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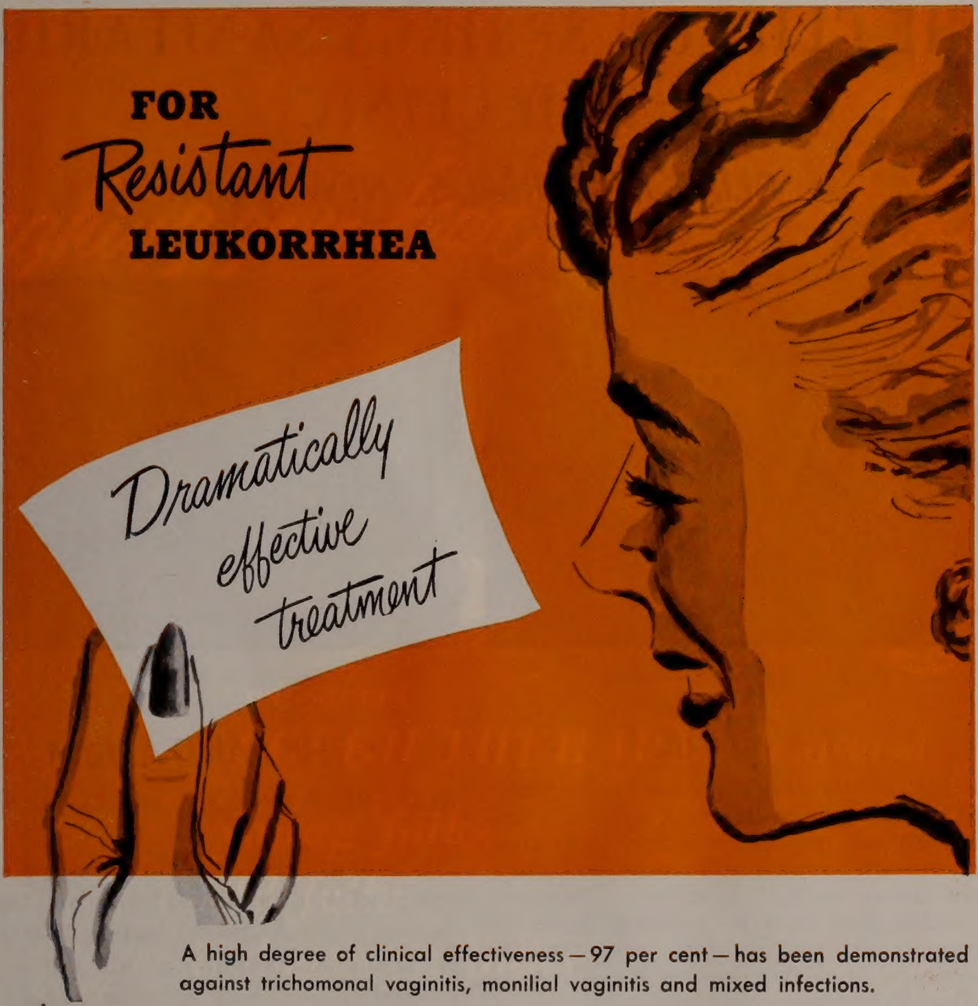

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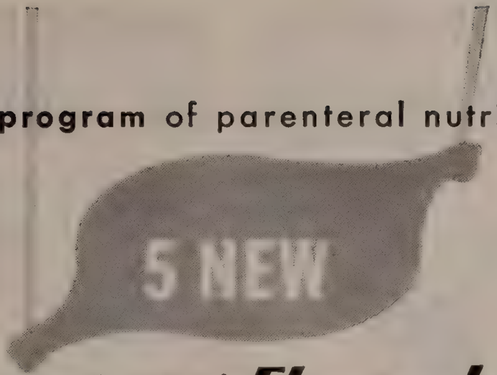

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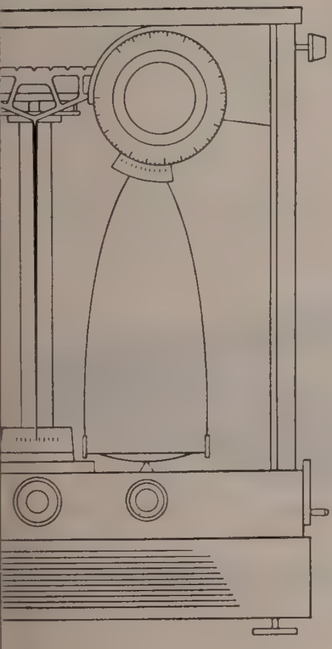

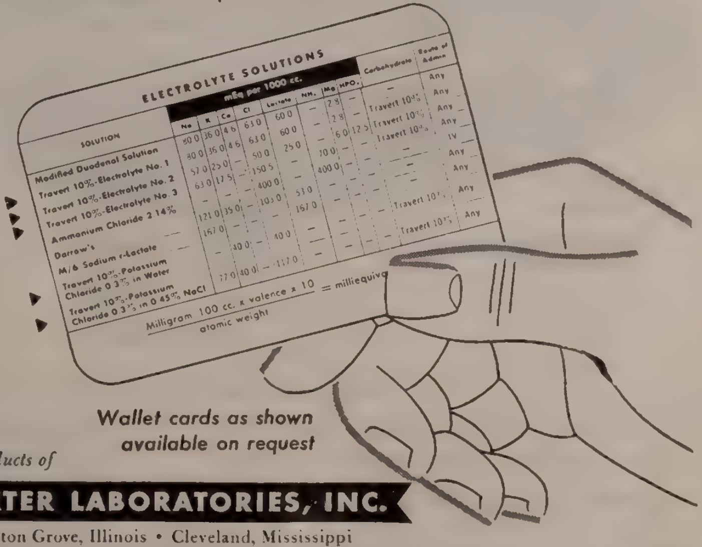

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(1) Lawrence, E. D., W. J. Surg., Ob. & Gyn., 58, 236-7, 1950.

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*Glass, S. J., and Rosenblum, G.: J. Clin. Endocrinol. 3:95 (Feb.) 1943.

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Nitrofurantoin has a low toxicity. With oral administration it occasionally produces nausea and emesis; however, these reactions may be obviated by slight reduction in dosage. An occasional case of sensitization has been noted, consisting of a diffuse erythematous maculopapular eruption of the skin. This has been readily controlled by discontinuing administration of the drug. Animal studies, using large doses administered over a prolonged period, have revealed a decrease in the maturation of spermatozoa, but this effect is reversible following discontinuance of the drug. Until more is known concerning its long-term effects, blood cell studies should be made during therapy. Frequent or prolonged treatment is not advised until the drug has received more widespread study. It is otherwise contraindicated in the presence of anuria, oliguria, or severe renal damage.

Dosage.—Nitrofurantoin is administered orally in an average total daily dosage of 5 to 8 mg. per kilogram (2.2 to 3.6 mg. per pound) of body weight. One-fourth of this amount is administered four times daily—with each meal and with food at bedtime to prevent or minimize nausea. For refractory infections such as Proteus and Pseudomonas species, total daily dosage may be increased to a maximum of 10 mg. per kilogram (4.5 mg. per pound) of body weight. If nausea is severe, the dosage may be reduced. Medication should be continued for at least three days after sterility of the urine is achieved.”

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Vitamin D	500 USP Units	Magnesium (from Manganese Sulfate)	1 mg.
Thiamine Hydrochloride	2 mg.	Molybdenum (from Sodium Molybdate)	0.07 mg.
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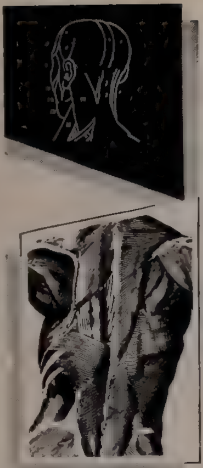

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"'Edrisal' was more effective than any other analgesic previously used..."

Wells, R. L.: M. Ann. District of Columbia *20*:360, 1951.

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Acetylsalicylic acid	2.5 gr.
Phenacetin	2.5 gr.

Be sure to prescribe 2 'Edrisal' tablets per dose to assure the full benefit of the 'Benzedrine' component.

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Fresh-Frozen and Freshly-Squeezed Orange Juice

Two years ago, findings of importance to dietitians everywhere were published, emphasizing the superiority of reconstituted MINUTE MAID Fresh-Frozen Orange Juice over home-squeezed juice of the same type oranges, in three respects:

(a) *Average levels of ascorbic acid significantly higher in* MINUTE MAID: Obviously, this advantage of MINUTE MAID, observed in the samples tested, is susceptible to variation, from season to season, as crops differ. It should be emphasized, however, that, penny for penny and year after year, the lower-priced MINUTE MAID offers the housewife *more* ascorbic acid than she could get from home-squeezed orange juice.

(b) *Peel oil content significantly lower:* Samples of orange juice, home-squeezed by typical housewives, showed contents of peel oil, a cause of allergic response and poor tolerance, especially in infants, were up to 700% higher than in MINUTE MAID!

(c) *Bacterial counts dramatically lower:* Bacterial counts were found to be as high as 350,000 per ml. in home-squeezed samples, but were uniformly low in MINUTE MAID.

Since publication of the above findings, more and more physicians are recommending MINUTE MAID Fresh-Frozen Orange Juice in place of home-squeezed orange juice where optimum year-around intake of natural Vitamin C is indicated.

And now comes more evidence in favor of MINUTE MAID . . .

New Assays Reaffirm Dietary Advantages of Minute Maid Fresh-Frozen Orange Juice on a Cost Basis

A second report comparing the individual mineral and vitamin values of MINUTE MAID Fresh-Frozen Orange Juice and home-squeezed juice of the same type oranges has recently been published.

In this latest study, each sample was analyzed separately. The analyses showed that MINUTE MAID Fresh-Frozen Orange Juice was equal to, or superior to, the home-squeezed juice in *all* of the components listed below:

TABLE

Mean Values in Samples Tested

COMPONENT	UNITS	MINUTE MAID FRESH-FROZEN ORANGE JUICE	HOME-SQUEEZED ORANGE JUICE
Betaine	mg./100 ml.	49	46
Biotin	mcg./100 ml.	0.26	0.26
Choline	mg./100 ml.	12	12
Cobalt	mcg./100 ml.	74	67
Folic acid	mcg./100 ml.	2.2	2.2
Iodine	mcg./100 ml.	0.24	0.21
Manganese	mcg./100 ml.	33	18
Nitrogen			
Total	mg./100 ml.	104	79
Amino	mg./100 ml.	22	22
Volatile	mg./100 ml.	[illegible]	7
Non-volatile	mg./100 ml.	96	72
Pantothenic acid	mcg./100 ml.	146	145
Para-amino-benzoic acid	mcg./100 ml.	4	4
Phosphorus	mg./100 ml.	19	18
Potassium	mg./100 ml.	380	290
Riboflavin	mcg./100 ml.	18	17
Tocopherols	mg./100 ml.	107	104
Vitamin A	mcg./100 ml.	19	16
Thiamine	mcg./100 ml.	87	83
Vitamin B_{12}	mcg./100 ml.	0.0022	0.0012

Although the results are again susceptible to variation according to crop and year, Fresh-Frozen MINUTE MAID was equal to the home-squeezed juice in the samples tested for the largest number of components listed; and in the mean values for iodine, manganese, potassium, Vitamins A and B_{12}, MINUTE MAID showed appreciably *higher* values.

SUMMARY

These new findings help enlarge professional knowledge of the nutrient constituents of orange juice in general and add fresh evidence that, on a cost basis, MINUTE MAID Fresh-Frozen Orange Juice has significant dietary advantages. Penny for penny, MINUTE MAID offers not only *more* Vitamin C, but also *more* of all the other vitamins and minerals listed than home-squeezed orange juice.

Taken in conjunction with the previously published findings, this should confirm the choice of physicians who recommend MINUTE MAID in place of home-squeezed orange juice.

REFERENCES:

(1) Rakieten, M. L., *et al.*, Journal of the American Dietetic Association, October, 1951.
(2) Joslin, C. L., and Bradley, J. E., Journal of Pediatrics, Vol. 39, No. 3, pp. 325-329 (1951).
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(4) Assn. Official Agricultural Chemists: Methods of Analysis, 7th ed. Washington: Assn. Off. Agric. Chemists, 1950.

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ORANGE JUICE

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Sulfamethazine	0.056 Gm.
Sulfacetamide	0.111 Gm.

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Sulfadiazine	0.167 Gm.
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Sulfamethazine	0.056 Gm.
Sulfacetamide	0.111 Gm.
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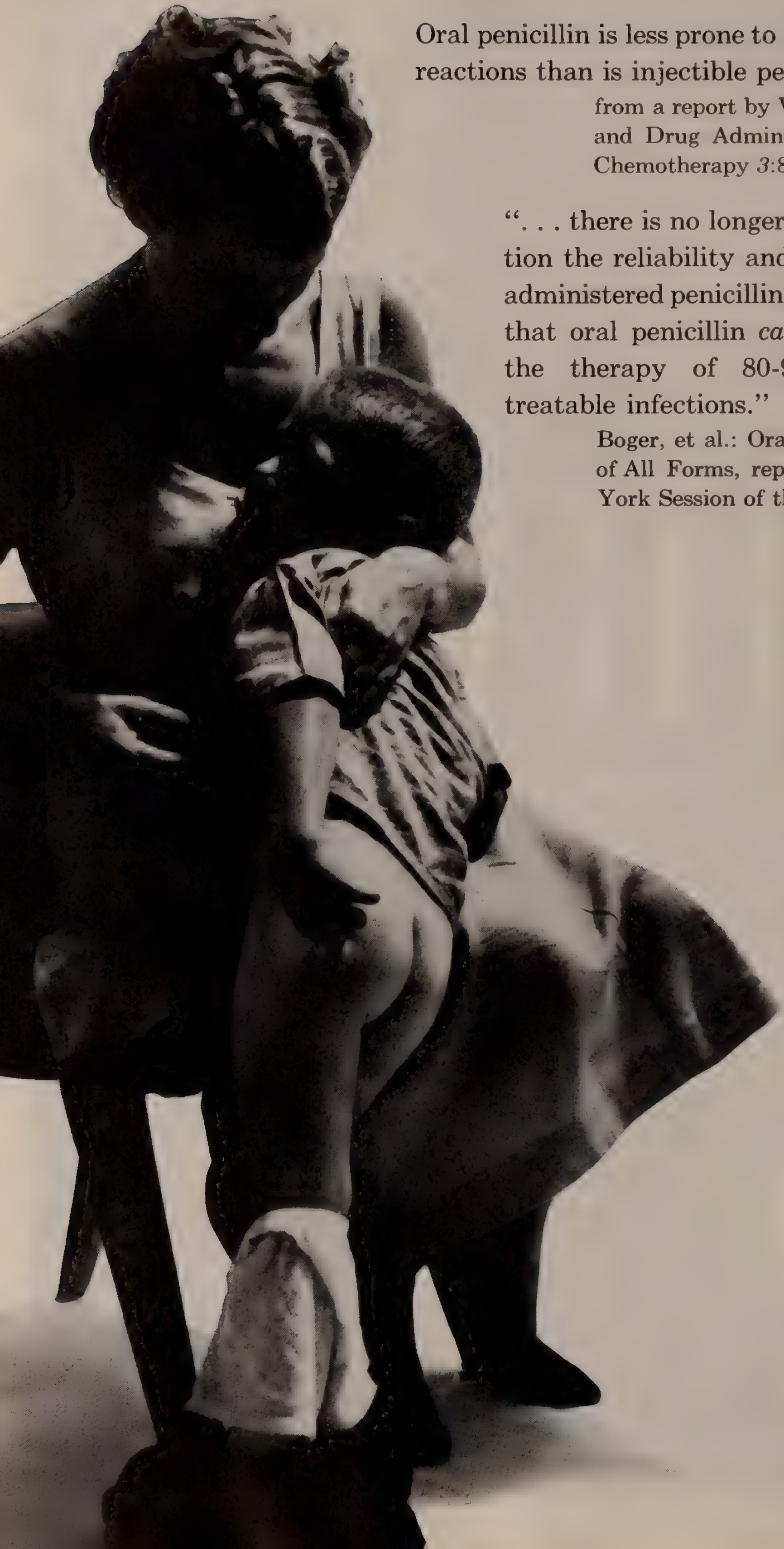

Oral penicillin is less prone to cause anaphylacto
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from a report by Welch et al. of the Fo
and Drug Administration, Antibiotics
Chemotherapy *3*:891 (Sept.) 1953.

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tion the reliability and efficiency of oral
administered penicillin, and it would appe
that oral penicillin *can be relied upon* f
the therapy of 80-90% of penicilli
treatable infections."

Boger, et al.: Oral Penicillin: Evaluati
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250,000 units procaine penicillin G plus a total of 0.5 Gm. (0.167 Gm. each) of 3 sulfonamides

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the ESKACILLINS

are painless penicillins
are effective penicillins

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ACHROMYCIN, a new broad-spectrum antibiotic developed by the Lederle research team, has demonstrated greater effectiveness in clinical trials with the advantages of more rapid absorption, quicker diffusion in tissue and body fluids, and increased stability resulting in prolonged high blood levels.

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ACHROMYCIN is now available in 250 mg., 100 mg., and 50 mg. capsules, SPERSOIDS® 50 mg. per teaspoonful (3.0 Gm.), Intravenous 500 mg., 250 mg. and 100 mg. Other dose forms will become available as rapidly as research permits.

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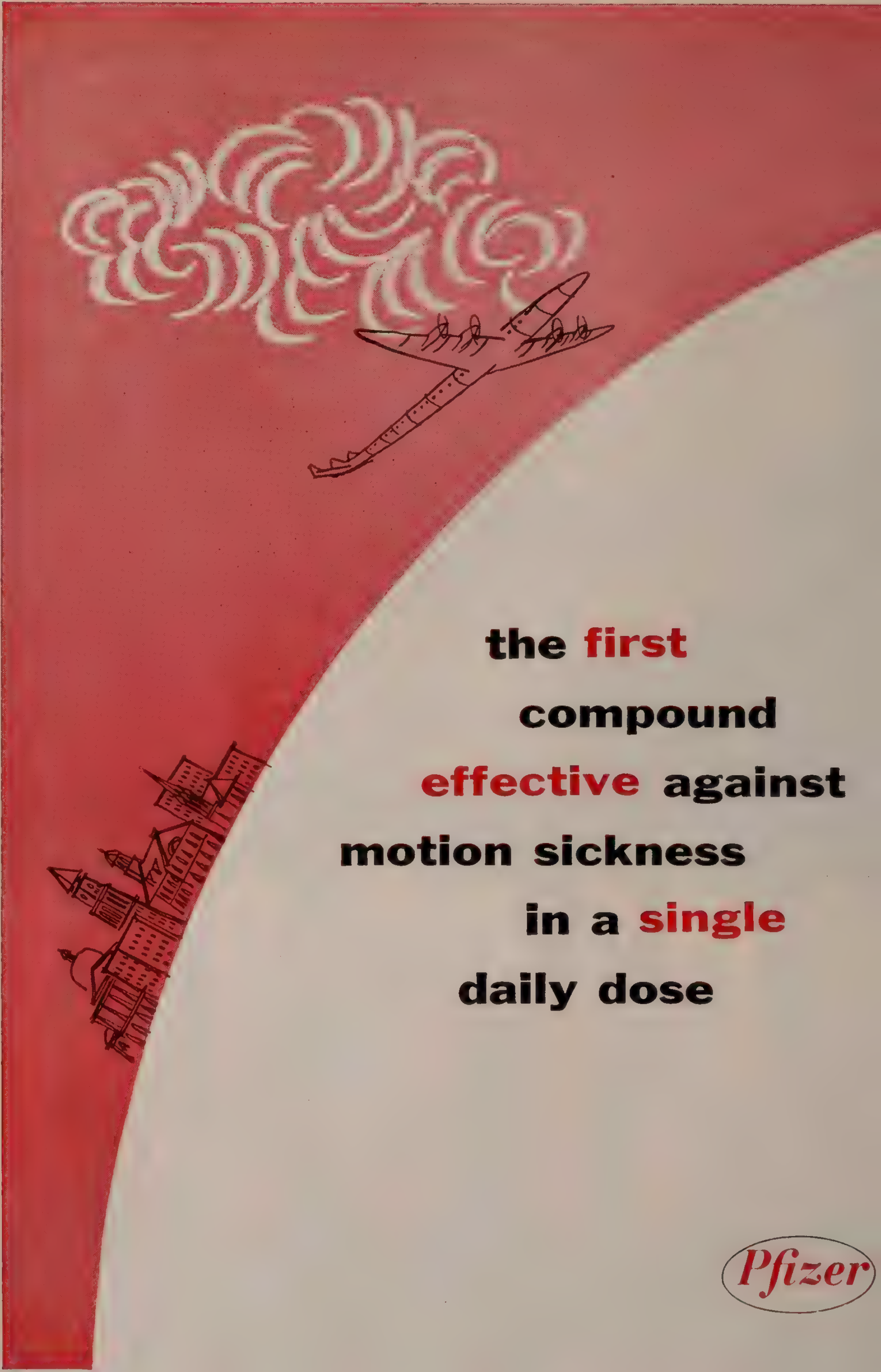
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of new **BONAMINE**
you can travel from . . .
Boston to Bangkok—*a 2 day trip*
. . . with new freedom from airsickness

MOST PROLONGED ACTION

Bonamine is the only motion-sickness preventive which is effective in a *single daily dose.* Just two 25 mg. tablets (50 mg.) will provide adequate protection against all types of motion sickness — car or boat, train or plane — for a *full 24 hours in most persons.*

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FEW SIDE EFFECTS

Clinical studies have shown, in case after case, that relatively few of the patients experienced the usual side effects observed with other motion-sickness remedies: less drowsiness, dullness, headache, dryness of the mouth, etc. In addition, Bonamine is tasteless and acceptable to patients of all ages.

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fast-acting salicylate formula

HIGH in analgesic power

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Recent studies[1,2] suggest that the time-tried salicylates exert a *hormonal* action similar to that of ACTH, stimulating release of cortisone.

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Each orange-colored, uncoated tablet provides:

Sodium salicylate	5 gr.	(325 mg.)	*POTENTIATED SALICYLATE BLOOD LEVELS*
Sodium para-aminobenzoate	3 gr.	(195 mg.)	
Salicylamide	½ gr.	(32.5 mg.)	
plus			
Ascorbic acid (as sodium ascorbate)	30 mg.		*SAFEGUARD AGAINST VITAMIN C DEPLETION AND CAPILLARY HEMORRHAGE*
Dihydroxy aluminum aminoacetate	½ gr.	(32.5 mg.)	BUFFERING ACTION *OVERCOMES GASTRIC INTOLERANCE*[3]

SUPPLIED in bottles of 100 and 500 tablets.

1. Van Cauwenberge, H.: Lancet 261:374, 1951; Van Cauwenberge, H., and Heusghem, C.: Proc. Soc. Exper. Biol. & Med. 80:51, 1952. 2. Pelloja, M.: Lancet 1:233, 1952. 3. Paul, W. D., et al.: J. Am. Pharm. A., Scient. Ed. 39:21, 1950.

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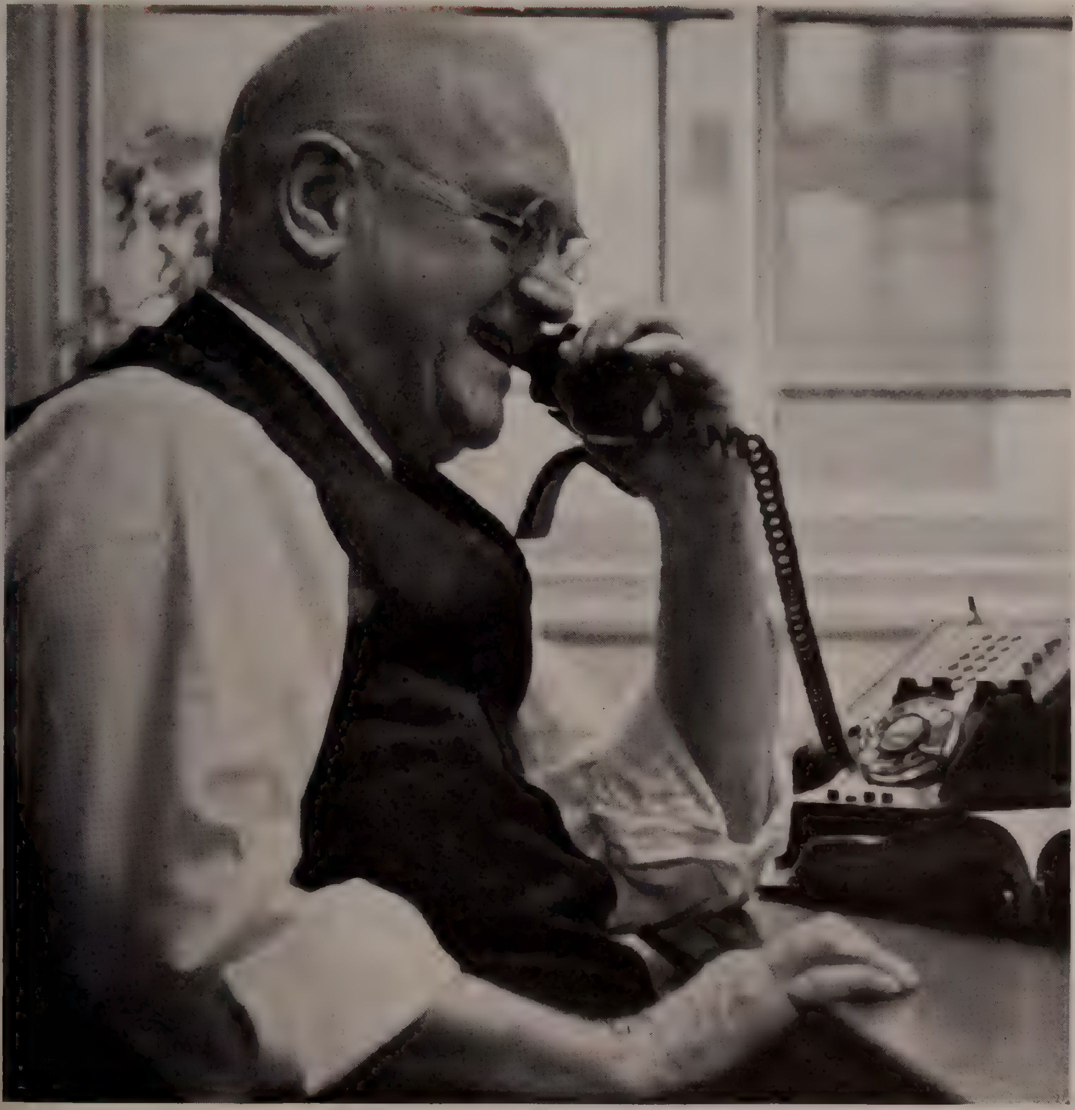
Geriatric Vitamin-Mineral Supplement Lederle



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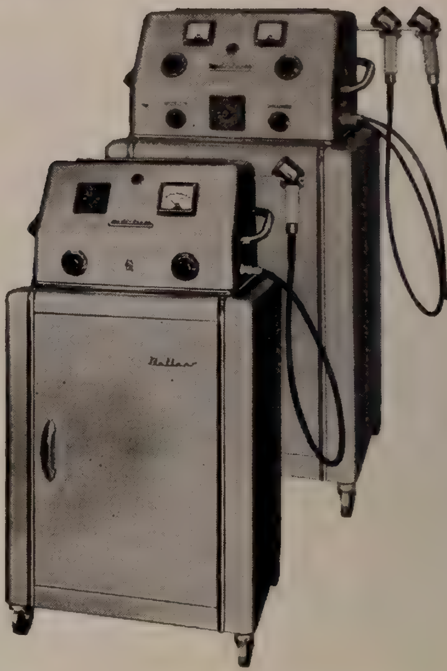

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EITHER MODEL WITH OR WITHOUT BASE CABINET

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NOW *prevent reactions to penicillin and other parenterals*

CHLOR-*TRIMETON* Injection 100 mg./cc.

Inject intramuscularly 10 to 20 mg. (0.1 to 0.2 cc.) in the same syringe with an aqueous medication.

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Injection 100 mg./cc., 2 cc. multiple-dose vials.
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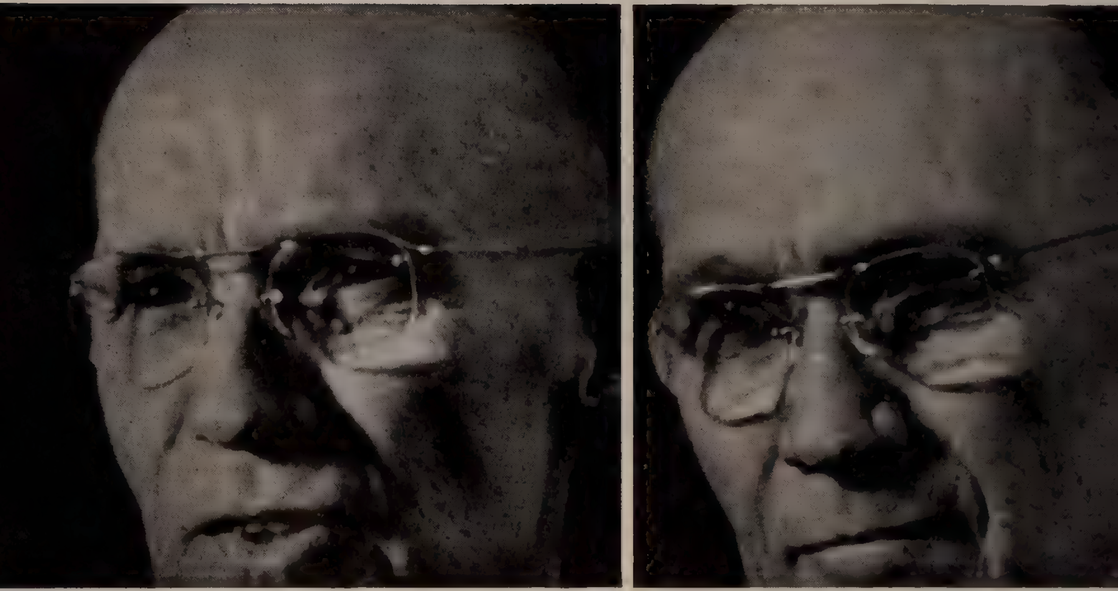
DEXAMYL* relieved…

… anxiety in a tired businessman



Patient T. H. complained of "fatigue and early morning weariness . . . refused to stop work and rest . . ."

"The relief that 'Dexamyl' brought in this case is incalculable." It relieved his anxiety about his work and helped him through the days he felt "low".

(Case-history excerpts from the files of a general practitioner, unposed photographs taken during office visit.)

Each tablet provides the synergistic action of two *mood-ameliorating components:* *Dexedrine* Sulfate* (*dextro-amphetamine sulfate, S.K.F.*), *5 mg.; amobarbital* (*Lilly*), ½ gr. (32 mg.). *Each teaspoonful* (5 cc.) *of the elixir is equivalent to one tablet.*

** T.M. Reg. U.S. Pat. Off.*

. . . despondency from the "dread of advancing years"

Patient W. F.'s "emotional cyclones, her tears and giggles, her hopelessness were products of her brooding unhappiness when alone."

" 'Dexamyl' gave her a smoother existence, alleviating her moodiness and lessening her storms."

'DEXAMYL' tablets and elixir

—relieves both anxiety and depression

—promotes a feeling of composure

Smith. Kline & French Laboratories, Philadelphia

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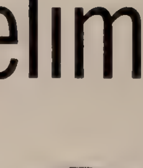

intravenous

aminophylline!

TABLETS

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aminophylline-colloidal aluminum hydroxide-magnesium trisilicate compound

Intravenous Results With New Oral Compound—And Without Gastric Irritation.

AL-AMPHYLLINE, a new development of the Raymer Medical and Research Departments, presents aminophylline in a new oral dosage form that produces blood levels comparable to those attained with parenterally administered aminophylline, with the further advantage that these levels are sustained over many hours. In addition, AL-AMPHYLLINE does not cause gastric irritation.

The colloidal aluminum hydroxide and the exceptional purity of the aminophylline contained in AL-AMPHYLLINE Tablets are responsible for the fact that AL-AMPHYLLINE Tablets are so well tolerated. Magnesium trisilicate is also included in the formula, to prevent possible constipation.

Since AL-AMPHYLLINE Tablets are uncoated, aminophylline absorption is rapid, producing satisfactory blood levels within an hour (see table below).

Aminophylline Blood Levels — mg./100 cc. Plasma
(Aminophylline dosage was 0.5 Gm. in each case)

Aminophylline Preparation	1 hour	3 hours	6 hours
AL-AMPHYLLINE TABLETS (4)	1.78	1.65	1.35
AL-AMPHYLLINE TABLETS (4)	1.67	1.84	1.26
AL-AMPHYLLINE TABLETS (4)	1.18	1.54	1.19
AL-AMPHYLLINE TABLETS (4)	0.90	1.16	0.91
Intravenous Aminophylline (0.5 Gm.)	1.33	0.84	—
Intravenous Aminophylline (0.5 Gm.)[1]	1.60	1.30	0.70
Aminophylline Suppository (0.5 Gm.)	0.11	0.22	0.38
Aminophylline Suppository (0.5 Gm.)	0.26	0.51	1.09

[1] J. Pharmacol. Exper Therap., 100:309, 1950.

RAYMER

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Jasper & Willard Streets
Philadelphia 34, Pa.

For use in all conditions where aminophylline is indicated. *Dosage Range:* 1 to 4 tablets as required. *Supplied:* bottles of 100, 500 and 1,000 tablets. *Formula:* Aminophylline, 125 mg.; Colloidal Aluminum Hydroxide, 150 mg.; Magnesium Trisilicate, 250 mg. *Also available:* AL-AMPHYLLINE with Phenobarbital (15 mg. per yellow tablet), bottles of 100.

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estrogen-progesterone
effective in
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Cyclogesterin
TRADEMARK, REG. U. S. PAT. OFF.
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Each scored tablet contains:

Estrogenic Substances* .. 1 mg.
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**Naturally-occurring equine estrogens (consisting primarily of estrone, with small amounts of equilin and equilenin, and possible traces of estradiol) physiologically equivalent to 1 mg. of estrone.*

Available in bottles of 15 tablets.

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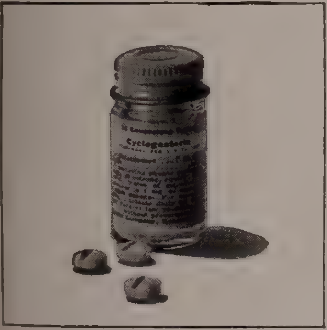
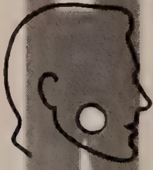


PARLUGUAN® FOR PEPTIC ULCER MANAGEMENT and control of gastric hyperacidity



Now Troches Provide Effect of Intragastric Milk-Alkali Drip

Present day medical regimen is based on the generally accepted theory that to heal an uncomplicated gastroduodenal ulcer, hydrochloric acid should be neutralized. To reduce the acidity favors healing, as it most certainly favors relief of pain associated with ulcer symptoms.

The most effective method known for neutralizing stomach contents over long periods has been the continuous intragastric milk and alkali drip.

This method has practical disadvantages.

But now the principle and effect of the intragastric milk-alkali drip is provided by continuous sucking of PARLUGUAN buccal troches containing milk solids and non-systemic alkali.

PARLUGUAN buccal troches

- **provide continuous acid neutralization**
- **promote healing of uncomplicated peptic ulcers**
- **reduce symptomatic ulcer pain**
- **strikingly reduce gastric acidity**
- **control pH levels for extended periods**
- **provide only 11 calories per troche**
- **are pleasant tasting**

Also indicated for relief of gastric hyperacidity and gastritis.

PARLUGUAN CONTAINS:

- **Whole milk solids, fortified with dextrins and maltose**
- **Magnesium trisilicate**
- **Magnesium oxide**
- **Calcium carbonate**
- **Magnesium carbonate**

DOSAGE: One-half hour after food is taken a PARLUGUAN troche should be placed in the mouth between the cheek and the gums and allowed to dissolve slowly over a period of 20 to 30 minutes. Up to 2 or 3 troches per hour may be required during the stage of ulcer activity. Follow-up treatment requires 1 to 2 troches between meals.

As an antacid for the temporary relief of gastric hyperacidity, 1 troche; repeat if necessary.

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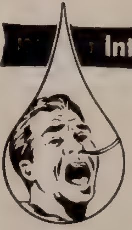
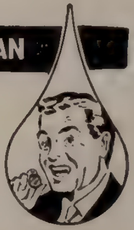


Patient enjoys beneficial effect of intragastric milk-alkali drip without discomfort of intubation.



Available in handy vials of 25 troches at all pharmacies.
Samples and literature on request.

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References:

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Douthwaite, A. H.: Medical treatment of Peptic Ulcer, M. Press 227:195 (Feb. 27) 1952
Douthwaite, A. H. and Shaw, A. B.: The Control of Gastric Acidity, Brit. M. J. 2:180 (July 26) 1952

1st choice for oral penicillin therapy

just 1 or 2 tablets

Pentids

Squibb 200,000 Unit Penicillin G Potassium Tablets

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'PENTIDS' IS A TRADEMARK

chocolate-mint-flavored
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SUSPENSION

'Sulfa-Neolin'

(Benzethacil with Sulfonamides, Lilly)

provides taste-tested
penicillin-sulfonamide therapy

FORMULA

Each 5 cc. (approximately 1 teaspoonful) contain sulfa: diazine, merazine, methazine, of each 0.167 Gm., and dibenzylethylenediamine dipenicillin—G, 300,000 units.

DOSAGE
The average dose is 1 teaspoonful four times a day.

In 60-cc. packages—stable at room temperature for two years.

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NEW YORK STATE JOURNAL OF MEDICINE

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EDITORIALS

The Annual Meeting

The 148th Annual Meeting of the Medical Society of the State of New York will be held this year in New York City at the Hotel Statler, May 10 to 14. All members of the Society are urged to note these dates now on their new memorandum pads. Incidentally, those whose fancy turns to the making of New Year's resolutions might well firmly resolve now to attend, to assist in making this meeting the best yet.

We also call attention at this time to the fact that the annual reports of the chairmen of the several Council committees and of the officers of the Society should be in the hands of the secretary by February 15. The issue of April 1, 1954, will be, as previously, the Convention Issue, and to have the reports printed in that issue, copy must be in on time. Your cooperation is earnestly requested.

Mark now the date of the Annual Meeting, May 10 to 14, 1954.

The New York State Journal of Medicine

As forecast in the issue of December 15, 1953, the membership may now appraise for itself the new cover, arrangement of contents, and typography of their Journal. These changes have been the subject of much study by the Publication Committee for about a year, and it is hoped that the new arrangement will contribute to easier reading of the contents and a more pleasing appearance of the cover.

Due to the untiring efforts of the associate editors and the unfailing cooperation of the authors submitting material for publication, the scope and usefulness of the scientific contents of the JOURNAL improve steadily. The number of clinicopathologic conferences being reported and submitted for publication increases beyond expectation so far.

In prospect for the year 1954 is a series of clinically valuable articles similar to those now coming to a close on diabetes. The new series will be in the field of cardiology.

The relatively new department on the History of Medicine should prove of great value. Living as we do now amid the completed projects and institutions of modern medical education, research, and practice, we are prone to forget their beginnings. Yet there are still living in the Empire State many doctors whose recollections of the early days and former conditions of teaching and practice are vivid. Many older doctors we are sure can contribute much if they will to this relatively new department of the JOURNAL and thereby help to fill out the gaps in our knowledge of those times.

It will be of interest to the membership that the JOURNAL now goes, as an act of good will by the Medical Society of the State of New York, to all those senior medical students in the nine medical schools of the State who have requested it. These young men and women will thereby have the opportunity before they enter practice in this or other states to become acquainted with the problems of the actual clinical practice of medicine and surgery as revealed by the scientific articles, the case reports, and special articles in the JOURNAL as well as the various conferences and reports of the activities of the Society in the interest of the people of the State as well as of the doctors themselves.

A realization of the extremely complex relationships existing between the modern practice of medicine and the growing number of agencies of the public, governmental and private, is a necessity hardly secondary to the scientific and clinical training of the young doctor, and it is hoped that the student who reads the JOURNAL will begin to get a better concept of the necessity for the representation his national, state, and local medical societies afford.

It is hoped that the department of medical news can be expanded in the near future to include a wider variety of coverage.

The Publication Committee and the Editors hope that the JOURNAL in its new dress will be a continuing credit to the Society.

Editorial Comment

Congressional Action on Medical Matters. We are informed by the Washington Office of the American Medical Association[1] that "The success of the medical profession in the field of federal legislation is in large measure a tribute to those members of state and local medical societies who maintain close liaison with their members of Congress. . . During the first session of the 83rd Congress in the period January 3 to August 3, 1953, a total of 10,695 legislative measures were introduced in the House and Senate. All of these were carefully screened for medical significance. We analyzed and reported in our Washington Letters 274 measures which were determined to be of interest to the medical profession. This total exceeds by 24 those medical measures followed by us in the entire two-year period of the 82nd Congress."

Health measures enacted into law were as follows:

- S. 106—Commission on Organization of the Executive Branch; became *Public Law 108.*
- S. 1514—Commission on Intergovernmental Relations; became *Public Law 109.*
- S. 967—Two-year extension of Hill-Burton Act; became *Public Law 151.*
- S. 1515—Compact between certain western states and U.S. territories to promote higher education; became *Public Law 226.*
- H.R. 4495—Doctor Draft Act; became *Public Law 84.*
- H.R. 5636—To establish a three-year presumption of service-connection for all types of tuberculosis; became *Public Law 241.*
- H.R. 5740—Factory Inspections by Food and Drug Agents; became *Public Law 217.*
- H.J. Res. 223—Making reorganization of FSA effective within ten days; Became *Public Law 13.*

This session of Congress has taken no action on the following subjects that were of concern to us in former sessions: national compulsory health insurance, Federal assistance for medical education, provision of school health services through Federal subsidization, Federal assistance in establishing and maintaining local public health departments, and provision of emergency maternity and infant care (EMIC) for families of servicemen. It should be remembered that all measures not passed by Congress did not die on adjournment but will retain their positions in committees or on Senate House calendars pending start of the second session in January.

The next session of Congress certainly will not be devoid of medical legislation. Commitments already made by the administration mean that amendments to the social security law, extending coverage to the self-employed (including physicians), will come up for decision. In the same connection there may be action on bills (Jenkins-Keogh type) to permit the self-employed to defer income tax payments on funds paid in to annuities as well as action on proposals to allow deduction for postgraduate education costs. These three matters now are under study by the House Ways and Means Committee. The House Veterans' Affairs Committee may have some legislation to propose on care of nonservice-connected cases by Veterans Administration, a center of controversy in the last session. The two newly formed commissions on Organization of the Executive Branch and on Intergovernmental Relations may be expected to offer bills with medical implications before the next session closes. It will be surprising if Congress does not take some definitive action on the long-delayed Bricker resolution concerning the making of international treaties and executive agreements.

A Novel Approach. There has recently come to our attention a paper-covered popular priced book published in 1953 which deals with an outbreak of Asiatic cholera, typhus, small pox, yellow fever, and the plague. While some attention has previously been paid to an outbreak of one of these diseases from an historical point of view when Daniel Defoe wrote a popular account of the plague in London, we do not recollect seeing on bookstands any novel in recent years which concerned itself with not only one but four of these epidemic scourges. Scientific publications one would expect, since these diseases have not vanished from the earth and are still being studied, but why a novel complete with a thin thread of love interest in it and written by a physician?

Novels from the pen of physicians are no new things, as to name a few, S. Weir Mitchell, A. Conan Doyle, W. Somerset Maugham, and A. J. Cronin, but this novel "Cry Plague"[1] is the first one to come to our attention which concerns itself with the public health problems of epidemic diseases appearing concurrently in an area in which

[Continued on page 54]

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[1] Special Report No. 10, Sept. 15, 1953, p. 2.

[1] Ace Books, Inc., 23 West 47th Street, New York 36, N. Y.

Current Concepts in

DIABETES MELLITUS

IRVING GRAEF, M.D., *Editor*

from the Committee on Professional Education of the Clinical Society of the New York Diabetes Association

Diabetic Neuropathy

LEON M. LEVITT, M.D., BROOKLYN, NEW YORK

(*From the Department of Medicine of the Long Island College Hospital and the State University of New York College of Medicine at New York City; Fellow, Clinical Society of the New York Diabetes Association*)

NEUROLOGIC abnormalities rank high on the list of the degenerative complications of diabetes. Reports of their incidence have varied from a total absence to as high as 93 per cent, depending upon the criteria used in diagnosing nervous system involvement.[1]

Mechanisms

The mechanisms producing neurologic disturbances in diabetes are obscure. Some view these changes as an integral part of the diabetes disease complex rather than as "complications."[2] Because of a superficial resemblance to beriberi, early investigators supposed that thiamine deficiency was the cause of neuritis in diabetes, but long clinical experience with thiamine chloride therapy has not substantiated this view. At present one is left with the vague concept that the abnormal metabolic state found in poorly regulated diabetic patients exerts a "toxic" effect upon nerve tissue. Neurologic complications may develop in patients of any age group but are most common in advanced age. While poorly controlled diabetes of long duration is frequently found in patients with neurologic symptoms, the latter may in some cases precede the recognition of diabetes by weeks or months. Dehydration, excessive vitamin excretion in the urine, minute hemorrhages in various parts of the nervous system (as in hypoglycemia), arteriosclerotic spinal cord changes, and the arteriosclerosis associated with obesity have all been mentioned as etiologic factors in diabetic neuropathy. Where present, neurologic symptoms are sometimes aggravated at first by regulation of previously uncontrolled diabetes,[3] especially with marked shifts in water and electrolyte balance leading to excessive urinary losses of water-soluble vitamins and temporary changes in intracellular metabolism.

Types of Neurologic Disturbances

Because of reversibility of neuropathies in diabetes pathologic findings are scarce. The most frequent pathologic finding is demyelinization of varying degree in the distal portion of the peripheral nerve. But if the axis cylinders are destroyed, the neurologic changes are no longer reversible. Alterations may also be found in the cells of the motor nuclei of the brain stem, the anterior horn of the spinal cord, the dorsal root fibers, the posterior[4] and lateral columns, and the efferent sympathetic fibers in the peripheral nerves and visceral ganglia.

Sensory disturbances predominate, particularly pain and paresthesias in the lower extremities. The pain is usually dull and constant but at times is severe and shooting. Rest and cold accentuate, while exercise and warmth frequently alleviate the pain. Numbness, tingling, burning, and coldness are prominent. Impairment of vibratory sensation is sometimes the first and only objective evidence of sensory involvement. Depending upon such localization, diabetic neuropathy may mimic the clinical pictures of tabes dorsalis, subacute combined degeneration, progressive spinal muscular atrophy, and the various peripheral neuropathies. The cerebrospinal fluid protein is frequently elevated.[5]

Motor abnormalities are infrequent. When they do occur, there is again a predilection for the lower extremities, particularly the muscles innervated by the lateral popliteal branches of the sciatic nerve. Loss of the Achilles reflex is most frequent; loss of the patellar reflex is less frequent.[1] A positive Babinski reflex and other neurologic signs, as pareses, are also seen in hypoglycemia.

Autonomic disturbances are many and varied. While known for many years, they have only recently received proper emphasis.[6] Vasomotor dysfunction is a common finding leading to dependent edema, atrophy of the subcutaneous tissues and skin, and reduced sweating. Orthostatic hypotension and tachycardia are relatively frequent. Gastrointestinal disturbances, particularly nocturnal diarrhea and constipation, may be secondary to dysfunction of the sympathetic plexuses which innervate the bowel. Bladder disturbances occur and are characterized by hesitancy, weakness of the urinary stream, and urinary retention. Cystometric studies may reveal marked impairment with increased capacity of the bladder, low expulsive force, and impaired or absent sense of filling. When these bladder disturbances are present in elderly diabetic males with incidental prostatic hypertrophy, the true etiology for the symptoms may be overlooked. Such patients may submit to prostatic surgery only to find no postoperative improvement. Impotence may precede the recognition of diabetes by many weeks or months, or it may appear later in the course of the diabetes in association with other manifestations of neuropathy. Arthropathy of the Charcot type may develop and is usually confined to the tarsal and metatarsal joints[7,8] but may also involve the ankle, knee, and spine.[9] As in tabes dorsalis painless, perforating ulcers on the plantar surface of the feet frequently develop. Pupillary disturbances including Argyll-Robertson pupils, miosis, irregularity, and anisocoria are occasionally found in patients with diabetic neuropathy.

Paralyses of cranial nerves are reported. While the nerves to the extraocular muscles are usually affected, optic neuritis, facial paralysis, deafness, and trigeminal involvement may be found. Palsies may be multiple, bilateral, and symmetric, resembling those found in diphtheria and the Guillain-Barré syndrome.[10] It has been thought that paralysis of the extraocular muscles is not a true neuropathy but is secondary to small hemorrhages in the nucleus of the third nerve.[11] This concept has been proposed because of the associated retinal hemorrhages in all cases. However, there has been no anatomic confirmation. Clinically, this theory is also improbable since the onset is not as sudden as is usually found in hemorrhagic catastrophes, and occasionally but one twig of the third nerve is involved. Furthermore, there is usually evidence of associated peripheral neuritis elsewhere and recovery is complete and rapid . . . within six to eight weeks.[1]

Ischemic neuritis associated with arteriosclerosis obliterans in the lower extremities is no different in patients with diabetes from nondiabetics.

Differential Diagnosis

The physician must constantly guard against the tendency to ascribe solely to diabetes symptoms and signs which occur in diabetic patients. The latter are subject to all the other diseases which afflict mankind. Hence, in the uncontrolled as well as in the controlled patient with diabetes, differential diagnosis and search for additional diseases (which may, in fact, be the cause of poor control) are most important. Vitamin deficiencies, toxic ("industrial") poisons, lues, neurologic diseases as they occur in nondiabetic patients, anemias and lymphomatous diseases, cerebrovascular "accidents," psychoneuroses, neuralgia, localized malignancies of brain or spinal cord, and the effect of trauma must all be considered.

Treatment

Good control of the diabetes is the postulated basis of the treatment of neurologic complications. While many patients, particularly those with recent onset of neuritic symptoms, respond within a reasonable period of time after the diabetes is controlled, therapy is often ineffective in more neglected cases. Thiamine chloride, vitamin B_{12} in massive doses,[12] British anti-lewisite (BAL),[13] crude liver extract, pregnant mammalian liver extract,[14] and a host of other drugs have been advocated. While an isolated case may respond to one of these, in general, they have not proved effective. Rarely, a patient with an associated thiamine deficiency or one whose symptoms were precipitated or aggravated by insulin therapy may respond rapidly to the use of thiamine; this is the exception rather than the rule. Recognition of cord-bladder should be emphasized. Therapy is directed toward increasing drainage and controlling infection. Parasympathomimetic drugs such as Urecholine in oral doses of 10 to 30 mg. three times daily may be useful. Transurethral resection of the bladder neck may be necessary if there is inability to void and the residual urine is greater than 5 ounces.[15] Perforating ulcers may heal if the foot is kept clean, warm, dry, and at rest. Neurogenic diarrhea is reportedly controlled occasionally by intramuscular injections of 2 to 4 cc. of crude liver extract for four to six days; therapy must then be continued weekly.[16] Neurogenic constipation is often corrected by parasympathomimetic drugs such as are used in the treatment of the neurogenic bladder. Cranial nerve lesions heal spontaneously and require no special therapy. Postural hypotension may be relieved by the use of a "head-up" bed which entails raising the head of the bed 36 inches, and sympathomimetic drugs which increase the general level of the blood pressure.[17] The treatment of pathologic joints is not satisfactory. Arthrodesis is indicated for a flail joint; lumbar sympathectomy has been reported as successful.[18]

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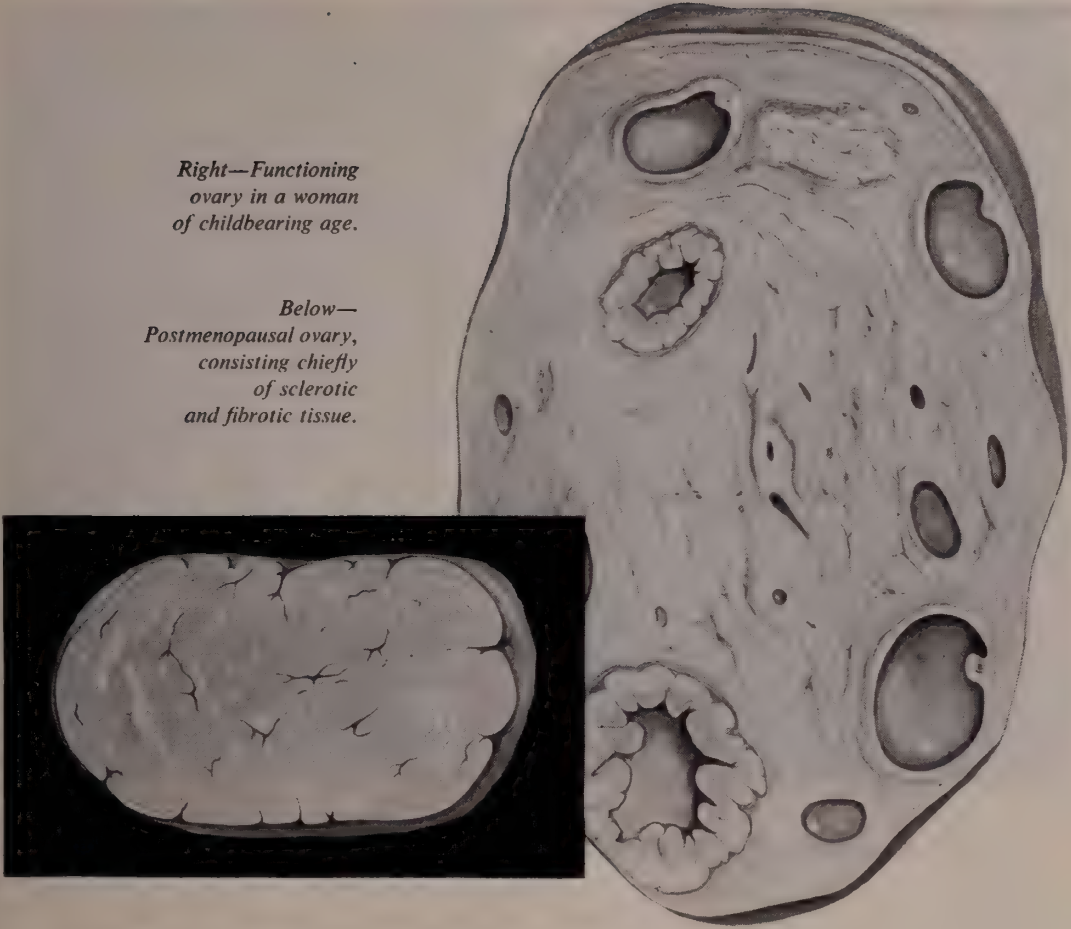
(*Number fourteen of a series on Current Concepts in Diabetes Mellitus*)

Editorial Comment

[Continued from page 51]

they are normally not encountered. The author, Dr. Theodore S. Drachman, First Deputy Commissioner of Health of Westchester County and a member of this Society, has succeeded in applying the old technics of his predecessors, the authors of detective stories, to create a kind of public health clinicopathologic conference around a putative attempt of some power to disrupt our native communities by initiating bacterial warfare. He has presented a picture of what might happen in a manner which is neither too technical for popular comprehension nor too simplified for professional enjoyment in the reading.



Right—Functioning ovary in a woman of childbearing age.

Below—Postmenopausal ovary, consisting chiefly of sclerotic and fibrotic tissue.

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[1] Sturnick, M. I., and Gargill, S. L.: Clinical Assay of a New Synthetic Estrogen: Vallestril, New England J. Med. *247*:829 (Nov. 27) 1952.

SEARLE Research in the Service of Medicine

You can prevent attacks in angina pectoris

Peritrate prophylaxis effective in 4 out of every 5. Humphreys *et al.* noted that Peritrate reduced the number of attacks in 78.4 per cent of patients and "... patients with the greatest number of attacks showed the greatest reduction."[1] Complementing this finding, Russek and coworkers observed that their results in angina pectoris patients receiving Peritrate were "...comparable to those obtained with glyceryl trinitrate, but the duration of action was considerably more prolonged."[2]

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SCIENTIFIC ARTICLES

Urinary Bladder Activity in Diseases of the Brain and Spinal Cord

SAMUEL H. ROTHFELD, M.D., MANHASSET, NEW YORK

(From the Department of Urology, Jewish Sanitarium and Hospital for Chronic Diseases, Brooklyn, New York)

ALTERED control of urination occurs in many clinical syndromes resulting from pathologic entities. Spinal cord lesions may cause urinary retention or incontinence. Disease of the brain affecting the influence of both cerebral hemispheres on the spinal cord vesical reflex mechanism also results in inability to control micturition. Moreover, urgency or frequency of urination are common complaints when individuals with no organic disease react to situations causing emotional tension. However, we have observed that irrespective of the basis for abnormal micturition, contraction of the bladder during voluntary urination in normal individuals, as well as in patients with organic disease of the brain or spinal cord, occurs similarly and uniformly as a mass detrusor action.

The normally functioning urinary bladder depends on cerebral influences on the reflex mechanism in the lumbosacral cord through fibers that accompany the corticospinal pathways. Associated with the act of micturition are the diaphragm, the abdominal musculature, and the muscles of the pelvic floor. Of special interest and importance in this latter group is the pubococcygeus muscle, the anterior portion of the levator ani.

Any standard textbook describes the anatomy and physiology of the urinary bladder so that these will not be discussed in detail in this communication.[1] Much has been written concerning detrusor and sphincter activity, but we do not have all the data in the chain of physiologic phenomena associated with micturition. It has not been established with reasonable certainty that cerebral bladder centers are present in the paracentral lobule, the midbrain, or the diencephalon.[2] Abnormalities of bladder and rectal sphincter control may occur in patients with disease of both cerebral hemispheres, but in unilateral cerebral syndromes function of these sphincters is normal. This is due to the fact that fibers from the uninvolved cerebral hemisphere conduct the normal control over the spinal vesical reflex mechanism.

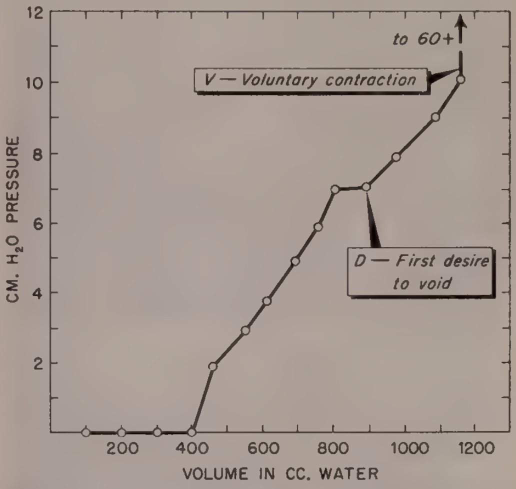

FIG. 1. Cystometrogram indicating a markedly atonic bladder in a patient with peripheral neuropathy due to diabetes mellitus. Voluntary control of micturition after transurethral prostatectomy.

Among the cases observed have been patients with cerebral syndromes, spinal cord neoplasm, multiple sclerosis, amyotrophic lateral sclerosis, and peripheral neuropathy. It has long been the belief that inability to control micturition occurs in patients when both pyramidal tracts are involved. We have, however, studied

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Presented at the 147th Annual Meeting of the Medical Society of the State of New York, Buffalo, Section on Urology, May 8, 1953.

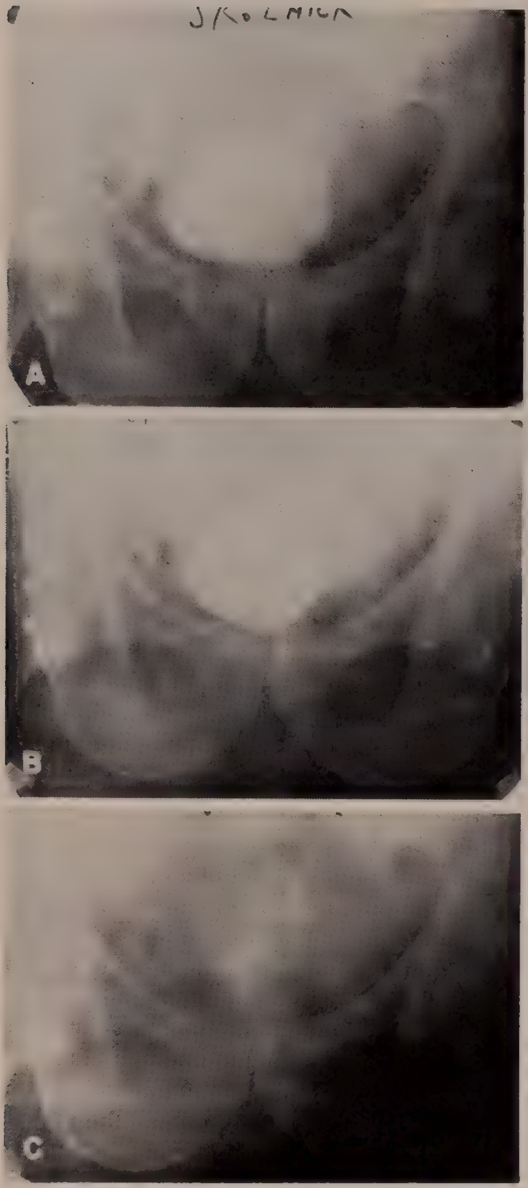

FIG. 2. Patient with right hemiplegia: (*A*) Bladder at rest. (*B*) Initiation of micturition; note funneling of vesical neck and increased longitudinal axis. (*C*) Bladder at end of urination; there is a small residual urine.

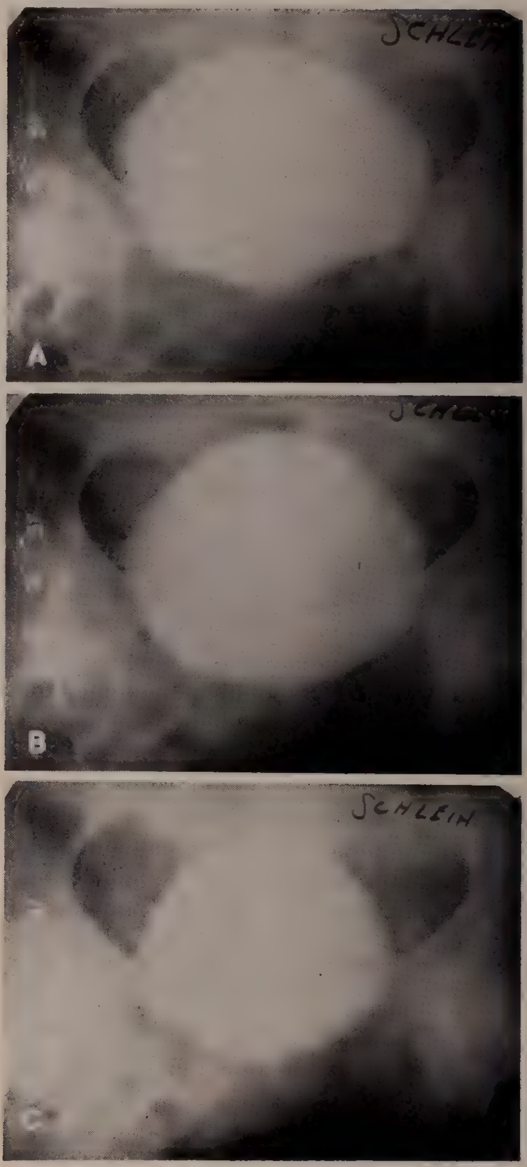

FIG. 3. Patient with spinal cord lesion. Voluntary micturition is present. (*A*) Bladder at rest; note relaxation of muscles of pelvic floor. (*B*) Initiation of micturition; note widening of the bladder neck and increased longitudinal axis. (*C*) Voluntary straining to empty bladder; note further descent of bladder because of pushing and the large residual urine.

patients with definite bilateral pyramidal tract involvement who continued to micturate normally and without complaint. We believe that there are individual fibers subserving the many functions, while voluntary motor power is relatively younger phylogenetically. The fibers for vesical sphincter control traveling with the corticospinal tract are older, less susceptible to invasion, and are affected late in the course of a disease if at all.[3]

These clinical neurologic disorders were studied as to bladder contractility by fluoroscopy. Our technic consisted of placing the patient in a supine position on the x-ray table, and a variable amount of a mixture of 4 per cent sodium iodide and 50 per cent Neo-Iopax, depending upon

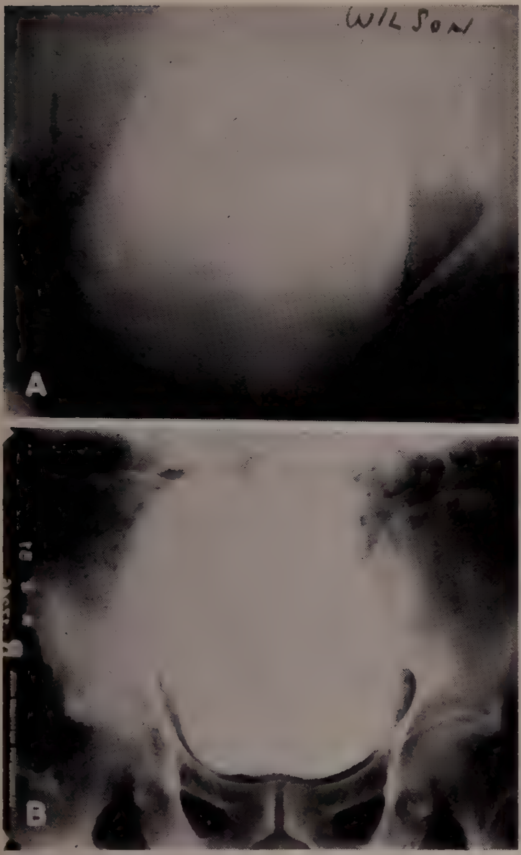

FIG. 4. Atonic bladder due to peripheral neuropathy in a patient with diabetes mellitus. (*A*) Bladder at rest; note great capacity. (*B*) Marked voluntary contraction at initiation of urination; inability to void because weakened detrusor cannot expel urine beyond prostatic obstruction; complete ability to void after transurethral prostatectomy (see Fig. 1).

previous cystometric studies, was instilled into the bladder through a urethral catheter (Fig. 1). The instrument was withdrawn, and the patient was raised to a vertical position and given a urinal into which he might void. The bladder was observed at rest and during the entire micturition process by fluoroscopy and spot x-ray films (Figs. 2, 3, 4, and 5).

The viscus at rest is usually spherical. With the initiation of micturition there is observed a funnel-shaped dilatation at the bladder neck together with an increase in the longitudinal axis and a decrease in the transverse diameter indicating general contraction of the detrusor muscle (Figs. 2B, 3B, 4B, and 5B). This status persists until the bladder has been emptied, until urination has been voluntarily stopped, or until the maximum force of detrusor contraction has

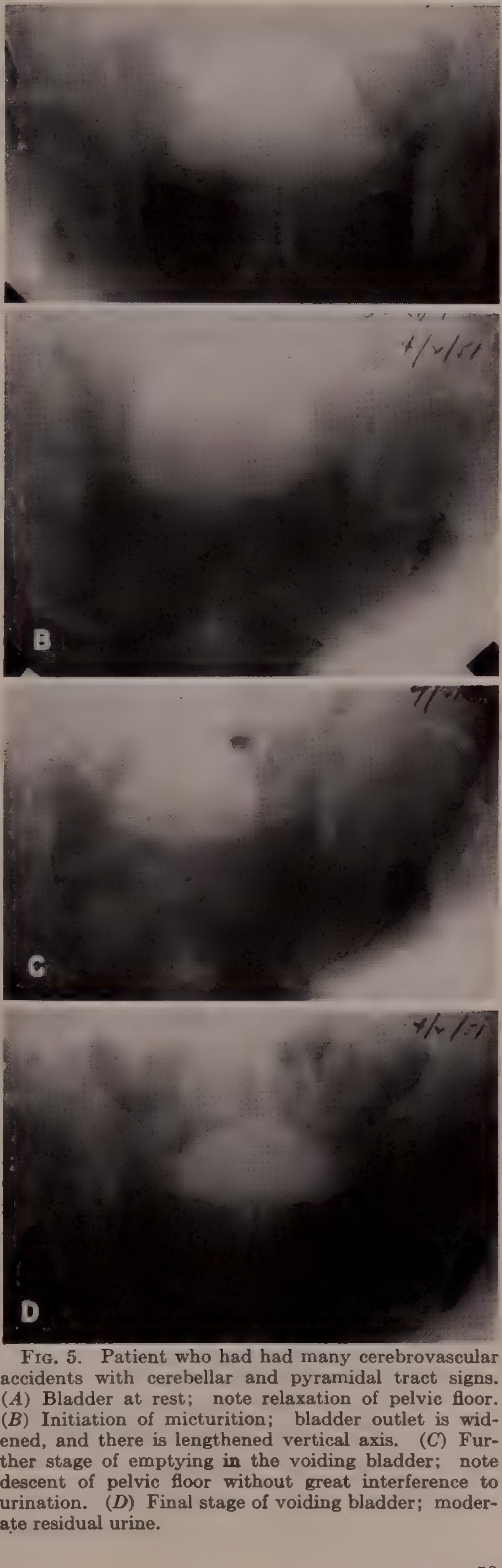

FIG. 5. Patient who had had many cerebrovascular accidents with cerebellar and pyramidal tract signs. (*A*) Bladder at rest; note relaxation of pelvic floor. (*B*) Initiation of micturition; bladder outlet is widened, and there is lengthened vertical axis. (*C*) Further stage of emptying in the voiding bladder; note descent of pelvic floor without great interference to urination. (*D*) Final stage of voiding bladder; moderate residual urine.

been reached (Figs. 2C, 3C, 4B, and 5D). In most of the patients studied, residual urine was present in varying amounts.

Muellner[4,5] believes that voluntary micturition in man is the result of contraction of the abdominal musculature and the diaphgram in association with relaxation of the muscles of the pelvic floor causing the bladder neck to be pushed down. He is of the opinion that this latter phenomenon is the stimulus which causes the detrusor to contract and precipitate the micturition reflexes, that the contraction wave begins at the bladder neck and spreads to the base and last to the dome of the bladder, and that voluntary inhibition of the urinary stream is due to contraction of the levator ani causing elevation of the base of the bladder and "the internal sphincter snaps shut. The urinary stream is thus promptly shut off, first at the internal sphincter."

In our observations we have not demonstrated either independent contraction of the detrusor or detrusor contraction occurring as a sequel to an initial trigonal expulsive force. On fluoroscopy we have found that the urinary bladder functions as an integrated unit normally as well as in disease of the nervous system.

Muellner has expressed the opinion that voluntary interruption of the urinary stream depends upon a normally functioning levator ani muscle which contracts, thereby raising the bladder neck and causing the "internal sphincter to snap shut." Most patients with neurogenic bladder dysfunction have concomitant impaired action of the levator muscles. Nevertheless, voluntary ability to interrupt micturition is possible. Moreover, in patients in whom prostatectomy has been associated with destruction of the internal sphincter, voluntary control of micturition is unimpaired.

Our studies thus far tend to indicate that expulsion of the urine initiated by the micturition reflexes occurs as the result of a uniform, symmetric mass contraction of the entire bladder musculature.

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ANNOUNCEMENT

PRIZE ESSAYS

The Lucien Howe Prize and the Merrit H. Cash Prize will be open for competition at the next Annual Convention of the Medical Society of the State of New York, May 10 to 14, 1954, in New York City.

The *Lucien Howe Prize* of $100 will be presented for the best original contribution on some branch of surgery, preferably ophthalmology. The author need not be a member of the Medical Society of the State of New York.

The *Merrit H. Cash Prize* of $100 will be given to the author of the best original essay on some medical or surgical subject. Competition is limited to the members of the Medical Society of the State of New York who at the time of the competition are residents of New York State.

The following conditions must be observed:

Essays shall be typewritten or printed with the name of the prize for which the essay is submitted, and the only means of identification of the author shall be a motto or other device. The essay shall be accompanied by a sealed envelope having on the outside the same motto or device and containing the name and address of the writer.

If the Committee considers that no essay or contribution is worthy of a prize, it will not be awarded.

Any essay that may win a prize automatically becomes the property of the Medical Society of the State of New York, " to be published as it may direct."

All essays must be presented not later than *February 2, 1954*, and sent to the Chairman of the Committee on Prize Essays of the Medical Society of the State of New York, 386 Fourth Avenue, New York 16, New York.

R. TOWNLEY PATON, M.D., *Chairman*
Committee on Prize Essays

A New Operation for the Cure of Priapism

OSWALD S. LOWSLEY, M.D., NEW YORK CITY, AND
ABEL GONZALEZ, M.D.,* CIUDAD TRUJILLO, DOMINICAN REPUBLIC

(*From the Oswald Swinney Lowsley Foundation, Inc., St. Clare's Hospital*)

PRIAPISM is a condition of prolonged and persistent erection of the penis unaccompanied by sexual desire. It is usually, but not always, painful. Since the condition is encountered rarely, it is difficult to generalize about the type of treatment. The methods used in the past have been, roughly speaking, to withdraw from the corpora cavernosa the thrombosed blood which causes the priapism. This has been done in a number of ways. The authors wish to propose a new method, which has been successful in the case to be presented.

Causes of Priapism

Priapism may be due to local causes, or it may depend upon a systemic condition, such as syphilis, leukemia, or sickle cell anemia. Certain nerve lesions and conditions of nervous imbalance may produce it. Sometimes no cause can be found, and the physician is compelled to fall back on the term "idiopathic."

Cases due to local mechanical factors are greatly in the majority. Such factors include trauma, thrombosis, infection, hemorrhage and hematoma, tumors encroaching on nerve-endings, inflammatory swellings, and edema. If there have been previous transitory erections, the inference is that some mechanical factor is at work. In most cases of true priapism, particularly where the cause is mechanical, erection is confined to the corpora cavernosa, which would favor the theory of venous thrombosis as a leading cause of pathologic erections.

Spinal cord lesions of syphilitic or other origin are sometimes first manifested by persistent erection.

That priapism sometimes occurs in patients suffering from leukemia has been known for over a century. It is most common in those with chronic myelogenous leukemia, being extremely rare in other forms of this disease. There is nothing characteristic about the persistent erection seen in the leukemic patient, and if the blood condition is not suspected, the case is likely to be classed as of nervous origin. Actually, however, these cases belong with those of mechanical cause. Since the condition is seen much more frequently in leukemia of the myelogenous type, the mechanism is probably that of thrombosis, by reason of an excess of myelocytes filling the corpora cavernosa. In 1930 Achard[1] collected from the literature reports of about 50 cases in which priapism was the first sign of the myelogenous leukemia, and examination of the blood revealed the leukemic condition.

A very infrequent cause of priapism is sickle cell anemia. The relationship of this disease to priapism was first noted in 1934 by Diggs and Ching,[2] who postulated that venous congestion in the penis lowered the oxygen tension, thereby causing increased sickling and additional stasis and eventual venous thrombosis and occlusion, with priapism. It is important, therefore, to make a careful blood examination in any case of priapism, the reason for which is not quickly apparent.

Although priapism may occur in infants and the aged, usually it is seen in adults in the full vigor of life. Hinman's[3] series included a newborn infant, the cause of the priapism being congenital syphilis. Most patients have more or less pain, which may be intense. Not the least of the symptoms is the mental anguish these patients undergo.

Treatment of Priapism

True priapism rarely responds to medication or other conservative measures. Occasionally it subsides spontaneously (usually very gradually), but more often some form of surgical intervention is necessary.

Nonsurgical measures that have been used include sedative agents, applications of heat or cold, stilbestrol, anticoagulant therapy, general or spinal anesthesia, sulfa drugs, and antibiotics.

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* By invitation.

Presented at the 147th Annual Meeting of the Medical Society of the State of New York, Buffalo, Section on Urology, May 8, 1953.

It is now generally believed that while the cause of priapism may be nervous in origin, persistence of the condition is due to thrombosis in the venous spaces of the corpora cavernosa. Therefore, in most cases which have existed for forty-eight hours or longer, the simplest and best form of treatment is evacuation of the thrombosed blood, which generally is followed by prompt relief.

This is usually accomplished by (1) simple aspiration of the engorged corpora cavernosa through a large-gauge needle or (2) incision of the corpora, evacuation of the thrombosed blood, and closure of the wound with adequate drainage. If there is any suspicion of malignancy, the expressed material should be subjected to microscopic examination.

Lower and Christoferson,[4] Achard,[1] and others who have had experience with priapism associated with leukemia recommend deep x-ray therapy instead of incision or aspiration, irradiation being given locally for the priapism and systemically for the leukemia.

Impotence very often follows priapism, especially when incision and drainage of the corpora cavernosa has been employed.

Case Report and Description of New Operation

The following case of very persistent priapism was successfully treated by operation by the authors in the Dominican Republic in 1952.

H. P., aged forty-one years, an agricultural laborer, entered the Hospital Militar Professor Marion on February 14, 1952. Four days earlier, he had been awakened with a painless erection. He had not had intercourse the preceding day or night. He went to work as usual, but noticing that the priapism did not subside, he went to his mistress and then to his wife, having four ejaculations but without modification of the erection. He went to the hospital at Bani, where treatment with general anesthesia (ether) and sedatives was unsuccessful.

He was then referred to the Hospital Militar Professor Marion, where he was treated for five days. His past history was negative. He had had gonorrhea two years previously, treated successfully with penicillin, but otherwise had always enjoyed very good health. Physical examination was also negative except for the priapism. The blood pressure was 110/75. The Kahn reaction and urinalysis were both negative. The laboratory findings showed hemoglobin 100 per cent; red blood cells 4,460,000; white blood cells 6,800; neutrophils 54; lymphocytes 47; monocytes 4; eosinophils 4. Heparin in normal saline was given intravenously, keeping the clotting time above twelve minutes. Stilbestrol, 5 mg. daily, was administered intramuscularly, also vitamin E, 250 mg. every twelve hours. There was no relief.

During these nine days, in spite of the extraordinary erection, he felt no pain, and micturition was normal.

Since there was danger of necrosis of the corpora cavernosa, operation was performed by the authors on February 23 by the perineal approach. No thrombosed veins were found. The corpora cavernosa were incised, freeing a large amount of black blood and several clots. The erection subsided. Two drains (number 10 Nelaton catheters) were left in the corpora cavernosa, and the wound was closed.

Several hours later the erection recurred, possibly because the drains were plugged with clots.

The following day he was again operated upon as follows (Fig. 1): The drains were removed, and the corpora cavernosa were irrigated with a syringe and a solution of heparin in physiologic saline. The clots were removed, and the irrigation continued until the solution was circulating freely through the corpora cavernosa. Two catheters (numbers 10 and 14 F.) were then placed in the corpora cavernosa, the smaller for irrigation and the larger to carry off the dissolved material. A constant-drip irrigation was started in both sides, using a solution of 1,000 cc. saline, 100 mg. heparin, and 200,000 units crystalline penicillin. The irrigation was continued for six days. Since the erection did not recur, the catheters were removed.

The patient had no further erection, but one month later he began to feel discomfort in the penis. Palpation revealed fluctuation in the corpora cavernosa. These were again incised, and necrotic material and an abundance of seropurulent secretion were obtained. In a few days the secretion was serous, but as soon as the cutaneous wound was closed, it reaccumulated, giving the impression that there was some obstruction in the return circulation. However, the secretion gradually disappeared, and the patient was discharged. During the postoperative period there was no fever at any time.

Following the patient's discharge from the hospital and for one year thereafter, he was impotent and unable to get any erections whatsoever. Therefore, on February 7, 1953, he was recalled to the hospital, and the Lowsley plastic operation for the relief of impotence was performed upon him. This operation consists, essentially, in shortening the ischiocavernosus muscle on each side and plicating the bulbocavernosus muscle, which has its own tendon, these procedures being done through a perineal exposure and by the use of ribbon gut, which does not tear the delicate muscles. A com-

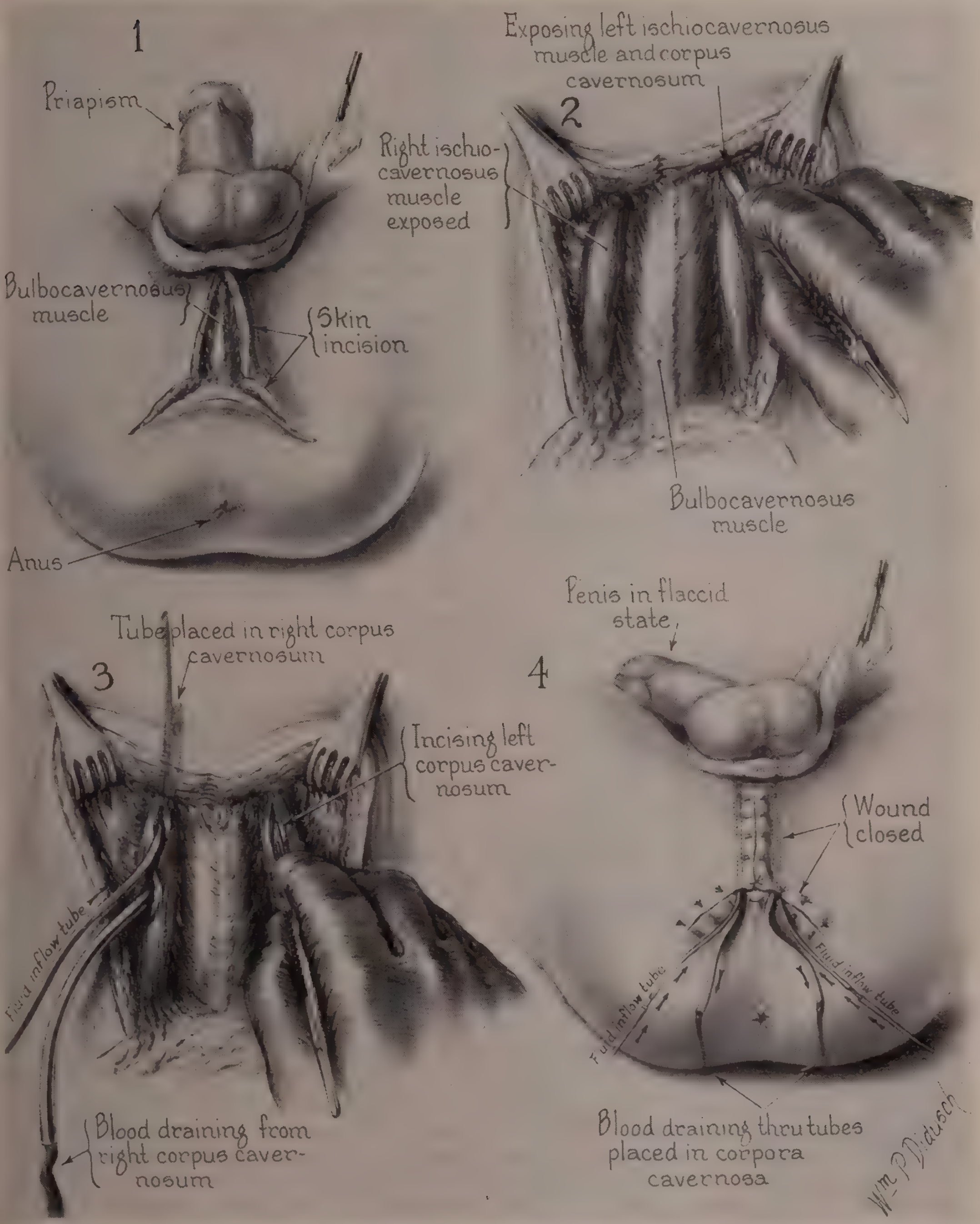
1
Priapism
Bulbocavernosus muscle
Skin incision
Anus
2
Exposing left ischiocavernosus muscle and corpus cavernosum
Right ischiocavernosus muscle exposed
Bulbocavernosus muscle
3
Tube placed in right corpus cavernosum
Incising left corpus cavernosum
Fluid inflow tube
Blood draining from right corpus cavernosum
4
Penis in flaccid state
Wound closed
Fluid inflow tube
Fluid inflow tube
Blood draining thru tubes placed in corpora cavernosa
Wm P. Didusch

FIG. 1. Operation for priapism: (1) Perineal skin incision; bulbocavernosus muscle exposed. (2) Right ischiocavernosus muscle exposed; exposing left ischiocavernosus muscle; no thrombosed veins found. (3) Right corpus cavernosum incised, freeing much black blood and clots; two catheters (numbers 10 and 14 F.) left in corpus, the smaller for irrigation and the larger to drain off the dissolved material; incising left ischiocavernosus muscle and corpus cavernosum. (4) Wound closed with catheters left in corpora cavernosa; constant-drip irrigation continued for six days.

pression suture is then placed in the suspensory ligament, preventing a too rapid flow of blood out of the penis, which would interfere with stasis. On the table, there was a semipriapism produced by plicating the bulbocavernosus and ischiocavernosus muscles.

Postoperatively, the patient had satisfactory improvement in his potency.

Summary and Conclusions

Priapism is caused by a number of factors divided into two main groups, local and systemic. Local factors predominate and include trauma, thrombosis, infection, hemorrhage and hematoma, inflammatory swellings and edema, and tumors encroaching on nerve endings. Systemic conditions include syphilis, leukemia (particularly the myelogenous type), and sickle cell anemia. Certain nervous lesions also may produce priapism.

The treatment of priapism is also divided into two classifications: (1) the general treatment, consisting chiefly of the use of heparin and other noncoagulants, and (2) surgical, consisting, generally speaking, of withdrawing the clots and degenerated blood from the corpora cavernosa by the most feasible means.

The authors present an original operation in which, after removal of the clots and degenerated blood, they continuously irrigate each corpus cavernosum through a small (number 10 F.) catheter by the drop method and allow the dissolved material to come out through a larger catheter (number 14 F.). The solution for irrigation is composed of saline solution 1,000 cc., heparin 100 mg., and crystalline penicillin 200,000 units.

In those cases in which the condition is followed by impotence, it is well to perform the Lowsley plastic operation for the cure of impotence, as described in a recent publication by Lowsley and Rueda.[5]

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Don't Scratch That Itch!

Itching may be caused by anything from dandruff to diabetes, and it can spread or camouflage real trouble if you scratch, according to Dr. Joseph D. Wassersug, Quincy, Massachusetts.

"Doctors may disagree on many points regarding the nature or treatment of itching skin diseases," Dr. Wassersug wrote in *Today's Health,* magazine published by the American Medical Association. "But on one point they are unanimous. Don't scratch!

"They are also pretty much in agreement that most drug store medicines are worse than none at all. In the great majority of cases, these ointments and lotions are too harsh. Literally, they add insult to injury. As a matter of fact, in at least half of the cases of itching the causative factor is not a skin disease but a general medical problem."

Dr. Wassersug divided itching into two classes—that with local causes and that with general causes. Local causes include such things as insect bites and pinworms; vegetable irritants such as poison ivy, burrs, nettles, plant juices, pollens, and many drugs and medicines derived from vegetable sources; mechanical irritants such as scratching, rubbing, and windburn; extremes of temperature and all sorts of chemical irritants. Even body secretions may cause local irritation.

"General causes of itching are of greater significance," he stated. "A patient with generalized itching but no skin rash may have a general disease such as diabetes, a tumor, Hodgkin's disease, or leukemia. At times, allergic factors are responsible, and, in some women, itching is associated with menopause.

"A great many cases of itching skin are due to nervous disorders of one sort or another. It has been definitely found that emotional stress produces itching in some people. The symptoms tend to appear in times of unusual worry or annoyance, particularly if the feelings are repressed. The psychiatrists say that scratching the affected area may provide satisfaction for thwarted desires or self-punishment for guilty thoughts or deeds.

"With all these factors to be taken into consideration, it is no wonder that drug store medicines taken without the advice of a physician are usually doomed to failure. In many cases, itching may be worse than pain. The patient would do well to consult his physician promptly rather than tear away at his flesh with his fingernails."

Urologic Complications of Regional Enteritis

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(From the Department of Urology, State University of New York College of Medicine at New York City and the Brooklyn Hospital)

Regional enteritis, a disease or group of entities of uncertain origin involving the ileum, jejunum, or large bowel singly or in combination, involves the urinary system more commonly than is generally supposed. The diseased portion of bowel may perforate into the urinary bladder or into the retroperitoneum. The resulting changes in the first instance are fairly well recognized, but those of the latter, for the most part, have been almost completely overlooked. Crohn[1] in his very thorough book on regional ileitis, limits his remarks concerning urinary tract involvement to findings which may be summarized in the following statements: "...internal fistulas...are frequently seen overlying the dome of the urinary bladder and creating urinary symptoms; actual gross fistula exit into the urinary bladder is rare in ileitis, much less common than are such similar fecal fistulas which arise in a sigmoid diverticulitis." and "Variations of...internal fistulas...are ileum to right ureter, to left ureter, to urinary bladder..."

Ginsburg and Oppenheimer[2] stated that the urologic complications arising from regional enteritis consist in vesicoenteric fistulas and retroperitoneal abscess. Haymes *et al.*[3] reported a case of terminal ileitis in which there was associated hydroureter and hydronephrosis, these changes in the urinary tract regressing after treatment of the bowel lesion.

These references represent the total of published material on the subject that we have been able to find and leave the impression that urologic changes in regional enteritis are much less frequent than has been the case in our experience. It is our belief that these changes will be found more often if looked for. We propose to discuss all of the urinary complications with particular emphasis on certain changes in the ureter and secondarily in the kidneys, as evidenced by roentgenographic studies which, to the best of our knowledge, had not been considered part of the intestinourinary syndrome associated with regional enteritis prior to our own publication.[4]

Perforation of a diseased segment of bowel into the urinary bladder is probably the best known of the complications, and yet this is infrequent in its own right. The symptoms and findings vary, depending on the stage and the severity of the process. Before actual perforation of the bladder occurs, the lytic or inflammatory process may involve the outer vesical wall, producing pain, frequency, tenesmus, and other symptoms of bladder irritation. After the opening has been established, these symptoms may become more acute, and the associated occurrence of pneumaturia and fecaluria may be noticed. In nearly all of the cases cystoscopic investigation will reveal findings suggestive of a fistulous opening into the bladder, but the stoma is actually visualized in less than one half of the cases. The vesical mucosa presents a hemorrhagic, exudative, inflammatory reaction with a variable area of bullous edema, this latter being confined more or less to the central portion of the inflammatory process (focus). Occasionally, the area of perforation is visualized during cystoscopy by the observation of debris, which was contained in the bladder, making its exit through the opening on the "waves" of distending fluid. Cystography will disclose the communication infrequently.

We have found the following an aid in visualizing the fistulous tract by roentgen study. The bladder is distended by approximately 200 cc. of air. A thin barium mixture is then introduced into the rectum and large bowel through a large catheter with a distensible bag, the latter being filled at the completion of the instillation. With the distended bag under slight traction so that none of the barium may escape, the patient is instructed to bear down. At this time a roentgen exposure of the bladder area is made. A thin line of barium contrasted against the air in the bladder may be seen.

Perforation of the diseased bowel into the retroperitoneal tissues may result in the formation of a retroperitoneal abscess, which may include the perinephritic tissues as well. The symptoms are chills, fever, pain and tenderness in the right

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Presented at the 147th Annual Meeting of the Medical Society of the State of New York, Buffalo, Section on Urology, May 8, 1953.

TABLE 1.—REPRESENTATIVE CASES

Case	Age	Symptoms	Genitourinary Roentgen Findings	Findings at Operation	Operative Procedure	Results
1	63	Pneumaturia, fecaluria, abdominal cutaneous fistula	Normal	Terminal ileum and cecum adherent to each other and to urinary bladder. Three separate areas contribute to formation of cutaneous fistula	Resection of terminal ileum and cecum plus ileo-ascending colostomy. Excision of cutaneous sinus tracts and fistulous tract to bladder. Excision of portion of bladder with primary closure	No recurrence 28 months later
2	26	Recurrent right retroperitoneal abscess, three times during two-year period	Lateral and anterior displacement of right lower ureter	Multilocular retroperitoneal abscess (operation 1). Thickened terminal ileum adherent to and perforated through posterior peritoneum (operation 2)	Evacuation of multilocular retroperitoneal abscess (operation 1). Ileo-ascending colostomy with exclusion of distal ileum (operation 2)	Three-year follow-up: no recurrence of retroperitoneal abscess; no bowel symptoms
3	32	Right flank pain radiating on occasion to right testicle; dysuria; diarrhea	Dilated right double ureters and renal pelves, the former joining at the level of the sacroiliac joint. The common ureter distal to the point of juncture was irregularly narrowed for a distance of approximately 6 cm. (Fig. 1)	Inflammatory terminal ileum had perforated through the posterior peritoneum, involving the common right ureter in the inflammatory mass	Exploration of right ureter with insertion of T tube; exploratory laparotomy (operation 1). Nephroureterectomy (operation 2). Ileotransverse colostomy with excision of ileitic process (operation 3).	Course satisfactory; initial intervention in the genitourinary tract due to incorrect diagnosis led to loss of kidney
4	32	Loss of weight; diarrhea; right flank pain radiating on occasion to right testicle	Medial displacement of midportion of right ureter with a 4-cm. area of dilatation proximal to this displacement and a narrowing above the level (Fig. 2)	Involvement of two areas of both ileum and jejunum with dilatation of the entire small bowel. Lower portion of jejunum adherent to posterior peritoneum at site of perforation	Jejunotransverse colostomy	Gain in weight and marked improvement of bowel movement. No recurrence of genitourinary symptoms. Return of ureter to normal (Fig. 3)
5	34	Severe recurring low abdominal pain. Alternating diarrhea and constipation. Pneumaturia on one occasion	Filling defect in lower third of left ureter (Fig. 4)	Marked inflammatory involvement of sigmoid colon with fixation to posterior peritoneum	Transverse colostomy	Primary resection of involved bowel three months later followed by closure of colostomy. Ureter returned to normal. Subsequent ileitis and cutaneous fistulization necessitating further resection. Three years later, complaints of diarrhea six times daily. No involvement of urinary tract

lower quadrant and/or flank, and redness and edema of the skin over the involved area with or without actual fluctuation. Urography may fail to show the shadow of the psoas. Displacement of the ureter and/or kidney with possible fixation of the latter is sometimes seen. This fixation is demonstrated by making a double roentgen exposure on the same film during pyelography, the first exposure being made while the patient inspires, the second during deep expiration. The unaffected side will show motion, the other will not. Gas may be observed in the retroperitoneal cellular tissues.

Not infrequently, in our experience, perforation has been of a less acute form so that the urinary aspect of the syndrome has pursued a chronic course. The resulting changes in the urinary tract are those which we feel represent a distinct intestinourinary syndrome, although in the past they have been completely overlooked.

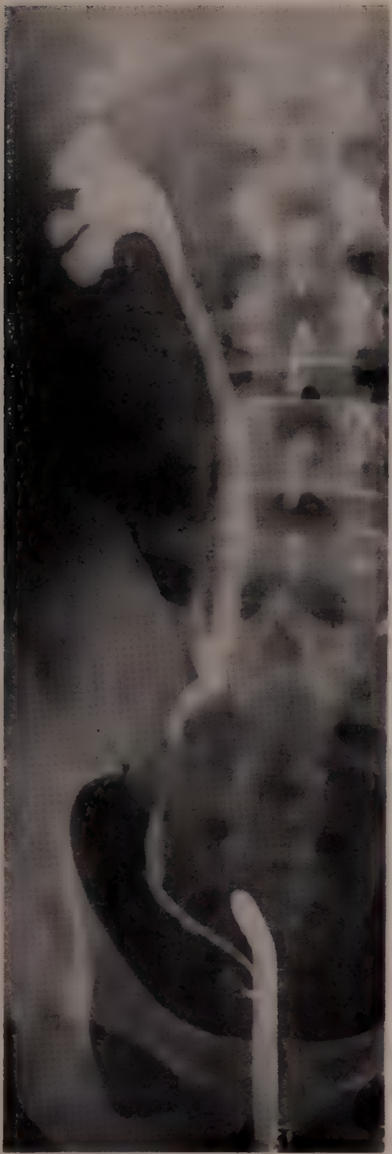

FIG. 1. Case 3—Dilated right double ureters and renal pelves, the former joining at level of sacroiliac joint. Distal to juncture common ureter was irregularly narrowed for a distance of approximately 6 cm.

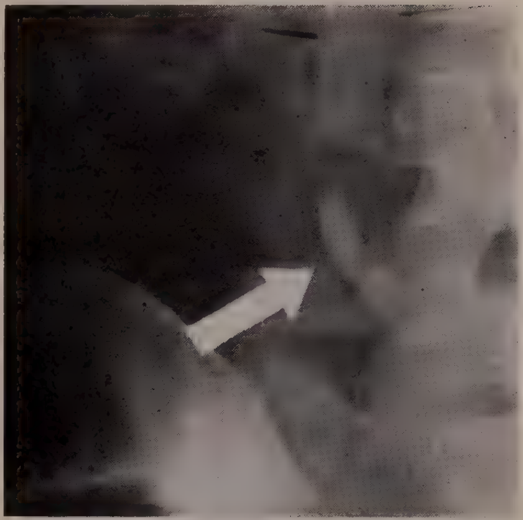

FIG. 2. Case 4—Medial displacement of midportion of right ureter with 4-cm. area of dilatation proximal to this displacement and a narrowing above this level.

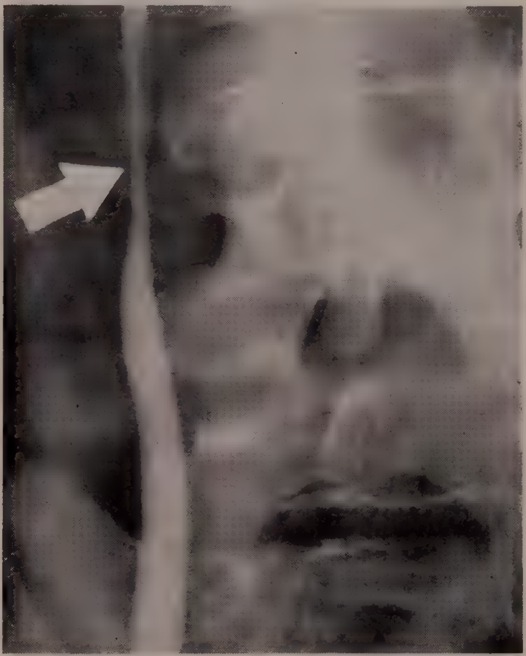

FIG. 3. Case 4—Return of ureter to normal following improvement of bowel lesions and no recurrence of genitourinary symptoms.

The inflammatory process from the intestine may involve the periureteral structures and the ureter by compression or actual invasion. The presenting symptoms are those of urinary obstruction, such as flank pain, colic with radiation along the course of the ureter, chills, and fever. When unrelieved, these episodes tend to become recurrent. Very likely this pain is often overlooked and is considered to be gastrointestinal in origin, particularly if diarrhea is coexistent. Urograms may reveal hydroureter and hydronephrosis of varying degrees. Displacement, narrowing, and associated defects in the involved portion of the ureter adjacent to the perforated bowel are all distinct possibilities. The urine will often contain red blood cells and pus cells.

Treatment depends on the portion or portions of bowel involved and the type of complication

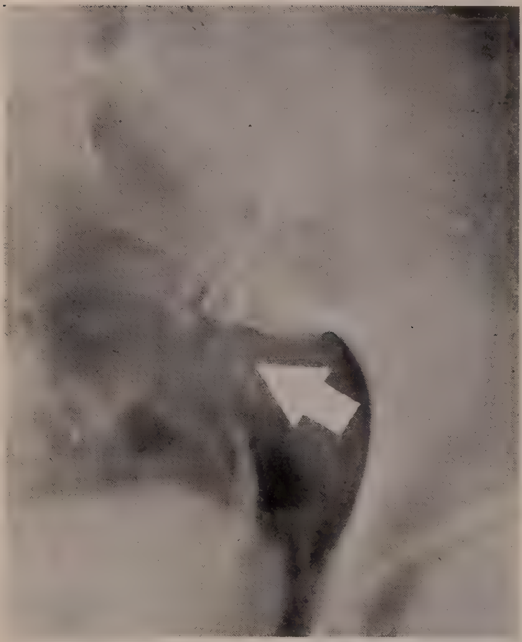

Fig. 4. Case 5—Filling defect in lower third of left ureter.

involving the urinary tract. Vesicoenteric fistula is managed surgically and consists of either (1) primary resection of both bowel and the involved portion of the bladder or (2) short-circuiting operation with later excision of fistula and involved portions of bowel and bladder. Retroperitoneal abscess is evacuated when diagnosed and the underlying cause treated at a future time.

If the disease in the bowel is confined to the terminal ileum, a primary resection or an ileotransverse colostomy with exclusion of the distal ileum should be done. When a higher portion of the bowel is involved, the appropriate short-circuiting procedure is carried out (or primary resection). Large bowel lesions require primary resection with or without colostomy, whereas when there is involvement of multiple areas of bowel, the case usually must be managed by medical means. Ileostomy has occasionally been utilized.

The urinary complications will usually disappear after bowel surgery, and such a regression should be anticipated in all cases since the major pathologic disturbances are not intrinsic in origin in the urinary tract. Intervention in the form of some surgical procedure on the urinary system is unnecessary and may lead to further complications.

Our attention was first directed to this intestinourinary syndrome after we had explored the right lower ureter of a patient who was admitted to our service at the Brooklyn Veterans Administration Hospital, complaining of right flank pain radiating down the course of the ureter, and whose urograms revealed an irregularly narrowed area in the lower one third of the ureter with ectasis above. At surgery this ureter was discovered to be extensively involved in an inflammatory process which was found to be originating in the terminal ileum (Case 3, Table I). Thereafter, in cooperation with the gastrointestinal service all cases of regional enteritis were carefully worked up from a urologic standpoint, and all cases of suggestive ureteral changes were subjected to a thorough intestinal survey. The gastroenterologist reported in another publication.[5] The cases summarized in Table I are representative of those encountered with urologic complications. To date, 45 cases of regional enteritis have been studied, and of these nine show some type of implication of the urinary tract. The average age in our series showing urinary involvement was thirty-nine years, which is higher than the average age of onset of regional enteritis recorded in the literature. However, the maximum incidence falls between twenty and thirty years, which is in agreement with the generally reported cases of enteritis. Males predominate in their susceptibility to the disease, and social factors do not seem to play a role in the etiology.

Comment

The urologist must consider regional enteritis as an underlying etiologic agent in any case of atypical ureteral obstruction, narrowing, filling defect, or displacement with or without evidence of hydronephrosis and hydroureter and in any recurrent retroperitoneal abscess or vesicoenteric fistula.

The portion of ureter most frequently involved is the approximate area marked by the crossing of the iliac vessels on the right side. Involvement at a higher level occurs when a segment of jejunum perforates through the posterior peritoneum. Left ureteral involvement is rare, but when it occurs, it is usually in the lower one third and secondary to large bowel perforation.

It cannot be emphasized too strongly that when the above types of urinary complication occur, the bowel condition demands primary treatment; the urinary complication will usually disappear. If after a fair trial the process does not regress and remains symptomatic, then some type of urologic intervention may be indicated. That this is not of academic interest may be borne out by reference to Case 3 in Table I.

When retroperitoneal abscess is present, its evacuation is of first consideration. The underlying bowel lesion is managed at a later date. Vesicoenteric fistula should be managed as described.

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Discussion

Gordon D. Oppenheimer, M.D., *New York City.*—It has been a real pleasure to hear Dr. Harlin's presentation, and I want to commend him for stressing again the fact that urologic lesions often result from nonspecific inflammatory lesions of the bowel, as well as malignant lesions.

Regional ileitis is a subject very close to my heart because the original work on this disease was done by Ginsburg and myself between 1927 and 1931. Subsequently, with Crohn we published the first complete description of the clinical and pathologic features in 1932, over twenty years ago.

Pathologically, regional ileitis is a chronic, nonspecific, ulcerative, granulomatous, stenosing lesion, usually of the terminal ileum, sometimes leading to fistula formation. Its etiology is unknown. It can be diagnosed first by its clinical picture of diarrhea, cramps, and fever, sometimes with chronic obstructive symptoms and signs, or by the formation of an intra-abdominal mass with or without internal or external fistulas. Gastrointestinal x-ray studies are characteristic and show the typical string sign as emphasized by Kantor.

As Dr. Harlin has pointed out, involvement of the urologic tract takes place in three main ways: (1) involvement of the bladder by the adjoining inflammatory disease or abscess with or without perforation, (2) formation of a retroperitoneal abscess simulating perinephric abscess, and (3) ureteral involvement by displacement or actual periureteritis and ureteritis. The incidence of urologic complications is estimated as between 4 to 10 per cent of all cases of regional ileitis.

The treatment indicated is usually surgical and directed to the intestinal lesion. The results of ileocolostomy with ileal exclusion have been gratifying, but removal of the ileum with ileocolostomy often has to be performed.

Physicians and the Press

Physicians and representatives of the press may differ:

The physician *searches* cautiously for the exact truth.
The press representative is *interested* in the exact truth.
The physician is technical: "a compound comminuted fracture of the tibia and fibula."
The press representative prefers simple words: "a broken leg."

Physicians and the representatives of the press are alike, too!

Neither likes to be inferior to anyone.
Both will fight against odds: one to help his patient; one to supply news to the public.
Both prefer facts to rumor.
Both like help on difficult and unpleasant cases (as well as the easy ones).

In working with representatives of the press also keep in mind:

Do not ask for favors.
Do not resent articles, if you were uncooperative.
Do not deny minor errors, if you failed to explain.
Do not forget to say "thank you."
Be as courteous with them as you expect them to be with you.
Be as truthful with them as you expect them to be in handling a story in which you or your society might be involved.

Usually they will respect your confidence, if you request it and have valid reason for doing so.—*Journal of the Indiana State Medical Association, October, 1953*

Calycectomy

Report of Five Cases

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(*From the Department of Urology, Veterans Administration Hospital*)

CALYCECTOMY (calyceal resection, partial nephrectomy, renal resection, heminephrectomy) has become accepted generally as the treatment of choice for calculi occurring in dilated renal calyces whose infundibula are strictured or in any way deformed.

In 1937 Goldstein and Abeshouse[1] collected 296 cases, including six of their own, in which calycectomy was performed for stones in a hydrocalyx. Campbell[2] in 1941 reported four cases of renal resection for calycectasis and calculus. Mathe[3] presented six cases in 1943, and in 1947 Engle[4] added nine additional cases. Mayers and Campbell[5] reported four cases in 1949. In nearly all of these cases the immediate postoperative period was devoid of major complications and free of hemorrhage, infection, and urinary fistula. In none was there recurrence of stone in the operated kidney. The operative procedure varied somewhat with each author, but the ultimate satisfactory results were the same.

To understand better the rationale for calycectomy, a brief review of the etiology of the condition for which it is carried out is necessary. Randall[6] originally advanced the theory of stone formation as being due to plaque production upon a small ulcerated area of a renal papilla near a collecting tubule, from which the calculus builds up and is temporarily attached. According to Twinem[7] 65 per cent of calyceal stones occur in the inferior calyx, 20 per cent in the middle, 7 per cent in the superior, and the remainder in two or more calyces. Joly[8] pointed out that the reason the majority of these calculi form in the lower calyx is due to the dependency of this structure, which is well below the level of the upper portion of the ureter. The urinary stream under such conditions is too sluggish to wash crystals out of such a calyx. Once formed, the calculus, together with associated infection, may lead to inflammation and fibrotic constriction of the infundibulum resulting in a hydrocalyx (calycectasis, hydrocalycosis, calyceal diverticulum, pyelogenic cyst, "dysuric calyx"[9]). Under such conditions the exit of the calculus is impeded or prevented. In other cases calyceal abnormality may precede the stone. Calycectasis may be the result of developmental fault such as dependency or angulation at the calyceal infundibulum, and once established, calculus formation may come about as a result of urinary stasis and infection.

It seems apparent from the above that conservatism in the form of nephrolithotomy and pelviolithotomy will be defeated since experience has all too often shown that calculi are prone to recur under such conditions. It has been estimated by Fish[10] that 14 to 18 per cent of calculus will recur in the original calyx.

In our series of five cases there has been no recurrence of stone to date. The postoperative period in all these cases was free of major complications including hemorrhage.

Operative Procedure

1. The kidney is approached through a lumbar incision and mobilized. The eleventh and twelfth ribs are usually resected to afford better exposure.
2. The ureteropelvic juncture is freed of all bands and areolar tissue, and incision is made into the renal pelvis, both for removal of any pelvic stone that may be present and also for postoperative drainage.
3. A rubber-shod clamp is placed across the renal pedicle and closed.
4. A wedge-shaped segment of renal parenchyma containing the stonebearing calyx is excised.
5. The amputated calyceal stump is closed using a continuous number 4 zero atraumatic chromic catgut suture.
6. The flaps of renal parenchyma are approximated with a deep layer of interrupted mattress

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Presented, by invitation, at the 147th Annual Meeting of the Medical Society of the State of New York, Buffalo, Section on Urology, May 8, 1953.

The statements and conclusions published by the author are a result of his own study and do not necessarily reflect the opinion or policies of the Veterans Administration.

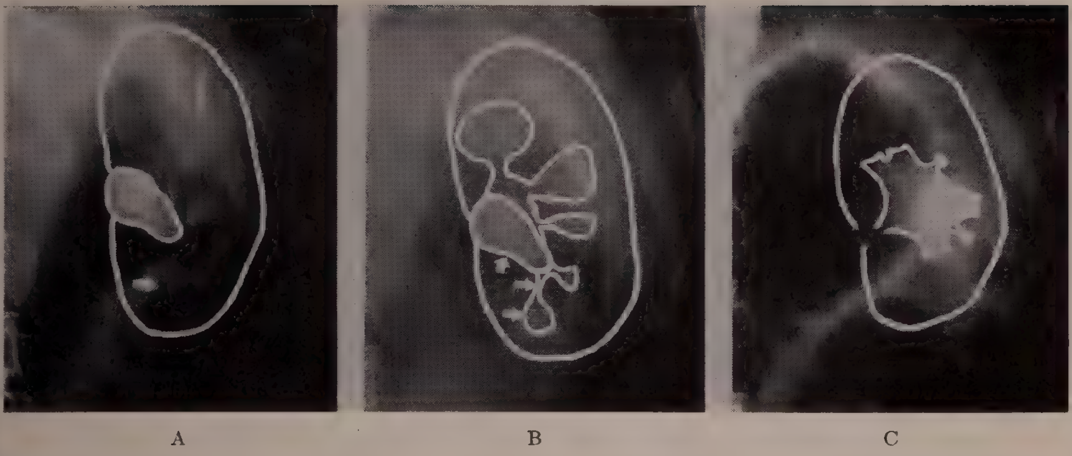


Fig. 1. (*A* and *B*) Large calculus in lower portion of left renal pelvis and smaller calculi in dilated inferior calyx. (*C*) Intravenous urogram three months after operation.

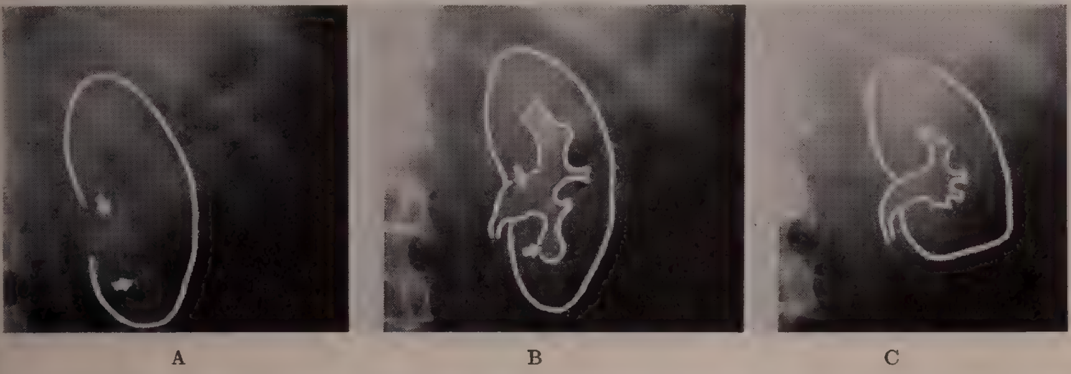


Fig. 2. (*A* and *B*) Calculus in left renal pelvis and smaller calculi in the left inferior calyx. (*C*) Excretory urogram nine months after operation.

sutures tied over fat pads and a superficial continuous suture, also tied over fat pads.

7. The kidney is returned to its fossa and suspended using a Deming type nephropexy.

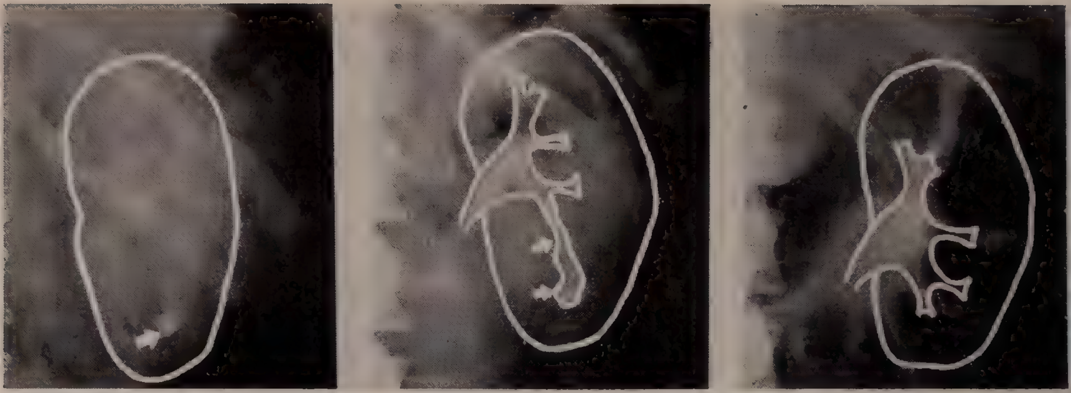
8. Rubber tissue drain is inserted down to the operative site. Nephrostomy tube and ureteral splint catheter are not used.

Case Reports

Case 1.—W. S., male, aged fifty-six, suffering from Parkinson's syndrome, was admitted to the Brooklyn Veterans Administration Hospital on June 6, 1951, complaining of stomach trouble and left-sided back pain of several months duration. Intravenous urogram showed a large calculus in the lower portion of the left renal pelvis and smaller calculi in a dilated inferior calyx (Fig. 1A and B). On October 4, 1951, lower calycectomy was carried out with removal of the lower third of the kidney. The pelvic calculus was extracted through the pyelotomy incision. Intravenous urogram was done three months after operation and showed satisfactory results (Fig. 1C).

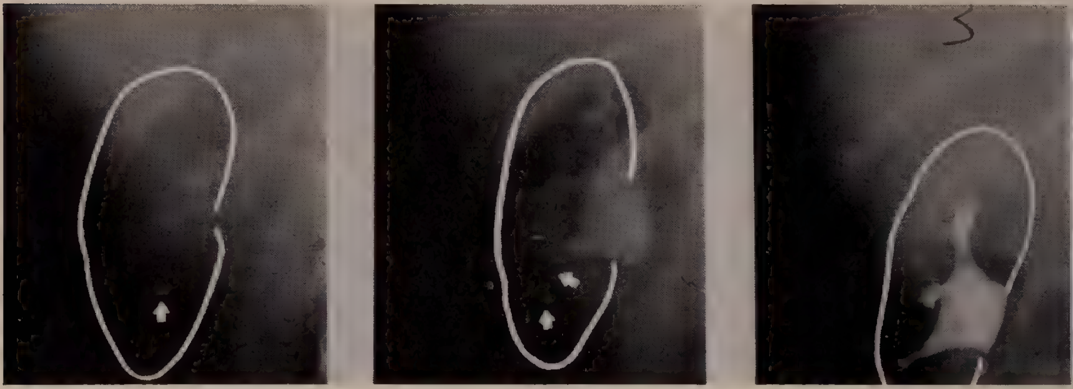
Case 2.—A. M., male, aged fifty-seven, was admitted on October 24, 1951, with a history of intermittent painless hematuria of one and one-half years duration. Intravenous pyelogram demonstrated a calculus in the left renal pelvis and smaller calculi in the left inferior calyx (Fig. 2A and B). Left pelviolithotomy and lower calycectomy were carried out on December 13, 1951. Excretory urogram made nine months following operation demonstrated absence of calculi (Fig. 2C).

Case 3.—E. B., male, aged twenty-nine, was admitted on February 19, 1952, with a two-year history of recurrent episodes of painless hematuria. Intravenous urogram revealed left renal calculi (Fig. 3A and B). On March 12, 1952, left lower calycectomy was performed. Follow-up intrave-



A B C

FIG. 3. (*A* and *B*) Left renal calculi. (*C*) Follow-up urogram three months after operation.



A B C

FIG. 4. (*A* and *B*) Calculi in right lower calyx. (*C*) Retrograde urogram nine months after operation.

nous urogram three months after operation showed satisfactory results (Fig. 3C).

CASE 4.—A. E. W., male, aged forty-seven, was admitted on June 3, 1952, with a history of right renal colic of forty-eight hours duration. Calculi were found filling the right lower calyx on intravenous urogram (Fig. 4A and B). Right lower calycectomy was done on June 17, 1952. Retrograde urogram nine months following operation showed no recurrence of stone and absence of the involved calyx (Fig. 4C).

CASE 5.—J. L., male, aged thirty-five, was admitted on September 24, 1952, with a history of intermittent low back pain, abdominal cramps, and pyuria of seven years duration. Urograms showed the presence of a large left renal calculus and several small calculi in the inferior left calyx with slight distention of this calyx and constriction of its infundibulum (Fig. 5A and B). On October 9, 1952, left pelviolithotomy and lower calycectomy were performed. Follow-up retrograde urogram made five months after operation showed satisfactory results (Fig. 5C).

Summary and Conclusions

A series of five cases is reported in which calycectomy was carried out for lower calyceal stone. In three of these cases calculi were also present in the renal pelvis.

Convalescence in all five cases was free of major complications including hemorrhage.

The surgical procedure outlined is felt to be easy of application and indicated in selected cases in which calculi are present in pathologic renal calyces.

The extirpation of such calyces reduces the possibility of recurrence of stone and eliminates the element of infection.

The period of follow-up in our series has been

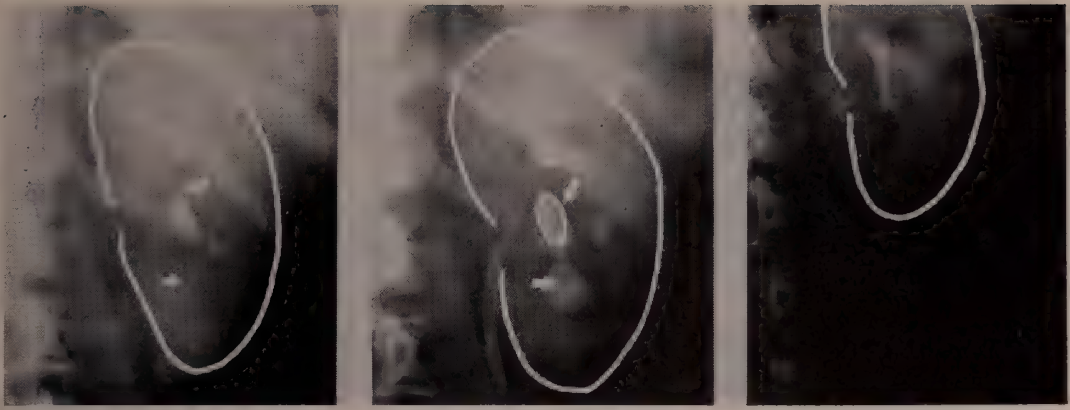


Fig. 5. (*A* and *B*) Large left renal calculus and several small calculi in inferior left calyx with slight distention of calyx and constriction of infundibulum. (*C*) Retrograde urogram five months after operation.

too short to predict the ultimate results, but to date there has been no recurrence of stone in any of these cases.

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Discussion

George E. Slotkin, M.D., *Buffalo.*—The indications for calycectomy as presented by the author are commendable. The only point of discussion which he has left me in this admirable presentation is the problem of calculous disease in general.

It has always been my contention that a patient with renal calculus is an individual who must be watched over a period of years. The simple finding and removing of the stone are only the preliminary steps in the future observation of the patient to prevent recurrence because the underlying factor which originally created the stone probably still exists.

In cases where stones are present in dilated calyces with evidence of strictured infundibulum the latter should be removed. This does not preclude the possibility of additional stones forming in the other kidney no matter what the lapse of time may be. Careful and diligent exploration must be done to remove any possible finding that may act as a focus, and after the operative procedure, which in my estimation is only the initial phase of the observation, the patient must be seen periodically for future prophylaxis.

On this basis, therefore, the employment of other methods for the prevention of calculi must be considered; change in the diet, ingestion of proper fluids, institution of a proper regime (aluminum hydroxide and stilbestrol), and the employment of hyaluronidase. All of the above entails the cooperation of the patient for years to come, and it is on that basis only that a careful urologist can offer a reasonable assurance of no recurrence in spite of any surgery which is instituted.

I would like to cite a recent case which is a striking example of neglect and misconduct by the patient, which caused her to return for more surgery. This young woman, forty years of age, had calculi removed from the kidney nine years previously, at the age of thirty-one years, by a most competent urologist. However, the subsequent follow-up was neglected by the patient so that she now presented herself again with persistent colic in the right flank and urinary disturbances as a result of secondary infection. She was first seen by me on April 17, 1953, and I found a multiplicity of calculi in a dilated lower major. A complete urologic investigation disclosed a normally functioning kidney. A right calycectomy was performed on April 22, 1953. She has made a complete and satisfactory recovery.

But while her immediate pathology has been removed, this patient will be instructed to continue under observation and have periodic checkups over a period of years with the assurance that any change that takes place can be discovered early. On this basis only can we assume the responsibility of care for our patients and recommend the type of surgery which the author has so vividly described.

The Role of the Organs of the Female Pelvis and Perineum in Infections of the Lower Urinary Tract

JOHN E. HESLIN, M.D., ALBANY, NEW YORK

(From the Department of Urology of the Albany Medical College)

This subject is presented because we have been impressed with the frequency of lower tract infections without symptoms or evidence of upper tract origin after complete urologic investigation. The absence of urethral or bladder diverticula would suggest that associated pelvic pathology and direct or metastatic extension of infection play a part in the etiology of these infections. The direct extension from the anus or vagina called attention to perineal hygiene, with the few references in the literature to this factor and the little instruction given to women and children in this important care of the body. All of these factors appeared to warrant again presenting this rather elementary discussion.

The genital and urinary tracts in the female, although not directly communicating as in the male, are closely related, and both must be considered in the study of diseases affecting organs of these tracts. The combined specialty of urologic gynecology or gynecologic urology would seem to be an ideal surgical specialty, but except for Kelly, Sampson, Hunner, and Wharton, few have adopted such a practice and those, for the most part, before the present development of urology.

This is well illustrated by Fulkerson,[1] who estimated that 20 per cent of patients consulting the gynecologist have urinary symptoms with 42 per cent having urinary tract lesions alone, 36.9 per cent having lesions of both tracts, and 11.7 per cent having lesions of pelvic organs, while only 8.4 per cent of the cases with urinary symptoms will have causes outside of the urinary tract. Vesicovaginal and ureterovaginal fistulas, malposition and prolapse, and benign and malignant lesions of the cervix and body of the uterus, with or without involvement of the ureters, are striking examples of the close relationship of the structures of these systems.

Poor drainage and congestion, thought to be necessary contributing factors in bladder infections, could well be supplied by the above or by the congestion associated with menstruation and the trauma of intercourse and childbirth. These conditions are capable of preparing the soil for organisms reaching the bladder by direct extension from without, through the lymphatics, or from the kidneys above. Granulations, polypoid processes, sacculations, and definite strictures may result from the local trauma of childbirth or the atrophic changes of the menopause. The cervix has long been suspected as a focus in infection, and the frequency of urination associated with carcinoma of that organ is at times seen as an early symptom. No urologic survey is complete without considering the possibility of associated pathology in the pelvic organs and a careful examination routinely made to rule out such lesions.

Vulvovaginitis in children has long been considered closely associated with cystitis and trigonitis, but the urologic literature and textbooks seldom mention this area as contributing to such lesions in the adult. Local resistance must be rather high, but some predisposing condition could easily make this contamination a real etiologic factor.

The anatomy of the female perineum with the close proximity of the external urinary meatus to the vagina and the anus makes the vulva, the vagina, the cervix, and the urethra vulnerable to infectious material from the rectum. The high incidence of Escherichia coli infections would further implicate this source. Added to this direct involvement of the vagina from feces, hands, and toilet seats, metastatic infection has been suggested in the work of Boisvert and Walcher.[2] Campbell,[3] in his new textbook, refers to their study of the bacteriology of vaginitis in 286 girls. Hemolytic streptococci were found in 37, gonococci in 33, and pneumococci in 11. In

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Presented at the 147th Annual Meeting of the Medical Society of the State of New York, Buffalo, Section on Urology, May 8, 1953.

30 of the 37 cases with hemolytic streptococci, these organisms were identified as the same type and grouping as were found in the nasopharyngeal cultures, suggesting etiologic relationship.

Leukorrhea is a common condition occurring at times in a large percentage of women. Biskind[4] refers to the study of leukorrhea by Bickers,[5] in which he found that it was predominantly of bacterial and parasitic origin. These organisms are usually found in the lower bowel and must be considered as reaching the vulva, vagina, and cervix from improper cleansing of the anus.

Trichomonas infections of the urinary tract are more frequent than supposed, and the primary infection found in the vagina might give the clue as to the causative factor in some persistent bladder conditions.

In our treatment of local lesions in the urethra, trigone, and bladder, we all too frequently fail to examine the vagina and cervix. Clearing up infection in this area may not only aid in the treatment of the urinary tract lesions but may prevent a possible recurrence of the acute phase or development of chronic lesions.

Our duty to these patients is not ended with the relief of their symptoms or the clearing up of the pathologic lesions present. A frank discussion of the role of improper perineal care in the possible causation of their symptoms and the proper hygiene of the parts should be a part of our treatment. Biskind[4] calls attention to the few references in the urologic or gynecologic literature to this important subject. In his paper he discusses the anatomy and physiology of the perineum and emphasizes the great importance of perineal cleanliness in obstetrics, gynecology, infancy, and childhood. Members of all branches of medicine and nursing, especially obstetricians, gynecologists, and pediatricians, should include such instructions as part of the general care of their patients.

Biskind in 1950 published a pamphlet* clearly outlining the subject and making the discussion with the patient or the mother simpler and more impressive. He urges the early instruction of children in the technic of the use of toilet tissue to avoid the danger of spreading germs usually present in fecal material. This instruction emphasizes the need of a good quality, highly absorptive tissue, using it as a blotter following urination and in a side-to-side rather than forward motion in cleansing the anus after a bowel movement. These separate procedures greatly reduce the danger of extension of infection to the vagina and urethra.

It is hoped that this superficial review will make a consideration of the female perineum and pelvic organs an important factor in the prophylaxis, the etiology, and treatment of apparent urologic disease.

Summary

1. Increasing incidence of localized lower urinary tract infections seems apparent.
2. Attention is called to the role played by diseases of the vulva, vagina, cervix, and uterus in the etiology of such infections.
3. The probable relationship of poor perineal hygiene in the development of these diseases is discussed.
4. A plea is made for more frank discussion by physicians and nurses of this important part of body care and the early instruction of the child.
5. Complete urologic and pelvic study will be required in all cases of recurrent or persistent infections of the urinary tract. Local conditions referred to above may account for some cases with a normal upper urinary tract and localized lower tract pathology and symptoms.

75 Willett Street

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Discussion

John H. Morrissey, M.D., *New York City.*—It has been quite a stimulating experience to hear Dr. Heslin's contribution to this program, and I wish to present my compliments to him for calling attention to an important urologic factor in the etiology of genitourinary infections. One statement alone is pertinently significant: "In our treatment of local lesions in the urethra, trigone, and bladder we all too frequently fail to examine the vagina and cervix." This is only too true, and yet understandably so, when one comprehends the problem, particularly the chronicity of the low-grade, persistent infections. In patients continuously complaining of no relief and returning and returning, we are inclined to disregard the finer details of examination, get them in and out, hoping that whatever treatment they have had will work.

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* May be obtained from Holland-Rantos, Inc., New York, New York.

Perhaps, after all, they are a gynecologic problem rather than a urologic one. Certainly, advice and early instruction of children in the technic of toilet tissue is a big order for us, apart from emphasizing the need for quality, highly absorptive tissue, its use as a blotter, and a side-to-side forward motion—had we better not leave this to Fulkerson and Biskind and Biskind's pamphlet of instructions?

All this notwithstanding, there is no question that the urethra in the female is a productive source of infection and trouble higher up in the bladder and kidney, regardless of how it originally gets going. Inspection and careful study of the urethra in women and children is imperative. And incidentally, Campbell's 286 cases of vaginitis in young girls hits a new high—that is more than all of us here have seen, I am sure, or probably ever will see. Only too often this reveals a granular urethritis, early strictures, plugged ducts and crypts, and small urethral polyps. Treatment by dilatation alone is effective in many cases.

In my opinion the most satisfactory treatment of these obscure and refractory infections of the urethra is the use of small Protargol bougies, or suppositories if you will. These are made up by the druggist in a strength of 2 or 3 per cent Protargol in cocoa butter. I have them made up in average lengths of 4 inches and place a portion of the bougie, which is somewhat smaller in caliber than a lead pencil, in the urethra after the patient has emptied her bladder. It is held in place by a pledget of cotton and after melting is replaced by a second one. This treatment, repeated four or five days in succession, has given very satisfactory results, and I recommend it for your consideration in the treatment of these cases when something more drastic, such as dilatation or fulguration, is not indicated.

Handicapped Seek Chance To Prove Themselves

A chance to prove themselves—a chance to prove they don't need anyone to feel sorry for them—is what most of the handicapped want. However, the well-meaning person often robs the handicapped of this chance, Dr. John E. Eichenlaub, Urbana, Illinois, wrote in the October *Today's Health* magazine, published by the A.M.A.

"A person with a defect, whether it is mild or severe, is still a person," Dr. Eichenlaub pointed out. "Like anyone else, he has to feel accepted and wanted as a person before the friendship or the applause of his fellows means anything to him. To think of him first as a horrible case, second as an object for charity (whether in money, deeds, or words), and last or not at all as a person closes the roads of real human contact.

"More than anyone else, a person who is handicapped needs to find these roads open. Friendship and applause themselves do not have greater meaning for him than for other people, but proof of his ability to win these treasured rewards certainly does. His constant fear is that he will not be able to live a fruitful and satisfying life. He can get used to the idea of not being as productive, as comfortable or even as independent as his fellows, but he can never get used to the idea of being a cripple instead of a person—of being closed off from his fellow man by an impenetrable wall of differentness. He needs to show himself continually that he is an accepted member of the human race, free to seek and find the rewards of life as if he were healthy and normal.

"The person who is fighting a handicap hates to have anybody talk about his problem. He hates to have things done for him if he can do them himself He hates to get any help or reward which he does no think he has earned. He hates these things becaus he hates to be thought of as a cripple instead of as a person. But, he also hates them because he know it would be easy to fall into the same way of thinkin himself. He knows that if he quits trying to get th normal satisfaction for which he must struggle s much harder than other people, he will lose out in th long run, but the fruits he can win through sympathy, poor as they are, tempt him sorely. This i the reason for the violent outbursts with which a handicapped person sometimes greets well-meanin helpers."

Doctors today think that weaning the handicapped from self-pity and invalidism is an importan part of the job, according to Dr. Eichenlaub. The aim to make people build their lives on hope an achievement instead of on despair and self-pity However, he added: "No matter how much effor is put into it, not every patient can be kept from invalidism. Some find in illness the excuse that the have always sought for backing off from the problems of living. Others find that their basic nee to lean on others is finally met. Still others fin that the sympathetic response of relatives an friends to their every wish brings them closer t their desires in life than anything they have bee able to do in health. These things encourage invalidism. And once invalidism is established in th patient's personality, it is very hard to root ou again. In fact, this process usually takes long an intense effort by a trained team of specialists."

The Effect of Banthine and Similar Agents on the Urinary Tract

JOHN W. DRAPER, M.D., AND ADRIAN W. ZORGNIOTTI, M.D.,* NEW YORK CITY

(From the Department of Surgery (Urology), Cornell University Medical College, and the Second Division Urology, Bellevue Hospital)

OBSERVATIONS of the response of the bladder to Banthine (Searle) and other related agents were presented a year ago and appeared in press recently.[1] The success of Banthine in the treatment of certain gastrointestinal lesions has stimulated the development of a large group of new compounds, many of which merit our study. In addition to these substances, which we will refer to as anticholinergic drugs, we are also interested in the cholinergic drugs, used to relieve acute and chronic nonobstructive urinary retention.

In practical use the cholinergic and anticholinergic drugs can be considered as antagonists, and our experiments with the urinary tract are based on this assumption. Actually the exact nervous mechanism of the bladder and ureter is not fully understood nor is the mode of action of some of the drugs we are using fully understood. Figure 1, based on Goodman and Gilman,[2] Rosenblueth,[3] and Hambourger *et al.*,[4] illustrates our present knowledge of the pharmacology of these interesting drugs.

Among the anticholinergic group atropine is known to block the effect of acetylcholine at the end-plate of the parasympathetic system. It has no effect on transmission of impulses at the ganglion level. Banthine and its related compounds have two effects. They block ganglionic acetylcholine transmission in both the parasympathetic and sympathetic systems and also have a potent atropine-like action at the parasympathetic end-plate.

Prostigmine, one of the cholinergic group of drugs, antagonizes the acetylcholine-destroying enzyme cholinesterase. The action of acetylcholine in the parasympathetic system, both at the ganglionic and end-plate levels, is thereby prolonged. Furmethide, Urecholine, and Doryl,* while they do not resemble each other chemically, have actions very similar to acetyl beta methyl choline (Mecholyl) but are not considered as toxic. These drugs exert a strong muscarinic action directly on the effector cell but unlike acetylcholine are not affected by cholinesterase.

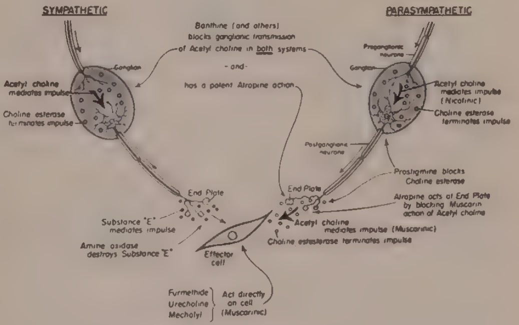
SYMPATHETIC
PARASYMPATHETIC
Banthine (and others) blocks ganglionic transmission of Acetyl choline in both systems
- and -
has a potent Atropine action
Ganglion
Acetyl choline mediates impulse
Choline esterase terminates impulse
Preganglionic neurone
Ganglion
Acetyl choline mediates impulse (Nicotinic)
Choline esterase terminates impulse
Postganglionic neurone
Prostigmine blocks Choline esterase
Atropine acts at End Plate by blocking Muscarin action of Acetyl choline
End Plate
End Plate
Substance "E" mediates impulse
Amine oxidase destroys Substance "E"
Effector cell
Acetyl choline mediates impulse (Muscarinic)
Choline estesterase terminates impulse
Furmethide
Urecholine
Mecholyl
Act directly on cell (Muscarinic)

FIG. 1. Pharmacologic action of cholinergic and anticholinergic drugs (hypothetic).

Effects of Cholinergic and Anticholinergic Drugs on the Human Bladder

Our method of study is simple and consists of measuring by means of the water cystometer the changes in bladder pressure caused by the administration of test doses of these drugs (Fig. 2). A number 20 F Foley catheter is inserted into the bladder, which is then emptied. One hundred cubic centimeters of water are allowed to drip slowly into the bladder from a Kelly flask attached by tubing to a T tube. The other leg of the T tube leads to a water manometer divided into centimeters. Readings are taken every minute and plotted on a graph to give continuous curves, as will be seen later. This method is cheap and accurate. It should not be confused with the cystometrogram which uses increments of fluid and gives a different type of curve.

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* By invitation.

Presented at the 147th Annual Meeting of the Medical Society of the State of New York, Buffalo, Section on Urology, May 8, 1953.

This study was aided by a grant from G. D. Searle & Co.

* Furmethide, Smith, Kline & French; Urecholine and Doryl, Merck.

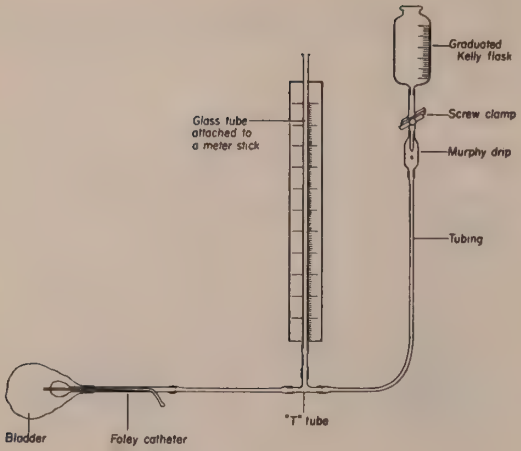

FIG. 2. A simple water cystometer.

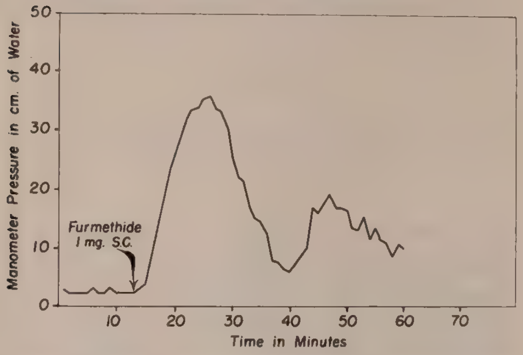

FIG. 3. Effect of Furmethide (1 mg. subcutaneously) on intravesical pressure.

Subjects for these experiments consist of patients with normal, hypertonic, hypotonic, and neurogenic bladders.

Our first example shows the effect of 1 mg. of Furmethide given to a patient with a hypertonic bladder (Fig. 3). Note the control period preceding the administration of a test dose subcutaneously. Within three minutes there is a sharp rise in intravesical pressure which reaches its peak in about ten minutes. The pressure then drops off almost to the baseline, and then a rise is seen which we have chosen to call a "rebound rise." Finally the pressure returns to normal.

Figure 4 shows the results of some of our earliest work, comparing the effects of Banthine and atropine as anticholinergics. On different days atropine (0.4 mg.) and Banthine (50 mg.) were given intramuscularly to the same patient following the subcutaneous injection of Furmethide (1 mg.) on each occasion. The resulting atropine graph, while not as high, still resembles the previous Furmethide curve in configuration. The Banthine graph is different. As blockade sets in, there is a smaller rise followed by a rapid drop to below the pre-injection level. The remainder of the graph is perfectly flat compared to the result with atropine, which shows irregular ups and downs as well as a "rebound rise."

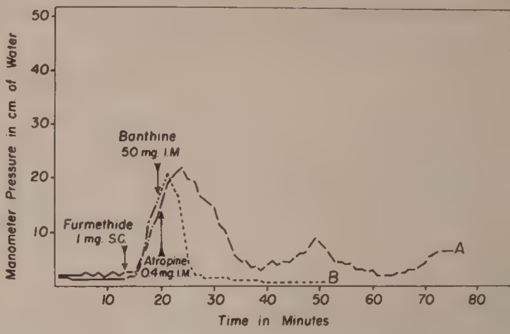

FIG. 4. Comparison of anti-Furmethide activity of atropine and Banthine.

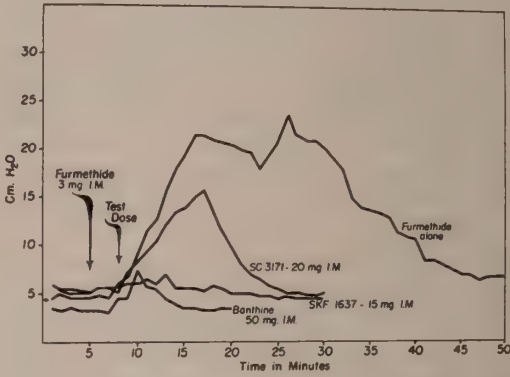

FIG. 5. Anti-Furmethide activity of three drugs compared with Banthine.

Once the superiority of Banthine over atropine in the doses used was established, we proceeded to investigate the effects of some drugs similar to Banthine: Pro-Banthine, SKF 1637 (a scopolamine derivative), and Prantal.*

Figure 5 shows the comparative effects of these four anticholinergic drugs given in doses recommended by their manufacturers. The highest pressure curve is again that of Furmethide alone. The remainder of the composite shows the graphs of Banthine which in this particular patient was very effective in its blockade. The SKF 1637 was slightly less efficient; as one can

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* Pro-Banthine, Searle; SKF 1637 (Scopolamine n butylbromide), Smith, Kline & French; Prantal, Schering.

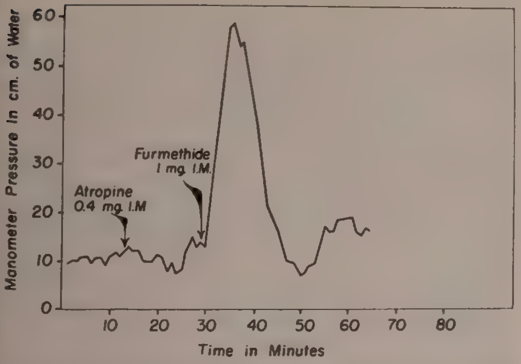

FIG. 6. Furmethide (1 mg.) overcomes atropine (0.4 mg.) blockade.

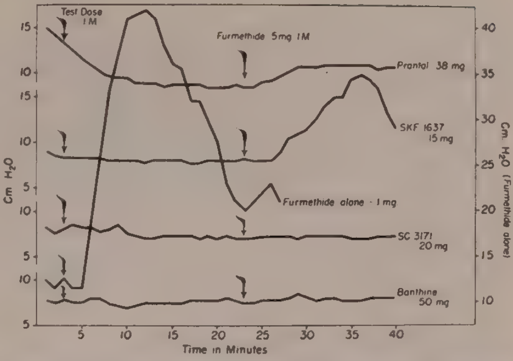

FIG. 7. Furmethide (5 mg.) overcomes blockade by Prantal and SKF 1637 but not Banthine and Pro-Banthine (in the doses used).

see, the post rise portion of the graph is not as flat as that of Banthine. Pro-Banthine in this case did not exert as strong an anti-Furmethide effect. This is a composite of the results in only one patient and was selected as being most typical of the results obtained in all our patients. Out of ten such trials in different subjects, Banthine proved itself most effective in seven. Pro-Banthine worked best in two of these ten. SKF 1637 was not available for the first part of this experiment. In six trials it proved most effective only once, but in the remaining five trials it appeared second best to Banthine.

Our next step was to reverse the order of administration of the test drugs. In the next ten patients anticholinergic blockade was produced first, and then a larger dose (5 mg.) of Furmethide than was used previously was administered. In Fig. 6 Furmethide (1 mg. subcutaneous) broke through atropine (0.4 mg. intramuscular) readily. In Fig. 7 the effectiveness of Banthine (50 mg.), Pro-Banthine (15 mg.), SKF 1637 (20 mg.), and Prantal (38 mg.) were tested. The Banthine and Pro-Banthine blocks were unaffected by Furmethide (5 mg.). The other drugs seem less efficacious. In ten different subjects Banthine allowed no Furmethide effect in eight, Pro-Banthine in nine, SKF 1637 in two. Prantal was effective in one out of three tests.

From these results it seems obvious to conclude that Banthine is the most effective drug in the dosages used in these observations (Tables I and II). We cannot explain why Pro-Banthine should seem so effective in our second set of experiments and yet appear to do so poorly in the first group where the dose of Furmethide was much smaller. The reverse also applies to SKF 1637 which appeared to have a strong anti-Furmethide activity second to Banthine in the first series and yet in the second did not fare so well. This probably is indicative of the possible errors in biologic assay.

Figure 8 compares the rise in intravesical pressure produced by four different cholinergic drugs. On successive days one fifth of the recommended dose was given subcutaneously. This smaller

TABLE I.—EFFECTS OF ANTICHOLINERGIC DRUGS AGAINST A FIXED DOSE OF FURMETHIDE

	Banthine		Pro-Banthine		SKF 1637	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Strongest effect	7	70	2	20	1	$16\frac{2}{3}$
Second strongest effect	2	20	4	40	4	$66\frac{2}{3}$
Least strong effect	1	10	4	40	1	$16\frac{2}{3}$
TOTAL	10	100	10	100	6	100

TABLE II.—EFFECTIVENESS IN PREVENTING FURMETHIDE BREAKTHROUGH FOLLOWING BLOCKADE BY VARIOUS ANTICHOLINERGICS

	Banthine		Pro-Banthine		SKF 1637		Prantal	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
No rise (breakthrough)	8	80	9	90	2	20	1	$33\frac{1}{3}$
Small rise (breakthrough)	2	20	1	10	2	20	2	$66\frac{2}{3}$
Marked rise	0	0	0	0	6	60	0	0
TOTAL	10	100	10	100	10	100	3	100

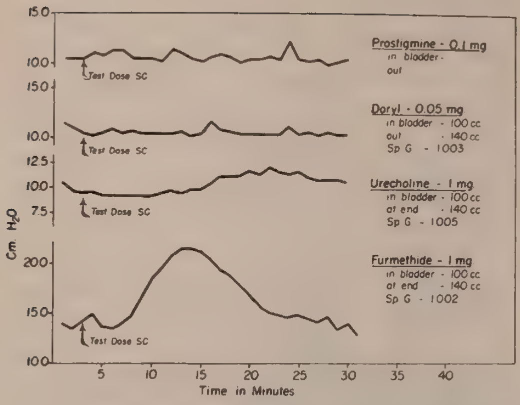

Fig. 8. Comparison of intravesical pressure rise with cholinergic drugs (in the doses used).

dose was selected after a few trials in which a full therapeutic dose produced too many undesirable side-effects. Doryl (0.05 mg.), Urecholine (1 mg.), and Furmethide (1 mg.) all produce a rise in intravesical pressure. Prostigmine (0.2 cc. of 1:2,000) has a very weak effect. Furmethide in the doses used seems to give the most consistent smooth rise in pressure.

Observations of the Action of Drugs on the Dog Ureter

Since the work of Greene and Essex[5] and Lapides' article[6] in 1948, it has been generally held that the ureter acts independently of autonomic connections, peristalsis being dependent on urine flow and unaffected by drugs acting via the autonomic system. Lapides, using a modified Trattner Hydrophorograph which records ureteral peristalsis by measuring variations of pressure as urine flows through a ureteral catheter, systematically studied the intact human ureter in situ. One of his conclusions was "No drug (in the therapeutic dose) used in this study produced a decrease in tonus or peristalsis of the normal ureter."

The development of sensitive electronic apparatus has made it possible to measure and record the action potential of vesical and ureteral musculature and the changes which occur as a result of varied experimental conditions. Corey, Vest, and Boyce[7] and, more recently, Slater[8] have demonstrated action potential currents of bladder detrusor muscle with the electroencephalograph. Kneucker[9] used the electrocardiograph to record electroureterograms. The latter two authors' primary interest was to establish a basis for a diagnostic method. Bozler[10–12] has also studied the effects of varied conditions primarily on the excised mammalian ureter. We have obtained recordings of human ureteral peristalsis but for the time being have turned to the dog as a subject since we can simultaneously record and observe ureteral peristalsis and urine flow during the experiment.

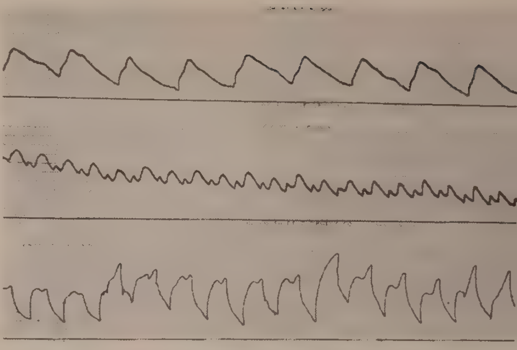

Fig. 9. Typical motion patterns obtained in the intact dog ureter.

Our apparatus consisted of a Brush D.C. High Gain Amplifier which is sensitive to potential changes as small as 0.5 millivolt and records on a direct-writing oscillograph. Large dogs (circa 60 pounds) anesthetized with pentobarbital were used. The abdomen and bladder were opened. A number 4 F ureteral catheter with a small Form Var wire electrode at the tip was inserted into the ureter via the ureteral orifice to the desired level. An indifferent electrode was also attached to the skin overlying the ureter. In this way recordings were made, and adventitious respiratory and intestinal potentials could be ruled out by direct observation of the ureteral peristalsis. Potentials resulting from movement of the ureter along the electrode during peristalsis were also recorded and undoubtedly altered the usual smooth muscle action potential waves. We call this "motion" potential.

As yet our results are of qualitative rather than of quantitative value as are our bladder studies. We are now applying this method to study of humans since it is very simple to insert an electrode into the ureter cystoscopically, with a catheter to measure urine flow.

Figure 9 shows three different patterns of motion potential of the dog's ureter induced by peristalsis. In spite of maintaining the ureteral electrode in as fixed a position as possible, the normal curves seemed to change pattern constantly. Altering the positions of the electrodes will also give variations in size and shape of the

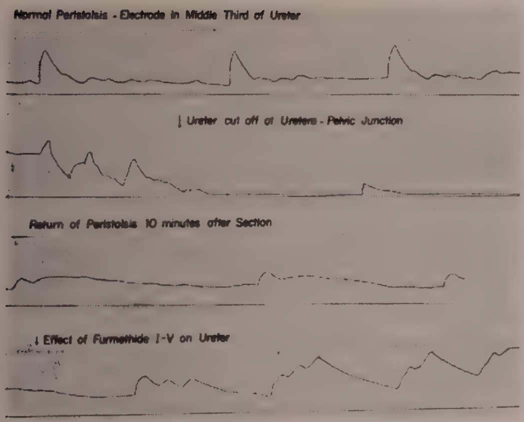

FIG. 10. Effect of section of dog ureter and of Furmethide (intravenous) on the peristalsis of the same ureter.

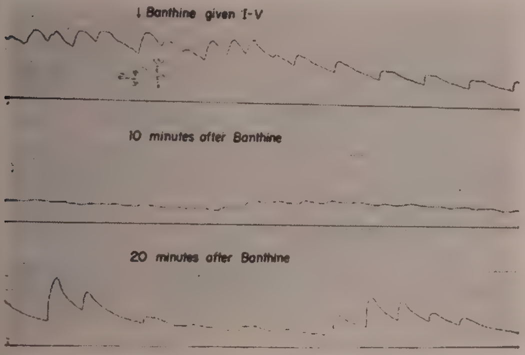

FIG. 11. Effect of Banthine (intravenous) on the peristaltic pattern of the intact dog ureter.

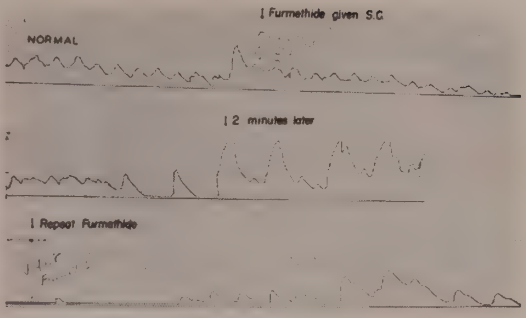

FIG. 12. Effect of Furmethide (subcutaneous) on the peristaltic pattern of the intact dog ureter. (Electrode in middle third of ureter; readings taken with D.C. amplifier and recording oscillograph.)

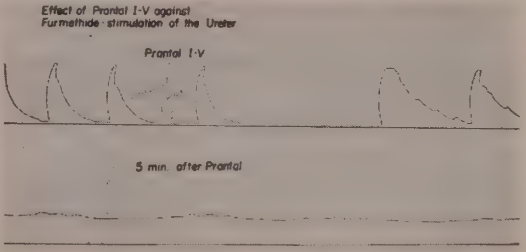

FIG. 13. Effect of Prantal (intravenous) on the peristaltic pattern of the intact, Furmethide-stimulated dog ureter. (Electrode in middle third of ureter; readings taken with D.C. amplifier and recording oscillograph.)

patterns obtained. Moving the electrode in the ureter caused a marked "motion" potential.

Figure 10 shows the effect of sectioning the ureter. With the ureteral electrode in the middle third of the ureter, the normal pattern disappeared completely after the ureter was sectioned at the ureteropelvic juncture. Ten minutes later there was a return of peristalsis but in an altered form. At this point Furmethide (5 mg.) was given intravenously, and a marked increase in the amplitude of the motion current resulted.

Figure 11 shows the effect of Banthine (100 mg.) on the intact ureter of another dog. As the Banthine took effect, the size of the potential curves diminished. Ten minutes later a diminished pattern could be seen, and finally, twenty minutes later, there was a return of peristalsis. During this experiment and the next there was no observed change in urine flow at the orifice, nor any evidence of damming of the urine in the ureter when the catheter was removed.

In Figures 12 and 13 the effect of Furmethide on the intact ureter is shown. An increase in peristaltic action pattern followed the subcutaneous injection of Furmethide (2 mg.). This was repeated producing another similar rise. In the same dog immediately after this administration of Furmethide, Prantal (50 mg.) was given intravenously. There was a decrease in peristaltic motion potential as the anticholinergic blockade set in. The last curve illustrates the pattern obtained twenty minutes after the administration of the Prantal.

From these results we can conclude that these drugs have an effect on ureteral motion potential in the dog and probably have a clinical application in certain ureteral conditions. Nesbit[13] feels that large doses of Banthine intravenously are valuable in relieving ureteral colic.

It is interesting to note that anticholinergic drugs have a *short* action on the ureter, in the case of Banthine less than twenty minutes. We know that this drug is capable of affecting the bladder for three to six hours after administration.

A possible explanation for this can be based on the assumption in Best and Taylor[14] that the ureter probably has sympathetic innervation only and that the results we have obtained are due to transient sympathetic ganglion blocking effects. In the bladder the effects of Banthine are the result of ganglionic blocking as well as its strong, prolonged, atropine-like action. This may explain why the autonomic drugs studied by earlier observers failed to act upon the ureter. Since the cholinergic drugs studied act directly on the effector cells, this problem does not arise.

We have experimented on 14 dogs. Of these, four died before any conclusive tracings could be obtained. Three other dogs failed to react in any way to the experimental drugs. The material presented was culled from tracings made on the remaining seven dogs. Three of the four dogs which expired died of cardiorespiratory failure caused by massive doses of intravenous Furmethide. This large dose was given in order to produce sudden changes of motion potential independent of urine flow. Intramuscular and subcutaneous administration of Furmethide is considered safe in recommended doses. Intravenous injection is not recommended by the manufacturer.

Comment

Anticholinergic drugs such as Banthine are useful in some conditions. Most observers agree that they are of little value in urinary frequency of functional origin. In organic disease they can be very useful in relieving the symptoms of chronic cystitis, interstitial cystitis, and uninhibited neurogenic bladder, and it has been proved that they can increase the capacity of certain patients with contracted bladder. We have had success in the relief of mild postcystoscopic and postoperative spasm with Banthine and related drugs. A few observers have reported good results in the treatment of enuresis in some children, but in adults results have been disappointing. Anticholinergics are very effective in relieving symptoms when the cholinergic stimulus is not too strong.

The value of the cholinergic drugs studied is well established.

Lapides and Dodson,[15] interested in the effects of drugs on the bladder, have based their conclusions on changes in the cystometrogram. We believe that direct observation of the water cystometer with the same quantity of fluid in the bladder gives a better picture of the response in intravesical pressure to various drugs than can be obtained by repeated cystometric examinations. Recently measurement of ureteral potential with the electrocardiograph has been offered as a diagnostic device. Our experience in the dog has shown that the configuration of motion patterns may change constantly. We have also learned that slight movement of electrodes, differences in metals used for electrodes, or changes in temperature all produce adventitious and confusing potentials. For diagnostic use motion potentials will require extensive, careful study before they will be of any concrete value. The action of the cholinergic and anticholinergic drugs on the bladder and ureter can be demonstrated by our experimental procedures.

Summary

1. The effect of cholinergic and anticholinergic drugs on the human bladder and on peristalsis of the intact dog ureter have been demonstrated experimentally.

2. Two experimental methods for the evaluation of the effect of cholinergic and anticholinergic drugs on the bladder and ureter have been presented.

3. In the doses employed in this study Banthine is the most effective anticholinergic and Furmethide the most active cholinergic drug we have tested.

4. Anticholinergic drugs have a very definite but limited use in urology.

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This paper was prepared with the technical assistance of Harry J. Williams, B.A.

Discussion

Harold B. Hermann, M.D., *Brooklyn.*—The paper by Drs. Draper and Zorgniotti is important and deserves our attention as urologists. With the introduction of Banthine in 1950, its urologic significance came to light clinically when with the use of this drug orally in ulcer therapy, particularly in the elderly age group, signs of disturbance in the emptying power of the bladder began to manifest itself. We are in accord with the conclusion of Drs. Draper and Zorgniotti that Banthine has a definite but limited use in urology. From this aspect then I would like to discuss briefly the correlation of the laboratory assay in relation to its clinical application in certain forms of urologic disease.

The work of Draper and his associates on the effect of Banthine in the treatment of genitourinary disorders, presented last year at the American Urological Association meeting, brought together for the first time a group of cases in which the use of Banthine was beneficial. Interstitial cystitis particularly lent itself to the application of this drug. It also proved useful in certain forms of neurogenic bladder disease.

Lapides and Dodson reported their observations recently in the *Journal of Urology* on the role of Banthine in the therapeusis of neurogenic bladder disorders. They report that in moderate doses (50 mg. every six hours) the drug is most effective in the uninhibited neurogenic bladder, a condition frequently encountered in patients with multiple sclerosis, hemiparesis due to cerebrovascular accidents, postoperative cordotomy, and neurogenic enuresis. These patients symptomatically have frequency, urgency, and/or partial incontinence. At times they are able to initiate urination voluntarily. The functional capacity of these bladders is reduced. Residual urine is absent as a rule. With Banthine many of these patients show marked decrease in frequency, incontinence disappears, and bladder capacity increases.

In paraplegics spastic reflex neurogenic bladder is the type of bladder seen in patients who have spinal cord lesions above the second, third, and fourth sacral levels and results in complete interruption of the ascending and descending tracts of the spinal cord where the bladder lacks sensation and shows uncontrolled voiding contractions. These patients carry a large residual urine. With increased doses of Banthine (150 mg. intravenously or 100 mg. every four hours orally) in conjunction with bladder distention, bladder capacity will increase, and after a time the frequency or voiding contractions will decrease.

Our own observations with the use of Banthine as an adjunct in the treatment of interstitial cystitis has been most satisfactory. When it is used in dosage of 50 mg. three times daily along with fulguration and hydrostatic bladder distention, these patients have not been fundamentally cured, but bladder comfort and periods of remission are definitely more satisfactory than without the use of this drug.

We have employed Banthine for the past twelve months postoperatively in prostatectomies and transurethral resections. These patients have subjectively less bladder spasm and a more comfortable postoperative bladder course.

We have also observed that this drug is beneficial in the small fibrotic type of prostate. These patients carried no residual urine and had increased frequency and urgency with spasm. We have hesitated to advise operative or transurethral interference in these cases since our results and those of other urologists have been notoriously poor in relieving spasm and frequency. With small doses of Banthine (25 mg. daily) these patients have exhibited a rather decided improvement in bladder comfort. We have had no personal experience with the use of the anticholinergic drugs, particularly intravenous Banthine in ureteral colic. The original work on the effect of Banthine presented by Drs. Draper and Zorgniotti may prove to be of clinical value in future studies on ureteral neurodynamics.

Although the harmful side-effects of Banthine in normal doses are minimal, the age factor of the patient, particularly those with borderline prostatic hypertrophy, must be kept in mind lest the clinical benefits of the drug be outweighed by the disadvantage of urinary retention.

John W. Draper, M.D., *Closing Remarks.*—We appreciate very much the kind remarks which Dr. Hermann made about our work. I would like to emphasize that the method of study of the response of the detrusor muscle is simple and reliable, and the results are well documented. In the study of ureteral peristalsis we thought at first we were recording action potential alone but soon realized that these records were not the typical sine curve of smooth muscle. As we watched the ureter move over the electrode, we realized that we were recording a motion rather than a pure action potential. Massive doses of the cholinergic and anticholinergic drugs demonstrated a brief effect on the motion potential of ureteral peristalsis in seven of our ten dogs. In three dogs no effect whatever was demonstrated.

Experience: What you get when you are trying to find something else.—Changing Times

Evaluation of Retropubic Prostatectomy

Analysis of 150 Cases

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EVERY new surgical procedure passes through similar phases of popularity during its infancy. Its acceptance by the profession reaches a peak early, and the decline from that level may be precipitous, gradual, or may settle to a plateau of reasonable objectivity.

The retropubic approach for prostatectomy has been rather generally used and is now reaching its plateau as a time-tested procedure. It has withstood the test well and is now an adjunct to the armamentarium of a urologist. However, it is a procedure that is not without hazards, especially for one in his initial attempts. We wish to point out a few of the stumbling blocks one might encounter and thereby hasten the enthusiasm and good results that for us may have been more prolonged than presently expected.

We will briefly describe the technic we use and will then discuss the procedure in certain details and the modifications which we have followed. Last, we wish to review the results we have had with the retropubic approach in 150 cases.

Technic

The bladder is lavaged and emptied. With the patient in Trendelenburg position, the incision is begun just below the umbilicus and carried down over the pubic symphysis. The rectus fascia is opened, exposing the muscles which are retracted laterally. By blunt dissection the peritoneal fold and overlying fat are pushed upward, exposing the bladder and the bladder neck. A self-retaining retractor is then inserted. The loose areolar fat seen lying behind the pubis over the prostatic capsule is stripped laterally. Any areas of bleeding are clamped and coagulated.

The prostatic capsule and its plexus of periprostatic veins are then brought into view. These superficial prostatic veins usually run in a linear direction over the superior surface of the prostate. Any attempts to suture these easily traumatized vessels most likely will not succeed and will result in greater bleeding. Instead, the fatty, fibrous layer of endopelvic fascia containing these vessels should be split in the midline and teased laterally (Figs. 1 and 2). Bleeding is then controlled by clamping and electrocoagulating. An open-end suction tip with continuous suction is most necessary to spot any bleeding points.

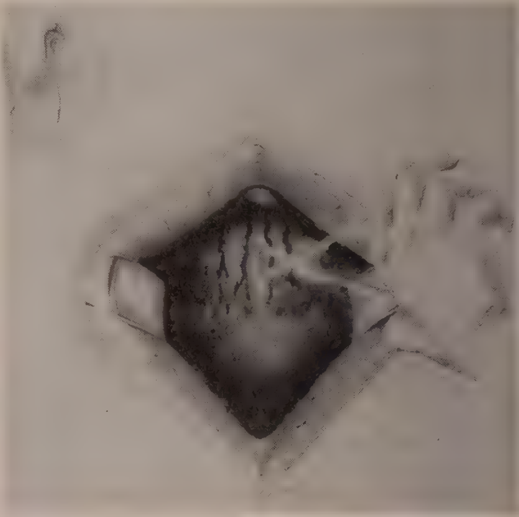

FIG. 1. Periprostatic fat pad split in midline.

A transverse incision in the capsule about 1 cm. distal to the bladder neck is made between the vessels and carried down so that the white prostatic tissue is seen (Fig. 3). Enucleation is then done by finger dissection around each lateral lobe, care being taken not to break through the urethra at the apex of the gland. The urethra is severed cleanly by scissors, and the prostatic enucleation forceps are then applied. The gland is then very gingerly delivered through the capsular incision while still being attached at the bladder neck (Fig. 4). This is severed, and the edges are picked up with Allis clamps.

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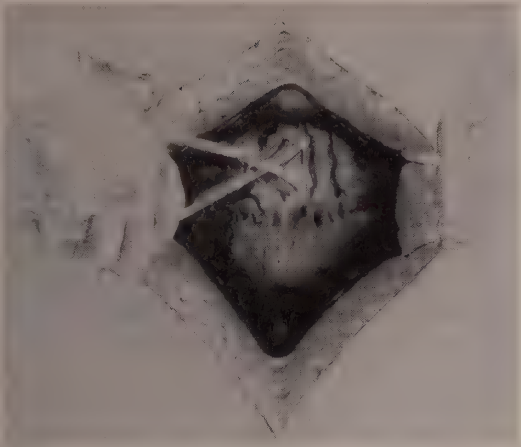

FIG. 2 Fat pad with veins teased laterally on prostatic capsule.

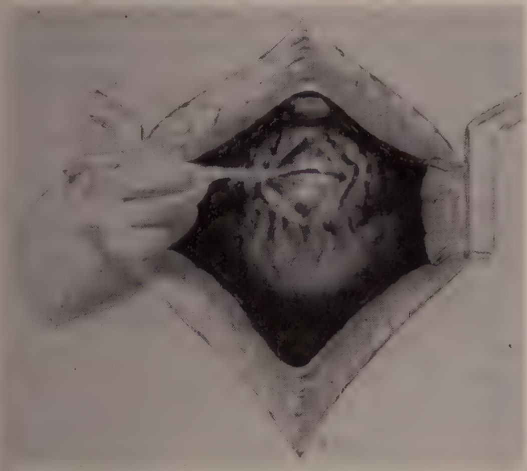

FIG. 3. Narrow transverse incision made through capsule into prostate.

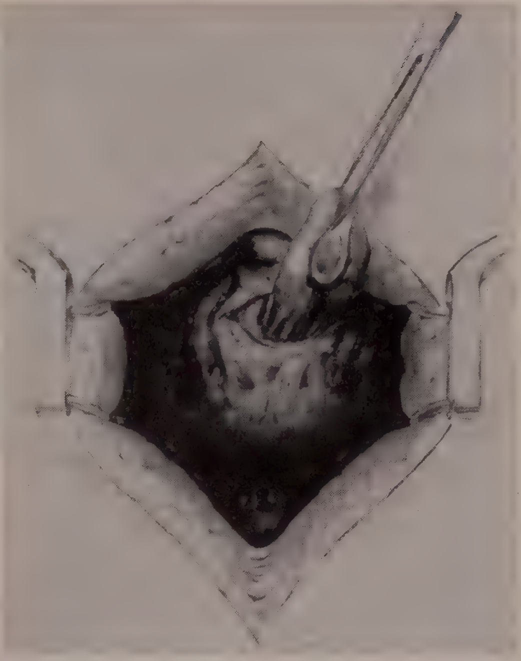

FIG. 4. Prostate delivered in separate lobes to prevent tearing of capsule.

The prostatic bed is then packed with a 1-inch warm gauze pack to control hemostasis and to allow for capsular contraction. The bladder neck must be resected routinely in the shape of a "U," and if this is adequately done, we feel it is unnecessary to suture the mucous membrane to the prostatic floor. Hemostasis is now done by coagulation under vision, particularly at the bladder neck. The pack is removed, and a 75-cc. Foley catheter is introduced through the urethra, the tip being directed into the bladder. Then, without inflating the balloon, the capsule is closed through all layers with number 1 chromic catgut. Interrupted sutures or a continuous running stitch may be used, the latter possibly giving better hemostasis and permitting a more rapid closure. A watertight closure is always more desirable to limit suprapubic drainage. At this point the bladder is irrigated, all clots are removed, and the balloon is inflated to a degree varying with the amount of bleeding present and the size of the gland removed. At times it may be unnecessary to inflate the balloon if capsular contraction has effectively controlled bleeding. Again, however, brisk oozing may persist, and the balloon may be drawn into the prostatic fossa and inflated to the desired amount. Irrigation should return pinkish. In a few selected cases it may be advantageous to surround the balloon with oxycel or Gelfoam cone, but ordinarily the inflated bag is sufficient to control any venous ooze.

A Penrose drain is inserted down to the capsule, and the wound is closed in layers, black silk being used for the skin. The balloon is deflated to 10 cc. within twenty-four hours because by that time the return is practically clear. The catheter is usually removed about the fourth postoperative day but may be removed earlier if suprapubic drainage is minimal. The drain is left in one more day, should the capsular incision leak urine. Early ambulation is important and may be done on the first or second postoperative day. It is important to remember that ambulation means actual walking and not sitting in a chair. Pressure on the large veins of the legs while seated is very conducive to thrombus formation.

Details of Procedure

Retractor.—In thin subjects any self-retaining type is usually sufficient, but in obese patients attachment of a third blade to the Balfour type to retract the bladder and peritoneal contents is very important. The Millin retractor is available, but unless modified it will not prove of much additional value. The Beneventi type retractor is an excellent one and is superior to the others. Without a third blade the use of a wide Deaver over a lap sponge held by an assistant gives excellent vision.

Capsular Blood Supply.—The superficial prostatic veins which course over the prostate and up onto the bladder derive their main supply from the dorsal vein of the penis and the pudendal plexus. These vessels, as seen on the surface of the prostate, are embedded in the fatty, fibrous layer of endopelvic fascia which surrounds the prostate. They are large, thin-walled, and bleed easily. They are formed in three groups, namely, the anterior and the two lateral groups. Considerable blood may be lost from this area before actual removal of the prostate has begun. In attempting to ligate or suture them, the vessel walls are torn or are perforated with the needle, and as the needless bleeding ensues, vision of the area is impaired and operating time prolonged. An area between the veins should be selected, and a spreading linear incision with scissors should be made through this layer, exposing the prostatic capsule (Fig. 1). This fascial layer with the veins is then teased laterally on either side to form a diamond (Fig. 2). Clamping and coagulating of any bleeding areas is done immediately. A narrow transverse incision is then made between the edges into the prostate (Fig. 3). In making this incision the anterior capsular arteries may be severed, and these should also be clamped and coagulated in like fashion.

Size of Capsular Incision.—We would advise against making a wide capsular incision. A surprisingly large gland can be delivered through a small opening if allowance is made for capsular stretching. The enucleation is done gently, carefully, and without haste. A rapidly removed gland will cause capsular tearing into the lateral venous sinuses, additional bleeding, and difficult closure. It will greatly facilitate removal of the gland and prevent capsular tearing if the lateral lobes are split and delivered separately (Fig. 4). An additional point to keep in mind in making the capsular incision is never to make the incision so low on the prostate that closure will be difficult. The lower capsular margin will retract beneath the pubis, and it may easily be torn in closure.

Retaining Sutures.—The use of retaining sutures to define the capsular margins after opening them is unnecessary, and usually they are pulled out some time during the operation before they can be used to facilitate the closure. Allis clamps applied to the margins of the capsule will bring the edges closely together. The Millin "T" clamps or Babcocks are usually effective substitutes for this procedure. The boomerang needle may be used to advantage to hurry the closure, but with the relatively small number of sutures we have returned to the usual needle-holder and small curved needle.

Use of the Urethral Catheter.—We first adopted the Millin technic of using a small, multiocular catheter, about a number 18 French, and left it on drainage postoperatively with or without suction. We found in these cases that the patients lost a fair amount of blood the first few hours, and they became quite apprehensive when a bloody drainage persisted for two or three days. We now use the Foley bag two-way catheter and frequently begin a slow, continuous drip through the catheter to wash out any blood before clotting takes place in the bladder. This arrangement requires very little attention and allows the patient and the surgeon to sleep. We use the 75-cc. Foley in preference to the 30-cc. because of the added length of the bag, especially on the larger prostates. The shorter bag catheters, if inflated in the prostatic fossa, will not drain as a result of the short tip lying in the prostatic fossa beneath the median bar. It may be used, however, if inflated within the bladder and retained there. In general, if Foley catheters are to be used, they should be of the long-tip type with several eyes. In many of the more recent cases of the series, we have found it unnecessary to inflate the bag at all. If allowance is made for capsular contraction, it frequently will control its own bleeding. The catheter is then sutured in place through the glans penis or strapped in place with continuous irrigation.

Sodium Citrate.—The instillation of 3 per cent sodium citrate solution into the bladder after the removal of all clots is very helpful, and after the capsule has been closed, the solution may be left in the bladder by clamping off the catheter for as long as two hours postoperatively. At the end of that time the bloody solution may be drained off with complete assurance that no clots have developed. Bleeding following this period is usually minimal.

COAGULATION.—Indiscriminate coagulation of the prostatic fossa will succeed only in causing a sloughing surface which invites infection and will not accomplish hemostasis regardless of the amount of coagulation. Arterial bleeders at the bladder neck, particularly at five and seven o'clock and in the capsule as well, must be coagulated. The rest will be quickly brought under control with the Foley catheter and its mild pressure from the bag.

GAUZE PACKING.—The use of gauze packs at the lateral margins of the prostate to aid in elevation and exposure of the gland are unnecessary and serve to open further fascial planes that may later act as pockets of infection.

ELEVATION OF PROSTATE.—The use of the rectal finger as practiced by some surgeons in prostatectomy to elevate the prostate and facilitate the enucleation is to be frowned on. This is a completely surgical procedure and must be so maintained. The risk of infection in these cases cannot be minimized, and the strictest asepsis from start to finish will prevent dire complications.

KIDNEY BAR ELEVATOR.—Many surgeons use the kidney bar to elevate the pelvis, thus tipping it forward to attain better visualization of the space of Retzius. It may be advantageous to do so, but we have not found the need for it.

Complications

IMMEDIATE POSTOPERATIVE HEMORRHAGE.—As in other types of operations there is a considerable variation in the bleeding tendencies between one case and the next, depending upon the age of the patient, size of the gland, and the pathology present. However, in general, it is our observation that the retropubic procedure causes less bleeding and clears more rapidly than transvesical procedures. Presumably this is due in the latter to the opening of another viscus and the greater number of bladder spasms associated therewith.

SECONDARY HEMORRHAGE.—This is a problem that a urologist must face occasionally in spite of his adeptness or the superiority of the procedure. It is unpredictable and, many times, unpreventable. It appears to happen less frequently in the extravesical approach, and rarely will a patient ever have to return to the operating room; however, incomplete removal of the obstruction always predisposes to infection and secondary hemorrhage.

BLADDER NECK OBSTRUCTION.—The development of postoperative stricture or fibrotic contracture of the bladder neck as a complication cannot be overemphasized. Its prophylaxis depends upon a careful resection of the posterior lip at operation. The apparent lack of obstruction of the bladder neck as visualized at the table without resection is undependable. All visible posterior lip should be routinely scissored away cleanly, as in a transurethral procedure, to insure removal of future obstructing scar tissue. Failing to perform this most important step is as neglectful as failure to remove the gland itself. Occasionally one of these patients will return with signs of obstruction or urosepsis, and catheterization or sounding will be impossible. After resorting to filiform bougies to accomplish dilatation, transurethral resection becomes evidently necessary.

POSTOPERATIVE INFECTION.—Postoperative infection deters the average urologist from using the procedure because of the relatively high incidence of osteitis pubis. This single complication discourages many in selecting the retropubic approach as their method of choice. With the improvement in technic and better understanding of the pathogenesis of this distressing disease, we believe it is on a relative decrease. In order to obviate infection as a complication, we must insist on rigid asepsis throughout the procedure, careful skin preparation, and a minimum of postoperative urethral manipulations.

Indications

Rigid adherence to specific indications for the operation in early cases will achieve better results. Asthenic individuals with rather large glands of predominantly lateral lobe hyperplasia will provide the most desirable type. Once experience has been gained with these cases, almost any moderately enlarged to large gland may be handled retropubically. Fibrous prostates, median bars, and late carcinomas should be removed transurethrally. However, prostatic calculi, abscess of the prostate, and fibrous contractures of the bladder neck, particularly in children, may be successfully removed retropubically. We also prefer this method over the perineal in early carcinoma of the prostate. The exposure appears to be better, and the incidence of incontinence is much less. Preliminary prostatic biopsy is used to confirm the diagnosis which precludes the need for perineal exposure of the gland for biopsy.

The only distinct contraindications may exist in those cases with coexisting bladder pathology such as tumor, diverticulum, large calculus, etc. However, smaller bladder calculi may be removed with ease by the retropubic approach.

Results in 150 Consecutive Cases

These cases have been selected from the urologic service of the Long Island College Hospital and constitute patients on both the private and ward service. Consequently, many operations were performed by the various residents on patients who were in a comparatively poorer state of health preoperatively.

Age.—The average age incidence in this series of cases was 66.7 years. The youngest of our patients was forty-nine years of age, and the oldest was eighty-three.

Hospitalization.—The average number of postoperative days in our service was fourteen days. The postoperative hospitalization period was found to be generally less than with other open-type prostatectomies and approached that of the transurethral procedures. However, we made no special attempt to discharge our patients early, and as a result their wounds were usually healed and they were voiding well on their discharge day. One patient was discharged in seven days and another in thirty-seven days.

Weight of Gland.—The average weight of the prostates removed was 48.8 Gm. We attempted to limit ourselves to the larger glands, reserving the glands smaller than 25 Gm. for the transurethral route. However, mistakes in estimation were frequent, and a total of 11 glands were found to weigh under 25 Gm. One was reported to weigh 11 Gm. The largest one removed was 145 Gm.

Course.—The postoperative course was noticeably smoother with regard to lack of spasms, shock, and fever than with the transvesical procedure. The average peak temperature in the series was 101.8 F. As a general rule, each patient received a 500-cc. transfusion, and rarely was a second bottle necessary. The postoperative complications in our series are listed in Table I.

TABLE I.—Complications in 150 Cases

Type	Number of Cases	Per Cent
Hemorrhage	9	6.0
Coronary thrombosis	3	2.0
Stricture of bladder neck	8	5.3
Cerebral thrombosis	2	1.3
Temporary urinary fistula	4	2.6
Osteitis pubis	5	3.3
Epididymitis	5	3.3
Myocardial failure	1	0.6
Gastric hemorrhage	1	0.6
Thrombophlebitis	1	0.6
Temporary stress incontinence	8	5.3
Impotence	3	2.0

TABLE II.—Mortality in 150 Cases

Cause of Death	Number of Cases	Postoperative Day
Cerebral thrombosis	1	2
Coronary thrombosis	3	7, 8, 9
Myocardial failure	1	28
Gastric hemorrhage	1	7
Total	6 (4%)	

Incontinence.—Temporary incontinence for two to three weeks is not uncommon, but it always clears rapidly. To date we have only one case with stress incontinence. He voids a good stream with no dribbling.

Mortality.—We encountered six deaths in our series for an over-all mortality of 4 per cent which compares very favorably with reports by other investigators on combined results of ward and private services (Table II).

Potency.—We have not investigated this in all patients; hence, no statistics are available. However, rarely was there any change in potency for the worse, but many volunteered the fact that this physiologic function had been enhanced.

Carcinoma.—An incidental finding of carcinoma was present in 12 cases or 7.7 per cent. Total prostatectomy was done in two of these with good results.

Conclusion

1. The technic of retropubic prostatectomy has been reviewed and important points stressed.
2. The complications and indications have been discussed.
3. Results in 150 consecutive cases have been analyzed and a mortality of 4 per cent reported.

Discussion

Leo Edelman, M.D., *New York City.*—We are indebted to Dr. Thomley for his excellent presentation and valued contribution in support of retropubic prostatectomy. When asked to participate in this discussion, I was rather hesitant because of my limited practical experience with this type of approach. An insufficient number of patients were subjected to this procedure at Mount Sinai and at Montefiore Hospitals to be of statistical value. I must say the results in the uncomplicated cases have been most impressive and satisfactory. On the basis of reports from many clinics, retropubic prostatectomy now appears to be a recognized procedure along with the suprapubic, perineal, and transurethral approaches. All are good and produce good results in competent hands. Each method has its advantages, and it is essential that the urologic resident and young urologist be given an opportunity to become proficient in all so that he can select the operation best suited to each individual case.

Prostatic surgery has become better and safer because of advances in pre- and postoperative care, control of postoperative hemorrhage, use of antibiotic and chemotherapeutic agents, prevention and treatment of thrombosis by early ambulation and other measures, and advances in the medical care of cardiovascular disease, diabetes, and other conditions prevalent in individuals of advanced years. Patients submit to operation earlier, and we see fewer bad risks. Advocates of each method have reduced their operative mortality, postoperative complications, and shortened the hospital stay of their patients. We are now beginning to see an increasing number of early cases of carcinoma of the prostate, and one can foresee that in the not too distant future more and more will be suitable for radical prostatectomy. The retropubic approach may prove an admirable supplement to the perineal operation.

Unfortunately, the retropubic approach carries a high incidence of complications in spite of meticulous care in following the Millin technic. Dr. Thomley brought to our attention some of the pitfalls. One distressing complication, which I daresay led many urologists to view the procedure with concern, is the high incidence of "ostitis pubis." Prior to the retropubic approach, "ostitis pubis" following prostatectomy was comparatively rare. I was on the service of the late Dr. Edwin Beer in 1916 when he first recognized this clinical entity in a patient a few weeks after suprapubic prostatectomy. He named it "periostitis and ostitis pubis." Although self-limiting, it is a most painful and disabling complication whose clinical picture has made a lasting impression upon me. It is not only distressing to the patient but to the surgeon as well.

Up to May, 1948, Drs. Lavalle and Hamm[a] were able to collect 41 cases in the entire literature. In the discussion of their paper, Dr. Thomas D. Moore[b] (Memphis, Tennessee) stated that "in his long experience with suprapubic prostatectomy for glands of unusually large size and transurethral resection for the smaller ones, he never recognized a single instance of osteitis pubis." Dr. Moore is one of many others with similar experience. During the period from May, 1947, to May, 1948, he encountered this distressing complication in eight cases of approximately 65 primary extravesical retropubic prostatectomies in spite of meticulous care.

In May, 1950, in a review of 116 retropubic prostatectomies in which more than one year had elapsed, Dr. Moore[c] reported 13 cases of ostitis pubis encountered among the first 80 cases (16.3 per cent). He also stated that in 159 consecutive retropubic prostatectomies, the complication occurred 13 times among the first 80 cases and none among the last 79. This change he ascribed as possibly "being due to the abandonment of the electric scalpel to incise the prostatic capsule in favor of a sharp knife between hemostatic sutures, the avoidance of the electrocoagulation of the veins comprising the plexus of Santorini," the local introduction of an aqueous sulfonamide solution containing 5,000 units of streptomycin per 100 cc. into the prostatic cavity and entire incision, and the use of two rows of sutures instead of one to insure watertight closure of the prostatic capsule.

Dr. Thomley and his associates are to be congratulated on their results with a comparatively new approach for prostatectomy. I am sure he will agree that the incidence of 3.3 per cent ostitis pubis and 5.3 per cent stricture at the bladder neck is still rather high. I hope these complications will be markedly reduced or eliminated when he reports another series of 150 cases.

Only the meticulously careful operator should undertake or be encouraged to perfect himself with the retropubic approach. In the final analysis each man will do the operation which in his hands is best for the patient.

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[a] Lavalle, L. L., and Hamm, F. C.: J. Urol. **61**: 83 (1949).
[b] Moore, T. D.: *ibid.* **61**: 93 (1949).
Ibid. **65**: 865 (1951).

I always like to hear a man talk about himself because then I never hear anything but good.—
WILL ROGERS

The Current Status of Cortisone in Postoperative Treatment of Dupuytren's Contracture

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Dupuytren's contracture, first described in 1832, although easily diagnosed, has remained a stubborn problem with regard to etiology, pathology, and therapy. Surgery has been, and still is, the sheet anchor of treatment. Only recently has the tendency to complete removal of the palmar fascia with its digital prolongations become the accepted approach. Frequent recurrences still remain the rule.

With the advent of cortisone and adrenocorticotropic hormones into the realm of therapy in the past two years, investigation of their value in collagen disease has been spurred. A considerable volume of literature has appeared suggesting that cortisone retards the development of all elements of connective tissue and inhibits the growth of granulation tissue. Hench[1] and Ragan[2] were among the first to observe the increased range of motion in patients with rheumatoid arthritis treated with cortisone. With the knowledge of the prime pathology in Dupuytren's contracture, i.e., overgrowth, thickening, and contracture of the palmar fascia, and of the effect of cortisone in relieving and relaxing connective tissue contractures in other collagen diseases, it seemed likely that patients with this disease might also be benefited by this hormone. A search of the literature reveals only three references to the use of cortisone and none to ACTH in Dupuytren's contracture.

The purpose of this paper is to correlate previous reports, add to them my own case experience, and show how there is emerging a more standard approach to the therapy in this disease.

In 1950 Baxter *et al.*[3] reported one case, a female, age forty-five, in whom excessive scar tissue developed after complete fasciotomy, although no gross infection had occurred. No benefit was obtained from active elastic splinting, physiotherapy, vitamin E, or desoxycorticosterone acetate and vitamin C therapy. Marked immediate improvement was noted with the parenteral administration of cortisone for two weeks when used in conjunction with active splinting and physiotherapy. Still further improvement was noted two months after discontinuance of hormone therapy, as shown by improved range of motion of all affected joints. The dose of hormone was 100 mg. intramuscularly daily the first week and 200 mg. intramuscularly daily the second week. The patient's family history revealed a strong predisposition to this disease, all in the male members.

Baxter *et al.*[4] published a more extensive investigational experience in March, 1952, when they studied the effect of cortisone under three headings in the treatment of Dupuytren's contracture. Twelve cases were discussed, one of which was previously reported. The first approach was administration of cortisone, two to seven injections of 12.5 to 25 mg. biweekly into the hypertrophied palmar fascia in each of five cases. Clinically no significant decrease in the size of the nodules or increase in ability to extend the fingers was noted. This was confirmed by biopsy.

The second approach was through administration of cortisone parenterally in two patients and orally in one patient in amounts up to 200 mg. daily for three weeks. Here again neither symptomatic nor clinically observable improvement was noted. Comparison of the pretreatment biopsy and the palmar fascia removed at operation failed to reveal any significant changes.

The third approach was operation followed by systemic therapy. Here, two patients received therapy immediately postoperatively with daily doses of 200 mg., another received 100 mg. daily commencing on the seventh postoperative day, and the last received cortisone as an adjunct to physiotherapy three and a half months after operation. All of the last five cases had cortisone therapy for two weeks. The results in the third series were gratifying. All cases improved markedly. Experience showed that even with early therapy epithelial union was not delayed to an extent which would precipitate the risk of separation of wound edges. Parenteral injection or oral administration was equally efficacious. The combination of operation and hormone therapy seemed to facilitate the early return to a free range of extension and flexion. All cases but one were males in the forty to fifty-year age group.

Ritchey[5] reported two cases, both males, aged forty-nine and sixty years, in June, 1952, wherein he found cortisone to be of limited value as a preoperative medication and probably only slightly useful in the very early stages of Dupuytren's contracture. He found cortisone of great value postoperatively because of the marked improvement in the mobilization of the hand.

Case Report

C. A. N., male, aged thirty-seven, a consultant electronics engineer, was first seen on May 25, 1951. Diagnosis was Dupuytren's contracture in both hands, moderately severe in degree, more so on the right. Because of an associated colitis, disposition of the contractures was deferred. No familial history of Dupuytren's contracture was obtained. Past history revealed a dyspepsia from 1937 to 1945. In 1947 the patient developed a nonspecific colitis which had been present to date, the intensity of which was directly proportional to the degree of tension he was experiencing. The present history of Dupuytren's contracture dated back to 1941 without preceding trauma. Only in the six-month period prior to consultation did the contracture manifest itself to such a degree that the use of his right hand was seriously impaired, i.e., difficulty in writing, buttoning clothes, washing face, using instruments.

In February, 1952, the patient underwent a radical palmar fasciectomy of the right hand. He was seen again two weeks postoperatively with evidence of a modified Keen's incision (absent vertical extension on the thumb side). There was complete extension and motion of all joints and fingers. Within a period of six weeks postoperatively the contracture had recurred and, if anything, was more severe than preoperatively. The patient was reluctant to proceed with further surgery and consented to therapy by oral cortisone. Investigation prior to the administration of the hormone showed a slightly elevated uric acid (4.6 mg. per cent), but all other routine tests including basal metabolism, electrocardiogram, x-ray of hands, nonprotein nitrogen, urea nitrogen, and sedimentation rate were normal. Directly prior to cortisone therapy the contractures were as shown in Table I.

The appearance of the right hand prior to cortisone showed that the site of the incision was 1 cm. wide vertically and $^1/_2$ cm. wide transversely across the palm, elevated in a keloid fashion to a height of 0.2 cm., pink, and warm. The skin itself was thickened, concave in the palm, and so closely adherent to the underlying structures that it could not be "picked up" with the fingers. Extension of the fingers caused blanching of the skin of the palm and that of linear prolongations to each of the fingers. One could palpate minute nodules in the skin, which the patient stated would eventually form the linear prolongations.

TABLE I.—MEASUREMENT OF CONTRACTURES BEFORE AND AFTER CORTISONE THERAPY

	Degrees of Extension at Metacarpophalangeal Joint			
	Before Cortisone		After Cortisone	
Finger	Right Hand	Left Hand	Right Hand	Left Hand
Index	165	180	180	180
Middle	147	170	160	170
Ring	145	165	168	165
Little	148	170	175	180

The patient was placed on cortisone, 25 mg. four times a day orally, on May 3, 1952, and remained on this regime for three weeks with no untoward effect. Incidentally, the chronic colitis was not affected in any manner during this period. No other therapy was used.

Within five days from the onset of therapy the patient volunteered that his contractures felt less hot, and the motion of his joints was less restricted. Objectively the lesion appeared less red and "angry looking."

Within two weeks of the onset of treatment, the entire palm was much softer to the touch. There was an increase in extension of the affected joints of about 20 degrees.

On November 16, 1952, the patient was reexamined and found to have retained the remission. The incisional line, no longer elevated, was pale white in color and measured 0.2 cm. in width throughout. Functionally, the patient was completely rehabilitated, as is shown by the measurements in Table I.

Comment

Although the etiology and pathology of Dupuytren's contracture remains undetermined, some definite statements can be made with regard to the therapy and several incongruities in the literature revealed. Souttar[6] stated it was an acquired deformity, seen in men past middle age, quite common, often hereditary, occurring most often in subjects with gout, and due to a slow fibrosis of the palmar fascia which involves the skin but not the tendons. Wakeley[7] has written that it was met in middle-aged individuals of a gouty temperament, more so in men, can be bilateral, may be associated with direct irritation of the palm, and was due to chronic overgrowth and contraction of the fascia, inflammatory in nature, and sclerosing in type. Christopher[8] wrote that three factors have some significance: heredity, senility, and a fibroplastic diathesis. The essential process is seen more frequently in males where, due to chronic inflammatory process, there is benign fibroplasia of the palmar connective tissue.

Ely[9] stated that the disease is seen in middle-aged and elderly men, occasionally in younger people, rarely in women. Heredity as a cause is not convincing nor is injury, but rheumatism is associated with from 60 to 84 per cent of cases, suggesting focal sepsis. In addition, Ely wrote that clinical experience and histologic findings showed that "fasciitis palmaris" and arthritis deformans belong etiologically together. Angrist[10] stated that Dupuytren's contracture represents one, and ordinarily an early, manifestation of an enzymatic breakdown in the metabolism of ordinary collagen tissue. This leads to a proliferation of fibroplastic elements and a laying down of collagen which contracts excessively and loses its elasticity. This is undoubtedly linked with fundamental biochemical disturbances, again under the influence of the aging process, the endocrine system, or some deficiency states.

From the foregoing it may be seen that most authors agree that gout or some other form of rheumatism is frequently associated with Dupuytren's contracture. It well may be that this condition is but another of the rheumatic group of diseases.

Dupuytren's contracture is not a common disease today. It is seen far more frequently in males than in females in the ratio of 14:1 of reported cases. No longer can it be said that this is a disease of the elderly, since we have shown it to be present from the third decade onwards.

Cortisone has been found to be useful only in the postoperative treatment of Dupuytren's contracture.[11] It exerts a restraining action on the formation of fibrous tissue and often the resolution of already formed scar tissue in all cases so treated. Increased mobility of the joints of the affected hand is a constant finding within two weeks of treatment. It is maintained, and often further improved, over a period beyond a year despite cessation of treatment. Therapy in all cases was for two to three weeks at an average dose of 100 mg. daily. Oral dosage was equally efficacious as parenteral injection. There were no toxic manifestations noted in any of the patients during the course of treatment. Any coincident rheumatic manifestation responded as though the Dupuytren's contracture were not present. Cortisone may be administered immediately postoperatively with little fear of delayed epithelial union. Improvement may be expected where cortisone has not been used till several months postoperatively. It is unnecessary to use any form of treatment other than hormonal in the postoperative care of Dupuytren's contracture.

Summary

The entire literature on the use of cortisone in Dupuytren's contracture has been reviewed. Only 14 cases were found. One additional case is presented. The concept that Dupuytren's contracture is another form of rheumatic disease is entertained. Cortisone is an effective agent only in the postoperative care. Early mobilization of the hand and diminished fibroplastic reaction were found in all cases. No toxic reactions were noted. Remission following therapy is quite prolonged.

It is hoped that this evaluation will act as a spur so that other investigators will make their experiences known.

59 HENDRICKSON AVENUE

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Education is what remains when we have forgotten all that we have been taught.—GEORGE SAVILE HALIFAX

The Effect of Aureomycin on the Clotting Time of Blood

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The advent of the era of antibiotics in the middle of the last decade stimulated an interest in the effect of these therapeutic agents upon the body's responses. There was also a growing awareness of the apparent increased incidence of postoperative thromboembolic disease in this period, this despite the practice of early ambulation and the dramatic reduction in postoperative infection. These impressions have stimulated a number of investigators to attempt to establish or disprove a causal relationship between the increased incidence of thromboembolic disease and the widespread and sometimes indiscriminate use of antibiotics. To date, much of the work done in this area has been controversial.

Muldovsky and Hasselbrook[1] in 1945 were the first to show that with intramuscular penicillin there is a marked and consistent reduction in the clotting time of blood, the maximum reduction coinciding with the peak in the blood level of the penicillin. Macht[2] confirmed this work with penicillin in experimental animals in 1948. In 1949 Macht and Farkos administered 250 mg. of aureomycin in a single oral dose to 14 patients and found that in every case there was some shortening of the coagulation time and no change in the prothrombin time.[3] The intervals of testing the clotting time were one hour and thirty minutes and three hours and thirty minutes after the administration of the drug. In 1951 Innerfield and coworkers[4] substantiated this finding experimentally. They showed that a dose of 5 mg. per Kg. of intravenous aureomycin given to six dogs lowered the coagulation time by 50 per cent and increased the Ac-globulin activity by 100 per cent. The average maximum change of the coagulation time and the Ac-globulin activity both coincided exactly in each dog at the ten-minute level after the administration of the drug. The prothrombin time in these dogs hardly underwent any change. An increase in Ac-globulin titer promotes a quicker conversion of prothrombin to thrombin. and it is in this period that the coagulation times were found to be maximally shortened. To date, observations by Innerfield on Ac-globulin have shown a rise in its titer to be associated only with a decreased coagulation time and, conversely, a fall in its titer to be associated only with a prolonged coagulation time, as in shock produced by large doses of trypsin intravenously in dogs.

In 1950 Walsbren and Glick[5] reported that in vitro aureomycin added to normal serum in the concentration of 100 to 200 mg. lowered the concentration of heparin by one half. Aureomycin was then given intravenously to 11 patients and lowered the coagulation time significantly in ten of the 11 patients. They concluded that the effect of aureomycin is due to an antiheparinic action.

There have been a number of investigators who have differed with these findings. Lasser *et al.*[6] were the first to report contradictory evidence in 1950. Five patients were given a single dose of 500 mg. of aureomycin and tested at two-hour and four-hour intervals. Then they were given another capsule and retested at six hours. Eight patients were given 500 mg. of aureomycin every six hours for three to ten days. In both groups the coagulation time and heparin tolerance tests showed no changes, all the values being within the limits of pretreatment controls. Shapse and Wright[7] in 1950 reported results in clotting times on 30 patients given 500 mg. of aureomycin intravenously and orally twice daily for an unstated number of doses. Venous clotting times were taken at six, twelve, twenty-four, and forty-eight hours after the initial dose. They concluded that the effect of aureomycin was a variable one ranging from increased to decreased coagulability of the blood. Galt and Hunter[8] in 1950 gave five males 500 mg. of aureomycin twice a day for seven to ten days and reported that the coagulation time was increased in four out of five subjects. Blodgett and Schilling[9] administered

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TABLE I.—Group I, 250 Mg. Aureomycin Orally in Single Daily Dose

Case	Time Interval After Medication (Minutes)*	Coagulation Time (Minutes)	Prothrombin Time (Minutes)	Maximum Depression Coagulation Time (Minutes)	Time Interval Maximum Change (Minutes)
1	0	7.1	20	1.2	30
	30	5.9	20		
	120	6.5	19		
2	0	5.7	29	1.7	136
	50	9.0	28		
	136	4.0	25		
3	0	6.25	22	3.25	145
	65	7.5	24		
	145	3.0	20		
4	0	9.5	..	3.9	60
	30	7.6	..		
	60	5.6	..		
	120	6.6	..		
	180	8.0	..		
5	0	8.1	..	2.1	30
	30	6.0	..		
	60	6.2	..		
	120	8.3	..		
6	0	8.25	..	2.25	30
	30	6.0	20		
	60	9.2	..		
7	0	9.7	21	7.4	195
	30	2.7	22		
	90	4.5	20		
	195	2.25	..		
8	0	10.0	19	6.8	195
	30	7.0	18		
	90	9.0	..		
	195	3.2	20		
				Mean −3.57	
9	0	10.3	..	0.6	30
	30	9.75	..		
	60	10.5	..		
10	0	3.0	..	1.25 (elevation)	150
	40	3.5	..		
	150	4.25	..		
11	0	5.25	30	3.6 (elevation)	35
	35	8.9	30		
	130	7.25	30		

* 0 time is control.

1 Gm. of aureomycin in a single dose to 11 males after a control period of five days of daily coagulation times. Coagulation times were taken at two, four, and six hours. Then 500 mg. were given orally for five days with coagulation times. No altered coagulability was found.

Finally, Miller and Bass,[10] in an attempt to resolve the conflicting evidence studied eight patients who were given therapeutically effective amounts of penicillin, streptomycin, aureomycin, and Chloromycetin singly or in combination. Observations were made over a period of three to seventy days. During the first twenty-four hours of treatment these tests were repeated at one-hour, four-hour, and twelve-hour intervals. Subsequent tests were repeated at daily intervals. They found no appreciable changes in the bleeding time, clotting time, and platelet count.

The problem confronting us was to attempt to resolve the controversy appearing in the literature by varying the route and dosage of the drug and the interval of the determination of the coagulation time.

Methods and Procedure

Patients were chosen from the wards of the Montefiore Hospital Surgical Division. None of the patients had had recent operations, and none had any blood dyscrasias or any condition which might affect their coagulation or prothrombin times. They did not receive any other antibiotics for at least a week or longer preceding the time covered by the test.

There were four groups of patients, each receiving the drug by a different route of administration or on a different dosage schedule. Blood samples were drawn at such intervals as to mirror most closely the changes occurring in the coagulation time. The last specimen was taken whenever possible when the coagulation

TABLE II.—GROUP II, SIX DOSES OF AUREOMYCIN, 250 MG. EVERY FOUR HOURS

Case	Time Interval of Specimen from Preceding Dose (Minutes)*	Coagulation Time† (Minutes)	Prothrombin Time† (Seconds)
1**	0	9.5	28
	165	8.3	..
	240	9.3	30
	240	8.75	30
	240	7.5	25
	210	9.0	25
	165	8.7	30
	180	9.0	25
2	0	8.1	29
	175	8.5	35
	240	8.4	35
	240	9.2	40
	240	9.5	25
	210	7.5	35
	165	7.7	40
3	0	7.2	20
	180	7.0	19
	180	7.2	18
	180	9.5	21
	180	7.3	21
	120	9.2	22
	180	6.0	..
4	0	10.3	24
	180	10.0	26
	180	8.5	25
	180	6.2	25
	180	8.0	24
	120	10.1	20
	300	10.5	31

* 0 time is control.

† Coagulation and prothrombin times taken immediately preceding each dose.

** Case 1 received 7 doses.

time approached its base-line value. The time intervals are given in Tables I to IV. Coagulation time was done by the three-tube method of Lee and White.[11] The glass tubes were thoroughly cleaned chemically with bichromate in sulfuric acid. They were not silicone coated. Prothrombin times were done by the Quick method.

Group I consisted of 11 patients, each receiving a single dose of 250 mg. of aureomycin orally. There were four patients in Group II, each of whom received six doses of 250 mg. of aureomycin orally at intervals of four hours. Control coagulation and prothrombin times were done and then repeated immediately preceding each of the doses of aureomycin.

In Group III there were two patients who were given 250 mg. of aureomycin orally every four hours for four days. Bleeding time, coagulation time, white blood count, and platelet count were done at the beginning of the study before the first dose was given and at the end of the study, three hours after the last dose.

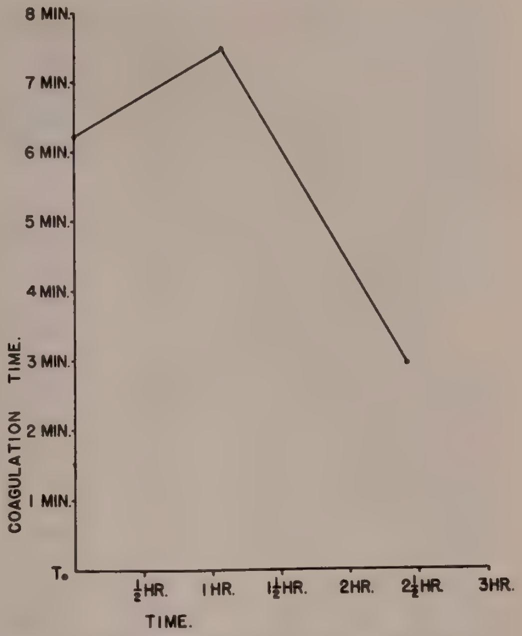

FIG. 1. Case 3, Group I—250 mg. aureomycin given orally at T.

Group IV consisted of ten patients, five of whom received 250 mg. of aureomycin intravenously in 500 cc. of tenth-normal saline and the other five 100 mg. of aureomycin in 500 cc. of 5 per cent glucose in water. Coagulation times were done for the same purpose as in Group I, i.e., to bring out any changes if present.

Results

In the entire series of patients studied there were three types of responses elicited: (1) a marked depression of the coagulation time, i.e., more than one minute, (2) a slight depression of the coagulation time of less than one minute, and (3) a slight to moderate elevation of the coagulation time. Three of the patients

TABLE III.—GROUP III, 250 MG. AUREOMYCIN EVERY FOUR HOURS FOR FOUR DAYS

	Case 1		Case 2	
	Control	3-Hour Determination*	Control	3-Hour Determination*
Bleeding time	1 minute	45 seconds	20 seconds	38 seconds
Coagulation time	9 minutes, 45 seconds	8 minutes, 45 seconds	9 minutes, 15 seconds	10 minutes
White blood cells	10,600	10,000	7,100	7,650
Platelet count	578,500	505,160	276,900	250,250

* Measurements taken three hours after last dose of aureomycin.

TABLE IV.—GROUP IV, INTRAVENOUS AUREOMYCIN

Dosage of Drug	Time Interval of Specimen from Onset Administration (Minutes)*	Coagulation Time (Minutes)	Time Interval of Maximum Change from Onset Administration (Minutes)	Maximum Depression Coagulation Time (Minutes)	Duration Administration (Minutes)
250 mg. in 500 cc. saline					
Case 1	0	5.0	30	2.0	37
	30	3.0			
	60	5.5			
	90	5.0			
Case 2	0	9.4	60	2.9	40
	30	7.5			
	60	6.5			
	90	7.0			
	120	7.5			
Case 3	0	4.6	60	2.0	55
	15	3.6			
	35	3.8			
	60	2.6			
	77	4.0			
	95	3.6			
Case 4	0	4.1	45	2.3	45
	30	2.1			
	45	1.8			
	65	3.1			
	80	3.5			
				2.3 (mean)	
Case 5	0	4.8	30	1.0 minute elevation	37
	15	5.0			
	30	5.8			
	60	4.2			
100 mg. in 500 cc. 5% glucose					
Case 6	0	6.2	90	2.4	70
	30	5.5			
	60	5.8			
	90	3.8			
	120	4.8			
Case 7	0	6.2	60	5.2	60
	30	3.0			
	60	1.0			
	90	4.8			
	120	5.8			
Case 8	0	4.0	180	1.5	90
	30	3.2			
	60	4.7			
	120	3.8			
	150	2.9			
	180	2.5			
				2.6 (mean)	
Case 9	0	4.2	120	0.8 (not significant)	90
	30	4.2			
	60	3.9			
	120	3.5			
	150	4.0			
Case 10	0	5.2	30	0.2 (not significant)	45
	30	5.0			
	60	5.1			

* 0 time is control.

(Cases 2 and 3, Group I, and Case 9, Group IV) with the first type of response exhibited a variation of this response: Following an initial increase in the coagulation time, there was a subsequent decrease (Fig. 1). The implications of this will be discussed later. In all instances where the coagulation time was lowered, i.e., the blood coagulated faster, it had returned to normal by the end of three hours. The prothrombin time was greatly altered only in Case 2, Group II. The results in the four groups are shown in Tables I to IV.

In Group I eight of 11 patients had a depression of the coagulation time of over one minute, one a depression of 0.6 minute, while two had an elevation of 1.25 and 3.6 minutes. The mean maximum depression was 3.57 minutes. The maximum depression shown by each patient compared to his control, when considered for this entire group, showed borderline significance ($P < 0.05$). The mean maximum elevation was 2.42 minutes. Of the nine patients who showed a depression of the coagulation time, two patients had an initial elevation with a subsequent depression. There

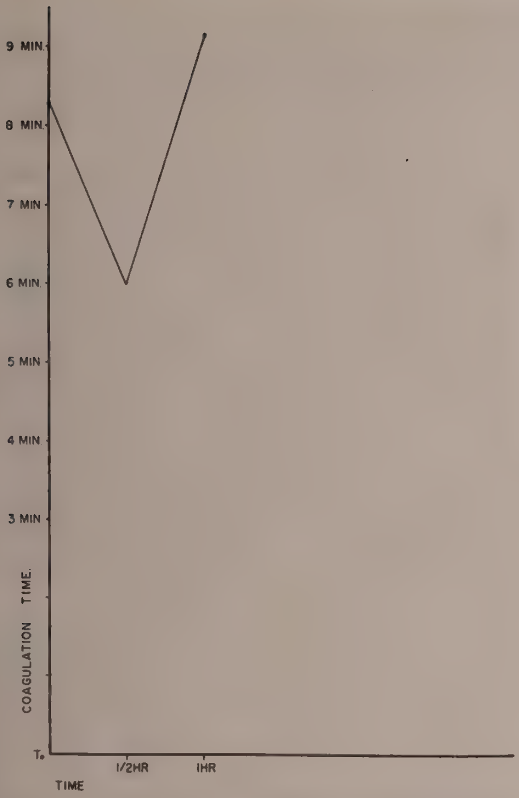

FIG. 2. Case 6, Group I—250 mg. aureomycin given orally at T.

was no correlation obtainable as to the time interval between the administration of the drug and the point of maximum depression of the coagulation time when tested by the analysis of variance ($P > 0.05$). Figure 2 shows the typical response of decreased coagulation time. The prothrombin time was lowered in two out of six cases by two and four seconds, respectively.

The four patients in Group II responded essentially alike. They evidenced an alternating lowering of the coagulation time taken at four intervals, with the final twenty-four-hour coagulation time back at the initial pretreatment level (Fig. 3). The lowering which occurred showed no correlation with time when tested by analysis variance ($P > 0.05$). Using the t-test for comparing maximum depression with control value, no significant difference was obtained. The prothrombin time was lowered by three seconds in one case and elevated by eleven, two, and seven seconds in the other three cases.

Group III showed no change in the final four-day levels of coagulation time, bleeding time, white blood cell count, and platelet count.

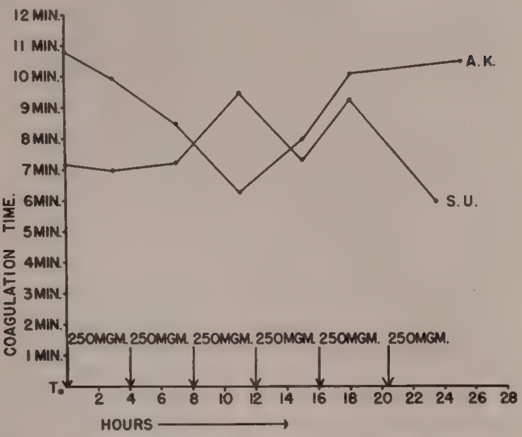

FIG. 3. Cases 3 and 4, Group II—six doses of aureomycin orally every four hours.

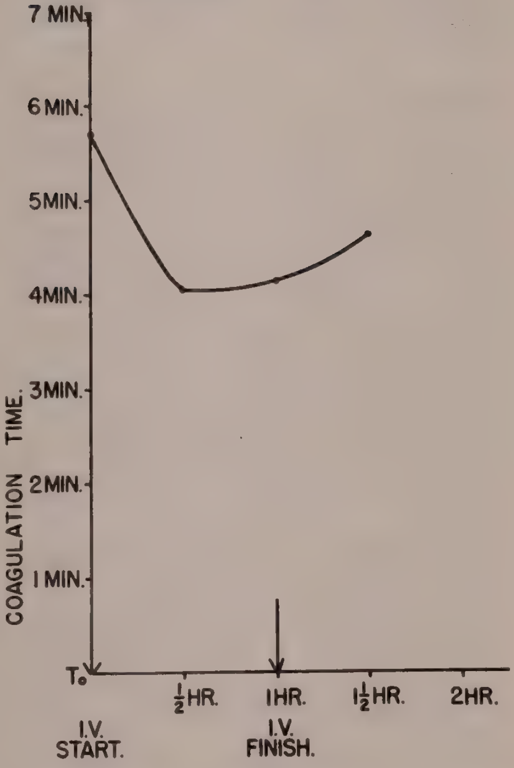

FIG. 4. Composite curve of average change in coagulation time in patients receiving intravenous aureomycin with a depression of coagulation time of more than one minute.

Of the ten patients in Group IV receiving intravenous aureomycin, seven showed a marked to slight depression of the coagulation time, while one showed a slight elevation of the coagulation time. Analysis of variance once again showed no correlation with time interval ($P > 0.05$). However, t-testing for maximum difference as above showed a high significance ($0.01 < P < 0.001$), when the entire 10 patients were taken as a whole. The mean depression of the coagulation time in the group with the greatest change was 2.6 minutes. Figure 4 shows the composite curve of the patients showing the greatest change in the coagulation time with intravenous aureomycin.

Therefore, of 21 patients with a single oral or intravenous dose of aureomycin, 15 (83 per cent) showed a depression of the coagulation time of over one minute, three (8.5 per cent) only a slight depression of less than one minute, and three (8.5 per cent) showed a prolongation of the coagulation time. The intravenous administration apparently had the greatest effect as judged by statistical criteria.

Comment

The results noted above seem to corroborate the findings of the groups of investigators who found that aureomycin, given either orally or intravenously, as a rule depresses the coagulation time of blood. These clinical findings are supported by experimental work on animals by Innerfield *et al.*[4] and Walsbren and Glick.[5] Innerfield was able to correlate the increased coagulability with another factor, namely, an increase in the Ac-globulin activity which occurs only with a decreased coagulation time. Walsbren and Glick[5] correlate this increased coagulability with an antiheparinic action of the aureomycin.

Other authors[8] noted a prolongation of the coagulation time. The variation in the results may be explained by two factors, one of which is emotional stress with resultant outpouring of adrenaline. MacFarlane and Biggs[12] found that the latter will activate plasminogen, which in vivo will give rise to plasmin, and this in turn causes fibrinolysis. Thus, Innerfield[4] states that the trauma of intravenous injection or cardiac puncture was noted to have produced a transient prolongation of the coagulation time. In our material showing such a discrepancy, one of our patients, Case 5, Group IV, with a duodenal ulcer was tested the afternoon before her operation. She was very apprehensive at the time and showed a prolongation of the coagulation time. This was true of Case 11, Group I, who was also an unusually apprehensive individual. This factor, we feel, may account for the type of response mentioned early in the results, and observed in three of the patients receiving a single dose, i.e., an initial prolongation of the coagulation time and its subsequent shortening.

The second factor responsible for the apparent variation of the results of the above-mentioned group of workers might be their failure to look for a change early enough. In our group, in 71 per cent of the 21 patients who were given a single dose, either orally or intravenously (Groups I and IV), a change occurred within one hour or less after the end of the administration of the drug. The authors reporting results at variance with ours determined the coagulation time at varying intervals ranging in all cases from one hour on upward, the average being a starting point at two hours. Although this may be an insignificant point, we feel that it may account for the wide variation in observations.

Group II in our series follows the pattern described by Shapse in that there was a marked variability of response ranging from increased to decreased coagulability of the blood but returning to control levels at twenty-four hours. At ninety-six hours, as shown in Group III, there was no change from pretreatment levels.

The depression of the coagulation time obtained in our series does not appear to be directly proportional to the dose given since the 250-mg. dose produced a mean maximum depression in four patients of 2.3 minutes and the 100-mg. dose produced a mean maximum depression of three minutes. However, it may be somehow related to the speed of administration since in all cases the greatest change occurred close to the end of the intravenous administration or shortly thereafter. However, this could not be shown to be statistically significant.

We would conclude, therefore, that there is no cumulative effect of aureomycin on the coagulation time of blood when it is given in doses of 250 mg. or less and in the accepted dosage schedule. Even though in our cases there was no demonstrable or even suggestive correlation between in vivo depression of coagulation time and clinical phlebothrombosis, it must be borne in mind that phlebothrombosis is thought to be due to an altered clotting mechanism. It is therefore, theoretically possible that repeated alterations in the coagulation time with repeated doses of aureomycin, such as occur in a high percentage of our cases, may act as a factor in tipping the scales in a patient predisposed to phlebothrombosis secondary to other forces in operation, even though the alterations in coagulation time are transitory.

Summary and Conclusions

1. Eleven patients received a single dose of 250 mg. of aureomycin. Eight of these showed an increased coagulability of the blood of over one minute as evidence by the decreased coagulation time. One showed a decreased coagulation time of less than one minute, and two showed an elevation of the coagulation time. The decrease in coagulation time showed borderline statistical significance.

2. Four patients received 250 mg. of aureomycin orally every four hours with alternating increase and decrease in the coagulation time, all of them returning to pretreatment control levels in twenty-four hours. The decrease showed no statistical significance.

3. Two patients received 250 mg. of aureomycin for four days with no demonstrable effect on the coagulation time, prothrombin time, and bleeding time.

4. Five patients received 250 mg. of aureomycin in 500 cc. of saline, and five patients received 250 mg. of aureomycin intravenously in 500 cc. of 5 per cent glucose in water. Seven of these patients showed a decreased coagulation time of over one minute, one showed a depression of less than one minute, and one showed an elevation of the coagulation time. The depression of the coagulation time was well within statistical significance. There is no significant difference in the shortening of the coagulation time between the 100- and the 250-mg. dose. The effect of fear upon the prolongation of the coagulation time is discussed.

5. Fifteen, or 83 per cent, of the patients receiving a single dose of aureomycin showed a depression of the coagulation time of over one minute; three, or 8.5 per cent, showed only a slight depression of less than one minute, and three, or 8.5 per cent, showed a prolongation of the coagulation time.

6. There is no significant alteration of the prothrombin time with a single dose. However, after a total of six doses there is some tendency toward a prolongation of the prothrombin time.

The authors wish to express their gratitude to Melvin Schwartz, M.D., of the Sugical Research Unit, Brooke Army Medical Center, for his assistance in the statistical analysis of the data.

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ANNOUNCEMENT—*SCIENTIFIC EXHIBITS*—1954 Annual Convention—Medical Society of the State of New York

Applications for space for the scientific exhibits should be made directly to the Chairman of the Subcommittee on Scientific Exhibits of the Convention Committee:

William L. Watson, M.D.
340 East 72nd Street
New York 21, New York

The Annual Convention will be held May 10 to 14, 1954, at the Hotel Statler, New York City.

No applications can be considered after January 1, 1954.

There will be two groups of awards:

Group I: Awards in Group I are made for exhibits of individual investigation, which are judged on the basis of originality and excellence of presentation.

Group II: Awards in Group II are made for exhibits which do not exemplify purely experimental studies and which are judged on the basis of presentation and correlation of facts.

W. P. Anderton, M.D., *Secretary*
Medical Society of the State of New York

Clinical Problems in the Rehabilitation of Older Patients

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Clinical problems in the rehabilitation of the older age group are characterized by complications usually not encountered in the younger patient. These interfering factors can be classified in two groups:

1. Physiologic, e.g., diminished muscle power, prolonged reaction time, lessened adaptation of the cardiovascular system, impaired learning and retention ability, and many others.
2. Pathologic, e.g., the variety of chronic illnesses which are so frequent in elderly people.

The concomitant occurrence of both the physiologic and the pathologic inhibiting factors is what makes the rehabilitation of the elderly patient sometimes so difficult.

Of the more than a million hemiplegics in this country, naturally the overwhelming majority belongs to the older age group. Although their rehabilitation is often difficult, their condition can be improved to a considerable degree. A careful analysis of the elderly hemiplegics will sometimes reveal a striking discrepancy between the site and extent of the anatomic lesion and the manifest disability. In many cases a thorough physical examination will reveal functional involvement of the so-called "unafflicted" or nonparalyzed side. Marks's[1] recent investigations throw some light on this phenomenon. With the aid of stroboscopic photography and "force plate" analysis, he proved that functional involvement of the nonparalyzed leg is in many respects similar to that of the paralyzed lower extremity. He also offered experimental evidence to prove that these changes are not merely of a mechanical nature but that it is the cerebral lesion itself that "may alter the functional capabilities of the non-paretic or normal limb."

Another important complicating factor is the gradual development of disuse atrophy. This is usually caused by unnecessarily prolonged bed rest. Such injudicious abuse of bed confinement aggravates the primary disability. It is of great clinical importance to differentiate the muscles weakened by disuse from the paralyzed muscles and concentrate on strengthening the former at the earliest phase of training. A gradual return of power in these muscles will allow the patient to stand up and start systematic gait training. About 80 per cent of hemiplegics can be successfully retrained for ambulation.

Disturbances in the body scheme may in an occasional old hemiplegic cause considerable difficulty. These disturbances range from a relatively simple allesthesia when the patient refers sensory stimuli to the contralateral side of his body; to anosognosia, a complete denial of the paralysis; or even autotopagnosia, a complete exclusion of the paralytic side from his own awareness. Cases in which the patient denies the paralysis and finds various excuses, e.g., tiredness, clumsiness, etc., for not moving his limb are known to all of us, but extreme cases such as one of our patients who simply stated that his paralyzed limbs did not belong to him but to his brother are fortunately rather rare. It is easy to understand how such an affliction can interfere with rehabilitation efforts. However rare such conditions are, it is well to remember that focal cerebral lesions are capable of causing unusual manifestations and sometimes profound changes in the patient's behavior pattern. Recognition of such conditions may protect many an old patient from the hasty diagnosis of senile mental deterioration with all of its dire consequences.

Homonymous visual field defects, the presence of extensive sensory changes, emotional instability of thalamic origin, and advanced aphasia all interfere with the rehabilitation of the elderly hemiplegic. It cannot be sufficiently emphasized that there is no such thing as a "typical hemiplegia." Every case has to be investigated thoroughly, and only after detailed study are we in the position to prognosticate intelligently and prescribe an adequate rehabilitation program.

Except for the occasional traumatic or pathologic fractures seen in the young, hip fractures occur mostly in elderly people. About 80 per cent of these patients fall into the age group of sixty years and over, and it is important to note that 75 to 80 per cent of all hip fractures are found in the elderly female. Many theories have been offered as an explanation for the startling predominance of hip fractures among the aged, e.g., decreased mineral content of the bones, decreased osteoblastic activity probably due to endocrinologic factors or reduced physical activity, protein deficiency resulting in lessening of the matrix, etc. While undoubtedly many or perhaps all of the above factors play an important role in the production of fractures, the significance of certain mechanical conditions cannot be overemphasized. The angle between the neck and the shaft of the hip, which is approximately 140 degrees in early youth, gradually decreases with the advancing years so that around the age of seventy it is in the neighborhood of 130 degrees in man and 125 degrees in women. This decrease of the physiologic angulation may very well be an important contributory factor to the frequent hip fractures in the aged. It is interesting to note that it is after the age of sixty that the diminution of angulation becomes more acute in women as compared to men.

The primary problems in the rehabilitation of the elderly hip fracture patient are as follows:

1. Most of these patients suffered from some chronic disease before the accident: cardiovascular changes, arthritis, or cerebrovascular accidents. Even in the absence of specific disease entities, they may show signs of disuse muscle atrophy or altered gait pattern.

2. The psychic shock which is most pronounced immediately after the accident not infrequently leaves permanent residua.

3. Prolonged bedfastness further aggravates disuse atrophy with all of its mechanical and metabolic consequences.

The earliest possible pinning of the fractured hip is the treatment of choice providing that this is not contraindicated or impossible to perform. If such a procedure is performed, it should be borne in mind that it does not increase the immediate weight-bearing capacity of the hip to any practical degree. Full weight-bearing should not be allowed for some time after the operation.

Some orthopedic surgeons, among them such outstanding authorities as Sir Watson-Jones, are definitely opposed to any kind of weight-bearing until good union has been attained. Many others, on the other hand, definitely favor early ambulation. In our experience the application of the limited weight-bearing gait is a clinically sound compromise between these two extremes. This actually is a modified three-point gait. In the first phase, with his weight on the good leg, the patient moves his crutches forward; in the second phase he swings the involved leg forward placing his foot on the floor with the toes barely touching; in the third and last phase he leans on his crutches and, using the toes of the afflicted leg only to maintain balance, does a "swing-through" step. Elderly patients with poor balance, especially in the early phase of training, often can only do a "swing-to" step without endangering their safety. In our experience this gait technic helps to prevent and sometimes corrects disuse atrophy. It hastens good union and shortens the period of psychologic shock.

When practicing this gait technic, it is very important to observe certain precautions, e.g., the utmost care should be exercised in cases of (1) aseptic necrosis of the head, (2) comminuted intertrochanteric fractures, (3) intertrochanteric fractures treated with traction and not pinned, and (4) fractures of the neck with perpendicular fracture line.

The best means of control during the gait training period are frequent x-ray pictures and physical examinations. If the x-rays show marked displacement or the patient complains of severe pain, training must be suspended or in rare cases abandoned.

Difficulties in walking and stair-climbing and the increased number of falling accidents in the advanced age group are matters of common knowledge. In spite of its clinical importance only a few investigators have found it worth-while to study the senile gait. This condition, which is characterized by loss of motor power, unsteadiness, and often some peculiar gait pattern, is usually referred to as senile paraplegia. This term is utterly misleading because it is not a paraplegia in the commonly accepted meaning of the word. Sensory and sphincteric involvements rarely, if ever, are seen among these patients.

Critchley,[2] who studied this problem quite extensively, classified these gait disorders according to the site of the central nervous or skeletal system involvement, as (1) cortical, (2) subcortical, (3) spinal, and (4) muscular. A similar classification was recommended by Lhermitte, a French investigator.[3]

It is important to point out that certain senile gait disorders usually escape the examiner's attention during the course of a routine clinical examination. Some old patients, when examined in the customary sitting or reclining position, will show very little if any diminution of muscle strength. If, however, the patient's gait is also tested (as should always be done with the elderly), profound disturbances can be observed. As they begin to walk, these people frantically look for support, they take short shuffling steps, and very often after a few such steps, their knees buckle. This gait pattern was well known to French clinicians in the nineteenth century, who referred to it as "l'astasie trepidante." Later in 1900 Petren[4,5] wrote several studies on the subject, and, in fact, this gait is sometimes called Petren's gait.

This rather incapacitating condition usually remains uncorrected, confining the old patient to his bed with all of the ill effects consequent to this. Using a special technic and a great deal of patience and perseverance, we have successfully corrected this pathologic gait pattern in many old people.

To the same general group belongs a gait disturbance of muscular origin which is sometimes referred to by its French technical term, "myosclerose retractilides viellards."[3] In this condition active and passive movements of the extremities are extremely difficult to perform. The muscles appear atrophic but characteristically are firm to the touch. The histologic picture shows a marked intra- and interfascicular accumulation of connective tissue. Our department has recently begun to study the effect of exercise on this clinical picture and also whether or not planned physical activity changes the histologic picture of the involved muscles.

Another gait pattern, occasionally observed i the aged and characterized by walking or standing on a rather broad base with moderate t severe ataxia, was described by Malaise[6] wh suggested that the lesion in such cases is eithe due to cerebellar atrophy or to some type of cerebellar vascular lesion. While this may be true, i should be remembered that here, as in othe neurologic disorders with cerebellar signs, th actual lesion can be in the cerebellar pathway rather than in the cerebellum itself. From th viewpoint of rehabilitation this gait disorde offers a slightly better prognosis than the Petre type.

Summary

In this brief paper we have attempted to giv some random samples of the clinical difficultie encountered in the rehabilitation of the elderly patient. The problems in rehabilitating this grou differ materially from those encountered i younger patients. It is of the utmost importanc that those who are interested in such problem should study them systematically and share the experiences with the rest of the profession. In th future every practicing physician, not only th rehabilitation specialist, will be expected to b familiar with the more common rehabilitatio problems and procedures as they present themselves in the medical care of the aged.

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How to Define Systems of Government

During the recent A.M.A. Public Relations Institute held at Chicago's Drake Hotel, a number of speakers touched on everything from vitriolic excoriations in politics to the changing connotation of words. One speaker—and I can't remember who—burst forth with a delightful definition of the systems of government. It went something like this:

Idealism. If you have two cows, you milk them both, use all the milk you need, and have enough left for your neighbors.

Socialism. If you have two cows, you keep one and give the other to the man next door.

Communism. If you have two cows, you give both to the government; then the governmen gives you back a little milk.

Imperialism. If you have two cows, you stea somebody's bull.

Capitalism. If you have two cows, you sell on and buy a bull.

New Dealism. If you have two cows, the government shoots one; you milk the other, then dum half the milk down the sink.

Nazism. If you have two cows, the governmen shoots you and takes the cows.

Realism. If you have two cows, they're both dr

—Secretary's Letter, A.M.A., October 7, 1953

Treatment of Multiple Myeloma

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The treatment of multiple myeloma has been generally unsatisfactory. A variety of therapeutic agents has been used, and the reports of their efficacy show considerable difference of opinion. The purpose of this paper is to review the results of the various forms of the therapy used and to propose a regime of treatment for consideration. Our own small series of 11 cases is also reviewed (Tables I and II). Before the therapeutic agents can be evaluated, the history and general characteristics of the disease must be considered.

In 1845 Sir James Watson sent the urine of a forty-five-year-old tradesman to Dr. Henry Bence Jones for study of the "animal matter" which it contained. This case was reported by MacIntyre in 1850. Darlrymple in 1846 described the bone lesions in the ribs. The name multiple myeloma was first used by von Rustizky in 1873. In 1887 Kahler first noted the association of the bone disease and urinary proteins, describing the following characteristics: (1) bone pain, (2) bone deformity and pathologic fragility, (3) cachexia, and (4) Bence Jones proteins. The disease has been referred to as Kahler's disease since that time by some writers. Ewald in 1897 first described solitary myeloma, and Ellinger in 1899 noted the hyperproteinemia.

Electrophoretic studies were first used by Longsworth *et al.*[1] in 1939 for diagnosis. During the 1930's the more widespread use of the technic of marrow aspiration resulted in a greatly increased number of diagnoses being made.[2,3] Many extensive studies have been made of this disease in recent years. In 1928 Geschichter and Copeland[4] reviewed 425 reported cases in the literature, and there have been a number of subsequent reviews.[2,5–9]

Classifications

Many classifications have been suggested in the past, but they serve no useful purpose and are probably based on erroneous morphologic interpretations. These suggested types include lymphocytic, myelocytic, erythroblastic, plasma cell, and myeloblastic. Aergerter and Robbins[10] describe (1) multicentric tumor of red marrow of flat bones, (2) single focus which becomes multiple, and (3) diffuse simultaneous involvement of all red marrow. They suggest that the aforementioned types are actually either the plasma cell type or the myeloid type. The most practical means of cytologic classification is into two major groups: (1) small uniform plasma cells and (2) large variegated myeloma cells with all gradations of maturity being found between these extremes.[7] There is biochemical as well as cytologic basis for this classification.[11]

The Plasmocyte

The origin of the plasmocyte is by no means clear. However, there is considerable evidence for a relatively close relationship between plasma cells and lymphocytes. Lymphocytes are not infrequently increased in myeloma. In rare instances myeloid[4] and erythroid proliferation[12] is increased. Fadem and McBirnie[13] report six cases of diseases other than primary plasmocytoses in which plasma cells of a predominantly mature type are found in the marrow (5.4 to 23.6 per cent). In each of these cases the reticulum cells were also increased, which suggests the reticulum cell as precursor of the plasma cell. This is the most likely origin in the light of present knowledge.[14,15] Rubinstein[16] has recently compared leukemia to myeloma and believes myeloma to be a form of leukemia. Other diseases in which plasma cells are found in the peripheral blood include rubeola, rubella, myeloid leukemia, metastatic carcinoma, and Hodgkin's disease.[17]

Incidence of Symptoms and Signs

The literature contains reports and analysis of over 700 cases on which the frequency of occurrence of the various signs and symptoms can be based. The criteria for diagnosis are not the same in each series, and this is partially responsible for the variation in percentage incidence. Multiple myeloma represented 0.03 per cent of

TABLE I.—ANALYSIS OF 11 CASES

Case	Age	Presenting Symptom	Physical Findings	Red Blood Count (Per Cu. Mm.)	White Blood Count (Per Cu. Mm.)	Blood: Globulin (Gm. Per Cent)	Blood: Calcium (Mg. Per Cent)	Blood: Urea Nitrogen (Mg. Per Cent)	Blood: Sedimentation Rate (Mm. Per Hour)	Urine: Alkaline Phosphatase (Bodansky Units)	Urine: Bence Jones Protein	Urine: Albuminuria
A. H.	78	Fatigue	Liver palpable	2,900,000 (aggregation)	9,350	6.0	..	26.0	..	...	Present	2+
E. V.	67	Chest pain	.....	2,650,000	3,600	8.4	11.5	21.2	18	3.8	...	trace
E. W.	63	Chest pain	Mastectomy	3,200,000	10,000 (19.5% plasma cells)	3.2	..	78.3	25	9.6	Present	2+
G. C.	45	Back pain	Kyphosis	3,050,000	6,600	4.2	..	18.5	..	9.25	Absent	trace
R. B.	76	Back pain	.....	3,740,000	10,650	3.65	..	36.5	28	3.6	Present	2+
A. S.	52	Back pain	.....	3,640,000	10,050	8.0	..	15.6	38	...	Present	2+
C. D.	76	Back pain	.....	3,730,000	4,550	2.2	9.4	8.2	..	5.5	Absent	trace
A. F.	64	Pain in chest, head, neck, arms	.....	2,820,000	6,300	6.1	..	11.8	34	...	Present	trace
S. T.	70	Hip pain	Nodule in breast	3,840,000	8,200	3.5 & 2.4	9.8	9.0	38	24.0	...	trace
B. A.	56	Headache	.....	3,420,000 (aggregation)	7,800	7.9* 4.2†	..	63.0* 16.0†	..	...	Present	1+
J. W.	62	Shoulder pain	.....	3,600,000 (aggregation)	6,300	5.9* 4.6†	..	...	..	...	Absent	trace

* Before treatment.
† After treatment.

TABLE II.—MARROW STUDY IN 11 CASES

Case	Bones Involved by X-ray	Fracture	Myeloma Cells (Per Cent)	Lymphocytes (Per Cent)	Myeloid (Per Cent)	Erythroid (Per Cent)	Treatment	Effect	Unusual Features
A. H.	Skull	....	32.8	3.0	28.0	12.6	Stilbamidine	Poor	....
E. V.	Vertebra, pelvis	....	21.3	6.0	69.0	8.3	....	...	....
E. W.	Skull, vertebra, ribs, pelvis, femur	Rib	58.6	1.9	39.3	6.0	Stilbamidine	Poor	Carcinoma of breast preceded
G. C.	Skull, vertebra, ribs, pelvis, humerus, scapula, clavicle, femur	....	62.1	0.4	29.0	8.0	Stilbamidine Urethane	Poor Poor	Signs of heart disease produced by kyphosis
R. B.	Skull, vertebra, ribs, pelvis	Vertebra	4.3	40.6	38.1	11.6	....	...	Lymphocytes predominated in marrow
A. S.	Skull, ribs, pelvis, femur	....	5.5 (mature type)	12.6	61.7	15.9	Urethane	Poor	Diagnosis could not be made by marrow aspiration
C. D.	Vertebra	Vertebra	9.4	8.3	63.4	12.3	....	...	No evidence of abnormal protein
A. F.	Skull, pelvis	....	34.2	3.6	35.5	21.4	Urethane	Poor	....
S. T.	Generalized	....	0.7	5.9	49.8	30.7	....	...	Diagnosis made only at postmortem with no abnormal proteins or cells found in life
B. A.	Skull	....	9.3* 2.6†	17.3* 10.0†	69.2* 71.5†	4.3* 14.3†	Urethane, ACTH, cortisone	Good	Remission has lasted 9 months with treatment; unusual spinal fluid protein
J. W.	Skull, ribs, pelvis, scapula, clavicle	....	67.0* 83.0†	5.5* 8.0†	26.0* 6.8†	0* 1.3†	Urethane, ACTH, cortisone	Good	Remission has lasted 5 months with treatment; few myeloma cells in vertebral spine and many in sternum

* Before treatment.
† After treatment.

all malignancy reported in 1928[4] and 0.66 per cent reported in 1949.[8]

The sex distribution is 63 to 72 per cent in males.[4,5,8]

The peak of the incidence occurs at age fifty-five[4] with an average age of fifty-three.[5] Eighty per cent of cases are between forty and seventy years,[4] and 89 per cent are over fifty.[8] The youngest accepted case was thirteen years old.[7] Our own cases were between forty-five and seventy-eight years of age.

The average duration of the disease is from 12.7 to twenty-seven months.[5,9] In 70 per cent the duration is one to two years,[4] and 12.5 per cent lived five years.[5] The longest reported survival was fourteen years and four months.[5] Occasional benign cases occur.[18]

The following outline summarizes the incidence of the features of the disease:

1. Pain
   - A. Incidence—68 to 100 per cent,[5,6,8,9] nine of 11 cases in present series
   - B. Involved
     - (1) Back 53 to 70 per cent[4,5]
     - (2) Chest and ribs 20 to 25 per cent[4,5]
     - (3) Legs, arms, or shoulders 5 to 55 per cent[4,5]
     - (4) Other areas 5 per cent[5]
   - C. Skull painful in only one reported case despite frequency of osteolytic lesions in skull[5]
2. Thoracic deformity
   - A. Incidence—18 to 60 per cent,[4,5] one of 11 cases in present series
   - B. Bronchitis and emphysema in 55 per cent with deformity[4]
3. Pathologic fracture
   - A. Incidence—16 to 23 per cent,[5,6] three of 11 cases in present series
   - B. 62 per cent of all pathologic fractures due to myeloma[4]
4. Neurologic manifestations
   - A. Incidence—14 to 40 per cent[4-6,8]
   - B. Paraplegia 18 per cent[5]
5. Gastrointestinal symptoms—20 to 62 per cent[4,8]
6. Bleeding
   - A. Incidence—19 to 39 per cent[8,9]
   - B. Epistaxis in 7 per cent[6]
7. Fever—52 per cent[8]
8. Spleen palpable—9 per cent[8]
9. Liver palpable—26 per cent,[8] one of 11 cases in present series
10. Tumor formation—12 to 45 per cent[5,6,8,9]
11. Extramedullary lesions—71 to 73 per cent[14,15]
12. X-ray abnormalities
    - A. Incidence—59 to 86 per cent,[6,8,9] all 11 cases in present series
    - B. No bone lesions demonstrable in 12 per cent[19]
    - C. Discrete lytic lesion[6]
      - (1) Skull 73 per cent
      - (2) Spine 70 per cent
      - (3) Ribs 68 per cent
      - (4) Pelvis 63 per cent
      - (5) Shoulder girdle 40 per cent
      - (6) Humerus 43 per cent
      - (7) Femur 48 per cent
    - D. Diffuse decalcification 26 per cent[6]
    - E. Diffuse decalcification with discrete lytic lesions 9 per cent[6]
    - F. New bone formation without therapy reported in one case only[20]
13. Hematologic abnormalities
    - A. Anemia—53 to 77 per cent,[4,6-9] all 11 cases in present series
    - B. Leukocytes
      - (1) Normal 70 per cent[4]
      - (2) Leukopenia 11 per cent[8]
      - (3) Occasional mild leukocytosis
    - C. Plasma cells in peripheral blood—27 to 46 per cent,[6,8,9,15,17,21] one of 11 cases in present series
    - D. Increased erythrocyte aggregation and rouleaux formation—59 to 60 per cent,[6,8] two of 11 cases in present series
    - E. Plasma cells in marrow—86 per cent,[8] eight of 11 cases in present series
    - F. Elevated sedimentation rate—90 per cent[8]
    - G. Wassermann anticomplementary—25 per cent[8]
14. Chemical abnormalities
    - A. Hyperproteinemia—50 to 73 per cent,[6-9,22] nine of 11 cases in present series
    - B. Electrophoretic abnormalities—83 to 100 per cent[8,23]
    - C. Hypercalcemia—19 to 50 per cent[6-9]
    - D. Hyperphosphatemia—22 per cent[8]
    - E. Alkaline phosphatase
      - (1) Usually not elevated[7]
      - (2) Elevated in 48 per cent in only one series of cases[8]
      - (3) Elevated in one of five cases in present series
      - (4) Found in the leukocyte in myeloma[24]
15. Kidney abnormalities
    - A. Incidence—57 to 70 per cent[4,6,8]
    - B. Bence Jones proteins in urine in 8 to 65 per cent[4-6,8]
    - C. Some form of nephritis 70 per cent[4]
    - D. Azotemia 46 to 71 per cent[8,9]
    - E. Albuminuria 71 per cent,[9] all 11 cases of present series
16. Amyloidosis—6 to 10 per cent[7,25]

Hematologic Variants

Plasma cell leukemia may not be a true disease entity but a variant of multiple myeloma.[26,27] An occasional case will resemble leukemia in most of its manifestations with the predominant cell of the peripheral blood being the plasma cell. Other cases are characterized by predominantly extramedullary lesions and no changes in the peripheral blood.

The association of multiple myeloma with other hematologic disorders is of interest. There are six reported cases of polycythemia associated with myeloma.[12] The presence of myelocytes in the peripheral blood (1 to 10 per cent) in 25 per cent of cases has been noted.[2,4] In two cases the author has seen a picture resembling multiple myeloma in the bone lesions and protein abnormalities in which the predominant cells in the marrow have been lymphocytes. Eosinophilia has been noted in cases of multiple myeloma.[28] Thrombocytopenia was present in five cases in a series of 13.[2] In examination of the marrow in cases of multiple myeloma more myeloma cells may be found at one site of puncture than at another in some instances.

Extramedullary Lesions

A recent review of the literature[2] revealed 18 cases with lesions outside of the bone marrow, and 71 per cent of 38 necropsies showed extramedullary lesions.[14] Another recent analysis of 30 cases revealed 73 per cent with extramedullary lesions,[15] occurring most frequently in the spleen, lymph nodes, liver, and kidneys, in the order named, as well as in many other tissues.[14] Usually extramedullary lesions are multiple. Solitary myeloma probably represents a stage in the general disease. In one of our cases there were extramedullary lesions and bone destruction, but no myeloma cells could be found in the marrow and no abnormal protein demonstrated.

Protein Abnormalities

The plasmocyte apparently produces a variety of abnormal globulins. These globulins may be studied by a number of methods.[22,29] The determination of globulin by precipitation with ammonium or sodium sulfate demonstrates a quantitative increase in many cases. Such tests as the formol-gel test also show an increase. The cationic detergent assay of Jacox[30] was utilized in two cases to identify the proteins of the serum.

Electrophoresis and ultracentrifugation are the most satisfactory methods for investigation[29] but require ponderous and expensive equipment. The most frequent finding in the electrophoretic pattern is an abnormal peak in the gamma globulin. Other clinically indistinguishable cases have abnormal beta globulin, and in rare cases alpha globulin is increased. The abnormal protein migrates even more slowly than the gamma globulin in some instances.[8] It has been noted that an increase in alpha globulin is associated with the presence of immature cells and an acute course, while an increase in gamma globulin is associated with more mature cells and a less malignant course.[11] In some cases there are only significant small abnormalities, and in 87.5 per cent of these cases there is Bence Jones proteinuria.[8] Rundles[23] has suggested that the small-sized Bence Jones proteins may be derived from serum increments of high molecular weight and filtered through the glomeruli. In one of our cases the abnormal peak was obscured by the fibrinogen but became apparent when serum instead of plasma was used.

Cryoglobulins have been demonstrated in multiple myeloma.[29,31,32] When the blood is cooled to 32 C. or lower, solidification may occur. Centrifugation and analysis of the lower white layer reveals cryoglobulin.[31] The plasma cells on rare occasions are capable of producing cryoglobulin. The clinical manifestations of cryoglobulinemia are apparent as (1) Raynaud's syndrome, (2) purpura with bleeding from the mucous membranes and edema, and (3) ulcers and necrosis of the skin.

Macroglobulinemia associated with a syndrome resembling myeloma has been demonstrated by Waldenstrom[29] by means of ultracentrifugation. Excessively high molecular weight globulin is not usually found in myeloma. The syndrome is characterized by (1) occurrence in elderly males, (2) lassitude and dyspnea, (3) bleeding from the mucous membranes, (4) enlarged lymph nodes, (5) anemia, (6) generalized decalcification of the bones, and (7) the presence of many small "lymphocytoid" cells in the marrow with shedding cytoplasm.

The abnormal proteins apparently are present in the spinal fluid, causing a bizarre colloidal gold curve, as demonstrated in one of our cases and one reported in the literature.[6]

Systematized amyloidosis occurs occasionally in association with multiple myeloma. Four cases of plasmocytosis and amyloidosis are reported with macroglossia present in three cases.[33] Atypical plasma cells were noted in the marrow of three cases of amyloidosis in which Bence Jones proteinuria was present, but no bone lesions could be found. Kolff and Dhout[34] suggested that all cases of primary amyloidosis were due to plasmocytoma, but in many cases of primary amyloidosis no evidence of plasmocytoma can be found.

Treatment

Evaluation of treatment of multiple myeloma is difficult because of the variation in survival time and the occurrence of relatively benign cases.[18] The rarity of the disease preven's a single group of investigators from observing personally a sufficiently large series of cases for statistical study. The following methods of treatment have been reported:

Excision of Solitary Lesions.—Excision of solitary lesions from the upper third of the humerus and in another case from the maxilla produced an eight-year survival. Survival for three years is reported in excision of lesions from the floor of the mouth and the soft palate.[35]

Roentgen Therapy.—The treatment of 23 cases by Batts[5] produced relief of pain in 78 per cent. Garland and Kennedy[36] treated 18 cases in which the average survival was 10.4 months as compared to 2.3 months in the untreated cases with one case surviving nine years. They conclude, however, that, in general, the lesions are not radiosensitive except in certain cases of solitary myeloma. Irradiation is of value following laminectomy for cord compression. Coley[37] reports two cases improved after therapy. Sturgis[38] recommends roentgen therapy as the most satisfactory method of treatment and of particular value in the relief of pain associated with bone involvement.

Laminectomy.—This surgical procedure is utilized to relieve pressure on the spinal cord.

Toxins.—Coley[37] treated three cases with toxin of "erysipelas and Bacillus prodigiosus" and claimed eradication of the disease, but follow-up reports are lacking. One case also received irradiation.

Stilbamidine and Pentamidine.—Snapper *et al.*[39-42] treated 15 cases with relief of pain, but other manifestations of the disease such as hyperglobulinemia, Bence Jones proteinuria, and marrow abnormalities persisted. Patients receiving stilbamidine are maintained on a diet low in animal proteins. In seven of nine cases basophilic inclusion bodies, which proved to be precipitates of ribonucleic acid, were found in the cytoplasm.[40]

Propp *et al.*[43] treated five cases with relief of pain in two cases but no arrest in the disease. Haedicke and Greenspan[44] used massive stilbamidine therapy by intravenous infusion and produced a remission and survival of fifteen months after onset of therapy; 14.86 Gm. were given in nine months. In three of our own cases this agent yielded only slight relief of pain but no other benefits. It may cause phlebitis of the veins in which it is injected and may also cause injury of the fifth nerve.

Antimony (Neostibosan).—Rubinstein[45,46] treated 11 cases with this agent. One case had less bleeding, in one a tumor disappeared, and in four the serum globulin was lowered.

Nitrogen Mustard.—Jacobson *et al.*[47] treated two cases with only slight relief of pain. Zwetschke[48] treated one patient with chlorethylamine in Czechoslovakia. The patient remained in good condition for two years and three months with diminished pain, weight gain, and healing of a fracture.

Radioactive Phosphorus (P^{32}).—Reinhard *et al.*[49] treated eight cases and reviewed 17 others similarly treated and found relief of pain in one case, but the life span was shortened in two. Their impression was that it was not of value. Warren[50] noted temporary improvement in one case. Bayrd and Hall[51] reported an unusual remission in one case.

Triethylene Melamine (TEM).—Rundles and Barton[52] treated three cases which were refractory to urethane with depression of the marrow function but no definite effect on the plasma cells. In one case there was slight reduction in gamma globulin.

Urethane.—Rundles *et al.*[53] treated 11 cases and noted reduction of abnormal protein and Bence Jones proteinuria. In another series of four cases[54] he observed a decrease in myeloma cells in the marrow, a decrease in hyperglobulinemia, and no progression of bone lesions. In a report of 24 cases[55] no bone repair was seen in three months of treatment but was noted after four to six months. Rundles[53] also reports toxicity and relapse developing after ten months and suggests that the myeloma cells may become dependent on the chemical. Further improvement may occur temporarily when the drug is withdrawn.

Haines *et al.*[56] treated two cases with relief of bone pain in one and evidence of fracture healing in another. Paterson *et al.*[57] noted no effect in two cases. Alwall[58] reported two cases in which urethane had no effect in one and reduced the number of myeloma cells in another. Berman and Axelrod[59] exhibited it in one case without effect.

Harrington and Moloney[60] utilized urethane in 11 cases and found it effective in six. Relief of pain occurred in the nine cases having pain, and there was weight gain in six cases. Neurologic improvement was seen in two cases with cord compression. Edema disappeared in one case and epistaxis in another. The serum proteins were reduced even in cases without clinical response. There was a fall in sedimentation rate. The presence of albuminuria, casts, and red cells in the urine cleared, but Bence Jones proteinuria persisted. The myeloma cells decreased in the marrow, even when there was no clinical response. The bone lesions demonstrated no or moderate progression, and in one case a mass in the rib disappeared. The average survival was 25.5 months. It was their impression that urethane was more effective in the chronic cases.

Saltzmann and Borgstrom[61] reported a case in which there was dramatic roentgenographic improvement as well as relief of pain.

We have used this agent alone in three cases without effect. In general, it may be stated that urethane is of benefit in more than half of the cases by producing a clinical remission with reduction of myeloma cells, decrease in hyperglobulinemia, and relief of pain.

ACTH AND CORTISONE.—Thorn *et al.*[62] treated one case with ACTH, 20 mg. every six hours for twenty days, with clinical improvement, fall in serum globulin, disappearance of plasmoblasts from the marrow, and a rise in hematocrit. Pearson *et al.*[63] treated one case with no effect.

Rosenthal *et al.*[64] treated five cases (15 mg. three times a day). In four cases with hyperglobulinemia there was a fall in globulin. In two cases Bence Jones proteins were cleared from the urine. In one case in which urethane was not effective, ACTH caused a reduction in plasma cells, serum globulin, and urinary proteins, as well as an increase in erythrocytes and platelets with a five-month remission. No effect on bone pain was noted in two cases.

Haines[56] treated three cases of which one was a solitary myeloma. In one case there was relief of bone pain and bone healing. The myeloma cells diminished, and serum calcium returned to normal.

Block and Jacobsen[18] reported relief of pain, return of proteins to normal, and stimulation of erythropoiesis with these agents.

Gardner[65] treated one case with a temporary lowering of plasma proteins. He suggested that immature myeloma cells respond best to ACTH and mature cells to urethane.

Effersöe[66] reported six cases treated, with decrease in total proteins and diminished Bence Jones protein excretion. The abnormal serum globulins remained, and the plasma cells of the marrow were unchanged.

ACTH and cortisone appear to be capable of producing clinical remissions and reduction in abnormal globulins and myeloma cells.

COMBINED THERAPY WITH ACTH, CORTISONE, AND URETHANE.—Haines[56] reports one case treated with this combination with a striking clinical response. There was also return of the abnormal proteins to normal and reduction in the number of myeloma cells in this case.

We have treated two cases with this combination, and both have had excellent clinical responses. Both patients have returned to their occupations and have been engaged in normal activities for nine and five months, respectively. The anemia in both cases has remained mild. Hyperglobulinemia has been reduced in each case, the myeloma cells have been reduced in one case, and the bone lesions remain unchanged.

This appears to be the most promising form of treatment available at present.

Program of Treatment Used

ACTH gel, 40 mg. intramuscularly, is given as initial dose and then 20 mg. twice a day for three days or until there is clinical improvement. The dose is then reduced 5 mg. a day until a dose of 15 mg. is reached. The patient is then transferred to oral cortisone, 25 mg. orally each day, and this is continued as a maintenance dose.

Urethane, 1 Gm. four times a day, is started at the same time as the ACTH. This dose is continued until the leukocyte count drops below 5,000 per cu. mm. at which time the dose is reduced to 1 Gm. a day and then varied to keep the white count in the range of 2,000 to 5,000. Maintenance dose has been 0.3 to 1 Gm. a day.

A white count and differential is done every week until the patient's dose is regulated, and then the white count is done every second week. Red cell counts and hemoglobin or hematocrits are done at monthly intervals.

Antibiotics are given as required to control infections, which are prone to develop while under treatment.

Transfusions are given when anemia is severe enough to produce symptoms. Usually transfusions are not used if the red count is over 3,500,000 and the hemoglobin 10 Gm.

X-ray therapy is reserved for solitary myeloma, localized bone pain, or cord compression.

Surgery is resorted to for the excision of solitary lesions and when laminectomy is needed for the treatment of cord compression.

Comment

Urethane appears to cause selective damage to the mitotic activity of neoplastic cells[67] which makes it a useful agent in the treatment of multiple myeloma. Urethane is capable of (1) decreasing the number of myeloma cells in the marrow, (2) lowering the concentration of abnormal proteins in the blood, and (3) arresting or decelerating the development of lytic bone lesions. It is not effective in all cases of myeloma. There is evidence to suggest that urethane is more effective when the predominant cell is the more mature plasmocyte.

There is likewise evidence that ACTH and cortisone are capable of producing the same effect on the disease. ACTH and cortisone may be more effective when the predominant cell is more immature. Since most cases show both mature and immature cells in varying proportions, it would be logical to use both agents. The effect of simultaneous administration of urethane and cortisone in the few cases in which it has been used suggests a synergistic action. Urethane may prove to be better tolerated and yield more consistent results when given in conjunction with ACTH or cortisone. The dangers involved in the prolonged administration of these agents are justified in view of the malignant course of most cases of multiple myeloma. No conclusions can be drawn from the few cases treated by the combined form of therapy.

Summary

A review of the characteristics of multiple myeloma has been presented. Eleven further cases are reported. The effects of the various methods of treatment have been reviewed. A program of treatment using urethane, ACTH, and cortisone has been presented in the hope that it will receive further trial.

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Many Medical Advances Made Under Stimulus of Wartime Exigency

Many significant advances in medical science have been made by medical officers in the armed services or by civilian physicians working under the stimulus of wartime exigency, in the opinion of Dr. John F. Fulton, New Haven, Connecticut.

"Whereas the ultimate compensations of war to any society are usually few and seldom recognized, in the field of medicine, over the years, they have been numerous and many of them highly important," Dr. Fulton, Sterling professor of the history of medicine at Yale University, wrote in the October 3 *Journal of the American Medical Association.*

Experience gained in World War I aided in the sphere of prevention of infectious diseases during World War II, he pointed out. Mass inoculation, particularly against tetanus, gained momentum during World War II, while the importance of moving casualties rapidly from the front lines before infection had set in was another lesson learned during World Wars I and II.

"Between World War I and World War II there were many important contributions useful not only in time of war but for medical and civilian defense," Dr. Fulton stated. "Undoubtedly the most important were the developments in the field of antibiotics. Much research had been done on them before 1939, but their introduction as therapeutic agents was greatly expedited by World War II. Surgery has probably been more benefited by wartime research than any other branch of medicine. In World War I, no surgeon would have dreamed of closing an infected wound, or even one that was potentially infected, without leaving a drain. Now, thanks to the use of chemotherapeutic agents such as the sulfonamides and penicillin, it is possible to close wounds of almost every description, even those of the abdomen, without drainage and without fear of subsequent complication from infection, provided all dead tissue has been carefully removed prior to the closure.

"A second important result of the use of penicillin and the sulfonamides has been the avoidance of unnecessary amputations and unnecessary removal of potentially viable tissue. Surgery has also been influenced by wartime studies on human blood and the blood plasma fractions that have become available in pure form, again as a direct result of wartime medical research. As a result of these investigations on blood and its fractions, the civilian surgeon has an imposing array of blood substitutes ready for his use at any time, and he is able to count on a supply of stored whole blood rather than having to find a blood donor at the scene of an accident or at some outpost of civilization."

Important new branches of medicine, important to the armed forces and to civilians alike, have been created by wartime necessity, he added. One of these is the area of chemical applications in disease control such as insect repellents, insecticides, and antimalarials.

Progress in aviation, stimulated by developments in military aircraft, has led to many advances of outstanding value both for medical defense and for civilian aviation, Dr. Fulton pointed out. These advances include improvements in oxygen administration, pressurized aircraft cabins, protection from acceleration in high-speed aircraft, and use of the rear-facing heavily moored aircraft seats.

CASE REPORTS

Thrombotic Thrombocytopenic Purpura

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In 1925 Moschcowitz[1] reported the first case of a syndrome characterized by fever, anemia, and the occurrence of widely disseminated hyaline thrombi in the terminal arterioles and capillaries of many organs. It was not until 1936 that the disease was clearly defined when Baehr, Klemperer, and Schifrin[2] in reporting four cases described the clinical course, the blood changes, and the anatomic findings. Since their report no essential new facts have been added. Clinically, the disease is characterized by hemolytic anemia, thrombocytopenic purpura, transient neurologic and psychologic manifestations with a progressive downhill course and fatal termination.

Only one case is known to have survived for three years following splenectomy, and then the patient succumbed to the disease.[3] To date about 40 cases have been reported in the literature, and few of these were diagnosed correctly prior to autopsy. The disease is seen at any age and appears more commonly in females.

The purpose of this report is to call attention to the syndrome and to describe a case with typical symptoms which was diagnosed antemortem.

Case Report

A fifty-one-year-old white salesman enjoyed good health until five years prior to his present illness at which time he received electric shock therapy for mental depression. At that time the general physical examination and blood counts were essentially normal. During the summer of 1950 he again complained of feeling depressed and nervous and was treated with psychotherapy. Ten days prior to admission to the New Rochelle Hospital on November 27, 1950, he developed a sudden chill. Although he felt somewhat under par following the chill, he continued to work. On the night before admission to the hospital he complained of weakness, tightness in the chest, and abdominal "soreness." The following morning in attempting to get out of bed he felt that his left arm and leg were paralyzed, and he had to be helped to the bathroom. When seen by his family physician (E.E.K.) one hour later, the symptoms had subsided, and neurologic examination was negative. He did, however, appear somewhat drowsy and was extremely pale. There was a subcutaneous hematoma on the outer aspect of the right thigh. Immediate hospitalization was advised.

On admission to the hospital the patient appeared restless and somewhat confused. His temperature was 101 F., blood pressure 104/65, and pulse 100. There was marked pallor, but the skin and sclera were not icteric. Physical examination was otherwise essentially negative except for a palpable liver two fingerbreadths below the right costal margin and the hematoma of the right thigh previously mentioned. The spleen was not palpable.

Laboratory findings were as follows: hemoglobin was 7 Gm. (40 per cent), erythrocytes 2,200,000, leukocytes 10,000 with neutrophils 73 per cent (40 segmented, 29 nonsegmented, 3 metamyelocytes, and 1 myelocyte), lymphocytes 26 per cent, and basophils 1 per cent. The red cells showed anisocytosis and macrocytosis as well as marked polychromatophilia. There were 14 normoblasts and 6 pronormoblasts per 100 white cells. Platelets numbered 18,900. The hematocrit was 15. Bleeding time was well over fifteen minutes and coagulation time four minutes. There was no clot retraction in twenty-four hours. The Van den Bergh reaction revealed a prompt direct of 0.15 mg. per cent, a delayed direct of 0.25 mg. per cent, and indirect of 1.6 mg. per cent. Erythrocyte fragility test was normal as well as the Coombs' test. Bone marrow examination on the evening of admission revealed a tremendous erythroid hyperplasia, and approximately 75 per cent of the marrow cells were in this series. The majority of these cells were pronormoblasts and erythroblasts.

During the first hospital day the patient was so agitated and restless that restraint was necessary. From that time on he was in coma, although he seemed to recognize members of his family on occasions during the last two days of life. Because of labored respiration an airway was introduced and oxygen administered. On the second day small petechiae appeared, first around the shoulders and later involving the entire body. At this time clinical jaundice was noted. Suddenly, on the third hospital day, at which time a diagnosis of thrombotic thrombocytopenic purpura was made, the patient developed a flaccid paralysis of the right side of the face and right arm. The paralysis, however, was not constant, and during the last two days he moved his right arm and at intervals the facial paralysis would disappear for several hours at a time. His stools became tarry. Two days before death a large hematoma developed in the perineal area. The temperature ranged from 101 to 103 F., spiking to 105 F. terminally.

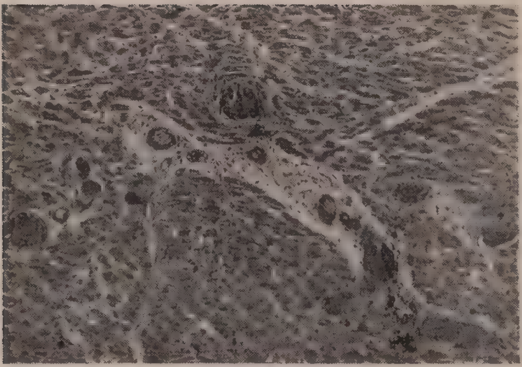

FIG. 1. Section of myocardium showing thrombosed vessels.

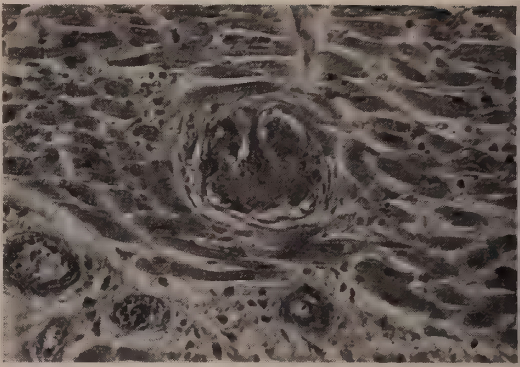

FIG. 2. Section of myocardium showing slight infiltration of lymphocytes and histiocytes about the thrombosed vessels and in the interstitial tissue.

Treatment was largely supportive consisting of oxygen, intravenous fluids, and blood transfusions (total 1,500 cc. during the first two days). Although there was a slight improvement in the blood picture (hemoglobin 56 per cent), clinically the patient appeared worse after the transfusions. Thereafter fluids were supplied by glucose and saline infusions. Death occurred on the sixth hospital day.

AUTOPSY FINDINGS.—*Gross Examination:* The body was that of a well-developed, well-nourished, white male. There was a definite icteric tinge to the skin and sclera. The peritoneal cavity appeared normal. Within the mesentery of the jejunum there was an ovoid, firm mass, 25 cm. in greatest dimension. The mass on section was brilliant yellow in color and contained numerous irregular gray opacities scattered throughout its substance. Twenty cubic centimeters of serosanguineous fluid were present in the pericardial sac, and numerous petechial hemorrhages were noted over the visceral and parietal pericardium. The heart was of normal size. The myocardium of the left ventricle was extremely flabby, and scattered about were discrete, faun-colored areas up to 2 mm. in diameter. The tracheobronchial tree contained a large amount of thick purulent fluid, and within both lower lobes and the right middle lobe there were numerous discrete, raised gray patches up to 3 mm. in greatest dimension. The liver weighed 2,500 Gm. and on section revealed no gross pathologic change. The gallbladder was filled with pigmented, faceted calculi measuring up to 18 mm. in greatest dimension. The cystic, hepatic, and common ducts were patent, and the duodenum was bile stained. The pancreas was of normal size and on section contained approximately six yellow discrete zones up to 4 mm. in diameter and filled with a thick, yellow, putty-like material. The spleen weighed 200 Gm. and on section was firm in consistency and purple in color. Multiple petechial hemorrhages were present within the gastric mucosa. The kidneys were normal but for numerous petechial hemorrhages within both pelves. The brain and meninges were grossly normal.

Microscopic Examination: Sections of all organs revealed many of the arterioles and capillaries plugged by homogeneous, pink-staining thrombi. No blood cells were recognizable within the thrombi. The endothelial cells of many of these vessels were hyperplastic. Serial sections along several of the arterioles revealed moderate aneurysmal dilatation. The thromboses were most prominent within the myocardium (Fig. 1) but were seen in great number throughout the lungs, liver, thyroid, kidneys, pancreas, adrenals, lymph nodes, testes, gastrointestinal tract, brain, spinal cord, and pituitary gland. The liver showed marked sinusoidal engorgement. Sections of both lower lobes and the right middle lobe of lung revealed an acute bronchopneumonia. Sections of myocardium revealed a slight infiltration of lymphocytes and histiocytes about the thrombosed vessels, as well as a slight infiltration of the interstitial tissue by similar inflammatory cells (Fig. 2). Sections revealed extensive necrosis involving the interstitial pancreatic fat. Sections through the mesentery of jejunum revealed a similar fat necrosis with a diffuse infiltration of lymphocytes, eosinophils, and occasional polynuclear leukocytes. Numerous thrombi were present within the arteries and arterioles of the pancreas and mesentery. The pancreas contained numerous thrombosed vessels but no areas of necrosis. All sections of the central nervous system showed capillary and arteriolar thrombi but failed to reveal evidence of necrosis.

Comment

The clinical picture in thrombotic thrombocytopenic purpura is quite distinct, and the diagnosis should be suggested by the findings of hemolytic anemia and thrombocytopenic purpura associated with transient neurologic and psychic changes. It was believed originally that the platelets became adherent to the vessel walls with the formation of thrombi and a resultant thrombocytopenia.[2] Recently, however, it has been suggested that the thrombocytopenia is the result of a process similar to that seen in idiopathic thrombocytopenia with an abnormal splenic mechanism.[3]

Histologic observations have led several investigators[3-5] to believe that the degenerative lesion of vessels in thrombotic thrombocytopenic purpura is primary, and for this reason they suggest a relationship of this syndrome to the collagen group of diseases. Meacham *et al.*[3] state that there is no conclusive evidence that the occlusions in the vessels are platelets.

To date no satisfactory treatment has been found for this disease. Splenectomy has been tried in four cases. Three of the patients died soon after operation.[2,6,7] The fourth patient lived for three years; ACTH in small doses was used during relapse with temporary improvement, and further trial of ACTH therapy in other cases is suggested.[3]

Summary

A typical case of thrombotic thrombocytopenic purpura diagnosed antemortem has been presented with autopsy findings. Present knowledge of the pathology of the syndrome and treatment employed in several other cases have also been reviewed.

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Death from Cardiac Arrest After the Intravenous Administration of Pronestyl (Procaine Amide)

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(*From the Queens General Hospital*)

THE value of procaine amide in the treatment of cardiac arrhythmias has been well established by many investigators.[1,2] Toxic manifestations of intravenous use of this drug include transient electrocardiographic changes, hypotension, and, less often, allergic reactions. The electrocardiographic changes are prolongation of the Q-T interval, widening of the QRS complex, ventricular acceleration, and ventricular fibrillation.[1,2]

The purpose of this report is to present a case of fatal cardiac arrest following the intravenous administration of Pronestyl, a toxic effect which has been reported only once previously. Acierno, Gubner, and Poliakoff[3] observed cardiac arrest after the administration of 300 mg. of Pronestyl intravenously. These authors could not be certain of the role played by Pronestyl because their patient was moribund as a result of phosphorus poisoning. Our case, however, supports the conclusions that Pronestyl can be responsible for cardiac arrest.

Case Report

J. M., a sixty-year-old, white male, was admitted to the hospital on October 21, 1951, with signs, symptoms, and laboratory findings consistent with a diagnosis of acute anterior wall myocardial infarction. His past history was negative except for a subtotal gastric resection for duodenal ulcer in 1948 followed by phlebitis. Physical examination

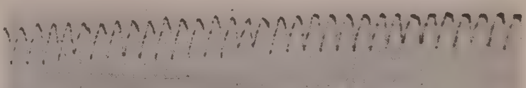

FIG. 1. Representative sections of a continuous electrocardiogram. The first section is prior to therapy. The second section is immediately following completion of Pronestyl injection. The following sections are taken from the continuous cardiogram at approximately four-minute intervals.

at the time of admission revealed a blood pressure of 160/110, a sinus rate of 120, bilateral basal pulmonary congestion, and a slightly distended, soft abdomen. The remainder of the examination was within normal limits.

The patient was placed on anticoagulant therapy and did well until November 8, 1951, when he experienced sudden collapse. No blood pressure was obtainable. An electrocardiogram done at this time revealed a ventricular tachycardia (Fig. 1). One gram of Pronestyl, diluted to 30 cc., was intravenously administered over a ten-minute period. A continuous electrocardiogram was traced with a direct writing machine during and after the drug administration.

Following completion of the dosage a gradual prolongation of the Q-T interval was noted (Fig. 1.) The ventricular tachycardia persisted. A gradual slowing of the cardiac rate occurred; the idioventricular rhythm was interrupted by occasional beats from other ventricular foci. Decreasing amplitude and frequency of the complexes were then noted, progressing to complete asystole without the occurrence of ventricular fibrillation.

Comment

This case represents an unusual complication of Pronestyl therapy in that death resulted from ventricular standstill rather than fibrillation which has been previously reported by other authors.[4,5] The continuous electrocardiographic tracing made in this case definitely rules out the possibility of ventricular fibrillation preceding the fatal cardiac arrest.

The action of procaine amide resembles quinidine in many respects. Wetherbee *et al.*[6] demonstrated that quinidine can cause ventricular tachycardia. Gold[7] and others have reported cardiac arrest following quinidine therapy. We have had the opportunity of observing one case of cardiac arrest with electrocardiographic confirmation complicating the use of intravenous quinidine. It is of interest to note that Pronestyl may act similarly.

Our case illustrates the fact that Pronestyl may achieve its maximum effect several minutes after the completion of injection, even when the drug is administered slowly and in dilute solution. We believe, therefore, that one should wait for about fifteen minutes after the administration of 500 mg. before the injection of a larger dose. Continuous electrocardiographic recording is essential if this drug is to be given intravenously with safety.

Conclusions

1. A case of death occurring after the intravenous use of Pronestyl is shown to have been due to cardiac arrest rather than ventricular fibrillation.

2. Apparently, Pronestyl like quinidine may cause either ventricular fibrillation or cardiac arrest. Only the electrocardiogram can distinguish between the two. A continuous electrocardiogram is necessary for the safe administration of Pronestyl by vein.

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Night Office Hours Seen As Mixed Blessing

Doctors in some areas are currently turning night into day by scheduling the bulk of their regular office hours after dark. Is this a good idea from the point of view of physician and patient?

In an effort to answer the question, *News and Views*, the publication of St. Louis G.P.'s, has drawn up a list of pros and cons based on the experience of its night-working readers.

On the credit side:

1. "Night hours increase the number of males that can come to the office."

2. Many women find night hours better, too, since "fully half of our adult women can't get time off from work to visit their doctor."

3. "Night hours add to the number of couples that can consult with their doctor."

4. "Transportation and parking problems are less severe at night."

On the other hand, says the publication:

1. The night-working doctor is compelled "to see his patients in less time, and thus perhaps to do a smaller number of examinations, since there are fewer hours in the evening than in the daytime."

2. "The cost of medical care is greater, because—for one thing—a night schedule makes office help more expensive."

One obvious drawback that *News and Views* might well have added: A night schedule ruins whatever small chance a doctor has of spending evenings with his family.

—Medical Economics, October, 1953

Weber-Christian Syndrome

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The clinical and pathologic accounts of the Weber-Christian syndrome (chronic relapsing febrile nodular panniculitis) were first described by Pfeiffer[1] in 1892 and Gilchrist and Ketron[2] in 1916. Until 1940 only 20 cases had been reported in the literature. During the past decade this entity has been recognized with increasing frequency so that up to the time of the completion of this article (June, 1951) 50 cases had been reported. It is the purpose of this paper to add two cases to the rapidly growing literature.

Case Reports

CASE 1.—A seventy-one-year-old woman was admitted to Queens General Hospital on December 17, 1950. Ten days prior to admission she suffered a mild left cerebrovascular accident with a right hemiparesis. There was no period of confusion or unconsciousness, and she was not acutely ill. Her local physician had advised admission only because she lived alone and could not care for her own needs. She had been a known hypertensive for the past ten years and had had a left cerebrovascular accident five years previously from which she made a complete recovery.

Her family history was noncontributory.

Essential findings on examination at admission revealed a well-nourished, well-developed, white female, cooperative and in no acute distress. The temperature was 98.2 F., pulse 96 and regular, respirations 16, and blood pressure 200/140. The fundi showed moderate tortuosity of the vessels with arteriovenous nicking. No hemorrhages or exudates were present. The heart was slightly enlarged to the left on percussion, rhythm regular, rate 96 (same as pulse), second aortic sound snappy with slight accentuation, and there was a grade II blowing mitral systolic murmur which was not transmitted. There was spastic weakness of the extremities on her right side with moderately hyperactive deep tendon reflexes and a Babinski. Over the skin of the face and lower extremities were noted a multiplicity of subcutaneous nodules varying in size from 0.5 to 3 cm. These were elevated, and the skin overlying most of them was reddened, although a few of the older lesions were noted to have a violaceous appearance. Many depressed, atrophic areas of skin were noted. Most of the nodules were somewhat tender, but none were purulent. A biopsy was taken from one of the representative acute lesions on her right leg.

The blood count disclosed the following: hemoglobin 12.5 Gm., leukocytes 9,200 with 80 per cent segmented forms and 20 per cent lymphocytes. Blood chemistry showed fasting blood sugar 119 mg. per cent and nonprotein nitrogen 14 mg. per cent. Blood Mazzini, spinal fluid studies, and urinalyses were negative. The chest x-ray disclosed a generalized increase of bronchovascular markings throughout both lung fields. The cardiac shadow was moderately enlarged as compared to total thoracic diameter with widening at the base. The electrocardiogram of December 17, 1950, revealed the following: auricular rate 80, ventricular rate 80, P-R interval 0.16 second, QRS 0.09 second, normal sinus rhythm, left axis shift.

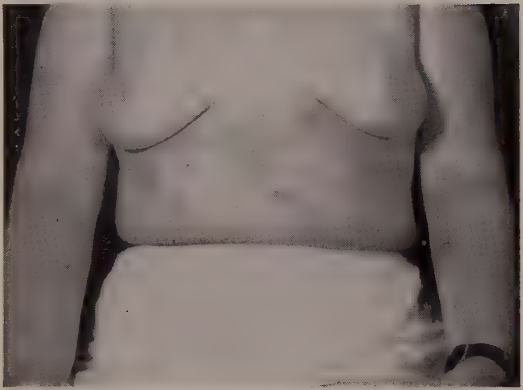

FIG. 1. Lesions on the anterior abdominal wall with draining sinus in centrally located lesion. Biopsy scars on forearms.

Temperature on admission was 98.2 F. For the following two weeks it fluctuated between 99 and 100 F. and then subsided to normal during her remaining time in the hospital. On the seventh day most of the lesions were noted to be violaceous, and that was their color on discharge thirty-three days after admission. The patient was told to return if there was any exacerbation of her lesions, but up to the time of submission of this article, she has not been seen.

Treatment consisted of depot penicillin, 500,000 units twice a day, and a salt-free diet.

Biopsy Report.—Gross examination: Fat lobules showed fibrosing panniculitis which was nonsuppurative.

Microscopic examination: Some lobulated fat tissue with islands of embryonal fat cells and some inflammatory infiltration, particularly prominent about the vessels, were seen. There was trabeculated congestion with some inflammatory cells and some hemorrhages. No giant cells were present. No tubercle structures were seen, but some of the embryonal fat islands showed a distinct focal distribution.

Diagnosis: Panniculitis with embryonal fat foci; lobulated, nonsuppurative.

CASE 2.—A twenty-one-year-old woman was ad-

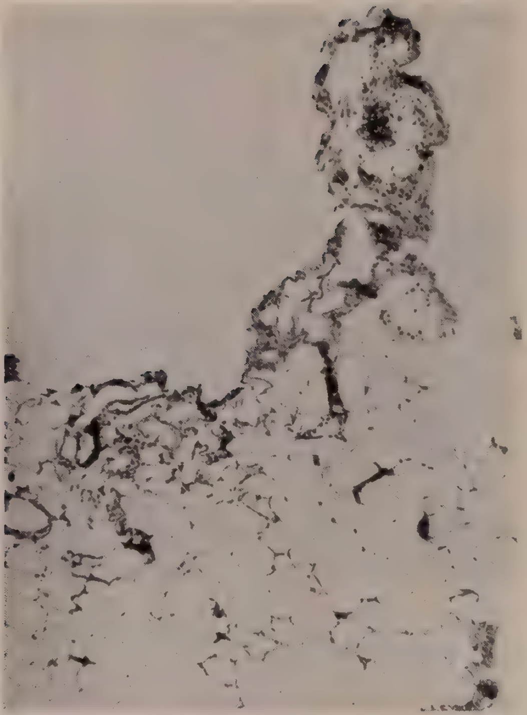

FIG. 2. Low-power photomicrograph from a biopsy of a nodule on the forearm. Note the histiocytic and lymphocytic infiltration with some fibrosis extending along the reticulum framework of the fat tissue.

mitted to the Queens General Hospital on May 10, 1951, complaining of painful, tender nodules over both forearms and the anterior abdominal wall (Fig. 1). They were first noted in January, 1951. The lesions always occurred over the areas noted, persisted for a few days to several weeks, and would gradually subside. There were recurrences of the cycle after an interval of about three to four weeks. The lesions did not respond to antibiotics. The only other accompanying symptoms were low-grade fever (99.4 to 100 F.) and slight malaise. However, she was able to carry on her usual duties as a nurse.

Past medical and family history were noncontributory.

Except for the skin lesions on the volar surfaces of both upper extremities and the upper portion of the abdomen, the examination was unremarkable. These lesions were tender, raised, fixed, subcutaneous nodules with surrounding inflammation up to $4^{1}/_{2}$ cm. in diameter. One of the nodules on the abdomen had a sinus which was draining a small amount of purulent material.

The blood count disclosed the following: hemoglobin 14.5 Gm., erythrocytes 4,730,000, leukocytes 10,600 with 88 per cent polymorphonuclears and 12 per cent lymphocytes. The blood was negative for febrile agglutinins including typhoid O and H, paratyphoid A and B, proteus OX-19, and Brucella abortus. A biopsy of one of the nodes on the left forearm was done. A smear and culture of the infected node on the abdomen was reported negative.

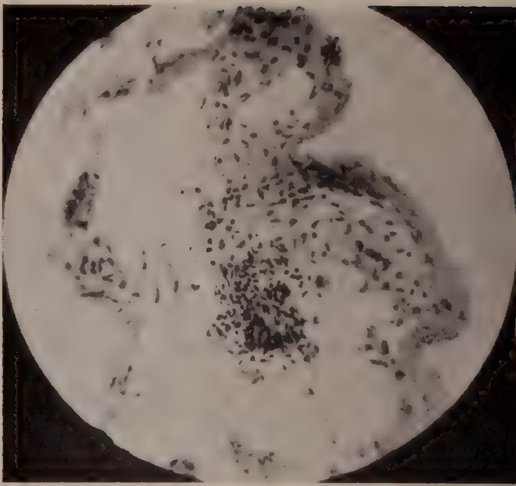

FIG. 3. High-power view of the upper portion of the specimen shown in Fig. 2. Fat tissue is seen infiltrated by masses of histiocytes. A number of leukocytes and lymphocytes are also present in a denser area where underlying fibrosis can be discerned.

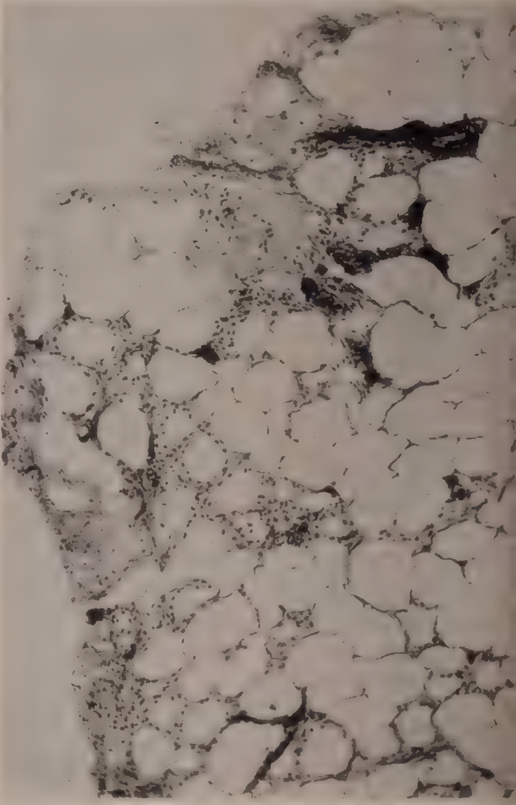

FIG. 4. High-power view of another area in Fig. 2. There are focal areas of histiocytic and lymphocytic infiltrations in the fat tissue occupying mainly the reticulum framework. Edema of fat tissue is also noted.

Because of the temperature of 102 F. and the infected node, aureomycin, 500 mg. every six hours, was started soon after admission. The patient was discharged after five days in an improved condition.

Biopsy Report.—Gross examination: Fat tissue.

Microscopic examination (Figs. 2, 3, and 4): Fat tissue with no overlying epidermis. In the fat a suppurative focus was found which was extensive. It infiltrated adjacent fibrofat tissue. Throughout polynuclears predominated with a scattering of eosinophils and large mononuclear cells. Fibrinous exudation was present in considerable amount. Fat-laden lipophages and embryonal fat cells were not noted in this section.

In adjacent fat tissue larger, pyknotic mononuclear elements predominated. In the original fat numerous lymphocytes were also seen about vessels. Included nerve structures showed edema. One larger vessel showed infiltration into the muscular coat which was edematous and a similar proliferation of pyknotic cells in the intima proper above the internal elastic lamella. The adventitial tissue about the smaller vessels was edematous with prominent inflammatory infiltration, most of the cells being lymphocytes and monocytes in this region about the larger vessel.

Diagnosis: active panniculitis.

Comment

This type of panniculitis should be considered a syndrome and not a disease entity. Among the factors which are considered to be of pathogenetic import are (1) bacterial allergy,[3] (2) treatment with iodides and bromides (halogens),[4] (3) trauma (included under this heading is the speculation that this syndrome is the adult manifestation of subcutaneous fat necrosis in the newborn[5]), (4) relationship to dermatomyositis or some other collagen disease,[6] and (5) avitaminosis.[7]

Bendel[8] combines several of the tested theories within his own. He believes that this syndrome is the result of some noxious stimulus (be it chemical, viral, or bacterial) producing a metamorphosis in the subcutaneous fat and possibly also in the visceral fat in the severer cases, the fat acting as a foreign body and calling forth a foreign body response, with the reticuloendothelial system playing a large part in the syndrome. It is suggested that the mechanism may be in the form of a nonspecific type of allergy. Up until the present time it has been impossible to demonstrate any association with any specific microorganism or virus. Bendel has not included the word suppurative in his description of the disease. He has seen liquefaction and pus occasionally occurring in the nodules which he believes probably indicate a severer phase of the node commonly seen in the nonsuppurative reaction.

The syndrome is self-limited in its duration, not usually affected by any type of therapy yet tried, and usually persists for several weeks with a free interval of months. This syndrome is usually benign, although at times it is severe enough to cause death. Because of its possible relationship to the allergic and collagen type syndromes, it is suggested that ACTH and cortisone may have a place in its therapy.

Summary

1. Two cases of the Weber-Christian syndrome are added to the growing literature on this subject.
2. Only the etiology and pathogenosis are briefly discussed.
3. The present author suggests that ACTH and cortisone probably have a place in its therapy.

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As soon as you can say what you think, and not what some other person has thought for you, you are on the way to being a remarkable man.—J. M. Barrie

SPECIAL ARTICLE

United Medical Service, Inc.—"The Doctors' Plan"

Part V—Proration of Allowances and Ethical Standards

CHAS. GORDON HEYD, M.D., NEW YORK CITY

(*Chairman, Board of Directors, United Medical Service, Inc.*)

EXPERIENCE indicates that by beginning with a mistaken or inadequate finding of fact, one ends with a mistaken or inadequate remedy.

UMS certificate of contract, Article III, Part 1—"Limitation of Liability of UMS" states, "When care is rendered by two or more physicians, payment hereunder for such care shall be the same as if rendered by one physician."

The following is an excerpt from Article II of the UMS Contract: "Benefits Provided to Subscribers"—"Benefits . . . shall be provided for services rendered to the subscriber by any duly licensed physician in the treatment of an illness or injury, and shall consist of: Surgical Care, comprising any operative procedure, including care of fractures and dislocations of bones; and After Care comprising the care customarily following an operative procedure, within the period specified in such Schedule of Allowances."

When a duly licensed practitioner of medicine takes under his care a UMS member, he obviously contracts to deliver medical service and receives from UMS such compensation as is indicated in the schedule of allowances. If the condition calls for surgery, the physician undertakes to provide the surgical care plus the scheduled period of postoperative after-care. The physician cannot waive his legal responsibility for the after-care of a surgical case. The after-care beyond the period prescribed in the schedule of allowances is a matter of adjustment between the patient and the surgeon. UMS has no responsibility for any further indemnification.

There has arisen, however, an infrequent number of cases[*] where the services of two or more physicians may be required. Since UMS cannot pay a physician or one or more physicians more than the amount set forth in the schedule of allowances, there has come about the practical necessity of ethical proration of allowances. Proration of allowances is not fee-splitting. Many physicians feel this step is an invitation to fee-splitting under the guise of "inducement" or an acquiescence in "ghost surgery." These are misleading and erroneous assumptions. No physician has any doubts as to what constitutes fee-splitting. It does not arise spontaneously. It is a contemplated procedure in the form of a "payoff" to some other physician for referring work to the first physician. Very few doctors have any misconception as to how it arises, how it works out, and the system under which it operates. The Medical Society of the State of New York has expressed an opinion, as follows:

> ". . . proration of fees by United Medical Service, if done with the knowledge and consent of the patient, and if not out of proportion to the respective services rendered, does not constitute procedure which violates the related provisions of the Code of Ethics."

The position of UMS in regard to proration of allowances for services rendered UMS subscribers by two or more physicians may be stated as follows:

1. Proration of allowances for services rendered to a UMS subscriber by two or more physicians is legal and ethical.
2. The physician or physicians engaged in rendering service to a UMS subscriber must inform the patient that the allowance received from UMS will be prorated, with the mutual consent of the patient and the attending physician.
3. The physicians engaged in rendering services to a UMS subscriber must agree upon the percentage of proration.
4. The patient must be informed how the remuneration from UMS will be prorated.
5. The services rendered by two or more physicians to a subscriber of UMS must be bona fide services and in keeping with the general practice of the county in which they practice.
6. The physician must render individual claim statements, signed by the patient and indicating the amount of proration to each physician. Each physician will receive a check from UMS for that part of the allowance, but the total amount of disbursements by UMS shall not exceed the total amount set forth in the schedule of allowances.
7. The Department of Internal Revenue will be apprised of the amount disbursed over $600 to every physician rendering services to UMS subscribers.

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[*] From January 1 to June 30, 1953, in over 250,000 claims there were 75 instances of proration of allowances.

8. The patient, where proration of fees has been established, will receive from UMS a notification of the amount each physician received for the services rendered.

UMS, the Doctors' Plan, is an effort of the medical profession, working through their county medical societies, to give direction and character to a voluntary prepaid medical plan. Any injury or lack of ethical cooperation by any physician hurts the Plan and eventually weakens the confidence of the public in the profession.

The function of UMS may be judged by the following factual information:

1. United Medical Service is not a medical F.B.I. or a district attorney's office.
2. It operates within the spirit and letter of the Insurance Law of New York State.
3. It is required to pay claims for medical services within the terms of its contracts and within the schedule of allowances.
4. UMS can pay only for medical services personally rendered by a duly licensed practitioner of medicine.
5. UMS makes no distinction in payment for medical claims between participating and nonparticipating physicians.
6. UMS at all times conforms to the ethical standards of the Code of Ethics of the Medical Society of the State of New York.
7. Administration of UMS is vested by law in 24 Directors, elected by 19 component medical societies. There are 11 lay directors and 13 physician members of the UMS Board of Directors.
8. All disputed claims for medical services are referred for consideration and action to a Physicians' Review Committee, composed of one delegate from each of the 17 county medical societies. No member of this committee has any other official connection with UMS.
9. Medical policy is studied by a reference committee of the medical societies, composed of either the president of the society or his delegate. No member of this committee has any other official connection with UMS.
10. UMS is interested in medical education, intern and resident systems, and hospital administration as they concern its participating physicians. UMS, however, has no legal function in these fields.

"It is the undoubted right of every society to exclude from its communion and benefits such among its members as reject or violate those regulations which have been established by general consent."†

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† Edward Gibbon, *Decline and Fall of the Roman Empire*, Everyman's Library, Vol. 1, p. 481.

Average Lifetime Increases

The average lifetime of the American people reached a new high of 68.4 years in 1950, according to the Metropolitan Life Insurance Company's statisticians. This represents a gain of twenty-one years since 1900; during the prior half century—from 1850 to 1900—the increase was only seven years.

As a result of the increase in longevity since the start of this century, the average American who now reaches age twenty-five has as many years of life before him as did the average newly born baby of 1900.

The gain in expectation of life since the turn of the century is attributed by the statisticians to "striking advances in the medical and allied sciences, the greater number and wider activities of public and voluntary health agencies, and the rapid rise in the standard of living."

Women have not only had a longer average lifetime than men during the past half century, but they have also made the more rapid gains in longevity. In 1950 the expectation of life at birth for white females was 72.4 years, as compared with 66.6 years for white males, a difference of nearly six years.

"It is not likely that the second half of this century will equal the accomplishment of the first half in improving the average length of life," the statisticians predict. "There are still substantial margins for improvement, however, and it probably will not be long before the population of our country reaches an average lifetime of seventy years."

HISTORY OF MEDICINE in New York State

Editor
FREDERICK D. ZEMAN, M.D.

Memories of a G.P.'s Sixty-Five Years in New York City—Part I

JOSEPH D. NAGEL, M.D., BYRAM, CONNECTICUT

A BLUSTERY night in the winter of 1890 found me stretched out on a folding cot in my first office in the West Thirties, or French Quarter of the city, exhausted from trudging through snow-filled streets lined with shops called Boulangerie, Boucherie, Pharmacie, and Marchand de Vin, and three and four-story cold-water tenements. After finishing my internship at the Old Hospice Français, I had settled among the French colonists to build up a general practice but found it hard going that first year because my young looks were a great handicap. I was just twenty-one when I graduated from the College of Physicians and Surgeons, Columbia University, and soon resorted to using hair stimulants to grow fuzz on my face, eyeglasses with window glass, and a Prince Albert coat bought at one of the many second-hand stores on Second Avenue. Patients wanted an older, "experienced" doctor, and an unmarried doctor was not welcome to treat a married woman.

During my first year at medical school, the College of Physicians and Surgeons was situated on the northeast corner of 23rd Street and Fourth Avenue, a dingy, red brick building with a large amphitheater in the center and a dissecting room on top, illuminated by gas jets and skylights. When we wanted a corpse, five of us chipped in a dollar each, and the janitor would hitch up his one-horse wagon, head for the Bellevue morgue, jam an unclaimed body double into a barrel, lug it on his back to the dissecting room, and put the corpse on one of the slabs. The amphitheater in the old college at 23rd Street was an immense room, rising tier upon tier almost to the top story of the building. Here the students sat, some youngsters like myself, some older college graduates, and quite a sprinkling of bearded, solemn-looking men over fifty, who, having tried other professions and failed, took up medical study since it was not very costly and lasted by choice either for two or three years. Several of these men still continued in their businesses. Very little college spirit prevailed among these assorted individuals.

The usual registration fee was $35 and an additional $5.00 was added on for each course of lectures selected by the student. I still have some of the cards which were presented at the door of the lecture room: Session 1886–1887, Physiology, by John G. Curtis, M.D.; Session 1886–1887, Chemistry, by Charles G. Chandler, M.D.; Session 1887–1888, Surgery, by Thomas M. Markoe, M.D., Henry B. Sands, M.D., William T. Bull, M.D.; Session 1887-1888, Anatomy, by Thomas T. Sabine, M.D.; Session 1887–1888, Obstetrics and Diseases of Children, by James W. McLane, M.D.—all of these physicians, leaders in the profession. I also find a card entitled, "Dr. Pick's Course of Lectures on Memory, 1889." This lecturer came over from Vienna and taught us in the full course of five lectures how to memorize by association of ideas those difficult Latin and Greek names which had to be learned by every student of medicine.

In March, 1888, when I awoke at the boarding house where I lived on East 60th Street, near Third Avenue, I looked out of my window upon a scene that I had never seen before or since. The street was covered almost to the second story windows with drifts of snow. A fearful blizzard was raging—it was the start of the memorable blizzard of 1888. Despite the inclement weather, I bundled up, tunneled my way to the street, and started for the College of Physicians and Surgeons, which was then located on 59th Street and 10th Avenue. There was not a horse-drawn vehicle to be seen on the street. The elevated railroad was not running. There were a few abandoned vehicles with frozen horses still in their harness in several spots. The wind was howling with a velocity which drove you back three steps when you took one step forward. It took me over an hour from my place of residence to reach the Twombly home, a distance of about six blocks. (During my second year at the College of Physicians and Surgeons, I had become acquainted with one of the first-year medical students, John Fogg Twombly, who resided with his mother and sister in a house on 59th Street, facing Central Park South.) Young John joined me, and we covered the remaining distance to the college in about an hour. Our greatest difficulty came in crossing Columbus Circle, where the howling wind let out its fury over the open space.

When we finally reached the college, there were but a handful of students present and only one of the professors. So we were all dismissed, and John and I started our return to his home. I stayed at his house for three days since it was impossible to venture out into the streets. While there, Mrs. Twombly, John's mother, asked me whether I would be willing to move to their home and become tutor to her son since his eyesight was weak. I gladly consented because my financial condition was very poor and I had had to work my way through the last years of college by doing odd jobs.

While at Mrs. Twombly's home, I became acquainted with her personal physician, Dr. Ghislani Durant, a Frenchman, but native of Algiers. He took me under his wing and taught me many of the things that he had learned at the medical schools in France. Among his patients was Sir Henry Irving, the great English actor, who on his occasional visits to America always consulted Dr. Durant. At that time Edwin Booth was our greatest tragedian, and he and Sir Henry Irving were great friends. On one of his visits Sir Henry heard that Edwin Booth was seriously ill and that Booth's physician advised the removal of his tongue, which seemed to be the seat of a cancerous growth. Booth strongly objected because the removal of his tongue would mean the end of his career. Sir Henry called on him and insisted that he consult Dr. Durant.

I accompanied Dr. Durant to Mr. Booth's bedside, and we found him suffering from a very large, swollen tongue, almost filling the mouth cavity, coated with a very black layer of mucus. In those days our pathologic knowledge of cancer was almost nil, and diagnosis was made mostly by physical symptoms. Dr. Durant took one look at the tongue and turned to me, saying, "This is very interesting. I had several cases like it while practicing in Algiers. The symptoms are produced by a fungous infection." He prescribed a phenol mouthwash, very popular among French physicians, and in a week's time Mr. Booth's tongue was completely normal. His gratitude knew no bounds, and he could not thank Dr. Durant enough for having saved his career. A week later, a beautiful silver loving cup arrived from Tiffany's. Inside was a check for one thousand dollars (a great sum in those days), with a note saying, "Please use this spoon to stir the cup. From your ever grateful patient, Edwin Booth."

In the 1890's hospital training meant training in all branches of medicine and surgery. We were made to understand that the health of each organ in the body was linked to the health of the body as a whole, and no one undertook a specialty until he had spent at least fifteen years in general practice. I was a third-year medical student when I saw a notice on the college bulletin board announcing an examination at the French Hospital for internship. I presented myself to the board of examiners and passed first of the 30 applicants. The entire staff of interns was made up of undergraduates since the junior and senior interns accepted were classmates of mine, and we became residents two months before our graduation. However, with the help of a fine staff of visiting physicians and surgeons, we managed to run things fairly smoothly, and we all passed our final examinations.

The French Hospital, or Hospice Français, as it was called then, was on 34th Street, west of Eighth Avenue, in two reconverted brownstone houses with two floors for women's wards and one floor for men. Since there were no trained nurses in those days, the Sisters Marianites de la Ste. Croix, all French, looked after the patients with the help of one orderly. A great deal of the menial work fell to the house staff, but it was good training. After his hospital service, the young doctor was appointed "Visiteur en Ville," or visitor to the poor French in town, then promoted to clinical work, and finally made a member of the visiting staff, thus assuring him of steady advance. I have always been proud of the fact that in a few short years I was able to mingle with so many different classes of people, for my wife and I felt equally at home when we led the grand march at the yearly ball of the Genevs Waiters Association at Terrace Garden, or attended the dance of the Societe Felibres from the Hautes Pyrenees, or the Sunday afternoons at Ella Wheeler Wilcox's.

Surgery as such was still in its infancy in the early nineties, and the discoveries of Pasteur and Lister regarding bacterial infection were still matters of debate. I can visualize the little, attic operating room in the old French Hospital where the only means of illumination was a skylight and the operating table was an ordinary kitchen table covered with oilcloth. To wash up we used cold running water, a tin basin, a cake of soap, and towels. The junior surgeon anesthetized the patient by making a cone out of a newspaper, stuffing it with cotton, which he saturated with chloroform, and holding it over the patient's face. Then our chief surgeon removed his coat, rolled up his sleeves, and washed his hands in cold water, and I did likewise. There were no rubber gloves or antiseptics, except mild solutions of mercury and carbolic acid, no sterilizers, and no trained nurses. The surgeon opened his pocket case, which every doctor carried, removed his instruments, needles, and thread, and laid them on a side table. If a laparotomy were to be performed, the patient's abdomen was washed with soap and water and dried with one of the towels. After the incision was made and the bleeding blood vessels caught, the surgeon plunged his hand into the abdomen for exploration. If he were puzzled, he would turn to me and say, "Nagel, what do you make of this?" and I would plunge my hand into the abdomen. The operating table was usually surrounded by members of the staff, mostly of Spanish and French extraction, well bearded and frock-coated, who would also plunge their hands into the patient's abdomen if asked to express an opinion.

It is amazing how many patients survived these "aseptic" performances. For those who did not survive, the cause of death was listed as "shock."

It is a source of pride for me to have watched the French Hospital grow from crude beginnings into one of the finest hospitals in New York City, thanks mainly to a handful of devoted French emigrés on the board of directors and to the loyalty and progressiveness of every member of its medical and surgical staffs.

(*To be continued*)

C. Albicans Growth Studied in Antibiotic Therapy

Increased growth of Candida albicans in gastrointestinal tracts of children receiving broad-spectrum antibiotics has been observed by McGovern and his colleagues of the Children's Hospital, Washington, D. C. However, the authors hold moniliasis not a hazard if dosage and duration of treatment are carefully controlled.

The first phase of study included 100 normal, untreated children. C. albicans was isolated from the mouth in 14 per cent and the rectum in six per cent of this group.

Aureomycin was then given orally for eight days to 21 hospitalized children, who had, however, no medical indication for the use of antibiotics. Another group of 24 children received chloramphenicol intramuscularly or orally for ten to fourteen days. In addition, this second group was given daily supplemental doses of synthetic multivitamin preparations including the vitamin B complex.

Before treatment, the incidence of C. albicans was 17 per cent in the 45 children; it rose to 33 per cent at the end of therapy. With the increased fungal flora in the gastrointestinal tract there was a marked decrease in gram-positive and gram-negative organisms. Clinical thrush did not appear in any of the patients in this series.

"From the results of this study," the authors hold, "the danger of moniliasis in children from the use of these drugs in therapeutic doses does not seem great when the drug is administered for not more than eight days."—*Currents in Infant Care, September, 1953*

NECROLOGY

Augustine James Annunziata, M.D., of the Bronx, died on November 19, 1953, at his home at the age of fifty-four. Dr. Annunziata was graduated from the University of Buffalo School of Medicine in 1924 and interned at Holy Family Hospital in the Bronx. During World War II, he introduced the use of sulfa drugs to the natives of the Aleutians and the Alaskan mainland, as a major in the U.S. Army Medical Corps, and received recognition for treatment of tuberculosis among the Eskimos. Dr. Annunziata was head of the pediatrics department at Mother Cabrini Memorial Hospital, New York City. He held membership in the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

A. Edward Balboni, M.D., of City Island, the Bronx, died on November 6, 1953, at Westchester Square Hospital, New York City, at the age of fifty-four. Dr. Balboni received his medical degree from Tufts University Medical College in 1923 and moved to City Island in 1928. He served as physician and surgeon with the United States Public Health Service until 1941, when he was automatically transferred into the reserves as a Lieutenant Commander. Dr. Balboni was a member of the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

James Allen Cooley, M.D., of Brooklyn, died on November 8, 1953, at the age of sixty-eight. Dr. Cooley was graduated from Cornell University Medical College in 1908. He was a resident physician at Sailors Snug Harbor, Brooklyn, for many years, and headed the obstetrics clinic at Swedish Hospital, Brooklyn. Dr. Cooley was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

L. Hayden Humphrey, M.D., of Silver Springs, died on November 14, 1953, at the Wyoming County Community Hospital, Warsaw, at the age of eighty-two. Dr. Humphrey received his medical degree from Albany Medical College in 1900 and was Wyoming County coroner for forty-five years, having been re-elected to his sixteenth term in November. He was health officer for Gainesville for several years, and a member of the Wyoming County welfare department, the medical staff of the Wyoming County Community Hospital, and the hospital's laboratory board. Dr. Humphrey held membership in the Wyoming County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Joseph Emerson Noll, M.D., of Port Jervis, died on December 3, 1953, at the age of fifty-nine. Dr. Noll received his medical degree from New York University and Bellevue Hospital Medical College in 1917. In World War I, he was a lieutenant, and in World War II, a lieutenant colonel in the U.S. Army Medical Corps. Dr. Noll was deputy director of the medical division of Port Jervis Civil Defense and a member of the Civil Defense Advisory Council, chief radiologist at St. Francis Hospital, Port Jervis, and consulting roentgenologist at Alexander Linn Hospital, Sussex, New Jersey. A Fellow of the American College of Surgeons and Member of the American College of Radiology, he was president of the New York State Association for Crippled Children, a former president of the Orange County Medical Society, and a member also of the Medical Society of the State of New York, and the American Medical Association.

Isabel M. Scharnagel, M.D., of New York City, died on November 25, 1953, at Memorial Hospital at the age of forty-seven. Dr. Scharnagel received her medical degree from Rush Medical College, Chicago, in 1930. She was assistant attending surgeon at Memorial Hospital, attending surgeon at the New York Infirmary and its Kate Depew Strang Clinic for Cancer and Allied Diseases, and instructor in surgery at Cornell University Medical College, New York Hospital. A Fellow of the American College of Surgeons, Dr. Scharnagel was a member of the New York Academy of Medicine, the Women's Medical Association of New York, the American Women's Medical Association, the Women's International Medical Society, the American Radium Society, the American Society for Cancer Research, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Alphonse Amedius Wren, M.D., of New York City, died on November 23, 1953, at St. Elizabeth's Hospital at the age of seventy-six. Dr. Wren received his medical degree from New York University and Bellevue Hospital Medical College in 1903 and interned at Knickerbocker Hospital. He was consulting urologist at Fordham Hospital and staff physician at Post-Graduate Hospital, Vanderbilt Clinic, and the outpatient department of Fordham Hospital. Dr. Wren was a member of the American Urological Society, the New York County Medical Society, and the Medical Society of the State of New York.

Department of

MEDICAL CARE INSURANCE

Conducted by GEORGE P. FARRELL, *Director*

Benefits paid for doctors' services during the nine-month period ending September 30, 1953, in the New York State Blue Shield Plans, amounted to $21,863,451 covering 534,650 claims, as compared to $18,911,301 for the same period in 1952 for 420,870 claims, an increase in benefits of $2,952,150 and 113,780 claims.

During the same period membership increased by 418,545, making the total membership 4,185,626 at September 30, 1953. Statistical tables follow.

TABLE I.—Membership Progress—Quarter Ending September 30, 1953

By Types of Contracts	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown	Totals
Surgical								
September 30, 1953	1,460,287	351,906	288,544	5,350	58,358	. . .	13,221	2,177,666
June 30, 1953	1,466,463	367,578	278,286	5,993	59,933	. . .	11,544	2,189,797
Increase	−6,176	−15,672	10,258	−643	−1,575	. . .	1,677	−12,131
Surgical, In-Hospital Medical								
September 30, 1953	1,413,656	84,076	. . .	47,529*	113,848	196,259	. . .	1,855,368
June 30, 1953	1,344,561	46,328	. . .	42,263*	111,371	182,146	. . .	1,726,669
Increase	69,095	37,748	. . .	5,266	2,477	14,113	. . .	128,699
Surgical-Medical (Home, Office, Hospital)								
September 30, 1953	111,415	. . .	. . .	41,177	. . .	. . .	. . .	152,592
June 30, 1953	107,129	. . .	. . .	41,749	. . .	. . .	. . .	148,878
Increase	4,286	. . .	. . .	−572	. . .	. . .	. . .	3,714
Grand Totals								
September 30, 1953	2,985,358	435,982	288,544	94,056	172,206	196,259	13,221	4,185,626
June 30, 1953	2,918,153	413,906	278,286	90,005	171,304	182,146	11,544	4,065,344
Increase	67,205	22,076	10,258	4,051	902	14,113	1,677	120,282

* Indicates accumulated members with service type contracts; all others in Syracuse plan indemnity.

TABLE II.—Comparative Statement of Membership Increases for Nine Months Ending September 30, 1953, and 1952

By Types of Contracts	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown	Totals
Surgical								
September 30, 1953	−787	−15,266	29,287	−5,051	−8,294	. . .	6,461	6,350
September 30, 1952	−49,747	27,584	24,601	298	316*	. . .	4,564	7,616
Surgical, In-Hospital Medical								
September 30, 1953	250,280	67,463	. . .	47,529	9,510	44,962	. . .	419,744
September 30, 1952	205,097	−846	. . .	. . .	10,640*	13,463	. . .	228,354
Surgical-Medical (Home, Office, Hospital)								
September 30, 1953	15,983	. . .	. . .	−23,532	. . .	. . .	. . .	−7,549
September 30, 1952	−9,472	. . .	. . .	14,624	. . .	. . .	. . .	5,152
Grand Totals								
September 30, 1953	265,476	52,197	29,287	18,946	1,216	44,962	6,461	418,545
September 30, 1952	145,878	26,738	24,601	14,922	10,956*	13,463	4,564	241,122

* Estimated.

TABLE III.—INCOME, GAIN, AND LOSS FOR NINE MONTHS ENDING SEPTEMBER 30, 1953

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown
Earned Premium Income	$22,923,086	$2,794,734	$2,551,515	$777,470	$1,051,549	$1,348,116	$83,966
Claims and Expenses Incurred	19,643,843	2,468,787	2,070,954	656,787	954,778	1,180,222	66,108
Gain from Underwriting	$ 3,279,243	$ 325,947	$ 480,561	$120,683	$ 96,771	$ 167,894	$17,858
Underwriting Adjustments							
Deferred Maternity Benefits	−$ 135,000	−$ 55,000	...	−$ 6,359	...	−$ 17,000	−$ 6,109
Profit and Loss Items	6,756	6,049	335	...	138	− 3,714	20
Total	−$ 128,244	−$ 48,951	$ 335	−$ 6,359	$ 138	−$ 20,714	−$ 6,089
Adjusted Gain from Underwriting	$ 3,150,999	$ 276,996	$ 480,896	$114,324	$ 96,909	$ 147,180	$11,769
Gain from Investments	261,434*	22,675	12,375	6,590	15,561	8,275	...
Gain from Underwriting and Investments	$ 3,412,433	$ 299,671	$ 493,271	$120,914	$ 112,470	$ 155,455	$11,769
Surplus Adjustments							
Provision for Special Contingent Surplus	−$ 955,565	−$ 114,602	−$ 103,233	−$ 31,099	−$ 42,392	−$ 53,925	−$ 3,358
Provision—Special Security Valuation	...	...	...	...	24,000	...	...
Provision for Epidemics and Other Contingencies	− 458,462	...	...	...	...	...	...
Payments to Physicians (Difference between 90 Per Cent and Parity)	...	...	− 121,125	...	...	...	...
Increase in Reserve for Unreported Claims	...	...	...	− 15,388	...	...	...
Payments of Amounts Withheld from Physicians September–November, 1951	...	− 132,342	...	...	...	...	...
Total	−$ 1,414,027	−$ 246,944	−$ 224,358	−$ 46,487	−$ 66,392	−$ 53,925	−$ 3,358
Increase (or Decrease) in Unassigned Surplus	$ 1,998,406	$ 52,727	$ 268,913	$ 74,427	$ 46,078	$ 101,530	$ 8,411

* $45,317 additional Provision for Security Valuation deducted from Investment Gain.

TABLE IV.—SURPLUS ACCOUNTS, SEPTEMBER 30, 1953

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown
Unassigned Surplus, January 1, 1953	$ 3,275,374	$ 357,761	$357,518	$ 87,307	$273,644	$103,281	$ 3,271
Add							
Gain from Underwriting	$ 2,195,434	$ 162,394	$377,663	$ 83,225	$ 54,517	$ 93,255	$ 8,411
Investment Income	261,434	22,675	12,375	6,590	15,561	8,275	...
Total	$ 2,456,868	$ 185,069	$390,038	$ 89,815	$ 70,078	$101,530	$ 8,411
Adjustments							
Paid to Physicians (Difference Between 90 Per Cent and Parity)	...	...	121,125	...	...	...	...
Increase—Reserve for Unreported Claims	...	...	...	15,388	...	...	...
Payments to Physicians for Withholdings, September–November, 1951	...	132,342	...	...	...	...	...
Provision for Special Security Valuation	...	...	...	...	24,000	...	...
Segregated for Epidemics and Other Contingencies	458,461	...	...	...	...	...	...
Net Increase in Unassigned Surplus	$ 1,998,407	$ 52,727	$268,913	$ 74,427	$ 46,078	$101,530	$ 8,411
Unassigned Surplus, September 30, 1953	$ 5,273,781	$ 410,488	$626,431	$161,734	$319,722	$204,811	$11,682
Special Contingent Surplus	4,441,483	618,513	354,546	124,320	339,271	226,260	3,358
Reserve for Epidemics and Other Contingencies	984,755	...	...	...	...	...	...
Reserve for Special Security Valuation	...	...	...	...	24,000	...	...
Total Surplus, September 30, 1953	$10,700,019	$1,029,001	$980,977	$286,054	$682,993	$431,071	$15,040

TABLE V.—CLAIM DATA (PAID BASIS)—YEAR TO SEPTEMBER 30, 1953, AND COMPARISON OF CLAIM INCIDENCE, SEPTEMBER 30, 1953, AND 1952

Plan Location and Types of Contracts	Earned Premium Income	Claim Cost	Per Cent of Claim Cost to Earned Premium	Number of Claims	Average Cost per Claim	Claim Incidence per 1,000 Members per Annum 1953	1952
New York							
Surgical	$10,020,191	$ 7,135,777	71.21	111,175	$64.19	101.4	95.1
Surgical, In-Hospital Medical	10,875,545	7,170,637	65.93	121,926	58.81	126.5	124.5
General Medical	2,027,350	1,403,750	69.24	104,784	13.39	1344.3	1261.6
Total	$22,923,086	$15,710,164	68.53	337,885	$46.50	...	...
Buffalo							
Surgical	$ 2,395,951	$ 1,806,145	75.38	70,089	$25.77	257.8	234.0
Surgical, In-Hospital Medical	398,783	228,605	57.32	8,711	26.24	261.4	342.7
Total	$ 2,794,734	$ 2,034,750	72.81	78,800	$25.82	...	...
Rochester							
Surgical	$ 2,551,515	$ 1,781,084	69.80	39,778	$44.78	187.1	169.6
Syracuse							
Surgical	$ 41,704	$ 38,015	91.15	1,255	$30.29	287.6	202.9
Surgical, In-Hospital Medical	406,941	281,710	69.23	14,504	19.42	472.4	...
Surgical-Medical	328,825	233,215	70.92	7,213	32.33	228.4	379.3
Total	$ 777,470	$ 552,940	71.12	22,972	$24.07	...	...
Utica							
Surgical	$ 286,850	$ 246,365	85.89	10,682	$23.06	236.8	*
Surgical, In-Hospital Medical	764,699	543,356	71.05	23,904	22.73	286.9	*
Total	$ 1,051,549	$ 789,721	75.10	34,586	$22.83	...	...
Albany							
Surgical, In-Hospital Medical	$ 1,348,116	$ 954,306	70.79	19,740	$48.34	146.2	175.2
Jamestown							
Surgical	$ 83,966	$ 40,486	48.22	889	$45.54	118.6	62.7
Grand Total	$31,530,436	$21,863,451	...	534,650	...	...	...

* Information not available.

TABLE VI.—DISTRIBUTION OF EARNED PREMIUM INCOME, AND AMOUNTS AVAILABLE FOR UNASSIGNED SURPLUS FOR NINE MONTHS ENDING SEPTEMBER 30, 1953

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown
Earned Premium Income	$22,923,086 100.00%	$2,794,734 100.00%	$2,551,515 100.00%	$777,470 100.00%	$1,051,549 100.00%	$1,348,116 100.00%	$83,966 100.00%
Incurred Claim Expense	$16,136,397 70.39%	$2,149,750 76.92%	$1,858,792 72.85%	$557,526 71.71%	$ 776,189 73.81%	$1,030,155 76.41%	$54,167 64.51%
Administrative Expense	$ 3,507,446 15.30%	$ 319,037 11.41%	$ 212,162 8.32%	$ 99,261 12.77%	$ 178,589 16.98%	$ 150,067 11.13%	$11,941 14.22%
Provision for Future Maternity Benefits	$ 135,000 0.59%	$ 55,000 1.97%	... ..	$ 6,359 0.82%	... ...	$ 17,000 1.26%	$ 6,109 7.28%
Provision for Special Contingent Surplus	$ 955,565 4.17%	$ 114,602 4.10%	$ 103,233 4.04%	$ 31,099 4.00%	$ 42,392 4.04%	$ 53,925 4.00%	$ 3,358 4.00%
Profit and Loss Items	−$ 6,756 −0.03%	−$ 6,049 −0.21%	−$ 335 −0.01%	... ...	−$ 138 −0.01%	$ 3,714 0.28%	−$ 20 −0.03%
Available for Unassigned Surplus	$ 2,195,434 9.58%	$ 162,394 5.81%	$ 377,663 14.80%	$ 83,225 10.70%	$ 54,517 5.18%	$ 93,255 6.92%	$ 8,411 10.02%

Woman's Auxiliary

to the MEDICAL SOCIETY OF THE STATE OF NEW YORK

Annual Health Poster Contest

The first Health Poster Contest sponsored by the Woman's Auxiliary to the Medical Society of the State of New York, undertaken as an experiment, proved so successful that it has been decided to make it an annual event. The 1953–1954 county contests began with the opening of school in September and will continue until January 31, 1954. The State contest winners will be chosen in Rochester in April.

Thirty-two counties participated in the first contest, and more than 6,000 posters were entered by student artists. Prizes totaling approximately $2,500 were awarded. On the conclusion of the county contests the winning posters were displayed in public libraries, local museums, utility buildings, bank lobbies, and store windows and evoked considerable interest.

The names of the winners of the prizes, awarded by the membership of the Medical Society of the State of New York, are listed in the accompanying table.

In describing the value of the contest the chairman of the State Auxiliary's Health Poster Contest Committee said, "This project so lends itself to the activities of the Woman's Auxiliary and is of such interest and value to medicine and the community that with proper support from the individual county societies it creates a most favorable and lasting impression."

A letter endorsing the contest was also received from Dr. Warren W. Knox, Assistant Commissioner for Instructional Services, State Department of Education, and read in part as follows: "It was a pleasure to learn of the success of the First Annual Health Poster Contest . . . . The 6,000 entries that were judged is indicative of the interest that was aroused through the efforts of your organization. Your objectives to develop within the child an awareness of his responsibility for his own good health represents an excellent philosophy for the contest and I am glad to know that you plan to run the contest again next year . . . . Please accept my best wishes for the success of your second contest." The directors of health education found the contest to be of special value. To them it represented a visual report of how the pupils were interpreting their health education courses.

This brief résumé of the purpose and scope of the Health Poster Contest illustrates the type of work the Auxiliary is doing for medicine and for the citizens of tomorrow. All school physicians can perform a service to their school children, school administrators, their county society, and the Auxiliary by doing whatever they can to make certain the school in which they work participates in the Second Annual Health Poster Contest.

That many of the children found it a source of pleasure is to be noted from the letter received from the first prize winner in the 10- to 12-grade group, John H. Janzen, age seventeen, of Yonkers, who wrote as follows: "May I again express my sincere thanks to you and to the Woman's Auxiliary of the State of New York who made the Poster Contest possible. I am happy to be the first winner of your contest . . . . I feel that your purpose in making the youth more keenly aware of their health has been accomplished . . . (personally, I have received greater confidence to continue pursuing a career in illustrating) . . . ."

Mrs. Isadore Zadek, *Chairman*
Health Poster Contest Committee

TABLE I.—Winners of the 1952–1953 Health Poster Contest

Grade	Winner	County	Prize	Savings Bond Award
10 to 12	John Hartley Janzen	Westchester	First	$125
	John Alisandrelli	Orange	Second	75
7 to 9	Nancy Hawkins	Cattaraugus	First	100
	Barbara J. Capobianco	Westchester	Second	50
4 to 6	Betty Ann Job	Cayuga	First	50
	Patricia Piper	Tompkins	Second	25
1 to 3	Kathryn Franceschetti	Onondaga	First	50
	Kathleen Krouse	Onondaga		
	Daniel Thompson	Onondaga		
	Harst Thoryk	Onondaga		
	Adela Bolduzzi	Onondaga		
	Peter Stevens	Monroe	Second	25

MEDICAL NEWS

UNITED MEDICAL SERVICE ENROLLS THREE MILLIONTH MEMBER

At the November meeting of the Council of the Medical Society of the State of New York, the three millionth member to enroll in United Medical Service, New York's Blue Shield Plan, was presented to the officers and other members of the State Society. An employe of the *Reader's Digest*, the three millionth member of UMS is Mr. Ignacis Acuna of Bedford Hills.

Recalling that United Medical Service had a membership of 77,412 when it was introduced to the public nine years ago as a merger between two experimental medical care plans, Dr. Andrew A. Eggston, president of the Medical Society of the State of New York, speaking at the Council meeting, attributed the rapid growth of UMS to the fact that members are permitted free choice of doctor with no "third party interference" to disturb the relationship between doctor and patient. For the year 1953 alone, he estimated, the sum of more than $21,000,000 will be paid to physicians on a fee-for-service basis for the care of members of New York's Blue Shield.

FIG. 1. Medical Society president greets three millionth member of United Medical Service. *Left to right:* Dr. Andrew A. Eggston, Mount Vernon, president of the Medical Society of the State of New York; Mr. Ignacis Acuna, Bedford Hills, Lawrence Wayne Acuna, Mrs. Acuna, and Richard Paul Acuna.

Refresher Courses in Cardiovascular Disease—New York University Post-Graduate Medical School will offer four courses in cardiovascular disease in 1954, for which fellowships will be provided by the New York State Department of Health. Stipends for living expenses will not be available.

"Modern Concepts in the Etiology, Diagnosis, and Treatment of Heart Diseases," under the direction of Dr. Charles A. Poindexter, will be given January 11 through 15; "Auscultation of the Heart," under direction of Dr. J. Scott Butterworth, February 1 through 3; "Electrocardiography," also directed by Dr. Butterworth, March 29 through April 2, and "Peripheral Vascular Diseases," under direction of Dr. A. Wilbur Duryee, June 7 through 11, 1954.

Columbia University Faculty of Medicine will offer a similar series, to be given at Mount Sinai Hospital, New York City, in January. Again, tuition fellowships will be provided by the New York State Department of Health.

"Intensive Course in Elementary Electrocardiography" will be given by Drs. S. Dack, H. L. Jaffe, A. M. Master and staff, January 4 through 9; "Intensive Course in Advanced Electrocardiography," by the above physicians, January 11 through 16, and "Cardiovascular Diseases," by the above physicians and Dr. H. Horn, January 18 through 29, 1954.

Application blanks for the courses given by New York University Post-Graduate Medical School may be obtained from the University or from the New York State Department of Health, Albany. Application blanks for the Columbia courses may be obtained from the Registrar for Medical Instruction, Mount Sinai Hospital, New York City.

MEETINGS—FUTURE

New York Cancer Society

The New York Cancer Society will meet on Tuesday night, January 5, at 8:30 P.M. at the New York Academy of Medicine, to hear papers on results to date of super-radical pelvic surgery for cancer. Dr. Perry Hudson, Francis Delafield Hospital, Columbia-Presbyterian Medical Center, will speak on "Cancer of the Bladder and Prostate," and Dr. Willet F. Whitmore, Jr., Memorial Center for Cancer and Allied Diseases, will lead the discussion. For the second part of the program, Dr. Alexander Brunschwig, Memorial Center for Cancer and Allied Diseases, will speak on "Cancer of the Uterus," and Dr. Howard C. Taylor, Jr., Sloane

[Continued on page 140]

MINUTES OF THE COUNCIL

The following is a summary of the Minutes of the October, 1953, meeting of the Council of the Medical Society of the State of New York.

The Council met October 8, 1953, from 9:00 to 11:45 A.M. at the Manhattan Club, Madison Square, New York City. Dr. Andrew A. Eggston, president, presided.

Secretary's Report

Executive Committee.—Dr. Anderton reported the following communications were considered at the Executive Committee meeting on October 7, 1953:

1. A letter of September 25, 1953, from James K. Keeley, chairman of the Cancer Committee of the Dutchess County Medical Society, enclosing a program for cancer teaching day, Wednesday, November 11, 1953, at Poughkeepsie, and requesting permission to indicate on the program that the meeting is held under the auspices of this Society. It is also under the auspices of the State Department of Health. The Executive Committee recommends that the Council accede to this request.

It was so voted.

2. Dr. Anderton stated: "Last month there was an advertisement from the Association of American Physicians and Surgeons, Incorporated, in regard to an essay contest that they are putting forth in the public schools, and on the back of it there is a suggestion that the State Society contribute financially. I was instructed to inquire from the American Medical Association what their attitude was. I wrote to Dr. Lull, and Dr. Ernest B. Howard, assistant secretary, replied on September 22, 1953, that the American Medical Association has never taken any formal action with regard to this annual essay contest, either through its Board of Trustees or through its House of Delegates.

"I move that the Council take no action on this invitation of the Association of American Physicians and Surgeons and that the Secretary be instructed to reply to Dr. Ingegno, president of the Kings County Medical Society, in regard to his letter of September 14, 1953, that whether or not to sponsor the aforesaid contest is the business of each and every county medical society to decide for themselves."

It was so voted.

3. A letter from Mr. Robert C. Killough, Jr., Assistant Commissioner for Professional Education, stating that Dr. Norman S. Moore's tenure of office as a member of the Nurse Advisory Council of the State Education Department will expire on December 31, 1953. The Regents probably would desire to make reappointment; however, they requested that we also submit the name of one other physician who could be considered by the Board of Regents. The Executive Committee suggested that the Council instruct the Secretary to suggest to the Commissioner the name of Dr. Elton R. Dickson of Binghamton.

Approval was voted.

4. Resolutions from Broome County Medical Society:

"At a regular meeting of the Broome County Medical Society, held on Tuesday, September 8, at 8:30 P.M. in the Binghamton City Hospital auditorium, the following resolutions were passed:

> "WHEREAS, there is no set policy within the Unemployment Commission of the State of New York with respect to payment of unemployment insurance to females who are pregnant and have ceased to be gainfully employed; and
>
> "WHEREAS, these recipients continue to receive unemployment insurance as long as their physicians certify they are fit to work at their occupation; and
>
> "WHEREAS, some of these recipients have been known to change physicians in order to continue to draw unemployment insurance, when the first physician has refused to certify that the patient is able to continue to be gainfully employed at her occupation; and
>
> "WHEREAS, this is reflected in the insurance rates paid by industry in this area, which is later reflected in the cost of living and the cost of the end products purchased by individuals throughout the nation; and
>
> "WHEREAS, the same situation applies both to prenatal and postnatal periods; be it therefore
>
> "*Resolved*, that no unemployment benefits be paid to females who are twenty-eight weeks or more pregnant or during the period of eight weeks after delivery of their child and that this policy be standardized throughout the State so that no discrimination will be shown one patient over another."
>
> "*Be it resolved* that the Broome County Medical Society go on record as desiring that the above resolution be presented to the House of Delegates of the Medical Society of the State of New York for consideration and implementation."

It was voted that both resolutions be referred through the Committee on Public Health and Education to its Subcommittee on Maternal and Child Welfare.

5. Letter and report from Mr. H. F. Wanvig,

secretary of the Malpractice Insurance and Defense Board, dated September 28, 1953.

> "Dear Doctor Anderton:
>
> "You will recall that the House of Delegates, in approving the report of the reference committee on the annual report of the Malpractice Insurance and Defense Board, directed the Board to study the offers of malpractice insurance being made to members of the Society by Lloyds of London.
>
> "In the absence of any instructions to the contrary, it might be assumed that the report of such a study was to be made to the House of Delegates. However, the information is undoubtedly of greater interest and importance to members of the Society at this time than it might be next May. Accordingly, the Board has directed that the enclosed report be made to the Council so that it can be published at an early date.
>
> "If approved for publication, it is requested that an order from this office be entered for one thousand reprints.
>
> Sincerely yours,
> H. F. Wanvig, *Secretary*"

Dr. Anderton stated: "Mr. President, in keeping with the opinion of your Executive Committee, I move that this report be accepted but that it be not published until it has been approved for publication by legal counsel."

After discussion it was *voted* that the report be edited by the Secretary or President and submitted to legal counsel for approval before publication in the Journal.

(This report of the Malpractice Insurance and Defense Board was published in the December 15, 1953, issue of the New York State Journal of Medicine.)

Dues Remissions.—Upon recommendation of the Executive Committee, the Council *voted* to remit 1953 dues of one member because of illness and 1948, 1949, 1950, and 1951 dues of one member, 1952 dues of four members, and 1953 dues of six members because of service with the armed forces. *It was also voted* to request remission of American Medical Association dues of one member for 1953 because of illness, one member for 1950, one for 1952, and four for 1953 because of military service, and six members for 1953 because they were more than seventy years of age.

General.—The Board of Trustees last month acceded to your request for the appropriations noted in the minutes of your Council.

On September 23, 1953, Mr. George M. Shapiro, counsel to Governor Thomas E. Dewey, acknowledged my letter of September 11, 1953, containing a copy of the resolution by the House of Delegates, advocating the establishment of a commission to study the problem of health insurance for people over sixty-five years of age.

Last May, letters were sent to the deans of the nine medical schools in New York State, as directed by the House of Delegates, recommending that each school give "a detailed course in medical ethics," and offering to make available materials and personnel.

Dr. Currier McEwen, dean, New York University College of Medicine, replied: "Our teaching in medical ethics has been included in a series of lectures on medical practice given in the department of preventive medicine." Dr. Ralph E. Snyder, executive dean, New York Medical College, Flower and Fifth Avenue Hospitals, replied in part: "We have, for some years, attempted to completely familiarize our students with the principles of professional conduct. We are, of course, planning to continue this practice and we shall feel free to call upon you for assistance any time." Dr. Jean A. Curran, dean, State University of New York College of Medicine at New York City, replied that he will be glad to bring this action to the attention of his curriculum committee. Dr. Stockton Kimball, dean, the University of Buffalo School of Medicine, replied in part: ". . . that this school has for a number of years offered regular instruction in Medical Ethics."

A list of newly licensed physicians in New York State has been received from Dr. Stiles D. Ezell, secretary of the New York State Board of Medical Examiners. To each is being sent a copy of the *Principles of Professional Conduct,* as voted by the House of Delegates.

Your secretary has attended several committee meetings in the last month, including the directors of the Woman's Auxiliary, the Policy and Planning Committee of the Blood Banks Association of New York State, Inc., your Public Health and Education Committee, your Public Relations Committee, the Committee on the Definition of Unprofessional Conduct, and the Scientific Exhibits Subcommittee. He also attended the Conference of County Society Public Relations Committee Chairmen, and the meetings of the Third, Fourth, Fifth, Sixth, Seventh, and Eighth District Branches. All had very fine programs. On September 22, 1953, President Eggston and I represented you at the annual meeting of the Medical Society of the State of Pennsylvania in Pittsburgh. Dr. Eggston's friendly and short address was very well received.

Dr. David J. Kaliski, director of the Workmen's Compensation Bureau, has kindly drawn to my attention an error in the verbatim and the published minutes of the Tuesday afternoon, May 5, 1953, session of the House of Delegates, Section 163, Report of Reference Committee on Report of Council, Part X: Workmen's Compensation. The published report states that the Committee on Workmen's Compensation advocates a first visit fee of $3.00 for the general practitioner. However, reference to the original report of the Workmen's Compensation committee shows that the committee advocated a first visit fee of $5.00 for the general practitioner and subsequent office fees of $3.00. It is suggested that the New York State Journal of Medicine be requested to note this correction, which will be presented when the minutes are considered at the next meeting of the House of Delegates.

It was so voted.

The special committee which has been discussing the interpretation and implementation of "Unprofessional Conduct as a Cause for Disciplinary Action for the Board of Regents" has met on three occasions with representatives of the State Education Department. On September 28, 1953, at the last meeting, our past president, Dr. Edward T. Wentworth, who was presiding, instructed me to report to the Council that his committee recommends approval of the Education Department's gracious suggestion that the State Society Legal Counsel discuss with the Department's Counsel the proposed interpretations and implementations which would later be referred to Dr. Wentworth's committee for comment before going to the State Board of Regents.

It was voted to accept the above report.

The Treasurer's report was accepted.

Reports of Committees

Blood Banks Commission.—Dr. Dan Mellen, chairman, stated:

"Dr. Kenney has been doing some very good work, and I would say that the Blood Banks Association is progressing very favorably."

Dr. Kenney presented the following report of the Blood Banks Association:

"Since the Council meeting of September 10, the Blood Banks Association of New York State has made substantial progress in the organization and administration of the new office which had been opened on August 10.

"1. A meeting of the board of directors of the Association was held at its offices at 386 Fourth Avenue on September 14. With the advice and guidance of Mr. Thomas E. Alexander, the board acted affirmatively on such matters as the bonding of the treasurer, establishing office practices for employes of the association to conform with those in force for the employes of the Medical Society, authorization of workmen's compensation, fire, and medical care insurance coverage, and other procedures which are required to stabilize functioning.

"Pending the report of the budget committee the board empowered the officers to provide for current expenses until its next meeting, which is scheduled for November 5, and to make proper accounting at that meeting. The board established the policy that dues received during the current membership drive be credited to both institutional and individual members until December 31, 1954.

"The President has contracted with Patterson and Ridgway to complete an audit for the period of August 10 to December 31, 1953, for a sum not to exceed $50. We have also requested the chairman of the scientific program at the 1954 annual meeting of our State Society to allot the Thursday morning for the scientific meeting of our association.

"2. We are pleased to report that the drive for membership is progressing satisfactorily. The membership committee, under the chairmanship of Dr. Milton Carvalho of Binghamton, mailed September 8 application forms to some 220 blood banks throughout the State, and approximately 600 letters inviting individuals to join. This was followed by a personal letter from the president of the association. To date 42 applications for institutional membership with dues, have been received, an excellent response.

"The president or other members of the board of directors have appeared personally before each district branch meeting to explain the aims and purposes of the organization and to stimulate the drive for membership. We are now preparing a strong follow-up letter to the blood banks, especially the hospital banks.

"Under the constitution and bylaws, before these banks can be enrolled for membership they must be declared eligible by our Committee on Standards for Individual, Institutional, and Associate memberships. This committee will meet on October 10; standards for eligibility will be approved, and 48 applications will be reviewed.

"3. Our first news release was mailed as of October 1. The *Newsletter* of October 1 carried a piece on the Blood Banks Association, and an important editorial will appear in an early issue of the NEW YORK STATE JOURNAL OF MEDICINE. A booklet for the membership is being considered which would correlate current information on the Association. This is an educational project which is needed, and we are hopeful that financial support will be forthcoming from one of the pharmaceutical companies. Also there is being considered a special appeal for financial assistance to those pharmaceutical houses which are concerned with the manufacture of blood derivatives and expanders.

"4. The early establishment of a clearing house seems a probability. I do not believe I am too optimistic when I say that this should be in operation about the first of next year. Last summer Mrs. Bernice Hemphill, administrator of the California blood banks system, in response to the question, 'How would you start a blood banks association for us?' replied tersely, '(1) Get members to participate; (2) establish a central office, and (3) a clearing house.' She felt that it could be established with a minimum membership of ten banks. She emphasized that those with negative views should not be pressed to join, and she urged that a well-trained individual with accounting experience be secured. She further stated that in her opinion our blood assurance program should not be started until the clearing house was functioning well.

"I am going to suggest to the Blood Banks Commission, which is our advisory body, to consider the advisability of sending Mr. Thomas E. Alexander to San Francisco to spend a week in the central office of the blood banks to become familiar with the technics of administration which have proved so successful.

"The committee on the clearing house and blood assurance program has submitted a report to the board of directors. What we do in this matter may well mark the success or failure of the entire program.

"5. In closing, I would appeal to every member of the Council to give some thought to how he can assist this association. Ultimately the blood assurance program must be established as a community project. The Genesee pilot experiment is an example of what I mean.

"We have already sounded out opinion in Orange, Sullivan, and Ulster Counties where there seems to be need for a community blood bank, and we have been encouraged. I went to a meeting with Mr. Messinger a week ago last Friday at Liberty. It was attended by some 80 hospital administrators, no doctors. It was a lay group, representing nearly all of the hospitals in three counties. They gave us a respectful hearing for the best part of an hour. Following the meeting, we had a question and answer period in which real interest was elicited. There is definitely in that area a very unstable blood supply. The Red Cross is operating in Middletown area, but the getting of blood at the present time to these small hospitals seems to be on the basis of something that turns up, and then there is an emotional appeal and a drive.

"I believe with time, tact, and proper follow up, we have a field there for a second pilot experiment, and we may even be successful in establishing a community blood bank at the tricounty level.

"This blood banks program is a directly sponsored activity of the Medical Society, and funds from the treasury have been allocated to develop it. Local education and cooperation are of paramount importance."

Legislation.—Dr. James Greenough, chairman, stated:

"A meeting of the Executive Committee of the Legislation Committee was held in New York City, September 10.

"Dr. Smith submitted the first four of the proposed sheets for the County Legislative Chairmen's files. They have been submitted to the committee for approval and should be ready for issue early in October.

"All county society presidents have been asked to ascertain by vote the opinion of their societies in regard to hospitals employing physicians and collecting their fees. To date the result is one in favor, one opposed, and two asking for more information.

"Further preparation has been made for attempting to secure enactment of a change in the insurance law to allow proration of fees in indemnity cases, the inclusion of mental and nervous diseases in the medical practice act, a new law to provide malpractice insurance for residents and interns in municipal hospitals, and alteration of the autopsy law patterned on the present Wisconsin law.

"Your chairman conducted a meeting of county chairmen in Utica, while Dr. Smith held one in Buffalo September 23. The eighth meeting was held by Dr. Smith in Mineola last night, and the ninth is planned in Bronxville October 15, and the tenth at Albany, October 16. That will include all of the upstate county legislative chairmen.

"Your chairman spoke at the meeting of the public relations chairmen in New York September 26, to point out the cooperation which the Legislation Committee needed in order to be successful.

"Dr. Smith has reviewed the present medical practice act to determine the problems involved in preparing a new act, pursuant to the action taken by the Council at the September meeting. The next step is for the Committee on Legislation to meet with counsel and other interested persons to work on this problem.

"Yesterday the subcommittee on the Panken and Condon Bills, had a meeting with Dr. Kottler, chairman. The committee reported that there was little chance of passing either bill. Denying groups of employes free choice of plan and methods of payment in some plans are probably illegal under Section IX-C of the Insurance Law. The subcommittee reported that a revamped free-choice-of-plan bill might offer some chance of passage. It also recommended that an intensive educational campaign, first to the medical profession and then to the public covering the situation involved in these two bills, be instituted by the Public Relations Committee.

It was voted to approve the report.

Malpractice Insurance and Defense Board.—Dr. Thomas M. d'Angelo stated:

"At its meeting on September 16, 1953, in view of the notification from you that a certain physician had appealed to the Council, the Board reviewed his qualifications and the recommendation of the Advisory Committee and concluded that the original recommendation was correct and should be maintained, that he be allowed electroshock therapy coverage to the extent of $5,000/$15,000, only. Of course that in no way has anything to do with his $25,000/$75,000 limits for his regular practice."

After discussion, *it was voted* to accept the recommendation of the Board and notify the complainant thereof.

Medical Licensure and Medical Service.—Dr. Leo E. Gibson, chairman, reported:

"I have the report of the Committee upon the annual general practitioner's award.

"During the past year there were submitted six candidates' names, Dr. John J. Flynn, of Brooklyn; Dr. Smith A. Combes, of Hempstead; Dr. Philip Eichler, of Bronx; Dr. Joseph E. Vigeant of Red Hook; Dr. Elizabeth Van R. Gillette, of Schenectady; and Dr. Mary Ross, of Binghamton.

"After thorough consideration of all the candidates, the Committee recommends Dr. Mary J. Ross for the award."

After discussion, *it was voted* that the committee's recommendation be approved and that the matter of nominating an individual to the American Medical Association be left to Dr. Gibson's committee.

Rural Medical Service Subcommittee.—Dr. Denver M. Vickers, chairman, reported:

"During the winter the Citizens' Health Council had a meeting or two. This is a lay organization, but we all have heard about the worthy things it is attempting. Dr. Wertz is president. He is asking through us that the meeting be sponsored among others by the Medical Society of the State of New York. May I ask the approval of the Council for that?"

Approval was voted.

Office Administration and Policies.—Dr. John J. Masterson, Chairman, reported the committee had met October 7, 1953. Various personnel and routine office matters were approved.

It was *voted* to accept the report.

Publication.—Dr. John J. Masterson, chairman, reported that at a meeting of the Publication Committee on October 7, 1953, the resignation of Dr. George Adie from the Associate Editorial Board was accepted with regret, and Dr. Granville Larimore, Deputy State Commissioner of Health, was appointed to the Board. Dr. Redway reported on a proposed department of the JOURNAL to be devoted to articles of interest to medical colleges. He also reported he had been informed that the New York State Society of Pathologists had voted to urge its members to contribute papers to the JOURNAL. The committee discussed the possibility of a campaign to increase JOURNAL circulation and a letter from Dr. George W. Kosmak regarding the *Medical Directory*, which was placed on the agenda for the November meeting. It was decided not to allow discounts on the 1953 *Medical Directory*, except to book stores, and to deny a request from a hospital for a complimentary copy.

It was voted to accept the report.

Public Health and Education.—Dr. Theodore J. Curphey, chairman, reported that he had attended five meetings and had arranged 12 postgraduate lectures in 12 counties as well as a teaching day program in Onondaga County. He stated that at a meeting of the committee with representatives of the State Health Department on September 25 the following subjects were discussed:

1. Dr. E. P. Fowler, chairman of the Subcommittee on the Hard of Hearing and the Deaf, presented the problem of discovering the 80,000 to 100,000 children in the State whose hearing is impaired. It was agreed that publicity in the NEW YORK STATE JOURNAL OF MEDICINE and elsewhere would be a forward step in bringing the importance of the simple diagnostic tests to the attention of physicians.
2. Dr. Korns of the Health Department reported on the gamma globulin program and results.
3. Commissioner Hilleboe reported his explanation to the association of part-time health officers of the conditions for their tenure of office to be required of county health departments and of the postgraduate education opportunities to be afforded them by the State Health Department.
4. Dr. Hilleboe stated it would be impossible to interpret Section 19-B of the Public Health Law to apply to the Ulster County Tumor Clinic. He suggested that Dr. Curphey inform the county medical society of this and indicate the possibility of trying the present reimbursement basis of State aid for a year.

Dr. Curphey requested that the following appointments be made: Hard of Hearing and the Deaf Subcommittee—Dr. Karl W. Gruppe, Utica; Maternal and Child Welfare Subcommittee—Dr. Joseph B. Loder, Rochester; School Health Subcommittee—Dr. Paul Beaven, Rochester, and Dr. Thomas S. Bumbalo, Buffalo.

The appointments were made by President Eggston and *approved* by the Council.

Dr. Curphey gave the Council the latest information regarding the distribution of gamma globulin. He said that the Federal government, as a result of the lower incidence of poliomyelitis in the preceding month or two, had increased the allotment from 60 to 100 cc. per case, and that New York State had received its appropriate share.

Recommendations were also made that the material be used in operative cases, especially nose and throat cases, and also in administering material to contacts on the part of the nurses and physicians.

Dr. Curphey concluded:

"I think everybody still recognizes the fact that gamma globulin is not the answer, and I understand that attempts are being made now to prepare a large enough amount of vaccine for next year's season along with an increased appropriation for gamma globulin for 1954."

The report as a whole *was adopted*.

Public Relations.—Dr. Floyd S. Winslow, chairman, presented the following report:

"During the past month district branch meetings and the Conference of Public Relations Committee Chairmen of county medical societies occupied much of the Public and Professional Relations Bureau staff.

"Prior to these meetings newspaper releases were distributed to the press throughout the State. Representatives of the bureau were in attendance at each branch meeting. Under the supervision of Dr. Anderton, the field men were in charge of registering attendance. Mr. Messinger worked at the fifth, seventh, and eighth district meetings; Mr. Walsh was in charge of registration at the third and sixth district meetings; and Mr. Tracey at the fourth district. Mr. Miebach was at the meetings, where he took charge of relations with the press.

"Much effort was spent in preparation and conduct of the conference of medical society public relations chairmen, which was held at the Hotel Biltmore, New York City, on September 26. Approximately 50 persons were present. A luncheon preceded the conference. Your chairman presided over both the conference and luncheon.

"An innovation was participation by representatives of the press, radio, and TV. Among the three discussing an analysis of a successful press program carried on by a small county medical society were a local medical society public relations committee chairman, the society's press representative, and the editor of a local newspaper.

"Following the custom of the past few years, a 'Public Relations Kit for County Medical Societies' was distributed at the conference. It contained samples from various sources throughout the country and materials prepared by the Public and Professional Relations Bureau.

"On September 26 the committee met before the luncheon. We discussed, among other things, a proposed code of cooperation with the press as outlined by the House of Delegates.

"On September 2 and 3 the field representatives and the Bureau's Director attended the Annual Medical Public Relations Institute conducted by the American Medical Association in Chicago.

"The *Newsletter*, which was not published in August and September, resumed in October. In addition to a story on district branch meetings, it announced the New York State Health Department's medical aide training program. This was prepared by Dr. J. G. Fred Hiss, chairman of the Committee on Medical Defense. In addition to publicizing the medical aide recruitment program in the *Newsletter*, the Bureau held several conferences with Dr. Lade, the Health Department's representative.

"The Bureau for the second year assisted the Woman's Auxiliary in manning its exhibit at the State Fair in Syracuse over the Labor Day week end."

Dr. Winslow submitted the following supplementary report.

"The Committee considered the matter of a proposed series of 12 pamphlets to educate the public in regard to various medical-economic matters, in interpretation of a resolution of the House of Delegates. The committee voted to endorse a letter, dated July 6, from your chairman to the Board of Trustees, requesting the sum of $4,000 be allocated in the budget for pamphlets. This had been removed by the Trustees. It was further requested that the committee's request be recommended by the Council to the Board of Trustees with the stipulation that the funds be restored 'if compatible with the income of the Society.'

"Another item was the 'heartbreak' cases presented on television, radio, and in the press. A 'heartbreak' case concerns an individual who has a serious illness but apparently insufficient funds to obtain adequate medical care. The obvious implication is that the medical profession, hospitals, welfare agencies, and allied groups are not providing adequate health facilities for the needy. Following a discussion the committee passed a motion which contained three main points. The first was that the committee endorse the recommendation of the A.M.A.'s House of Delegates that medical societies promote programs offering to provide the services of a physician to anyone unable to pay for them. (These programs are identified by the slogan: 'Adequate Medical Care Regardless of Ability to Pay.') The second consisted of a recommendation urging the State Society and its component county societies to adopt such a policy. The third urged solution to this problem through meetings with the producers and sponsors of 'heartbreak' television and radio shows as well as with editors of newspapers.

"We would like to know what to do about these pamphlets. We interviewed prominent officers and members of various county societies in the State, and 31 societies were interested in our producing these pamphlets. Some sent checks and were willing to pay half of the expenses. So we ought to send these pamphlets or at least obtain a decision as to whether we can put them out or not.

"The House of Delegates made a motion that substantially said to continue the health education program which we had last year so the committee considered ways of doing this. One was to issue a pamphlet once a month on some subject of interest to the people who so ably assisted the medical profession in our campaign last year for citizen's health education, that is, for instance, we might produce one on emergency help, or how we can serve the public, etc. That was the idea that appealed most to the committee, so we canvassed our county societies. They sent in suggestions, and out of those we took 12 subjects, one for each month."

After discussion *it was voted* that the Council approve of issuing these pamphlets. *It was also voted* that the Council recommend to the Board of Trustees that it restore to the Public Relations budget $4,000 for preparation and distribution of these pamphlets.

The President read the following letter, dated October 8, 1953, from Dr. Floyd S. Winslow:

"At its meeting on September 26 the Council Committee on Public Relations voted unanimously that a subcommittee be named to negotiate with representatives of the press, radio, television, and photographers to establish a Code of Cooperation.

"Consequently I should like to recommend the appointment of Dr. Henry I. Fineberg, of Queens; Dr. John C. McClintock, of Albany, and Dr. John D. Naples, of Erie, to constitute a subcommittee of the Council Committee on Public Relations for this purpose."

It was voted that the President be authorized to appoint the subcommittee, and that the whole report of the Public Relations Committee be approved.

Veterans Administration, Liaison with.—Dr. Herbert H. Bauckus, chairman, presented the following report:

"Mr. President and members, at the September meeting of the Council, you voted that the Liaison Committee be instructed to submit at the October Council meeting a resolution as to what action the Society should take regarding the Veterans Medical Care Program. That had to do with a resolution passed by the House of Delegates of the American Medical Association. An important paragraph relating to this reads, 'that the provision of medical care and hospitalization in Veterans Administration hospitals for the remaining groups of veterans with nonservice-connected disabilities be discontinued, and that the responsibility for the care of such veterans revert to the individual and the community, where it rightfully belongs.'

"The Committee met yesterday. After lengthy discussion it was decided that the Liaison Committee recommend to the Council that the State Society cooperate with the American Medical Association in the efforts to have the Federal law changed regarding nonservice-connected disabilities in Veterans Administration cases.

"We also discussed how to accomplish this. We decided that it is a very broad program and that we would need to follow the American Medical Association in its procedure. You recall from this packet that you received and from the work of Dr. Lull, the general manager, that the American Medical Association wants the county societies and the state societies to take active part.

"Since this becomes a public relations program, we invited to the meeting the chairman of the Public Relations Committee. He was represented by Mr. Miebach.

"I might quote this one paragraph from our minutes: 'In answer to a direct question, Mr. Miebach stated a program of this kind could well hurt the medical profession; that it was of the same magnitude as the National Education Campaign against socialized medicine. . . The difficulty is to keep it so that it does not seem directed against the veteran but rather that it is best for the country.'

"We approved and hoped that finally we would get this matter in the hands of the Public Relations Committee. What your idea is on this or what the committee wishes to do is quite another matter.

"I might say, however, that in perusing the proposed public relations pamphlets in Buffalo the other day, or an outline of them, I felt that one should cover veterans' nonservice-connected disabilities. I asked Mr. Messinger to inquire of his bureau the feasibility of such a pamphlet.

"The publications of our larger county societies have mentioned this favorably, advocating support of the American Medical Association. See, for instance, in *New York Medicine* of August 20, 1953, the editorial, 'Federal Survey Shows Abuse of Veterans Hospitalization.'

"We also have in *Erie County Medical Bulletin* a comment on what Dr. Edward McCormick, president of the American Medical Association, stated. It quotes the *Chicago Tribune*, 'Dr. McCormick . . . is on firm ground in calling for re-examination of the extent of free medical care to be dispensed by the Veterans Administration.'

"I would like to point out that both Dr. McCormick and Dr. Martin, the president-elect, have been clear and direct about advocating this change, and, as far as I know, all of the officials of the American Medical Association have concurred.

"The work of the Veterans Administration in service-connected and nonservice-connected cases is much better understood in Michigan and California and in New York than elsewhere. The plans in California and Michigan are much better handled. They have had more fee-basis work in proportion to the population because they conducted and have always conducted it through their Blue Shield and Blue Cross agencies. Nevertheless, the many points about this kind of veterans' medical and hospital care are not well understood."

Dr. Bauckus urged the members of the Council to study the pamphlet "Medical and Hospital Care of Veterans with Non-Service Connected Disabilities." He pointed out that proposed changes in the law would make it necessary for community hospitals throughout the country to accommodate many more patients than they do at present and reminded the Council that a few years ago, when an attempt had been made to have service-connected cases admitted to such hospitals, there had been opposition by hospital administrators. He stated it had recently been advocated that new building be undertaken under the Hill-Burton Act, and he advanced the argument that grants made under that act are meant for the hospitalization of persons whose illnesses or disabilities are not service-connected.

Dr. Bauckus also discussed Veterans Administration forms P-10 and 10-P-10, particularly the application of the question, "Are you financially able to pay?"

> *It was voted* that the State Society cooperate with the American Medical Association in the effort to have the Federal law changed regarding care of nonservice-connected disabilities in U.S. Veterans Administration cases.

Workmen's Compensation.—Dr. Gerald D. Dorman, chairman, reported:

"Your chairman and your director attended a meeting of the Workmen's Compensation Advisory Committee with Miss Mary Donlon on Thursday, September 17, 1953. The agenda referred to the action of the State Medical Society at the 1953 annual meeting with reference to the request for higher fees. It is hoped an advisory committee will soon be appointed to consider this.

"The question of ex-medical policies was discussed, and the opinion of the chairman was that the employer in the ex-medical policy is responsible for the payment of the medical bill, but if he does not pay, the insurance carrying company is liable.

"The chairman pointed out that under the auspices of the American Federation for the Physically Handicapped, a bill has been introduced into the Senate and House to establish a Federal agency for the handicapped, HR-3177, February 18, 1953. This bill would require conformity on the part of the State with provisions in the proposed bill which would nullify the provisions of Section 15 of the New York State workmen's compensation law. This second injury law was passed a few years ago when it was realized that it was impossible in a second injury case to determine how much of a disability was due to the first injury and how much to the second. The new second injury law has been satisfactory in this State, and the passage of a Federal law would be disastrous in the opinion of informed insurance personnel and officers of the Workmen's Compensation Board.

"An item on the agenda referred to the rules, regulations, report forms, and fee schedule to be established for the administration of the podiatry law which went into effect September 1, 1953. We are adding hereto a brief which has been submitted to interested parties on behalf of the Medical Society of the State of New York. We have been invited to attend a meeting of the special committee to effect administrative procedures under the Podiatry Law, September 30, 1953."

Brief submitted by the Medical Society of the State of New York (Bureau of Workmen's Compensation) for consideration by the chairman of the Workmen's Compensation Board and the committee to consider the administration of Section 13-k of the Workmen's Compensation Law in effect on September 1, 1953, involving the practice of podiatry.

(Section 7001 of the Education Law, subdivision c, was quoted in full).

Under the definition of podiatry and the provisions of subdivision c, a licensed podiatrist is authorized to diagnose ailments of the human feet by mechanical, chemical, and physical means. He is permitted to treat only conditions of the feet and here he is limited to the practice of minor surgery, superficial to the deep fascia; and may not operate upon the bones, muscles, or tendons of the feet or any other part of the body except operations for minor deformities of mechanical and functional nature including structures *superficial* to the deep fascia and including all structures of the terminal phalanges. Treatment of fractures as defined is limited to simple, uncomplicated fractures of the phalanges and metatarsals only. He may use only local anesthesia and non-narcotic postoperative therapy. The use of non-narcotic sedatives seems to be limited to postoperative care and nothing in the law confers upon the podiatrist the privilege of using any other medication. Thus, the podiatrist could not, for example, treat diabetes even if there were a local lesion on the foot due to diabetes.

The Workmen's Compensation Law has been amended by adding Section 13-k, "Care and Treatment of Injured Employees by Duly Licensed Podiatrists." Under the provisions of subdivision 2, an injured employe may select a podiatrist who is authorized by the Chairman of the Workmen's Compensation Board to treat an injury within the scope of the podiatrist's license to practice podiatry, issued by the Department of Education of the State of New York. If the injury is one which is outside of the limitations prescribed by the Education Department for podiatrists or involves or affects other parts of the body, in addition to the foot, the podiatrist must advise the injured employe and instruct him to consult a physician for appropriate care and treatment; and said physician shall have overall supervision of the treatment of the patient including all further treatment within the scope of the podiatrist.

The Chairman of the Workmen's Compensation Board is charged with promulgating rules governing the procedure to be followed by authorized podiatrists under the new section, and it is prescribed that these rules shall as far as practical conform to the rules presently in effect with reference to medical care furnished to claimants in workmen's compensation. Under the provisions of Chapter 10 of section 13-k, a podiatrist may be penalized by the podiatry practice committee and with the concurrence of the Chairman of the Workmen's Compensation Board, after an investigation and hearing for, among other things, exceeding the limitations of his professional competence in rendering podiatry care under the Workmen's Compensation Law. In accordance with the provisions of section 13-b 2 which applies to the authorization of physicians to practice under the Workmen's Compensation Law, a physician in applying for authorization is required to state his training and qualifications and "shall agree to limit his professional activities under this chapter to such medical care as his experience and training qualify him to render." Usually his rating symbols indicate the range of his practice. The medical doctor may be removed from the panel of physicians authorized to treat workmen's compensation patients if he exceeds the limits or range of his qualifications.

It is strongly recommended that the Chairman of the Workmen's Compensation Board require of the podiatrist the same restriction in range of practice to what the podiatrist is qualified to do as is required for physicians under Section 13-b 2. This is in the interest of the injured workingman as it protects him from treatment by physicians who exceed the limits of their competence.

The Workmen's Compensation Law is the only law in this or any other state which, so far as I know, limits the practice of a physician to what he is actually qualified to do by reasons of education, training, and experience. The podiatrist should be limited by regulations set up by the Chairman of the Workmen's Compensation Board, in his practice to what he is actually qualified to treat, viz: minor conditions of the feet. He should not be permitted or encouraged to perform certain diagnostic tests, such as tests of the blood, urine, and other body secretions or excretions, and tests for allergies, without presentation of credentials assuring training and experience sufficient to warrant the performance of such tests or examinations in relation to the diagnosis of foot conditions.

Experience has shown that certain laboratory tests and other tests in medical practice are not generally performed by general practitioners but are limited to laboratory and other specialists qualified by training and experience to do this work. We believe that the Chairman of the Workmen's Compensation Board should promulgate rules and regulations to limit the practice of podiatrists both diagnostic and therapeutic to what is actually the scope of their practice. The inclusion of a great many items in the fee schedule for podiatrists will certainly encourage podiatrists to perform certain procedures which they are by no means competent or qualified to carry out or interpret.

The restricting of podiatrists by regulations as well as law will enable the Chairman of the Workmen's Compensation Board, with the assistance of the podiatry practice committee, to proceed against those podiatrists who, through the guise of authorization to treat minor conditions of the feet, attempt to practice medicine. Certainly neither the fee schedule nor the forms which the podiatrists are required to file should encourage them to exceed the limitations of their qualifications and of their license. Podiatrists now are perhaps unwittingly to be required to answer questions on report forms, concerning parts of the body, other than the feet, which questions could only be answered by the podiatrist as a result of an examination of the patient beyond the scope and qualifications of the podiatrist. Furthermore, such examinations might involve the podiatrist in supplying an opinion before a referee or the Workmen's Compensation Board which he is not competent to render but which might illegally influence the opinion of a referee or judge.

I feel therefore that both the report forms and the fee schedule should be reconsidered and carefully scrutinized before being issued, as in our opinion, they require considerable modification to conform with the letter as well as the spirit of the amended law involving the practice of podiatry in workmen's compensation cases. It is our intention to submit to the meeting, to which we have been invited on September 30, a more detailed critique of both the report forms and the fee schedule.

David J. Kaliski, M.D., *Director*
Workmen's Compensation Bureau
Medical Society of the State of New York

September 18, 1953

Dr. Dorman stated:

"The first meeting of the Advisory Committee took place on September 17 with Miss Mary Donlon. At that time Miss Donlon asked us to submit a brief with our chief objections to the proposed podiatrists' fee schedule and the proposed podiatrists rules, regulations, and forms. Dr. David Kaliski drew up an extremely good brief, which is attached here—both the brief and our specific objections to the schedule.

"Dr. Kaliski's brief quotes the Education Law

[Continued on page 138]

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[Continued from page 136]

and the sections as it applies to the Workmen's Compensation Law. Miss Mary Donlon went over it and said we would take it up piece by piece, so that we could decide agreements with the podiatrists and objections.

The podiatrists object that the Workmen's Compensation Law further limited the practice of podiatry beyond what the Education Law did when it licensed them. They said they would not recognize that limitation, although we pointed out that physicians under the Education Law are allowed to practice medicine and surgery but are not allowed under the Compensation Law to do general surgery unless you have a surgical rating. We felt that as long as that was a recognized principle, we did not see why podiatrists should object. They said they would take exception but discuss it further. There were two or three areas of disagreement of that type, which Miss Donlon said they would take under consideration, and went on to the fee schedule.

"On the fee schedule, she said she did not want to take up the amount of fees—it was just the principle of the fees. We discussed the fee schedule item by item.

"Some of the salient features we struck out were, for instance, the allowance to an assistant to the surgeon.

"We brought under discussion the question of whether podiatrists were entitled to hospital visit allowances, whether they were entitled to do injections, particularly intramuscular deep injections and antibiotic injections, because the law limits them to practice on the foot, allows them to amputate or do any surgery on the toes, treat fractures of the metatarsals but not of the tarsal bones, and allows them otherwise to treat foot conditions superficial to the deep fascia. So when you get into the intramuscular injections, intravenous injections, and antibiotic therapy, we felt they were beyond their depth.

"Then we got into roentgenology, diagnostic films. They wanted to be entitled to 3 inches up the leg because they said that the ankle was part of the foot. They admitted that the tibia and fibula were not included in the foot bones, but 'the ankle is part of the foot,' they said.

"We questioned their allowances for dislocations of the ankle, astragalus, os calcis, and the tarsal bones.

"We also questioned their allowances for incision of deep abscess, $15. We felt that the deep abscesses, for which the physicians and surgeons are allowed $15, go below the deep fascia to which podiatrists are limited.

"There were other items under laboratory work. Particularly they had allowances for blood tests, sedimentation, clotting time, culture of bacteria, culture of fungus, examination of smear for bacilli or fungi in exudates, and darkfield examination. We felt that was beyond the treatment of the foot.

"Miss Donlon said she would take the controversial items under consideration and that the amount of the fee would be delegated to a committee on which the State Medical Society would appoint one member.

"There was one thing that she also said. It is clearly stated in the law that when there is something outside of the foot and a physician is called, the podiatrist does not call in the physician, but he advises the patient to consult a physician. In that case the compensation law reads that the physician will be in charge of the case, and Miss Donlon said that her understanding was even to the extent of excluding the podiatrist from the case and supervising the podiatrist's practice. They objected to that.

"As Dr. Kaliski stated, great care should be taken to avoid enlarging the scope of the podiatrist under Section 7001 of the Education Law by means of rules and regulations, fee schedule, and report forms. We must not permit, by departmental rules, etc., what the basic law itself restricts. Podiatrists should be carefully restricted both in therapy and with regard to testimony before referees and the Workmen's Compensation Board.

"Care must be taken to restrict the podiatrist to conditions of the feet and not to permit them to treat, by indirection, conditions which they attribute to lesions of the feet. For example, certain orthopedic conditions of the feet may result in postural changes and pain elsewhere than in the feet, especially in the back. Such conditions should be ruled beyond the competence of the podiatrist. If a podiatrist exercises his right under the law to treat the feet of such persons, leaving the back condition to a physician, we shall certainly find that there will be duplication of bills. We must guard against an inordinate increase in the cost of medical care as the result of combined medical and podiatry care.

"We raise the question as to the advisability or propriety of paying a podiatrist the same fee as a practitioner of medicine. Certainly they are not entitled to fees on a par with fees paid to medical specialists.

"We must object to many items in the various report forms. To name a few after a brief examination of the forms: forms C-104 P—items 5, 6, 14, 15; forms C-4 P—items 5, 6, 13, 14, 15, 16; forms C-14 P—items 7, 9; forms C-27 P—items 7, 9.

"I took the liberty of requesting that Dr. Kaliski sit with the Fee Schedule Committee that Miss Mary Donlon was establishing because I think that Dr. Kaliski has a broader knowledge and a deeper understanding of the problems of the fee schedule than anybody else, and I would ask the president's and the Council's indulgence in approving the recommendation that he sit on the Fee Schedule Committee with the other members of the insurance companies and of Miss Donlon's office."

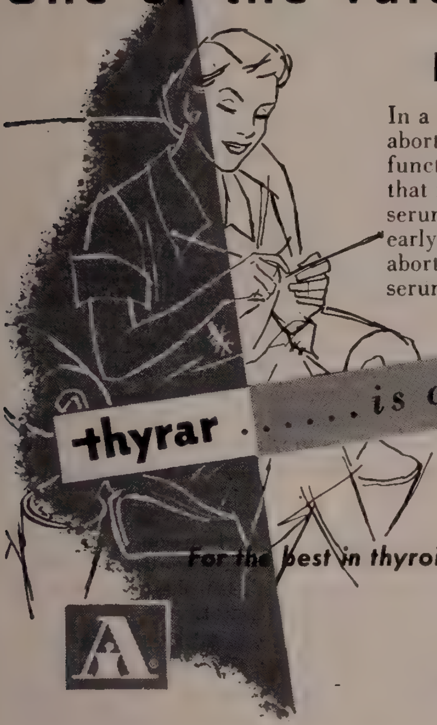
It was voted that the report be accepted and that Dr. Kaliski's appointment to the Subcommittee on Fee Schedule be approved.

Dr. Dorman continued:

"I would also be interested if we could have an informal expression of opinion on this fee schedule to help guide Dr. Kaliski."

After discussion, Dr. Kaliski was *instructed* to oppose granting podiatrists the same fees as medical doctors.

[Continued on page 140]



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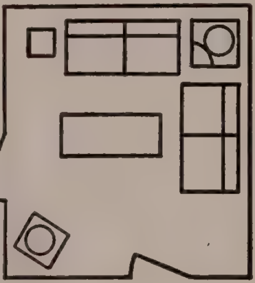

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[Continued from page 138]

Reports of Representatives to State Medical Society Meetings

Vermont and New Hampshire.—Dr. Denver M. Vickers reported he extended greetings of President Eggston to the joint meeting of the New Hampshire Medical Society and the Vermont State Medical Society. He stated that the subjects of malpractice insurance and defense and of Blue Cross and Blue Shield insurance were discussed. In connection with the latter, he proffered the assistance of Mr. George Farrell. He expressed surprise at the customary large attendance, stating that approximately half of the membership of the Vermont State Medical Society is present at each meeting.

Pennsylvania.—Dr. Eggston reported that he and Dr. Anderton attended the annual meeting of the Medical Society of the State of Pennsylvania. He stated that the affairs of their House of Delegates are very efficiently handled and that their problems seem similar to those of our society. Dr. Anderton stated that President Eggston delivered a short speech which was well received by the Pennsylvania House of Delegates.

Unfinished Business

Estimates of Expenditures—House of Delegates Resolutions.—Dr. Anderton stated:

"It was voted at your last meeting to place on the October agenda a motion that the Society have at the annual convention a person from the headquarters office who understands the cost of procedures, to be present and review all resolutions which would require expenditure of money so that such costs may be announced to the House."

It was voted that this motion be taken off the table.

After discussion, the motion was put to a vote and *was carried.*

American Medical Association Convention.—Dr. Kenney stated:

"Just a brief report on the American Medical Association general committee to the effect that we had a meeting on October 1, and four bills were received and approved. It was the considered action of those present at the meeting that the residual funds in that account, estimated to be approximately $7,500, be earmarked for use in connection with the next American Medical Association meeting in New York City, we hope in 1956. This was approved by members of the committee present and a half dozen others to whom I telephoned. I think the Council should, perhaps, at this time make such a provision.

"It was also decided, in connection with the first motion, that a letter or report be sent to each of the county medical societies which contributed money, stating the disposition of the surplus fund and giving the complete treasurer's report."

After discussion *it was voted* that these recommendations be made to the Board of Trustees as the feeling of the Convention Committee, that the remaining funds be held in a separate account pending the next meeting of the American Medical Association in New York City, in 1956 or thereafter.

Medical News

[Continued from page 128]

Hospital for Women, Columbia-Presbyterian Medical Center, will lead the discussion.

Physicians and medical students are invited to attend.

Jewish Sanitarium and Hospital for Chronic Diseases

Dr. Adolph Berger, William Carr Professor of Oral Surgery, Columbia University Faculty of Medicine, will speak on "The Cooperative Role of the Physician and Dentist in the Diagnosis and Treatment of Oral Neoplasms" at a meeting at the Jewish Sanitarium and Hospital for Chronic Diseases on Wednesday, January 13, at 8:30 P.M. A motion picture, "Oral Cancer—The Problem of Early Diagnosis," will be shown.

American Diabetes Association

The second postgraduate course of the American Diabetes Association will be held at Rochester, Minnesota, at the Mayo Clinic and Foundation, on January 18, 19, and 20. Details and further information may be obtained from the Executive Director, American Diabetes Association, 11 West 42nd Street, New York 36, New York.

Fourth Sigmund Pollitzer Lecture

The Department of Dermatology and Syphilology of the New York University Post-Graduate Medical School will present the fourth Sigmund Pollitzer Lecture on January 21, at 4:00 P.M., in the Main Lecture Hall of the College of Medicine, 477 First Avenue, New York City. Dr. Stephan Rothman, professor and head of the Section of Dermatology and Syphilology, of the University of Chicago School of Medicine, will speak on, "Some Physiologic and Endocrinologic Aspects of the Epidermis and Skin Appendages."

Pediatric Section, Kings County Medical Society

The Pediatric Section of the Kings County Medical Society and the Brooklyn Academy of Medicine will meet on Monday night, January 25, at 8:15 P.M. Dr. Joseph Stokes, Jr., professor of pediatrics, School of Medicine of the University of Pennsylvania, will speak on "Studies on the Control of Certain Viral Diseases." All members of the medical profession are invited.

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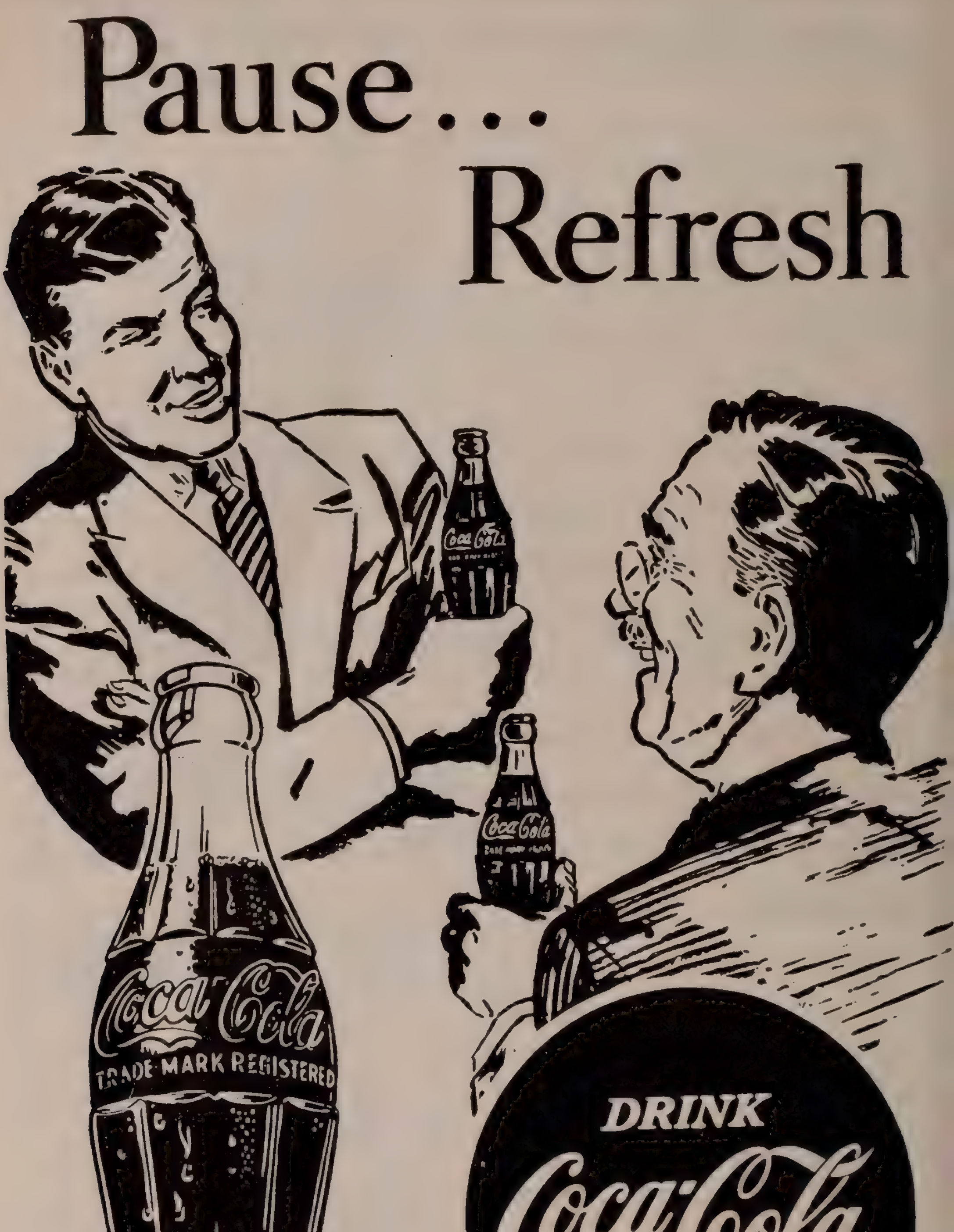
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1. SIMON, S. W.: ANN. ALLERGY 11:218, 1953. 2. KESTEN, B. M.: ANN. ALLERGY 6:408, 1948. 3. LOEW, E. R.: MED. CLIN. N. AM. 34:351, 1950.

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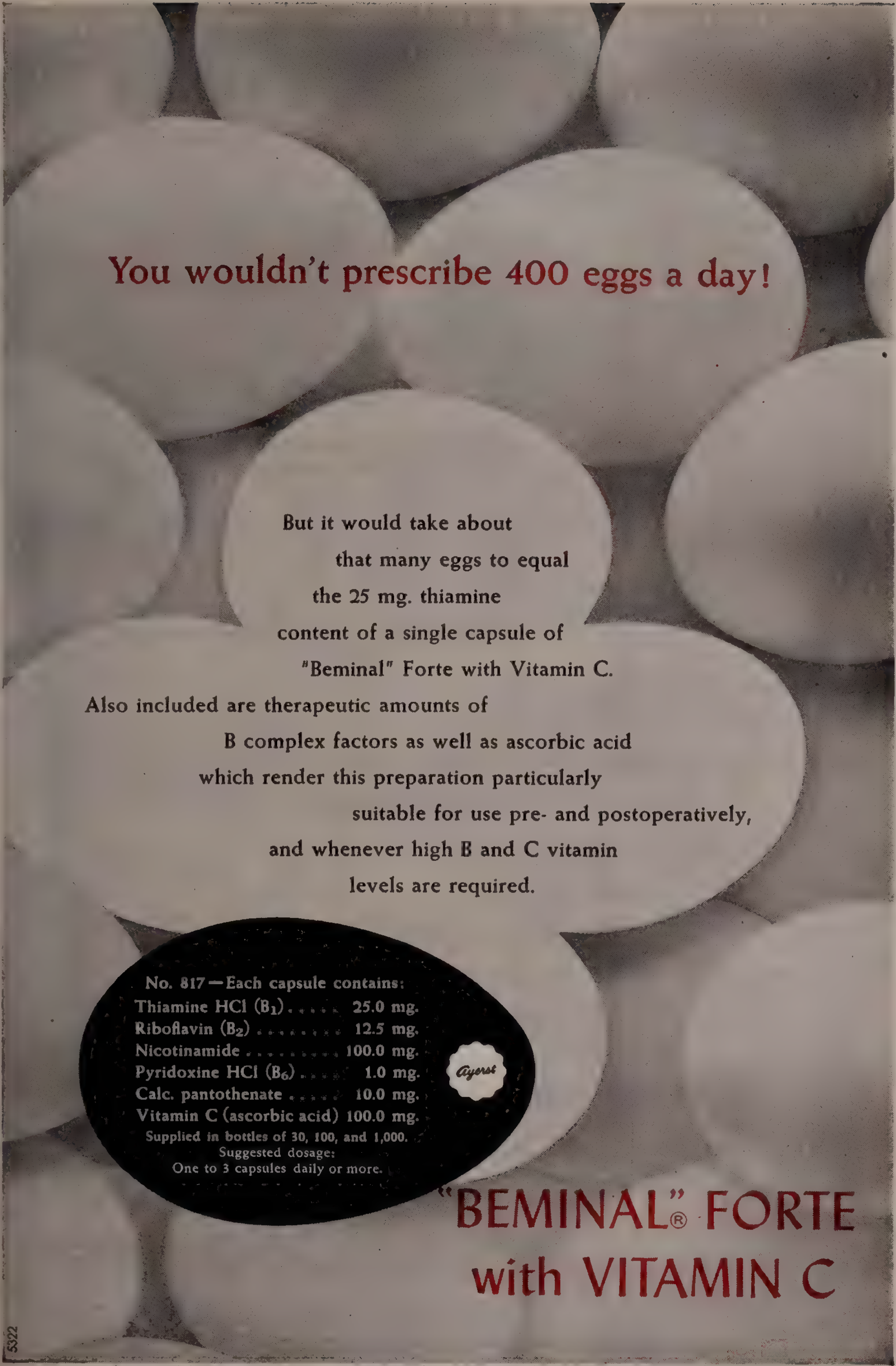

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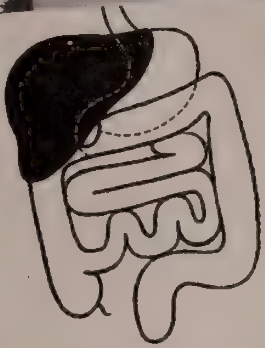

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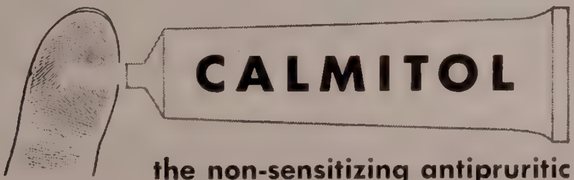

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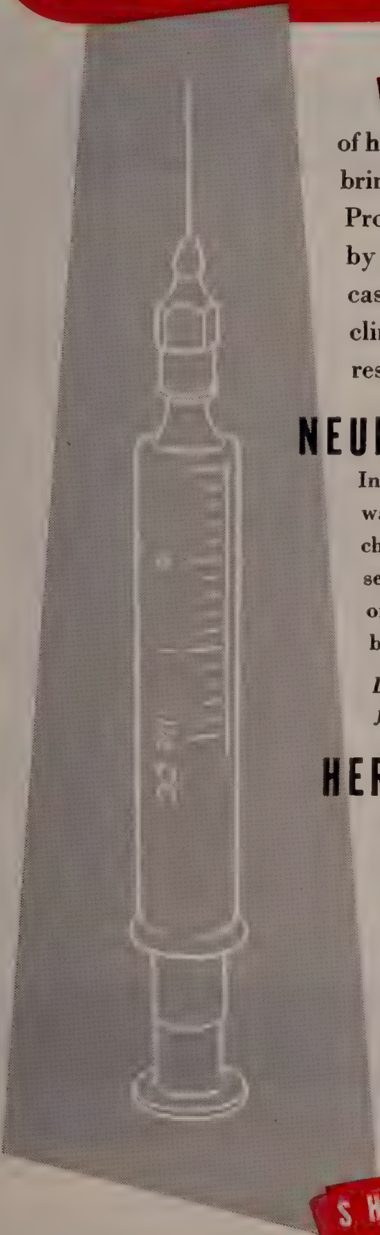

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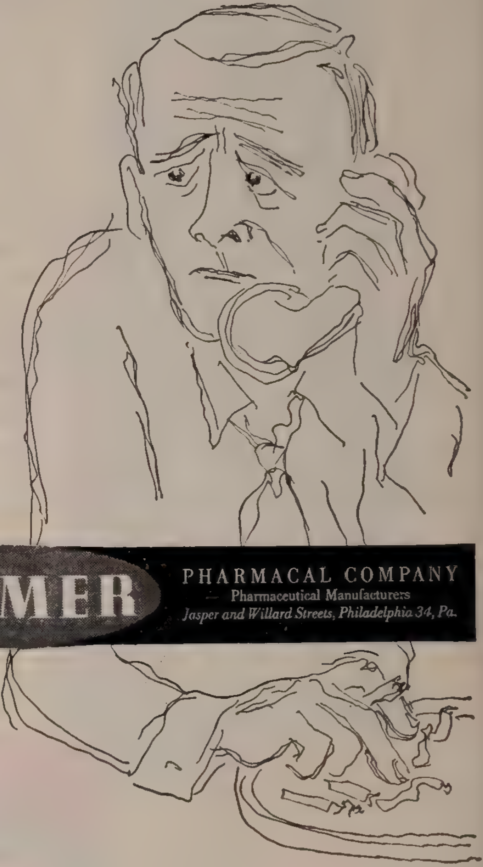

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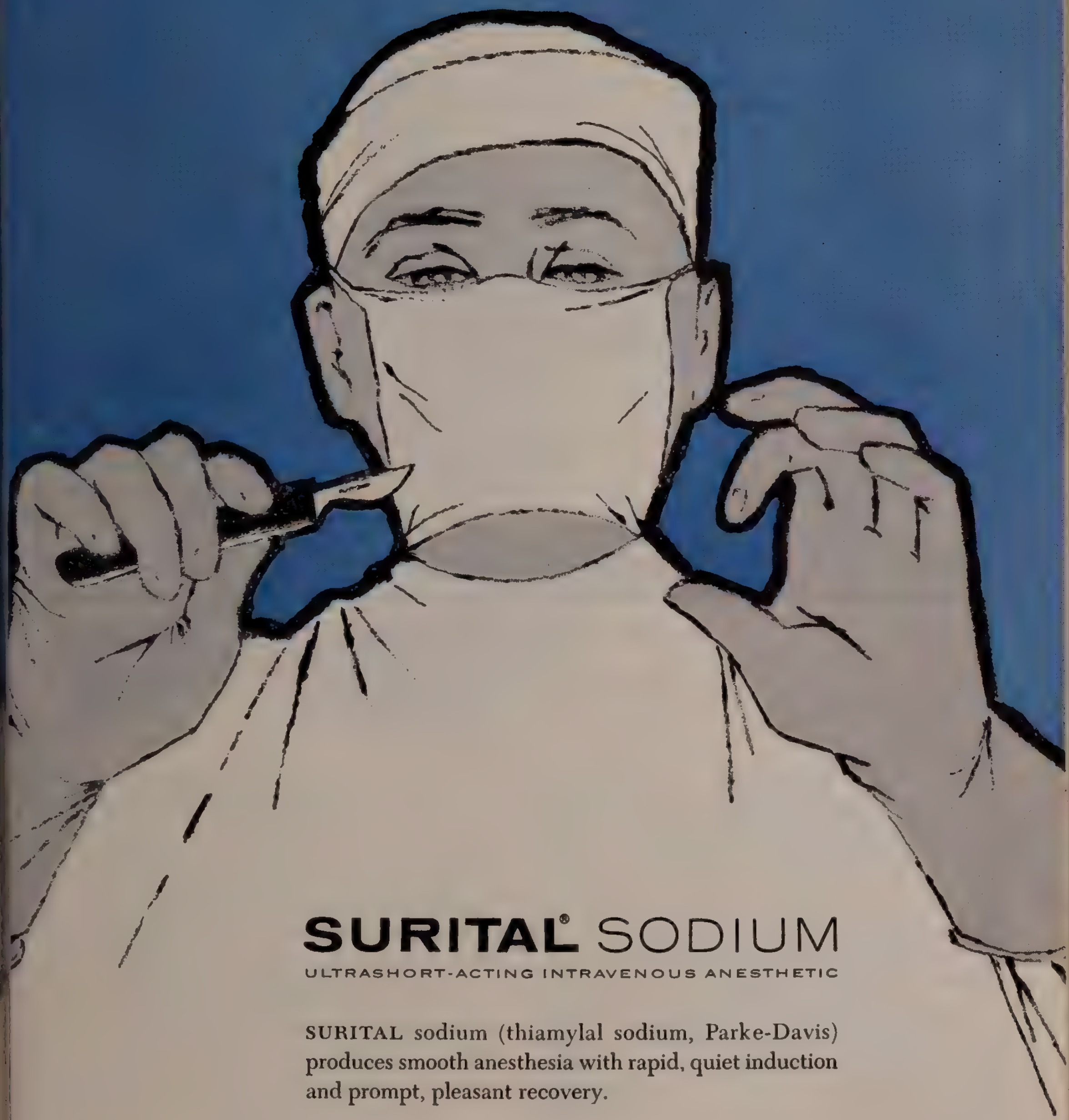

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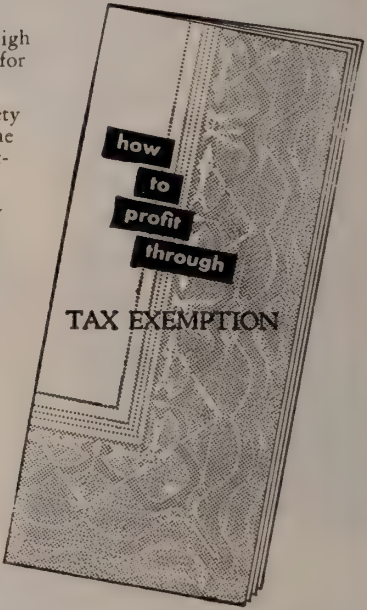

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1. Thompson, M. R., and Thompson, R. E., The Pharmacology and Chemistry of Veratrum Viride, A. Ph. A. Meeting, August 20, 1953.

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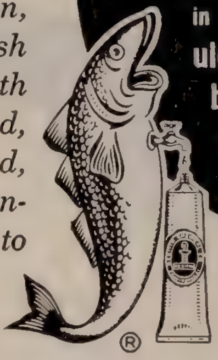

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1. Behrman, H. T., Combes, F. C., Bobroff, A., Leviticus, R.: Ind. Med. & Surg. 18:512, 1949.
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3. Heimer, C. B., Grayzel, H. G., and Kramer, B.: Archives Pediat. 68:382, 1951.

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(1) Burns, J. J., and others: J. Pharmacol. & Exper. Therap. *106*:375, 1952. (2) Byron, C. S., and Orenstein, H. B.: New York State J. Med. *53*:676 (Mar. 15) 1953. (3) Currie, J. P.: Lancet *2*:15 (July 5) 1952. (4) Davies, H. R.; Barter, R. W.; Gee, A., and Hirson, C.: Brit. M. J. *2*:1392 (Dec. 27) 1952. (5) Delfel, N. E., and Griffin, A. C.: Stanford M. Bull. *2*:65, 1953. (6) Domenjoz, R.: Federation Proc. *11*:339, 1952. (7) Domenjoz, R.: Internat. Rec. Med. *165*:467, 1952. (8) Goldfain, E.: J. Oklahoma M. A. *46*:27, 1953. (9) Gutman, A. B., and Yü, T. F.: Am. J. Med. *13*:744, 1952. (10) Kuzell, W. C.: Annual Review of Medicine, Stanford, Annual Reviews, *2*:367, 1951. (11) Kuzell, W. C., and Schaffarzick, R. W.: Bull. on Rheumatic Diseases *3*:23, 1952. (12) Kuzell, W. C.; Schaffarzick, R. W.; Brown, B., and Mankle, E. A.: J.A.M.A. *149*:729 (June 21) 1952. (13) Kuzell, W. C., and Schaffarzick, R. W.: California Med. *77*:319, 1952. (14) Patterson, R. M.; Benson, J. F., and Schoenberg, F. L.: U. S. Armed Forces M. J. *4*:109, 1953. (15) Rowe, A., Jr.; Tufft, R. W.; Mechanick, P. G., and Rowe, A. H.: Am. Pract. & Digest Treat., in press. (16) Smith, C. H., and Kunz, H. G.: J. M. Soc. New Jersey *49*:306, 1952. (17) Steinbrocker, O., and others: J.A.M.A. *150*:1087 (Nov. 15) 1952. (18) Stephens, C. A. L., Jr., and others: J.A.M.A. *150*:1084 (Nov. 15) 1952. (19) Wilkinson, E. L., and Brown, H.: Am. J. M. Sc. *225*:153, 1953.

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2. Brown, M. G. and Riseman, J. E. F. JAMA 109: 256, 1937.
3. Riseman, J. E. F. N. E. J. Med. 229: 670, 1943.

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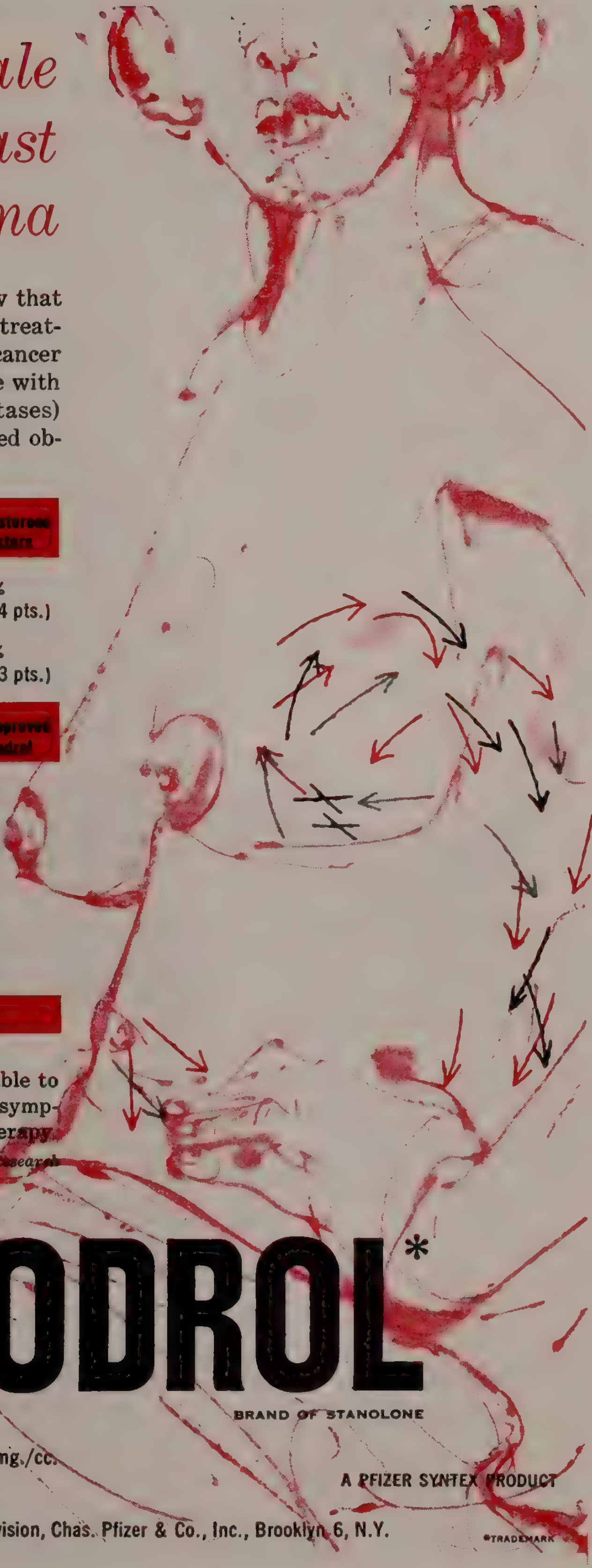

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Headache	6	6
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Escher, G. C., et al.: Clinical Research Proceedings 1:51 (Apr.) [illegible]

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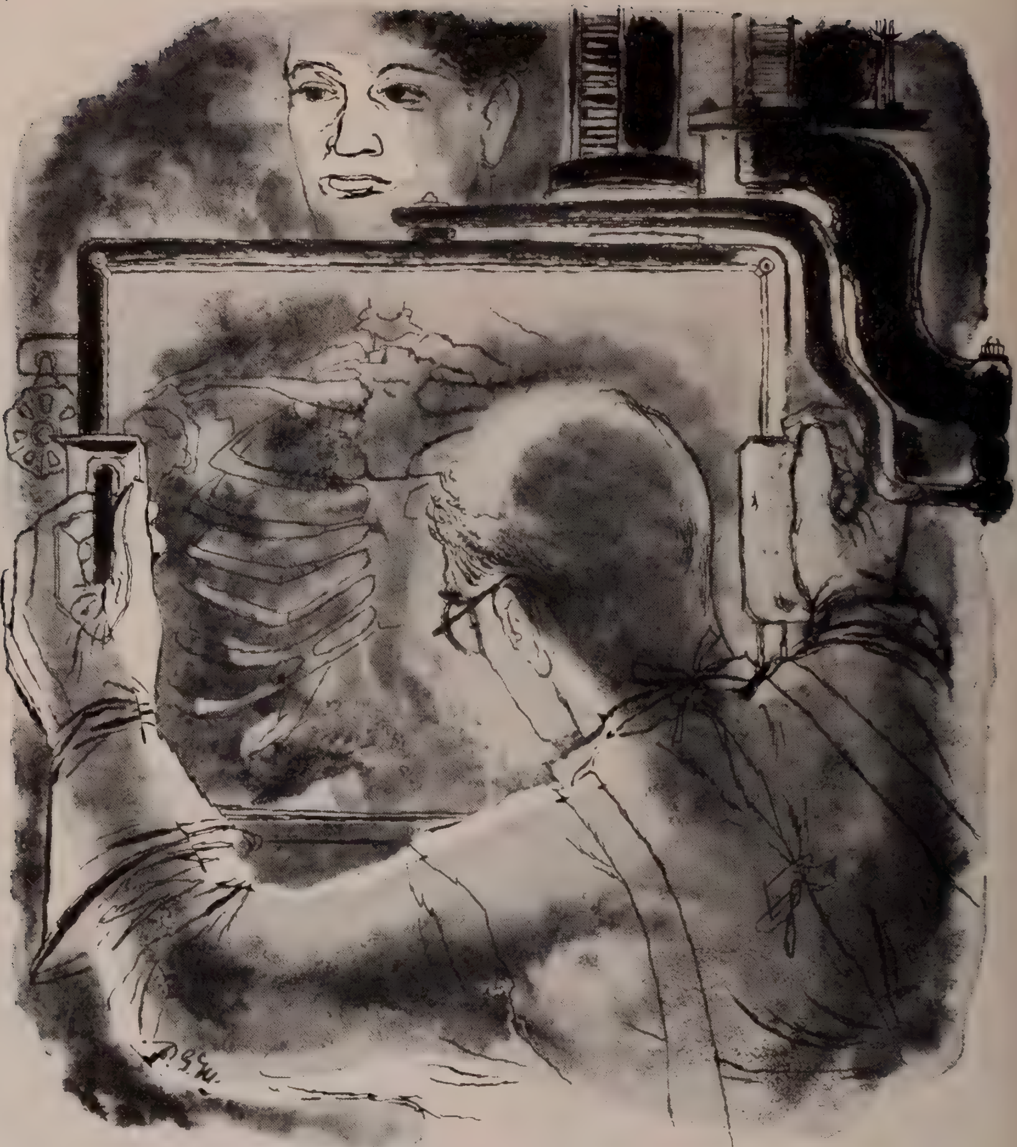

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EDITORIALS

Social Security Extension, I

Physicians should concern themselves with the theoretic and practical considerations behind old age and survivors insurance. Current proposals in Washington "to include self-employed physicians under the benefits of OASI, as most employed physicians have been since 1950, make the question timely."[1] We call attention to a recent publication of the Bureau of Medical Economic Research of the American Medical Association[2] which deals exhaustively with the subject, and we urge our membership to acquaint themselves with the facts.

In his State of the Union message of February 2, the President recommended that the "old-age and survivors insurance law should promptly be extended to cover millions of citizens who have been left out of the social security system." On August 1 he recommended to the Congress an extension of coverage based on a report filed with the Secretary of Health, Education, and Welfare by a group of consultants on social security. Their plan suggests that coverage be extended to cover about 10 million more workers. In addition to the state and local government workers, farmers and domestic workers, ministers, home workers, and others who would thus be covered by OASI, there are about half a million self-employed professional persons who would be covered for the first time: accountants, architects, chiropractors, Christian Science practitioners, dentists, funeral directors, lawyers, naturopaths, optometrists, osteopaths, physicians, professional engineers, and veterinarians. The consultants on social security report that "many if not all of these exclusions were made at the request of the groups excluded" but, nevertheless, recommend that they be included in the future.

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[1] J.A.M.A. 153: 921 (Nov. 7) 1953.
[2] Miscellaneous Publication M-78.

It seems certain that pressure will be exerted on the Congress to extend the Social Security Act to cover self-employed physicians and others not covered by previous legislation, although the American Dental Association, the governing bodies of the American Bar Association and the American Farm Bureau Federation, and other national organizations composed largely of self-employed persons including the American Medical Association[3] are on record opposing it. Many persons on the other hand seem to favor such an extension of coverage.

Since much discussion and some legislation is anticipated, it would be well for our membership to consider that "the median age at which self-employed physicians over age sixty-four are currently retiring is seventy-four. The retirement ages of self-employed lawyers, dentists, and farmers is probably about the same. Under the so-called work rule no eligible person can draw an OASI pension if he earns $75 a month between ages sixty-five and seventy-five. This would obviously mean that half of the self-employed physicians would, under the President's proposal, be required to pay social security taxes but would not receive one penny of benefits until age seventy-four. But relaxing the 'work rule' to make coverage more attractive to these 10 million gainfully employed would, unless accompanied by a sharp increase in OASI taxes, merely increase the get-something-for-next-to-nothing potential of this act."[2]

A subject of such vital importance to all self-employed doctors deserves serious study and thorough discussion.

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[3] June, 1949.

Editorial Comment

Dwight Anderson. Publicist, author, formerly executive secretary of the Medical Society of the State of New York and director of its Bureau of Professional and Public Relations as well as business manager of the NEW YORK STATE JOURNAL OF MEDICINE, Dwight S. Anderson died at the age of seventy-one in Miami, Florida, on December 13, 1953.

Born in Cleveland, Mr. Anderson was educated at Western Reserve Academy, Ohio State University, and Western Reserve University. After a number of years as a theatrical press agent, lawyer, and newspaper man, he entered public relations work in 1924, handling the Christmas seal drive of the National Tuberculosis Association from 1925 to 1935 and doing other work for the Maternity Center Association, the American Association of Orthodontists, the American College of Surgeons, and the American College of Physicians.

He founded the Medical Society's public relations bureau in 1935 and, from 1945 until his retirement in 1950, was the Society's executive secretary. He also had served as business manager of the NEW YORK STATE JOURNAL OF MEDICINE and the *Medical Directory of New York State.*

Mr. Anderson had written many articles on alcoholism and a book, *The Other Side of the Bottle,* published in 1950. He was a member of the board of directors of the National Committee on Alcoholism and was a frequent lecturer at the Yale School of Alcoholic Studies. He also had written a number of other books on subjects in the medical field.

He was a member of the Military Order

[Continued on page 188]

Current Concepts in

DIABETES MELLITUS

IRVING GRAEF, M.D., *Editor*

from the Committee on Professional Education of the Clinical Society of the New York Diabetes Association

Problems of Diagnosis in Diabetes

HENRY E. MARKS, M.D., NEW YORK CITY

(From the Department of Medicine, College of Physicians and Surgeons, Columbia University; Fellow, Clinical Society, New York Diabetes Association)

The diagnosis of diabetes presents no difficulty in the fully developed stage of the disease except in the occasional aglycosuric case with an elevated renal glucose threshold. Nevertheless, it is surprising to see how frequently the diagnosis is missed or long delayed because the patient does not complain of the classic symptoms of thirst, polyuria, pruritis, or loss of weight, and the physician fails to suspect diabetes or to perform a urine test for glucose.

The time so lost can be of major importance for the control of the disease and the prevention of irreversible complications and disability. The point to be made here is that the classic symptoms are the consequence of prolonged and severe glycosuria and, therefore, appear only in the advanced stage of the disease. The early and mild stages are symptomless, and even with long-standing diabetes many patients with an elevated threshold or only moderate hyperglycemia never have enough glycosuria to develop the typical symptom picture. Such patients may go on for long periods of time without becoming ill enough to consult a doctor and eventually develop the late degenerative complications before the presence of diabetes is suspected or discovered. Early diagnosis is thus a major factor in the prevention of illness from diabetes.

There are four situations in which diagnosis and evaluation may present a problem:

1. Diabetes of moderate severity with not enough glycosuria to produce the classic symptom picture.
2. The diabetic with an elevated renal glucose threshold and minimal or absent glycosuria.
3. The early case before symptoms or signs develop to arouse suspicion or the mild case with only minimal, transient, or recurrent glycosuria.
4. Glycosuria first appearing as a complication in the course of another disease.

The first two categories are responsible for many of the most disastrous complications. Lacking the typical picture they often remain undetected for long periods. When discovered, the slight glycosuria, the benign course under observation, and the failure to show evidence of increasing severity give both patient and physician a false sense of security and lead them to regard careful treatment as unnecessary. Only after ten to twenty years do the late complications make themselves manifest as cataract, retinopathy, neuropathy, advanced atherosclerosis, or nephropathy, irreversible lesions which might have been prevented had the "mild" diabetes been taken more seriously.

Long before the development of the late degenerative complications, however, these patients may exhibit functional disturbances which, while not pathognomonic, should alert the clinician to the possibility of a diabetic etiology. These include otherwise unexplained asthenia, neuritis involving sensory, motor, or cranial nerves, often in an isolated nerve, functional disturbances of vision, impairment of memory or mental acuity, amenorrhea, infertility, repeated abortion, or stillbirths in the last month of pregnancy, unusually large babies, impotence, xanthomatosis, hepatomegaly, and the finding of red cells, white cells, and considerable albumin in the urine. Some of these disturbances may occur even in the earliest preclinical stage of diabetes when the disease may be detectable only by study of the blood sugar after a loading test, as described below. Insofar as they are not accompanied by or based upon gross degenerative lesions, most of these disturbances may be expected to clear up when the diabetes is brought under good control.

The discovery of diabetes in the earlier stages, then, when it is most amenable to control and before it has done irreparable damage, is dependent not on diagnostic acumen but on the physicians's awareness that it may be present at any time in any symptomless individual, just as in the case of tuberculosis and cancer. Since the prognostic outlook is far better if it is discovered early and treated vigorously, the physician has an obligation to look for diabetes at every opportunity, regardless of complaints or symptoms.

Detection of Early Diabetes

Clinically, diabetes may be defined as inability to ingest a normal amount of carbohydrate without subsequent sustained hyperglycemia. In the earliest or mildest stage of diabetes the postprandial hyperglycemic peak is of moderate height and brief duration. Even in diabetes of moderate severity the morning urine may be sugar-free and the fasting blood sugar normal. The customary fasting blood sugar determination and morning urine specimen cannot therefore be expected to reveal the presence of diabetes until the disease has reached a well-advanced stage. The use of these examinations for routine diagnostic studies is a common source of failure to discover diabetes at the most favorable time for its control and should be abandoned.

To discover diabetes early one must examine the urine and, if possible, the blood sugar in the postprandial period and preferably after the loading test of a high carbohydrate meal, the previous carbohydrate intake having been normal. Such a test has many advantages over the traditional glucose tolerance test. Since it requires only one blood sugar determination instead of five, it is simpler, quicker, cheaper, and less burdensome to the patient, the physician, and the laboratory. Furthermore, it is a more physiologic test of the function one is examining since the normal subject shows a hyperglycemia after the abnormal load of 100 Gm. of glucose but not after the normal load of 100 Gm. of mixed carbohydrate.

Finally, by quantitating the carbohydrate load one may measure the carbohydrate tolerance of the subject, that is, the amount that can be disposed of at a single feeding without sustained hyperglycemia, and this may be used as a guide to diet.

Both the oral glucose tolerance test and the mixed meal tolerance test are of course invalidated by disturbances in the rate of digestion and absorption. When transitory, these are not of practical importance. However, when they are constantly present, it may be necessary to resort to the intravenous glucose tolerance test as described in the texts.

For mass screening tests or for the simplest form of individual exclusion test, one should examine the urine for sugar an hour or two after a high-carbohydrate meal. Such a breakfast, for example, may contain a full glass of orange juice, a portion of cereal with milk and sugar, three slices of bread or toast, and coffee with sugar (approximately 100 Gm. of carbohydrate). This will miss only the diabetic with an unusually high renal glucose threshold and those persons with a slight loss of tolerance and a postprandial peak not rising above the normal threshold level.

Far more information is furnished by the blood sugar taken one or two hours after such a meal. With blood sugar methods which measure total reducing substances, the normal subject, if his previous carbohydrate intake has not been restricted, does not rise above 130 mg. at one hour; values above 150 mg. may be considered as definite loss of tolerance, while values between 130 mg. and 150 mg. should call for watchfulness, retesting at intervals, and whatever measures are indicated to correct bad eating habits or overweight.

If the blood sugar at one hour is above normal, further examinations may be carried out at one-hour intervals to determine the duration of hyperglycemia, in order to prescribe a diet which will permit the blood sugar to return to normal well in advance of the following meal. It will be found that most persons with moderate depression of carbohydrate tolerance treated in this way will not show further loss so long as they remain on a diet within their limits of tolerance but will rather tend to regain tolerance to some extent.

Significance of Slight Impairment of Tolerance

The natural history of diabetes is poorly understood. One seldom has the opportunity to observe the evolution of the disease from its inception to the fully developed stage. Important questions remain to be answered: To what extent do these moderate losses of tolerance, so frequently found when looked for, represent early or potential diabetes? Under what conditions do they tend to progress to further loss of tolerance? How can further loss be prevented? A full discussion of these questions is outside the scope of this paper, but until they are answered, we must assume that knowledge of the situation on the part of both physician and patient can lead to the prevention of more severe diabetes.

The finding of slight, transient, or intermittent and recurrent glycosuria poses a problem in the diagnosis of diabetes that can be profitably studied by determination of the blood sugar curve at one, two, and three hours after a meal of known carbohydrate content. When studied in this way it will be found that in many supposed cases of renal glycosuria the excretion of sugar is the result of a brief postprandial hyperglycemia rather than of a lowered renal glucose threshold. This is the so-called alimentary glycosuria; it should be looked upon as a slightly deficient or delayed insulin response since some of these patients at least will go on to greater loss of tolerance. They are early or at least potential diabetics.

Continued observation of patients with mild glycosuria shows that some will remain apparently stationary, some will get worse, some will regain approximately normal tolerance, and some will show variations in tolerance from time to time, often correlated with variations in diet or body weight or with stress of one kind or another. Such patients should be regarded as mild or potential diabetics. Review of hospital records of diabetics frequently shows that years before the onset of their diabetes a transient glycosuria had been noted when they were subjected to surgery, during pregnancy, or at the time of a fracture or some other stress. Periodic testing of tolerance in the intervening years might perhaps have prevented the development of diabetes in these cases.

How is one to regard the hyperglycemia and glycosuria first observed after a coronary occlusion, a cerebral vascular accident, a severe body injury, an infection, or during pregnancy or other stress? Some of these patients will turn out to have a permanent diabetes; in others the loss of tolerance will be transient. Since the great majority of patients with these conditions do not exhibit glycosuria, one may assume that those who do are persons in whom a previous diagnostic loading test would have revealed some depression of tolerance with further impairment resulting from the stress situation. It is, however, possible that diabetes may appear after a head injury or cerebral vascular accident without such pre-existing susceptibility.

At what point does the person with a slight or transient loss of tolerance become a diabetic? With the high carbohydrate meal as a tolerance test a blood sugar value above 150 mg. at one hour or above 130 mg. at two hours should probably be looked upon as diabetes, which does not preclude the fact that diet care, loss of weight, or relief from stress may result in recovery of tolerance. But even though tolerance is regained, that person must be regarded as vulnerable and may be expected to break again when subjected to strain. Those with blood sugar between 130 and 150 mg. at one hour are less easy to classify. They are not to be called diabetics but certainly should be watched and retested from time to time.

When the physician is asked by a court, an insurance company, or a compensation board whether such a patient is a diabetic or not, it is best to explain the actual situation; in "stress diabetes," for example, its significance cannot be evaluated until the patient has been followed for a sufficient period of time after recovery, and with minimal or borderline loss of tolerance the patient is a potential diabetic who may or may not be able to escape further development of the disease.

The most widely accepted diagnostic criterion in such situations is failure of the blood sugar to return to a normal level at the second hour after a standard glucose tolerance test. If this test is employed, it should be made clear that it is a purely arbitrary measure of tolerance, and in questionable cases a later test may give quite a different result. The physician should not be persuaded by a direct question to give an answer that implies more certainty than the facts warrant.

Studies of carbohydrate tolerance in this manner reveal that the number of persons with slight impairment of tolerance is far greater than the number of frank diabetics. Do these people constitute the reservoir of potential diabetics from which true diabetes develops when conditions are favorable? Not enough of them have been observed over a sufficiently long period of time to answer this question, but there are grounds for believing that this may indeed be the case. If this is true it is important to know what the conditions are that lead to further loss of tolerance. The stress situations mentioned are unquestionably among these factors, but most important of all appears to be the long-continued overloading of the metabolic processes by overeating, as attested by diet histories, by the common history of obesity preceding the discovery of diabetes, and by the usual observation of improvement in carbohydrate tolerance following dietary restriction, loss of weight, and maintenance of a normal blood sugar level by the use of insulin.

Other factors tending to favor the development of diabetes are endocrine disturbances associated with the menopause, acromegaly, Cushing's syndrome, hyperthyroidism, and pregnancy or the postpregnancy period, as well as hemachromatosis and other less frequent metabolic disturbances and the therapeutic diabetes produced by cortisone therapy. Loss of carbohydrate tolerance associated with these conditions is diabetes, mild or severe, transient or permanent, and should be evaluated by the same criteria as in other cases.

Summary

The diagnosis of diabetes is a problem only in the early or mild and symptomless stage of the disease and in those advanced cases which remain aglycosuric because of a high renal glucose threshold. Diagnosis in the early stage of the disease is desirable since it may be easier then to prevent or retard further loss of tolerance and the development of the degenerative complications. Since at this stage there are no symptoms to arouse suspicion, early diagnosis becomes a matter of including a test for diabetes in the examination at every opportunity. The routine blood sugar for this purpose should be taken an hour or two after a meal, preferably of high carbohydrate content, and the routine urine analysis should likewise be done after a high-carbohydrate meal. The urine analysis will miss some cases with mild diabetes and an elevated renal glucose threshold; when sugar is found, the diagnosis is confirmed if an elevated blood sugar is found an hour or two after a meal containing a liberal amount of carbohydrates; the severity of the diabetes is indicated by the height and duration of the hyperglycemia in relation to the amount of carbohydrate ingested. Even a moderate and brief postprandial hyperglycemia, the so-called alimentary hyperglycemia, should be regarded with suspicion as potential diabetes and calls for retesting at intervals. The diagnosis of renal glycosuria should not be made until it has been established that the excretion of sugar is not the result of an early postprandial hyperglycemia in the first hour after eating, and this is particularly likely when hourly collection of the urine shows the glycosuria confined to that period.

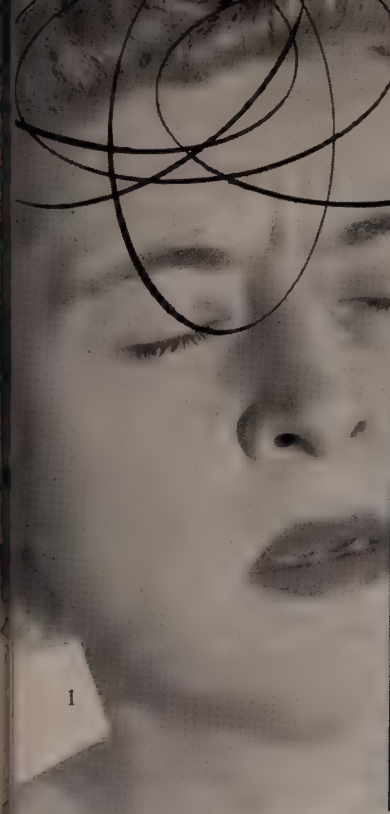
(*Number fifteen of a series on Current Concepts in Diabetes Mellitus*)

Editorial Comment

[Continued from page 184]

of the World Wars, the American Legion, the Veterans of Foreign Wars, the Federal Grand Jurors' Association, the Public Relations Society of America, and the Swedenborg Foundation.

Mr. Anderson, although retired, continued to maintain his interest in the progress of medicine, particularly as this related to the problems of alcoholism. Always an active and enthusiastic personality, he founded the public relations work of the Medical Society of the State of New York so well in 1935 that the Bureau became a model on which many others patterned similar public and press relationships. He was a pioneer in this difficult field and will be long remembered by those who knew him. He has earned his rest.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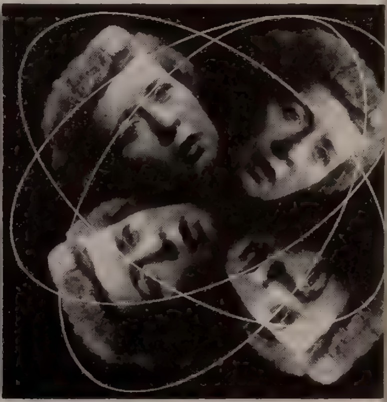
1. *Dizziness . . . movement is within the head.*
2. *Objective vertigo . . . the environment is in motion.*
3. *Subjective vertigo . . . the patient himself moves in space.*

2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TYPES OF VERTIGO:

Their symptomatic relief with Dramamine®

The disagreeable sensations of dizziness which physicians are frequently required to explain to patients have been described by Simonton[1] as varying from a slight sensation of confusion to severe vertigo.

While dizziness or giddiness is classified as a sensation of unsteadiness with a feeling of movement within the head, in vertigo the environment seems to spin (objective vertigo) or the body to revolve in space (subjective vertigo). Labyrinthine disturbances are likely to cause a sensation of rotation. Among the more common causes of dizziness or vertigo, this author lists: Damage to the vestibular nuclei or tracts in the central nervous system, involvement of the vestibular end organs by disease of the ear, Ménière's disease, toxicity of drugs, ocular vertigo from sudden diplopia, visual field defects, looking down from heights and motion sickness due to hyperactive labyrinthine reaction from riding in vehicles.

Dramamine (brand of dimenhydrinate) has proved effective in treating many of these disturbances. The indications for which Dramamine is now Council accepted include: Motion sickness; the nausea and vomiting associated with pregnancy, certain drugs, electroshock therapy and narcotization; vestibular dysfunction associated with streptomycin therapy; the vertigo of Ménière's syndrome, hypertensive disease and that following fenestration procedures, labyrinthitis and radiation sickness.

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[1] Simonton, K. M.: The Symptom of Dizziness, Arizona Med. 6:28 (Sept.) 1949.

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phenobarbital	16 mg.
WARNING: may be habit-forming	
d-amphetamine sulfate	5 mg.
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dl-methionine	150 mg.
vitamin B_{12} U.S.P.	4 mcg.
methyl cellulose	160 mg.

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Prescribe* OBOLIP *in bottles of 50 capsules.

*Zelman, S.: Arch. Int. Med. *90*:141, 1952.

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HISTORY OF WOUND TREATMENT

Theodoric: Master Surgeon of the Thirteenth Century

ELDRIDGE CAMPBELL, M.D., AND JAMES B. COLTON, JR., B. A., ALBANY, NEW YORK

(*From the Department of Surgery, Albany Medical College*)

It is a popular misconception that the history of medicine is not only dull but pointless and reserved for those of us past the age of active productivity. Nothing could be farther from the truth. On the contrary, it is a fascinating field of study and one which, as I believe this program will show, can be of enormous help in giving us the background and perspective for the understanding of today's tenets.

The healing of wounds is a pertinent example. This biologic phenomenon, basic to surgery, has engaged the attention of physicians for hundreds of years. Some progress has been made toward an understanding of Nature's requirements; we attempt to make our interventions conform to her own modus operandi. Much, in fact one should say most, remains to be learned. For example, many factors have been discovered which may retard the normal progression of a wound's healing, but not one method for accelerating Nature's timetable has ever been found. In spite of all the studies of the chemistry of the wound juices and the cytology of the reacting tissues we know little about wound dehiscence and practically nothing, for example, about keloid formation.

It is of interest to turn back the pages and look into the minds of some of our great predecessors in this field. In no era will such a search be more rewarding than in the thirteenth century, for there was a ferment working at that time which resulted in one of the greatest reawakenings of history. It was then that the Magna Carta was signed at Runnymede, that Brocton first codified the English Common Law, that the great cathedrals were built, and that Dante wrote the Divine Comedy. It was then that Cimabuie and Giotto laid the foundations for Italian art, that the great universities were founded, and particularly that Grosseteste molded the career of a young scholar named Roger Bacon. More germane to the present discussion is the fact that the School of Salerno was at full flower and that Bologna was rapidly reaching maturity. A reawakening was at hand; men began to look more closely at things about them and to wonder aloud. Nowhere was this search for truth better expressed than by this same Roger Bacon when he declared that the "four great grounds of human ignorance" were "First, trust in inadequate authority; second, that force of custom which leads men to accept without properly questioning what has been accepted before their time; third, the placing of confidence in the assertions of the inexperienced; and fourth, the hiding of one's own ignorance behind the parade

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of superficial knowledge, so that we are afraid to say, 'I do not know.' "

Thus it is not strange, although nonetheless exciting, to discover a resurgence of surgery at that time. Of the many novel observations subsequently proved correct, none was more significant nor disclosed a more fearless disregard for the weight of accepted authority than those of Hugo de Lucca on wound healing.

For hundreds of years the laudability of pus was as completely accepted as the flatness of the earth. Physicians contrived to "engender" pus rather than to prevent it, and of course the former was a far easier thing to do. What a shock it was when this old surgeon taught (and his son Theodoric wrote) that per primam healing was actually desirable and gave explicit directions for bringing it about. Loud and long were the protests, but that is another story.

Let us turn to the original, or at least the earliest known manuscript (1497), to taste the flavor of Hugo's wisdom in the writings of his son Theodoric.[1] Early in his book he defines what he considers the requisites of those striving to become good surgeons. It behooves them "to frequent the places where skilled surgeons operate, to attend their operations diligently, and to commit them to memory. There is no need for them to be rash nor daring, but let them be foresighted, gentle, and circumspect, in order that they may operate with the greatest deliberateness and gentleness under all circumstances, especially around cerebral membranes, sensitive parts, and other ticklish places. All the things which are necessary to the art cannot be included in books, cannot easily be foreseen, and many of these frequently happen to the operator."

Before launching into the details of surgical therapy he makes the following statement, which is well worth repeating today: "The objectives of the surgeon's operations are three: The joining together of broken parts, the separation of parts unnaturally joined, and the removal of whatever is superfluous."

From the widely ranging subject matter of his text, one might choose a number of excerpts which would illustrate his originality, his powers of observation, his honesty, and sound common sense. The principles laid down for the repair of intestinal wounds, more than six hundred years before Halsted, are illustrative: "The first procedure is that it should be so managed that the feces ma
ing their way through the intestines may not s
the wound and bring about . . . putrification . .
the second that severed parts be rejoined a
sewed together; third, that the intestine shou
be put back into the belly and the belly wou
sewed up. Take therefore a length of (hollo
elder, which should be of such calibre as is su
able to the intestine, and let it be thinned down
such an extent that the finger softens it wh
pressed inward, and place it within the intesti
Then let the intestine be sewed from above wi
the finest needle and the finest delicate thre
made from the intestines of animals, or if t
cannot be had, from fine silk [sic], after t
intestines have first been washed with hot, da
wine. Later let them be well cleansed with t
which is especially soft and delicate and with h
dark wine. When they have been well cleans
let them be put back clean and dry, and as h
been stated before, let the wound be sewed u

It was in the treatment of wounds that Hu
and Theodoric made their greatest and m
revolutionary contribution, one which ma
them as the master surgeons of the Middle Ag
Instead of "laudible pus," they strove for, a
evidently usually obtained, per primam heali
But let Theodoric give the directions himsel
"In the treatment of a simple wound—the obj
tive is a simple one: The reunion of sever
parts. . . In the first place the lips of t
wound and all about the wound should
debrided (abradantur); and then the wou
should be completely cleansed of fuzz, hair a
anything else, and let it be wiped quite dry wi
fine lint soaked in warm wine and wrung o
Thus the lips of the wound may be reunited
well as possible in accordance with the origi
healthy state; and having made compress
from fine clean lint soaked in warm wine a
placed upon the wound so as to fit, let it be bou
up with a light bandage in such a way that t
reapproximation of the wound edges cannot
disturbed at all.

"The first bandaging should not be undo
until the 3rd or 4th day if no pain occurs."

Were they not six hundred years in advan
of their time?

Later on Theodoric discusses certain deta
which throw further light on their concept
wound healing:[3] "Indeed, above all else, a wou

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[1] Campbell, E., and Colton, J. B., Jr., Trans.: Theodoric's Surgery—1267, New York, Appleton & Co. In press.

[2] *Ibid.*, Book II, chap. 1.

[3] *Ibid.*, Book II, chap. 11.

must be made clean. Secondly, having brought the lips of the wound together, they should be replaced accurately in the position which they had in their natural state; if necessary, they should be held there by stitches..."

Concerning drainage of a fresh wound promptly treated he has this to say:[3] "For it is not necessary, as stupid men do, to place a wick at the end of a suture line; nor under such conditions is it necessary to generate bloody matter in a wound, as Roger and Roland teach...For there is no error greater than this, and nothing which impedes Nature so much or prolongs the sickness, prevents the uniting and consolidating of a wound, deforms the part and impedes cictrization."

And, finally, just to prove to modern military surgeons that they too had given the subject of delayed wound closure some thought, Theodoric has this to say:[4] "If at the beginning you have not made a suture, and if the wound should already have been altered by air, then let the sides be refreshened with some instrument, and let them be made bloody so that they may be better joined together, and then let it be sewed up and treated with incarnative medicine."

This early flowering of wound surgery was destined to blight because men were unwilling to give up established authority, because the path of least resistance lay in "engendering" rather than "preventing" pus, and finally—and I cannot stress this point too strongly—because one surgeon had too sharp a tongue.

This particular surgeon, the most brilliant and colorful pupil of Theodoric, was Henri de Mondeville, who, as might be surmised from his name, was a Frenchman. On the basis of training and ability he became the outstanding surgeon of his time. His skill in the application of Hugo's principles to the treatment of wounds, his ingenious methods of handling fractures, and his good common sense brought both patients and pupils from far and wide. When one reads Nicaise's translation, and I can assure you it is both delightful and informative, one is struck by his wit as well as his sagacity. Here is his suggestion for cheering up a postoperatively depressed cleric: "Tell him you have just learned he is to be made a bishop." Again, to the young surgeon: "If you have operated upon the poor for charity and the rich for a proper fee, you need not play the monk nor make pilgrimages for your soul." But when in a moment of irritation with his critics he wrote, "God's creative genius was not exhausted in the making of Galen," he profoundly shocked both the physicians and the churchmen. That was heresy, sheer heresy, and very nearly blasphemy! The result was that pus resumed its laudability for another five hundred years.

What a tragedy both for medicine and for humanity. Is there not an important lesson here? Was the acceptance of truth not prevented by the unacceptable personality of its proclaimer? One cannot resist recalling a very similar incident of more recent date. Some five years after his discovery of ventriculography, Walter Dandy offered a paper on the subject before a national neurologic society. A committee on which were several men by whom he was cordially disliked refused this monumental work even a place on the program! How distracted from our search for truth can we become? Madame Curie, in a moment of annoyance at a personality conflict which had arisen in her laboratory, thus admonished the two parties, "In science we are interested in things, not persons."

Discussion

Eliott B. Hague, M.D., *Buffalo.*—The history of medicine has been approached from a number of incongruous standpoints. It has been viewed as a serious discipline and study. Others have felt that at least a few footsteps of science in the shifting sands of time should be preserved, perhaps with the hope that those who come after us will find the record of our own time something worth the recollection.

There is, again, the interest of the dilettante, graced with the saving sense of his own humor, who feels that an interest in medical history is at least polite and correct; and beyond that, the expressed disinterest in medical tradition of the considerable know-nothing party whom we may always have with us, men of therapeutic action too busy applying the fashionable or accepted remedies of their day, too busy trying to protect their professional reputation and their clients' health to participate in the constant revision and rejuvenation of the institutes of medicine.

Today, as in times before, medicine needs perspective. With a growing tendency to apply less discriminately the flood of newly proposed remedies, without familiarity with either their composition or, more important, without even a half understanding of their presumed mode of action; with a rising tide of political pressure from well-intentioned but exceptionally misinformed laymen and from professional politicians both without and within the ranks of medical men; with the growing pressure to mechanize medical research and uniformalize medical practice, surely the study of medical history will help all of us working in medicine to clarify to ourselves our opportunities. It will provide us with the best working philosophies. It will teach us, in our busyness, to think (when thinking is helpful) while we act.

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[4] *Ibid.*, Book I, chap. 4.

From that general standpoint the history of the understanding and treatment of wounds should be valuable. Dr. Campbell has reminded us that in the thirteenth century Theodoric tried to teach that he had found that wounds heal best when the edges are closely joined, and yet we find Richard Wiseman in the sixteenth century proclaiming the same fact, as though it were new and to be held against common belief.

Today Dr. Campbell has referred to Theodoric's basic classification of surgical problem as follows: (1) the joining together of broken parts, (2) the separation of parts unnaturally joined, and (3) the removal of whatever is superfluous. I think we are reminded of the claims and views of the present-day plastic surgeon. In his field where rather much is new and where, then, an aggressive attitude is easily understandable, we might gain the impression that the plastic surgeon would divide surgery into that which is extirpated and that which is reconstructed. (I understand that exstrophy of the bladder is now a problem treated by a plastic surgeon.) In one part of the world plastic surgeons asked leaders in at least one field of regional reconstructive surgery to join with them in forming a society and in accepting so-called board credentials. It was not long, however, before the group of purely reconstructive surgeons decided that a surgeon, although able and experienced in one region of reconstructive surgery, would no longer be accredited by them. Those of us who knew the great ophthalmic surgeon, Dr. John M. Wheeler imagine how disappointed he would be, with this recent chapter of medical history. "Flourishing wits, men of good parts, good fashion, good worth"—so much the ancients teach us!

The Treatment of Wounds in China

EDWARD H. HUME, M.D., NEW YORK CITY

As in every other area of Asia and Africa, medicine and religion are intimately bound together in China. This is true of wounds, of diseases, and of mental trouble. If you search through the practices of various areas, it will become evident everywhere that disease is caused by offense to the gods or evil spirits or by object intrusion. You will find that the treatment consists universally in propitiating the higher powers. If bread and food are mysteries, drugs are still more so.

Wounds may be of many kinds: accidents, war wounds, attacks by animals, beatings in or out of the family, fractures, dislocations, breaks in the dental framework, etc. The removal of the cause of the wounds is done in a variety of ways. In the first place there must be adequate diagnosis. The patient wants to know what his chances of recovery are. And the medicine man must make a prognosis, to find out whether the patient will live or die and whether the illness will be short or long. In many instances the medicine man will resort to divination. He will have to observe the omens, the signs through which the gods reveal their intentions. This search for omens is true for wounds as well as for diseases. Wounds may easily be relieved and cured by using the waters of some famous spring. The mountains and valleys of China abound in springs with medicinal water.

The old doctors of China were either physicians of the old school or quacks. The quacks always sought to keep their methods secret. One of the latter was to grind old copper coins into a fine powder and to put this powder on the outside of the wound. This might be done outside of a fracture. Another favorite procedure used by quacks was to take the root of the banana tree—this was a very secret method—for the treatment of wounds on the lip, particularly if there were a furuncle there. Kernels of rice were laid on the

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furuncle to help open it up. In five minutes, the common people say, the swelling would disappear. Still another method was to use the feces of the sparrow in treating the furuncle. The sparrow has always had a great influence in China. Thus, the game we call mah-jong is really named for the sparrow. The correct Chinese name is Ma-chiao. In many other aspects of life the sparrow is held in high regard.

Among the more accomplished physicians of the old school it was customary to take the root of the banana tree and pound it to get out all the juice. The patient was instructed to drink a bowlful of this, which would be followed by a severe diarrhea after two or three hours. This diarrhea would cause the swelling to disappear entirely, and the inflammation of the wound would subside.

One essential in treating the patient was to burn benzoin around him, covering the patient with blankets. The main thing to bear in mind was that treatment was obliged to neutralize the malevolent influences that had been working on the patient and bring to the patient's aid all the medicaments known to have pharmacologic value and known to be akin to the forces of life and vigor. Thus remedies derived from trees that have grown in graveyards are not likely to produce good effects because these trees shelter the spirits of the dead over whom they are standing guard. It follows, everywhere in China, that souls thus guarded, deprived of the elements of protecting material, can be counted on to vent their wrath upon sick mortals to whom any part of their being is administered as medicine.

If the continuity of life is interrupted, whether in plants or in animals, the unity of nature is defied. Man must not interrupt life in this way. There is the story in an oriental poem of a young girl who came to draw water in the early morning. She found the bucket and rope entwined by twisting tendrils of convolvulus and, rather than break the living thread, went away quietly to a neighbor's well and begged water there. This is no story with artificial symbolism; it is a picture of the living unity between the spirit of man and the life of all nature.

When there is disease, or a wound, or a series of wounds, oracle bones must be consulted. This became evident as far back in the records as 1776 B.C. Ordinarily the gods and the dead do not respond to human speech. There must be prayer to the gods, and the ancient Chinese usually wrote their prayers. The message was written on inflammable material and burned so that the smoke carried the message on its way to the heavens. In those old days there were found on the oracle bones a character composed of a mouth and a book which meant, "to tell in writing." The Chinese language today bears many indications of the part played by religion in its development. Before a wound could be effectively treated there always had to be confession of sins, and a priest or magician must exercise evil spirits.

There are the wounds of war and the wounds of civil life. The cause of the wounds must be removed, warfare must be stopped, and suitable applications must be made. The physician will not only inspect the wounded man's body but what comes out of it, blood and mucus and urine and feces. He must watch for abnormal smells and treat penetrating wounds according to the odor that they give off. The sensibility of the patient must be tested and the temperature of various parts of his body ascertained. Obviously an abscess will feel very hot, while the rest of the body may be shivering. One of the first steps in the physician's procedure is to feel the pulse. Probably more tomes have been written in China than anywhere else about the various kinds of pulses and their value in forecasting the outcome of an illness or the progress of a wound.

It did not follow in China that it was necessary to have a surgeon to deal with a wound. In old China the surgeon was one who dealt with "the outer department." The physician was one who cared for "the inner department." The most famous surgeon in Chinese history, Hua T'o, lived in the second century A.D. in the romantic period of the Three Kingdoms. He was said to have used very few drugs in his prescriptions. He was so accurate in dispensing that he never needed to use scales to weigh any ingredient, even though prescribed in minute doses. In acupuncture he only needled at a few spots. He was not only most accurate in diagnosis, but his rare ability in prognosis seemed to grow out of his mathematical precision. Hua T'o was a pioneer of hydrotherapy, using it with marked success in cases of long-continued fever. On one occasion, in spite of the cold weather, he had the patient, a woman, sit inside a stone trough and ordered his assistants to pour a hundred bucketfuls of cold water over her. When only seven or eight buckets had been emptied, the patient shivered so violently that his assistants were frightened and wanted to stop. Hua T'o, however, insisted on their giving the full number. After about eighty bucketfuls had been poured, vapor, gradually rising to a height of two or three feet, began to appear around the patient's body. The hundredth bucketful poured, Hua T'o lighted a fire to warm the bed for the patient who was heavily covered with quilts until a thorough sweating ensued. The patient recovered under this heroic treatment.

Hua T'o lived to be nearly a hundred but, since he was an ardent enthusiast about preventive medicine, retained a youthful appearance even up to the end. Two of his pupils, Wu Po and Fan Aho, became famous. Wu acquired all his master's skill in treating surgical conditions. He diligently practiced gymnastic exercises, and his teeth, eyesight, and hearing remained in good condition to the end of his life. Fan specialized in acupuncture, performing skillful feats which no average doctor of that time would have dared to attempt.

While the internal use of calomel in therapeutics is attributed to Hua T'o, his greatest skill lay in surgery. A memorable record of his powers is found in Chapter LXXV of that immortal story *The Romance of the Three Kingdoms.* We read that Ts'ao Jen, who was among his men on the wall, saw that Kuan Yu had no armor on, so he ordered his men to shoot. The archers and bowmen at once set a flight of arrows and bolts that way. Kuan Yu hastily pulled the reins to retire, but an arrow struck him in the arm. The shock of the blow made him turn in the saddle, and he fell from his horse.

At the sight of Kuan Yu falling from his charger, Ts'ao Jen led his men out of the city to follow up with an attack, but Kuan P'ing drove him off and escorted his father back to camp. There the arrow was extracted, but the head had been poisoned. The wound was deep, and the poison had penetrated to the bone. The right arm was discolored and swollen and useless.

Kuan P'ing consulted with the other leaders and proposed that since fighting was impossible for the moment, they should withdraw to Chingchou, where his father's wound could be treated. Having decided this, they went to see the wounded warrior.

"What have you come for?" asked Kuan Yu when they entered.

"Considering that you, Sir, have been wounded in the right arm, we fear the result of the excitement of battle. Moreover, you can hardly take part in a fight just now, and we therefore propose that the army retire till you are recovered."

Kuan Yu replied angrily, "I am on the point of taking the city, and if I succeed I must press forward to the capital, Hsütu, and destroy that brigand Ts'ao Ts'ao, so that the Hans may be restored to their own. Think you that I can vitiate the whole campaign because of a slight wound? Would you dishearten the army?"

Kuan P'ing and his colleagues said no more but somewhat unwillingly withdrew.

Seeing that their leader would not retire and the wound showed no signs of healing, the various captains inquired far and near for a good surgeon to attend their general.

One day a person arrived in a small vessel and, having landed and come up to the gate of the camp, was led in to see Kuan P'ing. The visitor wore a square-cut cap and a loose robe. In his hand he carried a small black bag. He said that his name was Hua T'o and that he belonged to Ch'iaochun. He had heard of the wound sustained by the famous hero and had come to heal it.

"Surely you must be the physician who treated Chou T'ai," said Kuan P'ing.

"I am."

Taking with him the other captains, Kuan P'ing went in to see his father. He found him engaged in a game of wei-ch'i (chess), although his arm was very painful, but he kept up appearances so as not to discourage the men. When they told him that a physician had come, he consented to see him. Hua T'o was introduced, asked to take a seat, and, after the tea of ceremony, was shown the injured arm.

"This was caused by an arrow," said the doctor. "There is some 'blackhead' poison in the wound, and it has penetrated to the bone. Unless the wound is soon treated, the arm will become useless."

"What do you propose to do?" asked Kuan.

"I know how to cure the wound, but I think you will be afraid of the remedy."

"Am I likely to be afraid of that when I am not even afraid of death? Death is only a return home after all."

Then Hua T'o said, "This is what I shall do. In a private room I shall erect a post with a ring attached. I shall ask you, Sir, to insert your arm in the ring, and I shall bind it firmly to the post. Then I shall cover your head with a quilt so that you cannot see, and with a scalpel I shall open up the flesh right down to the bone. Then I shall scrape away the poison. This done, I shall dress the wound with a certain preparation, sew it up with a thread, and there will be no further trouble. But I think you may quail at the severity of the treatment."

Kuan Yu smiled. "It all sounds easy enough," said he, "but why the post and the ring?"

Refreshments were then served, and after a few cups of wine the warrior extended his arm for the operation. With his other hand he went on with his game. Meanwhile the surgeon prepared his knife and called a lad to hold a basin beneath the limb.

"I am just going to cut; do not start," said Hua T'o.

"When I consented to undergo the treatment, did you think I was like the generality of people, afraid of pain?"

The surgeon then performed the operation as he had predescribed. He found the bone much discolored, but he scraped it clean. "Hsi, hsi," went the knife over the surface, and all those near covered their eyes and turned pale. But Kuan Yu went on with his game, only drinking a cup of wine now and again, and his face betrayed no sign of pain. When the wound had been cleansed, sewn up, and dressed, the patient stood up smiling and said, "This arm is now as good as it ever was; there is no pain. Indeed, Master Leech, you are a marvel."

"I have spent my life in the art," said Hua T'o, "but I have never seen such a patient as you, Sir. You are the real marvel."

"Here as surgeons, there physicians, leeches boast their skill;
Bitter few are those that cure one when one's really ill.
As for superhuman valour rivals Kuan had none,
So for holy touch in healing Hua T'o stood alone."

Through the years of Chinese history Hua T'o has remained the ideal surgeon. You could never speak to a Chinese gentleman about surgery without his saying to you, "I hope the surgeon you describe will do as well as Hua T'o did when he operated on the duke back in the days of the Three Kingdoms." If you walk along a city street, you are likely to come to some corner where a man has set up his place of consultation. Hanging down above him, you will see a number of panels, usually lacquered, on which are outlined the characteristics of a great surgeon or a great physician. If the man is being praised for his surgery, the panel is apt to read, "You are our modern Hua T'o!" In our hospital in Changsha there hung many panels addressed to the memory of Hua T'o or some other great figure in Chinese medical history. People who came in to consult the doctor or to visit the hospital always stopped in the corridors to look up at the hanging panels. You could hear them saying to one another, "Is not that the name of our own great Hua T'o, the one who healed our wounds and mended our broken bones?" Even if a patient paid the hospital's regular fee for professional service, it would be expected that he should make a gift to his surgeon or physician. And this gift would deal with the inner meaning of medical cure. For example, there hung on our hospital walls a tablet with these words:

"He came to restore life."

Sometimes the inscription on the panel would allude to some famous episode in Chinese history. There was the story of the mother who urged her son, while he was growing up, to plant orange groves around his house. When he became a doctor, this man would distribute oranges, fruit, and leaves to patients with diseases or wounds who came to consult him. So, too, every medical consultation had to be accompanied by fragrant swallows of spiced tea. I can see one patient taking a bitter dose and driving the dose home with a mouthful of thoroughwort tea. This brew was like strong medicine and served as a tonic for the patient to use before his treatment had been completed. Still another aspect of medical treatment in China has been to follow out the instructions of that fairy being who came down the mountain and spoke to the renowned physician, Pien Ch'iao: "Here is a packet of medicinal powder. Give it to your patient whether you treat him for a fever or seek to mend his broken bones. Be sure that the powder is always mixed with water that has never touched the ground. It may be rain or dew or snow or mist, but your medicine will be effective only if the water has come directly from the skies."

Wounds in China have never been studied and analyzed thoroughly. The thing to do has always been to place some kind of dressing on the wound to cover the cut edges and to give the broken surfaces a chance to heal. Unhappily, too frequently the substance put over the wound was mud from the nearest alley. I shall never forget the visit, some years ago, of a group of members of the village gentry from a little place outside Peking. They came down to consult the senior surgeon, Dr. Liu. As soon as they got into his office, "Sir," they said, "we have come to lay before you the state of our native village. For five years no child has stayed alive. Within a few days after birth, every infant has been seized with convulsions and died. You must come to our village to set us once more on the pathway of life."

Dr. Liu guessed at once where the trouble lay. He made up a little team, including a nurse, a public health worker, and a surgeon. When they got out into the country, Dr. Liu's fears were fully realized. The mud the people had been using came from the street which was generously sprinkled with the droppings of horses. It took but a few hours to prove the presence of the tetanus bacillus. The midwives were taught how to keep their hands clean and how to provide sterile dressings to tie over the cord of each newborn infant. The epidemic of plague was stayed, and a new chapter of public health opened in that remote mountain area of China. The same story could be duplicated almost everywhere. If a woman came in to tell you that she had lost four out of her first five children, you would begin to wonder if they might not have died from tetanus following the use of dirty dressings on their wounds.

Appeals were constantly made to the spirit of the ancestors to send healing. The ancestor was no powerless corpse lying supine in the grave, waiting for his descendant's whim. On the contrary, his real power began when he became a spirit. He then became possessed of powers undefined but vast. True, he was dependent on his descendants for food, in the form of sacrifices, but he could very well see that these were forthcoming or make his descendants wish that they had been. He was not regarded as either omnipotent or omniscient, yet in practice he was very nearly so. Success in hunting, agriculture, war, and other activities was his to give or to withhold. Famine, defeat, sickness, and death were the penalties which he could and did hurl at any who had the temerity to displease him. The attitude toward him was not wholly one of awe or fear. Nor was the sacrifice merely a simple bargain with the spirits, to deliver so much in sacrifices in return for the delivery of so much in prosperity and other blessings. There wa also real devotion to the departed and real grie at their death. Among the evidences for this is the Shang word meaning death, a pictograph of a mourner kneeling with bowed head beside a corpse.

More convincing than historical records of the attitude of the Chinese toward their forebears are experiences that reveal the attitude of livin persons toward their parents, those who wil presently become their ancestors. A flower selle of Peking, who supported her aged father, could not eat or sleep when he fell ill. Although she did her best for him, he grew no better. One day she heard that an elderly woman, a neighbor, was going on a pilgrimage with some other wome to the Sacred Mountain, T'ai Shan.

"If I went," she asked, "would my father b cured?"

"Those who go there and pray sincerely get al that they ask," replied the neighbor.

"How far is it?"

"A hundred li."

"And how much is a hundred li?"

"Ninety thousand paces."

The girl made a mental note of these figure and every night, while her father was asleep went out into the yard, holding a lighted stick o incense. There she paced up and down, carefull counting her steps. When unable to move fron fatigue, she prostrated herself and said, facin the mountain, "Excuse me for not visiting you temple. I am only a girl and cannot go."

In a fortnight she had added up the ninet thousand paces. Just at that time, pilgrim flocked to T'ai Shan to venerate the Goddes T'ien Nai Nai. Rich and poor thronged he temple from cockcrow, for the pilgrim who wa the first to burn incense in the morning was mor likely to have his prayer answered than lat comers. On the morning the girl completed he ninety thousand paces, a wealthy palac attendant from Peking occupied the entrance t the temple, determined at all costs that his shoul be the first stick of incense to be burnt that day but as he entered he saw, to his amazement, a incense-stick already smoking in the burner.

He angrily questioned the custodian of th temple, who replied, "I had shut the door, an do not know who came before you."

"I shall be here again tomorrow," growled the rich man. "See that you keep the door properly closed this time."

The next morning, long before dawn, the rich man was there, waiting for the door to open. Rushing to the great burner, he found a stick of incense already smoldering in it, while the shadowy form of a girl lay prostrate before the altar. At the noise made by the rich man's entrance the form vanished.

"What's this?" thought he, "Do Kuei and Kuai (ghosts and goblins) offer incense to this goddess?" Going out of the temple, he asked the other pilgrims what they thought it could be.

"Ah!" said the elderly woman, neighbor of the flowergirl, "this must be the pious florist I know in Peking. As she cannot come to worship in person, she has sent her soul to pray for the cure of her aged father."

The rich man was delighted and on returning to Peking, visited the girl, praised her filial piety, and left her a generous gift. Her father recovered, and the dutiful daughter married a rich merchant and lived happily ever after.

Modern Wound Management

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Although our concept of modern wound management was developed during World Wars I and II, the definition of wounds and some of the factors which influence treatment have changed little over several centuries. In 1685 James Cook of Warwick stated that "a wound was a solution of unity in any part of the body by an external instrument." He recognized as we do today that certain factors such as magnitude, part wounded, and cause influence wound care. Regardless of this common knowledge medical literature has presented a constant change in our concept of wound management.

The modern treatment of wounds might well be said to date from World War I. There is a striking similarity between descriptions of wound care advocated in 1917 and 1918 and that which is described now. It is true that refinements have been added since that time, but it is to the discredit of surgeons who followed that some lessons so painfully learned had to be learned again.

Although we are not concerned primarily with war wounds, it is obvious that the large experience that war offers does allow for a careful study of all aspects of wounds and conditions which influence them and their care. It is wrong to divide sharply the care of the latter from civilian wounds. The varying circumstances may require greater stress on certain aspects, but they do not change basic principles. The muscle mass badly contused and lacerated by a car bumper may be very little different from the muscle mass laid open by the shell fragment. The care will differ only as circumstances differ.

The things which influence a wound from the time it is made until it is healed we may call wound factors. As they vary, so will wound prognosis vary. The more important ones are the wounding agent, locale, body part involved, time lag, surgical care of the wound, antibiotics, and state of nutrition. Careful consideration of these factors will dictate what we shall call modern wound management.

It has long been recognized that the locale and the conditions under which the wound was made will influence wound care. The wound made by a fast-moving piece of machinery in a plant will give a better prognosis than the wound made and exposed to soil fertilized over many years. A greater percentage of the wounds incurred in the North African campaign, for instance, allowed for primary and delayed closure than did those incurred in the trench warfare of 1917 and 1918. It is an accepted fact that wounding agents passing through clean clothing and skin are less likely to introduce pyogenic bacteria. The contamination of such wounds will be greater when clothing and body are less clean.

It is unnecessary to do more than mention the influence of the agent on wound outcome. The perforating wound of a high-velocity bullet will require less care than the wound made by an irregularly shaped shell fragment. The sharply

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lacerated wound made by a power-driven tool will offer an even better prognosis. The wound tract made by the shell fragment or similar instrument is not a simple channel in the tissue but may be surrounded by an extensive area of devitalized and lacerated tissue. This zone may extend far beyond the wound tract, hence the agent's influence on wound care.

There is complete agreement among surgeons on the effect of time lag. In large numbers of similarly produced wounds incurred in the same locale, varying time lags will reveal striking differences, and wound prognosis will vary. Surface contamination fades into wound infection, and a greater wound problem is presented. The extent of débridement necessary will be greater. The problem of a primary or delayed closure will be more difficult. The so-called golden period for primary closure has been quoted as being six to eight hours. This time period obviously will vary with the locale, the agent, and the body part involved. Unwarranted faith in certain therapeutic agents may at times unwisely lengthen the safe period.

The factors so far enumerated are not under the control of the surgeon. They have exerted and are continuing to exert their influence, and in a direction that is away from good. The positive steps must follow in quick order so that the wound balance may be tipped toward wound healing. Since these are the things we can do, they should be discussed in detail.

It is preferable if the original dressing can be left in place until the definitive care is available. Wound peeking adds little to the care of wounds but the possibility of more contamination. The excellent results obtained in wound care today stem directly from the careful and deliberate débridement of the wound, débridement used in the sense that the English and American authors used it in 1917 and 1918. It must be more than an unbridling of the wound that Ambrose Paré first mentioned. We must understand by the term, removal of all foreign material and aseptic excision of all contaminated and devitalized tissue. In brief, it includes excision of the skin margin of the wound without sacrificing too much skin. The wound is lengthened in the long axis of the part or in the direction of the muscle fibers. The wound edges of the fascia are excised, and the fascia is incised in its long axis. The skin and fascial incisions must be adequate to the task at hand. The muscle wound is laid open, and all devitalized tissue is excised until healthy appearing, bleeding, contractile muscle is exposed Great care must be taken to remove all foreig material completely. Copious amounts of normal saline will aid in accomplishing this. As ha been already mentioned the extent of débridement required will vary with the wounding agen The small armed missile does less destruction tha the shell fragment. A sharp instrument whic incises tissue produces little damage, and th amount of tissue to be excised will be smal Each wound, however, demands adequate an complete inspection of all its ramification Drains are for the most part unnecessary, an through-and-through drains are to be condemned.

The decision to close or leave open a wound wi depend on several factors, namely, possible bacterial flora in the locale where the wound wa made, the wounding agent, time lag, opportunit for observation, and the use of antibiotics. Muc reliance was placed on wound bacterial counts i the past, and great efforts were made to determine the type of organism present and in wha quantity. The bacterial count plus the appearance of the wound made the decision for or agains closure. Today the gross clinical appearance the wound, together with consideration of th factors mentioned, dictate whether or not wound should be closed primarily.

The concept established in World War II tha wounds sustained in combat should be left ope after the initial débridement and closed b reparative suture on the fourth day has no changed. It was still followed in Korea. Th closure may be accompanied by revision wit excision of residual dead tissue. Clearly define exceptions exist which require primary closure the wound (scalp, cranial cerebral, face, penetrating wounds of the chest).

Wounds sustained in civilian life allow for higher percentage of primary closure. This is because the factors which determine the woun prognosis weigh in the direction of safe primar closure. The wound closed primarily must made surgically clean by excision of dead tissu Hemostasis must be complete. Dead space mu be obliterated. Splinting of wounds will exert good influence. The opportunity of observin the wound over a period of seven to ten days essential. The time interval between woundin and primary closure in some instances may toda far exceed our previous concept of a safe perio

Extensive wounds of the face are being closed as long as forty-eight hours after wounding. Some wounds may at times, by their nature, demand delayed closure. When doubt exists, delayed closure of the wound is a safer procedure. An intelligent use of the method assumes an accurate knowledge of the process of the wound repair. The reparative stage of wound healing begins at about the fourth to fifth day. At this time the wound begins to lose its flexibility, and greater effort is required to bring the wound edges together. Dead spaces may be created which require drainage. The percentage of wound healing following delayed closure reaches its peak when closure is done at about the fourth or fifth day. As the time between the initial operative procedure and the delayed closure lengthens beyond five days, the incidence of healing diminishes.

There is sufficient evidence to suggest that fine mesh gauze is the best material with which to dress the wound in preparation for delayed closure. Among the numerous other agents that have been used, vaseline-impregnated gauze is the only one deserving mention. It is significant that answers to a questionnaire sent out by Finney and Crile concerning the condition of wounds arriving at Base Hospitals in 1918–1919 suggested that dry gauze resulted in the best looking wound surface. It is interesting that at the end of World War II fine mesh dry gauze laid to the depths of the wound was considered to be the preferable type of dressing. Such a dressing held in place by fluffed gauze and supported by pressure makes an ideal wound support. By this dressing drainage is not interfered with, and edema is held to a minimum. The pressure bandage should be elastic and should be carried to the distal most part if the wound involves an extremity. There is unanimity of opinion that such wounds should not be tightly packed.

Reluctance to close a wound at the optimum time may result from inexperience. A clean granulating surface will not appear by the fourth day, but rather minute granulations will be seen. A thin film of fibrin giving a glazed appearance may be misleading and may be the cause for unwarranted delay. The longer the interval draws out, the greater is the chance of secondary contamination and infection.

The wound that becomes grossly infected presents a problem, one which is even more serious if closure was immediate. Adequate drainage must be established so that there will be no pocketing or puddling of purulent material Here the agents used to aid in creating an aseptic wound are legion, and all have had their champion. A majority will agree that adequate drainage plus wet dressings will be of greatest value. Enzymatic therapy may be of considerable help when used as an adjunct to the care of infected wounds. There is little place for the local use of sulfonamides or antibiotics in such wounds. I include the latter group with some hesitation because experience with the local use of bacitracin in infected wounds warrants a further trial. When all evidence of the invasive elements of the infection have subsided, the wound can be closed after revision.

Antibiotics have been a real adjunct in the care of wounds. Churchill[1] recently expressed the opinion that the increased dosage of the more effective antibiotics is responsible for lessening the hazards of invasive infections in Korea. They should be started as soon after wounding as is possible and continued for a sufficient period of time until all possibility of infection has passed. Wound cultures with sensitivity tests are used to determine the most effective agent or agents to be used in infected wounds. It is most important that antibiotics be considered as only one adjunct to the care of wounds. They give no license. Careful débridement of the wound remains essential.

The nutritional status of the patient must be given every consideration. The protein and fluid loss from large infected wounds may be great. Effort must be made to supply an adequate dietary intake. If what the patient takes orally falls short of what is considered necessary, we must resort to tube feeding and intravenous replacement therapy. If whole blood has been lost in considerable amounts, whole blood must be replaced. The hemoglobin value must be brought to normal levels.

Summary

A brief review of the factors which influence wound healing has been given. The importance of adequate débridement has been stressed, and simplicity in wound dressing has been advocated. The criteria are listed on which the decision for or against primary wound closure is based, and the importance of a knowledge of tissue repair necessary to the proper timing of delayed closure has been suggested.

The importance of antibiotics, whole blood, and general nutrition has been stated.

Reference

1. Churchill, E. D.: Personal communication, Apr., 1953.

Discussion

John R. Paine, M.D., *Buffalo.*—Evart Graham stated in 1950 that the most important contribution to the general subject of wound healing since the time of Joseph Lister was the appreciation of the importance of an adequate supply of protein and vitamin C for the reparative processes to occur in proper fashion and in as short a time as possible. That doctors in general also believe these substances are important implements in the treatment of the surgical patient is well attested by the increasing amount of blood being used in hospitals and the almost routine addition of vitamin C to parenteral fluids.

Certain it is that by and large surgical incisions heal nowadays more kindly and quickly than was the case ten to fifteen years ago. The rather common use of the antibiotic drugs in a prophylactic fashion has been an important factor in reducing the number of postoperative wound infections, but a gradually increasing appreciation of less spectacular but no less fundamental factors has probably been of even more importance.

Every medical student now knows that any wound goes through two phases in its healing. The first phase has been called by some the exudative phase. This in the clean surgical incision lasts three to four days and is concerned with the initial reactions of the tissues to injury, the removal of injured cells by the body, and the formation of early granulation tissue—in other words, the preparation of the wounded area for the second phase, the proliferating phase, during which healing actually takes place. During this phase granulation tissue matures with proliferation of fibroblasts and the outgrowth of a capillary network of blood vessels to restore the continuity of the tissues and provide a base for new epithelium which completes the scar.

The exudative phase is prolonged and healing delayed by various things which the surgeon can and should prevent at the time of operation. These are (1) rough handling of tissues, (2) unnecessary drying of tissues, (3) decreasing of the local blood supply by mass ligatures, (4) hematomas from inadequate hemostasis, (5) accumulations of serum from improper suturing or wound dressing, and (6) unnecessary amounts of suture material.

During the period of healing the salutary effects of pressure dressings and immobilization, especially for wounds of the extremity, are rather universally known.

Frequent changes of dressings in the case of clean surgical wounds must now be considered bad wound management. Someone has remarked that "inspection means infection." In the absence of drainage or infection dressings should not be disturbed until the time of suture removal.

For the infected postoperative wound prompt, adequate drainage, warm moist dressings, and débridement with secondary closure after the infection has subsided remain the accepted basic principles. The increasing number of effective antibiotic drugs administered in accordance with the results of wound cultures and sensitivity tests has given the surgeon another effective means for the treatment of such complications which has decreased morbidity markedly.

Two important phases of wound management have not been emphasized. These are the present-day concepts of the proper treatment of peripheral nerve trunks and large blood vessels injured by traumatic wounds. Since World War II, our ideas in this aspect of wound management have changed considerably. Formerly it was recommended that in war wounds, if a large peripheral nerve had been severed, it was not to be repaired primarily but rather disregarded following débridement until it could be secondarily repaired several weeks later, after the wound itself had healed. At the present time, however, surgeons are in general agreement that injured or severed nerve trunks should always be primarily sutured and completely covered by soft tissue at the time of the initial débridement if possible. This has been more or less the practice in the treatment of such wounds suffered in civilian life now for some years. In those instances where satisfactory nerve regeneration fails to occur, later exploration and secondary repair are not prejudiced by the initial repair. There is much to be gained by the initial repair and very little to be lost.

Improved technics for the repair of large blood vessels, which have appeared with the rapid expansion of vessel surgery since 1945, have caused our old ideas concerning the management of such structures in traumatic wounds to be obsolete. In any such case now we really cannot be satisfied to find and ligate the bleeding vessel if such treatment carries with it the danger of gangrene of an extremity or endangers the life of the patient by opposing a major obstruction to the circulation of the blood. The continuity of such vessels should be restored at the initial débridement or as soon as the injured patient can be transported to surgical facilities adequate for this type of procedure. End-to-end anastomosis when possible is the procedure of choice. When an appreciable extent of an artery has been injured, however, such a procedure may not be possible. In these cases the use of a segment of a vein, such as the saphenous, that can be sacrificed without penalty should be used to bridge the gap. Preserved homologous arterial grafts have been successfully used for this purpose but in most instances will not be available for use in traumatic wounds.

Hubbard Tank Therapy Versus Hot Packs in Acute Poliomyelitis

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THIS paper will be confined to the study of the application of wet heat in cases of poliomyelitis suffering from pain and spasm. This study was carried out at the E. J. Meyer Memorial Hospital, situated in Buffalo, New York. In one wing of this 1,000-bed hospital we have a setup sponsored by the Sister Kenny Foundation to carry out technics advocated by Sister Kenny, while in another wing of the hospital Hubbard Tank therapy is utilized.

In 1952 there were 71 cases of acute poliomyelitis diagnosed and admitted to the floors of the E. J. Meyer Memorial Hospital. Of the 36 cases admitted to the floors where Hubbard Tank therapy is practiced, 13 of these were treated by the Hubbard Tank method. Of the total of 35 patients admitted to the floors where Sister Kenny Pack method is utilized, six were treated by the Kenny Pack method. The remaining cases were treated with various antispasmodic drugs without the use of wet heat, and these I will not include in this discussion.

The six patients who received the Kenny Pack type of therapy were put on this regime upon admission. The patients who received Hubbard Tank therapy were put into the tank as soon as their temperatures came down to normal for a period of twenty-four hours. Several of the patients on Hubbard Tank therapy began to show improvement in their muscle grading and general well-being, and suddenly, approximately ten to fourteen days after the tank therapy was instituted, they began to experience more spasm, pain, and muscle weakness in the limbs. In some cases muscles which graded normal at the onset of therapy now began to show weaknesses. In other cases, as well as these cases, we noticed a considerable amount of emotional distress and in a few cases difficulty in cerebration. This also occurred about ten days after therapy was started. Since no drugs were used which could cause such an upset, we felt that there was a flareup of the infectious process in the central nervous system. We did not discontinue the Hubbard Tank therapy when this occurred, and the patients began to show improvement within a week's time. Most of these patients continued to improve and showed no more regression.

TABLE I.—RESULTS OF ELECTROENCEPHALOGRAMS IN 9 PATIENTS

Patient	Electroencephalogram
T. B.*	Negative
D. D.*	Negative
C. D.*	Negative
B. G.	Negative
J. L.*	Negative
J. K.*	Negative
M. S.*	Encephalitis Oct. 24, 1952; improved Nov. 6, 1952
R. M.*	Encephalitis Nov. 24, 1952
D. DeC.	Diffuse encephalitis

* These patients are also listed in Table II.

When this phenomenon occurred, we decided to do some brain wave studies. Electroencephalograms were done on nine of these patients; six of them were negative, and three showed diffused involvement of the brain, suggesting encephalitis (Table I). In two of these cases we noted spasticity and hyperactive reflexes. However, within two weeks after encephalograms were done, these cases showed improvement clinically. We then postulated that some of the cases which did not respond to therapy and continued to have spasm and pain in the back might be experiencing an exacerbation of the acute process in the central nervous system.

One of the Hubbard Tanks was equipped with two agitators and another without agitators, and we found that the patients who were placed in the tank with the agitators could tolerate a little higher temperature for a longer period of time, while those put into the Hubbard Tank without the agitators, were able to tolerate a much lower temperature and a shorter period of immersion. We also found that it was ad-

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vantageous to adjust the agitators so that the propelling force would give resistive exercise to the affected limbs. It was found that those individuals who had progressive resistive form of immersion exercise, as compared to those who only utilized the buoyant qualities of the water, did much better in muscle strength and relief of spasm.

In reviewing the cases which received hot pack applications, we found that there was a variation in applying packs to the involved extremities by the various therapists from thirty to sixty minutes for two-hour periods with one-hour rest periods. Approximately twenty to thirty minutes is the ideal time for submersion in hydrotherapy. We also noted that passive stretching of neck muscles and hamstrings could be initiated on the first day of therapy with greater ease on those patients who received hydrotherapy. Psychologically, those patients receiving hydrotherapy were less depressed than those receiving Sister Kenny packs. One of the reasons, I think, is that the patient in hydrotherapy is able to see his or her extremity in the water and realize it is moving. This, of course, was not possible in the individuals receiving hot pack therapy. It was also observed that patients who received hydrotherapy looked forward with great enthusiasm to their next session, while those receiving packs were less enthusiastic. Several patients received both hot packs and Hubbard Tank, and they expressed greater satisfaction and well-being with the use of the hydrotherapy. I feel that an illness which necessitates hospitalization of several weeks or months has a definite impact on the emotional makeup of the individual. With Sister Kenny Pack therapy the patient is treated in his own room, while the patient receiving hydrotherapy is moved from his room to the hydroroom, thus changing the monotonous atmosphere. This helps eliminate depression and apathy.

One must also consider that the handling of hot packs is a hardship on the physical therapist's hands. It has also been noted that the heat and steam in the room where this therapy is carried on is sometimes very difficult to tolerate, both for the patient and the therapist. In cases where windows were opened because of too much steam, the beneficial effects of hot pack therapy seemed to diminish.

One should also consider the amount of equipment necessary to handle the patient adequately. At the E. J. Meyer Memorial Hospital there are three Hubbard Tanks in one room. It was felt more feasible to put in three tanks so that the therapists would not have to enter a pool, and the patients would have the feeling of individual therapy. These three tanks are supervised by two licensed physiotherapists and two helpers. It is possible to give 16 treatments per day per tank, or a total of 48 treatments for 24 patients. Thus, from the viewpoint of hospital administration, personnel, storage space, and time of

TABLE II.—Results with Hubbard Tank Therapy

			Hubbard Tank Therapy			
Patient	Age	Part Affected	Admitted	Discontinued	Discharge from Hospital	Total Days for Hubbard Tank
T. B.	34	Back; abdomen; lower: right,left	Sept. 17, 1952	Nov. 17, 1952	Feb. 4, 1953	52
C. D.	49	Lower:right,left; back; upper:right	Sept. 26, 1952	Nov. 5, 1952	Dec. 10, 1952	34
D. D.	19	Upper:right; lower: right; abdomen; back	Sept. 3, 1952	Oct. 15, 1952	Oct. 15, 1952	36
J. F.	10	Lower:right,left; abdomen	Oct. 6, 1952	Jan. 7, 1953	Nov. 6, 1952	44
E. H.	31	Back; abdomen; lower: right,left; upper: right, left	Nov. 3, 1952	Dec. 30, 1952	Jan. 21, 1953	49
J. K.	18	Abdomen; lower:right	Sept. 23, 1952	Nov. 14, 1952	Dec. 10, 1952	44
J. L.	30	Back; abdomen; lower: right,left	Aug. 18, 1952	Nov. 17, 1952	Dec. 10, 1952	78
R. M.	17	Upper:right,left; lower: right,left	Nov. 13, 1952	Dec. 19, 1952	Dec. 19, 1952	31
J. M.	16	Hamstrings	Sept. 24, 1952	Sept. 29, 1952	Sept. 29, 1952	5
S. N.	16	Back and hamstrings	July 29, 1952	Dec. 5, 1952	Dec. 5, 1952	83
K. N.	38	Upper:right,left; lower: right,left; back	Aug. 18, 1952	Oct. 7, 1952	Oct. 9, 1952	42
M. S.	17	Abdomen; lower:right, left	Sept. 16, 1952	Nov. 19, 1952	Nov. 24, 1952	55
J. Fr.	15	Lower:right,left; back; abdomen	Aug. 21, 1952	Nov. 19, 1952	Sept. 22, 1952	42

TABLE III.—Results of Kenny Pack Method

Patient	Age	Part Affected	Kenny Pack Method		Total Days	Hubbard Tank
			Started	Ended		
V. P.	5	Back; lower: right; upper: right, left	Oct. 10, 1952	Jan. 13, 1953	79	....
J. A.	13	Back; lower: right, left	Oct. 4, 1952	Dec. 24, 1952	69	....
J. M.	9	Back; lower: right, left	Sept. 6, 1952	Dec. 18, 1952	88	Dec. 18, 1952 to present
J. J.	3	Lower: right, left	Sept. 26, 1952	Dec. 5, 1952	57	....
J. F.	8	Lower: right, left	Aug. 28, 1952	Oct. 15, 1952	41	Oct. 15, 1952 to present
P. B.*	25	Respiratory	Nov. 26, 1952	Dec. 15, 1952	18	Dec. 15, 1952 to present

* Respirator case.

therapy, i.e., time required to get a patient out of bed to perform the normal activities of daily living and to return him to his home environment, the hydrotherapy is much superior to the hot wet pack therapy.

Tables II and III compare the results in patients treated with Hubbard Tank and hot pack therapy. Here we find that if we eliminate Cases 7, 9, and 10, the average time for hydrotherapy was 39.9 days. When we compare this with the cases which received Kenny Pack therapy, we find that the days of therapy are shortened by approximately one third.

At this time I would like to point out that Cases 3, 5, and 6, Table II, started with Kenny Pack therapy and either ended with hydrotherapy or are still receiving this form of therapy.

Of the total 71 cases, for some reason or other, two of the three cases which showed the greatest amount of disability received Kenny Pack therapy, and I would like to point out at this time that these three cases have been put on more active therapy and bracing with reinforcement exercises and are now beginning to show general improvement. It seems that these cases experienced pain for a longer period of time than others, but since general improvement was noted, the amount of pain has lessened.

I would like to compare this study to one made in 1949 by Dr. Bumbalo at the same hospital, at which time 93 cases of acute poliomyelitis were treated, both with the hydrotherapy method and the hot pack method. At this time it was found that there was a marked decrease in muscle spasm and pain in approximately one third to one half the time, the hydrotherapy method being the superior one.

Summary

Of the two methods utilized in treating acute poliomyelitis, I prefer the hydrotherapy method. I feel that as soon as the patient's temperature is normal for a period of twenty-four hours and physical examination reveals no complicating factors, such as pneumonitis, skin pathology, respiratory or cardiac difficulty, hydrotherapy should be started. Patient should be put into the tank at least twice daily. It has been found that most patients will tolerate temperatures of approximately 100 degrees for the first two or three days. If higher temperatures are tried in the early stages, we have noted dizziness, nausea, vertigo, and blanching. It has also been noted that if temperatures are dropped below 98 degrees, the patients begin to chill quickly, and pain and spasm in the affected muscles become exaggerated quite rapidly. After the third or fourth day, when the patient is able to tolerate more heat, we gradually increase the heat until patient is able to tolerate between 101 and 102 degrees for approximately twenty to thirty minutes.

246 George Urban Boulevard

You can get along with a wooden leg, but you can't get along with a wooden head. It is the brain that counts, but in order that your brain may be kept clear you must keep your body fit and well. That cannot be done if one drinks liquor, which breaks down the command of the individual over his own life and his destiny.—Charles Mayo

Further Light on the Rationale of Physical Medicine Procedures

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Physical Medicine and Rehabilitation is now an accepted specialty in medicine. Its modalities of treatment seem to be firmly established. Their physics and their physiologic effects have been thoroughly investigated. The so-called "accepted" methods of treatment are extensively used, and they are popular with both the physician and the patient. The clinical rationale of our physiotherapeutic armamentarium, however, is still not yet fully understood. This often results in disappointment. Patients with identical pathologies and receiving the same treatments may show a vast difference in response. The writer has always been impressed by the "hit-or-miss" procedures which have often discredited our specialty. It will be the purpose of this paper to report on some recent developments in physical therapy which originated abroad, have come to our attention, and have greatly influenced our thinking. This in turn has led us to an almost revolutionary change in our therapeutic approach because new light has been shed on the clinical rationale of the procedures applied.

Historically considered, medicine of the middle of the last century was governed by humoral pathologic thinking. Changes of the body fluids were thought to be the cause of disease. With the invention of the microscope humoral pathology was substituted by cellular pathology which traced the cause of disease to pathologic changes of the body cell. With the advent of cellular pathology the great uprising of scientific medicine began. In physical medicine the new thinking resulted in the almost indiscriminate use of its modalities as a form of local treatment over the area of the pathology or over a painful area of the body. In applying a local treatment for a local pathology we think in terms of reversing the pathology by physically influencing tissue metabolism. We are visualizing biophysical or biochemical changes or reactions which occur in the living tissue substance locally at the site of the application. This approach constitutes one of the main reasons for disappointment in physical therapy.

We have been taught that conductive surface heating, for example, causes a local release of metabolites. Through hyperemia local tissue metabolism is influenced. Deep heating of tissues by high frequency currents again causes an improvement of local metabolism besides its alleged bactericidal characteristics. Galvanism causes a local electrophoretic effect. The accepted rationale of the faradic and sinusoidal currents is stimulation of muscle from its motor point. Too often we have in practice disregarded the fact that even the mildest local application has an effect on the entire body system. Locally heated blood, for example, influences the heat regulatory centers and, therefore, brings about secondary general reactions. Failures in therapy can be explained in many cases to be caused by the indiscriminate use of heat causing a hyperemia which cannot cope with insufficient tissue metabolism. We should consider the possibility that tissue reactions at the site of the application are not produced locally but via a segmental axon reflex using the skin as a transmitter organ.

Those interested in hydrotherapy and balneology are accustomed to think along these lines. Treatments involving the entire body surface are very efficient, and besides they are very well liked by the patients who flock to spas in order to get relief from their troubles.

When we consider the role of the skin as a transmitter of external stimuli, we must realize immediately that all ensuing reactions and counterreactions are produced via the nervous system and especially via its autonomic component. The old hydrologists attributed the cure to so-called "new tuning" of the body, to strengthening of nature, of defense mechanism, or of resistance, and to hardening of the body. In modern times these old-fashioned slogans are represented

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in the research on the relationship of autonomic steering on endocrine occurrences which have led to the advent of the ACTH substances and of cortisone.

The anatomy of the autonomic nervous system is well known. End-plates are found in muscles and in connective tissue. The autonomic nervous system is therefore represented in the skin, in the subcutaneous structures, and in the muscles, as well as in internal organs under involuntary control. Its physiology and pharmacology are firmly established.

Very little is known about its pathophysiology, especially about the pathology of the sympathetic ganglion. Everybody agrees to the important role of the ganglion in body physiology. It partakes in the reflex system of the body. The Mackenzie-Head reflexes, for instance, have been studied extensively. They have been used, however, for diagnostic purposes only, as have all the other known reflexes in neurology. Only a few authors so far have realized that reflex pathways can also be used for therapeutic purposes. When we admit that the autonomic nervous system supplies the skin, the subcutaneous structures, and the muscles, when we further admit that pain may originate in all these three structures and that it can be carried over afferent sympathetic neurons, and when we further acknowledge the theory of referred pain, it follows that local treatment alone does not solve our therapeutic problem, and local improvement of the circulation often is only of limited value. It is therefore important to think in terms of influencing the nervous system, especially the imbalanced autonomic nervous system.

Medical research in the European countries, especially in Switzerland and in Germany, has followed these lines of thought. Stuhlfauth,[1] Tschannen,[2] Zinn and Sonnenschein,[3] Schikorsky,[4] and others have advanced the so-called neural therapy. As a result two modalities of treatment have benefited, massage and ultrasonic therapy, both closely related to mechanotherapy. It is the common characteristic of these procedures that they result in a relaxation of tissue tone and in a change of tissue function when applied in an appropriate dose.

Kohlrausch[5] and Leube and Dicke[6] have described a technic of massage which they have named "connective tissue massage." These authors and also Hansen and von Staa[7] have drawn attention to the fact that in chronic diseases and also in some of the subacute phases visible and palpable changes occur in the skin, in the connective tissue, and in the musculature which are in reflex relationship with other parts of the body and with internal organs located remote from the site of the findings. These changes manifest themselves in an increased tissue tone and turgor and in changes of the elasticity of the skin.

It is not the purpose of this paper to describe these skin and connective tissue changes and the technic of treatment in detail. This has been done in a previous presentation.[8]

The skin and subcutaneous tissue changes described by Kohlrausch and others can be found over almost any area of the body. They may involve fairly large areas or smaller ones. Pathologically they may be the same as described under orthodox fibrositis. Physiologically interesting is the etiologic factor. Kohlrausch,[5] Leube and Dicke,[6] and others believe that they may originate secondarily and reflexly from a pathology involving a remote area of the body or involving an internal organ via a viscerocutaneous reflex. They may survive the pathology of the remote area or organ and may then develop into a source of unexplained pain. Head[9] and Mackenzie[10] first described reflexogenic zones in segments of the skin and of the musculature. The subcutaneous changes described by Kohlrausch and others have also been observed in the so-called head zones and to a great extent limited to the dermatome, involving not always the entire dermatome but sometimes only certain segments of the dermatome. These zones are amenable to therapeutic procedures.

Leube and Dicke[6] have described their so-called "connective tissue massage" which can best be described as subdermal traction. The skin is gently pulled with the ball of one or two fingers over its underlying structure. It is a form of deep stroking which physiologically sends a stimulus into and affecting the nervous system, mainly its autonomic branch. Applied in appropriate doses it results in tissue relaxation and the final disappearance of the visible and palpable skin and connective tissue changes and of the pain syndrome. For this reason we have offered the name of "tissue release therapy" for this form of therapeutic approach.* Tissue release therapy is therefore nothing else but the recognition of the existence of reflexogenic body zones limited to or transgressing a single dermatome and the utilization of same for therapeutic purposes.

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* This term was suggested by Dr. Jerome Weiss.

This subject is by no means a new one. It dates back about two thousand years to the Chinese discovery of sensitive points all over the body surface in disturbances of internal organs. From this time on we find almost continuously reports on observations of this kind in the medical literature which center in the discussion of four questions: (1) the size of the area which originates reflexively, (2) its location in relation to skin and the subcutaneous structure, (3) its pathologic background, and (4) its therapeutic usefulness. As to the latter, the following therapeutic procedures have been described for the treatment of painful areas and of referred pain.

1. Acupuncture practiced by the Chinese and the French.
2. The highly disputed spondylotherapy of Abrams.
3. Hundreds of methods of counterirritation.
4. Cornelius' "Nerve-point massage."
5. Manipulative procedures.
6. So-called deep massage in fibrositis.
7. The nasal-reflex therapy which started thirty years ago in Germany for treatment of dysmenorrhea and which is now practiced in the form of treating backaches by applying novacaine to the sphenopalatine ganglion.
8. The injection of trigger points with novacaine.
9. The injection of nerve roots with novacaine.
10. Nerve block and ganglion block therapy.
11. Intracutaneous injections from bee venom to Coley's mixture.
12. The spraying of ethyl chloride on painful areas.

During the past four years we have employed the Leube and Dicke technic. We were able to confirm the clinical findings as described by Kohlrausch.[5] We have learned to detect changes in tone and turgor of the skin and its underlying connective tissue element. We have trained ourselves to detect the relationship of reflexogenic zones. Most of these zones were observed over the trunk, especially over the back. They originated not only from a reflex excitation sent out by an internal organ but also from pathologies involving the extremities. The latter are probably involved in the sympathetic nervous system reflex problem to a much greater extent than expected before.

In disorders of the upper and lower extremities related reflexogenic zones are observed very frequently in the lumbar area. On palpation of these areas a referred pain is felt which does not travel over known anatomic pathways. Palpation of the right buttock produced pain at the inferior angle of the left scapula. A stroke over the left gastrocnemius muscle produced a very dull pain over the left side of the face. In a sciatic syndrome palpation of the erector trunci of the contralateral side at the tenth to twelfth dorsal levels produced referred pain along the ipsilateral sciatic distribution. In shoulder pathologies related zones have been observed in the lumbar area. Atypical distribution of pain has been observed by everyone treating referred pain. Failure of analgesic injection therapy into trigger points and in the form of nerve blocks may result from not including a related zone with its skin and connective tissue changes in the therapy. Treatment of a reflexogenic zone, on the other hand, may improve a pain syndrome which is remote from the area to which, for instance, tissue release therapy is applied. We have almost regularly observed that in painful shoulder pathologies treatment of the related zone in the lumbar area will by reflex effect improve shoulder motion almost immediately in the acute, subacute, and chronic phases. The same holds true for the sciatic syndrome and the reflex dystrophies.

Although the rationale of this form of therapy is by no means solved, theoretic deliberations point in the direction of direct involvement of the intricate autonomic nervous system and its obscure mechanism. Tissue release therapy primarily affects the skin and its underlying connective tissue structures. We have become aware of the fact that connective tissue is a physiologically active tissue which participates in important processes of metabolism, water balance, transportation of body fluids, etc. It has a close relationship to the autonomic nervous system. Observations during tissue release treatment revealed symptoms which proved a close relationship to sympathetic-parasympathetic balance. These ranged from varying degrees of dermographia to marked perspiration, pilomotor effects, and paroxysmal irritative phenomena which caused chattering of teeth, perspiration of hands, numbness of extremities, crying spells, episodes of excitation, or even mild momentary syncope.

When Kohlrausch[5] and Leube and Dicke[6] first presented their method of treatment, it was based mainly on sound clinical observation and theoretic deliberations. In the years which followed, we find in the European literature more signs of recognition of the importance of an imbalanced autonomic nervous system in pathophysiology and a demand that sympathetic reflexes be utilized for therapeutic procedures.

The rationale of ultrasonic therapy is still under discussion. It seems to be established now that ultrasound, when applied to the body, produces a mechanical, chemical, and thermal effect. Ultrasonic impulses are said to exert an effect on the functional state of the autonomic nervous system. Publications on ultrasonic research follow in a very remarkable way the line of thought on the importance of the pattern of reflexogenic zones and their utilization for therapeutic purposes.

Tschannen[2] observed that ultrasonic treatments are more effective when applied not only to the affected area but also to the area of the corresponding spinal root. He emphasizes the importance of "radicular treatment." · Tschannen clearly describes the mechanism through which an osteoarthritic knee joint may cause a hypertonus of the muscles of the back. The excitation travels over the known afferent sensory pathways and, through the connections with the autonomic nervous system, involves not only a corresponding segmental reflex but, by sensitization of synapses, will cause reactions in the spinal cord, which then will affect remote segments. Application of ultrasound to the related reflexogenic zone will produce a release of tension and an improvement of circulation in the affected extremity. These observations have been confirmed by Stuhlfauth.[1] He describes vasomotor responses resulting in an increase of temperature of about 0.5 C. in an extremity on applying ultrasound to the corresponding segment of the spine. The neural theory could be substantiated by clinical observation, and we were able to confirm it in hundreds of cases. In shoulder pathologies, in sciatic syndromes, in peripheral vascular diseases, in phantom pain of the amputee, in neurologic disorders we have applied ultrasonic therapy not only locally over the area of pain or of the pathology, but also we have always included the root of the corresponding spinal segment. Very often treatment of the latter sufficed to give the expected relief.

Stuhlfauth[1] has come to the conclusion that the therapeutic effect of ultrasonic therapy is largely conditioned by the state of the autonomic nervous system, a viewpoint which is shared by Zinn and Sonnenschein.[3] Very important is the dosage which is applied in an attempt to influence the autonomic nervous system favorably. If the dose is too heavy, an undesirable reaction will ensue. It is for this reason that the therapist must be guided by "experience and intuition."

Intuition, however, is always a weak point for the sober scientist and research worker. It is, therefore, no wonder that serious attempts have been made to establish the state of the autonomic nervous system in order to avoid the "hit-or-miss" method.

The diagnostic possibilities of an exact examination of the state of the autonomic nervous system are relatively poor so far. Schneider and Seelentag[11] have described the diagnostic significance of dermographia. They have observed a decrease of dermographia in an adrenergic state, e.g., in peripheral vascular diseases. Increased dermographia as a symptom of cholinergic preponderance is found in hyperthyroidism, scleroderma, rheumatoid arthritis, and during the acute phase of neurologic disorders. In treating patients with tissue release treatment we have observed considerable diminution, or even disappearance, of dermographia with improvement setting in.

Zach[12] has recently examined the action of ultrasonic energy on the autonomic nervous system. He has used the method of electrodermatometry for diagnosis of autonomic functioning and its physiologic changes. A dermatometer is a constant current apparatus by means of which, with a test tension of 1.5 volts, the potentials in the area tested can be read off, after electrical amplification, on a voltmeter drum. Zach regards electrodermatometry as "a suitable rapid method of determining the autonomic tonus in general or in segmentally controlled areas." He showed on the basis of 75 cases that tissue reaction to ultrasonics depends upon the autonomic tonus prevailing at the time of application.

Despite these interesting findings we have not yet available a safe clinical method for determining objectively the state of the autonomic nervous system. This is unfortunate because we have become aware of the important role the autonomics play in physical therapy. Research on the ACTH substances and on cortisone has caused many of the old humoral pathologic aspects to be examined in a modern light. The autonomics are the guiding factor in controlling the adrenocorticotropic occurrences. Their importance in massage and in ultrasonic therapy has been demonstrated.

By analogy we must assume that other modalities of physical medicine, e.g., low volt currents, general and local orthodox massage, hydrotherapeutic procedures, even conductive and conversive heating, involve the same mechanism. By external stimulation of the transmitting skin organ they all affect the autonomic nervous system and its regulatory mechanism. The importance of the role of the skin and the subcutaneous structures in physical medicine must be more extensively emphasized. The rationale of our accepted methods of treatment will appear in a new light when we realize the existence of the related zones and when we include these in our therapeutic approach. Local treatments in inappropriate doses over the area of pain or pathology do not always solve our therapeutic problem. Simultaneous treatment of the reflexogenic zone will yield interesting and often surprising results in cases which apparently did not respond to an orthodox treatment approach.

Summary

In closing we should like to state that we have presented this paper in order to open a discussion on a subject which, to the best of our knowledge, has so far hardly been published in the English literature except for some short references.

We do not offer any specific claims because we do not have the answer to all the problems which we have just discussed. Clinical experience, however, has made us aware of this new therapeutic approach.

470 West End Avenue

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Discussion

Thomas E. Walsh, M.D., *Syracuse.*—First of all, I would like to thank Dr. Behrend for his fine paper which deals chiefly with one of the most perplexing problems, both from a diagnostic and therapeutic standpoint, with which the physiatrist is confronted, namely, the painful syndromes such as fibrositis or the fibropathic syndromes and segmental pain and tenderness. He has brought to our attention the significant role the autonomic nervous system plays in these particular syndromes.

Clinically the interpretation of pain can be greatly facilitated by eliciting hyperalgesic or tender skin zones which accompany the pain. The presence of tenderness, whether local or segmental, is a definite aid to diagnosis and therapy. It is here the autonomic system appears to be a prominent factor in the differential diagnosis between somatic and visceral pathology. In my clinical experience the combination of segmental pain and tenderness usually appears to be due to factors which irritate nerve roots, ganglia, or trunks of the spinal sensory nerves and is not due to painful impulses originating in pathologic viscera. Segmental pain and tenderness in the chest and abdomen may simulate the pain of visceral disease and are not relieved until treatment is directed to the somatic origin and its cause. These conditions are of frequent occurrence and are often incorrectly diagnosed. Other painful syndromes associated with segmental pain and tenderness include scalp neuralgia, lumbosacral strain, sciatic pain, tic doloureux, the scalenus anticus syndrome, herpes zoster, and disk injuries.

As Dr. Behrend has inferred, the physiologic basis of pain perception depends upon the existence of sensory end organs, afferent fibers, and tracts and levels of integration, and the autonomic fibers play a predominant part in this physiologic conception. He approaches the therapeutic aspect of segmental or referred pain and the fibropathic syndromes by way of the sympathetic nervous system. In this approach he brings to our attention the so-called neurotherapy which has been propounded by foreign medical research. According to this theory the physical modalities of massage and ultrasonic therapy have been found beneficial. The particular type of massage is described as connective tissue massage, which, I feel, Dr. Behrend appropriately refers to as subdermal traction or tissue release therapy, and is intended for its effect on reflexogenic body zones. Personally, I am not familiar with the technic of connective tissue massage or ultrasonic therapy, but it seems reasonable to assume these physical modalities could have a distinct influence on the reflexogenic mechanism, particularly the autonomic fibers. The question of their superiority over present physical procedures, which Dr. Behrend has enumerated, is still a matter of investigation. The problem of the physical therapeutic approach to the fibropathic syndromes and segmental pain, I feel, is concerned with a differential diagnosis.

Some of the reasons for the difficulties in the etiologic diagnosis and treatment of pain are (1) difficulty in finding objective evidence of progressive structural disease in its early stages, (2) the presence of mild structural alterations or only physiologic disturbances not discernible by our present clinical methods of investigation and, for that reason, designated as neuralgia, and (3) psychologic reactions which are often manifested in terms of localized pain.

I notice in Dr. Behrend's paper that he refers to the pathophysiology of the autonomic system, particularly the pathology of the sympathetic ganglia. Does he infer that the autonomic system and its two main divisions, the parasympathetic and the sympathetic, may be the seat of a primary lesion or simply thrown into imbalance by reflexogenic impulses conveyed from lesions either somatic or visceral in nature?

Essentially Dr. Behrend's paper deals with the physical therapeutic approach of certain pathogenic concepts of fibrositis and segmental pain and tenderness, particularly from the neuroanatomic and neurophysiologic aspect. The question of whether or not tissue release therapy and ultrasonic treatment have a more selective action on the autonomic system than other accepted standard physical modalities should be considered. Certainly, this subject merits considerable discussion.

The Distaff Reader Objects

"Why must your weekly medical journals be so dull?" I looked up from my scrutiny of one of the journals to see my wife idly turning over the pages of the other one.

"I don't think they are so dull, dear."

"Well, I suppose that it's all right for you. But considering that every medical household in the country probably takes at least one of them if not both, I think they might cater for the family a little more."

"But they are not really supposed to be for the family."

"Well, they should be."

After that piece of unassailable feminine logic the discussion could proceed no further, but I began to wonder if there wasn't something in what she said. There is the *Family Doctor* of course, but that is hardly the same thing. Something more like the *Doctor's Family* would be needed.

There would have to be a Woman Doctor's Page with fashion notes on natty two-piece dark blue suits, hints on how to get help when the car breaks down, and easy recipes "for your husband to make." The school-children could have their growing minds trained along the right lines by a comic strip: *The Adventures of Lionel Scalpel—Medical Student* sounds exciting. Lionel would get himself involved in all sorts of thrilling incidents—trapping the porter who is stealing the precious supplies of cortisone; discovering that the mysterious patient in Surgical 2 is a Russian spy who is after the Senior Surgeon, a prominent Territorial officer, and so on.

An advice column, run by an understanding, sympathetic, but sensible Auntie would have plenty of material. A young house-surgeon is in love with the new theater sister and is jealous of the surgical registrar who seems to be paying her a lot of attention; what should he do?

Even the Original Articles could be brightened. The longer ones could be serialized, breaking off each week at the beginning of an exciting development, with a little note in the approved manner at the end of each part—"Will methylphenylpolysyllabalate reduce the blood-pressure? Is it toxic? How many patients were treated? Don't miss next week's thrilling installment!"—*The Lancet, November 21, 1953*

Muscular Fitness and Orthopedic Disability

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(From the Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center)

IN HIS studies of bodily reactions to physical threat or fear, Cannon[1] emphasized the necessity of discharging energies accumulated as preparation for "fight or flight." When the individual is prevented from ridding himself of surplus energies, tension remains and often results in physical discomfort. This observation is of particular interest in an attempt to understand and to alleviate muscular pain of obscure origin.

The effect of overexercise as stressor[2] causing general adaptation syndrome is well known. The effect of nervous, emotional strain as cause of this syndrome is equally well established. The effect of underexercise, however, as a cause of stress still requires investigation and is rarely taken into consideration.

Physical activity—actual physical work, walking, stair-climbing, carrying, dancing, and active sports—forms an important outlet for emotional stimuli. While this may be a delayed outlet, it can still be sufficient to balance the tremendous influx of stimuli to which we are subjected in our daily living. Traffic, the telephone, high-pressure work, all combine to keep us in a state of irritation, but the necessary physical outlet is denied.

Lack of sufficient muscular activity not only means insufficient emotional release, but at the same time it decreases muscle strength. Constantly inhibited impulse to respond to outside stimuli results in general and local muscle tension.[3] These reactions combined seem the basic cause for the frequent occurrence of painful necks, shoulders, and backs [4–7] In a large group of these patients x-ray and other clinical findings may be entirely negative. Localized or general muscle weakness and tenseness, aggravated by minor trauma or occupational misuse, may be the only cause for chronic or acute pain, as well as loss of function.[8–14] It seems that these diverse ailments differ only in their locations, in their target areas reacting to the same stressor: lack of exercise.

Over 4,000 cases of low back pain have been studied from this point of view. Of this number, 3,000 were patients in the Columbia Medical Center Low Back Clinic,[7–9] the others in the Low Back Service of the Institute of Physical Medicine and Rehabilitation of New York University-Bellevue Medical Center, as well as patients in private practice. In almost all cases the patients were evaluated by a team consisting of an orthopedic surgeon, a neurosurgeon, an internist, a radiologist, and a specialist in physical medicine.

The majority of these patients showed a combination of the above-named muscle deficiencies and nervous tension. While their complaints were definitely "backache," they were not healthy people suffering from a local difficulty, nor were they simply neurotics somatizing their emotional complaints. They offered a combination of both physical and emotional difficulties. In these people a minor back strain, either acute or chronic, merely designated the location for a much deeper and more complex disease.

We have reported these cases extensively[12,14] and would merely like to reiterate that a good percentage of them improved as their strength and flexibility increased with systematic muscle training. The pain had to be alleviated by local or general treatment, but the final outcome and the permanency of relief mainly ran parallel with the muscle status. The patients recuperated as their muscles improved. They lost ground as their physical activities were reduced or given up, and they recovered as they resumed their therapeutic exercises or other regular physical activities. The exact follow-up of muscle status of these patients was possible by using a series of simple muscle tests.

Since the number of these "muscular" low back patients seems constantly on the increase and since our experiences made us feel that a majority of these patients could have prevented their trouble by keeping above the minimum level of muscular fitness, we became interested in gauging the muscular fitness of our population.

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* By invitation.

Presented at the 147th Annual Meeting of the Medical Society of the State of New York, Buffalo, Session on Physical Medicine May 8, 1953.

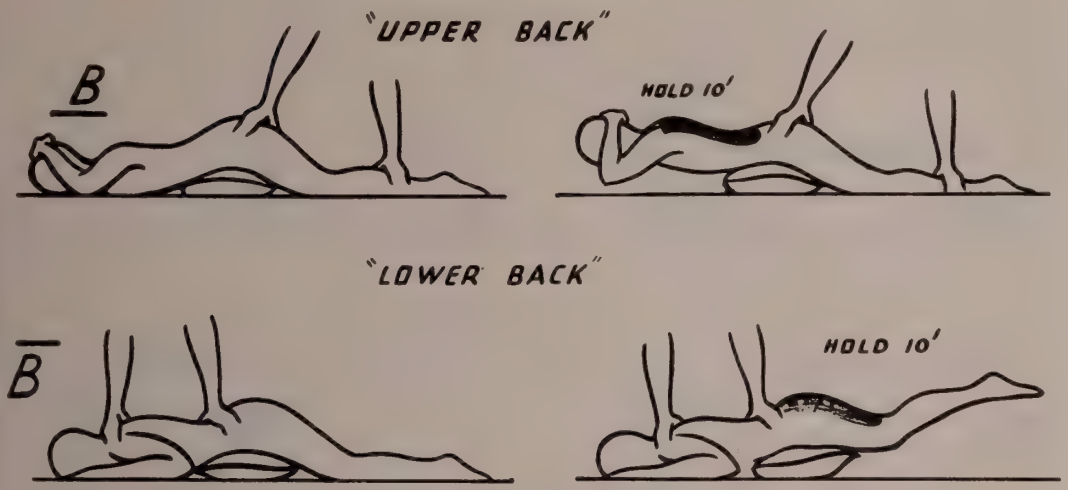

Fig. 1. Muscle tests for power of back.[15]

It was decided to test healthy school children, having in mind that their muscular fitness might well be used to prognosticate the incidence of backache sufferers in a coming generation. A comparison was made between school children in this country and school children in countries which are less mechanized.

As in our back examinations, we used the following tests: [8, 10, 12–18] The patient was placed face down, hips resting on a pillow, hands locked behind the neck. The examiner supported the legs and hips and asked the patient to raise his trunk and to keep the trunk raised for ten seconds. Following this the trunk and hips were supported, and the patient was asked to raise and lower extremities simultaneously and hold this position for ten seconds (Fig. 1). Findings were graded from one to ten seconds, depending on the patient, and noted as "upper back muscle strength" (B/10) and "lower back muscle strength" (10/B).

The patient was then placed in a supine position with his hands locked behind his neck (Fig. 2). While his ankles were held down, he was asked to raise his trunk to a sitting position. Ability to do so unassisted was rated as 10, and depending on the degree to which the patient needed assistance, his rating was made accordingly. This gave the rating of the "upper abdominals" (A/10).

Following this the patient was asked to raise both legs to a 30-degree angle and to hold them for ten seconds with the knees straight. This gave the rating for the "lower abdominals," depending on the time the patient could hold up both legs (10/A). The patient was again asked to sit up from a supine position with his hands locked behind the neck, this time with the knees flexed, in order to obtain a rating for the isolated abdominals (A 10).

Then the flexibility of back muscles and hamstring muscles was determined. Back muscles and hamstring muscles were combined by having the patient try to touch the floor with the tips of his fingers, knees kept straight, and measuring the distance from the fingers to the floor (Fig. 3). Floor touch was considered normal (t), and the distance from fingertips to floor was noted in inches.

Measurements were written as follows: [12,14]

$$\mathrm{B}\frac{10}{10} \qquad \mathrm{A}\frac{10}{10}10$$

$$\mathrm{BH}-\mathrm{t}$$

Normal, healthy school children from six to nineteen years were subjected to these muscle tests in urban and suburban communities of this country. For comparison children of the same age distribution in similar communities in northern Italy and southern Austria were examined. A major difference between these groups is the fact that the European children do not have the benefit of a highly mechanized society; they do not use cars, elevators, or other labor-saving devices but must walk to school, frequently long distances. Their recreation is mainly based on active use of their bodies. The children examined in this country are usually taken to and from school by car or bus. They engage in recreation as spectators rather than as participants.

The test conditions were identical. In order

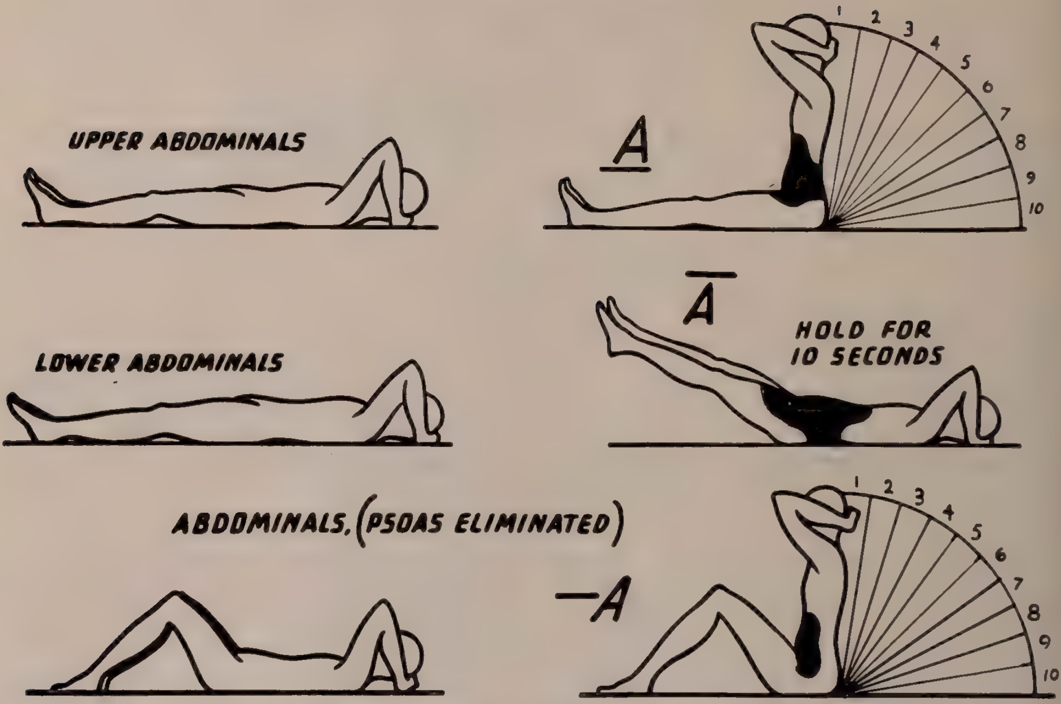

FIG. 2. Tests for power of abdominals.[15]

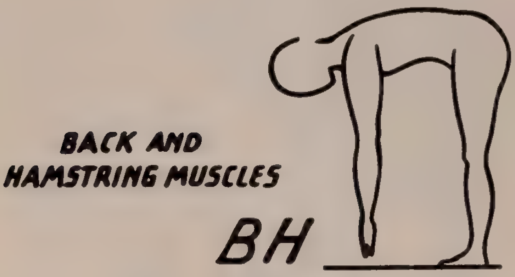

FIG. 3. Test for elasticity.[15]

to keep the tests as uniform as possible, they were all directly supervised and largely made by one person (R. P. H.). The tests described above had been thoroughly standardized in the long series of examinations of back patients, as well as posture patients.

In the following table, we have noted only failures and nonfailures, regardless of how high the degree of individual deficiency might have been. Our statistics are supported by (1) additional reports from people who assisted in our tests, (2) a special series taken by Sonja Weber in Austria, and (3) tests of 775 children made by Elsie Hemlock and Ruth P. Hirschland in Guatemala. Evaluation and breakdown of all figures, distribution as to sex and age, etc., will be reported elsewhere. Here, we would like to concentrate only on the few essential figures which demonstrate the relative muscle efficiency of our children compared to European groups. The figures are given in Table I.

TABLE I.—RESULTS OF TESTS

	Europe	America
Total number of children tested	1,987	4,458
Per cent failing test	8.2	56.6
Per cent failing two or more tests	0.3	16.4
Incidence of tests failed	8.5	78.3

As this table points out, the percentage of children failing tests is 56.6 per cent in our country, compared with only 8.2 per cent abroad. This shows a very low degree of fitness in our children, as measured by the above tests, in spite of the fact that their nutrition and general health supervision are infinitely better than any found abroad.

The picture is still darker if we do not look at the number of children who failed, but compare the percentages of children who failed in more than one test. In Europe only 0.3 per cent belong in this category; in our country 16.4 per cent (or over fifty times the percentage found in Europe) failed in two or more tests. The incidence of failures, that is, number of all failures counted, amounts to 8.5 in Europe versus 78.3 here.

It might be of interest to note that the Austrian and Italian children, who were of course individually tested and who were quite efficiently kept apart due to European frontier conditions, showed similar test result of total deficiency: Italy 8 per cent and Austria 8.3 per cent. We may add that these figures were borne out by the general physical appearance of the tested children, e.g., the ability to run, to move, and the measure of tenseness.

In order to gauge the emotional stability of the testees, we jotted down our impressions as either "tense" or "relaxed" and compared these impressions with the school teachers' yearly reports and appraisals. This procedure was sometimes reversed when we predicted relative muscle deficiencies after learning the "thumbnail" history of the child. In a majority of cases poor test results were associated with history and signs of emotional instability.

Conclusion

We have the impression that insufficient exercise may cause inadequate outlet for nervous tension, which in turn may act as a stressor.

Local muscle weakness and tenseness may prepare a target area for the stressors. Chronic misuse, typical movement patterns, or minor trauma are contributing factors.

Lack of sufficient exercise, therefore, constitutes a serious deficiency comparable to vitamin deficiency. This deficiency can be relieved as any other deficiency by providing the lacking agent. This, however, may not be sufficient for the relief of damage that has gone beyond the functional stage and often leads to chronic changes, such as fibrositis and myositis, etc.

Prevention of this deficiency disease is an urgent need.

Further research will be necessary to complete and broaden our preliminary survey and to show the geographic incidence of underexercise in this country. We may well find large sections where excellent conditions of muscular fitness prevail. In areas where poor muscular fitness is prevalent, definite programs of physical activities should be set up.

Our attitude toward physical activities and exercise will have to be seriously revised. Our physical education needs a very definite expansion and active participation on a wider base. The amount of exercise performed by the individual child will have to be supervised, and a minimum of these hours will have to be observed, not only in high schools, but even more important, in elementary schools.

We in the medical profession will have to take a lead by revising our own attitudes. We will have to be more careful in the prescription of "slow up," "resting," and in the restraining of children from physical education. The need for sufficient physical activity was well known to the physician of past decades. It was frequently part of his prescription. We should try again to restore physical activity to its proper place in a well-balanced life.

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There are worse occupations in this world than feeling a woman's pulse.—LAWRENCE STERNE

Public Relations in a Small Upstate County

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Twenty-five years ago our county medical societies were largely scientific bodies. At that time there were few if any socioeconomic problems besetting the profession. During the last quarter of a century medicine has become more complex, and its complexity has raised many problems. Hospital relationships, staff privileges, care of the indigent, public health facilities, relationships with voluntary health agencies, and the increasing participation of government in medicine are some of the problems. Practically no one can practice medicine today without being involved in one or more of them.

The modern medical curriculum is so crowded that it is impossible to include everything and give it adequate time. The average medical student or intern has little contact with the public except through public clinics and hospitals. Too few, if any, schools, take the time or trouble to teach the student the valuable lessons of medical history. The average young physician is not familiar with the traditions of the profession. He usually obtains his knowledge of medical ethics from a printed code that is handed to him.

County medical societies should realize that this is insufficient and that personal instruction is essential. The county societies should accept the responsibilities of training young physicians, not only in medical ethics, but in the reasons for them. If the county societies continue to neglect this responsibility, the profession is apt to become primarily economic-minded rather than public service-minded. Dr. Bauer stated, "While physicians must always remain physicians, they are citizens first."[1]

I have urged for a number of years that our county society be the strongest of all local medical organizations. It is through the county societies that all physicians have an opportunity to take part in the professional, political, civic, and social welfare organizations of their respective counties. Public relations on the county level is where the profession, as a whole, both on a national and state level has an opportunity to reach the "grass roots" of the people.

To keep the public informed on medical problems, we have found that it is essential that the county medical society maintain a friendly relationship with the local press, radio, and television. These media of communication have always been used freely on all controversial subjects such as socialized medicine and our recent educational campaign against cults. The press, radio, and television should be used to educate the public about health problems, socioeconomic problems, and the progress of medicine in general.

I am afraid that many physicians are indulging in wishful thinking that medicine can be practiced as it was twenty-five years ago without becoming involved in the many socioeconomic problems that beset us at the present time. So it is up to those who are active in the affairs of medicine to educate our colleagues and to stimulate their interest in what may be termed the nonscientific aspects of medicine. Unless we handle these nonscientific matters properly, the scientific aspect will suffer too.

Eighteen years ago a small group of physicians in Chemung County organized a medical bureau. This bureau has slowly developed until at the present time it is invaluable to the members of the County Society, especially in the nonscientific aspects of medicine. It is incorporated as Health and Credit Services. This bureau was incorporated as a membership corporation, and its incorporation papers set out the following purposes of its formation:

1. To unite the physicians of Chemung County for the purpose of maintaining a compact, representative, and centralized agency to consider and act in unison upon all matters affecting the practice of the profession of medicine.
2. To promote, foster, and maintain, by means of education of the public, a relationship between the physician and his patient whereby the patient, whether he be an indigent or not, may have the free choice of a physician.
3. To establish a central system or exchange

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through which any individual may make prompt contact with the physician of his choice, or a recognized alternate, at any time of day or night in any emergency.

4. To promote, establish, and maintain a system for the collection of adequate fees.
5. To establish a medical registry and credit rating system applicable to a physician's clientele.
6. To work out and adopt a plan of financing expense of medical treatment for (*a*) borderline cases, (*b*) cases able to pay on installment plan, (*c*) cases in which families wish to provide for medical expense by budget or otherwise.
7. To keep, collect, establish, and compile such statistics as may be of value in improving any of the purposes of the association, particularly those pertaining to the cost of medical and surgical services.

It is the aim of this association to work at all times in the interest of the physician and his patient. It is proposed to secure for the physician adequate and fair compensation for his services in all instances. It is proposed to demand of every physician in this association an honest and sincere service to his patient. It is also proposed by public education and otherwise to prevent and lessen in this community the exploitation of the physician and to establish him in the community in a manner that is equitable to the community and to the physician.

Through the years the bureau has acted as a grievance committee for the County Society and has been able to smooth out many misunderstandings and adjust many accounts that otherwise might have led to malpractice suits or at least to "bad relations" with the patient. To my knowledge there has not been one malpractice suit in the eighteen years of the bureau's operations that has been brought on by its mishandling of a controversial account. Through the bureau there has been recovered for its members a total of $1,223,709.02 from their delinquent accounts. Gradually the bureau developed other services and made them available to the members so that it now offers the following services:

1. Bonded collection service.
2. Professional bookkeeping service.
3. Professional statement service.
4. Income tax service.
5. Estate liquidating service.
6. Collection aids.
7. Credit reports.
8. Doctor's exchange which gives a twenty-four-hour telephone service and emergency reference bureau for Chemung County physicians and their patients.

The medical bureau officially is not a part of the county medical society. However, all members of the County Society are members of the medical bureau at the present time. The manager of the medical bureau is also executive secretary of the Chemung County Medical Society. The feeling of most, if not all, of the members of the County Society is that through the bureau and its operations they have developed an excellent public relations medium which has been very helpful to the profession in maintaining good public relations without exploiting the profession.

I do not want to leave the impression with you that our medical bureau is a panacea for all of the socioeconomic and medical problems of Chemung County Medical Society, for such is far from the truth. Our public relations committee finds more to do than it has time for. There are new scientific or nonscientific problems presenting themselves every few days.

While the bureau has done a great deal to relieve the grievance committee of much of its duties, especially the adjustment of controversial amounts, it is essential that we maintain a strong grievance committee. Because of the pioneer work of the bureau it was easy to establish and maintain a twenty-four-hour emergency service, which has worked smoothly for more than two years. Through the efforts of the County Society more of its members are now taking an active part in the local political, civic, and religious affairs of the community. Five years ago only three members of the medical society were members of the chamber of commerce. At the present time about 60 per cent of the County Society are members of the chamber of commerce. The younger physicians have been taking a great interest in the problems of the County Society. The attendance at the meetings of the County Society has increased 30 to 40 per cent since 1945.

It is the hope of the essayist that this paper will be of some interest to the members of the other county medical societies in the State. It is my personal opinion if the younger physicians are not taught medical history and what it means, as well as medical ethics, a great deal of the respect the community has had for medicine and the physician will be lost. We are living in a changing world. If the younger physician is not properly guided by his older colleagues, he will become more economic minded than service minded.

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The Why, What, and How of the Public Education Meeting

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(*Executive Officer, Medical Society of the County of Erie*)

I welcomed the invitation of Dr. Charles S. Lakeman, chairman of the Public Relations Session, to discuss the theme of the public education meeting for the following reasons: First, I firmly believe that the public education meeting is an instrument of value and capability for the promotion of good medical public relations on the county level. Second, being completely sold on the worth-whileness of the public education meeting as a P.R. activity, I was happy to be afforded an opportunity to describe concisely, but I trust completely and clearly, for the information, help, and guidance of representatives of other county medical societies, the mechanics of planning and conducting a seats-free informational session for the laity on the truth and whole facts with respect to some disease or condition of widespread incidence and therefore widespread interest. For that is just what a public education meeting is!

Eight years ago, in 1945, it was my privilege to arrange and direct the first public education meeting ever sponsored by the Erie County Medical Society. So enthusiastic was the public reaction, so commendatory was the local press of the project, that it was there and then resolved to make the public education meeting a permanent part of our county society's public service and public relations program and to stage a meeting of this type once each year.

Not for a moment would I imply that our county society was the first to make such a decision; unquestionably other county societies, perhaps many of them throughout the land, have been and now are putting on meetings of this kind as a regular annual service. However, I would like to observe that nowhere in the P.R. textbooks, literature, or treatises have we come across a recital of any county society's experiences in this special field sufficiently detailed to serve as a blueprint or pattern. Perhaps this paper will fill that deficiency.

The public education meeting, a one-night production limited to consideration of a single theme, should not, of course, be confused with the medical forum type of public education enterprise inaugurated, it would appear, by the Pinellas County Medical Society at St. Petersburg, Florida, in cooperation with the *St. Petersburg Times*. This very comprehensive and meritorious project runs for twelve weeks and embraces every physical ailment in the catalog.

Just one more preliminary statement before getting down to the brass tacks of my theme. The Erie County Medical Society has conducted public education meetings for the last eight years, with what public, press, and the profession term a gratifying degree of success. Over these years we encountered problems and hurdles and "bugs" and kinks. Finally, however, we developed a set of procedures, policies, and technics which have enabled our meetings to move smoothly and "pay off" to the limit in P.R. dividends. It is my pleasant task here simply to unfold for your consideration some of the things which seem to be particularly pertinent and vital to the conduct of one of these meetings, all drawn from our own experiences. I would not be so presumptuous as to suggest, much less urge, that the methods employed in Erie County be adopted in every county. The pattern which best fits

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your local landscape and pocketbook is something for you alone to evolve.

Generally speaking, nothing of importance ever is done without careful planning. If you want to insure a successful production, one that will redound to the credit of your county society and send the audience away saying, "These doctors know how to stage a good show," chart every phase of the program with scrupulous attention to detail. You will soon see what I mean as I take you step by step through the continuity of decisions and actions that enter into the over-all production.

The comitia minora of your county society has agreed, we will assume, to sponsor a public education meeting. The logical agency to supervise and have charge of the project is the committee on public health, and the commander-in-chief of the enterprise should be the chairman of the public health committee. Under no circumstances should the meeting be publicized as a project of the public relations committee. For obvious reasons the accent should be on betterment of the communal health, not on promotion of the society's public relations. The total cost element must be reckoned with at the very outset. Your county society must decide whether it wants to "shoot the works," financially speaking, and put on a lavish production, or proceed on a conservative basis, or even engineer your initial project on thrifty lines. But remember this: the P.R. potentialities of this kind of meeting are almost boundless, and your society will benefit in proportion to the time, thought, and money you are willing to dedicate to the program. Many items in the continuity I shall unreel are strictly optional. Some might be regarded as icing on the cake. As I have pointed out, it is for each county society to avail itself of the ideas and suggestions that adapt themselves to the society personnel and wallet. I shall give detailed cost figures at the conclusion of my remarks, merely for your information, of course.

Picking the date and scene of the meeting and selecting the subject come next. After several years' experience, the Erie County Society reached the conclusion that a Wednesday evening late in September or early in October offered the most attractive date, with a Tuesday as the second-best choice. Thursday is the big all-evening shopping night in Buffalo and many other localities and accordingly should be dismissed. Friday is our Hebrew friends' night at Temple. Saturday is club night and play night for hosts of people. Since the audiences at our meetings have consisted of 60 to 70 per cent women, our planning always takes into account the habits and wishes of the female of the species.

The scene of the meeting should, of course, be central and befitting the dignity of the medical profession. Our society has held all eight meetings in the ballroom of Hotel Statler. Seating capacity is between 1,000 and 1,200, and we repeatedly have filled it to overflowing. Selection of the subject should be made by a majority vote of the public health committee from themes suggested by committee members at the first meeting called by the chairman for the mapping of plans, and this initial meeting should be held in the late spring or very early summer to allow ample time to perfect arrangements. In the event that only a few committee members show up at the first meeting, it is advisable for the chairman to poll each missing member by post-card as to his preference. Our society has held meetings on cancer, heart disease, diabetes, chronic alcoholism, indigestion and ulcers, arthritis, childhood ailments, and hormones. Cancer, heart disease, diabetes, and arthritis drew the largest audiences. Whatever your chosen topic, it must be one of broad public appeal. Beware of adopting some committee member's pet topic, something over which he has a complex perhaps. "Dangers of Self-Medication" has no drawing power. "Use and Abuse of Antibiotics" won't pack your hall. Avoid preachments; the public does not want to be lectured or scolded by medicine. And by all means clothe your chosen subject with an attractive but not a sensational title, such as "Cancer is Curable," "You and Your Heart," "The Truth About Indigestion," etc.

Having agreed on a date, booked a meeting place, and chosen a subject, you are ready to proceed with formulation of the program itself. Our county society has followed a standard pattern for years and has found it popular and good. We open with a five-minute address of greeting by the president, who then presents the chairman of the public health committee, who in turn introduces the guest speaker, an outstanding practitioner in the particular field of disease being dealt with. He talks for about forty-five minutes, usually with the aid of slides or movies. Directly following comes the open discussion of the meeting topic by a picked panel of 12 to 14 local physicians. Everyone present is given an opportunity to put questions in writing to the panelists, and all inquiries are answered clearly and authoritatively. The program usually concludes with a fifteen to twenty-minute sound motion picture designed for the laity.

The panel discussion is the real highspot of the program, so it is important that the public health committee pick the right kind of a group to answer all questions. In shaping the panel the committee should avoid the "strong silent man" type of physician, the "microphone shy" doctor, and the physician who may look down his nose a bit at the whole project. Don't try to force any doctor to serve on the panel against his personal wishes. Appoint a group, mainly specialists in the realm of the evening's topic, who really welcome the invitation to participate, who view the whole thing not only as an opportunity to render a service to the society and the public but as a lot of fun. The doctor chosen by the public health committee as moderator should be a top specialist in the subject of the evening and a man who knows all or most of the panel members intimately. Moderator and panelists should gather a few days prior to the public education meeting and agree among themselves on which doctor or doctors will take which phase or phases of the subject and answer questions thereon. Each panelist should bring to this preparatory meeting one or two written questions to be used on meeting night to "prime the pump" until the stream of bonafide inquiries from the audience begins to hit the stage. And they will come in a torrent.

Every panelist should be sternly warned against answering any question from the audience with a mere "yes" or "no." Such a short reply does not satisfy the inquirer. He may, indeed, feel hurt or rebuffed. He wants a well-rounded, explanatory reply to his question. Let him have that kind of a reply.

Moreover, the moderator should always alert and gain the close attention of the panelist he intends to call upon to answer the written question just come to his hands. Never should the moderator read aloud the question to the entire panel and then announce that he is calling upon Dr. Smith to answer it. Dr. Smith might be caught off guard. Instead, the moderator should say: "I am going to ask Dr. Smith to answer the next question." That puts Dr. Smith on the qui vive. He listens attentively to the reading of the question and comes up with a fine response.

Procurement of the principal speaker is a phase of the meeting which our public health committee usually delegates to a subcommittee thereof. If Mr. Main Speaker is not bringing with him a copy or an abstract of his address, it is wise to arrange a conference of the speaker with representatives of the local press several hours before the big meeting. This facilitates press coverage and conduces to accurate reporting of the technical material. Establishment of a down-front table for use of the press at the meeting is a "must," of course.

Means must be provided for transporting the written questions in orderly manner from the floor to the stage or platform on which the panelists are arrayed. Our society has had the volunteer assistance of numerous groups for the distribution of small pads and short pencils throughout the audience just before the meeting started, and for the collection of the written questions and conveying of the same to the moderator by designated workers under the direction of one chosen to be captain for the evening. The nurses aides of the Red Cross, young women in bright-hued uniforms, the Grey Ladies of the Red Cross, or a corps of white-uniformed nurses from one of the larger hospitals, all are available and will turn in an efficient job as well as present a pretty picture. If you use nurses aides, you probably will have to provide a small dressing room in which they can don their uniforms.

Good, dependable public address equipment is a major factor in the successful conduct of a meeting of this type. We have not found it necessary to install a table microphone in front of every panel member. One movable "mike" will serve two panelists efficiently. If possible, by all means employ an expert to monitor your amplifying equipment. Collapse of the public address system at the height of a program is a real catastrophe.

A small amount of ordinary stagecraft will contribute a lot to the appearance and smooth conduct of your production. Make up in typewritten form a timetable for the guidance of all principals in the cast, and distribute carbon copies to all principals. Start your meeting right on the dot, and adhere to your time schedule. And here are a few suggestions on staging for your consideration. Seat your panelists in high-backed, heavy-armed impressive looking chairs, not wobbly undertaking parlor chairs, and place an identification name-card before each panelist in a wire holder or some other device. The press, seeking to cover the question-and-answer discussion accurately, will thank you for cards identifying the panelists. If the tables at which panelists are seated to the right and the left of the moderator are laid straight out, the moderator will have to lean forward constantly to pick up the faces and seating locations of the 12 to 14 panelists. Therefore, angle the panel tables about 2 feet forward from the moderator's centrally situated reading stand in a broad "V" formation. Drape a placard with the title of the county society in artistic lettering over the front of the moderator's reading stand. Place at his right hand on the table a deep cardboard box in which to deposit all answered question slips, thus insuring their preservation for future reference and avoiding a littered floor. Some stages in hotels and lodge rooms are equipped with hidden baby spotlights that can be adjusted to train a beam of light on the moderator's reading desk. By all means utilize such a spotlight if available. It will make the moderator's reading job a lot easier. Don't expose yourself to a charge of staging a meeting that is poorly conceived or amateurishly executed.

I have elected to deal last with the publicizing of the meeting and the creation of public interest in the project, a most important aspect of your public education meeting. Since the primary purpose of the meeting is to develop good will and promote friendly public opinion for medicine, every legitimate method, technic, and channel through which your county society can effectively reach the public should, of course, be utilized. Actually, you will not need a tremendous volume of publicity in order to draw a crowd to your meeting, but that is not my point. The key to good public relations, as someone wiser than myself has said, is to be good or do good and tell the public about it. But publicity in this instance should not consist solely in crashing the newspapers with advance stories. Get this picture: You have your county society willing and eager to do something constructive for the communal health and welfare. It's your duty to tell the whole town about it. So exploit the public relations possibilities to the hilt, and milk the situation to the last drop of good P.R. The fact that all seats are free should be stressed.

Our county society embarks on the publicity phase of the meeting in midsummer by dispatching on society stationery identical personalized letters to between 600 and 700 local organizations informing them of the meeting and soliciting the attendance of their members. This mailing list includes the churches and church societies of all denominations and faiths, all women's clubs, all service clubs, certain fraternal and business organizations, and numerous others. Thus we bring to the notice and favorable attention of molders of opinion in the community, along with tens of thousands of individuals, that the county society is rendering a public health service to the community.

Second our society places in the windows of drugstores and other legitimate business and mercantile establishments throughout city and towns two weeks before the meeting about 500 attractively colored posters, 22 by 14 inches, advertising the meeting. The placement work is performed by members of the Woman's Auxiliary. Posters also are displayed in such key spots as the lobbies of public and office buildings. Moreover, we have arranged in connection with several meetings to have our downtown movie theaters flash on their screens for the week before the meeting short "trailers" announcing the meeting. King-sized placards on buses and streetcars are another valuable publicity feature provided the county society can persuade the national advertising concern having control of bus and streetcar advertising to donate the space outright or donate the space provided the society pays for printing and weather-proofing of the placards and foots the bill for labor costs.

In the course of the summer and early fall news stories should be given the local newspapers, beginning with an announcement of the date, place, hour, and topic of the meeting and the society group in charge. Don't try to pile all the facts and details into one comprehensive story. Then you have shot your bolt. Spin out your material on the installment plan, with a second release on the makeup of the panel, a third on the selection of the main speaker, with picture, etc. One week before the meeting hit the newspapers with a series of paid advertisements in the form of small panels, one column wide by 3, 4, or 5 inches deep. Yours is a nonprofit public service project so the newspapers will give you a special rate and will accord your "ads" top-page positions, if so requested.

I have brought you some factual experiences and suggestions from our own county for your consideration to do with as you will.

Do Your Patients Really Like You?

ERNEST DICHTER, PH.D., MONTROSE, NEW YORK

(*President, Institute for Research in Mass Motivations, Inc.*)

NOTHING is a safer topic for conversation than doctors and the medical profession. A group of people may have had violent disagreements, but when the discussion is shifted to doctors, most of the people present will probably agree. Unfortunately, in most cases they will agree on negative facts about the medical profession. Even those people whom you would not consider capable of unfairness and subjective attitudes will join in gleefully to report incidents from their own experience where doctors were wrong, overcharged, drove around in Cadillacs after only one year in practice, split fees, and a long list of comparable horror tales.

From a public relations viewpoint and to the researcher in human motivations, a big question mark poses itself. How come? Why, from among all the various possible scapegoats in modern human society, are doctors picked, and what can be done about it? How can we make patients like their doctors more? Several years ago I was asked by the Alameda Contra Costa County Medical Association to investigate this doctor-patient relationship, to find out what was wrong with it and what could be done about it. Since then I have conducted a number of additional studies, one major one for the California Physicians Service on specific problems in connection with health insurance and a number of experimental studies to determine in what ways the doctor-patient relationship can be improved.

First, was the diagnosis. What was wrong? In summarizing our findings, it was shown that what had happened was that while the world was changing and changing very rapidly; while the patient in this world was changing at least at the same pace; while all the medical equipment, medical knowledge, and drugs were developing at an ever-increasing rate, the human aspect in the doctor-patient relationship had fallen behind. A psychologic lag had taken place. We discovered that most doctors choose their profession for idealistic reasons. Although a good income is usually expected, and this factor does enter into the picture, the idea of helping humanity and doing something worth-while, uncommercial, and out of the doldrums of everyday life, of devoting oneself to helping others is very strongly accented. Something vital and very important happens to the young doctor during the course of his major studies and particularly during his internship. The young doctor discovers the harsh realities of life. These realities very quickly clash with his initial, highly exaggerated idealism.

The patient, as well as the doctor, becomes aware of this conflict. The doctor often exaggerates his idealism to overcompensate for the recognition that in many ways he really has to behave like a businessman. The patient, on the other hand, is asked and expected to pay respect comparable to the kind of reverence that one pays to a saint, and then a few days later he receives a bill; again a conflict is the result. A further difficulty stems from the fact that while the modern patient is catered to by most other businesses and professionals and even large corporations, the medical profession as a whole has failed to acknowledge that this patient has been growing up, is insistent on his right to be treated as an equal, and spoken to in clear understandable language. The modern patient doesn't want to be called a "layman"; he doesn't want to have complicated Latin phrases thrown at him, which he feels he would understand quite well if they were translated. Every time he is in contact with a doctor, he feels he is confronted by a clique. He is the outsider, the child, the ignoramus.

The modern citizen, and thus the modern patient, has been invited to become a participant rather than a passive recipient in more and more fields. There are profit-sharing plans; do-it or make-it yourself is the latest and most modern development in many fields of industry. The home workshop, the ready-mixes, fix-it yourself plans; new approaches in labor-management rela-

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tionships, where labor becomes a participant in management decisions, all point to an entirely new direction. His relationship with the doctor seems to be in complete contrast to this. Instead of being permitted or invited to be a participant, he is told to simply hold still and follow instructions.

A further important trend which has been observed in our modern culture is the desire for emotional security. Before the last election it was predicted that in times of prosperity, the party in power stays in power. This prediction was wrong. Why? Because a psychologic factor was overlooked: people in general want more than just financial security. They need emotional security as well. Applied to the medical field, it means that the technologic assurance, the mastery of x-ray machines and antibiotics, while highly desirable, is not enough. We often overlook the fact that progress does not take place in a straight ascending line; a much more correct picture is the one of a spiral development. While it seems logical that progress has such a steady development, that greater and greater efficiency and scientific expertness on the part of the doctor were all that was demanded, our studies show conclusively that not only in this field, but in many other fields, people really want to be assured of the return of this spiral development. They want to come back to the kind of relationship on an emotional level that they used to have with their doctor, but in a more developed and scientifically more dependable form.

Even in the industrial field our studies showed that such companies as General Mills, General Motors, Ford, etc., have to take care of the emotional problem. A company like General Mills had to develop a personality like Betty Crocker in order to establish a relationship between themselves and the consumer, a relationship of a psychologic and emotional form. In other words, it is not enough for them to produce an excellent flour and to have perfect production facilities; what is even more important and what finally determines the success of their commercial undertaking is the existence or nonexistence of this emotional tie.

Comparably, therefore, the modern doctor too can have the most perfect laboratory equipment in his office, be qualified through medical knowledge in the most unquestionable fashion, and yet be completely deficient as far as the basic requirements of his profession are concerned. These requirements of having an emotional relationship with his patient used to be the standard equipment of any good family doctor. A modern patient feels that he has been cheated, that he has x-ray machines instead of human relationships. He clamors, therefore, and with a great feeling of justification, for the old family doctor to be brought back, minus the horse and buggy, of course, and equipped with the x-ray machine and all the other scientific advances.

In our surveys we discovered that the doctor is proud of his rugged individualism, yet this individualism is as outdated as the frontiersman who totes his gun would be today. The modern patient is no longer allowed to be this kind of rugged individualist. Recently it was pointed out that there are hardly any employers left. Most of us are employes of a large corporation or business enterprise. In the final analysis even the president of General Motors is an employe with all the psychology that goes with it. What right has the doctor to consider himself beyond the law, above the restrictions that are imposed on almost every other citizen in our society?

Therefore, the modern patient demands that his doctor interest himself in community affairs as much as he himself is expected to participate. He demands that the modern doctor accept his responsibility as far as medical care is concerned. This is another source of conflict, another source of jealousy and frustration.

In this short time I cannot go into all the details of the various studies concerning the doctor-patient relationship which we conducted. The diagnosis can be summarized in the following way: It is not the high medical fee; it is not even the threat of catastrophic illness or the imperfection of medical science, or any other surface reason given by people, when asked directly, which can serve as the explanation for this lack of love on the part of the modern patient for his doctor. We have to dig deeper, as we did in our psychoanalytic approach to the problem in order to find out what some of the real faults in this relationship are. As the examples we have presented demonstrate, most of them point to a feeling of frustration. The modern patient wants to be loved by his doctor. The modern doctor would like to love his patient, have a personal relationship with him, and spend as much time as possible with him. Both in a sense are caught in this dilemma. The modern doctor is not permitted to be the idealist he really feels he ought to be.

The modern patient feels he is not being treated the way he really feels he ought to be treated. He states, as one of our respondents did, "All he did was make me well." You might say, "This is the typical, ungrateful attitude of a patient." As a psychologist, I would say, "No, this is the outcry of a person who feels let down, neglected, and robbed of what he thinks his doctor should have given him—love, interest, and affection."

What is the answer? What can be done about it? How can we make the patient love his doctor? What therapy, as far as public relations are concerned, can we prescribe? It is my conviction that the answer does not lie in political maneuvers, in lobbying, or any other form of high-pressure advertising approach. We must give each individual physician a manual, a prescription, or, better yet, the tools to develop insight into his own relationship with his patients and urge him to put these things into practice bit by bit. Only by such a systematic approach, starting with each individual doctor, can we hope to achieve a generally improved relationship between the doctor and his patient. Here is a list of concrete recommendations:

1. *Do you have the right kind of patients?* Make a list of all the patients whom you have treated in the last year or so. Next to their names, jot down your own personal feelings about them. How many of them do you really like, how many of them do you detest, how many of them are you indifferent to? If there is an undue number of patients that you would rather not have further contact with, your public relations with your patients is not too good.

2. *How many of your patients would you permit to call you by your first name? How many of your patients do you call by their first name?* If the ratio, the difference, is a very large one, again I would say that here you have another symptom of poor public relations between yourself and your patients. One of the important aspects of our study revealed that authoritarian relationships between the physician and the modern patient are on their way out. While many doctors claimed that the patients wanted them to feel authoritarian, experiments that we conducted not only in the medical field, but also in labor management fields, proved that it is quite often the opposite that is really true. For example, we found that the doctor who took his patients into his confidence, who admitted that he didn't know all the answers, who dealt with them on an equal, nonauthoritarian basis, reaped great benefits from this kind of relationship. The patient, rather than losing confidence in his doctor, had increased confidence in his humanitarian and ethical principles and trusted him even more than if he simply pretended to be the authority.

3. *How many of your patients lose contact with you after you have cured them?* We found that the desire for continuity is a very important one in the modern patient. He does not want to have contact with you only when he is sick. He wants to have the feeling that you watch over his health and his family's health all year long. We found that patients remembered the days when their family doctor carried their whole destiny and recorded all their family events in his little black book. This knowledge of continuous care and interest on the part of their doctor is a very important one for the improvement of the doctor-patient relationship.

Have you ever sent your patients cards? Do you ever call up your patients? Do you ever inquire, after you have prescribed a treatment, whether it actually worked or not? Do you consider the relationship has ended when the patient has paid his bill? Do you ever send a thank-you note after you received your payment, inquiring at the same time about the health of your patient? We conducted a number of experiments which showed that the patient was puzzled at first, then tremendously pleased by this demonstration of a new era, a new philosophy, on the part of his doctor. Contrary to the fears which some doctors expressed that this would be interpreted by the patient as solicitation and commercialism, the modern patient interpreted this to mean that the doctor too has finally acknowledged the fact that it is his job to please the customer. This principle of continuity is practiced by insurance companies, gas stations, dentists, lawyers. The patient feels that the doctor should not think himself above this, should not feel himself exempt.

4. *How much participation do you grant your patients?* We found that when you write out your diagnosis, when you fill out those mysterious sheets in your office, the patient wonders what it is that you are putting down. We found dramatic and miraculous effects when the doctor tore off the top sheet, handed it to the patient with proper explanations and informed him what all this mysterious writing meant. In this way

the doctor demonstrated that he considered the patient his partner, not a "layman" who had to be dealt with like a child.

5. *How much medical information, specific or general in nature, do you disseminate in your own community?* Many doctors complained that the patient read articles in popular magazines indiscriminately and then pestered the physician with questions, suggesting therapy himself, etc. While it is perfectly correct that much of this information may lead to misinformation, a large part of the blame really falls back on the medical profession. The modern patient wants to have the Bible translated into English. He wants to know what is going on. He feels that anything that concerns his own body is primarily his own prerogative. If he cannot get information from his doctor, his medical association, or the medical profession within his community legitimately, he will try to get it somewhere else. No complaints will ever be effective until the medical profession understands that this is a justifiable need of a psychologic nature for the modern patient, which must be satisfied one way or another.

Why shouldn't medical associations disseminate this information themselves, with the help of local newspapers, radio stations, television stations, etc.? Why would it not be possible to send out monthly or quarterly bulletins signed by the county medical association, with the names of the doctors who work in the county listed? This would give patients the feeling that all they need to know about diseases, epidemics, adjustments to seasonal changes, etc., is made available to them by the medical association.

6. *Have you looked at your waiting room lately?* To a certain extent, the waiting room is the display room, the show window of the medical practitioner. Why call it "waiting room" to begin with? Nobody likes to wait. In our studies we found that the patient has a great desire to learn more about his doctor. He wants to establish an emotional relationship with him. What are you doing to help it? For example, there is nothing wrong with having a family album in the waiting room, which would show the patients what you did during your last vacation, introduce him to your family, give him insight and information about yourself as a living, human being and not just a technician in the medical field. What are you doing to make your patients more comfortable while they wait? How old are your magazines? Are there any cigarets or candy offered? In what other ways can you help make the waiting period more pleasant? Have you considered slide projectors?

7. *Do you explain your apparatus to your patients?* More and more, modern factories have introduced open house sessions which permit the families of their employes, factory workers, etc., to visit all parts of the enterprise and familiarize themselves with various machines. Couldn't something similar be done as far as the medical profession is concerned? We found that many of the modern patients were quite eager and curious in not just an idle fashion to learn more about the various apparatus and instruments their physicians use. It is quite conceivable that the nurse, an assistant, or the doctor himself should show the patient his facilities and explain his apparatus and various instruments to him.

8. *As a physician, how do you participate in your community?* It is possible to cooperate on a community level with schools, for example. Certain school periods could be used to introduce various medical practices and medical apparatus to the children and familiarize them with these. This would diminish their fears and teach them to consider the doctor a professional man with special knowledge and not one who is a saint, or a medicine man with magic, mysterious, dangerous apparatus at his disposal.

9. *What is the role of your medical association?* Most patients consider the medical association of their county a mysterious building where secret sessions take place. Patients think of their doctors meeting as members of a clique to protect themselves against the intruders. Why not make these buildings open to the public, arrange exhibits in them, invite the community to come and see, to sit in on some session. Perhaps some day medical associations will have the courage to invite so-called "laymen" to become members of the community and representatives of the patients. They might even be granted a vote in some decisions.

10. *Are your nurse and/or wife helping you?* The doctor's wife and his nurse have many functions which can be used to facilitate the practice of the doctor. Often a patient feels frustrated because there's not enough time for him to discuss all the details with the doctor. Couldn't the nurse be trained to have sessions of this sort in the way that an investigator, a researcher who works with the scientist, would do? She could

more readily afford to spend half an hour with the patient and prepare all the information for the doctor so he is aware of the problems when he deals with the patient.

11. *What is your reaction to standardization of fees?* In my opinion, the fee problem, although dependent to a large extent on emotional frustrations, deserves a specific approach of its own. It is not so much the absolute figure of the fee, the cost itself, that the patient objects to, as the feeling that he has developed that "biologic blackmail" is exerted on him. He feels he is charged for the value of a limb to him, the value of his life to him, instead of on what he considers a fair basis, the doctor's knowledge, time, effort, and responsibility.

It is my belief that at one point open and aboveboard standardization of fees will have to be introduced. It has been done in some counties with excellent results as far as the public relations value is concerned. We found that the patient does not object so much to what he is being charged, as to not knowing in advance how much he will be charged. We found that a president of a large corporation, earning $150,000 a year feels just as strongly about being "blackmailed," as he called it, as the factory employe who earns $75 a week. What they resent is being reminded of their helplessness and having the doctor take advantage of his power. It is only natural, therefore, from a psychologic viewpoint that they are waiting for the day when they can take this power away from him.

I've tried to list a number of concrete suggestions. Again, I must say these are only a few examples. What we must realize is that the problem of socialized medicine versus free medicine, like any other problem in our modern life, cannot be approached simply from a political or economic viewpoint. In most of the discussions in this sphere, very little acknowledgment was made of this apparently overlooked and apparently insignificant factor, the human mind. When your son starts to grow up, you will not get very far by disciplining him, refusing to let him ask questions, and denying him the right to make his own decisions. You will lose out in the end because you are working against his growth and maturity. A wise approach is to acknowledge the fact that your son is becoming a man. The patient, too, is growing up. He insists on his right to ask questions. He wants to be loved, not in a condescending, paternalistic fashion but as an equal partner in the fight against the difficulties of modern life.

I think that the answer to improved public relations will not lie in insistence on rugged individualism and absolute freedom nor in federalization and socialization of medical care. The answer will lie in a new democratic form of cooperation where the individual gives up some of his prerogatives, accepts the responsibility of the health of the community, recognizes the right of his patients, and learns to cooperate with them. The answer to how to make your patients like you more lies in recognizing the fact that this world is a changing one, that the patients are changing, and that you too must learn to change.

And Finally . . .

There are two kinds of people on earth today
  Just two kinds of people—no more, I say,
Not the good and the bad, for 'tis well understood
  The good are half bad and the bad are half good;
Not the rich and the poor, for to count a man's wealth
  You must know the state of his conscience and health;
No, the two kinds of people on earth that I mean
  Are the people who lift and the people who lean.
Wherever you go, you will find the world's masses
  Are divided up in just these two classes.
And, oddly enough, you will find, too, I ween,
  There is only one lifter to twenty who lean.

—Bulletin of the Utica Academy of Medicine, December, 1953

Public Relations Factors of Physician-Hospital Relationship

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(*Chairman, American Medical Association Council on Medical Service*)

I WOULD like to talk to you for a few moments about some of the remarks the first speaker made. If what he says is true, we have no one to blame but the people in the "ivory towers" who are teaching the young men to consider medicine, not from all angles but from one angle—the scientific.

I have an associate who was trained at Johns Hopkins. When a patient came into the hospital at Hopkins, the first thing everybody yelled was: "Get a doctor." That's the scientific setup. We expect that from Hopkins. Then he went out to a Roman Catholic hospital in South Dakota where he had to take a course in general surgery. This was required of all these young men on Young's resident staff. There was an old nun who ran that hospital, and when somebody terribly sick came in, the first thing that she demanded was, "Get a priest." That's the spiritual side, the religious side, a very important part in medicine. And then he went for a year to a very great clinic in these United States of America, and the first thing that was asked of a patient there was, "Have you been to the business office?" All three are important, but if medicine is to be medicine, when a patient comes to a doctor, he or she should be first treated scientifically as far as possible; he or she should be treated spiritually as far as possible (because without spiritual values medicine is worthless), and he or she should be asked, "Can you afford private service?" If he or she can't, then he or she should be taken care of anyhow. To me, economics is as simple as that. Medical economics is as simple as that.

I have been asked to talk about hospital-public relations. I would like to remind you that hospital-public relations is an economic proposition, and from the standpoint of good public relations it also has psychosomatic implications.

Every time we investigate the high cost of medical care, we usually run into a hospital-doctor bill which is the result of a catastrophic illness. Most people don't object to the ordinary office calls and house call fees or the ordinary examination fees which are standard. They know that Dr. X charges $10 for an office call. They can go to Dr. X if they want to, but Dr. Z might only charge $1.00 for an office call. They have that choice. They don't object to those standard fees. What they object to is the cost of catastrophic illness, and sometimes the fault isn't the fault of the doctor as much as it is the fault, shall I say, of the hospital.

For example, I had a doctor call me up recently and say, "Elmer, I wanted to send a man over to you, but, gosh, he says he can't afford $1,600 for a prostatectomy."

I said, "That's funny. I don't remember ever charging $1,600 for a prostatectomy—might have been $1,500 but never $1,600. What's the trouble?"

"Well," he said, "You charged a neighbor of his $1,600 for a prostatectomy."

I said, "Wait a minute!"

I called one of the secretaries and asked, "How much did we charge Mr. so-and-so?"

She said, "$250."

The difference between the medical fee and the $1,600 was the difference in the hospital cost, including nursing, extra services, and what-have-you over a rather long period of time. My fee was $250. When that was explained to the patient, he didn't object at all to coming to me. But you see, whenever you talk of high cost of medical care, the doctor gets the blame for the catastrophic illness' high cost because the hospital charges are included in the patient's mind with the fees rendered. The patient thinks, "This illness cost me so much." He doesn't stop and analyze that the doctor's fee is often a minimal one.

Again, sometimes some of our great men in

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medicine do things which hurt our achievement of good public relations. Many of our great teachers think very well of themselves and rightly so. If one were to accuse them of doing anything unethical or of causing any bad public relations between the public and the medical profession, they'd be horror stricken. Well, they just wouldn't believe it.

I'll give you an example of a medical teacher who was very critical of the way young men were trained. He was very critical of the excessive fees that the average doctor charges, and yet when he himself was called less than 100 miles away from his office for a consultation that took fifteen minutes, he charged 10 per cent of the father's annual income for that consultation fee. However, you could never make him believe that that was an excessive fee. I believe that when some of our private clinics charge 10 per cent of a patient's annual income for a major surgical operation, perhaps they're on the right track, but nobody in his wildest dreams would consider 10 per cent of a man's yearly income a fair fee, except under very unusual circumstances, for an ordinary consultation. Yet if you had told that man he was hurting medicine, he wouldn't have believed you. He'd think you were jealous of him. He belongs to the "ivory tower" group and sometimes, I think, forgets that there's something else to medicine besides the scientific side. I think we were far better off in our teaching of medicine when they had the old clinicians with private practices who came up to the medical schools and taught medicine and taught surgery instead of the full-time teacher and the full-time professor who knows nothing about economics.

I took the trouble to look up some of the records here, and I find out that medical fees have increased about 100 per cent since 1939. The hospital charges have gone up 400 per cent —over 400 per cent.

Now let's look at a voluntary hospital for half a moment. How did we get our hospitals? What are our hospitals? Hospitals are institutions that have been created by the public usually with some state or church help. Usually a board of trustees is elected from the wealthy, successful business people of the community, and those people get together and finance and build a hospital and try to see that its deficits are made up each year. They hire, listen to this, they hire a superintendent to represent them. The American Hospital Association, with all due respect to it, and I am very fond of many of its members and have worked with them, is nothing but an association of the hired men of the boards of trustees who run those hospitals. These men are employed by the boards of trustees.

Now, an ambitious superintendent can do a lot of things to hurt the medical profession, or he can do a lot of things to help. He may place a certain doctor on the staff, and that doctor won't object to what is done because he's afraid of losing his favorite spot in that hospital picture. And that hospital superintendent finally may get so independent of his board of trustees that he only tells his board what he wants them to know. He may take to the board of trustees the complaints of the staff of the hospital. There are very few hospital boards of trustees that have medical representation on them. Now, he wants to make a record, perhaps, and so he adds 50 cents here and a dollar there and a dollar somewhere else to try to get his hospital in the black, or closer to the black, so he can make a personal record, forgetting all the time that that board of trustees may not be particularly interested in deficits. They don't object to a modest deficit and very frequently don't object to a rather large deficit, as long as that institution is really serving the public. When he begins to add a charge here and a charge there and a charge somewhere else, and in these days of inflation it doesn't make much difference if another 50 cents or a dollar is added to the bill, eventually this thing adds up to an enormous hospital charge. Is the hospital superintendent the only one who is to blame? No, he isn't. The doctor is very specifically to blame for a lot of the high cost of hospital care. Not for the bill you render, no. But because the doctors are either too lazy or too busy to make a diagnosis and take a good history and do a good physical examination, the patient may have an enormous amount of hospital laboratory services that are completely absurd, and you tack that charge to your patient's bill, to the cost of your patient's illness.

Many times much of the laboratory work and the x-ray work in a modern hospital is completely unnecessary. The art of taking a history and doing a complete physical examination is almost a lost one. Our boys are coming out of medical schools today relying on the laboratory to make a diagnosis for them instead of having to make one themselves.

I looked over a month's bills in my own hospital a short time ago to prove my point and found that one out of every three bills had about 35 per cent of unnecessary laboratory charges on them. Figure it out over a month. I happen to be a specialist, and I realize that there are a lot of laboratory tests that you have to make if you have a resident-training program just for the purpose of teaching residents. If you don't believe what I'm saying is true, I'll tell you a little experiment to try. Tell the residents for one week that any laboratory test or x-ray examination of the patient that they can't justify by the history and the physical examination as being indicated will come out of their pockets instead of the patient's and see what will happen. Laboratory work, believe it or not, will fall 80 per cent in that week, and your diagnostic work will be just as good as it was when you were demanding all laboratory work. You won't make any more mistakes in diagnosis than you did before, believe it or not! Try the experiment sometime.

You and I are personally to blame as well as the ambitious superintendent of the hospital for the increased cost in medical care in the catastrophic illness, which is the great issue between the public, the medical profession, and the hospital.

A patient hates to feel that he is being taken for a buggy-ride. You do yourself, don't you? You hate to feel that when you go into a store and get something, you haven't gotten your money's worth. Well, just remember that the patient is just as human as you are.

A lot of people have the idea that the community chest and the government pay the hospital bills, and they often resent a hospital bill. "Oh, I contribute to the community chest," they often say, and they're serious about it. They don't think they should have to pay a hospital bill. You know this type of person.

We had a superintendent at home—a hard-boiled old Army officer—who arrived at one of our hospitals a number of years ago, and he immediately employed a tough bookkeeper. He was losing so much money by waiting until after the patient left to get his money that he put in a rule that everybody had to pay one week in advance and he had a tough bookkeeper over in the front office. Here's a little tip if any hospital administrators are here. He had the bookkeeper demand the money in advance for the week, and if the patient complained and wanted to see the superintendent, he met him with a great big smile and a handshake and found out immediately whether it would be impolitic to be tough because of this man's or woman's family connections. If it were, he'd pat the person on the back and say, "Well, you pay it whenever you're ready. That's perfectly all right." Of course, that made good public relations between that particular family and their relatives and that hospital and the doctor. But how about the fellow who didn't have any money or who was planning to take the hospital for a little buggy-ride himself. Well, as a rule the superintendent would go over to the bookkeeper with the patient or the patient's family and say, "Now, John, these people are fine people." Then he'd winked at John and that meant, "John, hammer down on 'em—get the money," but he said, "These people are fine people, and we would like to accommodate them. These people need help." Quite frequently if they couldn't pay the bill, they would be willing to take ward service which he was glad to give them, and instead of being sore at the hospital, the superintendent, or the doctor, they got sore at the tough bookkeeper. That's an awfully good public relations program when you think somebody's trying to take you for a financial buggy-ride.

The board of trustees or the board of managers of our various hospitals must be vital, active men and must not be elected to the board simply because they're wealthy and successful. They've got to be elected to those boards because they're interested in the hospital, interested in the community, and because they want that hospital to grow and to give service to the public.

The day of the untrained hospital administrator is gone. Our hospitals have grown like Topsy. Quite frequently our administrators have been old nurses or old bookkeepers or what-have-you. That's changing and, I think, for the better.

On our committee that wrote the Hess Report we had one of the very finest men in the hospital administration field. His name was Dwight Barnett and he was head of Harper Hospital in Detroit. Now this need for the trained hospital administrator and preferably the professionally trained administrator—I mean the doctor-trained hospital administrator in contradistinction to the trained lay hospital administrator—is great. Don't misunderstand me. But I think there's a little less chance for a bad public relations program and more chance for cooperation between the staff in a hospital if the superintendent of the hospital does happen to be a doctor. Dwight Barnett has been made head of the Department of Administrative Medicine at Columbia University, and we're going to have some mighty well-trained hospital administrators come out of that program. They're going to have the know-how, not only on how to run a hospital efficiently but how to get along with the staff. Now these administrators are going to be willing to have some member of the staff in an advisory capacity on the board of trustees or on the board of managers, as it should be, and these men are going to be able to correlate the work of the board of trustees and the work of the doctors for the benefit of the sick public.

I am always a little bit alarmed by some of the things that I see and hear as I go around the country. I was a little bit alarmed at another paper presented at this Session. I don't see any reason why we should furnish cigarets in our waiting rooms for patients just to keep them happy while they are there. I don't see any reason why we should advertise ourselves and put on business drives as he suggested in part of his remarks. That may be the new technic to get business. The best technic to get business is service, service at the bedside, service in your office, service at and from the hospital. Full publicity of what's going on I agree with. I agree that we must tell the public what we're doing, how we are doing it and why, and what it costs to do it. I also believe that if we tell the public these things, we will have the public confidence when we have our hospital drives so that we can raise money to expand our hospital facilities further. I've just come through a hospital drive. It started out for a million dollars. We ended up with much more than we expected. We went way over our set quota. Why? Because that hospital was rendering service to the public, and the public knew it and appreciated it and was willing to contribute to it.

There's only one way that I can describe how you may maintain good public relations. As a man is in his heart, so is he, and most doctors are good in their hearts. We've got a little educating to do. Some of our younger men, who are coming fresh out of the ivory towers with the sole idea that because they're certified surgeons they're worth more than the old tried and true surgeon who hasn't been certified, need some educating. We've got a lot of educating to do if our hospitals are to have the proper public relations standards in the community that we think they should have, and we've got to begin, in my opinion, with the men who are doing the educating. Some of our full-time teachers must realize that there is a need for the teaching of medical economics both at the undergraduate and the resident training level.

501 COMMERCE BUILDING

New Medical Group to Humanize Patient Care

A new medical group that aims to improve and humanize medical care by treating the patient's sick feelings and sick organs at the same time has been organized.

It is called the Academy of Psychosomatic Medicine. Its officers are: president, Dr. William Kaufman of Bridgeport, Connecticut; vice-president, Dr. B. B. Raginsky of Montreal, Canada; secretary, Dr. Ethan Allan Brown of Boston, Massachusetts, and treasurer, Dr. Alfred J. Cantor of Flushing.

Members will be leading surgeons, rehabilitation experts, internists, anesthesiologists, ophthalmologists, gynecologists, obstetricians, psychiatrists, hospital administrators, pediatricians, geriatricians, dermatologists, allergists, and other medical specialists. The important work of this organization will be carried out through clinical and laboratory research, medical meetings and forums, and through creation of a new medical journal.

"Today's patient," Dr. Kaufman points out in explaining the aims of the new group, "while benefiting from the newest technologic advances, is often treated as if he were a sick liver, nose, pair of lungs or heart, rather than an ailing human being. By treating not only the disease but also the person who has it, a doctor, regardless of his specialty, can increase the effectiveness of his treatment, and at the same time prevent crippling psychosomatic reactions to illness which a patient might otherwise have."—*Science Newsletter, December 12, 1953*

Further Observations on Anorectal Complications Following Aureomycin, Terramycin, and Chloromycetin Therapy

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It is becoming more and more apparent that the ingestion of aureomycin, Terramycin, and Chloromycetin is responsible for an entirely new anorectal clinical entity. In 1951 one of us (S.D.M.) reported 100 cases of anorectal complications following aureomycin, Terramycin, and Chloromycetin therapy.[1] The present review includes the data from 300 patients who have been treated with these drugs for a considerable variety of illnesses and who have developed anorectal complications as a direct result of the therapy.

Since the advent of aureomycin, Terramycin, and Chloromycetin, physicians have prescribed these antibiotics with increasing frequency and, unfortunately, at times without specific indication. All too often patients are able to obtain and take these drugs without benefit of medical advice. Two thirds of our patients received the drugs for such common ailments as "colds," sore throats, "virus infections," and "flu" (Table I). Inasmuch as these diseases are usually self-limited and since the antibiotics used are not specific, we must conclude that the therapy was of questionable value. In the remaining 100 cases the use of the drugs was probably justified.

An analysis of our collected data reveals that males outnumbered females in a ratio of two to one, confirming the findings in our initial report. It can be seen that patients in the fourth, fifth, and sixth decades of life showed the greatest morbidity (Table II). The reason for this may be that individuals in this age group are more prone to develop the various diseases listed. On the other hand, we know that large quantities of the antibiotics are administered to children, and yet our figures show that very few in this age group developed anorectal symptoms. Pediatricians have confirmed this impression. Further studies must be done to determine why children are not as susceptible as adults.

TABLE I.—DISEASES FOR WHICH DRUGS WERE TAKEN

Disease	Number of Cases
"Colds," "flu," sore throat, "virus infections"	208
Pneumonia	23
Genitourinary infections	22
Gastrointestinal upset	9
Postoperative care for conditions other than rectal	5
Furunculosis	5
Otitis media	5
Tonsillitis	3
Bronchitis	2
Cellulitis	2
Herpes zoster	2
Anal infection	2
Gynecologic infection	1
Dermatitis	1
Measles	1
Conjunctivitis	1
Carbuncle	1
Acne vulgaris	1
Pleurisy	1
Cervical lymphadenopathy	1
Breast abscess	1
Diverticulitis	1
Postoperative tooth extraction	1
Mumps	1
TOTAL	300

TABLE II.—AGE DISTRIBUTION IN 300 CASES

Age Group (Years)	Number of Cases
0 to 10	2
11 to 20	3
21 to 30	19
31 to 40	61
41 to 50	102
51 to 60	88
61 to 70	17
71 to 80	8
Over 80	0
TOTAL	300

Our earlier study confirms the findings that aureomycin was the most common offender, Terramycin was next in frequency, and Chloromycetin the least common (Table III). In all fairness this may lead to a false impression since there is considerably more aureomycin and Terramycin dispensed than Chloromycetin.

Because we have encountered anorectal complications following aureomycin, Terramycin, and Chloromycetin so frequently, it has become our practice to question our patients at length regarding the oral ingestion of antibiotics. We

TABLE III.—Number of Patients Ingesting Each Drug

Drug	Number of Patients
Aureomycin	171
Terramycin	95
Chloromycetin	13
Aureomycin and Terramycin	9
Aureomycin or Terramycin (unknown by patient)	5
Aureomycin and Chloromycetin	4
Terramycin and Chloromycetin	3
Total	300

TABLE IV.—Anorectal Conditions Following Use of the Drugs

Condition	Number of Cases
Pruritus	207
Multiple fissures	51
Ulcerative proctitis	14
Abscess and fistula requiring surgery	8
Anal ulcer requiring surgery	6
Ulcerative colitis	5
Exacerbation of healed anal ulcer	4
Exacerbation of inactive pruritus ani	2
Fecal impaction	2
Crypt abscess requiring surgery	1
Total	300

have found that most patients attach no importance to the ingestion of the drugs as related to their anorectal symptoms despite the fact that the discomfort arose shortly after therapy.

The most common group of symptoms included perianal itching, burning, bleeding, a feeling of continuous moisture, and fecal staining of the underclothing (Table IV). The staining occurs after evacuation despite meticulous cleansing. This syndrome usually arises one to two weeks after ingestion of the drug, and in about 40 per cent of cases follows a short period of diarrhea. The symptoms are definitely accentuated during the day and after defecation, and rarely is there any discomfort at night. This is in contradistinction to the distressing nocturnal itching of "idiopathic" pruritus ani.

Proctologic examination usually reveals a perianal erythema extending for a distance of 1 to 2 inches around the anal aperture. Invariably the skin exhibits multiple excoriations and superficial fissures radially placed, close to the anocutaneous junction. These multiple fissures in no way resemble the chronic fissure which is usually caused by trauma. This clinical picture must be differentiated from "idiopathic" pruritus ani. In the latter condition the skin is either dry or moist, thickened and leathery, and grayish-white in color, presenting a "parboiled" appearance. Sigmoidoscopic examination in the vast majority of cases was negative except for five cases of acute ulcerative colitis and 14 cases of acute ulcerative proctitis.

Fifteen of our patients developed conditions necessitating surgery (Table IV). This group consisted of typical crypt abscesses, fistulas, and anal ulcers.

Treatment

Those patients requiring surgical intervention presented the simplest therapeutic problems, even though healing was occasionally delayed because of perianal skin changes due to drug therapy. Those patients with multiple superficial fissures responded well temporarily to conservative medical therapy consisting of sitz baths, analgesic ointments, mineral oil, and various other preparations such as scarlet red and cod liver oil ointments.

The proctitis and colitis group of patients presented the same therapeutic difficulties which are encountered in the "nonspecific" colitides and, as such, had remissions and exacerbations despite adequate therapy.

In our largest group, which consisted of patients with pruritus, prompt relief was frequently obtained by the use of applications of fungicidal powders and the oral ingestion of buttermilk, yoghurt, or acidophilus milk. In addition, local applications of solutions causing mild desquamation of the superficial layers of the skin were of benefit.

Detailed questionnaires were sent to all patients in our series. The responses revealed that over two thirds developed recurrences after apparent cure without further ingestion of the drugs. Many of our patients subsequently were cured, but at the present writing over one half of our series is still experiencing recurrent attacks (Table V). This has constituted a therapeutic problem of great magnitude. We have made it a practice to advise our patients to continue treatment for some time after apparent cure, and this seems to reduce the number of recurrences.

Comment

Although considerable time has elapsed since the medical profession first became aware of anorectal complications following the oral ingestion of aureomycin, Terramycin, and Chloromycetin, the literature on this subject is scanty. Harris[2] and Tomaszewski[3] have reported cases of anal irritation following the use of these drugs. Both authors report the finding of Candida albicans in the perianal scrapings of patients so afflicted. Behrman[4] has also had this same experience. This organism has been isolated from the stools of patients having diarrhea following aureomycin, Terramycin, and Chloromycetin. Most investigators are of the opinion that the normal intestinal bacterial flora is altered by these particular drugs with an overgrowth of monilial forms in the gastrointestinal tract. This undoubtedly does occur, and one would expect the normal flora to be re-established rather quickly after cessation of the drug. Inasmuch as exacerbations occur for such long periods of time, we must conclude that other factors are contributing to the prolongation of the condition. Further bacterial investigation is undoubtedly necessary. It is conceivable that the crypts of Morgagni become a receptacle for monilia, and even after the normal intestinal flora is re-established, a low-grade monilia cryptitis persists and discharges monilial forms on the perianal skin.

There appears to be no correlation between the total dose of the drug and either the onset or the severity of the complications. Our figures do not confirm the findings expressed in a recent article[5] that no instance of severe colitis or proctitis has been observed by those authors following the ingestion of Terramycin. In our series six cases of acute ulcerative proctitis or colitis due to Terramycin are reported, as well as two cases of ulcerative proctitis due to Chloromycetin.

It was further stated in that review[5] that practically all patients with anorectal complications of drug therapy get well spontaneously over a period of from three to six weeks. Our statistics reveal an entirely different picture. The most striking characteristics of this syndrome are its tendency to recur and its tenacity. In one case aureomycin lozenges were taken for one day for a mild sore throat, and yet this patient has had recurrent symptoms for over twenty-four months. Another of our patients has had recurrences for orty-two months and, although improved, still has frequent exacerbations. Originally, he was iven aureomycin for herpes zoster, a self-limited disease. Our follow-up studies reveal that over one half of our patients are still having recurrences over two years after drug therapy, even hough they are diminishing in severity. It has also been determined that exacerbations of a more severe nature occur if aureomycin, Terramycin, or Chloromycetin is repeated.

TABLE V.—RESULTS OF MEDICAL AND SURGICAL TREATMENT

Status	Number of Cases
Cured	136
Improved	138
Unchanged	26
TOTAL	300

We do not wish to imply that all people who ingest these antibiotics develop anorectal complications, but it must be remembered that these occur more frequently than we imagine since many people who develop symptoms never seek medical aid.

It is of considerable interest to note that two thirds of our patients never had previous anorectal disease. The remaining one third had been treated for anorectal disease before taking the drugs. Of this latter group of 100 cases, 81 developed an entirely new anorectal syndrome in no way related to the previous difficulty.

We wish to emphasize that aureomycin, Terramycin, and Chloromycetin should be administered when a specific indication exists, but indiscriminate use of the drugs should be discontinued. The complications which develop as a result of the oral ingestion of these antibiotics are far more annoying and in some instances more serious than the original conditions for which the drugs were given.

Summary

1. A total of 300 cases of anorectal complications following oral ingestion of aureomycin, Terramycin, and Chloromycetin is presented.
2. A distinctive clinical entity is described.
3. The results of treatment are presented.
4. The need for caution in prescribing aureomycin, Terramycin, and Chloromycetin is emphasized.

905 FIFTH AVENUE

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Pulmonary Hyaline Membrane Disease in Newborn Infants

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Despite the fact that pulmonary hyaline membrane disease has been recognized for many years and has been associated with a high mortality, relatively little was written about it until quite recently. In fact, as late as 1948 in an authoritative manual[1] on premature infants from the Children's Bureau in Washington, D.C., no mention was made of hyaline membranes as a cause of death. In the booklet on problems of fetal and neonatal mortality issued in 1952 by the New York State Department of Health,[2] hyaline membranes were not mentioned by any descriptive title, and the only reference to their possible existence was a statement referring to aspiration of amniotic fluid, described as one of the causes of neonatal anoxia.

In the fifth edition of one of the leading textbooks of pediatrics published in 1950,[3] there was one paragraph under the section on congenital atelectasis, which mentioned the presence of this condition, and no mention of its presence was made in describing the hazards of the premature infant. However, in an extensive review reprinted from the annual report of the Chicago Health Department in 1951,[4] covering a period of fourteen years in which 10,000 neonatal deaths with satisfactory postmortem examinations were studied, pulmonary hyaline membrane was described as one of the leading causes of neonatal mortality.

In describing this entity different authors have used synonymous terms such as asphyxial membrane, vernix membrane, hyaline membrane, and resorption atelectasis,[5] and some have interpreted it as congenital alveolar dysplasia.[6] Since an inflammatory response is occasionally superimposed, it has also been described under "pneumonia of the newborn."[7]

It has been estimated that between 10,000 and 20,000 premature infants dying annually within the first two weeks of life have hyaline membranes in their lungs.[7] The incidence of hyaline membranes has been found to diminish progressively with increasing birth weight of infants so that this lesion is relatively uncommon in babies whose birth weight is over 3,000 Gm. These membranes are rarely seen in stillborn infants or in babies living less than one hour. From 25 to 50 per cent of deaths among prematures have been considered to be related to the presence of these hyaline membranes. Miller[8] claims it is the chief cause of death of newborn infants today. Potter[5] states that it is responsible for more deaths in liveborn babies than any other single cause in the Chicago Lying-in Hospital. At that institution it was the only pathologic finding in 40 per cent of all infants weighing from 1,000 to 2,500 Gm. who died between 1939 and 1949.

Hyaline membranes have been found in a large proportion of newborns delivered by cesarean section regardless of weight.[5] The literature reveals that this method of delivery was performed in the great majority of mature infants who were found to possess these membranes at autopsy. An interesting finding very frequently associated with the pulmonary lesion in babies dying after cesarean section has been a rise in intracranial pressure due to an increase in subarachnoid fluid. Whether there is a causal relationship between the rise in intracranial pressure and the pulmonary distress following this method of delivery has not been determined to date.[5]

Warren and Le Compte[9] found eight cases of neonatal death attributed to pulmonary hyaline membranes in a study of 50 autopsies on infants of diabetic mothers. Although the majority of these eight cases were delivered by cesarean section, this pulmonary lesion was also present in some delivered by the vaginal route. These authors emphasize the fact that the large size of babies of diabetic mothers is deceptive since the size obscures the actual prematurity. According to gestational age, many of these large infants are premature and behave as such both clinically and physiologically. Immaturity o

TABLE I.—Pathologic Cause of Death in 34 Cases Autopsied

Cause of Death	Number of Cases
Prematurity (nonviable)	7
Atelectasis (cause undetermined)	4
Intracranial hemorrhage	4
Multiple congenital deformities	3
Intestinal obstruction	2
Internal hydrocephalus	2
Internal hydrocephalus with spina bifida	1
Aspiration pneumonia	1
Esophageal atresia	1
Anencephaly	1
Cystic degeneration of brain	1
Pulmonary hyaline membranes	7

Table II.—Analysis of Seven Cases with Pulmonary Hyaline Membrane Disease

Case	Sex	Maturity (Weeks)	Weight (Gm.)	Duration of Life (Hours)	Type of Delivery
1	Male	34	1,450	25	Cesarean section
2	Female	40	2,500	38	Cesarean section
3	Male	31	1,600	38	Spontaneous
4	Male	42	2,500	41	Low forceps
5	Male	33	1,850	40	Low forceps
6	Male	40	3,000	22	Mid forceps
7	Male	26	1,000	7	Spontaneous

the kidney glomeruli was found in babies of large size, providing further evidence for prematurity.

Among the causative factors aspiration of amniotic fluid, deficient vagal control of respiration, excessive oxygen concentration, infection, and protein deficiency have been mentioned.

The purpose of this article is to add further data corroborating the high incidence of pulmonary hyaline membrane disease and to describe some concepts of its pathogenesis and treatment. It is hoped that this communication will stimulate a greater awareness of an important disease in which much progress is necessary in order to reduce the mortality.

During the period from January, 1950, to June, 1952, inclusive, there were 6,378 live births and 91 stillborns at Beth Israel Hospital, New York City. Of the live births 66 babies died, and autopsies were performed in 34 (Table I). Twenty-one babies of the 34 were in the weight range of 1,000 to 3,000 Gm., and in this group pulmonary hyaline membrane disease was found to be the cause of death in seven cases, an incidence of 33 per cent (Table II). There were no cases found in infants who weighed over 3,000 Gm. or less than 1,000 Gm.

Pulmonary hyaline membranes were found only in infants who were free from other diseases or congenital defects. There was no apparent relationship to race, age of the mother, parity, order of birth of the infant, Rh factor, serology, analgesia, or type of anesthesia. There were two deaths in babies delivered by cesarean section, and both infants had pulmonary hyaline membranes. Although other observers have noted no relationship between hyaline membranes and sex, six of seven babies in this series were males. The only maternal complications were those relating to the premature onset of labor.

TABLE III.—Clinical Cause of Death in 32 Cases Not Autopsied

Cause of Death	Number of Cases
Prematurity	21
Intracranial hemorrhage	3
Multiple congenital deformities	3
Congenital heart disease	1
Erythroblastosis fetalis	1
Imperforate anus with perforation of splenic flexure	1
Omphalocele	1
Bronchopneumonia	1

Of the 32 cases not autopsied there were 21 babies who died with a clinical diagnosis of prematurity unassociated with any other findings (Table III). It is reasonable to infer that among these, especially the larger or viable ones, there were some cases of pulmonary hyaline membranes so that the actual number of infants who died from this entity during the period of this study may be greater than the figure given.

The clinical picture follows a rather characteristic and uniform pattern. Following delivery the infants often seem normal or, if they are in poor condition, appear to improve for an hour or two after being placed in oxygen. Within the next few hours, despite oxygen administration, increasing dyspnea and sternal and costal retraction appear which become progressively more marked. Cyanosis and periods of apnea become prominent features, and a rapid downhill course ensues. Death usually follows in from four to ninety hours.

At autopsy the lungs are reddish purple in color and have the appearance and consistency of liver. They sink when placed in water. Microscopically, the membranes are most numerous in the alveolar ducts and appear to cause atelectasis by blocking the mouths of alveoli (Figs. 1 to 5). The generalized reabsorption of air and the collapsed appearance of the alveolar ducts and alveoli impart a solid appearance to the lung tissue which may be responsible for the con-

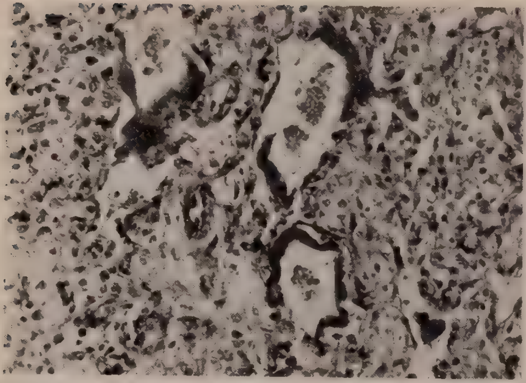

FIG. 1. Hyaline membrane lining alveolar ducts. The alveolar septa are thickened (hematoxylin-eosin stain).

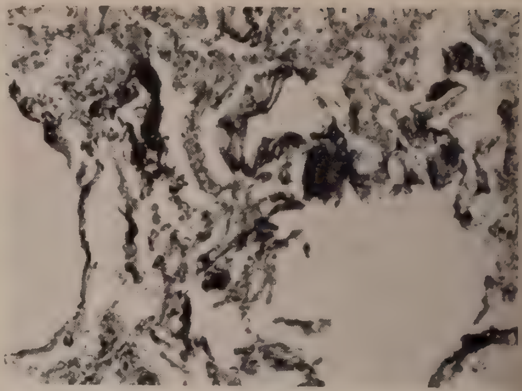

FIG. 3. Hyaline membrane, focal emphysema (PAS-H).

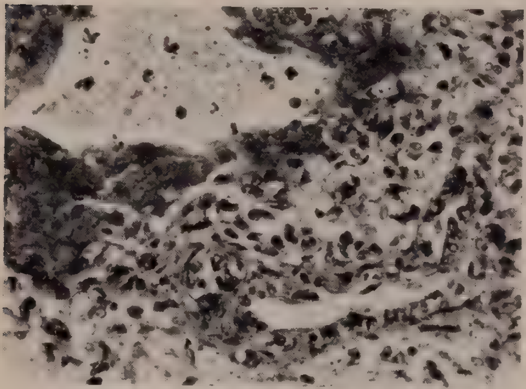

FIG. 2. Hyaline membrane lining alveolar ducts. Adjacent alveoli are not expanded (PAS-H).

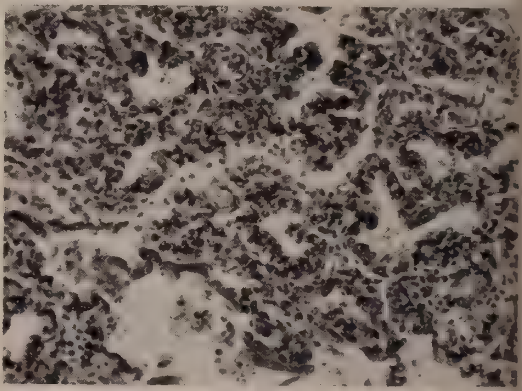

FIG. 4. Hyaline membrane, focal atelectasis (hematoxylin-eosin stain).

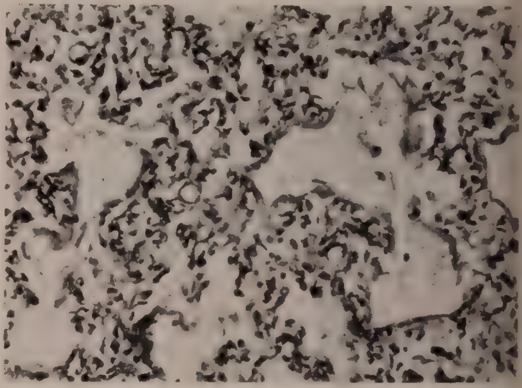

FIG. 5. Hyaline membrane lining dilated alveolar ducts. Thickened septa show prominent although few capillaries (hematoxylin-eosin stain).

cept of congenital alveolar dysplasia attributed to faulty development of lung tissue. The membranes are identified with the usual hematoxylin and eosin stain. They are acidophilic and homogeneous. Occasionally, staining reactions may demonstrate the presence of some fat, and for this reason it has been considered to originate from vernix caseosa. However, these membranes still retain their dense, homogeneous structure after treatment with fat solvents so that fat may play an insignificant role. Although squamous cells can be demonstrated at times, they are far fewer than are found in vernix. Nobody has been able to demonstrate the presence of fibrin, collagen, or amyloid in the membranes.

Whereas Miller and coworkers[10] identified a polysaccharide aldehyde as the only substance uniformly present in pulmonary hyaline membranes, by various staining methods Blystad and his group[11] found that the membranes were formed of concentrated protein of amniotic fluid. They also demonstrated a rise in the squamous cell content of amniotic fluid during the last month of pregnancy, which would explain the different microscopic picture between hyaline membranes formed of amniotic fluid aspirated before and after this rise.

Controversy centers around the pathogenesis of pulmonary hyaline membranes. There are divided schools of thought. One group considers these membranes to be formed of aspirated amniotic sac contents, caused by intrauterine asphyxia, which are forced against the lining of the lower respiratory tree when the infant begins to inspire air following delivery. Farber and Wilson,[12] leading proponents of this theory, were able to produce pulmonary hyaline membranes by introducing different types of liquids into animal lungs and artificially excised human lungs and then ventilating them. Blystad, Landing, and Smith[11] were also able to produce hyaline membranes in excised guinea pig and mouse lungs by repeated intratracheal injection of small amounts of amniotic fluid, while the lungs were alternately contracted and expanded for one hour. On the other hand, Miller and his group of coworkers[13–15] formerly believed that these membranes are the result of an injury to the respiratory epithelium or capillary bed of the lung. Recently, Miller and Behrle have suggested that lesions in the lungs of infants with hyaline membranes might in part be the result of a deficient vagal control of respiration.[10,15] Arey[16] contends that intrauterine anoxia may be responsible for vascular damage and capillary fragility which permits the escape of protein from the pulmonary capillaries. This protein from the blood and not amniotic protein may form the hyaline membranes.

Another factor, hitherto inadequately described, in the pathogenesis of this condition may be the difference between the microscopic structure of the premature lung and the lung of the normal infant born at term. In the former the distal portion of the pulmonary tree is lined by varying amounts of cuboidal cells, whereas in the full-term infant there is no epithelial lining distal to the bronchi. Furthermore, in the premature baby the connective tissue septa separating the outer surfaces of the alveolar ducts are prominent and poorly vascularized. In the fully developed infant these septa are no longer prominent, and the alveolar ducts are seen as spaces around which the individual alveoli are located.

We believe that several factors play a role in the pathogenesis of pulmonary hyaline membranes. Anoxia causes vigorous intrauterine respiratory movements with resulting aspiration of amniotic fluid. This is the first stage in the formation of pulmonary hyaline membranes. Extrauterine ventilation then applies the amniotic fluid firmly against the alveolar ducts and passages. This latter condition is rarely seen in anoxic mature infants unless delivered by cesarean section. However, in premature infants the difference in the structure and physiology of the lungs and the poor respiratory movements play vital roles in the formation of hyaline membranes. The premature baby must necessarily have difficulty in absorbing amniotic contents through lack of adequate pulmonary capillary bed and through the presence of cuboidal cells which line the alveolar walls. Factors contributing to poor ventilation are weak cough reflex, poor tonus and weak movements of the intercostal muscles and diaphragm, and a soft thoracic bony cage.

A plausible explanation for the mechanism of hyaline membrane formation in babies born by cesarean section may be based upon the fact that at the moment the infant is delivered, it is engulfed in amniotic fluid, provided the membranes have not ruptured. Attempting to deliver the baby as quickly as possible will frequently stimulate vigorous respiratory movements with resultant aspiration of large quantities of amniotic sac contents. Here the amount of fluid aspirated is so overwhelming as to make absorption or disposal via the airway difficult, even for the mature infant despite the normal structure and physiology of the lungs.

All investigators interested in the pathogenesis of this lesion have been impressed with the variety of conditions in older individuals where similar membranes have been found. For example, they have been described in rheumatic pneumonia,[17] influenza, radiation pneumonia,[18] pneumonic plague, and in pneumonia of coccal origin. They have been reproduced experimentally in guinea pigs by placing them in almost 100 per cent oxygen for thirty-six hours.[7] Experiments on dogs showed the production of hyaline membranes beginning twenty-four hours after exposure to cadmium chloride aerosols.[19] Miller *et al.*[10] were able to produce this condition by performing midcervical vagotomies in rabbits, the time of appearance of the membranes following the procedure being very similar to that of newborn infants after delivery.

At the present time the treatment of pulmonary hyaline membrane disease remains empiric. In view of the fact that this condition has been produced experimentally in animals with extremely high oxygen concentrations, the possibility of oxygen poisoning has been considered as a causative factor. However, normal infants in incubators with 40 to 60 per cent oxygen saturation suffer no apparent adverse effect. Furthermore, since many infants have had symptoms before being placed on oxygen, there is no reason to believe that the usual concentrations of oxygen employed have other than a beneficial influence.

Potter[5] has found at the Chicago Lying-in Hospital that increasing the humidity in the incubators to 90 to 95 per cent appears to have reduced considerably the incidence of hyaline membranes.

In an effort to reduce the incidence of hyaline membranes following cesarean section, we have advised immediate suction of amniotic fluid as soon as the uterus is opened. The attempt to deliver the baby as quickly as possible, thereby frequently stimulating vigorous respiratory movements without suctioning the fluid initially from the uterus, may possibly be the factor causing excessive aspiration with consequent membrane formation.

Gastric suction should be performed in these infants.[20] The ordinary suction of the nose, throat, and trachea is not sufficient. It is preferable to encourage repeated suction by catheter and, if necessary, through a laryngoscope down to the carina whenever indicated.

It is felt that the meticulous enforcement of these measures may serve to decrease the formation of hyaline membranes following cesarean section, and it is gratifying to learn that this is being done increasingly in our hospital and other institutions.[21] In the performance of cesarean section it must be remembered that although great strides have been made in reducing the maternal mortality, the fetal mortality according to some, even under the best of conditions, is still higher in this type of delivery than in delivery by the vaginal route.[22]

A concerted attempt to reduce to a minimum all factors which cause and contribute to prematurity would represent a distinct advance in decreasing the incidence of this condition. In spite of recent marked advances[23] in caring for prematures, there remain as yet physiologic and morbid alterations which confound our best efforts at diagnosis and treatment.

Since hyaline membrane formation may be dependent upon local permeability changes, the use of cortisone or corticotropin either in prophylaxis or treatment may be indicated. Since the pathogenesis is still undetermined and since no physical finding or laboratory test has been reported which permits the establishment of the diagnosis with certainty during life, only a statistical survey of a large series would prove the efficacy of corticosteroids in preventing or treating this condition.

Summary

1. Pulmonary hyaline membrane disease is a most important entity in the neonatal period and exhibits a predilection for premature babies and for infants delivered by cesarean section. Increasing efforts directed towards its clinical recognition, as well as more physiologic and pathologic investigation, are necessary in order to effect a reduction in the mortality rate.

2. During the period from January, 1950, to June, 1952, there were 6,378 live births and 91 stillborns at Beth Israel Hospital, New York City. Of the live births 66 died, and autopsies were performed in 34. Twenty-one babies in this group were in the weight category of 1,000 to 3,000 Gm., and in this category seven cases of pulmonary hyaline membrane disease were found to be the cause of death, an incidence of 33 per cent. There were no cases found in infants weighing more than 3,000 Gm. or less than 1,000 Gm. There were two deaths in babies delivered by cesarean section, and both had pulmonary hyaline membranes.

3. There was no relationship to race, age of the mother, parity, order of birth of the infant, Rh factor, serology, analgesia, or type of anesthesia. Six of the seven cases were males. The only maternal complications were those relating to the premature onset of labor. Hyaline membranes were found only in infants otherwise free from other diseases and congenital defects.

4. Some new concepts regarding the pathogenesis and treatment of this disease entity have been discussed.

5. It is hoped to bring further awareness to this important pulmonary condition and to emphasize the need for its inclusion in all future reviews of physiologic handicaps and hazards in premature infants and infants delivered by cesarean section.

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The Significance of a Single Electrocardiogram in the Interpretation of Serum Potassium

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LACK of close correlation between serum potassium and a single electrocardiogram in clinical situations has been reported.[1,2] The usefulness of the electrocardiogram in following changing serum potassium levels has been generally conceded.[3,4] The relation of serum sodium[5] and calcium[6,7] levels to electrocardiographic changes of potassium abnormality has been described. This study is an attempt to define the limits within which experienced electrocardiographers can reliably predict potassium abnormality from a single tracing.

Methods

Sixty-eight 12-lead electrocardiograms on 59 patients were studied. Serum potassium and sodium levels were determined by flame photometry on blood drawn within twelve hours of the electrocardiogram. The tracings were read without clinical or laboratory data by three electrocardiographers, each of whom had had at least ten years of experience interpreting tracings at a University Hospital.

Criteria used for hyperkalemia included QT prolongation, increased T-wave height with "peaking," depression of the ST junction, deepening S wave, prolongation of the PR and QRS, and disappearance of P waves. Hypokalemia was deduced from flattening and diminished height of T waves without prolongation of the ST segment, the presence of prominent U waves, and prolongation of the QT_c.

For this study the interpretations by the electrocardiographers have been classified as low, high, or normal potassium. The original interpretation, made with the help of history and previous tracings, has been similarly classified. Drug history and serum calcium levels were taken from the hospital chart when available.

Results

The results are shown in Fig. 1A, B, and C.

Aided by funds from the National Heart Institute, U.S. Public Health Service.

As shown, consistent agreement between serum potassium levels and electrocardiograph interpretation was obtained only when the serum potassium was above 7.3 mEq. per L. Only one patient with hypokalemia (2.1 mEq. per L.) had a tracing which all three observers agreed was suggestive of low potassium.

In the normal range, taken here as 3.6 to 4.8 mEq. per L., eight out of 28 tracings were read as hypokalemic by at least two out of three observers (Fig. 1A). Four of these eight were read that way originally. Only one in the normal range was read as hyperkalemic by two out of three examiners. Eleven out of 28 electrocardiograms from patients with normal potassium levels were read as abnormal by at least one observer in the blind interpretation, while only four had suggested electrolyte disturbance to the original interpreter.

In the hyperkalemic range only one of 14 electrocardiograms coincident to serum potassium levels between 4.9 to 5.9 mEq. per L. was read correctly by all three observers (Fig. 1B). Four others were interpreted as compatible with high serum potassium by one of the three interpreters. The original interpretations of these 14 suggested electrolyte imbalance in two instances, one suggesting a high level and another a low level of potassium. Between 6.0 and 7.1 mEq. per L. three out of six electrocardiograms were correctly associated with the high serum potassium by the original observer. On examination hyperkalemia was suggested to only one of three interpreters on two of these six tracings. Above 7.1 mEq. per L., as stated before, all six electrocardiograms were read correctly originally and on reexamination.

Renal disease was present in 25 patients, 21 of whom were frankly uremic. All but three of the 25 had potassium levels over 4.0 mEq. per L. Only five of these 22 hyperkalemic, uremic patients had electrocardiograms identifiable with high potassium. Of the 17 not showing the changes of high potassium levels, serum calcium was available in only two, with values of 5.8 and 6.2 mg. per cent.

In the hypokalemic range the following was found (Fig. 1C): Between 2.1 and 2.9 mEq. per L. a low serum potassium was suggested in two out of eight tracings originally. On re-examination two or three observers thought a low potassium level was present in five of the eight tracings below 2.9 mEq. per L. Between 3.0 and 3.5 mEq. per L. hypokalemia was suggested originally in three out of six instances. On review only two of the six tracings were thought to be consistent with low serum potassium level by at least two of the three interpreters.

Serum sodium, shown in small numerals on the figure, have shown no constant relationship to the correctness of interpretation in this study when related to potassium either as a ratio or a product.

Of the six tracings of patients with serum potassium above 7.3 mEq. per L., three had normal serum sodium levels (138, 140, 140), and three had low serum sodium levels (116, 113, 113). All six were interpreted as consistent with hyperkalemia.

Of the 19 tracings of patients with hyperkalemia whose serum potassium levels were not predicted from the electrocardiogram, only four had serum sodium levels below 130 mEq. per L.

None of the 14 tracings of patients found to be hypokalemic had an elevated serum sodium level, and two were actually slightly under 130 mEq. per L.

Serum calcium was available in four instances, three of which were hyperkalemic situations. A serum calcium of 6.7 mg. per cent apparently did not interfere with detection of hyperkalemia at a potassium level of 7.9 mEq. per L. Two with a calcium level of 6.8 mg. per cent and potassium levels of 6.6 and 5.1 mEq. per L. were originally interpreted as hyperkalemia but not on review. One patient whose potassium was 4.8 mEq. per L., the upper limits of normal, had a serum calcium of 6.2 mg. per cent. His tracing was originally interpreted as without potassium abnormality, but on review all three observers suggested hypokalemia.

Digitalis may account for four of the eight low potassium tracings which were read otherwise. It

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Fig. 1. (*See next page*). The arrows represent single interpretation of a tracing. In each cluster the arrow above represents the original interpretation *with* benefit of history and previous tracings if any. The trio of arrows below represents the separate impressions *without* history or previous tracings of three experienced electrocardiographers. Small numbers represent serum sodium (mEq. per L.) in each instance.

(A) All of these patients had potassium levels in the normal range (3.6 to 4.8 mEq. per L.).
(B) All of these patients had potassium levels in the hyperkalemic range (over 4.8 mEq. per L.).
(C) All of these patients had potassium levels in the hypokalemic range (under 3.6 mEq. per L.).

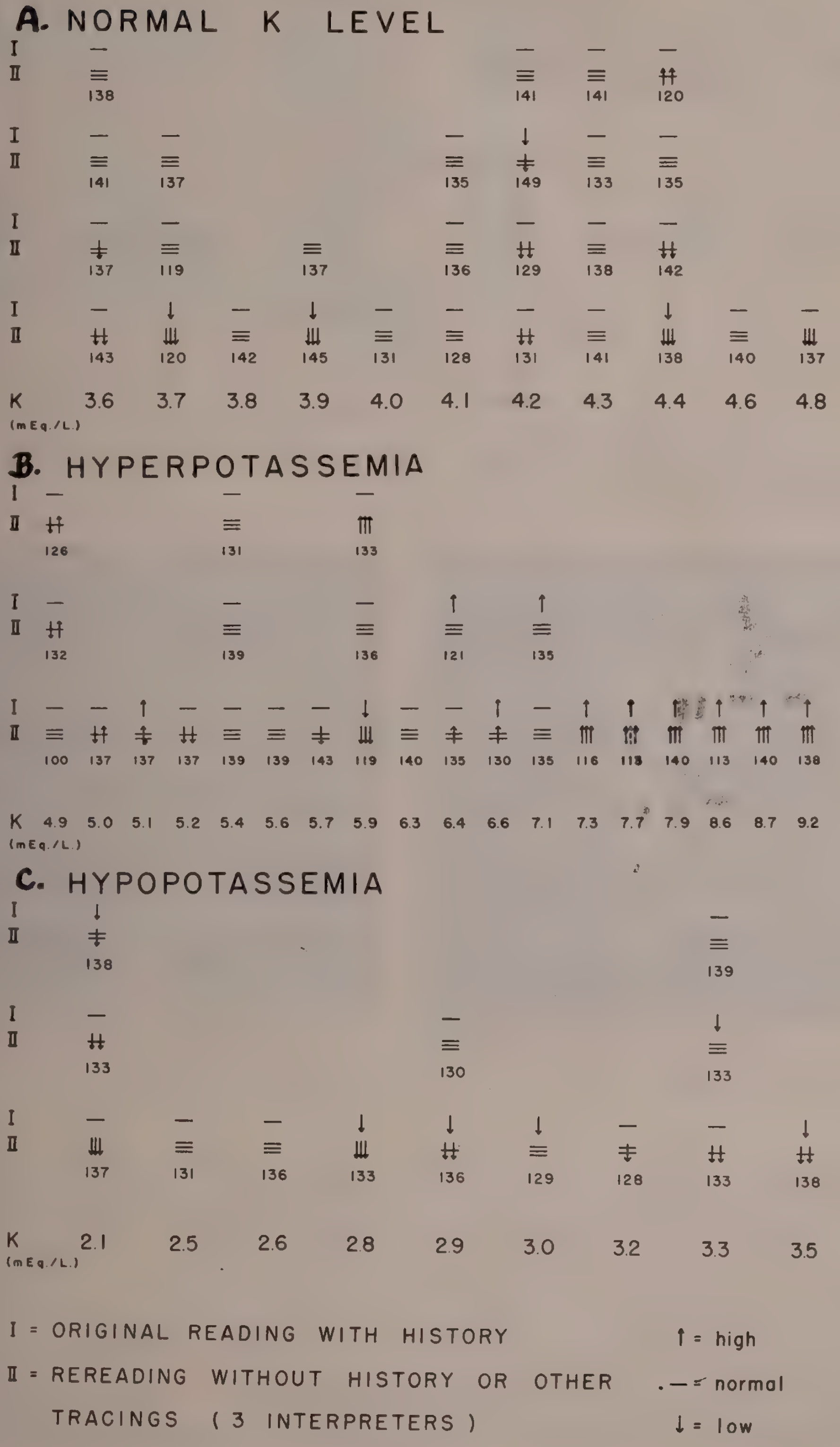
A. NORMAL K LEVEL
138 141 141 120
141 137 135 149 133 135
137 119 137 136 129 138 142
143 120 142 145 131 128 131 141 138 140 137
K (mEq./L.) 3.6 3.7 3.8 3.9 4.0 4.1 4.2 4.3 4.4 4.6 4.8
B. HYPERPOTASSEMIA
126 131 133
132 139 136 121 135
100 137 137 137 139 139 143 119 140 135 130 135 116 113 140 113 140 138
K (mEq./L.) 4.9 5.0 5.1 5.2 5.4 5.6 5.7 5.9 6.3 6.4 6.6 7.1 7.3 7.7 7.9 8.6 8.7 9.2
C. HYPOPOTASSEMIA
138 139
133 130 133
137 131 136 133 136 129 128 133 138
K (mEq./L.) 2.1 2.5 2.6 2.8 2.9 3.0 3.2 3.3 3.5
I = ORIGINAL READING WITH HISTORY
II = REREADING WITHOUT HISTORY OR OTHER TRACINGS (3 INTERPRETERS)
↑ = high
— = normal
↓ = low

Fig. 1

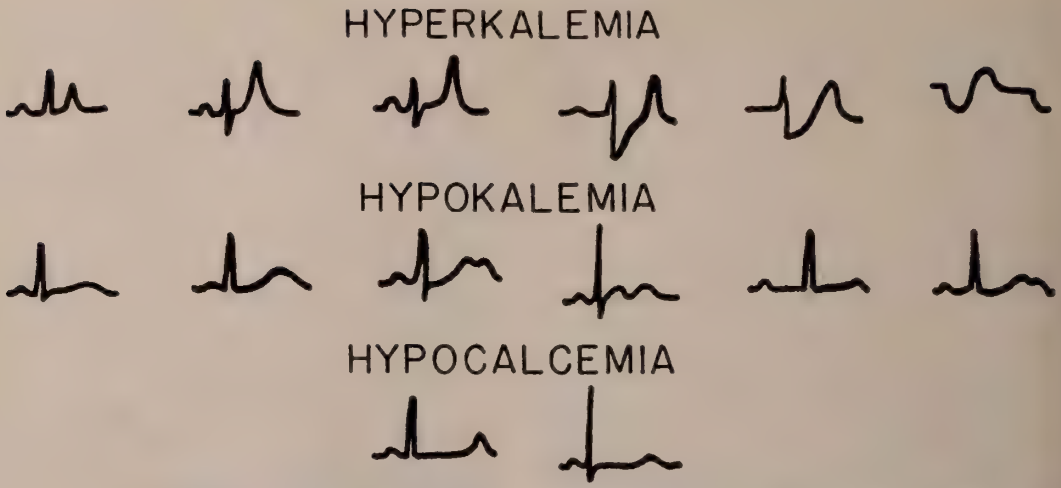

FIG. 2. The progressive changes seen with elevation of serum potassium, lowering of serum potassium, and lowering of serum calcium are shown, derangement increasing from left to right. (*Courtesy of Dr. George H. Reifenstein, Syracuse, New York.*)

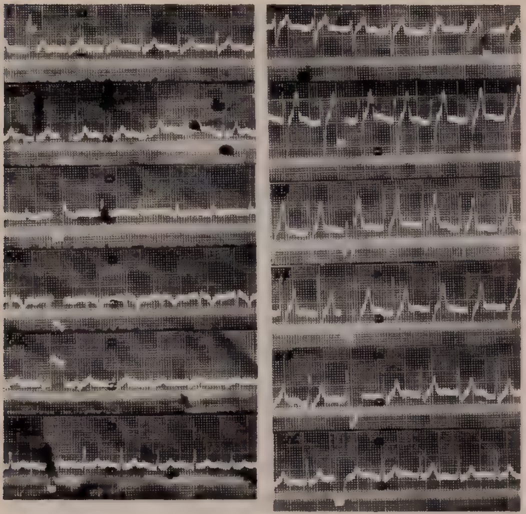

FIG. 3. Electrocardiogram from a patient with uremia. The serum potassium was 7.7 mEq. per L. and serum sodium 113 mEq. per L.

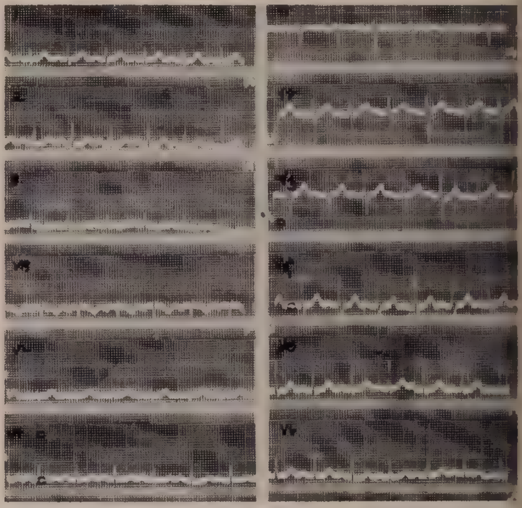

FIG. 4. Electrocardiogram fifteen days later from same patient as shown in Fig. 3. Serum potassium was 4.1 mEq. per L. and serum sodium 128 mEq. per L.

had been given to eight of the 18 hyperkalemic patients whose tracings were read as compatible with low or normal serum potassium. Only one patient on digitalis had an electrocardiogram correctly interpreted for electrolyte level, this one with a serum potassium of 7.3 mEq. per L.

Comparing blind reading with the original interpretation, knowing the patient's history, there were only slight differences. Of 14 patients with low serum potassium the tracings of nine were misinterpreted knowing the history, and eight were misread when read without the history. Four of 28 tracings on patients with normal potassium were misread when the history was available, and nine were misread when the clinical picture was unknown. Fifteen of 26 high potassium tracings were read otherwise with history available, and 19 were misinterpreted when seen without other data.

Three patients had five serial tracings and one had four tracings. All had hyperkalemia varying from day to day. The original clinical interpretation with the history and previous tracings available predicted hyperkalemia more reliably

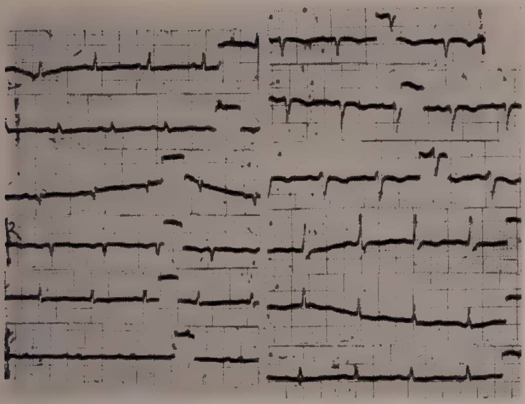

FIG. 5. Electrocardiogram from a patient with intestinal obstruction treated with Wangensteen drainage. The serum potassium was 2.5 mEq. per L. and serum sodium 131 mEq. per L.

than the "blind" reading in three of the four series.

Comment

Figure 2 demonstrates the expected changes in precordial leads with varying degrees of hyperkalemia, hypokalemia, and hypocalcemia. Figures 3 and 4 are electrocardiograms from a patient with uremia and illustrate hyperkalemia which was subsequently relieved. Figure 5 is an electrocardiogram from a patient with small bowel obstruction and hypokalemia.

Apparently the electrocardiographic changes associated with hyperkalemia are more easily recognized, at least by the interpreters in this study, than those associated with low potassium. Very high levels of potassium were necessary, moreover, before consistent agreement could be attained.

It appears that serum sodium level influenced the interpretation of potassium abnormality very little, if at all, in the tracings studied here. Low serum calcium levels, as pointed out by Ernstine and Proudfit,[7] may suggest hypokalemia or may prevent the recognition of hyperkalemia when present. The differentiation of hypokalemia and hypocalcemia by the ST prolongation usually seen with the latter is not consistently useful.

The reasons for lack of correlation of serum potassium and the electrocardiograms here apparently lie in the multitude of variables in a clinical situation, including electrolyte variation and drug administration. Changes in the electrocardiograph with potassium abnormality of minor or moderate amount involve the T wave. This element of the electrocardiograph is also changed by drugs such as digitalis or quinidine as well as by other electrolytes, chiefly calcium.

In this study the availability of the patient's history made little difference in low potassium situations and improved the interpretation only slightly in normal or high potassium ranges.

Conclusions

In clinical situations a single electrocardiogram has not proved to be a reliable indication of the level of serum potassium with or without historical data when interpreted by experienced electrocardiographers.

The assistance of Drs. W. W. Street, I. L. Ershler, and G. H. Reifenstein is gratefully acknowledged.

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It Happened Here

The Ludwig Music House, Inc., 709 Pine Street, uses its trucks to spread the following safety message, printed on the rear: "Play it safe, we've run out of harps."—*St. Louis Globe-Democrat*

Carbon Dioxide Inhalation Therapy in Psychiatric Conditions

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HISTORICALLY the use of carbon dioxide in the treatment of emotionally disturbed patients can be traced to Loevenhart, Lorens, and Waters[1] who first made use of this technic in the treatment of schizophrenic patients in 1929. This procedure appeared to be ineffectual, however, and was generally discarded until 1947, at which time Meduna[2] published a series of papers dealing with the treatment of psychoneurotics with carbon dioxide inhalation therapy. This revival of a comparatively dated technic gave impetus to many workers in the field to test its effectiveness. As a result there is an increasing body of data in the literature describing results obtained with this modality in various settings throughout the country.

Subsequent to the report of Meduna at the American Psychiatric Association Convention in 1951, the treatment of psychiatric disorders with carbon dioxide inhalation therapy was begun in the Outpatient Neuropsychiatric Clinic of the Jewish Hospital of Brooklyn. The procedure followed that of Meduna[3] and utilized a mixture of 30 per cent carbon dioxide and 70 per cent oxygen. The patient, in a supine position, breaths the mixture through an ordinary inhalation mask with a reducing valve and a central valve arrangement. From 15 to 50 inspirations are used to induce narcosis. However, it is not advisable to give more than 20 to 25 inhalations during the initial stages of treatment. Following the second or third treatment the observed reaction of the patient to the gas will determine the number of inhalations most appropriate for him.

At this point we departed from the Meduna procedure. Shortly after initiating the use of carbon dioxide we became impressed with the apparent need of the patient to form a relationship with the therapist. This has ultimately resulted in the use of varying degrees of psychotherapy as an adjunct to the carbon dioxide treatment. Psychotherapy is introduced immediately upon the patient's awakening from the comatose state. As a consequence the duration of the individual treatment was extended from the original six minutes to twenty to thirty minutes. The patient can immediately leave the hospital or office following the treatment since his orientation is in no way affected.

There appears to be a definite physiologic pattern of reaction to the treatment which is readily observable. Our findings correspond closely to those reported by Meduna and Gyarfas,[4] Baars,[5] and McRae[6] among many others. After two or three inhalations there is an increase in the respiratory rate, heart rate, and in the blood pressure and a general suffusion of the face. Muscular twitching, usually of the eyelids, develops, and narcosis takes place. This is followed by psychomotor and psychosensory excitation with movements of the extremities and the body which are often suggestive of a postural set associated with an emotional experience. Beyond this point tremors and spasms may occur; sometimes Babinski signs can be elicited. It is undesirable to reach this latter stage since it is of no therapeutic value and may prove harmful to the patient.

The population used as the basis for this report consisted of 72 patients treated at the private offices of the authors and at the Neuropsychiatric Clinic of the hospital. They ranged in age from twenty-one to fifty-six years. The intellectual range was from dull normal to superior. There was no predominance of either sex. Ninety-five per cent of the patients had been ill for two or more years, and many had received other forms of psychiatric treatment including psychotherapy and/or electric shock therapy.

A complete case history was taken on all of the patients. A thorough physical examination, both neurologic and medical, was made with

TABLE I.—RESULTS OF TREATMENTS

Diagnosis	Improvement	Slight Improvement	No Improvement	Total
Anxiety neurosis	18	..	12	30
Conversion hysteria and psychosomatic syndromes	10	..	5	15
Obsessive compulsive	1	..	7	8
Recurrent depressions	..	3	4	7
Alcoholism	3	..	2	5
Borderline psychosis	..	..	3	3
Neurotic homosexuals	2	..	..	2
Psychomotor epilepsy	..	..	1	1
Stammerer	1	..	..	1

any laboratory studies as indicated. A battery of psychologic tests was administered to those patients seen at the hospital preceding, during, and at the completion of the treatment series. Psychiatric interviews were similarly done by psychiatrists not involved in this study for an objective evaluation of the patients' conditions. The criterion used to judge improvement was the extent of amelioration of the presenting complaints. An arbitrary list of 30 complaints was noted on each patient's chart. The increase or decrease of the severity of these complaints determined the ultimate evaluation (Table I).

Each patient received two to three treatments a week, averaging 52 per patient and ranging from 12 to 100 treatments. It was noted that those patients who received more than 30 treatments experienced a mild period of depression lasting from a few days to a week. This was dissipated with further treatment. The manifestation of this reaction often heralds improvement.

Of the anxiety neurotics those who improved included the very acute and those of chronic standing for as long as fifteen years. The severity and duration of the illness apparently played no significant role in the final outcome of the course of therapy. These results compare well with Kindwall,[7] who reported 50 per cent improvement with anxiety states, and Silver,[8] who claimed that all of his patients with anxiety symptoms reported subjective improvement. LaVerne and Herman,[9] using the Meduna technic, reported only 14 per cent improvement with this group. However, with the Rapid Coma Technic (RCT), a modification developed by LaVerne, consisting of a forced inhalation of a single breath of a 70 per cent carbon dioxide to 30 per cent oxygen mixture, 45 per cent of his anxiety states improved.

Those patients with conversion symptoms who improved showed an almost immediate reduction in tension followed by a complete or partial symptom abatement. It is widely reported that tension states are amenable to carbon dioxide therapy, and striking improvement is seen where this is the primary symptom. The obsessive-compulsives appear to have the poorest prognosis of the psychoneurotic group with the use of this modality. Receiving more treatments per individual than any other group, they showed the worst results. The carbon dioxide tended to aggravate rather than diminish the symptoms, and in one case a psychosis was precipitated. One patient, however, improved remarkably.

A woman, fifty-six years of age, showed an obsessive-compulsive reaction pattern strongly attended by depressive features. She had previously undergone vitamin therapy, estrogen therapy, psychotherapy, and electric shock therapy with no improvement. Following two months of carbon dioxide treatment on a twice-a-week basis, she was able to carry out the minimal duties of a housewife. At the present time (after 51 treatments) she has fully resumed her previous role in the household and appears to be making an effective adjustment.

The results obtained with alcoholic patients seemed to correlate well with the status of the illness in terms of duration and severity, although Phillips[10] treated an alcoholic of ten years standing with 14 treatments over twenty-four days and achieved excellent results. Kindwall,[7] Baars,[5] and LaVerne and Herman[9] report good results with RCT in alcoholic patients and with barbiturate addicts.[7] Recurrent and neurotic depressives show slight improvement with this technic. Generally speaking this group yields poor results.[8] The three prepsychotic patients reacted to carbon dioxide in such a manner as to indicate precipitation into full-blown psychosis. Immediate hospitalization was required. Results reported with psychotic patients are generally pessimistic,[1,7,9,11] although Liest[12] claims that psychotics in remission are made more amenable to psychotherapy with the use of carbon dioxide.

The two neurotic homosexuals had suffered with severe anxiety panic in relation to their homosexuality. This tended to incapacitate them. Following a series of treatments they subjectively reported a feeling of well-being.

They are capable of maintaining employment, have begun heterosexual relationships, but have not given up their homosexual activities. Baars[5] and LaVerne and Herman[9] report good results with RCT in this group, particularly with the passive homosexual.

Physiologic Theory

The rationale for the use of carbon dioxide inhalation therapy is based on the theory developed by Meduna[13] invoking the reverbatory circuit concepts of Lorente de No.[14] He concluded that his results were strictly on a pharmacologic biochemical basis and that the effects of carbon dioxide therapy could be attributed to the following factors: (1) carbon dioxide produces an increase in the membrane potential of the nerve; (2) carbon dioxide produces an increase in the threshold of stimulation and ability to conduct trains of impulses; (3) carbon dioxide produces a decrease in the fatigability of the nerve cell, and (4) carbon dioxide increases the ability to release energy. Meduna attempted to show that by means of carbon dioxide therapy the neural integration of the cortex is brought into equilibrium by inhibition of the undesirable circuits through the establishment of circuits which interfere with the undesirable ones. He said that homeostasis can be achieved by mobilizing suppressive areas, which areas, by negative feed-back circuits, decrease or inhibit the function of the pertinent cortical areas, even if the nociferous stimuli persist.

Meduna believed that by establishing an irreducible theory of neurosis in physiologic terms, the "verbiage of symbolic psychiatry" would be eliminated.

Psychologic Theory

Findings based on the psychologic data obtained by clinical testing indicate that carbon dioxide therapy tends to release some inhibitory mechanisms, probably due to its biphasic effect. Liest[15] and Meduna and Gyarfas[4] indicate that the administration of carbon dioxide therapy inhibits the role of the "analytic cortex" decreasing the function of the inhibitory cortical areas. The inhibitor, undergoing a temporary anesthesia coupled with the increased respiratory rate, heart rate, and blood pressure, tends to add buoyancy to physiologic functioning and possibly to hitherto repressed impulses. The impulses thus strengthen and make ineffectual those controls which previously had been adequate to contain them. Freeman[16] points out that carbon dioxide may overwhelm the ego, inhibit the control of the super-ego, and thus allow the release of impulses which are ordinarily associated with guilt and anxiety and, therefore, repressed. Wilcox[17] observed that there is often a considerable amount of emotion released during the carbon dioxide experience which has a cathartic effect.

The energy which was involved in this action to control the impulse is suddenly made available to the patient. If this newly found force is not amenable to harnessing or channelization by the patient, one of three alternate possibilities may result:

1. The energy which was repressed for a long period of time may diffusely spend itself, relieving accumulated tension and anxiety. Subsequently, the patient will probably return to previously learned behavior and begin anew to accumulate energy resulting in tension, which can be abated by the administration of such a pharmacologic agent as carbon dioxide. This cumulative process may extend over a long time period, during part of which the patient may appear to be symptom-free.

2. The energy which finds sudden release may take on such profound proportions as to overwhelm the ego and its defenses and precipitate psychosis. Peterson[18] states that the treatment experience is occasionally a serious threat to the ego and may produce "road to ruin" anxieties, homosexual anxieties, or sometimes a breakdown. Shorvon and Sargant[19] similarly warned against the possibility of such an occurrence. This sort of reaction would occur in patients with markedly weak ego structures whose defense mechanisms are essentially inadequate, those in whom the typical balance between control and impulse is, at best, precarious. Such a personality picture would contraindicate the use of carbon dioxide as a therapy. This was strikingly demonstrated by the three borderline psychotic patients referred to above, who were precipitated into a psychotic reaction.

3. The proprioceptive awareness of inner excitation may so threaten the patient as to cause him to resist the treatment rigidly. This would probably result in a flight from the total situation. McGraw[20] reported numerous cases of patients who, following one to three treat-

ments, evinced great fright and subsequently did not return.

Judged on its own merits, carbon dioxide therapy would not appear in itself to be an adequate form of treatment. It is short of being complete to the extent that psychotherapy in some degree is not employed. Particularly where energy which had been previously repressed is now available, it is necessary to institute a learning process. It is especially appropriate at this stage for, as Liest[15] points out, "repeated temporary removal of the cortical influence certainly permits reassociation and strengthening by re-enforcement in accord with the principles conventionally accepted as indigenous to psychologic learning." This learning preferably should be in the form of psychotherapy to enable the patient to sublimate the released energy into a more creative or productive channel. And, as Peterson[18] remarked, "it is also recommended as a means of insulating the patient against a psychogenic recurrence."

As an adjunct to psychotherapy, carbon dioxide therapy could be invaluable. Wilcox[21] developed a technic which he calls "psychopenetration" wherein he combines the use of carbon dioxide with a psychoanalytically oriented psychotherapeutic technic. He developed a series of test questions in order to determine the patient's readiness for this form of therapy and also a group of measurements which can be considered as probing devices. These are used to trace symptoms, feelings, and ideas elicited through the medium of carbon dioxide to their unconscious causal factors.

Liest,[15] following Meduna, made an attempt to divorce education and psychotherapy from this technic. However, he found it necessary to forego the initial practice of using carbon dioxide exclusively because he felt that both the physiologic and psychologic must be equally considered. Freeman[16] describes the carbon dioxide therapy situation as a sexualized one within which much of the material which is acted out during the psychomotor phase should be open to psychodynamic interpretation. There is also the inference that this sexualization would enhance a transference relationship. Lerman[22] informed the authors that he frequently makes use of carbon dioxide in this manner to initiate the transference situation. During psychotherapy if one encounters a stubborn resistance regarding material which the therapist feels is close to the level of awareness and the psychologic and physiologic organization does not contraindicate carbon dioxide, it would appear that this would be a most appropriate and useful measure.

Conclusions

1. A group of 72 patients were treated at the private offices of the authors and at the Outpatient Department, Neuropsychiatric Clinic, Brooklyn Jewish Hospital. The anxiety neurotics showed the most substantial improvement of those within the psychoneurotic group. The least improvement was indicated in the obsessive-compulsive group where symptoms tended to become aggravated rather than ameliorated.

2. Prepsychotic states were found to be precipitated into open psychosis as a result of this treatment.

3. Carbon dioxide can be a valuable adjunct to psychotherapy. It is particularly valuable in breaking down resistance during the course of general psychotherapy.

4. Carbon dioxide has been effective in the treatment of some forms of psychiatric disorders which do not respond to other kinds of treatment.

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A New Method of Timing Ballistocardiographs

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The rhythmic beat of the heart is the ground phenomenon of the circulation of the blood. It reveals itself by certain tokens: sounds, surface movements or pulsations, changes in the pressure and velocity of the blood, changes of volume in parts, and others. All are periodic phenomena continually recurring with the same period as the heart beat. All are therefore fundamentally related.

Whether a pulse tracing is made or a blood pressure curve (tonoscillogram), or a plethysmographic record, or an electrocardiogram, it is evident that we are really investigating the same fact from quite different approaches. The ballistocardiogram is still another and as yet incompletely charted approach.

Secondari and Pacini[1,2] made simultaneous recordings of the ballistocardiogram and the heart sounds using a two-channel electrocardiograph (Twin Viso-Cardiette). The subjects were young, normal adults free from heart disease according to the criteria established by the New York Heart Association. A typical simultaneous trace as presented by these investigations is shown (Fig. 1).

Study of such simultaneous recordings revealed that normally there is a ballistocardiographic systole coincident in timing with systole as measured by the interval between the beginning of the first and second heart sound. Ballistocardiographic systole is composed normally of an upstroke lettered G-H, a downstroke H-I, an upstroke I-J, and a terminal and generally most conspicuous downstroke J-K. The point G is coincident with the beginning of the recorded first heart sound, and the point K is coincident with the beginning of the recorded second heart sound. Therefore, investigators call the interval beginning at G and ending at K "ballistocardiographic systole."

Ballistocardiographic systole is easily identified in normal traces. There are, however, several situations in which ballistocardiographic systole does not coincide with recorded heart sound systole. Deviation from this coincidence may take one of two forms:

1. The ballistocardiographic pattern retains the general configuration of the normal, each of its four strokes being easily identified (G-H, H-I, I-J, and J-K), but, whereas G is coincidental in time with the beginning of the first recorded heart sound,
    - (*a*) K occurs before the beginning of the second heart sound, or
    - (*b*) K occurs after the beginning of the second heart sound.
2. The ballistocardiographic pattern is not of usual normal configuration but so confused as to make it difficult, often impossible, to identify the beginning and end of systole without recourse to a superimposed timing signal.

Both findings, we believe, indicate abnormality

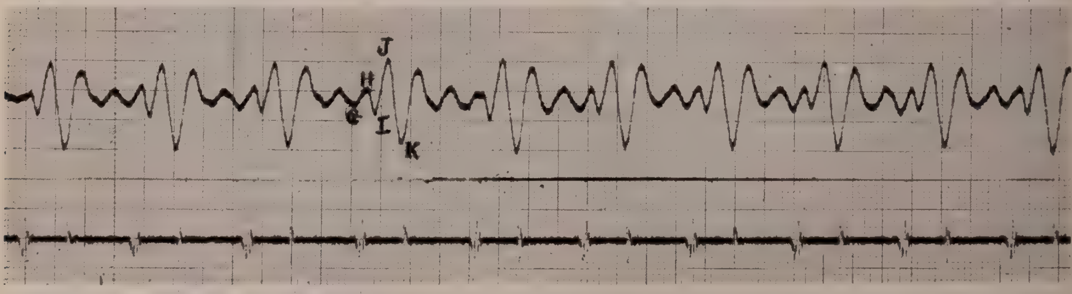

FIG. 1. Simultaneous recording ballistocardiogram and heart sounds. The strokes of the normal ballistocardiogram comprising ballistocardiographic systole include G-H, H-J, I-J, and J-K. This is coincidental with the beginning of the first heart sound and K with the beginning of the second heart sound. The interval G-K is designated ballistocardiographic systole and is normally coincidental with heart sound systole in time.

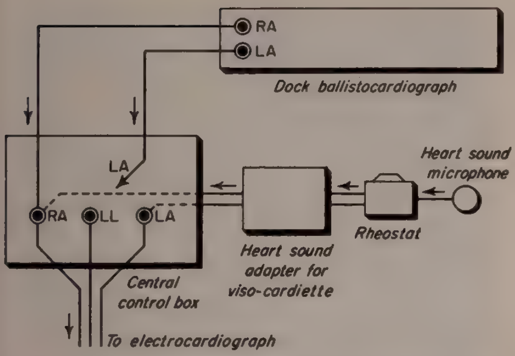

FIG. 2. Device to permit simultaneous superimposition of heart sounds on ballistocardiogram with a single-channel electrocardiograph recorder: (*A*) heart sound microphone, (*B*) rheostat for adjustment of heart sound intensity, (*C*) heart sound adapter for viso-cardiette, (*D*) dock ballistocardiograph, (*E*) central control box, (*F*) socket for heart sounds plug, and (*G*) sockets for electrocardiograph and ballistograph lead cables.

and call for a diagnosis of the heart condition accountable for the deviation.

Multichannel recording devices are not always clinically available, and several procedures have been described for timing the ballistocardiogram recorded on a single-channel, self-writing electrocardiograph. Dock, Mandlebaum, and Mandlebaum[3] used a simultaneous pulse recording. Gubner[4] superimposed the QRS electrocardiographic spike on the ballistocardiogram.

In the case of the radial pulse, much work is required to establish the variables in the normal that can influence the appearance of radial pulsation entirely apart from any heart action. More simply, the radial pulse does not attain its peak at any precise event in the heart beat but is dependent on numerous uncontrollable and variable extracardiac phenomena.

In the case of the electrocardiograph the QRS spike differs with each lead and actually represents a byproduct of heart contraction of a totally different origin (electrical) from that occasioning the ballistocardiogram (mechanical).

Clinically, the heart sounds are a much studied token of heart pulsation and are normally related to the ballistocardiogram in time. They seem to serve as clinically satisfactory timing signals.

To overcome the need for multichannel instruments, we have devised a relatively simple procedure for superimposing the heart sounds on the ballistocardiogram during a recording on a one-channel, commonly available, self-writing electrocardiograph. The apparatus employed is shown in Fig. 2. In this diagram a Dock ballistocardiograph is shown (although other types of ballistocardiographs can be used with small modifications). A special heart sound system for a viso-cardiette is required.* It includes a rheostat for adjustment of the heart sound intensity. The use of a central control box enabled us to obtain tracings of the heart sounds alone (Fig. 3A), the ballistocardiogram alone (Fig. 3B), and a combination of the two (Fig. 3C).

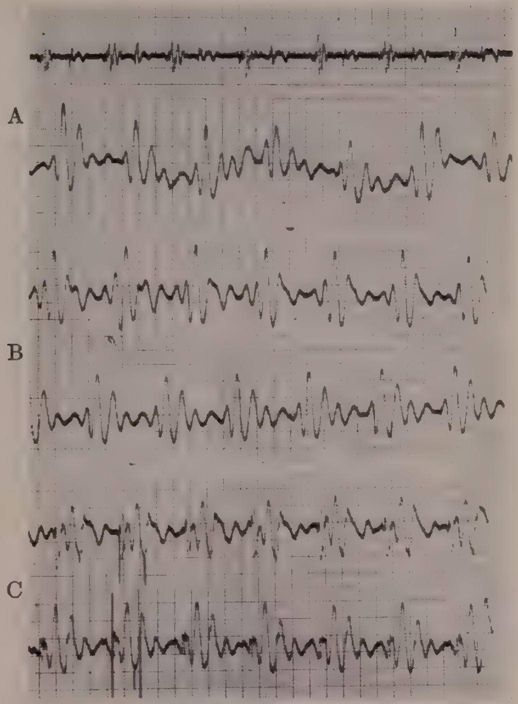

FIG. 3. (*A*) Recording of the heart sounds alone. (*B*) Recording of the ballistocardiogram alone. (*C*) Superimposition of the heart sounds on the ballistocardiogram to aid in the identification of ballistocardiographic systole. The rheostat enables the heart sound records to be reduced to the barest recognizable limit so as to preclude interference with the ballistocardiogram. Once ballistocardiographic systole is recognized, a simple turn of the switch removes the heart sounds which then no longer vitiate the ballistocardiogram.

To obtain the tracing, the procedure is as follows: The microphone is strapped to the chest over the apex of the heart, and the heart sound cable is plugged into the control box. The right arm, left arm, and left leg leads of the electrocardiograph cable are inserted in the proper terminals. The ballistocardiograph is placed on the patient's shins in the usual manner. The

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* Heart sound equipment, courtesy of Sanborn Company.

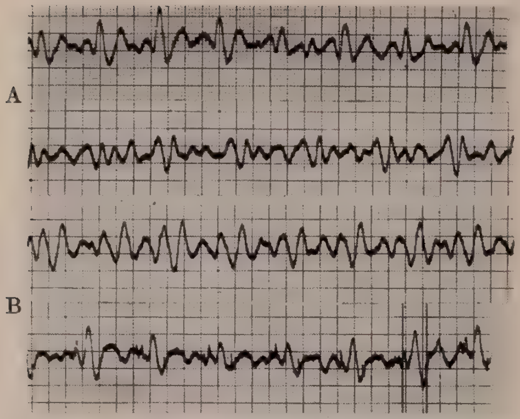

FIG. 4. (*A*) Without a timing device the certain identification of ballistocardiographic systole may be difficult. (*B*) Superimposition of the heart sounds quickly identifies ballistocardiographic intervals.

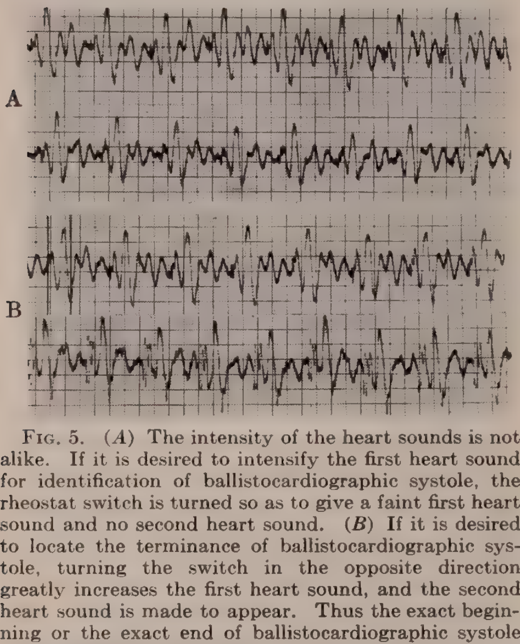

FIG. 5. (*A*) The intensity of the heart sounds is not alike. If it is desired to intensify the first heart sound for identification of ballistocardiographic systole, the rheostat switch is turned so as to give a faint first heart sound and no second heart sound. (*B*) If it is desired to locate the terminance of ballistocardiographic systole, turning the switch in the opposite direction greatly increases the first heart sound, and the second heart sound is made to appear. Thus the exact beginning or the exact end of ballistocardiographic systole can be definitely identified by simple manipulation of the rheostat switch.

right arm lead wire from the ballistocardiograph is connected to the right arm terminal of the control box. The left arm lead from the ballistocardiograph is the variable controlling factor and is applied as follows:

1. To obtain heart sounds alone, do not connect.
2. To obtain ballistocardiograms alone, connect at LA of the control box.
3. To obtain heart sounds and ballistocardiogram simultaneously, connect at LL of control box.

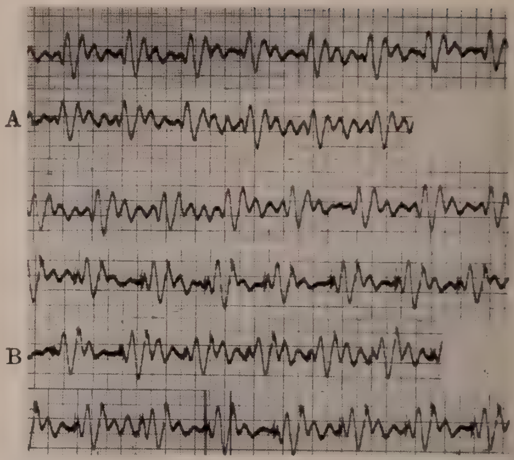

FIG. 6. (*A*) Ballistocardiogram without heart sounds: Whereas the ballistocardiographic configuration appears normal, ballistocardiographic systole does not terminate at K but at the next zenith L. (*B*) Ballistocardiogram with heart sounds: This important abnormality is quickly identified by superimposing the heart sound which shows the end of systole to be at the L zenith instead of at the K nadir.

As shown in Fig. 3C, the first heart sound is at G-H, and the second heart sound begins at the K. This confirms the original study of Secondari and Pacini. A series of tracings from young, normal adults* showed the same positions of the heart sounds.

Figure 4A shows an abnormal ballistocardiogram without heart sounds. Figure 4B shows a ballistocardiogram taken on the same patient with the heart sound recording.

It is possible to lower the intensity of the heart sounds with the rheostat (increasing the resistance) and produce a small first heart sound and filter out the second heart sound. If timing at the end of the ballistocardiographic systole is not desired, this will time the G-H, with no distortion of the ballistocardiogram (Fig. 5A). If, however, the second heart sound is desired, it can then be obtained simply by using the rheostat to lower the resistance, which will increase the heart sound intensity on the same patient, and record the second heart sound (Fig. 5B).

In our series of cases we found that the first heart sound is uniformly found on the G-H in both normal and abnormal subjects. The second heart sound was found coincidental with the K wave in most normal subjects and coincidental with the L wave in most abnormal subjects. A small proportion of abnormal subjects have the second heart sound coincidental with the K wave (Fig. 4B). A smaller proportion of normal subjects have the second heart sound coincidental with the L wave (Fig. 6A and B). The clinical significance of these variations of the second heart sound from K to L is not understood at present but is being studied. Our preliminary evidence indicates that this may be of diagnostic import.

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* Students of the first-year class of Long Island University College of Podiatry.

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The Economic Values of Rehabilitation

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With the tremendous growth of interest and activity in rehabilitation during the past decade and the admitted fact that such services are expensive in terms of money, personnel, and facilities, it is only logical that the medical profession and the general public from time to time have raised the question, "Is rehabilitation economically feasible?"

A rapidly increasing accumulation of experiences proves that rehabilitation is economically feasible, but equally important these experiences prove that it is an economic necessity. In the recently published Public Affairs pamphlet, "Doing Something for the Disabled," by Switzer and Rusk,[1] the aspect of necessity is made clear.

> "Estimates by responsible organizations shed some light on the extent of disabling conditions among our citizens. They indicate some 260,000 blind persons, 2,000,000 with diabetes, 500,000 with tuberculosis. There are more than 200,000 amputees who require artificial limbs. The National Multiple Sclerosis Society reports from 50,000 to 100,000 persons are victims of this disease. More than 1,500,000 of our people have serious hearing impairments; another 750,000 have epilepsy; and about 10,500 new cases of cerebral palsy appear each year.
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> "These are only part of the picture, for there are dozens of other diagnostic groups and their numbers total millions. Not all of them are potential cases for rehabilitation, for some have conditions beyond the reach of medical science today. There are at least 2,000,000 disabled who can be rehabilitated and we, as individuals and as a nation, must face our responsibility to bring them back into useful places in the fabric of the American society.
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> "Somehow or other, we must come to understand, as individuals, as communities and as a nation, that neglect of disability is more costly than an aggressive program of rehabilitation which restores people to lives of productivity and satisfaction."

This pamphlet also emphasizes the increasing problem of aging in our population in its discussion of the growing numbers of disabled. If we do not find ways to preserve the health of the aging and ways to rehabilitate the victims of aging, the economic and social problems in caring for the older members of our society will become crushing.

The basic objective in rehabilitation is to restore physical and social function to the maximum of remaining abilities in order to build a foundation on which the individual may develop his capacities to care for himself and to carry on socially and economically useful activity. Work is one of the things man lives by, and one of the chief contributions made by the field of physical medicine and rehabilitation has been the demonstration that few men are so disabled that they cannot learn to use their remaining capacities in some kind of work.

An example of this ability of even the most severely handicapped to learn to use the capacities they have left is provided by the experience of the program of the Department of Physical Medicine and Rehabilitation of New York University-Bellevue Medical Center. New York University-Bellevue Medical Center conducts an active service for both inpatients and outpatients in four hospitals in which physical therapy, occupational therapy, speech and hearing therapy, prosthetic services, psychiatric services, and a program of vocational evaluation, counseling and prevocational training, social services, and a therapeutic recreation program are provided in connection with or following medical and surgical treatment.

The services of the Department are distributed as follows: Bellevue Hospital has 69 rehabilitation beds for adults, 65 for tuberculosis rehabilitation, 20 rehabilitation beds for children, and an active outpatient program servicing the entire hospital. Goldwater Memorial Hospital, another city institution, has 100 beds for adult rehabilitation which is currently being expanded to 200 beds. The Institute of Physical Medicine and Rehabilitation of the New York University-Bellevue Medical Center has 56 beds for adult rehabilitation, 25 beds for children's rehabilitation, and an active outpatient department. University Hospital has 20 beds for adult rehabilitation and an active outpatient service. These services offer a complete program, individually planned, to help retrain and readjust the whole man.

The need for information on the eventual medical, economic, and social effect of such services, both on the individual patient and on the community in which he resides, prompted the organization in 1950 of a follow-up study, financed by the New York Foundation, to analyze the results obtained with the patients discharged from these four services in the calendar year 1950 and to determine their status a year after discharge. It was found that 90 per cent of the individuals included in this study derived some benefit from their rehabilitation experience, and, eliminating 14 who did not complete their rehabilitation program, this percentage is increased to 97 per cent. The number confined to wheelchairs and beds decreased from 67.8 to 32.2 per cent of the total, and the number bedfast decreased from 36.1 to 11.1 per cent. The number able to do some kind of work increased from 18.3 to 59.6 per cent, and the number not capable of even minimal self-care decreased from 63 to 18.3 per cent. This latter figure is the index to the full value of rehabilitation, for economic as well as social value results from increased self-care which releases beds and consequently others, directly and indirectly, for productive employment.

In reviewing the results of the State-Federal program of vocational rehabilitation for disabled civilians during the last nine years, it is interesting to point out that 470,000 disabled men and women have been rehabilitated into successful employment and have increased their earnings by more than two and a half billion dollars. At the end of 1952, it was estimated that they will have paid Federal income taxes of 221 million dollars, this is half again as much as the Federal government has spent on the program. In fact, it exceeds the combined total of State and Federal expenditures for the program of vocational rehabilitation. These figures should be examined closely because they present so vividly several economic values of rehabilitation.

To sharpen our focus on these values, let us examine the figures for the year 1952. The 88 State divisions of vocational rehabilitation and agencies for the blind in that year gave some kind of rehabilitation service to more than 228,000 disabled individuals. In the same period they rehabilitated successfully 63,632 men and women. The entire cost of operation of the State-Federal program was about 32 million dollars. It is estimated that the annual earnings of the 63,632 men and women successfully rehabilitated will be in excess of $115,420,000. It is further estimated that in the first year after their rehabilitation they will pay in Federal income tax from their earnings approximately $10,378,000 and that during their remaining working life they will pay about 270 million dollars in Federal income taxes! At this rate we are receiving from the successfully rehabilitated people $12 in Federal income tax for each $1.00 of Federal money spent.

To bring this close to home let us examine the results in the State of New York. In 1952 the New York Division of Vocational Rehabilitation and the Vocational Rehabilitation Service of the New York Commission for the Blind provided some kind of rehabilitation service to 16,867 disabled people. In that same period they rehabilitated successfully 4,487. The entire cost of the program was $2,067,253. It is estimated that the annual earnings of these 4,487 individuals will be almost ten million dollars, and in the first year after their rehabilitation they will pay very close to one million dollars in Federal income taxes. During their remaining working life they will pay an estimated $26,500,000 in Federal income taxes, which is 12 times the cost of the entire program in the State during 1952.

In a purely financial way these benefits to the rehabilitated individual and to the Federal government bespeak the value of rehabilitation. The economic values can be extended if we realize the production increase made possible by bringing these rehabilitated citizens back into the labor market. During this prolonged mobilization period in which we now find ourselves because of the country's defense needs, the productive strength of our nation takes on particular significance. A special task force on the handicapped, after spending months studying our handicapped population and their relationship to the financial and productive strength of the nation, made a significant report to the Office of Defense Mobilization last year. This civilian committee, all specialists in their fields, presented a detailed picture of disability in this country. Their report made this observation:

> "All of these events have combined to produce a society in which disability will become a major obstacle to national strength and vitality unless a determined and concerted effort is made to cope with it. It is not a matter for the vague future; the problem has shown itself already and will be with us through any prolonged defense mobilization period. If we are to avoid sheer waste in our manpower plans, we need to ask ourselves some searching questions on the place of our handicapped citizens in those plans. We know that the burden on health services and institutions already is mounting as a result of military and other defense requirements; we know that many communities are having a financial struggle to continue public assistance and other benefits in the face of increasing municipal expenses. We need to decide now whether it is good business to undertake a major and sustained effort to bring the disabled into the ranks of the workers and to transform tax consumers into tax producers."

Whether for defense or simply civilian production, the disabled man with adequate rehabilitation services, including placement in the right job, can add much to the productive capacity of this nation.

Of concern to all of the nation today is the enormous amount of money the Federal and State governments must spend for the many, many thousands of persons on the public assistance rolls. A substantial portion of these neighbors of ours have had to turn to public assistance because they were disabled. Not enough of us realize that many of these disabled people who are unable to support themselves can be rehabilitated and, at a saving of millions of dollars, returned to dignified and productive living. As taxpayers, let's explore this possibility of saving.

Through a special study it was learned that the State-Federal program of vocational rehabilitation had rehabilitated 66,000 persons during the twelve months ending June 30, 1951. About 20 per cent of these, more than 8,000, had been on the public assistance rolls receiving aid to the blind and to the permanently and totally disabled, aid to dependent children, or old-age assistance. In just that twelve-month period those 8,000 persons had been receiving public support of nearly $5,700,000. Through the services provided by the State-Federal vocational rehabilitation program these 8,000 people were made wage earners again—contributing members of their communities, and it is estimated that in their first year after rehabilitation they will earn about 14 million dollars. Not even counting State and local taxes, these people will pay an estimated one million dollars each year in Federal income taxes.

Let's look at the State of New York again to see if there is a similar pattern there. As we mentioned before, 4,487 disabled people were rehabilitated back into employment in the year 1952. The special report indicated that 17 per cent or 784 of these people had been receiving public assistance at the time they were accepted for rehabilitation. The total annual relief payments were probably about $706,000, an expense that could recur year after year. The cost of their rehabilitation, a one-time expense, was about $361,000. The estimated annual earnings of these successfully rehabilitated people who had been on public assistance at the time their rehabilitation began was $1,726,000. Again, not counting State and local taxes, these people will pay an estimated $180,500 each year in Federal income taxes.

This accomplishment, reducing the costs of public assistance, is heartening, but the fact remains that there are many thousands of disabled persons on public assistance in the United States who must wait until the resources of the vocational rehabilitation program are made much more adequate.

Probably one of the most significant contributions of the State-Federal vocational rehabilitation program is the successful rehabilitation of disabled women. There were 21,000 disabled women rehabilitated during the year 1952. Women make up a large part of our labor market today. A disabled woman placed in a carefully selected job that uses her abilities can help our critical defense production. But homemaking is the largest single industry in the world, and disablement of housewives is a serious problem of disability in our society. The social and financial drain on the family resulting from the disability of the homemaker is such that it threatens the life of the home itself with all the economic and social costs of such a disaster. The treatment and retraining of disabled housewives represents, therefore, another important socioeconomic contribution made by rehabilitation.

The Department of Physical Medicine and Rehabilitation of New York University-Bellevue Medical Center, referred to earlier in this article, provides such a service. In this program the housewife-patient not only learns to use what she has left, but her job and her kitchen are reengineered to her particular capacities. Dr. Lillian Gilbreth, the eminent industrial engineer, has worked with the staff of the Center in the development of household equipment adjusted to the abilities of the disabled housewife and in working out methods of organization and procedure for doing household tasks with the greatest efficiency and economy of motion.

Up to January, 1953, there have been 150 women trained in this program. They included cardiac cases, polio and arthritic cases, hemiplegics, etc. The majority, however, were hemiplegics, one of the most difficult types of disability to overcome. Experience with a selected group of 50 severely disabled hemiplegic housewives provides an index to the productive results of rehabilitation in these cases. At admission 18 of these women were able to perform a few tasks; 32 were completely dependent. Following training seven were completely independent, i.e., able to perform all self-care and household tasks; 17 required only slight assistance; 18 increased the number of things they could do independently; eight remained "dependent," but even these patients acquired some new skills which improved their capacities for living.

Summary

Programs of physical medicine and rehabilitation and programs of vocational rehabilitation do pay. They are the essential foundation on which the disabled individual can build a strong and useful life, but the keystone of rehabilitation is the community itself.

It is the community which must provide the opportunity to the disabled individual not only to learn to use his abilities but to make his contribution to the community through his participation in community life. While the investments required to provide these opportunities appear to be costly, it is being impressively demonstrated that the social and economic returns on these investments far outweigh the costs.

The challenge of these problems to the community is strikingly presented by Switzer and Rusk in the Public Affairs pamphlet, "Doing Something for the Disabled."

> "Because this question of disability, and the burden it imposes in terms of dollars and human misery, is common to every community, the logical starting point must be the cities, towns and villages throughout the country. Certainly, responsibilities rest with the states and their official agencies; the Federal Government also has clear obligations under law which demand thorough understanding, adequate financial support, and intelligent national planning. Yet state and national planning is of little value unless it bears fruit in the form of action in the communities across the land, for that is where our handicapped people live, where rehabilitation is done, where jobs are found. In other words, we constantly have to bear in mind that such a national problem as this is simply a reflection of the accumulated local problems in thousands of communities. We can profitably assess these needs on a national basis but, when we undertake to do something about them, we must go back to the community itself and start from there.
>
> "If communities throughout this country can acquire an understanding of the needs of their own disabled people and what can be done for them through rehabilitation and selective placement, then the solution to disability in this country will be in sight. When our friends, neighbors and colleagues acquire insight into the problem of disability, when they realize that the drain on municipal aid can be reduced through an aggressive rehabilitation program, then community action will follow."

Reference

1. Switzer, M. E., and Rusk, H. A.: Doing Something for the Disabled, Public Affairs Pamphlet No. 197

Cornell Conferences on Therapy

DEPARTMENTS OF PHARMACOLOGY AND MEDICINE OF THE
CORNELL UNIVERSITY MEDICAL COLLEGE AND NEW YORK HOSPITAL

These are the stenographic reports (which have been edited) of conferences by the members of the Departments of Pharmacology and of Medicine of Cornell University Medical College and New York Hospital, with collaboration of other departments and institutions. The questions and discussions involve participation by members of the staff of the college and hospital, students, and visitors. A selected group of these conferences is published in an annual volume, *Cornell Conferences on Therapy,* by the Macmillan Company.

Re-evaluation of Problems of Treatment in Barbiturate Poisoning

Dr. George Reader: Dr. Philippe Cardon will open the discussion this afternoon on the topic of the treatment of barbiturate poisoning. He has had considerable experience with the treatment of these patients and has developed an interesting slant on the subject. We will see how it accords with the experience of members of the audience.

Dr. Philippe Cardon: We talked about barbiturate poisoning during a recent conference on the treatment of the patient in coma, but the subject was not exhausted. There is need for a critical evaluation of the measures that are used in the treatment of barbiturate intoxication and for emphasis on some of its aspects concerning which there is still considerable doubt. Barbiturate poisoning is one of the favorite methods of suicide, especially in large urban areas. Few physicians are likely to escape the need, perhaps many times, of evaluating the situation of patients poisoned by barbiturates with suicidal intent or accidentally, in the various stages between complete wakefulness and death.

First, a few words about the diagnosis. In most cases there is a history of having taken the drug. Any patient who is found unconscious in his night clothes in a room should be suspected of having taken a barbiturate, especially if the breath gives no evidence of alcohol or if there appears to be no history of chronic alcoholism. I say this because patients who have taken barbiturates are not apt to be found in the street, or fully dressed, or in a bathroom. Experience shows that if a person takes a barbiturate with suicidal intent he usually lies down in bed where he will look as if he is sleeping peacefully, and it is in this situation that he is likely to be found unconscious, appearing like any individual in a deep sleep. Most persons who take an overdose of a barbiturate show varying depths of depression but are likely to wake up if they are left alone without any particular treatment, and while the proportion of these is unknown, I have a notion that perhaps only from one to five out of every 100 have taken enough to constitute serious problems requiring hospitalization and the kind of treatment I am about to present in detail.

The first thing to do is to get an idea of the depth of anesthesia. Determine the patient's response to noxious stimuli, and for this purpose a useful maneuver is to grind the knuckles into the breastbone or press your thumbs upward in the supraorbital area. If the patient squirms or grimaces, one may assume that the anesthesia is not particularly deep, that the individual is in no particular danger and is likely to recover, although in some cases the coma may deepen later. We try to find out how long it is since the drug was taken and how much. Both are estimates and usually inaccurate.

It will rarely do any harm to wash out the stomach in such patients, although there are differences of opinion on the question. At Bellevue Hospital we have seen patients who seem to have gone into deep coma after a lapse of as long as twelve hours following the taking of the drug, although the delay has never been satisfactorily explained. One is never altogether sure how long it has been since the patient took the drug, and if washing the stomach can be carried out without doing the patient any harm, it should be done.

Aspiration pneumonia is the principal danger which is cited against washing out the stomach. This should not occur if one takes cognizance of the simple fact that water runs downhill. If the foot of the bed is raised, if the patient is placed on his stomach with his head down over the side of the bed before the gastric lavage is started, there is no reason why the procedure cannot be carried out without aspiration. One should use a large tube so that the water will flow freely and the procedure can be carried out quickly. One should use relatively small amounts of water with each washing, a glass or two at a time, and wash repeatedly, nine or ten times, saving the contents for toxicologic examination. After this the patients who are in relatively light sleep should be carefully observed until there are definite signs of awakening. This usually does not take more than twenty-four hours. It is a good plan to use one or another antibiotic medication. Problems like these constitute the vast majority of cases of barbiturate intoxication, and unless there are questions, I think we can pass on to a consideration of the more important group from the standpoint of treatment.

Let us now consider the more severe cases. A good many people die of barbiturate intoxication. There is no doubt of that. However, it should become clear at this session that very few of those who arrive at the hospital alive will die if the most effective treatment is applied. The establishment and maintenance of a satisfactory airway is the first and the most important consideration in the treatment from beginning to end. There can be no recovery, no matter how good the treatment is in other respects, if sufficient air cannot get into and out of the patient's lungs. This is the first matter demanding attention. It is much more important than anything else that is done. This fact has been emphasized in a recent report from Scandinavia by Eric Nillsson, an anesthesiologist, who arrived at this conclusion from his results in the treatment of cases of severe barbiturate intoxication. This is especially true in the case of the patient who is deeply narcotized, with shallow respiration, cyanosis, rapid and thready pulse, pupils that fail to react whether they are dilated or constricted, and abnormal neurologic signs such as a positive Babinski. Incidentally, the neurologic signs may be asymmetric in deep barbiturate poisoning.

Such patients may have a great deal of mucous secretion back in the throat. The first thing to do is to get the tongue forward, for it almost always falls back against the pharynx and obstructs the passage of air. Reach under the angle of the jaw, pull it forward, extend the neck, and at the same time turn the patient over on the stomach so that gravity helps the tongue to fall forward. This maneuver alone will sometimes make the difference between life and death.

The next thing to do is to remove the secretions which invariably accumulate. The suction machine is the best for this purpose. If it is not available, reach in with a gauze pad on the finger, get as much of the mucus out that way as possible, and then put down any kind of tube with which suction from one source or another can be applied. The tube should be inserted as deeply into the tracheobronchial tree as the patient will permit. It is possible to get it fairly well down since these patients are usually deeply narcotized and are free of cough and swallowing reflexes. The tube can be passed right down beyond the carina into the major bronchi. The patient will sometimes cough when the tube reaches the carina, a reflex which persists almost to the end. It is present in patients in whom the tube can be passed through the larynx without any response.

In order to get rid of the mucus more efficiently, roll the patient over from side to side, and pound his chest with your fists. This helps to dislodge mucus from the smaller bronchi. Listen to the breath sounds for areas in which they may be absent and pound harder over these areas in order to dislodge the obstructing mucus. One may have to spend many minutes in the endeavor to clear the lungs of as much of the mucus as possible. If sizable areas remain over which the breath sounds are absent, have no hesitation in arranging for immediate bronchoscopy.

After this is done, if the patient's cough reflex is absent, the next step is to install a permanent airway. This should be done by an anesthetist with a laryngoscope under direct visualization. He inserts a large-sized tube through the nose, directs it into the larynx, and leaves it in place taped over the nose for as long as it is needed. It is well to leave it there as long as the patient will tolerate it. It is removed when the patient begins to cough and "ride on the airway." This shows that he does not need it any longer because sufficient cough reflex has returned to enable him to expel the mucus. It is undesirable to leave it there at this point because it produces irritation which leads to contraction of the laryngeal muscles around the tube and may give rise to laryngeal edema. Thus, as soon as the patient begins to cough, the tube should be removed. This should also be carried out by the anesthetist who keeps the direct laryngoscope handy. He should remain in attendance for about forty minutes, for during that time there is still the danger that the patient may develop laryngeal edema.

It is imperative to keep the tube scrupulously clean. It should be suctioned whenever there is any indication of mucus. The suction catheter should be passed down through this tube into the lungs as far as it can go, at least every ten or fifteen minutes. The anesthetist should remove the tube itself every six to eight hours, clean and reinsert it, or replace it with a new tube. One cannot emphasize too strongly the importance of making sure that the tube is not clogged. This matter can prove quite deceptive. The patient who has a tube in place may seem to have a perfectly good airway and may seem to be breathing clearly at one time and then within a very short period appear to be in difficulties. If one looks on the inside of the tube, one is apt to see a thick coating of mucus like shellac narrowing down the lumen to a tiny opening and then within a few minutes closing off the lumen completely. These secretions build up very quickly on the inside of the tube. The nurse should be informed about this matter and should be instructed to watch for it continuously. She must be duly impressed with the fact that the major job throughout is to keep the airway patent.

The next item that requires attention is the patient's breathing. Let us assume that the patient is breathing when he arrives at the hospital. It is now important to see that he continues breathing adequately. The patient's color is a good guide. If the mucous membranes of the mouth have a good color, one can assume that he is getting enough oxygen. If the breathing does not become satisfactory after the airway is established, if it remains extremely shallow or ceases altogether, as it sometimes does shortly after entering the hospital, artificial respiration should be applied at once. With the patient turned over on his stomach artificial respiration can be given by the back-pressure arm-lift method. A respirator should be used if it is available. It is a point worth remembering that the cessation of respiration is not due solely to the direct depressant action of the barbiturate but to the additional factor of anoxia, and if the anoxia is corrected by artificial respiration, breathing is resumed or improved.

The next item requiring attention is the circulation. These patients may be in shock or near it. The situation is sometimes unpredictable. The patient long in coma may pass into shock sometimes with little warning. Intravenous infusions and plasma, the measures usually employed in cases of shock, should be used here. It might be well to try norepinephrine. Although experience with it is not extensive, it seems rational to try vasoconstriction with an agent that does not decrease renal blood flow. It comes in the form of a preparation known as Levophed, in ampules of 4 cc., each cc. containing 1 mg. of norepinephrine. The 4 cc. is mixed with a liter of physiologic salt solution and given intravenously at the rate of about 1 cc. per minute, which represents 4 micrograms of the drug per minute. This drug acts very rapidly and its effect is very fleeting, so that it becomes possible to maintain a desired level of the blood pressure by careful adjustment of the rate of flow of the infusion. I would not hesitate to give whole blood transfusion if the state of shock is advanced.

Finally, we come to the measures which have received so much emphasis in the treatment of barbiturate intoxication, namely, drugs. I should like to point out again that the drug which should receive the most attention is the barbiturate itself. If you wash the stomach, there is at least the security that whatever the depth of depression it is not going to become deeper. The antibiotics are important. Penicillin should certainly be given to all cases, probably streptomycin also. It is not likely to do any harm when given during a period of a few days, and the pneumonia which these patients develop is apt to involve mixed flora.

Now for the matter of the analeptics. It is very difficult to assess the value of these drugs in barbiturate poisoning. There is no doubt that they protect animals against lethal doses of the barbiturates. The literature contains reports of spectacular recovery in human cases after doses of the barbiturates which one might ordinarily consider as fatal. There appears to be no good evidence that these analeptics are harmful. Perhaps some of you here at the conference today may wish to say what purpose they are supposed to serve in the treatment of barbiturate poisoning. It has been stated that they are given to maintain the "reflex tone" of the patients. Just what this means is not clear to me. It is also stated that they serve the purpose of improving the depth of respiration, but those patients who need respiratory stimulation are already under the influence of the most powerful respiratory stimulus, namely, oxygen lack and carbon dioxide excess. As for improving the circulation, I have already mentioned the drug norepinephrine which is more effective than any of the analeptics that are usually employed. As for shortening the duration of the coma, much effort has been spent in the study of the literature relating the behavior of patients in coma to the dosage of the barbiturate in the endeavor to find out about this point, but there still remains much doubt whether they do materially shorten the duration of coma in human cases.

One should call attention to the report from Sweden by Nillsson, which deals with 88 cases of severe barbiturate poisoning. Any one of the following criteria was cause for labeling the case "severe": a patient in coma who has been that way for twenty-four hours prior to admission; absence of all reflexes on admission; profound shock; marked hypothermia. All 88 cases presented one or more of these findings. He estimated average dose of barbiturate in these cases as 3.6 Gm., a pretty stiff dose. Some took as much as 7, 10, and 11 Gm. and recovered.

There were four deaths among those 88 patients. One was a man who died of a pulmonary infarct after recovery from the barbiturate. Another was a chronic alcoholic who took 20 Gm. of phenobarbital with some alcohol besides. In his case an effort was made to clear the blood stream of barbiturate with large amounts of fluid together with mercurial diuretics. The coma lightened, but the patient developed renal shutdown with lower nephron nephrosis several days later and eventually died of uremia. The picture at postmortem was that of shock with nephron nephrosis but not that of mercury intoxication. It was not a respiratory death. The third patient had been unconscious for twenty-four hours with signs of massive consolidation of one lung. Although the narcosis lightened under treatment, he died in a state most closely resembling severe sepsis and showed a consolidated lung at autopsy. The fourth patient was a woman who had awakened from the narcosis and was responding well, but when the intratracheal airway was removed, she developed respiratory distress and died of laryngeal edema. A tracheotomy would probably have saved her life. If we exclude the first case for obvious reasons, this experience represents a mortality rate of 3.4 per cent.

Among a group of 129 patients who had been unconscious at some time in the course of the barbiturate intoxication, the mortality was 2.3 per cent. In the whole series of 176 cases of barbiturate intoxication who were deemed sufficiently serious to enter the hospital, the mortality was only 1.7 per cent. Compare the mortality figures just quoted in relation to a method of treatment of barbiturate poisoning without analeptics, with those in the several series of cases treated with various and sundry analeptics. Among these there is the highest value of 41 per cent mortality to the lowest that I have seen, 12 per cent. One might even suspect that analeptics are harmful, although it is not safe to draw that conclusion since methods of treatment differed in other respects. I think, however, that analeptics present disadvantages.

The first drawback is the fact that they assume unwarranted prominence in the treatment. The doctor is apt to take the position that there is little else he need do except to give the antidote if he assumes that the antidote is lifesaving. It gives the doctor a false sense of security. There is the fact that the analeptics, and particularly picrotoxin, may induce convulsions if they are not used with great care. There is the belief that a latent period of as long as fifteen to twenty minutes elapses before the full activity of a particular dose of picrotoxin becomes manifest, so that it is not a simple matter to titrate the patient with this drug in such a way that just the proper level of action is maintained, and the dose varies with each individual. It has been stated that the objective is to restore reflex activity, re-establish tendon reflexes or minor muscular twitchings of the face and hands, and that the purpose is to keep the patients at that level, but not to try to wake them up with these drugs. If an unconscious patient has had the stomach washed out to prevent any further absorption, any deepening of the coma or improvement in his state provides a clear picture of how the course is progressing. However, with an analeptic, the picture becomes confused and one does not know where one stands, for the altered signs are now an artifact caused by the treatment.

Another objection, as I see it, to the use of the analeptics, is the fact that any considerable increase in reflex activity is apt to get one into trouble with the patient's airway, for one may be forced to pull it out prematurely lest laryngeal edema ensue. There may be times when the analeptics are lifesaving measures, but it is very hard to find a case of that kind with evidence that is convincing. It seems to me that the use of the analeptics in barbiturate poisoning leaves us with tenuous advantages. The results with conservative therapy without the analeptics, just cited, were obtained in cases with survival from doses of the barbiturates which are, on the whole, as large as any of those reported in the literature for survivals ascribed to the analeptics. Another disadvantage in the use of the analeptics is that it requires continuous attendance of the physician, which is much too great a burden for advantages that are so doubtful.

The greatest lesson to learn from the superb mortality statistics of the Nillsson report is that a trained anesthesiologist is very important to the therapy of barbiturate poisoning, and the most significant aspects of the treatment are those of keeping the airway clear and the patient breathing, supporting the circulation, and taking measures to guard against hypostatic pneumonia.

I asked Dr. Barbara Parker to give me some idea of the experience on the Psychiatric Division of the Bellevue Hospital. These figures are not absolutely accurate, but they treat there about 200 patients a year, which would add up to about 1,000 cases over the last five years. It is estimated that about 70 of these could be classed as "serious," and among these were 11 deaths, a mortality of about 15 per cent. There were only four deaths in the last three years, a mortality rate during this period of only about 7 per cent. Without going into the details of the manner of death in these cases, it can be stated that few if any of them died with anoxia and respiratory failure. It was usually a matter of complications or measures in treatment which would now be considered injudicious.

Dr. Reader: Did any of those receive analeptics?

Dr. Cardon: There was only the occasional case that received analeptics. I discuss the Bellevue Hospital experience because of the low mortality figures on a service where the analeptics are not apt to be used. In my own personal experience there during a period of fifteen months, I never used analeptics, and I saw no deaths.

Dr. Janet Travell: I believe you did not mention the use of oxygen in the list of drugs.

Dr. Cardon: That should have been mentioned in connection with the airway. It can be given by mask or nasal catheter going directly down into the airway. It should be bubbled through water to keep it moist to prevent the solidification of the secretions. Perhaps Dr. Lukas will have something to say about the possible danger of oxygen in these cases, as in persons with poliomyelitis or chronic pulmonary disease, of inducing through the use of oxygen carbon dioxide intoxication. As far as I know, this has not turned up as a practical problem yet.

Visitor: Are we to assume from Dr. Cardon's account of the lifesaving value of adequate oxygenation and removal of carbon dioxide that the barbiturates do not produce a direct fatal action in the human organism? Is that pharmacologically sound?

Dr. Reader: The discussion did make it sound a bit as though there is no such thing as a fatal dose of a barbiturate.

Dr. Harry Gold: It sounded like that to me also.

Dr. Reader: How about that, Dr. Cardon, do we know the fatal dose for man?

Dr. Cardon: It varies. It runs from about 3 to 5 Gm. There is cause for worry about anyone who has taken such amounts, although there are many examples of persons who have taken three and four times as much as that and have survived.

Dr. Walter Modell: Were those survivals with or without washing the stomach?

Dr. Cardon: Nillsson did not use the gastric lavage in any of his patients.

Dr. Reader: To obtain figures which represent the actual fatal dose of the barbiturate we should have to secure them from cases in which there were no manifest complications and death occurred in spite of the use of all the therapeutic measures which you have described. Do I then understand correctly that in the Nillsson series which you have reported there were really no deaths due to the barbiturate directly?

Dr. Cardon: That is correct.

Visitor: I understand that barbiturates

merely depress respiratory and circulatory function without causing any permanent tissue damage.

Dr. Gold: I do not believe that Dr. Cardon's discussion has any bearing on the question of permanent tissue damage by the barbiturates.

Visitor: But is there any evidence that the barbiturates damage tissue?

Dr. Gold: There is a good deal in the literature on the subject of permanent damage by the barbiturates. There are many reports of patients who have been for long periods of time under deep barbiturate narcosis and have shown lasting neurologic changes. There is a tendency for ultimate recovery from these chronic sequelae of a protracted barbiturate narcosis, but in these there is the question whether the functional recovery represents true reversal of a damage or a physiologic adjustment of a nature similar to that occurring after vestibular injury produced by streptomycin. Several years ago we published some observations in animal experiments in which bizarre disturbances in behavior and gait occurred after barbiturate poisoning. These effects persisted for a period of many months until the animals were sacrificed for histologic examination of the brain. We found extensive destruction of the Purkinje layer of cells of the cerebellum.

Dr. McKeen Cattell: Might not this all be due to anoxia?

Dr. Gold: The long anoxia is an important factor. I might add, however, that we came to suspect that it may not be anoxia alone in the ordinary sense, for we had a few animals in which similar changes were present after moderate doses with relatively light narcosis of fairly brief duration. It may still, of course, be a specific cellular anoxia in an animal in which general respiratory exchange is adequate. The fact remains that whether it is due to one or the other or both of these factors, lasting and what may be permanent neurologic damage is occasionally seen after protracted barbiturate poisoning.

Dr. Reader: Dr. Cardon referred only to phenobarbital, and I wonder if he would say whether the dangers and the problems of treatment are similar with the rapidly acting barbiturates taken in doses of 3 to 5 Gm.?

Dr. Cardon: The general principles are the same. Once a patient is in profound coma, he tends to stay in it for forty-eight hours or longer, even with the rapidly acting barbiturates. Nevertheless, I am inclined to believe that the outlook might be better for the patient in profound coma when the drug is the shorter acting Amytal rather than the longer acting phenobarbital.

Dr. Frank C. Ferguson, Jr.: In connection with Dr. Cardon's thesis that death from barbiturate poisoning is due to secondary factors and not to the direct action of the drug, the question was raised whether there is a direct fatal action of the barbiturate in man, assuming that oxygenation is maintained at an adequate level. I do not think we have had an answer to that question.

Dr. Gold: I do not believe that anyone doubts the fact that there is a level of barbiturate dosage in man which can kill by a direct action of the drug without secondary factors.

Visitor: Does it kill a laboratory animal which is under artificial respiration?

Dr. Gold: Oh heavens, yes.

Visitor: Does it tend to depress the action of the heart?

Dr. Cattell: Definitely.

Visitor: Is that just an assumption?

Dr. Gold: No, it is a fact. Pharmacologic studies with the heart-lung preparation at Harvard on the action of digitalis made use of a barbiturate to throw the heart into failure. That sounds like a direct action. As for the action on the respiratory mechanism, there is abundant experimental evidence that the average lethal dose of a barbiturate is only little altered by having the animal under artificial respiration during the course of the poisoning. The respiratory center ceases to function, even though adequate respiratory ventilation is artificially maintained. That also means a direct action on the respiratory mechanism.

Dr. Ferguson: What would you suggest, then, to explain Dr. Cardon's position that death in human poisoning by barbiturates is not due to the direct action of the drug but to secondary factors?

Dr. Gold: As far as I can see, it simply means that the patients who try to commit suicide with barbiturates do not as a rule take enough of the drug to die from its direct action. It seems from Dr. Cardon's presentation that even in very severe poisoning, mechanical factors restricting respiratory ventilation contribute to the fatal outcome, and that is why they survive when all these measures are taken to insure adequate ventilation. Dr. Cardon has pointed out that in deep barbiturate narcosis, disaster may result from such factors as mucous plugs in the bronchi or "swallowing" the tongue.

Dr. Reader: Are humans more sensitive to the barbiturates and apt to die from smaller doses than animals in terms of their body weight?

Dr. Gold: We do not know the exact average fatal dose in humans for obvious reasons. Humans probably are more sensitive. There is reason for believing that there is greater variation in the sensitivity among humans, considering the wide differences in age and influences of disease, than one is apt to expect in an essentially normal laboratory animal colony, although even among them extraordinarily marked variations in sensitivity are encountered. In our animal experiments it is not uncommon to find one individual surviving three times the dose that kills another.

Dr. Cattell: Dr. Reader referred to the rapidly acting barbiturates. It might be well to point out that while barbital itself is somewhat slow in its onset of action, there is no appreciable difference in the speed of onset of action among other barbiturates in common use for therapeutic purposes. The difference that may be significant in poisoning and treatment is better represented by the terms short-acting and long-acting for in duration of action there is considerable difference between members of the group.

Dr. Peter Rogatz: Dr. Gold has stated that it does not take much more barbiturate to cause cessation of respiration in an animal maintained on artificial respiration than in one without it. Would the answer be the same for an animal in which an adequate circulation is maintained during barbiturate poisoning?

Dr. Gold: I doubt there is any way of maintaining an adequate circulation in an animal that has received a lethal dose of a barbiturate. It may well be that a combination of artificial respiration and intravenous infusions might slightly raise the incidence of recoveries with the usual fatal doses, but I doubt that the difference would be conspicuous. During fatal barbiturate poisoning in animals there is impairment of respiratory and circulatory functions interacting upon each other so that the respiration becomes very feeble, ventilation becomes poor, and circulatory function falls to shock levels. Under the usual conditions the respiration ceases first and then the heart. This result can be obtained within a few seconds to a few minutes after an intravenous fatal dose so that it is obviously due to the direct action of the drug for there was not time enough for secondary factors to come into play. If the animal receives a somewhat smaller dose and remains in deep narcosis for a longer period of time, such secondary factors as mechanical interference with ventilation and the effects of prolonged anoxia may appear very much as in human cases, but it is the experience that with all attempts to correct these factors, the lethal dose is only very slightly raised, indicating that their contribution to the fatal outcome is not great in the situation of the animal that is otherwise normal.

Dr. Reader: Dr. Grace, do you have a comment?

Dr. William J. Grace: I would think it worth while to place more emphasis on the importance of antibiotics in this connection than appears from Dr. Cardon's discussion. It seems to me that before the days of penicillin the treatment of patients with barbiturate poisoning was a much more difficult task and the results were much less satisfactory. I wonder whether there are any statistics which show the change that may be ascribed to penicillin. I see the difficulty of obtaining satisfactory information on this point because at about the time that penicillin came into general use people also began to emphasize the importance of the airway.

Dr. Cardon: Some of the reports on current series of cases treated with antibiotics and analeptics also show fairly high mortality rates, from 15 to 20 per cent. There seems to be no question, however, that since penicillin the incidence of severe pulmonary complication has fallen very low.

Dr. Reader: Is there any information on positive blood cultures in these cases?

Dr. Cardon: There are no figures that I know of.

Dr. Travell: I believe that Dr. Cardon said he would not try to wake the patient up with analeptics and that the analeptics are not especially useful. I wonder whether Dr. Gold would comment on these points?

Dr. Reader: I think that what Dr. Cardon implied was that even if you do tend to stir them up with analeptics, it still seems to do no particular good.

Dr. Cattell: I might also add a question. I note that Dr. Cardon prefers norepinephrine as a circulatory stimulant. I wonder why he feels it more desirable to stimulate at the periphery rather than at the central nervous system where the poisoning actually occurs? Why not get at the vasoconstrictor center directly?

Dr. Reader: I think these questions are being fired at you, Dr. Gold.

Dr. Gold: I shall then fire one at Dr. Cardon in relation to the matter of washing the stomach. It is not altogether clear to me whether you advise washing the stomach in every patient who has taken an oral overdose of barbiturate. Suppose I assume that you do not bother to wash the stomach in a case in which the overdose has not been very large and the patient is just very sleepy, but do you advocate it in every patient who is sufficiently poisoned to warrant having him brought to the hospital?

Dr. Cardon: It would be very well not to wash the stomach if I were pretty sure I could trust the patient, but there is the fact that the patient who took it with suicidal intent might not tell the truth about the amount he took.

Dr. Gold: Would you then assume for the purpose of this question that you are quite sure about the amount he took and you believe that it is outside of the range of a dose likely to prove fatal, would you in such a case wash the stomach? What I am driving at is an answer to the question whether you wash the stomach in all cases.

Dr. Cardon: If you make it a rule to wash the stomach in all cases of overdosage with barbiturates, especially when taken with suicidal intent, you are not going to make any mistakes.

Dr. Gold: If that then is your view, I will ask you to consider Nillsson's report to which you referred and on which you placed a good deal of emphasis. This dealt with a fairly large group of cases of barbiturate poisoning, an average dose of 3.6 Gm., patients desperately ill, and mortality rate the lowest on record I believe, less than 4 per cent. The treatment in these excluded both analeptics and gastric lavage. It seems washing the stomach is not worth very much.

Dr. Reader: How about that, Dr. Cardon?

Dr. Cardon: I don't see that. What that means I think is that washing the stomach is not a lifesaving procedure in these people who have been in coma for a long time.

Dr. Gold: Then let me try this. You have indicated that one of the reasons for not advocating analeptics is the fact that their use requires special skill and it is possible to do harm with them. Doesn't the same apply to gastric lavage? The fact that you lay so much stress upon the minute details of washing the stomach suggests that here is a job that can also be done badly, and perhaps you would admit that if it is badly done, there are risks of aspiration pneumonia. You have made effective use of Nillsson's experience to back up your case against analeptics, why do you now drop it as a case against routine use of gastric lavage since in that experience neither analeptics nor lavage was used?

Dr. Cardon: I suspected this might be coming up. I have already cited some arguments in favor of gastric lavage, and I might mention again the fact that the removal of some of the drug in that way would have the effect of shortening the period in which the patient might otherwise remain comatose. If the patient is still in a state of light depression before all of it has been absorbed, you might prevent him from going into coma. Also, some of these patients have taken not only barbiturates but alcohol, in addition to heaven knows what, and you might just as well wash them out on that basis. Finally, information obtained from the washings is often useful for medicolegal reasons.

Dr. Gold: If then you are going to support the case for routine gastric lavage, not on experience which, you have already pointed out, shows it is unnecessary from the standpoint of saving life, but on the basis of reasonable possibilities that it might do some good in spite of a possible risk in the hands of the less skilled, then the same kind of argument can be applied to support the case for analeptics. One can say that in spite of the fact that Nillsson's excellent results were obtained without analeptics and in spite of the fact that there is some danger in the use of the analeptics, it is reasonable to use them in appropriate cases because there is some evidence from human cases that they may be of some value, there is good experimental evidence that they shorten the duration of narcosis and enable an animal to recover from as much as two to three times an otherwise fatal dose of barbiturate, and that they may help to save the life of the occasional patient who happens to have been poisoned by a dose of barbiturate which would otherwise prove fatal.

Dr. Cardon: I cannot defeat your logic.

Dr. Reader: Should you say picrotoxin, when you refer to analeptics?

Dr. Gold: Yes.

Dr. Ferguson: Dr. Gold, do you question the wisdom of ever washing the stomach? Would you advocate it in any case?

Dr. Gold: Yes, I would have the stomach washed if an unknown amount of barbiturate or a large known dose had been swallowed and the patient is seen within an hour or so. If six or more hours have elapsed, I doubt there is much to be gained by washing the stomach because the barbiturates are rapidly absorbed. Between these intervals fall the cases in which the decision is more difficult to make. Here the doctor's judgment will prevail, and I would suggest that the stomach be washed in those in which there is considerable doubt. All of this means that in the vast majority of cases of barbiturate poisoning, as encountered in actual practice, the stomach will not be washed. The washings usually contain some barbiturate, but the amounts are apt to be measured in milligrams while the dose was taken in grams.

Visitor: I wonder why one should use oxygen if one succeeds in maintaining an adequate tidal volume through a satisfactory airway?

Dr. Reader: Perhaps Dr. Lukas will answer that question.

Dr. Daniel S. Lukas: When the ventilation drops off, the result is not only a decrease in the oxygen concentration but a rise in the carbon dioxide. Carbon dioxide has a narcotic action with the effect, in sufficient concentration, of producing coma and death by respiratory depression. In one of the textbooks on pharmacology which is currently used by medical students, carbon dioxide inhalation is recommended for the treatment for the patient with barbiturate depression. I daresay that with the shallow respiration of some of the cases the carbon dioxide concentration with this form of treatment will not rise. Carbon dioxide also increases the cerebral blood flow rather sharply. It is known to produce a marked rise in the pressure of the cerebrospinal fluid. But merely giving oxygen to patients with such shallow breathing also fails to correct the abnormal state. I would like then to re-emphasize the need for artificial respiration in those with very shallow tidal volume. Patients in advanced barbiturate poisoning are in a state not significantly different from that of patients acutely ill with poliomyelitis and acute respiratory paralysis.

Visitor: An article recently appeared reporting a small series of cases of barbiturate poisoning in which amphetamine was used as the analeptic. Is this preferable to picrotoxin? Is it safer?

Dr. Reader: I think, Dr. Gold, you had better say something on the subject of choice among the various analeptic agents.

Dr. Gold: I've seen that report on amphetamine. This drug is a potent central stimulant, and there is evidence of this action in the patients that were treated. The doses of the barbiturate in this series of observations were relatively small, however, and it is probable that they would have recovered without any analeptic. Most of the common central stimulants like caffeine, Metrazol, nikethamide, even strychnine, produce signs of excitation in patients narcotized with the barbiturates, and it is probable that they sometimes save a life. The evidence for a choice is not conclusive from experience with humans, but in animal experiments in terms of recovery from otherwise fatal doses of barbiturate, picrotoxin is the most favorable. This is the one I would use at the present time.

Dr. Reader: How good is caffeine in these cases?

Dr. Gold: Caffeine, also aminophylline, are fairly effective stimulants of the respiratory center. In some patients with advanced barbiturate depression the breathing is so shallow you can hardly see it. It may be very slow, although it is sometimes fairly rapid. It is the excursion that is so small. Alveolar ventilation must be very poor in such cases. An intravenous dose of about 0.5 Gm. of caffeine and sodium benzoate or a similar dose of aminophylline will sometimes boost the respiratory depth in a satisfactory manner and for a period of some hours. The power of these drugs to reverse barbiturate depression of respiration has limitations, however, and there is some doubt about the utility of this action in the more profound states of depression. I think it should be tried.

Dr. Reader: Is not the fact that aminophylline sharply reduces the cerebral blood flow an objection to its use here?

Dr. Gold: That fact complicates our understanding of the mechanism involved, but the fact remains that the drug does improve the respiration. One of the most striking effects of it is sometimes seen in the semicomatose patient with advanced congestive heart failure in whom Cheyne-Stokes respiration is promptly replaced by regular and satisfactory breathing.

Dr. Cardon: I should like to comment on Dr. Cattell's question concerning my preference in the matter of stimulating the circulation for an agent that acts peripherally rather than centrally. I prefer norepinephrine for the very reason that it exerts little or no central stimulating action, since from my point of view it is one of the objections to the common analeptics that they confuse the clinical picture. Without them what the patient shows is either the result of anoxia or the direct depression by the barbiturate, and you know every minute where you stand.

Dr. Gold: Dr. Cardon, it is well enough to know where one stands, but one may not like to stand there. In the presence of a patient whose systolic blood pressure is 70 or 80 mm. Hg, all of whose reflexes are absent, whose respiration is almost imperceptible, and whose outlook is far from bright, it is not a pleasant place to stand, even though you know where you are.

Dr. Cardon: No, it is not.

Dr. Gold: It is in this very situation that you might wish to resort to picrotoxin.

Dr. Cardon: I don't think I wish to leave the impression that one should never use picrotoxin. I have tried to point out its disadvantages and have tried to emphasize the fact that the best results in the treatment for barbiturate poisoning have been attained in groups of cases treated without analeptics.

Dr. Gold: I think this a splendid discussion, and I wish there were time for more of it. Dr. Cardon's presentation emphasizes the need for shifting the focus in the treatment of barbiturate poisoning from the direct depressant action of the drug to secondary mechanisms which seem to be responsible for the deaths in human experience with this problem. If we direct our attention to the airway, the problems of adequate breathing, and such other things as Dr. Cardon has stressed, it seems likely that we shall save a good many people whom we would otherwise lose.

Dr. Reader: The hour is up.

Summary

Dr. Gold: Practice and experience in relation to the treatment of barbiturate poisoning received a critical examination in today's conference. In recent years the view has gained currency that saving life in barbiturate intoxication is largely a matter of the appropriate application of one of the stimulant antidotes or analeptics. The fact, however, that results with groups of patients seriously ill with barbiturate poisoning, reported by different workers, show mortality rates which vary from a high of about 40 per cent down to a low of less than 4 per cent, and that the lowest value was obtained with a large series of seriously ill patients in whom the analeptics were not used, called for re-evaluation of our current attitude.

The discussion was strongly focused on the point that the vast majority of persons who take barbiturate with suicidal intentions rarely take enough of the drug to kill by its direct action and that the major cause of the disaster is a secondary factor, mechanical obstruction to breathing and pulmonary ventilation. It was pointed out that with proper attention to the matter of a clear airway, adequate breathing, and support of the circulation, the vast majority of patients in even advanced barbiturate poisoning are likely to recover without the use of analeptics.

The problem of maintaining adequate pulmonary ventilation is no perfunctory item, and considerable time was spent in the elaboration of the details of the procedures by which this essential aspect of the treatment is carried out. One of the speakers took the position that most if not all patients with conspicuous barbiturate poisoning should have the stomach washed and at the same time made out a case against the use of analeptics. Both of these viewpoints aroused lively discussion which challenged the desirability of washing the stomach if the patient is first seen many hours after the drug has been taken and also challenged the exclusion of analeptics from the plan of treatment.

It is well to read the conference for the kind of reasoning on both sides of the issue. The point was developed that lavage should be performed whenever the time of ingestion of the poison or its amount is in question and whenever the poison was taken a very short time before the patient is seen. The lavage of the stomach in barbiturate poisoning is accompanied by some risk and should be carried out with all the precautions suggested in the text. It seems clear from the material presented in the discussions that in the matter of lifesaving in barbiturate poisoning, the focus must be shifted from analeptic so-called antidotes to the details of expert management of the problem of pulmonary ventilation for the most successful treatment of poisoning by the barbiturates.

CASE REPORTS

Phenylbutazone Toxicity Resulting in a Severe Systemic Reaction

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PHENYLBUTAZONE (Butazolidin), a relatively new synthetic drug, recently has been the subject of numerous clinical reports describing its use in the treatment of various "rheumatic" conditions, including gout, rheumatoid arthritis, psoriatic arthritis, peritendinitis, osteoarthritis, fibrositis, and the neuralgias. These reports suggest a high incidence of toxic reactions. It is our purpose to describe a particularly severe systemic reaction following the use of this drug.

Case Report

S. D., a twenty-five-year-old, white, male carpenter, was admitted to the United Hospital on July 30, 1952, with chief complaints of fever, fleeting generalized pains, sore throat, and malaise of five days duration. For four years prior to the present illness the patient suffered from psoriasis involving the scalp, face, and lower extremities, which failed to respond satisfactorily to various forms of therapy. Butazolidin was started two weeks prior to admission in dosage of 600 mg. per day. One week prior to admission this was reduced to 400 mg. per day and continued until the development of the symptoms noted above.

Physical examination at the time of admission revealed an acutely ill, well-nourished, white male. Temperature was 104 F., and the pulse was regular at 88 per minute. Over the right malar and left pretibial areas were well-circumscribed, indurated, nontender brownish lesions $^1/_2$ to 1 cm. in diameter. Enlarged, freely movable, nontender lymph nodes were present generally throughout the body. The liver was palpable three fingerbreadths below the right costal margin in the midclavicular line. It was tender, and a firm, smooth edge could be felt. The spleen descended to two fingerbreadths below the left costal margin on deep inspiration. There were no other abnormalities.

Admission laboratory studies included hemoglobin 14 Gm., red blood cells 4,400,000, white blood cells 23,650 with 33 per cent band cells, 12 per cent segmented polymorphonuclears, 7 per cent eosinophils, and 48 per cent lymphocytes, the majority of which were of the large immature variety. Urinalysis revealed specific gravity of 1.012, a trace of albumin, no sugar, and a normal sediment. A heterophil agglutination test on the day of admission was negative.

By the fourth hospital day urticaria of both hands and feet had developed in association with swelling and stiffness of the joints. The following day a diffuse morbilliform rash appeared involving the face, trunk, and extremities, and scleral icterus developed. Icterus index was 32 units; total serum bilirubin 4.9 mg. per cent with direct bilirubin 3.5 mg. per cent; white blood cells 54,550 with 16 per cent band forms, 18 per cent segmented polymorphonuclears, 8 per cent eosinophils, and 58 per cent lymphocytes; hemoglobin 14 Gm.; red blood cells 4,040,000; cephalin cholesterol flocculation 4 plus; plasma proteins 8.1 Gm. per cent with albumin 4.9 Gm. per cent and globulin 2.8 Gm. per cent; fibrinogen 0.38 Gm. per cent. A second heterophil agglutination test on the seventh hospital day was again negative. Sternal bone marrow aspiration at this time revealed hyperplastic marrow with myeloid metaplasia.

Because of the persistence of what appeared to be a hypersensitivity reaction to Butazolidin, ACTH therapy was begun in dosage of 0.025 Gm. per day by slow intravenous drip. This was continued for four days, by the end of which time the temperature had returned to normal. On the eighth hospital day the laboratory findings revealed hemoglobin 11 Gm., red blood cells 3,400,000, white blood cells 14,650 with 35 per cent band cells, 21 per cent segmented polymorphonuclears, 1 per cent eosinophils, and 43 per cent lymphocytes. Total serum bilirubin was 3.4 mg. per cent with a direct reading of 2.0 mg. per cent.

Improvement had begun by the tenth hospital day. Temperature was normal; urticaria and arthritic pains had diminished, and the morbilliform rash was subsiding. Hepatosplenomegaly and lymphadenopathy persisted.

On the twelfth hospital day the patient appeared pale. The hemoglobin had fallen to 7.5 Gm. and the red blood cells to 1,700,000. The white blood cell count was 21,150 with 11 per cent band cells, 18 per cent segmented polymorphonuclears, 6 per cent eosinophils, and 65 per cent lymphocytes. Total serum bilirubin was 4.8 mg. per cent, direct 2.5 mg per cent. Over the next two days 1,500 cc. of whole blood were administered.

By the fifteenth hospital day the hemoglobin had increased to 11.5 Gm. and the red blood cells to 3,500,000. White blood cells were 14,050 with 14 per cent band cells, 29 per cent segmented polymorphonuclears, 1 per cent eosinophils, and 56 per cent lymphocytes. Direct and indirect Coombs' tests were negative. Red cell fragility test revealed hemolysis beginning at 0.52 per cent sodium chloride and incomplete at 0.28 per cent. Cephalin cholesterol flocculation was 4 plus. Fever recurred on this day to 102 F. and persisted until the twenty-first hospital day. Lymphadenopathy was slowly subsiding, but hepatosplenomegaly persisted, although there was less liver tenderness. The eruption had now changed from an erythematous to a desquamating variety.

On the twenty-first hospital day the patient was afebrile and felt much improved. Heterophil agglutination was again negative, and cephalin cholesterol flocculation remained 4 plus. White blood cell count was 7,750 with 8 per cent band cells, 43 per cent polymorphonuclears, 2 per cent eosinophils, and 40 per cent lymphocytes. The hemoglobin was 15 Gm. and red blood cells 3,500,000. Total serum bilirubin had fallen to 1.24 mg. per cent with direct reading of 0.6 mg. per cent. Stool was negative for occult blood (guaiac).

During the ensuing two weeks resolution of all abnormal physical signs occurred. The patient felt well with normal appetite and returning strength. At discharge on the thirty-first hospital day the hemoglobin was 12 Gm., red blood cells 3,800,000, white blood cells 7,000 with no band cells, 42 per cent polymorphonuclears, 54 per cent lymphocytes, 2 monocytes, and 2 basophils. Heterophil agglutination was again negative. Total serum bilirubin was 0.72 mg. per cent, direct reading 0.4 mg. per cent. Cephalin cholesterol flocculation was 4 plus.

Convalescence proceeded uneventfully. When last seen, four months after discharge, no physical or laboratory abnormalities were present.

Comment

One of the great advantages of Butazolidin stressed by numerous investigators had been its low toxicity. Recent reports,[1-4] however, indicate that the incidence of toxicity approaches 50 per cent. A death following the use of the drug has been described as well.[5]

Preliminary reports dealing with the use of Butazolidin in the treatment of psoriatic arthritis suggest concurrent improvement in the skin lesions.[6] For this reason the drug was employed in this case. During the early stages of treatment a marked improvement was noted which continued for the entire period of observation. However, because of the onset of toxic symptoms on the tenth day of treatment, the drug was discontinued.

Characterized by fever, malaise, arthritis, lymphadenopathy, hepatosplenomegaly, icterus, morbilliform rash, and urticaria, the clinical picture suggested an allergic drug reaction. This intense reaction was further complicated by the development of an anemia characterized by increased red blood cell fragility first noted on the eighteenth day of illness. Just prior to this time the bone marrow showed mild myeloid hyperplasia which had changed in character to normoblastic hyperplasia on examination nine days later. In the absence of obvious blood loss it was concluded that the anemia was of a hemolytic variety. The usual disturbances in pigment metabolism found in hemolytic states could not be accurately evaluated because of the prior development of hepatocellular dysfunction with hyperbilirubinemia. All the clinical and laboratory features of hepatocellular involvement were present at the onset.

Response to adrenocortical stimulation, so dramatic in most hypersensitivity reactions, was not striking in this instance. Gradually all of the abnormal features reverted to normal with the exception of mild adenopathy, which persisted for a period of two months, and 4 plus cephalin cholesterol flocculation, which disappeared at the end of three months.

It was obvious at the onset and during the course of this illness that infectious mononucleosis was a possible alternative diagnosis. However, all of the evidence, particularly the persistent absence of heterophil agglutination over a three-month period and the failure of Downey cells to appear in the peripheral blood and bone marrow, made this diagnosis untenable.

Summary

An unusual systemic toxic reaction to Butazolidin involving the skin, hematopoietic, and reticuloendothelial systems with subsequent recovery is described.

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A slowness to applaud betrays a cold temper or an envious spirit.—H. MORE

Narcotic Addiction

Preliminary Report on the Effects of Dimenhydrinate (Dramamine) on Withdrawal Symptoms

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THIS is a preliminary report on earliest impressions of the effect of dimenhydrinate (Dramamine) in the treatment of withdrawal symptoms of narcotic addiction. The favorable responses obtained by this method in the few cases that have been treated are so encouraging that it seems wise to publish even this very inadequate and wholly inconclusive information so that it will be immediately available for testing by other investigators. A review of the literature has failed to disclose that dimenhydrinate (Dramamine) has been used previously to treat narcotic withdrawal symptoms.

Nausea and emesis are most distressing and disturbing to the individual suffering from such symptoms. Over the years no treatment has been discovered which will satisfactorily ameliorate or prevent these symptoms and thus give the patient some degree of comfort during the harrowing days of taking the "cure." In searching for such a treatment it was logical and rational to consider dimenhydrinate (Dramamine) because of its marked beneficial effect in reducing nausea and emesis in sea sickness,[1] air sickness,[2] pregnancy,[3] radiation sickness,[4] Menières syndrome,[5] postelectric shock reactions,[6] vestibular reactions following labryinthine operations,[7] and in vertigo of vestibular origin.[8]

Gutner *et al.*[9] have demonstrated that on the average Dramamine causes a 60 per cent decrease in the function of the labyrinth. Johns and Himwich[10] have indicated that Dramamine has a direct cerebral action, and Schiff *et al.*[11] state that Dramamine acts by having a depressive effect upon the central portion of the vestibular mechanism at the nuclear level. Tyler and Bard[12] have shown that the vestibular cerebellar nuclei are connected with the bulbar emetic center. Dimenhydrinate (Dramamine), appears experimentally to depress both the local and central areas of the nervous system which cause nausea and emesis. One can state theoretically, therefore, that it should lessen such symptoms from whatever cause, including nausea and emesis due to the withdrawal of narcotic drugs.

Case Report

T. L., a sixty-year-old, white female, was admitted to the hospital on January 17, 1953, by ambulance from the county jail because of nausea and vomiting and other withdrawal symptoms due to drug addiction. She had been arrested for shoplifting and placed in jail twenty-four hours before admission. While in jail she received 100 mg. of demerol to ease her withdrawal symptoms.

The past history revealed that she has been addicted to drugs since the age of sixteen, and she had taken the "cure" three or four times, most recently seven years ago in a sanitarium in Iowa. During the past two years she had been taking $^1/_2$ ounce of heroin subcutaneously each day. Physical examination was essentially negative except for argyria caused by repeated use of argyrol for a sinus infection many years ago.

On admission she complained of severe leg pains, nausea, and vomiting, and she refused food. She suffered from perspiration, rhinorrhea, and lacrimation. Shortly after admission she became very restless, thrashed about in bed, was irritable and demanding, and continually asked for a "needle." About four hours after admission, when the diagnosis of narcotic addiction withdrawal symptoms was definitely made, the experimental treatment routine was instituted. She was given 50 mg. Dramamine, to be repeated every four hours. Also phenobarbital, $1^1/_2$ grains to be repeated every six hours, and morphine sulfate, $^1/_4$ grain to be repeated only to control severe withdrawal symptoms.

Twelve hours after medication was started, the patient complained for the first time that her legs not only pained but that they also twitched and "jumped." It was also noted at this time that the perspiration, lacrimation, and rhinorrhea had ceased, and the patient was less restless and dozed quietly at intervals during the rest of the night.

The following day the nurses' notes stated that the patient was cross and irritable, complained of pain in her legs, but ate well and dozed at intervals. The second night and following day were much the same. She was restless and complaining at times, but at no time did she suffer from nausea or vomiting. During these first forty-eight hours in the hospital she received 1 grain of morphine in two $^1/_4$-grain and $^1/_8$-grain doses the first day, and three $^1/_8$-grain doses the second day.

On the third day morphine was abruptly discontinued, and codeine $^1/_2$ grain was substituted. During this third day she complained some of general pain but was up and about in the day room talking with other patients. After receiving the $^1/_2$ grain of codeine she slept well the rest of the night. During the third day she had no nausea or vomiting, ate well, had no perspiration, lacrimation, or rhinorrhea, but continued to complain of leg pains and for the first time had a mild diarrhea.

On the fourth day her only treatment was a continuation of the Dramamine and phenobarbital and two doses of Kaopectate which stopped her diarrhea. She was pleasant, agreeable, and cooperative during the day and slept well at night with the additional help of 3 grains of Sodium Amytal.

Dramamine was stopped on the fifth and sixth days. Her only treatment was phenobarbital as per original order and 3 grains of Sodium Amytal at night. This kept her quiet and comfortable in the daytime and gave her a good sleep at night. Except for mild complaints of pains in the legs and a mild diarrhea treated with Kaopectate, she felt very comfortable and was pleasant and cooperative. On the seventh day all medication was stopped, even during the night. She slept rather poorly but did not require a sedative.

The patient had no medication the eighth, ninth, and tenth nights, was friendly and agreeable, had no complaints, and slept well at night.

Comment

Four patients have received the Dramamine treatment herein described. All reactions were similar with mild withdrawal symptoms. Therefore, only one case report has been presented.

It is considered significant that no patient suffered from nausea or emesis after the treatment was instituted. Also all patients, for the most part, ate well throughout the course of the treatment. It is further considered significant that within a few hours after the start of treatment, perspiration, rhinorrhea, and lacrimation ceased. It is believed that these favorable effects must be due to dimenhydrinate (Dramamine) because formerly this routine without Dramamine did not prevent the above symptoms. The minimum dose of 50 mg. of Dramamine every four hours was found adequate. If necessary, it could be increased to 100 mg.

The nurses and attendants on the ward, who are familiar with the usual severe withdrawal symptoms, stated that patients under the Dramamine treatment suffered little real discomfort. The patient described in the case report, who had had previous "cures," stated in regard to the present treatment: "It is the easiest time I ever had."

Within a few hours after this treatment was started, the patients complained of only two untoward symptoms, moderately severe pains in the legs which were never completely relieved and a mild diarrhea from the third to the sixth days which was controlled by Kaopectate.

The routine used in this study was as follows:

1. First two days
   - (*a*) Give minimum amount of narcotic necessary for the comfort of the patient and to prevent severe withdrawal symptoms.
   - (*b*) Give Dramamine 50 mg. every four hours up to 300 mg. in twenty-four hours to ease nausea and vomiting and for sedation.
   - (*c*) Give phenobarbital, $1^{1}/_{2}$ grains, every six hours up to 6 grains in twenty-four hours, to the point of definite drowsiness.
   - (*d*) Patient may be up and about ad lib during course of treatment.
2. Third day
   - (*a*) Discontinue narcotic abruptly.
   - (*b*) Continue Dramamine and phenobarbital as above noted.
   - (*c*) Give codeine sulfate, 1 grain per dose up to two doses in twenty-four hours, for extreme restlessness.
   - (*d*) If patient is still noisy and uncomfortable due to withdrawal symptoms, Sodium Amytal up to 11 grains intravenously or intramuscularly may be given. May repeat in two hours if necessary.
3. Fourth, fifth, six, and seventh days
   - (*a*) Stop all narcotics, including codeine.
   - (*b*) Continue Dramamine and phenobarbital, as above noted, for nausea, emesis, and restlessness.
   - (*c*) Give Sodium Amytal at night up to 11 grains intravenously or intramuscularly only for noisiness and uncomfortable symptoms not controlled by other medicines. May repeat each night if necessary.

At the end of seven days the patient should be recovered from his withdrawal symptoms. If some symptoms remain, the patient should be given Sodium Amytal and/or phenobarbital by mouth.

Conclusions

According to the literature, dimenhydrinate (Dramamine) acts as a depressant in both the labyrinth and the central nervous system, including the bulbar vomiting center.

Although earliest impressions are favorable, no conclusions can be formed because of the very small number of cases which have been studied to date.

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A Nonfluorescent Type of Persistent Ringworm of the Scalp

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RINGWORM of the scalp, or tinea capitis, is a superficial fungous infection observed chiefly in children before the age of puberty. The disease is recognized by the partial loss of the hair of the scalp in scaling patches, the breaking off and forming of stubby infected hairs, and inflammation of varying degrees. In New York the majority of cases of tinea capitis are due to fungi that show a greenish fluorescence under filtered ultraviolet rays (Wood light). The causative fungi are either Microsporum audouini or M. lanosum.

School children are usually screened for fungous infections of the scalp by observing the scalp under the Wood light. All scalp infections that fluoresce green are diagnosed as ringworm while those that do not fluoresce green are usually, but at times erroneously, diagnosed as not having ringworm of the scalp. When hairs are infected with Trichophyton violaceum, T. crateriforme, T. tonsurans, and T. sulfureum, the hairs, scales, and patches do not fluoresce on exposure to the Wood light.

During the past years ringworm of the scalp caused by fungi that do not fluoresce under the Wood light was indeed rarely observed. However, the ever-shifting incidence of such fungous infections, both locally and nationally, makes it important for physicians in all sections of the State and country to appreciate the presence of this clinical entity.

At the present time there are a number of cases of ringworm of the scalp that are caused by T. tonsurans in the New York area with probably many more cases going undiagnosed as such because of inadequacy of diagnosing ringworm of the scalp by Wood light screening alone.

A geographic survey has shown that tinea capitis due to T. tonsurans, which was widely distributed in Mexico and Puerto Rico, has now become endemic in Texas, Oklahoma, California, Utah, and Georgia with a gradual infiltration along the coast lines to the New England states.

In recent years there has been a large immigration from Puerto Rico to New York City. The case to be reported occurred in a Puerto Rican girl. Several members of her family were similarly infected. Unlike the human (M. audouini) and the animal (M. lanosum) infections, the T. tonsurans infections may persist through adult life and may be contracted by adults, to our minds creating an ever-increasing reservoir of this type of infection which is quite resistant to conventional therapy.

FIG. 1. Culture on Sabouraud medium revealed a velvety, cream-colored growth with depressions and elevations suggesting crater formation of T. tonsurans.

Case Report

M. M., a white Puerto Rican girl, aged four years, presented an eruption of six months duration which was limited to the scalp. There was a scaly patch on the left side of the scalp. The scales in the patches were thin, shiny, and white in appearance with little loss of hair. Under the Wood light there was no fluorescence. Direct microscopic examination of the hairs with potassium hydroxide was positive for fungi. Culture on Sabouraud's medium revealed a velvety, cream-colored growth with a central depression and an older growth showing crater formation (Fig. 1). Microscopic examination of the culture showed numerous microconidia along the side of hyphae. Chlamydospores were found throughout the culture with terminal swelling of the hyphae into club-shaped ends. The diagnosis was T. tonsurans.

Summary

A Puerto Rican girl with T. tonsurans type of ringworm of the scalp that did not fluoresce under the Wood light is reported. The clinical picture is not like that of the common type of ringworm of the scalp but resembles other chronic diseases of the scalp such as seborrheic dermatitis and psoriasis.

The incidence of this type of infection is rising in New York State. This type of ringworm of the scalp should be listed as a reportable disease, and children with this persistent and resistant fungous infection of the scalp should be excluded from school attendance.

This type of fungous infection is important because it does not disappear spontaneously at puberty but may persist well into adult life, creating a permanent reservoir of infection.

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SPECIAL ARTICLE

United Medical Service, Inc.—"The Doctors' Plan"

Part VI—Income Ceilings and Service Benefits

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From many contacts with physicians, medical societies, and the committees of the various county societies, it has become apparent that there is widespread misinformation and misconception about (1) income ceilings, (2) service benefits, and (3) medical indemnity insurance.

It is obvious that the weekly wage of individual workers will depend upon many factors: on the locality of the industry, whether it is located in a rural area or in a large city; again, whether the employe is in a highly unionized group and whether the individual is a skilled workman or doing routine or ordinary labor. The wage will depend upon the impelling nature of the employment such as transportation, truckage, food supply, or war industry. Furthermore, there is a wide latitude between ordinary desk occupations and highly technical skills, and geography has a tremendous impact on weekly wage earnings.

However, most physicians establish for themselves a fee schedule for medical practice that arises in or from their office. I am referring chiefly to the independent physician and not to such physicians as are employed in any capacity on a full-time payment basis by any institution or corporation. This personal fee schedule of the physician is based upon the experience and training with consideration of the ability of the patient to pay. Knowingly or not, he probably is subconsciously influenced by the Biblical injunction, "For unto whomsoever much is given, of him shall be much required."

With the advent of prepaid medical insurance, whether by Blue Shield or commercial carriers, there has been a marked revolution in the ordinary processes of medical practice. Vast numbers of individuals, by prepayment medical insurance, literally have been lifted from clinical and dispensary medicine into the realm of paying patients. If the "ability to pay" is a valid criterion for payment of professional services, then a fee schedule for remuneration of the physicians becomes an absolute necessity.

The fee schedule for Workmen's Compensation patients was devised for making payment to a physician for services to an employe injured or ill through his employment. The Workmen's Compensation fee schedule was founded originally upon the basic concept, "What would be a fair remuneration for an employe making $35 a week?" The $35 a week was a fair medium income for a workman during the 1920's. With the slow progression of increased industrial activity and inflation such a weekly wage was unrealistic, and from time to time the breadth, scope, and remuneration in Workmen's Compensation have been changed. A fee schedule soon becomes an iron chain, both for employers and such organizations as are engaged in any field that compensates physicians for professional services. Therefore, "ability to pay" becomes basic to any fee for service system.

The United Medical Service, almost from the day of its formation, has been administered on the philosophy that remuneration under its contracts would, in general, never be less than that which could be obtained under the Workmen's Compensation schedule. There may be a few items here and there that might for a limited period be below the Workmen's Compensation schedule, but the intent was always to use Workmen's Compensation as the minimal basis for the UMS schedule of remuneration to physicians.

In the formulation of an income ceiling United Medical Service must at all times be governed by a simple formula: "equal premiums pay for equal benefits." Therefore, any income ceiling that was adopted by UMS must be with the unanimous concurrence of the 17 county medical societies with which UMS does business. It is obvious that the weekly wage in the metropolitan counties would be in excess of that of the rural counties or that the weekly remuneration for automobile workers in highly industrialized Detroit would be in excess of that enjoyed in Northern Michigan. Critics of the income ceiling say that it is nonrealistic. Proponents of the income ceiling say that it is fair and, in general, in consonance with the wages in the area of the 17 counties UMS serves.

The ceiling income of United Medical Service is $2,500 for a single individual male or female and $4,000 for a family. It is impossible for UMS to have a ceiling for Kings County and a different one for Sullivan. It is true there are many families whose annual income exceeds United Medical Service, Inc. ceilings. Therefore, the physician who takes care of the family with an income in excess of $4,000 a year is entitled to receive the amount set forth in the schedule of remuneration of United Medical Service, Inc., for the $4,000 income ceiling. However, the physician may make an arrangement with the patient for an additional charge as an indemnity fee for the amount the patient receives in excess of $2,500 for a single individual or $4,000 for a family. For example:

Income of family	$5,000
An appendectomy under the ceiling of $4,000	125
The physician may charge as an indemnity an additional fee for the $1,000 income over the $4,000 service income ceiling—for example, say	100
	$ 225

The total fee would then be $225: $125 from United Medical Service, Inc., and $100 from the patient.

For the patient to receive service benefits under the income ceiling limits, it is necessary that two essential conditions be fulfilled: (1) The patient must state at the time he first consults the doctor that he is entitled to service benefits, and (2) at the same time the doctor must indicate that he will or will not accept the patient as one entitled to service benefits.

If the doctor believes that the patient's income is above those limits set forth in the Claim Statement, he then and there should indicate that he will not accept the patient for service benefits, that he will accept what UMS will pay under the schedule of remuneration, and that he will, in addition, charge the patient so much as an indemnity item. From this arrangement the physician at all times controls, in the economic sense, his ability to charge fair and adequate fees for his services. It has been alleged that a few physicians charge "what they will" and take the UMS remuneration as "velvet." Fortunately, these must be rare occasions and, if practiced, are not to the credit of the physician.

However, another feature has entered into the concept of service, the so-called "semiprivate plan." In brief it may be stated that the proponents of this idea frankly state, "this Plan provides full payment (regardless of income) of doctor bills in medical or surgical cases if the patient is hospitalized in semiprivate accommodations." It may consist in the hospital of single occupancy or two-person occupancy, up to as many as 12 patients or more. This designation of semiprivate accommodation in a hospital is made unilaterally by hospital authorities, and in that designation the medical profession is not consulted nor does it have any voice.

An analysis made by the Associated Hospital Service of their subscribers in voluntary and private hospitals for 1951 indicated that with 5,000,000 subscribers admissions were semiprivate 75 per cent and ward 12 per cent, making a total of 87 per cent. Under the semiprivate plan (regardless of income) of the patients, the doctor would accept full payment for 75 per cent of hospital cases. No further charge for services could be rendered by the doctor to 87 per cent of in-hospital patients.

I can recall no circumstances in which this plan was submitted to the societies per se or to a vote of its members. The approval of this Plan was by inference on recommendations to the Society of reports from the respective comitia minorae. The question itself and its implications were, to the best of my knowledge, not discussed in open meeting nor was the voice of the profession, as such, obtained.

It has been held by the State Society that approval of a prepayment plan must be based, among others, on the condition that at least a majority of the board of directors must be physicians. Only one plan in our area has been approved, namely, UMS, because there is a majority of two medical directors, or 13 physicians to 11 lay directors on the board of directors of UMS.

The acceptance of the principle of semiprivate accommodations for service benefits by prepayment medical plans would shackle the medical profession because the physicians would have no choice in the determination of a fair and adequate fee for his services. The serfdom of the medical profession could be easily and completely accomplished by the acceptance of this idea! If this condition obtained and was in continuous operation for a few years, the physician would have, roughly, only 13 per cent of admissions to our hospitals in which he could act as an independent entrepreneur and make a charge for his services on the "ability to pay" basis.

Some of our big medical institutions are going to unusual lengths to establish a legal means of having prepayment medical plans pay for services rendered to insured patients in the wards rather than the semiprivate. Suppose next year a hospital decides that all insurees in a ward or in semiprivate rooms will be taken care of by their official staff and the hospital as an entity be permitted to send bills for their services to the insurance plan. Where does the medical profession go from there?

"New things have come to stay!" In these papers I have attempted to show that prepaid medical insurance is rather rapidly changing the practice of medicine. It has been estimated by various studies that within a short time 70 to 80 per cent of individuals will be covered by some form of hospital and prepaid medical insurance. Correlative with this change is the fact that the patient desires protection, in whole or part, by prepaid medical insurance. The concept of "service benefits" means that the insuree by reason of his income status, ability to pay, will have his entire medical bill paid to the doctor of his choice by the carrier under the schedule of remuneration accepted by the participating physicians and adopted by the Superintendent of Insurance. Service benefits are here to stay. Therefore, the medical profession will inevitably be forced to utilize the mechanism of collective bargaining. On the one hand will be a vast number of individuals and families organized into groups seeking medical service by prepayment medical plans. On the other hand is the medical profession that must render the service under any of these plans. There is thus in the making a relationship that will be in the nature of an amicable partnership but requiring the intervention of a third party, the particular prepaid medical insurance plan concerned.

UMS in the area in which it operates will be the intermediate body between the buyers of protection and the physicians that render the service. It is very opportune that both these parties can utilize the mechanism of UMS to determine a fair and adequate premium rate for the payees and to obtain as large and comprehensive a medical service as the premium will support. It will also be inevitable that only a strong, competent, well-administered insurance plan endorsed by the State Medical Society will be able to function as the intermediary factor.

UMS, with its policies determined upon the advice of the medical profession, is in a position to assume this and many other ancillary functions. However, one must view with considerable apprehension the rash of projected plans by individual county medical societies, to wit: Kings, Richmond, and New York County Medical Societies. The creation, organization, and administration of a prepaid medical plan is a project not lightly to be considered nor readily projected and administered. It requires from the very beginning large and adequate capital and reserves.

Imagine, if you will, the chaos that must result if there were 17 local plans representing 17 counties in the area in which UMS operates. What a catastrophe it would be for sales efforts or for an individual to have a change of insurance plan the moment he passes over the boundary of a county. One seriously questions whether the organic structure of a county medical society is constituted to set up a plan of its own to say nothing of the far-reaching consequences that come from division of effort. "Divide and conquer" was the dictum of the dictator and, in essence, would represent surrendering by the physician of the field of prepaid medical insurance to commercial and other carriers.

Another aspect that gives considerable concern is when the Medical Society of the State of New York has not approved of a prepayment plan because it does not comply with the conditions set forth by the State Society. We find that some plans denied approval by the State Society have received approval by the local county medical society unit. It is not going too far to say that this parodox should be solved and solved at the level of the State Society, which is the parent body of all the physicians. The medical profession has, in the Blue Shield Plans, a factor of great importance to its own well-being. Detract from it, introduce "splinter plans," and the result will be disastrous. Proponents of competition for all types of medical insurance, prepayment medical and malpractice insurance, have led some physicians to believe that encouragement and active participation in a number of prepaid medical plans are good for the physicians. This belief is wholly erroneous and dangerous and by division in the ranks of the profession means "chaos is come again." Only the doctors can destroy the private practice of medicine. The final effect of these divisive elements will be the total failure of the Blue Shield Plans, a great and splendid concept.

"Where there is no vision, the people perish."

If the patient dies, the doctor killed him; if he gets well, the saints cured him.—PROVERB

HISTORY OF MEDICINE in New York State

Editor
FREDERIC D. ZEMAN, M.D.

Memories of a G.P.'s Sixty-Five Years in New York City—Part II

JOSEPH D. NAGEL, M.D., BYRAM, CONNECTICUT

I SOON discovered that New York City had a great many foreign groups among its residents, and it occurred to me that if I were familiar with other languages I could enlarge my practice. Since I couldn't afford lessons, I chose two men among my clinical patients, a Greek and an Italian, whom I offered to treat free, and, if flush, took them to dinner in exchange for talking to me in the evenings. I had always had the faculty of learning a language by the phonetic system, as children do, and studied grammatical rules only after I was thoroughly familiar with the language. When I arrived in New York in June, 1886, I could speak only my native tongues, Hungarian, German, and Slovak, but not a word of English. Yet, when I entered medical college in September, I had a fair vocabulary and upon graduating three years later won one of the cherished Harzen prizes in a class of over 120. Later, as intern at the French Hospital, which I entered without knowing a word of French, I came not only to speak French fluently, but also to reproduce the patois of the different provinces as a result of talking with the patients from various parts of France and other French-speaking countries.

While much of my early service was given free as district physician to the Society for Improving the Condition of the Poor, the hope that my poor patients might have wealthier friends or relatives to whom I could be recommended often proved true. I can trace the acquisition of a number of my wealthy patients to some poor charity case I had been kind to, a hack driver who recommended me to his fares, or a servant who praised me to his mistress. Through a waiter in one of the French societies I joined, who recommended me to the headwaiter, I became physician to the hotel manager, and eventually medical director of one of the largest hotels in the city. Many eminent and successful practitioners started in a similar way, increasing their understanding of human nature and weakness through their own struggles.

Physicians of the present generation would marvel at how we managed to live when office calls were from 50 cents to one dollar, and the most eminent specialists charged five dollars for a consultation. But living expenses were low. I was charged five dollars a week rent for my office, the "back parlor," and the use of the "front parlor," and a classmate of mine who used it two hours a day paid me two dollars weekly, reducing my rent to three dollars. Of course, I had to answer the doorbell at night since the landlady would not be disturbed. It did not take much to outfit an office—the universal, little black satchel for bandages and dressings, the pocket case of instruments, which was usually presented by the hospital to the intern after his graduation, and an intubation set for diptheritic croup cases.

The obstetricians of today may find it hard to believe that our fee for a confinement case was 15 dollars, including monthly office examinations, delivery of the patient, and daily visits for eight days thereafter. If we delivered the same woman a second time our fee was ten dollars, five dollars better than a midwife's fee. There was an additional charge of five dollars if we had to use forceps, and some kind neighbor always offered to come in and hold a cone, filled with cotton and saturated with chloroform, over the patient's face during the extraction. Today, almost every mother wants her child born in a hospital under aseptic conditions, but in those days every woman, no matter how poor, wanted her child in her own home, and for that reason the greater part of the medical practice of the younger doctors was in obstetrics. I remember the day my son was born. After having had four deliveries in different parts of the town, I had to deliver my own wife when Dr. Collyer, the father of the tragic Collyer brothers, failed to show up.

One evening I was on the point of turning off my Welsbach gas lamp (few houses had electric lights) when the front doorbell rang. Hastily donning a dressing gown, I went to the door and found an elderly, bewhiskered man who informed me in a strong German accent that he had been referred to me by the Charity Society and that his wife was having labor pains. He insisted that I go with him at once to his flat in Hell's Kitchen, a district west of Tenth Avenue in the lower forties, inhabited mostly by Irish and Negroes. The district had an unsavory reputation because of holdups and assaults of nightly occurrence. Yet, in all the years that I did my charity work, I was never molested. When the ruffians saw my black bag, they knew I was on an errand of mercy among their poor and, instead, greeted me with a cheery, "Hello, Doc," or asked for a dime to "rush the growler," a tin pail holding several quarts of "suds," as beer was called.

As soon as I finished dressing, I followed the man into the night, through mounds of frozen snowbanks, over streets made empty by the absence of horse cars which would not venture out onto the slippery rails. The Broadway cable cars were running, but since our destination lay in the direction of the Hudson River, we had to make the best of it on foot. It took us almost half an hour to reach the tenement where I climbed three flights of stairs to find the patient groaning under a mound of featherbeds on an immense bedstead which completely filled a small, dark bedroom. The floors were bare, and the furniture cheap in the combination kitchen and dining room, just a kitchen table and two chairs, besides the iron stove. In one corner sat the cradle for the expected child—a soapbox with a pillow. I took off my coat, warmed my hands in hot water from the teapot on the stove, and proceeded to examine the patient.

When I had finished, I returned to the kitchen where the husband, wearing a surly, suspicious expression, sat hunched in a chair. I told him, "Your wife is just starting her labor pains, and it will be at least eight hours before she will be ready for delivery. I may as well go back to my office, catch a little sleep, and be here in time in the morning." At this, the man jumped up and yelled at me, "No, no, mister, you shtick right here und stay 'til der baby comes. Last year when my wife got a baby de doctor say the same ding—baby not come some dime and he go home, but baby come quick and when doctor got back baby was dead." With that he turned the key in the lock, put a chair against the door, took down an old German shotgun which hung on the wall over the door, sat down on the chair with the gun across his knee, and said, "Now, mister, you dry to go home, eh. You shtay here." The memory of those terrible hours will never fade, of me sitting on one kitchen chair and making occasional trips to my patient's bed to see how she was progressing, and her husband sitting on the other chair glowering at me, his gun lying across his lap.

Finally, the hour of delivery came, and I thought that if the infant were born dead, I would surely get that load of shot. Fortunately, the child was a normal, healthy youngster, and after bathing it, part of our routine in the days when we had no nurses, I made the mother comfortable. The husband, to my great relief, hung his gun back on the wall, opened the door, and without a "thank you" went into his wife's room. I did not hesitate a second to escape from the place.

Some of the cases that were referred to me certainly provided memorable experiences. On one occasion an Italian doctor asked me to come to his office on Elizabeth Street. Waiting for me on the top step of his basement barber shop was the doctor's father-in-law (and his greatest booster among tonsorial clients), who took me to the doctor's office, two flights up. We entered a large, bare room with a table and chair in the center. The first patient who arrived occupied the chair, while the other patients stood against the wall waiting their turn. In the doctor's office was a kitchen table which served as examination table, and a long, side table with dressings, hypodermics, and drugs. The doctor's brother, a young pharmacist, dispensed the drugs, mostly pills, while the doctor administered hypodermics of iron or told his brother what pills to give the patient. There was no sterilizer, and whenever the doctor gave an injection, he merely rubbed the skin with cotton until it was quite red, filled his syringe, and plunged the needle in. Were there many infections? Well, he gave me no statistics. As each patient left, he deposited 50 cents in a bowl, which was pretty nearly filled.

The doctor grabbed his satchel and hurried out with me, explaining that he had a very sick man whom he wanted me to see. On the next block we entered a rear tenement to find the patient lying in bed in a dark room, surrounded as usual by family and friends. His temperature was 105.5 F.; he had a barely perceptible, rapid pulse, dry skin, and greatly distended abdomen. I diagnosed the case as ruptured appendix. Appendicitis had just recently become known to the medical profession, and surgery had been employed for just a few years. Before that time such conditions had been classified as inflammation of the bowels. But, since I had seen two such cases at the French Hospital, I felt sure of my diagnosis. I told the doctor that the patient was too far gone to risk removal to the hospital, that he was bound to die on the way. Upon hearing these words, he filled a tin basin with water, opened his satchel, dipped a wad of cotton in the basin, and cleaned the patient's abdomen on the right side. He then whipped out a scalpel and, without preparation, plunged it into the abdomen over the McBurney point, that is, halfway between navel and groin. A great stream of foul-smelling pus gushed out like a torrent. The doctor pulled some gauze from his bag, stuffed it into the opening of the wound after stopping the bleeding in some small arteries, and applied a belly binder. I called the next day to find out when his patient had died, but the doctor said, "He came along nice." Well, maybe people were tougher in those days.

Another time I was recommended to an Italian family on Sixth Avenue near the Haymarket on 30th Street where a twelve-year-old boy was having trouble with breathing and moaning in pain. I diagnosed the case as pleurisy with effusion and advised removal to the hospital for aspiration. Since hospitals in those days were not quite as popular as they are now, the family strongly objected to this. The doctor told me he could perform the aspiration quite easily himself if I held the child. I did not like the idea, but seeing that he was badly in need of relief, I held him while the family crowded around to watch. The doctor, in plunging his needle into the side of the child's chest, evidently penetrated beyond the pleural cavity into the lung because after a violent cry the child gave a few last gasps and suddenly stopped breathing. I shall never forget the shrieks that tore from his parents and relatives. When I saw one coming for me with a stiletto, I made a dash for the door, leaving coat and hat behind. I never ran faster than I did that day. When I reached the street, I took one look behind me and saw the doctor surrounded by a mob of people, who nearly ripped off his clothes. Fortunately, a policeman stood on the corner talking to Captain Bill Devery (called the "Finest Chief" by our then Mayor of New York), who between them rescued the doctor in time and allowed me to escape to my nearby office.

As head of the medical departments of two of the largest hotels in the city, I came to discover that the modern, large American hotels are far superior to any Continental hotel in one respect, their medical departments. When the late E. M. Statler built his Pennsylvania Hotel (now the Statler) and the late Lucius Boomer built the new Waldorf Astoria, they both asked me to lay out a medical department which would be of prime help both to the guests and employes of the hotel. These departments have consulting, operating, laboratory, x-ray, nose and throat, and emergency rooms for injured employes, and bedrooms for the assistants who live on the premises. With a staff of trained nurses on duty day and night, immediate help may be rendered in emergency. So successful was this idea of a modern hotel hospital, that the architects of the New Yorker, the Barbizon Plaza, and many of the newly built hotels in other cities asked me to design their medical departments. These were of particular comfort to the guests and their families at home, because, as they often expressed it to me, they "felt safe" in such a hotel. There were many men prominent in business and politics who did not wish to publicize that they were ill, and in a modern hotel they could have their own physician, consultant, or surgeon if they preferred them to the hotel's medical staff.

Incidentally, I do not know why hospitals, most of which can never balance their budgets, are not run on the hotel plan. A comfortable room in a hotel can be provided for from eight to 15 dollars. As for meals, how much food does a patient consume in postoperative gastric or other cases? Some of our most prominent surgeons have operated in these hotels to their perfect satisfaction, and we have had quite a few obstetric patients on our list, many of whom returned to the hotel for their "delivery" because on a previous visit they had been taken ill and were so pleased with the care they received.

Those who witnessed the growth of medicine and surgery from the days when bacteria were unheard of and nationally famous colleges like the College of Physicians and Surgeons did not teach pathology, but only the study of normal tissues, appreciate the discoveries of Louis Pasteur of France and Joseph Lister of England, which so completely revolutionized our medical and surgical knowledge and procedure.

In my early practice diphtheria was very prevalent, and since diphtheritic croup was considered 98 per cent fatal, we always carried an intubation set with us. But the disease has practically been stamped out in civilized countries since Dr. Behring announced his discovery of the diphtheria antitoxins and Dr. Schick's test showed the child's susceptibility to the disease and enabled us to use preventive injections. We wonder at the great results in various forms of blood conditions, anemias, polycythemia, etc., in the control of malaria and other devastating diseases due to parasitic infections, pneumonia, diabetes, mastoid and various purulent conditions, tuberculosis, and above all the quick cure of the dread venereal diseases, which often left lifelong after-effects. To us old timers who have seen infants by the hundreds die during their "second summer," scientific infant feeding, which has saved the lives of millions of children, seems a miracle. We had never heard of appendicitis before we saw Dr. McBurney perform his first appendectomy. Brain surgery—yes, trephining was known to the ancient Greeks—but who would have dared in those days to expose the brain and remove tumors. I can safely say that our profession has made more progress in the last fifty years than since the beginning of time.

As I look back upon nearly sixty-five years of active practice, I have the satisfaction to feel that while I may not have achieved eminence in my profession, I have been a source of comfort and help to the thousands who called on me, often for advice outside their purely medical needs. People often ask me for the secret of growing old, mentally well-balanced. As to longevity that in my opinion is a matter of heredity, for no human being could, as we did in the old days, go through almost nightly calls, interrupted meals, and exposure to contagion and infection (with scant knowledge how to safeguard against it) without succumbing, as did many members of the medical profession, the shortest-lived of all professional people. I attribute mental well-balance to the various hobbies which I have pursued since my early youth. There is something about hobbies which tends, like a change of occupation, to bring a new outlook upon life, and the many patients I have seen, especially the shut-ins who suffered from nervous depression or nervous breakdown, and to whom I have always preached "hobbies," have invariably benefited from acquiring an interest outside their ego. Gardening is my chief hobby, and I am proud to have received a gold medal from the defunct *New York World* and two silver medals and a bronze medal from the *Herald Tribune.* I prize these medals equally with the silver medal I received from the French Government in 1926 for "Eminence in Hygiene."

Above all, I kept in touch with the miraculous progress surgery and medicine were making in the last decade of the nineteenth and the first part of the twentieth century. I worked at the clinics of the French Hospital and the Polyclinic Hospital and still managed to write two books on diseases of the brain and nervous system.

One thing that I can say without undue boasting is that the American medical profession today leads every civilized country on the globe. When I first entered medical school, it was the universal practice for those graduates who could afford it to go to the European universities for their postgraduate work. As a matter of fact, even some of the more recently arrived medical men, who came over from Europe, claimed that their schools of medicine were superior to ours because our students went over there for postgraduate training. I have attended the lectures of Charcot in Paris, Bernheim in Lyons, Freud in Vienna, Dr. Calmette at the Pasteur Institute, and many others, and the only superiority I could find was in the number of patients presented at the clinics. But, no wonder, with the many hopelessly poor and ill-fed people over there! Now, the tide has turned for today the sick of all lands come to the United States to benefit from the most progressive medical profession in the world.

Thorough knowledge of our profession is absolutely essential, but if I am asked to give the best formula for success, I will unqualifiedly answer, "The knowledge of how to handle your patients." Unfortunately, this is not a science taught in medical schools now, although when I entered the College of Physicians and Surgeons in 1886, students could obtain credit if before their graduation they could bring in a certificate from their preceptor, a practicing physician, stating that the student had accompanied him on his rounds visiting his private patients. I have known quite a few medical men who were walking medical libraries but who could never build up a practice because they lacked the "know-how" of gaining a patient's confidence. It is a science that only experience and the love of mankind can develop.

The Doctor in CIVIL DEFENSE

Medical Defense Committee of the Medical Society of the State of New York and the Office of Medical Defense, New York State Department of Health

J. G. FRED HISS, M.D., SYRACUSE, NEW YORK, *Editor*

"The Injured Can't Wait"—A New Medical Film

PHYSICIANS, nurses, medical aides, medical supplies, litter-cots, and plasma—these we must have if we are to care for the thousands who would be injured in an atomic attack. But, they won't be enough. We must also have a plan that can go into operation within minutes after it is known that one of our cities has been attacked. Personnel must be trained and ready to carry out that plan.

To help members of Emergency Medical Services understand what should happen after an atomic bombing in order to save the greatest number of lives, a film, *The Injured Can't Wait,* has been produced by the New York State Health Department Office of Medical Defense. It covers the purpose of Emergency Medical Services, the assembly and movement of aid, and the movement of the injured.

"...To care for more injured, at one time, than has ever been done before. We must learn to move swiftly and safely—to save lives, to reduce disability, to relieve suffering. The injured can't wait." This is the mission of the medical service of Civil Defense which is stated at the beginning of the film. The effects of the atom bomb, the inflow of supplies from State and Federal depots, the assembly of personnel, the need for medical aides, the medical installations, and the headquarters' control of medical operations are all shown in the first part of the film. The types of medical installations, first aid stations, secondary aid stations, improvised emergency hospitals, permanent and remote hospitals, holding stations, the personnel needed, and the work done by each installation are covered by film and narration.

"Moving the Injured" is the subject of the second part of the film. If large numbers of injured are to receive emergency treatment necessary to keep them alive, there must be swift and continuous movement of the injured to rearward installations. *The Injured Can't Wait* shows the flow of the injured between installations and explains treatment given in each. This is further clarified through scenes which follow three sample cases from the time they are picked up in the field. Numerous closeups show clearly how to use the litter-cot, which serves both as a litter and a cot, how to stack litter-cots, and how to load them onto trucks.

It is important that every person who is to work in Emergency Medical Services after an atomic attack know the contents of this film for it contains the basic concepts of the plan for caring for the injured. Training courses will, of course, define particulars more completely. It may be some time, however, before all personnel are reached by a training course, and some professional personnel may never report for training. However, it will be difficult even for physicians to work in the emergency situation which will exist unless they have some idea of the over-all plan of the medical service and the part they are expected to play in it.

The plan to save the lives of all those who can be saved will be greatly furthered if all professional personnel in the State see the film *The Injured Can't Wait.* County medical societies are urged to arrange for it to be shown at a society meeting in the near future. A copy may be borrowed through the local Office of Civil Defense. The more physicians who understand the plan and purpose of Emergency Medical Services, the more lives they will save after an atomic attack.

NECROLOGY

Samuel Barland, M.D., of Queens, died on November 27, 1953, at his home at the age of forty-nine. Dr. Barland received his medical degree from the University of Maryland Medical College in 1929 and interned at City Hospital, New York City. He was director of the laboratories at Parsons Hospital, Flushing, and at Queens Memorial Hospital, associate attending pathologist at Queens General Hospital, and attending pathologist and director of the laboratories at Bethany Deaconess Hospital, Brooklyn. A Fellow of the College of American Pathologists and a Diplomate of the American Board of Pathology, he was a member of the American Society of Clinical Pathologists, the New York Pathological Society, the New York State Society of Pathologists, the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles Edward Bauer, M.D., of Poughkeepsie, died on December 9, 1953, in Vassar Brothers Hospital at the age of fifty-one. Dr. Bauer was graduated from Cornell University Medical College in 1928 and interned at the New York Eye and Ear Infirmary and St. Luke's Hospital, New York City. He was assistant attending surgeon in ophthalmology at the New York Eye and Ear Infirmary, associate attending ophthalmologist at Vassar Brothers Hospital, Poughkeepsie, and on the consulting staff at the Northern Dutchess Health Center, in Rhinebeck. A Diplomate of the American Board of Ophthalmology, Dr. Bauer held membership in the American Academy of Ophthalmology and Otolaryngology, the Dutchess County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Merritt Isaac Beers, M.D., of Middletown, died on December 11, 1953, at his home at the age of seventy-six. Dr. Beers received his medical degree from New York Homeopathic Medical College in 1901 and practiced medicine in Middletown for more than fifty years. He was a member of the Orange County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Franklin D. Earl, M.D., of Ogdensburg, died on November 22, 1953, at his home at the age of eighty-one. Dr. Earl received his medical degree from Bellevue Hospital Medical College in 1895. He served as acting assistant surgeon with the United States Public Health Service from 1908 to 1918 and was medical officer of the State Department of Health for a number of years, prior to a full-time appointment as district health officer. Dr. Earl was local school physician from 1917 to 1928, and from 1931 until his retirement in 1935, and was on the staff of the A. Barton Hepburn Memorial Hospital, in Ogdensburg. In June, the St. Lawrence County Medical Society awarded him a citation for forty or more years of practice. Dr. Earl was a member of the St. Lawrence County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles Perley Gray, M.D., of New York City, died on December 8, 1953, at the age of seventy-eight. Dr. Gray received his medical degree from Harvard University Medical College in 1904. He had practiced in New York City since 1905 and was attending gynecologist at the North Eastern Dispensary, instructor in gynecology at New York Polyclinic Medical School and Hospital, visiting surgeon at Midtown Hospital, and assistant visiting surgeon at City Hospital. Dr. Gray was active in the Mexican border conflicts, and was gassed in France in 1918, while serving as military surgeon in World War I. A Fellow of the American College of Surgeons, he was a former president of the Harvard Medical Society, in New York City, and a member of the Military Surgeons of the United States, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harry C. Guess, M.D., of Buffalo, died in Millard Fillmore Hospital on December 2, 1953, at the age of sixty-five. Dr. Guess was graduated from the University of Buffalo School of Medicine in 1912 and did graduate work in proctology in London and Berlin. He was chairman of the Department of Proctology at Millard Fillmore Hospital, and had been active on the medical staff since 1930, serving as its president from 1941 to 1943. Dr. Guess was chief proctologist at Sisters of Charity Hospital of Buffalo, attending proctologist at Lafayette General Hospital, and instructor in proctology at the University of Buffalo School of Medicine. He was the first physician to be named to the Alcoholic Beverage Control Board in 1939. Dr. Guess headed the Erie County Medical Society in 1938, and served for many years as a delegate to the Medical Society of the State of New York, and as a member of the county society's publication committee. He was one of the founders of the Western New York Blue Shield Medical Plan. A Fellow of the American College of Surgeons and a Diplomate of the American Board of Proctology and the American Board of Surgery, Dr Guess held membership in the American Proctologi

Society, the Buffalo Academy of Medicine, the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Carl M. Herold, M.D., of Saranac Lake, died on December 7, 1953, at Albany Hospital at the age of sixty-one. Dr. Herold received his medical degree from the University of Hamburg in 1928. He was a member of the American Psychoanalytic Association, the American Association for Research in Psychosomatic Problems, the New York Psychoanalytic Society, the Franklin County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Scott Johnson, M.D., of New York City, died on December 14, 1953, in his office at the age of fifty-five. Dr. Johnson received his medical degree from Washington University Medical School, in St. Louis, in 1924 and did postgraduate work in Vienna. He interned at Presbyterian Hospital, New York City, and was medical director of Knickerbocker and Lincoln Hospitals, associate professor of medicine at Cornell University Medical College, physician for the American Museum of Natural History, assistant attending physician at New York Hospital, and on the staffs of Doctors and Manhattan State Hospitals. Dr. Johnson was a Fellow of the American College of Physicians and a Diplomate of the American Board of Internal Medicine, and was a member of the American Geriatrics Society, the New York Academy of Medicine, the New York Gastroenterological Society, the West Side Clinical Society, the Medical Strollers, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Samuel Linder, M.D., of Brooklyn, died on November 17, 1953, in Jewish Hospital at the age of sixty-seven. Dr. Linder was graduated from Cornell University Medical College in 1910 and interned at Jewish Hospital. He served on the surgical staff of Jewish Hospital from 1915 until his death, and was the last of a noted trio of brothers who had served there as surgeons. Dr. Linder was a Fellow of the American College of Surgeons, a Diplomate of the American Board of Surgery, and a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

G. Randolph Manning, M.D., of New York City, died on December 1, 1953, at the age of eighty-one. Dr. Manning received his medical degree from the University of Freiburg in 1898 and was attending gastroenterologist at Polyclinic Hospital. He held membership in the National Gastroenterological Association, the New York Gastroenterological Society, the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Howard Valentine Merrell, M.D., of Brooklyn, died on November 18, 1953, at Caledonian Hospital at the age of seventy-eight. Dr. Merrell was graduated from Columbia University College of Physicians and Surgeons in 1898 and interned at Staten Island Hospital. In 1948 he was honored for the completion of fifty years as a physician, at a dinner given by the Medical Society of the State of New York, and the College of Physicians and Surgeons. He was assistant attending physician at Kings County and Caledonian Hospitals until his retirement several years ago. Dr. Merrell was a charter member of the Flatbush Medical Society, and a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Samuel Solis Nussbaum, M.D., of Kingston, died on November 15, 1953, at the age of fifty-three. Dr. Nussbaum received his medical degree from the University of Maryland Medical College in 1927. He practiced medicine in New York City before moving to Kingston twelve years ago, and had been medical director for the Kingston public school system since 1948. Dr. Nussbaum was a member of the Ulster County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Joseph Pisciotta, M.D., of Brooklyn, died on November 19, 1953, at Norwegian Hospital at the age of sixty-six. Dr. Pisciotta received his medical degree from New York Homeopathic Medical College in 1914 and interned at Jersey City Hospital, New Jersey. He was assistant professor in pediatrics for nineteen years at Post-Graduate Hospital, New York City, and was attending physician in pediatrics at St. Mary's and Norwegian Hospitals, Brooklyn. During World War II, he served for three years as a member of the board of examiners for a Selective Service board in Bay Ridge.

Byron D. St. John, M.D., of Manhasset, died on December 16, 1953, in Flower and Fifth Avenue Hospitals, New York City, at the age of fifty-nine. Dr. St. John received his medical degree from New York Homeopathic Medical College in 1921. He was consultant in internal medicine and physical peripheral vascular diseases at Meadowbrook Hospital, Hempstead, consultant in internal medicine at Mercy Hospital, Rockville Centre, attending physician in internal medicine at Nassau Hospital, Mineola, assistant attending physician in internal medicine at Flower and Fifth Avenue Hospitals, and consultant at the North Shore Hospital, Manhasset. A Fellow of the American College of Physicians and a Diplomate of the American Board of Internal Medicine, Dr. St. John was a member of the American Geriatrics Society, the New York Academy of Medicine, the Nassau County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

MEDICAL NEWS

American Medical Education Foundation—Contributors to the American Medical Education Foundation for October, 1953, from New York State were: *Bethel*—Dr. C. Duggan; *Binghamton*—Drs. M. A. Carvalho, Arthur Lankford, Jr., and A. H. Potouhi; *Bronx*—Drs. H. Goldstein and William Horowitz; *Brooklyn*—Drs. Albert F. Andresen, Harry S. Lichtman, B. Pollet, A. S. Werner, and Samuel Zane; *Buffalo*—Drs. G. C. Brady, W. J. Daley, W. B. Hamby, R. S. Kidder, and E. J. Lippschutz; *Cambridge*—Dr. D. M. Vickers; *Clinton*—Dr. James E. Compson; *Elmira*—Dr. John F. Lynch; *Hammondsport*—Drs. Donald Coon and Eldred J. Stevens; *Helmuth*—Dr. W. J. Allexsaht; *Hempstead*—Dr. Benjamin M. Stein; *Livingston*—Dr. H. A. Pattison; *Newburgh*—Dr. Paul Watson; *New York City*—Drs. S. Alexander, Lionel S. Auster, Louis H. Bauer, Ellis M. Black, Herbert Conway, J. H. Cudmore, H. W. Dargeon, Haven Emerson, Herbert O. Grossman, William A. Horwitz, D. R. Jensen, Merrill D. Lipsey, Robert B. McGraw, Harry R. Potter, George G. Reader, G. Schnerb, Otto Steinbrocker, M. P. Sykes, Harold L. Temple, David P. Waldman, and F. A. Wurzback, Jr.

Also, *Northport*—Dr. Walter Novotny; *Plattsburg*—Drs. Ruth Copeland, George Gonyea, and Eric D. Pearson; *Port Chester*—Drs. Peter A. Duncan, John E. Gundy, and R. A. Higgons; *Rochester*—Drs. Joseph W. Cooney, Francis A. Dobrzynski, William W. Howe, Jr., G. F. McCann, William S. McCann, T. P. Merrick, Howard A. Spindler, and D. M. Tomaselli; *Rockaway Beach*—Dr. A. W. Victor; *Roslyn Heights*—Dr. Howard J. Agatston; *White Plains*—Drs. Kaare K. Nygaard and E. Rockwell; *Woodside*—Dr. Harry K. Stone, and *Yonkers*—Dr. Edwin C. Coyne.

Child Guidance Center Opens in Rochester—A new child guidance center, the twelfth to be maintained by the Department of Mental Hygiene in New York State, opened in Rochester in November. It will be staffed by a "traveling team" of personnel, including psychiatrist, psychiatric social workers, and psychologist, who will conduct four weekly community child guidance clinics in the area. Drs. Donald J. McIntosh and Oscar K. Diamond, of the Willard State Hospital staff, will conduct the clinic every Monday at Canandaigua; on Tuesdays, Drs. James M. Murphy and Harold A. O'Connor, also of Willard, will hold a clinic at Seneca Falls; Wednesdays, a clinic will be conducted at Albion, by Dr. Guy M. Walters, of Rochester, and on Thursdays, Drs. Edward D. Stevenson and Harry Feldman, of the Newark State School, will hold a clinic at Lyons.

Provision has been made in State appropriations for two more clinic teams, to be appointed as soon as professional personnel can be obtained. Dr. Donald W. Cohen, chief child guidance psychiatrist, is director of child guidance clinics, with headquarters in Albany. The Department of Mental Hygiene maintains the clinics as part of its program of prevention, and stresses therapy. The children are referred by school personnel, courts, social agencies, or parents, and are treated for habit disorders, conduct disturbances, neurotic behavior, and personality difficulties, as well as for early symptoms of psychosis. A total of 59 New York State communities receive regularly scheduled service from these centers.

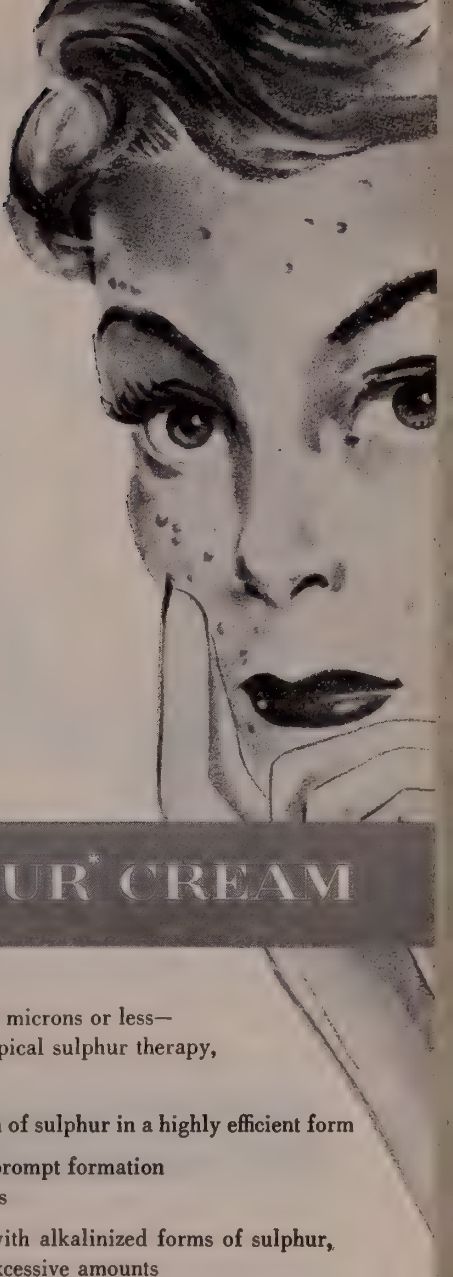
Nation-Wide Discussions on Institutional Care of the Aging—Health and welfare experts throughout the country will meet in a series of regional conferences early in 1954 to discuss the improvement of institutional care for the aging. Authorities in health, nursing, institutional management, hospital planning, social welfare, and government met in New York City on November 10 to draft plans for the conferences, which will offer the first opportunity in the United States for national interchange of experience in standard-setting and licensure of institutions caring for elderly people.

The Frederick and Amelia Schimper Foundation, which recently sponsored a two-year study of basic standards on which the discussions will be based, will finance the meetings. "Standards of Care for Older People in Institutions," the report resulting from the study is priced at $2.00 and is available from the National Committee on Aging. It emphasizes the essential needs of older people in institutions, and analyzes the educational technics used by state and local agencies concerned with raising standards in these institutions. To prepare for the regional conferences, groups are urged to send information about their activities to the National Committee on Aging.

Formed in 1950, the National Committee on Aging, in care of the National Social Welfare Assembly, Inc., New York City, comprises approximately two hundred representatives of citizen groups, labor, industry, and health.

American Board of Obstetrics and Gynecology—The next scheduled examination (Part I), written examination and review of case histories, for all candidates will be held in various cities of the United States, Canada, and military centers outside the continental United States, on Friday, February

[Continued on page 282]



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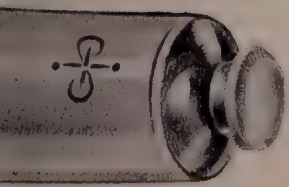

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WRITE TODAY

[Continued from page 280]

5, 1954. Candidates resubmitting case abstracts should forward these to the office of the secretary, Dr. Robert L. Faulkner, 2105 Adelbert Road, Cleveland 6, Ohio, as early as possible.

Requests for re-examination in Part II must be made by the candidate prior to February 1 of any year.

New Officers Elected—At the annual meeting of the New York Allergy Society, held November 16, 1953, at the New York Academy of Medicine, the following officers were elected: Dr. Frederick R. Brown, president; Dr. William B. Sherman, president-elect; Dr. Murray Albert, vice-president; Dr. Leoni N. Claman, secretary, and Dr. Samuel J. Prigal, treasurer.

Announce New Officers—The Brooklyn Dermatological Society has announced the following slate of officers for the current year: Dr. C. B. Locasto, president; Dr. Harry L. Feingenbaum, vice-president; and Dr. Frank D. Jennings, Jr., secretary.

Roswell Park Lecture—On February 18, the Buffalo Surgical Society will sponsor the Roswell Park Lecture, this year to be given by Dr. Isador S. Ravdin, John Rhea Barton professor of surgery, University of Pennsylvania Medical School, and surgeon-in-chief at the Hospital of the University of Pennsylvania.

Dr. Ravdin at that time will be awarded the Society's Gold Medal, being given for the seventh time, in honor of Dr. Roswell Park, professor of surgery, University of Buffalo, from 1883 to 1914. Previous lecturers and recipients of the Medal are as follows: Dr. Allen C. Whipple, 1948; Dr. Evarts A. Graham, 1949; Dr. Dallas B. Phemister, 1950; Dr. Frederick A. Coller, 1951; Dr. Edward D. Churchill, 1952, and Dr. Warren H. Cole, 1953.

MEETINGS—PAST

Finger Lakes Neuropsychiatric Society

The Finger Lakes Neuropsychiatric Society held its annual dinner meeting at the Veterans Administration Hospital, Canandaigua, on November 12, 1953. Dr. Robert W. Rasor spoke on "The Psychopathology of Drug Addiction."

The following officers were elected: president, Dr. Benjamin Pollack, Rochester; vice-president, Dr. Edwin M. Levy, Canandaigua; secretary-treasurer, Dr. Murray Bergman, Newark; and council, Dr. Benjamin Pollack, Dr. Louis V. Lopez, Canadaigua; Dr. Edwin M. Levy, Dr. James F. Murphy, Willard; Dr. Murray Bergman, Dr. Robert Schopbach, Clifton Springs, and Dr. Jacob Schneider, Willard.

Jefferson County Medical Society

The Jefferson County Medical Society held a meeting at the Black River Valley Club, in Watertown, on November 17, 1953. Dr. Raymond Harris, research associate in biochemistry at Albany Medical College, and attending cardiologist and assistant medical director at the Ann Lee Home, Albany, spoke on the topic, "Cardiovascular Problems in the Aged."

The program was postgraduate education arranged by the State Society's Council Committee on Public Health and Education, with the cooperation of the State Department of Health.

Cayuga County Medical Society

The Cayuga County Medical Society held a meeting at the Osborne Hotel, in Auburn, on November 19, 1953. Dr. Clyde L. Randall, professor of obstetrics and gynecology at the University of Buffalo School of Medicine, spoke on the topic, 'Hormone Therapy and the Prevention of Gynecologic Cancer."

The program was postgraduate education arranged by the State Society's Council on Public Health and Education, with the cooperation of the State Department of Health.

Geneva Academy of Medicine

The Geneva Academy of Medicine held a meeting at The Belhurst, in Geneva, on December 21, 1953. Dr. Stewart Ross, secretary and Fellow of the American Proctological Society, spoke on the topic, 'Office Diagnosis of Common Proctological Conditions."

The program was postgraduate education arranged by the State Society's Council Committee on Public Health and Education, with the cooperation of the State Department of Health.

FILM REVIEW

Functional Anatomy of the Hand

Produced in cooperation with the Department of Anatomy, Duke University School of Medicine

Available through the Division of Professional Education of the National Foundation for Infantile Paralysis

This film portrays by actual moving demonstration the function of the individual muscles of the hand and forearm, their origin, location, insertions, and their action individually and in groups.

Preparation and demonstration are very effectively and accurately done. The photography is good, although at times the reflections are distracting.

The film stands alone as a teaching instrument for review purposes but should be used with lecture and laboratory materials for medical students.

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It is a basic film that should be in every medical film library.

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BOOKS RECEIVED

The following books were received during the month of November, 1953

The Medical Clinics of North America. Philadelphia Number. November, 1953. Index 1951–1953. Octavo, illustrated. Philadelphia, W. B. Saunders Co., 1953. Published bimonthly (six numbers a year.) Cloth, $18 net; paper, $15 net.

Pediatric Gynecology. With Sections on Urology and Proctology. By Goodrich C. Schauffler, M.D. Third edition. Octavo of 318 pages, illustrated. Chicago, Year Book Publishers, 1953. Cloth, $7.50.

Hunted Heretic. The Life and Death of Michael Servetus, 1511–1553. By Ronald H. Bainton, Ph.D. Octavo of 270 pages, illustrated. Boston, Beacon Press, 1953. Cloth, $3.75.

Mother and Baby Care in Pictures. By Louise Zabriskie. Fourth edition. Octavo of 244 pages, illustrated. Philadelphia, J. B. Lippincott Co., 1953. Cloth, $3.00.

Physiology of the Eye. Clinical Application. By Francis Heed Adler, M.D. Second edition. Quarto of 734 pages, illustrated. St. Louis, C. V. Mosby Co., 1953. Cloth, $13.

Official History of the Canadian Medical Services, 1939–1945. Vol. Two. Clinical Subjects. Edited by Lt. Col. W. R. Feasby, R.C.A.M.C. Illustrated with Paintings and Photographs by Canadian War Artists and Photographers. Published by Authority of the Minister of National Defence. Quarto of 537 pages, illustrated. Ottawa, Edmond Cloutier, Queen's Printer and Controller of Stationery, 1953. Cloth, $5.00.

Doctor—It Tickles! By Henry Gregor Felsen. Illustrated by Lawrence Lariar. Octavo of 120 pages, illustrated. New York, Prentice-Hall, 1953. Cloth, $2.95.

The Collected Papers of Otto Fenichel. First Series. Octavo of 408 pages. New York, W. W. Norton & Co., 1953. Cloth, $6.50.

Human Behavior in the Concentration Camp. By Dr. Elie A. Cohen. Translated from the Dutch by M. H. Braaksma. Octavo of 295 pages, illustrated. New York, W. W. Norton & Co., 1953. Cloth, $5.00.

Practical Methods in Biochemistry. By Frederick C. Koch and Martin E. Hanke, Ph.D. Sixth edition. Octavo of 537 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $5.00.

Surgery of Repair as Applied to Hand Injuries. By B. K. Rank, M.S. (Melbourne) and A. R. Wakefield, M.S. (Melbourne). Octavo of 256 pages, illustrated. Edinburgh, E. & S. Livingstone (Baltimore, Williams & Wilkins Co.), 1953. Cloth, $8.00.

Diseases of Women. By Robert James Crossen, M.D. Tenth edition. Quarto of 935 pages, illustrated. St. Louis, C. V. Mosby Co., 1953. Cloth, $18.50.

Medical Treatment of Disease. Edited by Henry A. Christian, M.D., Col. Dale G. Friend, M.C., A.U.S., and Lt. Col. Maurice A. Schnitker, M.C., A.U.S. Co-Editors, Burgess Gordon, M.D., William J. Kerr, M.D., and Cyrus C. Sturgis, M.D. Octavo of 965 pages. New York, Oxford University Press, 1953. Cloth, $25. (Vol. 8 of the Oxford Medicine [Loose-Leaf].)

Essentials of Medical Research. By Wallace Marshall, M.D. Octavo of 176 pages. New York, Vantage Pr., 1953. Cloth, $3.00.

Diseases of Women. By Ten Teachers. Under the Direction of Frederick W. Roques, M.D. Edited by Frederick W. Roques, M.D., John Beattie, M.D., and Joseph Wrigley, M.D. Ninth edition. Octavo of 480 pages, illustrated. London, Edward Arnold & Co. (Baltimore, Williams & Wilkins Co.), 1953. Cloth, $6.50.

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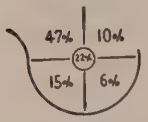
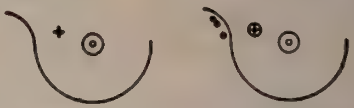


No axillary glands
70 to 80 per cent—
five-year survival

Comparative frequency



Axillary glands or fixation of
tumor 20 to 30 per cent—
five-year survival

TO IMPROVE THE RESULTS OF TREATMENT OF BREAST CANCER

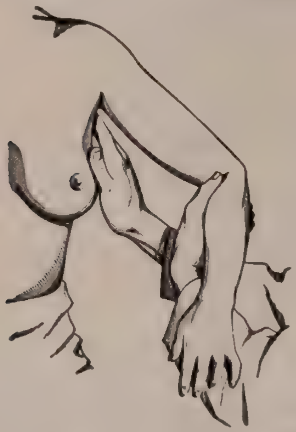
Investigate

- *Bloody, serous, grumous discharge from nipple with or without palpable mass.
- Tiny lump.
- Minimal localized thickening.
- Persistent fissure, ulceration and scaling of nipple.
- Slightest dimpling of overlying skin.
- Nontender axillary gland.

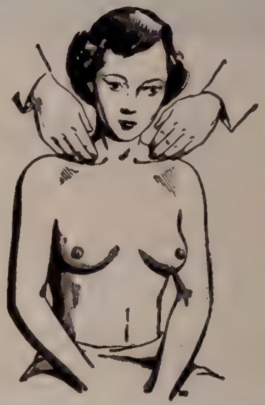
Don't WATCH and WAIT for

- *OBVIOUS* lump.
- *OBVIOUS* fixation or retraction of skin, areola, nipple, or chest wall.
- *OBVIOUS* fixed axillary and supraclavicular nodes.
- *OBVIOUS* ulceration of skin.
- *OBVIOUS* bleeding from palpable duct tumor.
- *OBVIOUS* tense orange peel skin.
- *OBVIOUS* edema of arm.
- *OBVIOUS* pain from metastasis to bone.

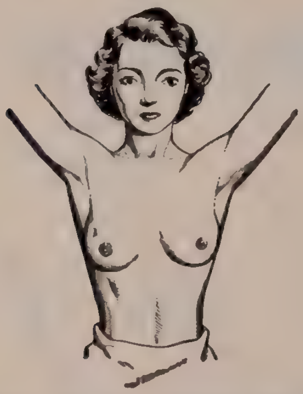
POSITION FOR EXAMINATION OF AXILLA



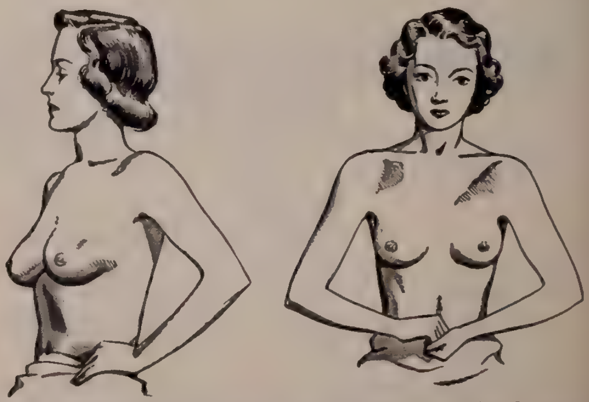
The arm is relaxed so that the examiner can palpate the axilla, apex, lateral chest wall, upper, outer, and lower quadrants of the breast.



The physician should stand behind the patient to examine for supraclavicular nodes and for a breast tumor.



Raising the arms demonstrates the dimpling and fixation of the tumor to the skin.



Tensing the pectoral muscles by pressure on the hips or tightly clasping the fingers shows fixation of the tumor to the skin, pectoral fascia or muscle.

*Express a few drops of discharge from nipple on a glass slide and fix wet slide in mixture of 95 per cent alcohol and ether for cytologic examination.

(Prepared by the Subcommittee on Cancer, Medical Society of the State of New York)

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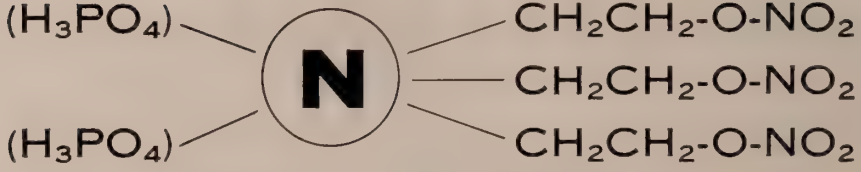
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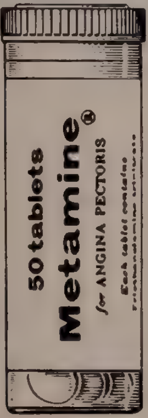

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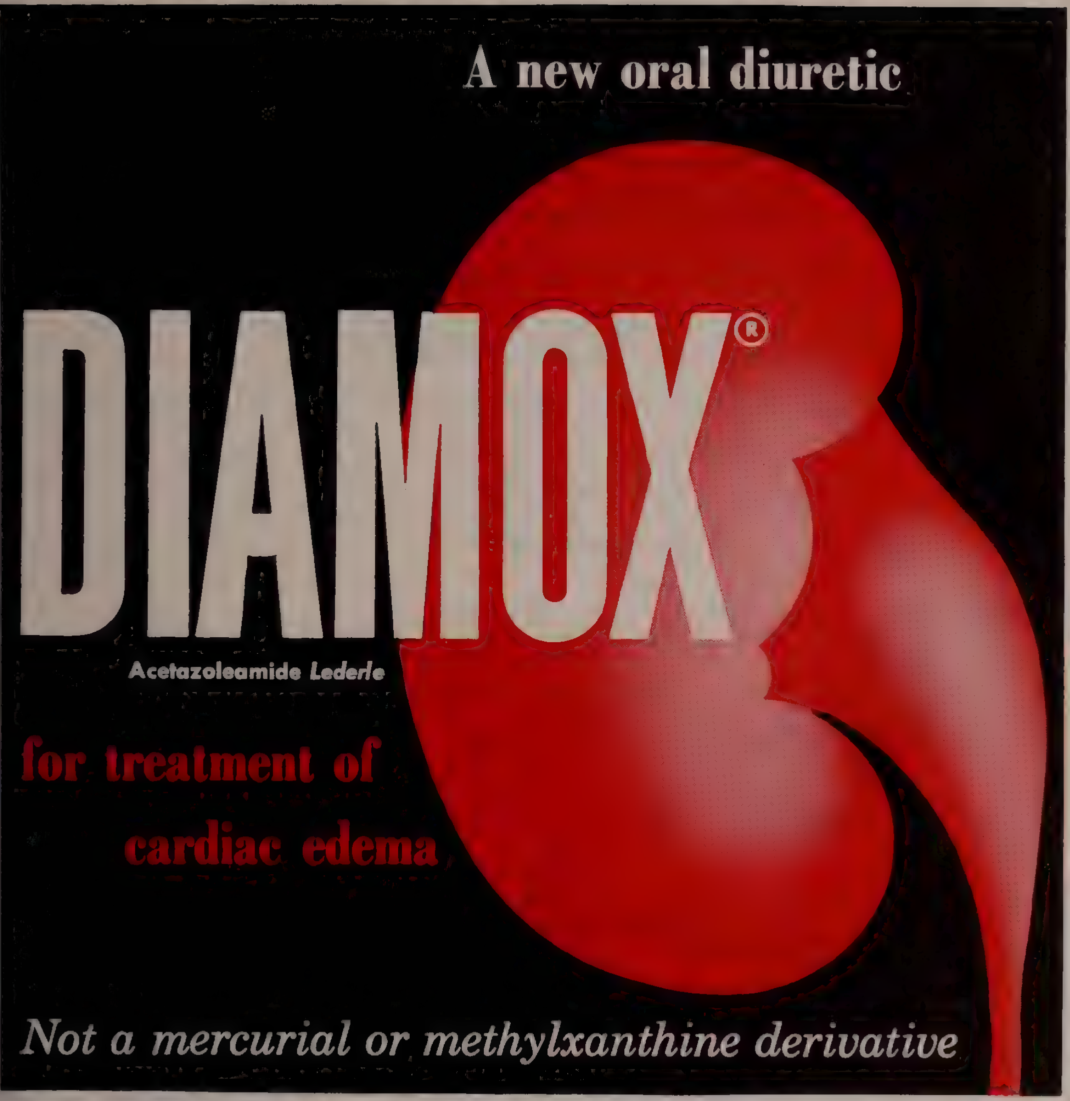
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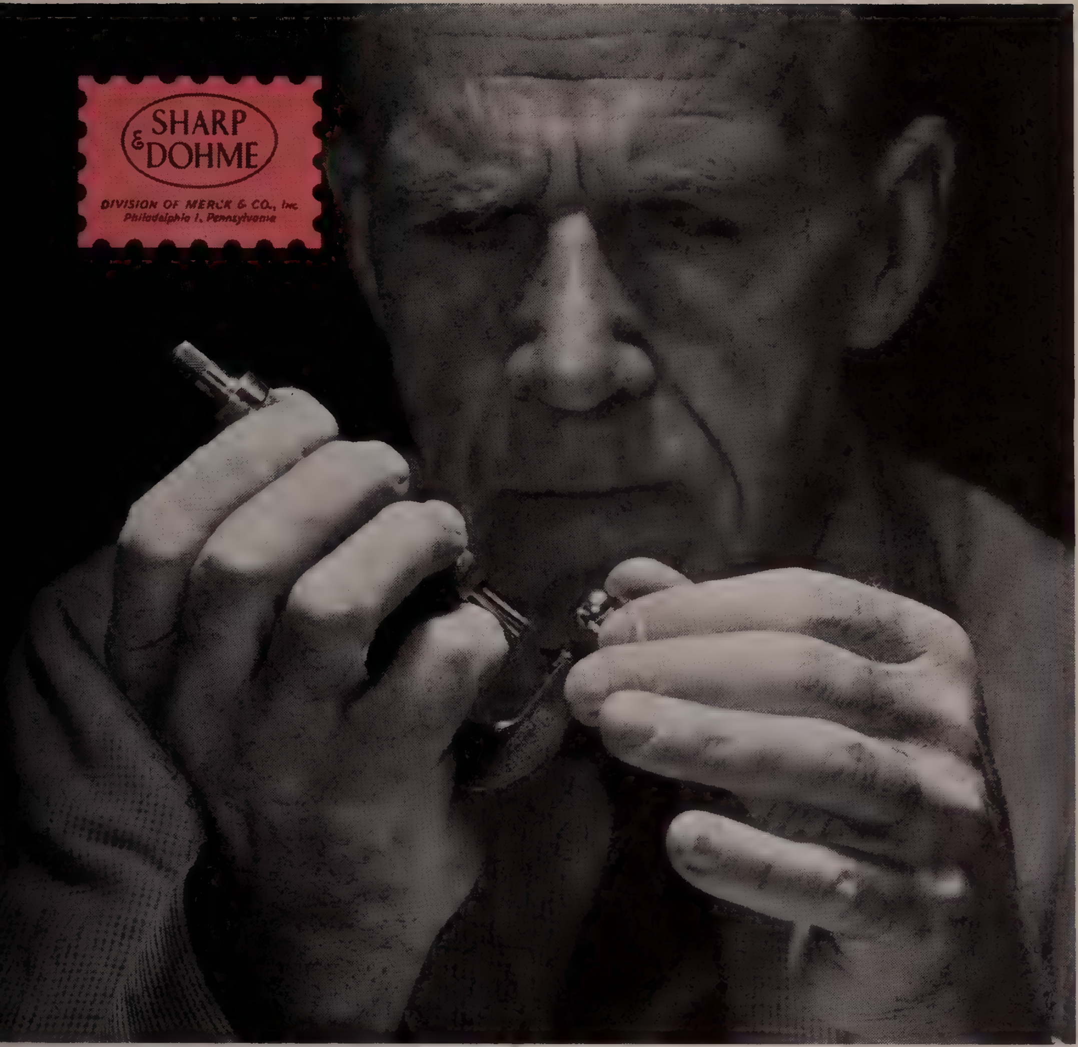

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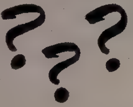

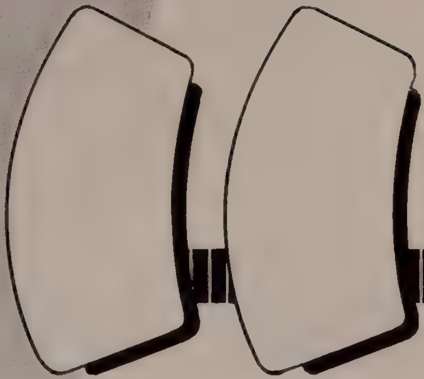

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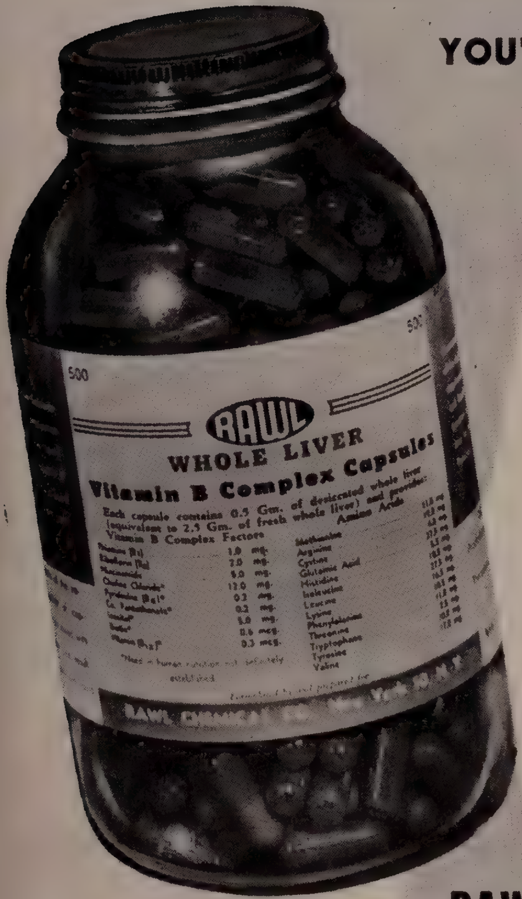

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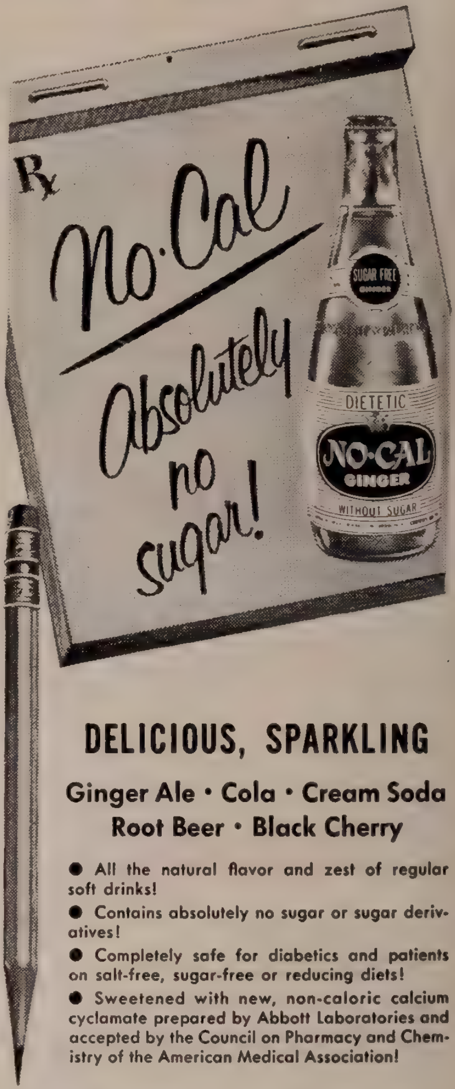

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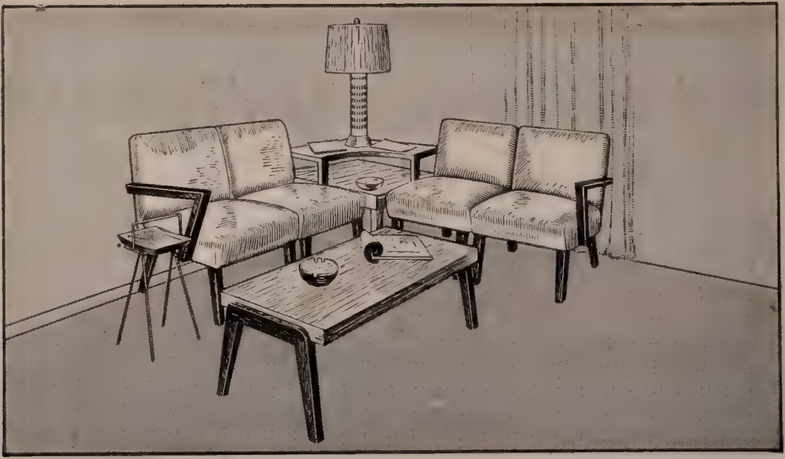

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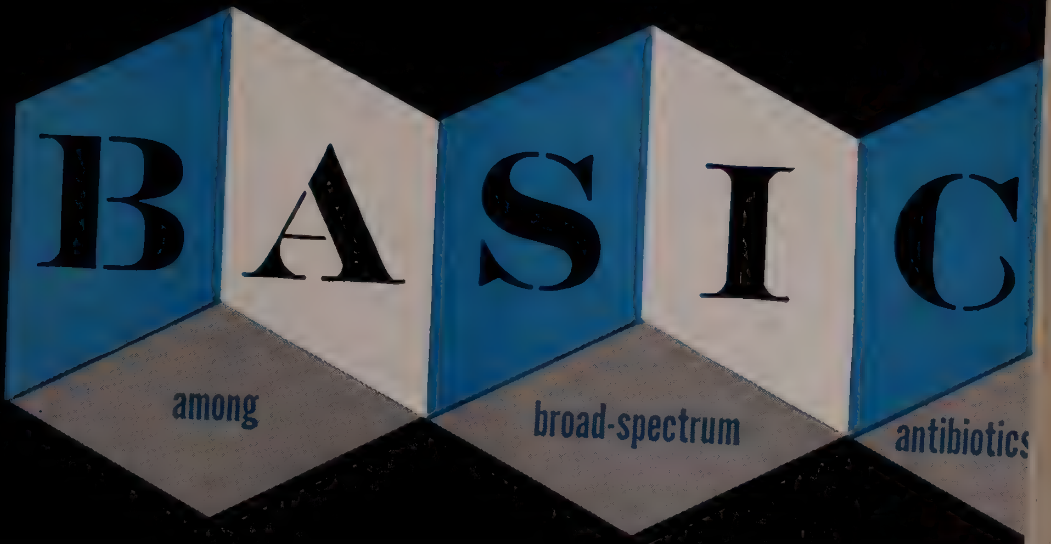
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including follicular tonsillitis,
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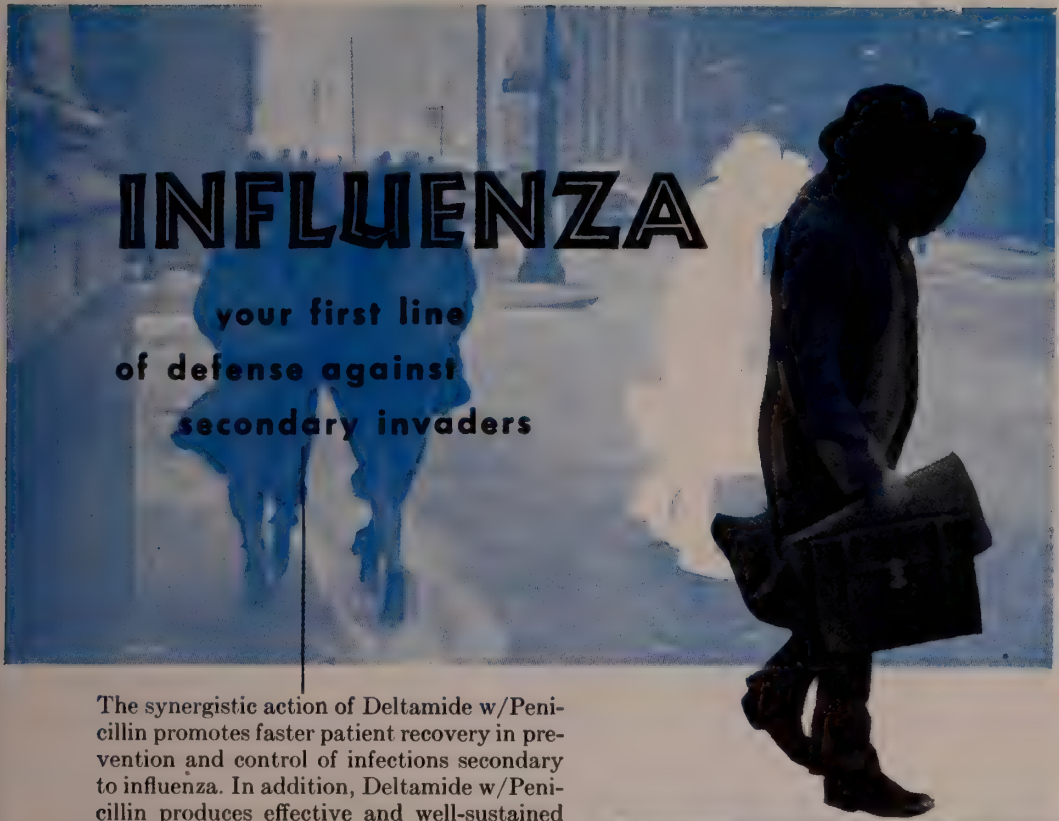

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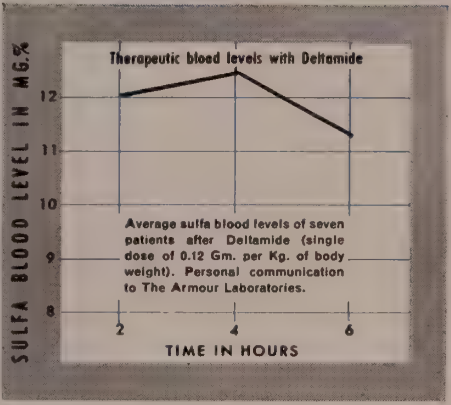

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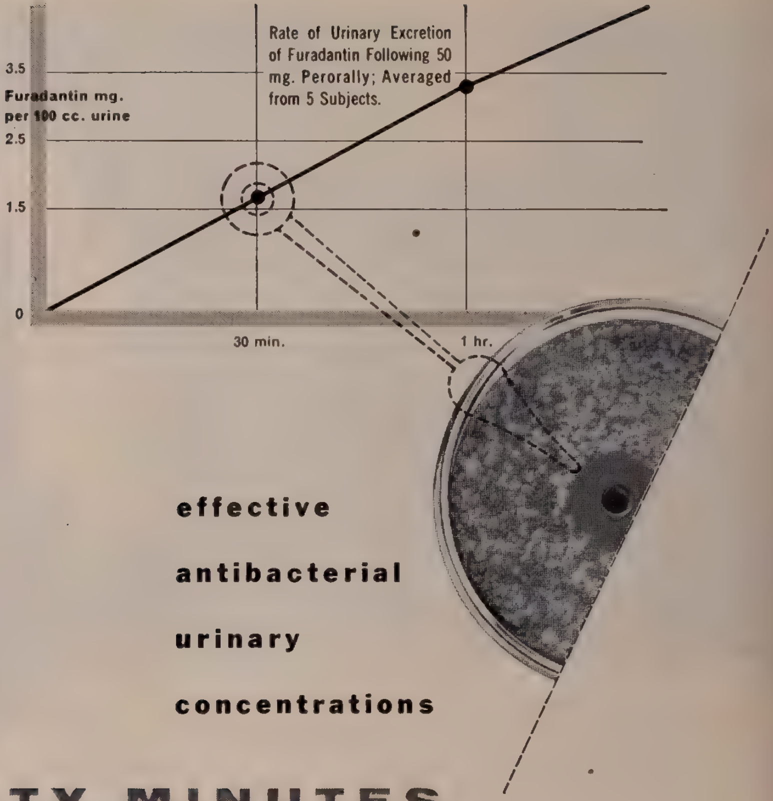

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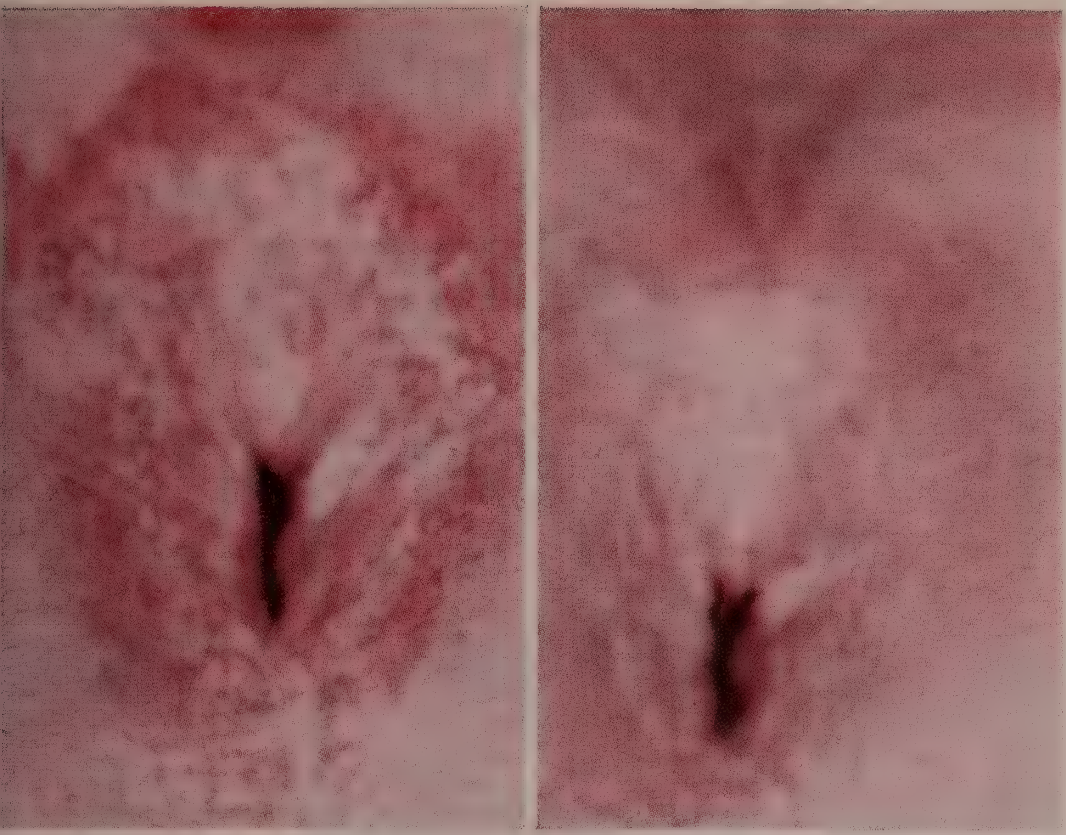

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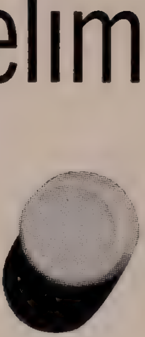

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(Aminophylline dosage was 0.5 Gm. in each case)

Aminophylline Preparation	1 hour	3 hours	6 hours
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AL-AMPHYLLINE TABLETS (4)	1.67	1.84	1.26
AL-AMPHYLLINE TABLETS (4)	1.18	1.54	1.19
AL-AMPHYLLINE TABLETS (4)	0.90	1.16	0.91
Intravenous Aminophylline (0.5 Gm.)	1.33	0.84	--
Intravenous Aminophylline (0.5 Gm.)[1]	1.60	1.30	0.70
Aminophylline Suppository (0.5 Gm.)	0.11	0.22	0.38
Aminophylline Suppository (0.5 Gm.)	0.26	0.51	1.09

RAYMER

RAYMER PHARMACAL COMPANY
Jasper & Willard Streets
Philadelphia 34, Pa.

[1] J. Pharmacol. Exper Therap., 100:309, 1950.

For use in all conditions where aminophylline is indicated. *Dosage Range:* 1 to 4 tablets as required. *Supplied:* bottles of 100, 500 and 1,000 tablets. *Formula:* Aminophylline, 125 mg.; Colloidal Aluminum Hydroxide, 150 mg.; Magnesium Trisilicate, 250 mg. *Also available:* AL-AMPHYLLINE with Phenobarbital (15 mg. per yellow tablet), bottles of 100.

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. . . for a satisfactory preparation in the management of hypercholesteremia

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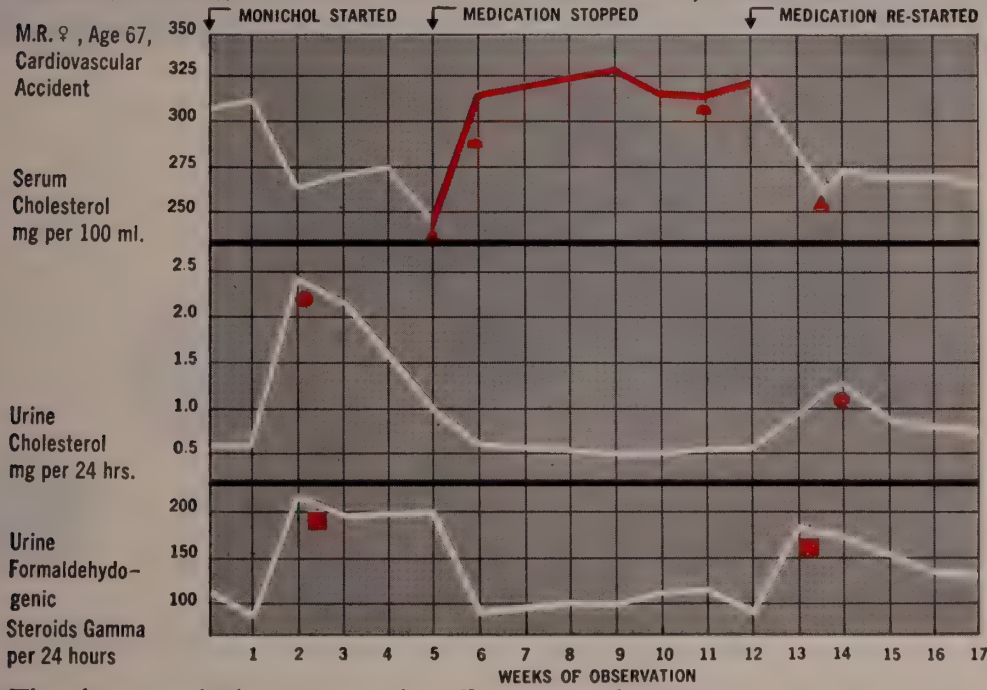

The above graph demonstrates the effectiveness of MONICHOL in enhancing the stability of the serum lipid emulsion by: ▲ normalizing elevated serum cholesterol levels, ● changing the character of the excess serum cholesterol to facilitate urinary excretion, and ■ making the excess serum cholesterol more readily available for utilization by the adrenal cortex in steroid synthesis.**

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Formula: Each teaspoonful (5 cc.) contains:	
Polysorbate 80	500 mg.
Choline Dihydrogen Citrate	500 mg.
Inositol	250 mg.

Minimum Dosage: Two teaspoonsful twice daily after meals.

Supplied: Bottles of 12 oz.

Literature on request

**Sherber, D. A., and Levites, M. M.: Hypercholesteremia. Effect on Cholesterol Metabolism of a Polysorbate 80-Choline-Inositol Complex (MONICHOL) J.A.M.A. 152:682 (June 20) 1953.

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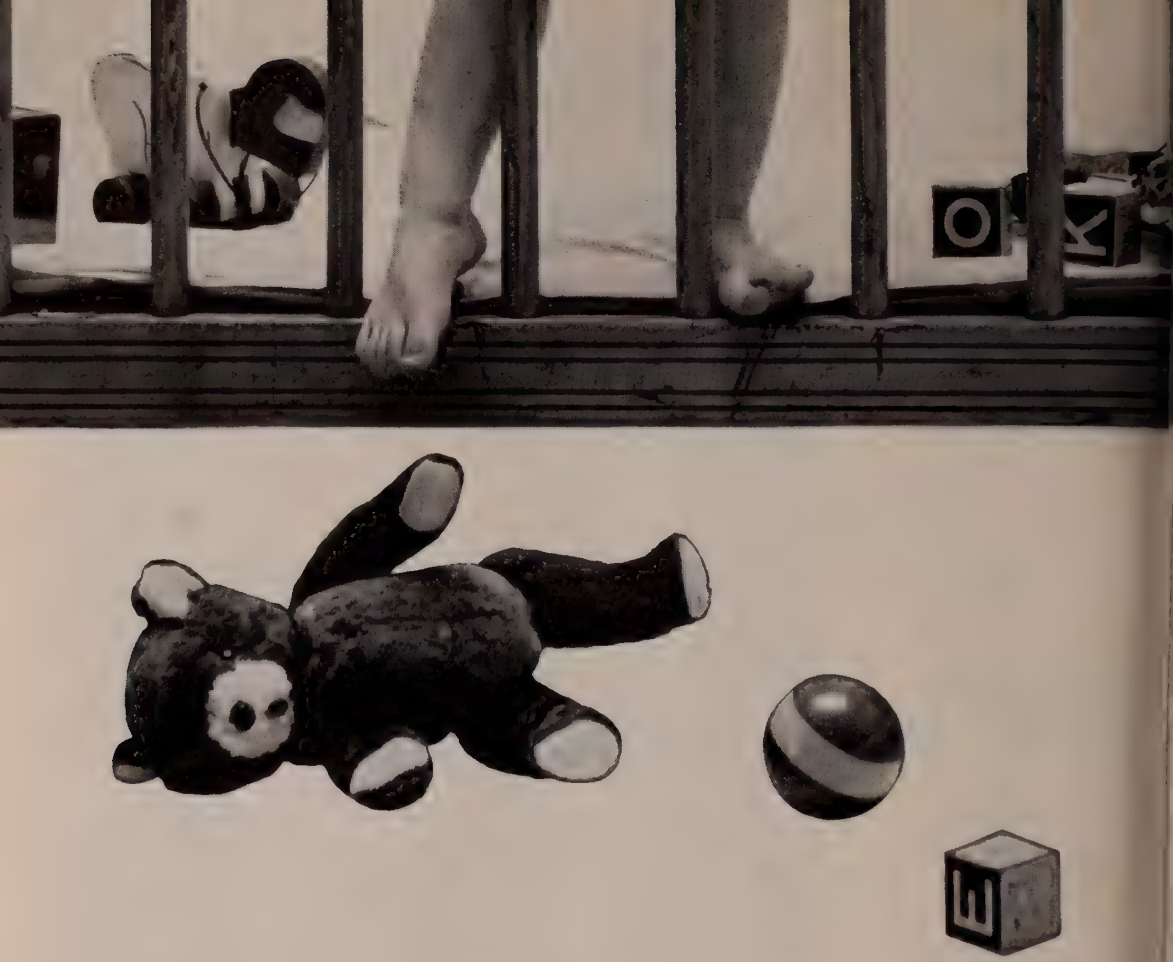

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Antibiotics & Chemotherapy 3:891 (Sept.) 1953

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—Barach, A. L.: Geriatrics 8:423 (Aug.) 1953

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for ease of administration

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'ESKACILLIN 50'	50,000 units potassium penicillin G
'ESKACILLIN 100'	100,000 units potassium penicillin G
'ESKACILLIN 250'	250,000 units procaine penicillin G
'ESKACILLIN 500'	500,000 units procaine penicillin G

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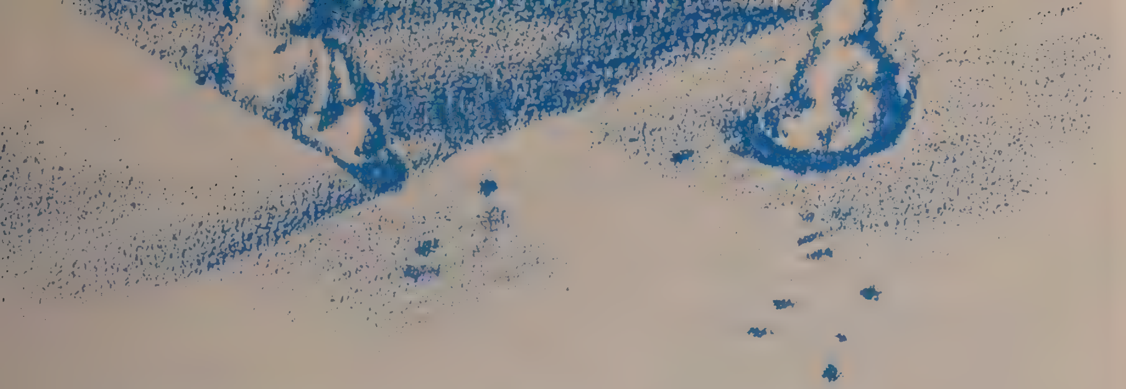

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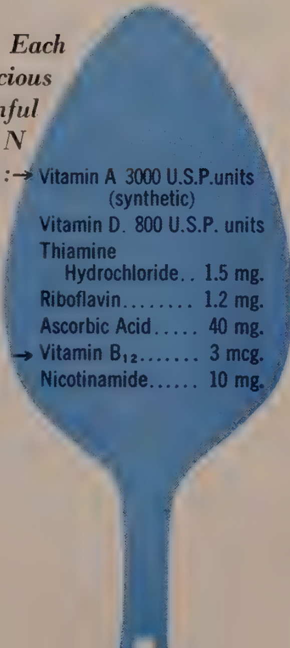

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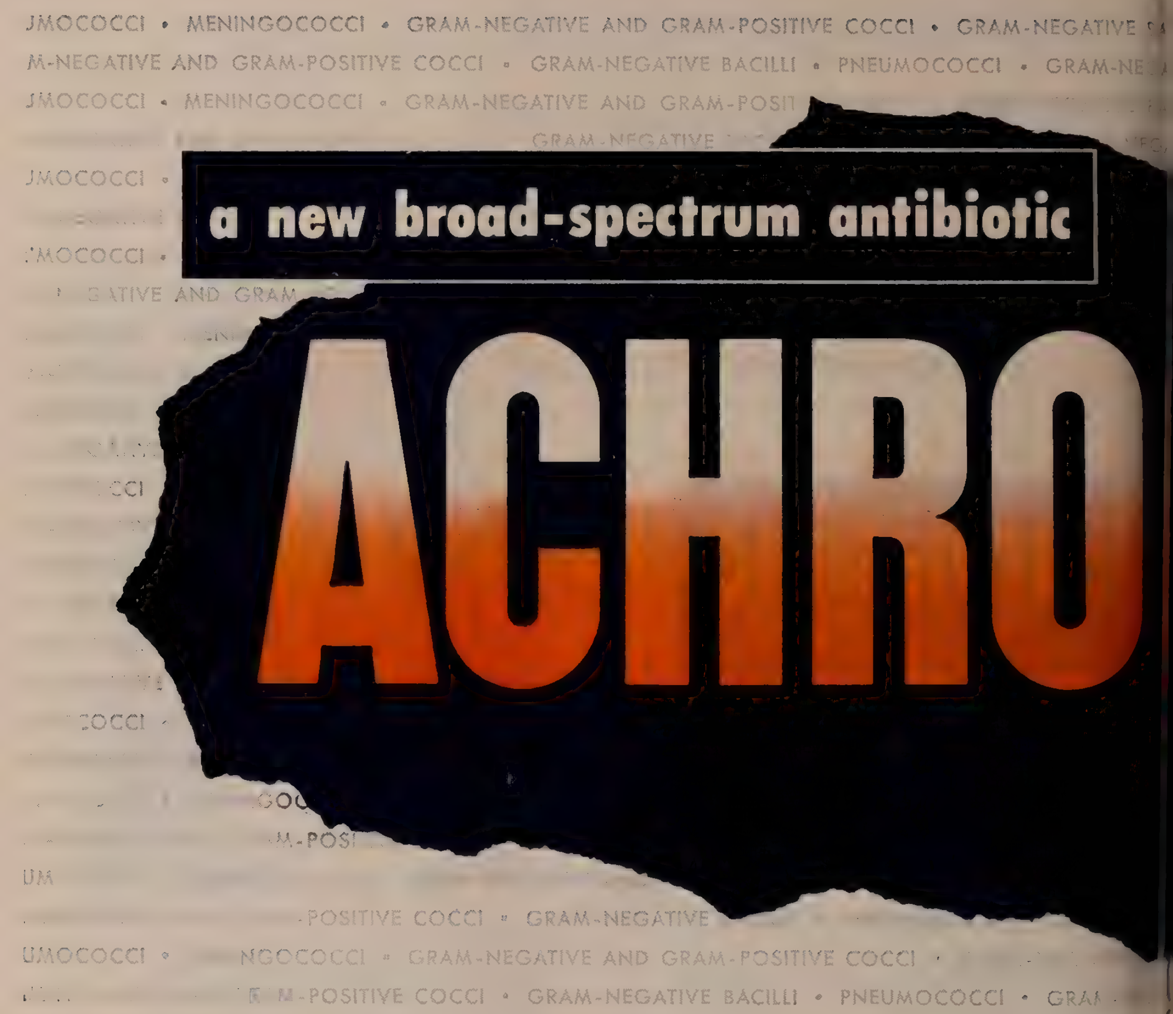

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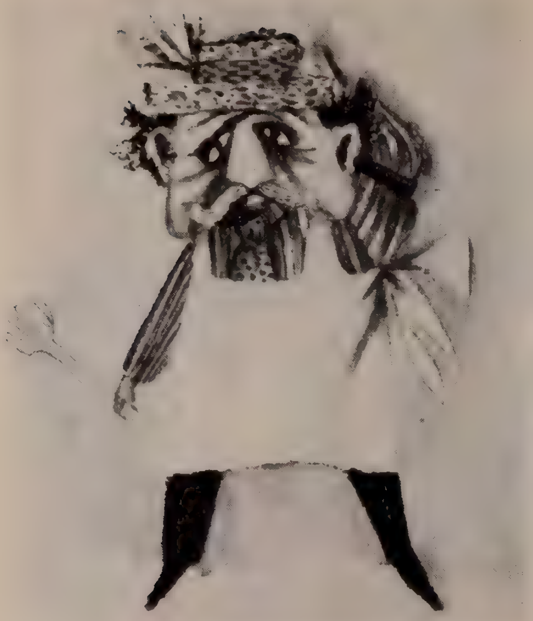

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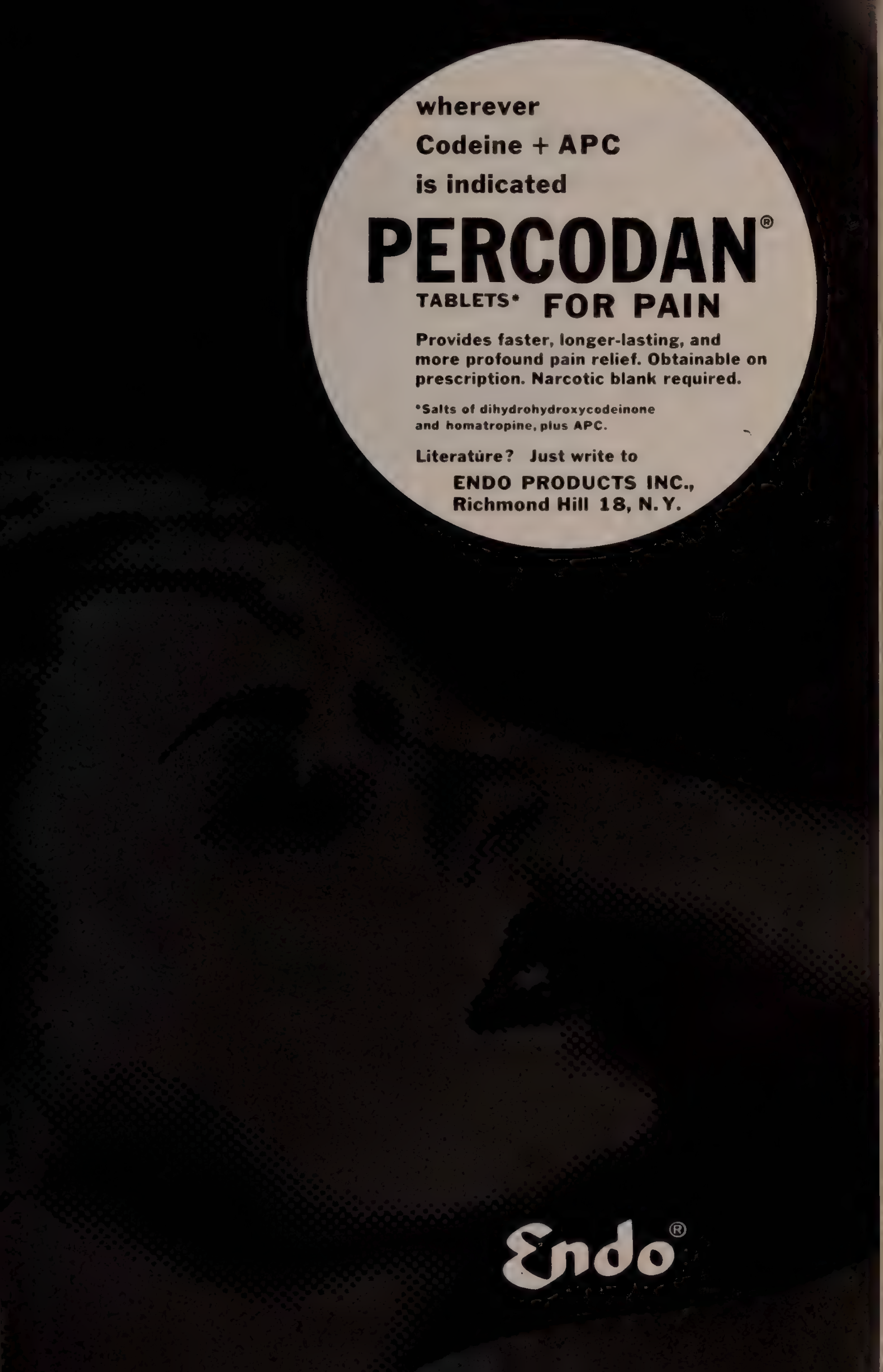

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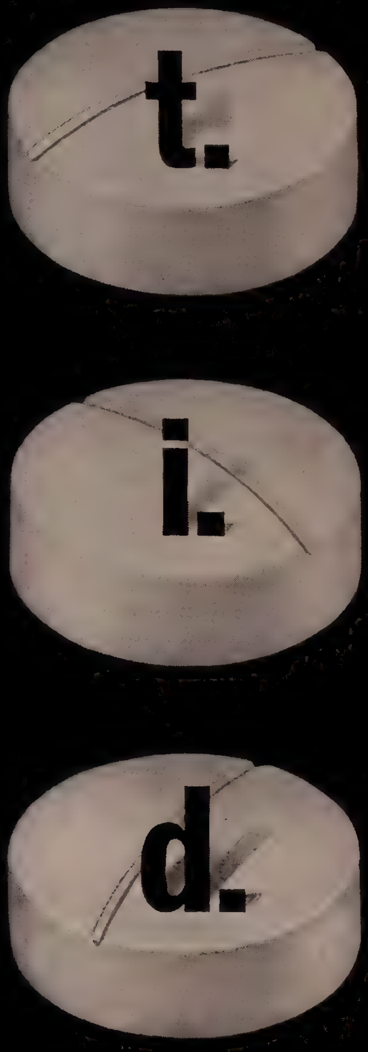

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references:

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EDITORIALS

Hazards of the Aged

ttention has been directed by press, radio, nd television to the frightful toll of dis-ster deaths resulting from highway travel, irplane and train accidents, explosions, fires, nd the like. We have almost come to the oint where, in a modern, high speed civiliza-ion with everybody on the move, we look pon an accidental death as commonplace.

It should not surprise us, therefore, to earn from the *Statistical Bulletin of the Metropolitan Life Insurance Company*[1] that ccidents are a major threat to the life of the ged "outranking every other cause of death xcept the cardiovascular diseases and cancer. Of the 100,000 deaths from accidents in the United States annually, about 25,000 occur among people at ages sixty-five and over." These elderly people contribute one fourth of all the victims of fatal accidental injury, although they comprise only 8 per cent of the total population. The death rate says the *Bulletin* in the above group is three times the rate at ages forty-five to sixty-four and seven times that at ages one to fourteen.

Three fourths of all the fatal accidents among the elders were of two types, falls and motor vehicle injuries. Motor vehicle injuries were most prevalent for men and falls for women.

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[1] October, 1952, p. 5.

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In terms of actual death rates, the total accident mortality among males was not far from twice that for females. Moreover, the toll from motor vehicle accidents was virtually three times as great for men as for women at ages sixty-five to seventy-four. The wide sex difference in the mortality from motor vehicle accidents reflects mainly the higher proportion of time spent by men on streets and highways. In each sex the majority of such fatalities were among pedestrians, indicating the difficulty that older people have in coping with modern traffic conditions. Yet a substantial proportion of the fatalities also occurred among drivers and passengers in motor vehicles.

Fatal falls likewise occurred under a variety of circumstances. In this insurance experience a considerable proportion were falls from one level to another. Stairs and steps accounted for the majority of such fatalities, while falls from windows, porches, and other high places also contributed to the total. Many of the fatal falls in this study were sustained by older men and women who were simply walking in the street or about the house. Illness or physical weakness played a major role in many of these cases.

Accidents are much more amenable to control than any of the other major causes of death among the aged. The record for the past two decades shows that the mortality from accidents at the later ages has declined more rapidly than that from disease. Further progress could be made if elders learned to adjust their habits in accordance with their changing physical condition and if their environment, particularly in the home, were made as free from hazard as possible.

There is certainly a responsibility here stated and laid at the physician's doorstep. He can impress upon the elderly their limitations and upon their families the importance of eliminating all possible hazards in the home.

Medical Student Enrollments

Says the *Journal of the American Medical Association*[1] disclosing the 53rd annual report on medical education of its Council on Medical Education and Hospitals, "enrollments in the country's 72 medical and seven basic science schools during 1952–53 totaled 27,688, or 2.3 per cent more than the 27,076 enrolled during 1951–52. The 6,668 students graduated during the last year exceeds by 279, or 4.4 per cent, the previous record established in 1947, when at the termination of the wartime accelerated program several schools graduated more than one class. The estimated number of graduates for 1953–54, based on enrollments reported for senior classes in schools, is even greater—6,831." There was, however, a slight decrease in the size of the entering freshman class for the first time in five years—7,425, or 16 less than the record class of 1952–53.

In addition to those regularly enrolled as full-time students of medicine, medical schools had enrolled a total of 140 part-time and special students working toward an M.D. degree, and 407 students in internships that were a part of the degree requirements of the medical schools at which they were educated. There was also a total of 1,734 students from the United States enrolled in 72 foreign medical schools, located in 22 different countries.

There were 1,463 women in medical and basic science schools during 1952–53, eight less than last year, the report said. The women comprised 5.3 per cent of all students, as compared with 5.4 per cent last year. Women in freshmen classes totaled 399, against 394 last year. They constituted 6.1 per cent of all applicants to medical schools this year, compared with 5.6 per cent last year. The actual number of women graduates increased slightly—363,

[Continued on page 344]

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[1] J.A.M.A. **153**: 105 (Sept. 12) 1953.

Hospitals—An Enigma

There was a time when the doctors sought homes of refuge for sick and helpless people and created something like the convalescent home of today, which ultimately metamorphosed into the community hospital and the present large, mechanized institution. The doctor, incidentally, instead of directing the administration of the patient's care, has been reduced to a subordinate position by directives or administrative and managerial pressures. In other words, the tail now seems to wag the dog. The physicians might well reflect about the probability that in the not too distant future, by means of compression and attrition, he will be assimilated. This situation is the result of economic pressure and organized groups.

As a product of modern trends, in some aspects this may represent progress. Certainly the medical profession questions the healthfulness of the situation. There are many phases of the doctor-hospital relationship that deserve clarification and understanding..

Because of the complicated status and framework of hospitals, there are presented many enigmatic features. First, the problems of hospitals are bewildering because of the various types of services demanded, services which are often rendered in an exacting manner and about which the public is obscurely and inadequately informed. Therefore, to the people hospital medical care appears inscrutable and justly so because they are taken care of under circumstances that are not of their own choosing or understanding. It is easy to visualize that no one wishes to be sick, and there was the day when, if a person became very ill and hospitalization was advised, only death appeared on the horizon for the one who entered. Fortunately, this is in no way the true situation today. People should understand that the services of the hospital are curiously and peculiarly different from any other phase of life. First of all, the patients are frequently not themselves; illness often dims clarity of thinking. The management of such an institution is, therefore, baffling, and things that happen therein appear unaccountable when measured by the ordinary processes of business, living, and housekeeping. The administration and costs for services and personnel seem inexplicable, even incomprehensible, to the public, and few there are who will take the time and effort to study the problem. It is also true that many of the lay boards of managers find the details of the hospital mystifying. Yet, whatever they or the administrators do and whatever excellent service the staff gives may be forgotten by the patient when the time of financial reckoning arrives. Little does the public know, and perhaps this is not their fault, of all the things that are entailed in the delivery of good medical care.

In no way are these statements offered as an apology. Hospitals are vitally and truly essential. They are the indispensable necessity of community life. The public, and sometimes many of the staff, feel that hospitals are exploiting them. This has been brought out particularly in relation to the four vital services of pathology, roentgenology, anesthesia, and physiatrics, to which surgery and medicine are being added. I wish to include also the training of nurses. I have in mind the charging of tuition to student nurses during their apprenticeship. In few walks of life are apprentices asked to pay; rather, they receive a stipend. I am sure this prevents many girls, who are financially unable to pay, from taking up the nursing profession for which they have a longing and for which there is a crying need. However, scholarships are provided in some places to help meet the demand but this is only a drop in the bucket.

Of course, exploiting of the profession in the case of hospitals is related to the economic problems. On the other hand, if the hospital's management consummates an amicable arrangement with the directors of medical departments, there seems to be little room for criticism if all parties are satisfied. In any event, the precedent is here and probably will remain.

There is one point, however, which I should like to make; when these departments bring in profits for the hospital, such profits should not be thrown into the general fund for the maintenance of the departments that do not pay. An equitable proportion, if not all, should be returned to these departments for the benefit of the staff and the purchase of modern equipment, regardless of cost, to continue the efficiency and service which modern medicine demands. At least this would be fair play. I think this would satisfy the arguments of certain departmental heads who know that they cannot give good service without a happy personnel and adequate equipment. If this principle were followed, the sting of exploitation would certainly lose its force.

Exploitation of the hospital exists by politicians, insurance plans, and also by people who are able to pay yet accept charity. These actions make the over-all costs and deficits greater than justice dictates.

There are few medical and hospital problems that can be solved by public recriminations. Perhaps certain columnists, newspapers, and periodicals could qualify. However, the lack of understanding that they have evinced certainly belies this fact if one is to judge from the half truths that are commonly dispensed to the trusting public.

The newly created Joint Commission on Accreditation of Hospitals has embarked upon a complicated program in surveying and approving the hospitals. The problem of equating the various types and sizes of hospitals is colossal. It should appear that various classes will have to be designated in order to dispense justice to the smaller community hospitals in relation to the larger teaching hospitals.

One last remark and truism, one that cannot be denied: When one is sick, the logical action toward recovery is treatment in a good hospital, let it cost what it may. Rapid recovery of health, which is so difficult to obtain in home surroundings, makes hospital care the best bargain one can purchase. The good hospital, with trained and conscientious personnel, is the sine qua non of health investment.

These lines certainly are not offered as a solution to the enigma. I trust they do not confound the confusion that exists.

Andrew R. Eggston

Current Concepts in

DIABETES MELLITUS

IRVING GRAEF, M.D., *Editor*

from the Committee on Professional Education of the
Clinical Society of the New York Diabetes Association

The Endocrine Control of Carbohydrate Metabolism

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In order to discuss the endocrine control of carbohydrate metabolism, it is necessary to appreciate the basic metabolic reactions involving carbohydrate, protein, and fat. Due to this close interrelation, the action of a hormone, although directly concerned with one aspect of metabolism, indirectly influences the rate of other metabolic reactions.

The main pathways of carbohydrate metabolism and their interrelations with protein and fat metabolism are shown in Fig. 1. The initial metabolic step in carbohydrate utilization is the phosphorylation of glucose to glucose-6-PO_4. The phosphate donor in this reaction is adenosine triphosphate, a high energy phosphate compound referred to as ATP. The reaction is catalyzed by the enzyme hexokinase. Glucose-6-PO_4 can be converted to glycogen in the liver and muscles, to glucose in the liver, or it can form pyruvate anaerobically through a series of reactions known as glycolysis. The anaerobic glycolytic phase of carbohydrate metabolism is summarized in Fig. 1. In the absence of oxygen, pyruvate is converted to lactate, but if oxygen is available, the metabolism of pyruvate may proceed in any one of several directions. Pyruvate may be converted to acetyl CoA which, by condensation with oxaloacetate, can form citrate, the first intermediate of the Krebs citric acid cycle. The reactions in this cycle ordinarily proceed in a clockwise direction as indicated in the figure. In the course of the conversion of citrate to oxaloacetate, the equivalent of one molecule of acetic acid is oxidized with the production of relatively large amounts of energy in the form of ATP.

Acetyl CoA is one of the pivotal points in the metabolism of both carbohydrate and fat. As is shown in the diagram, acetyl CoA may be converted to fatty acids. If fatty acids are to be oxidized, they must first be converted to acetyl CoA, which then condenses with oxaloacetate to enter the citric acid cycle. It is clear that sufficient oxaloacetate must be available for the complete oxidation of fatty acids.

Oxaloacetate can be formed directly from pyruvate and can also arise from certain amino acids. In diabetes, when the body is obliged to depend increasingly on fatty acid oxidation as a source of energy, the production of acetyl CoA may exceed the availability of carbohydrate intermediates such as oxaloacetic acid. When this happens, acetoacetic acid tends to accumulate, resulting in ketosis and a consequent derangement in the acid-base balance of the body.

The various amino acids are also closely integrated with the metabolism of carbohydrate and fatty acids as indicated in the figure. After the amino acids are deaminated to form the related keto acids, they are ultimately degraded either to pyruvate or acetate residues. These in turn can either be oxidized through the citric acid cycle or converted to fatty acids or glycogen, depending upon the metabolic needs of the body at the time.

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Many of the reactions shown in Fig. 1 are reversible and can proceed either in the direction of oxidative breakdown or in the direction of synthesis. Synthesizing reactions require energy which comes largely from ATP produced in the course of the oxidative reactions, particularly those occurring in the citric acid cycle. Acetyl CoA is the starting point for many synthesizing reactions. The synthesis of fatty acids and of some amino acids proceeds directly from acetyl CoA. However, the carbon atoms of acetate, or acetoacetate, can only be transferred to glycogen via the citric acid cycle. In the process of passing once around the cycle the equivalent of one molecule of acetate is completely oxidized. This means that although carbon atoms from fatty acids can be traced to glycogen, there is no increase in the total amount of carbohydrate by this pathway. Glycogen can be synthesized from lactate or pyruvate, from the Krebs cycle intermediates, and from the amino acids which can be converted to carbohydrate intermediates.

Since carbohydrate, fat, and protein metabolism are so closely integrated, a disturbance in any one will be reflected in all the others. In order to maintain metabolic homeostasis, continued adjustments are necessary, and in these adjustments the various hormones to be discussed play a major role.

Hormones Controlling Carbohydrate Metabolism

There are a number of hormones which influence carbohydrate metabolism either directly or indirectly. These include insulin, several fractions from the anterior pituitary, the adrenocortical hormones, epinephrine, the hyperglycemic factor, and the thyroid hormone.

In diabetes mellitus there is a relative lack of insulin. This results in a decreased capacity to oxidize glucose, an inability to form glycogen from glucose, and an inability to form fat from glucose. In view of the fact that all aspects of carbohydrate metabolism are impaired, it has seemed logical to infer that insulin acts early in carbohydrate metabolism. At the present time there are two theories to explain the action of insulin. The first of these was suggested by the Coris[1] and proposes that insulin influences the rate of the hexokinase reaction by overcoming the inhibitory effect of a pituitary factor on the reaction. As shown in Fig. 1, hexokinase catalyzes the initial reaction in carbohydrate metabolism, i.e., the phosphorylation of glucose by ATP to form glucose-6-PO_4. The second theory, proposed by Levine,[2] suggests that insulin exerts its effect by increasing the transfer of glucose into cells. Further investigation is required to establish exactly how insulin exerts its effects. At the present time there is considerable evidence to support both of these theories.

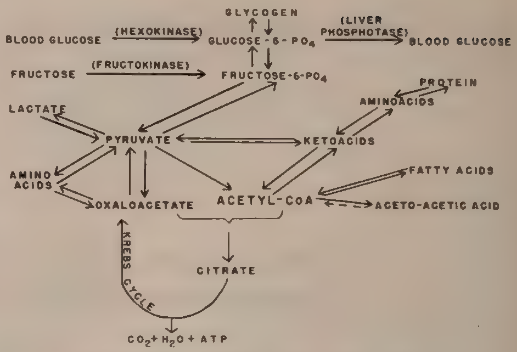

FIG. 1. The main pathways of carbohydrate, fat and protein metabolism.

There are several anterior pituitary factors which influence carbohydrate metabolism. One of these, studied by the Coris, is said to act by inhibiting the enzyme hexokinase. This has already been referred to in discussing one of the theories of the action of insulin.

Another anterior pituitary factor known to influence carbohydrate metabolism is the "growth hormone." "Growth hormone," as usually understood, has two general metabolic effects. The first is to increase blood sugar, which is referred to as the "diabetogenic" effect. The second effect is to increase the retention of nitrogen, potassium, and phosphate. The mechanism of the diabetogenic effect is not clear and is further complicated by the fact that growth hormone preparations have not been satisfactorily purified. It has been suggested that the diabetogenic effect is due to an inhibition of one of the glycolytic reactions, namely, the conversion of fructose-1-6-diphosphate to glyceraldehyde phosphate and dihydroxyacetone phosphate.[3] While a block at this point would not interfere with the formation of glycogen from glucose, it would interfere with its oxidation. This is consistent with the experimental observations that the administration of growth hormone leads to an increase in blood sugar and muscle glycogen.

A third anterior pituitary factor influencing carbohydrate metabolism is ACTH. This hormone exerts its effects through stimulation of the adrenal cortex. The adrenal cortical hormones which have the greatest effect on carbohydrate metabolism are compounds E (cortisone) and F. The over-all result of the administration of the adrenal steroids is to increase blood sugar by increasing the formation of glucose from protein (gluconeogenesis). There is also an increase in liver glycogen. In adrenal cortical insufficiency, such as is seen in Addison's disease, carbohydrate metabolism is severely impaired. In this situation there is a low fasting blood sugar because gluconeogenesis (the formation of glucose from protein) is depressed. In adrenalectomized animals both blood sugar and liver glycogen values are low after an overnight fast.

The hormone of the adrenal medulla, epinephrine, also influences carbohydrate metabolism. The injection of epinephrine increases the amount of active phosphorylase in liver. Epinephrine may also influence the direction of the phosphorylase reaction, so that this reaction proceeds mainly in the direction of glycogen breakdown.[4] The over-all effect is to increase glycogen breakdown in the liver, and consequently to increase blood sugar. If the secretion or administration of epinephrine is prolonged, liver glycogen will eventually be diminished.

Another factor influencing carbohydrate metabolism is the "hyperglycemic factor," which is also known as "glucagon." This has been extracted from insulin, pancreas, and the gastric mucosa. Its effects on metabolic reactions have been studied by several groups.[4,5] The action of the hyperglycemic factor is to increase the active phosphorylase of the liver. In this respect it behaves like epinephrine. When injected, both the hyperglycemic factor and epinephrine cause a rapid increase in blood sugar levels. However, the effects of the hyperglycemic factor differ from those of epinephrine in that the injection of the hyperglycemic factor is not followed by a rise in blood lactate or pyruvate.

The effects of the thyroid hormone in carbohydrate metabolism are not satisfactorily explained. When the rate of metabolism is increased as the result of an increased secretion of the thyroid hormone, there may be an increase in blood sugar. There are several ways in which this could occur. Hyperthyroidism is associated with an increased production of epinephrine which increases glycogenolysis in the liver. In hyperthyroidism there is probably stimulation of the anterior pituitary which might lead to hyperglycemia due to a production of some pituitary diabetogenic factor. It is of considerable interest that hyperthyroidism occurs in about 15 per cent of patients with diabetes mellitus. Hypothyroidism is also associated with changes in carbohydrate metabolism, and in this situation hypoglycemia is quite common. This may be caused by poor absorption of monosaccharides from the intestinal tract which could be the result of impairment in the phosphorylation of glucose in the intestine. Another factor operating to impair carbohydrate metabolism in hypothyroidism is a depression in adrenal cortical function. This would result in a decrease in the rate of gluconeogenesis in the liver, a decrease in liver glycogen, and a low blood sugar. Patients with this disease tend to have an increase in liver fat.

Summary

From this brief discussion it is clear that carbohydrate, protein, and fat are interrelated in metabolic reactions. For this reason the effect of a hormone, although concerned primarily with the metabolism of one of the major food stuffs, inevitably affects the metabolism of the others. The action of the hormones concerned with carbohydrate metabolism can be summarized as follows:

1. The hormones of the pancreas are insulin and possibly the hyperglycemic factor. *Insulin* may act on hexokinase to overcome the inhibitory effect of a pituitary factor or may control the transfer of glucose into the cells. In the absence of insulin, carbohydrate is relatively unavailable as a source of energy, glucose is not converted to glycogen, and fatty acids accumulate and are not completely oxidized. *The hyperglycemic factor* acts on liver cells to control the formation of glucose from glycogen by increasing the activity of phosphorylase.

2. The principal hormones of the pituitary affecting carbohydrate metabolism are (*a*) *the Cori "anterior pituitary" factor*—this inhibits hexokinase and thus interferes with the phosphorylation of glucose to glucose-6-PO_4; (*b*) *the growth hormone*—the diabetogenic effect of growth hormone has been attributed to an inhibitory effect on the hexokinase reaction and to an inhibition of the formation of triose phosphate in the

glycolytic cycle; (*c*) *ACTH*—the action of this hormone is on the adrenal cortex, which is stimulated to secrete its hormones.

3. The hormones of the adrenal gland are (*a*) *epinephrine* from the adrenal medulla—this controls the formation of glucose from glycogen by influencing the activity of the enzyme phosphorylase; (*b*) *the adrenal corticosteroids*—the C-11 steroids of the adrenal cortex increase the rate of gluconeogenesis and consequently increase the level of blood sugar.

4. An excess of thyroid hormone increases the rate of metabolic reactions, stimulates the sympathetic nervous system, and increases the secretion of epinephrine. In the absence of the thyroid hormone, absorption of glucose from the intestines is decreased.

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(*Number sixteen of a series on Current Concepts in Diabetes Mellitus*)

Editorials

[Continued from page 338]

or 5.5 per cent of the total, as contrasted to 351 last year. The record number of women graduates, 612, was set in 1949.

A total of 715 Negro students, 2.6 per cent of all enrollments, was reported.

The number of veterans enrolled in medical and basic science schools declined for the second year. There were 7,942 veterans enrolled, comprising 28.7 per cent of the total student body, as compared with 11,436, or 42.2 per cent, last year. There were 36 women veterans.

For the fourth consecutive year, the number of applicants for admission to medical schools continued to decrease, the report disclosed. During the year 1952–53, 16,763 individuals applied for admission, a decrease of 3,157 from 1951–52, and 5,516 less than the number who applied in 1950–51.

"This report has emphasized in recent years that the difficulty of gaining admission to medical schools has been grossly exaggerated," it was stressed.

"The statistics presented here amply confirm this exaggeration. The situation in the past year, when there were 2.6 applicants for each place in medical schools, was approximately comparable to the year 1929–30 when there were 2.6 applicants for each available place.

"One major factor is the disappearance of the large backlog of veterans who completed their premedical training following the termination of World War II. Another factor, one that is certain to cause serious concern among medical educators, is the sharp decrease in the number of applicants with superior academic records.

"While, again, one can only speculate as to the cause, it seems likely that this drop is in no small measure due to increasing competition for such talent from other professional fields."

Medical faculties and medical students alike show a continuing interest in education for family or general practice, the report pointed out. A high proportion of the medical schools sponsor one or more programs specifically designed to induce students to this type of practice.

The report also disclosed that physicians of this country are cognizant of the fact that medical education is a continuous process and that it is their responsibility to keep abreast of advances in the field of medicine. During 1952–53, 64,608 physicians attended 1,341 postgraduate courses.

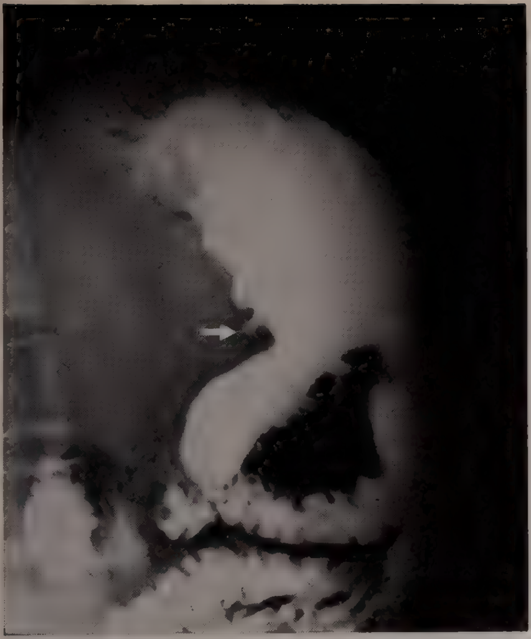

Fig. 1 "Roentgen examination . . . revealed the ulcer to be very much in evidence."

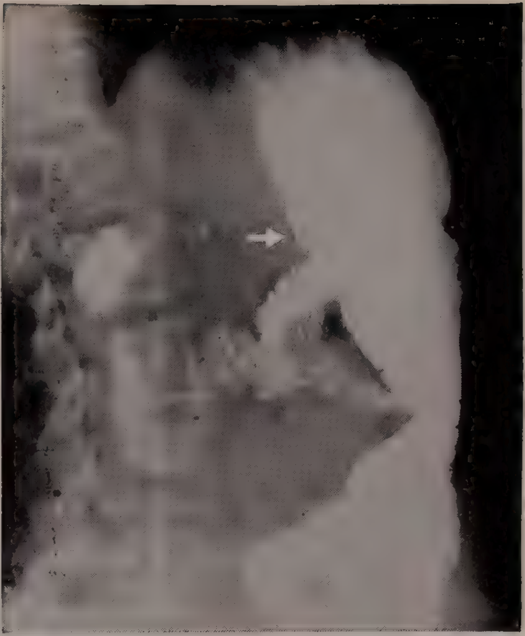

Fig. 2 In ten weeks "the ulcer niche was no longer in evidence roentgenologically or gastroscopically."

Clinical Evaluation of Pro-Banthīne®

The case report described below offers significant evidence of the high potency in low dosage of the new, well-tolerated anticholinergic agent, Pro-Banthīne.

"M. D., female, aged 48, had a posterior gastrojejunostomy 14 years ago for duodenal ulcer. The patient was fairly well until nine months ago when severe, intractable pains occurred. She was hospitalized and a subtotal gastrectomy was done.

"She remained well for only a few months and was referred to us because of recurrence of very severe pain and marked weight loss. Roentgen study revealed a fairly large ulcer niche on the gastric side of the anastomosis.

"The patient had been on various types of antacids and sedatives without relief from pain. She was given 60 mg. of Pro-Banthīne q.i.d. and within 72 hours was able to sleep through the night for the first time in weeks.

"At the end of two weeks of such treatment the patient had absolutely no pain and felt that she had been 'cured.' Roentgen examination at this time revealed the ulcer to be very much in evidence (*Fig. 1*). Much persuasion was necessary to make the patient realize the importance of maintaining her diet and therapy.

"Ten weeks of controlled regulation was necessary before we were satisfied that the ulcer niche was no longer in evidence roentgenologically or gastroscopically (*Fig. 2*).

"She has been maintained on 30 mg. [q. i. d.] of Pro-Banthīne for almost five months with no recurrence of symptoms."[1]

Pro-Banthīne (*brand of propantheline bromide*), the new, improved anticholinergic agent, is more potent and, consequently, a smaller dosage is required and side effects are greatly reduced or absent. It is available in 15 mg. tablets as well as in tablets (15 mg.) with Phenobarbital (15 mg.) and in 30 mg. ampuls.

Peptic ulcer, gastritis, intestinal hypermotility, pancreatitis, genitourinary spasm and hyperhidrosis respond effectively to Pro-Banthīne, orally, combined with dietary regulation and mental relaxation. G. D. Searle & Co. *Research in the Service of Medicine.*

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You can prevent attacks in angina pectoris

Peritrate prophylaxis effective in 4 out of every 5. Humphreys *et al.* noted that Peritrate reduced the number of attacks in 78.4 per cent of patients and "... patients with the greatest number of attacks showed the greatest reduction."[1] Complementing this finding, Russek and coworkers observed that their results in angina pectoris patients receiving Peritrate were "...comparable to those obtained with glyceryl trinitrate, but the duration of action was considerably more prolonged."[2]

Freedom from attacks with significant ECG improvement. Freedom from attacks during Peritrate prophylaxis in verified angina pectoris is usually accompanied by significant ECG improvement. Peritrate has been effective in preventing S-T segment shifts occurring after exercise in many angina pectoris patients.[1]

Simple regimen helps patient "keep up with the crowd." Peritrate, a long-lasting coronary vasodilator, will reduce the nitroglycerin need in most angina pectoris patients.[3] A continuing schedule of one or two tablets 4 times daily will usually

1. reduce the number of attacks
2. reduce the severity of attacks which cannot be prevented.

Available in 10 mg. tablets in bottles of 100, 500 and 5000.

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SCIENTIFIC ARTICLES

POSTGRADUATE LECTURES

Presented with the cooperation of the Postgraduate Department, University of Buffalo School of Medicine, at the 147th Annual Meeting of the Medical Society of the State of New York, Buffalo, May 5 and 6, 1953

WILLIAM F. LIPP, M.D., *Chairman*

The Treatment of Arthritis

BERNARD M. NORCROSS, M.D., BUFFALO, NEW YORK

(*From the Department of Medicine, University of Buffalo School of Medicine*)

RHEUMATOID arthritis is a systemic disease, and we have realized after using ACTH and cortisone for the past three years that they are not a cure for the disease and that it is still necessary to use the same basic treatment that we had employed previously.

The first item we will discuss is bed rest. The patient who is acutely ill or has severe involvement of the weight-bearing joints should be placed at complete bed rest for a period of several weeks. It is important with these individuals not to neglect them and to prevent deformities or other complications from arising during the period of their bed rest. Therefore, we use a firm mattress and bed boards in order to keep the spine straight. We use supports such as sand bags to prevent eversion of the foot and either a cradle or a pillow at the foot of the bed to support the bed clothes and prevent foot drop in these patients. We also teach the individual a program of muscle setting exercises to prevent muscle atrophy during this period of bed rest.

Physical therapy is a very important method of treatment for all patients with rheumatoid arthritis. We prefer the use of the infrared lamp two or three times daily for periods of twenty minutes each at a distance of $2^1/_2$ to 3 feet from the affected joints. Hot wet packs may also be helpful in the acute stages of arthritis. We avoid shortwave therapy and vigorous massage or exercises during the acute stage of the arthritis.

The patient with rheumatoid arthritis should be given a well-balanced diet which may need to be high in proteins or calories if there has been a great deal of weight loss. We also employ iron and other hematinic substances or transfusions, if required, to build up the patient's general health. Salicylates are used for relief of pain, and we avoid opiate derivatives as much as possible.

The prevention of deformities is one of the most important functions that the doctor must perform for these patients. During the acute phase of the arthritis, spasm of the flexor muscles may frequently produce flexion deformities of the knees and of other joints. It is much more important to prevent deformities than to try to correct them at a later date. In many of these patients it may be impossible to correct deformities once they have appeared. We use posterior splints to prevent flexion deformity of the knees and a modified cock-up type splint for the wrist so that if ankylosis does occur, it will occur with the wrist and hand in a functionally useful position. Once deformities have occurred, there are many measures that may be used to correct them, such as a series of casts that progressively increase the amount of extension in the knee joint, traction, crutches, or perhaps some corrective surgical procedure.

The psychosomatic aspect of rheumatoid arthritis is extremely important. The patient must be given an understanding of the disease, and an attempt should be made to solve any emotional disturbances or other problems that create mental unrest. If we are unable to do this, the result of treatment will be less satisfactory.

Gold salt injection is accepted as the single most reliable drug in the treatment of this condition. We prefer to use a water-soluble gold compound such as myochrysine or solganal. The initial dose is 10 mg. and is increased 10 mg. each week until a level of 50 mg. has been reached. The 50-mg. dose is continued at weekly intervals until the patient has received a total of 600 or 700 mg. At this time if satisfactory improvement has occurred, as it does in about 75 per cent, we then give a 50-mg. dose once every three weeks for a prolonged period of time.

It is essential to observe these people carefully for the detection of any toxic reaction to gold. At each visit we question them concerning the occurrence of itching of the skin, a sore mouth or tongue, or any other untoward reactions. A urinalysis is performed weekly, and a complete blood count, including a platelet count, is performed every four or five weeks.

In the past few years since patients receiving gold have been observed much more carefully and since the weekly dose has not exceeded the 50-mg. level, severe reactions have been very infrequent. In the event of a serious reaction to gold, BAL therapy can be used to minimize such reactions.

Three years ago we hoped that cortisone and ACTH would perhaps be curative agents in the treatment of rheumatoid arthritis. We now realize that these drugs are only helpful in suppressing the rheumatoid inflammation and do not cure the disease. We do not believe that these drugs should be used continuously over prolonged periods of time. They may be helpful for short periods of time, such as a matter of a few weeks, under the following circumstances:

1. When the patient is acutely ill or when his joints are so painful that it is impossible to begin a program of adequate physical therapy unless some analgesic agent is administered concurrently.

2. In the juvenile rheumatoid arthritic patient they may be important in diminishing the prolonged acute phase of the disease.

3. We do use them in a few patients who have had all other forms of treatment without help and who are almost wheelchair or bed invalids without these drugs. In these people a rather small dose may help them to engage in a more useful and happier life.

Some of the more serious complications that have occurred after the continuous use of cortisone and ACTH for periods of eighteen to twenty-four months are osteoporosis with multiple fractures of the vertebrae which we have encountered in four postmenopausal women. Once this complication has occurred, we have not been very successful in preventing further compression of other vertebrae.

One postmenopausal woman developed a severe Cushing's syndrome with a weight gain of 50 pounds, hirsutism, marked moon face, hypertension, and diabetes. We have also had one patient with severe gastrointestinal bleeding from a duodenal ulcer which was reactivated during her therapy with ACTH.

Butazolidin is a recent preparation which has a marked analgesic effect in many people with arthritis. This drug should not be used indiscriminately because it may produce some serious toxic reactions. Granulocytopenia was observed in three people, and, fortunately, their white blood cells returned to normal when the drug was discontinued. Two people have had massive gastrointestinal bleeding during its use. Two people developed acute pulmonary edema during therapy with Butazolidin.

The salt and water retention properties of this drug are quite marked in individuals who have some form of cardiovascular or hypertensive vascular disease. In three people enough fluid retention occurred to produce mild cardiac decompensation, and in two others their hypertension was considerably aggravated. It appears to be much safer to use Butazolidin in the treatment of an acute disorder such as acute gouty arthritis or acute bursitis when it will be used for only a period of a few days or a week rather than in the treatment of rheumatoid or osteoarthritis over a long period of time.

The intra-articular injection of hydrocortisone is definitely of some help in patients with rheumatoid arthritis. It is a comparatively simple procedure to inject a large joint such as the knee, the shoulder, the ankle, or the elbow when the severe symptoms are confined to one or two such large joints. A course of several injections of 25 to 50 mg. of hydrocortisone may be of considerable benefit under such circumstances. In our experience hydrocortisone has been of much greater value in the case of an osteoarthritic joint or where acute symptoms follow an injury to a joint.

Practically all of the previously described measures used in the treatment of peripheral rheumatoid arthritis apply in the case of spondylitis. However, this is not true in the case of gold therapy which does not produce significant improvement in most people who have rheumatoid arthritis of the spine. X-ray therapy is a very important method of treatment in spondylitis, not only for its analgesic effect, but it may also retard the progress of this disease.

Otherwise, the treatment of rheumatoid arthritis of the spine consists of teaching the patient proper posture, corrective exercises, the use of deep-breathing exercises, and also various forms of physical therapy such as infrared heat. It is important that the patient does not become physically fatigued or perform such types of work as require a bent posture or prolonged standing or lifting of heavy objects. In most patients a back support such as a Taylor or a Freeman brace is of great value.

Osteoarthritis is not a crippling disease such as rheumatoid arthritis, nor is it an inflammatory disease as in the case of rheumatoid arthritis. This condition occurs later in life and is a result of the wear and tear of everyday use of the joints. The only type of osteoarthritis that produces serious disability is that of the hip joint where there may be severe pain and limitation of activity.

All forms of physical therapy are valuable in the relief of this condition, e.g., infrared heat, shortwave therapy, and occasionally x-ray therapy. Many of these patients are overweight so that reduction of weight may be an important method of relieving any excess strain on their joints. It may be necessary to use various types of supports such as metatarsal bars, arch supports, even braces to help correct faulty posture. In the case of involvement of the cervical or lumbar spine such forms of physical therapy as traction or neck stretching may be of considerable help.

The local injection of hydrocortisone is of considerable aid, particularly in the knee and the shoulder joint. The hip joint is quite difficult to inject, particularly where the joint space has been practically destroyed, but appreciable benefit will result in about 50 per cent of the patients.

Occasionally it is necessary to perform an osteotomy and joint débridement with a removal of loose bodies or joint mice. One of the more important advances in osteoarthritis of the hip has been a recent operation in which the femoral head is removed and replaced with a plastic prosthesis which usually results in a great deal of relief of pain. This latter procedure has been a considerable improvement over the older procedures of cup arthroplasties.

Colchicine is still the main therapeutic agent in the treatment of the acute attack of gout. We use a 0.5-mg. tablet every hour until gastrointestinal symptoms occur. It is important that the medication be taken on an uninterrupted schedule and used to the point of gastrointestinal toxicity if the attack is to be relieved satisfactorily. In the few cases where relief is not satisfactory, Butazolidin in a dose of 600 to 800 mg. daily for three or four days or ACTH in a dose of 80 to 100 units within a twenty-four-hour period will usually be successful.

Our results with oral cortisone have not been as successful as some of the reported results. If it is used, 100 mg. should be given every six to eight hours until the attack has subsided.

I believe that Benemid has been the most important therapeutic development in gout in the last two to three years. Benemid is a potent uricosuric agent which may be used over a prolonged period with practically no toxicity. We believe Benemid should be given in a dose of 500 mg. twice a day to patients with frequently recurring attacks of gouty arthritis and to patients who maintain a high uric acid level. In a group of patients who have now taken this drug continuously for a period of two years, we believe that they have less frequent and less severe attacks, and it has maintained their blood uric acid within normal limits. They have also continued to excrete very large amounts of uric acid over this entire period of time. We believe that Benemid may be important in the prevention of the occasional, more serious kidney or vascular complications in patients with severe gouty disease.

Discussion

Dr. Lipp: We have one question, Dr. Norcross. Is there a relationship between menopause and arthritis?

Dr. Norcross: The only definite relationship between menopause and arthritis is seen in osteoarthritis. However, the age period when the symptoms of osteoarthritis and also the menopause appear is the same so that it may be a more coincidental than causal relationship.

The Management of Sterility by the General Practitioner

HARRY G. LAFORGE, M.D., BUFFALO, NEW YORK

(*From the Department of Obstetrics and Gynecology, University of Buffalo School of Medicine*)

I understand that 15 per cent of married couples are childless due to their inability to initiate a reproductive process. We realize the importance of the problem. Fifteen per cent of the people that walk into the office are sterile, unable to conceive, either primarily, never having conceived, or secondarily, having had a pregnancy and having been unable to conceive again.

The woman usually presents herself because we males think we are the most fertile creatures in the world. So the woman is pushed into the doctor's office. Three times out of four, it is the woman's fault, but one fourth of the time it is the man's fault. So, both must be investigated.

If a woman or a couple comes to your office for sterility, it is helpful to explain the general procedure instead of taking it for granted she knows all about things. When she comes in, she expects some magic tablet or some shot. She has been getting shots for other things. There is no such thing, and it is worth while to sit down and draw her a diagram. Remember, she knows no anatomy or physiology. Draw her a diagram of the uterus, tubes, and ovaries. Explain ovulation, the necessity of the sperms being present in the first place, and ascending, of fertilizing the ovum in the outer third of the tube, and then the descent of the fertilized ovum down into the uterus and where it grows. If you explain that to them, you will get much better cooperation.

General health seems to be a factor, but sometimes we wonder. A pale, anemic little woman has ten children. The husband, who looks as if he will not last until morning, can fertilize everybody in the block if he is given the opportunity. But sometimes there seems to be a relation between tuberculosis, nephritis, malnutrition, and low protein diet on the woman's side. It seems to have some relation to the fertile status. Several factors are found many times on both sides. It helps psychologically if you can find a little wrong with both. The man does not point his finger at the woman and say, "I am all right. It is you who is at fault."

When going into the history, get the history with the woman alone. It is helpful because she may have had a pregnancy some time that she does not want to discuss with anyone but you alone and which may tell you she had an abortion or infection and explain why she has not conceived. As to previous operations, many times women do not know they have had their tubes out. You are wasting your time and her money. She cannot possibly conceive if she does not have tubes.

A history of abdominal pain is a clue to salpingitis having existed, or mumps.

Menstrual function indicates evidence of ovarian secretion to some extent. If a person menstruates irregularly, she may not be ovulating.

Inquire into the sex life, the frequency of intercourse. It is hard to believe, but people come for sterility who have intercourse once a month. I tell those patients that if they want corn, they have to plant corn, and make a chore of setting the clock, so to speak, by the time they must have intercourse. As to frequency, some people overtrain. They are trying to have a baby so badly, they have too frequent intercourse and keep the male's count so low that he is incapable of fertilizing. Every second or third day seems to be optimal. Again, they must keep a record to know. They seem to think once a week or once a month might be sufficient.

In the examination there are a few things that are important or helpful to look for. For example, the size of the uterus. Now, too often we use the words "infantile uterus." Infantile uterus is really a rare thing and means a reversal of the ratio of the size of the fundus to the cervix. Normally the fundus is twice the length of the cervix. If the reverse is true, the cervix is twice as long as the fundus, then you have a true infantile uterus. What we mean many times is a hypoplastic uterus, but these women are capable of conceiving. You can test and find the length of the uterus by putting a sound into the cervix and, when it strikes the internal os, putting an applicator to the external os. From the external to the internal os is the cervical measure. Put the sound through, push it to the fundus, again measure the distance. If you can see the distance of about two to one is there, it is a normal ratio. It is not an infantile uterus. It is hypoplastic. The patient can conceive.

In examining, in addition to the hypoplasia of the internal genitals, retroversion does not seem to be much of a factor. That is a lay belief that a woman cannot get pregnant if her womb is tipped. That is ridiculous! Some people, however, seem to conceive less readily if they have a retroversion, and a pessary is inserted to bring the uterus forward, probably for the reason that the cervix bathes best in the seminal pool if it is not up behind the pubis.

Woman can conceive with fibroids. We have all seen many pregnant women with fibroids. Sometimes they cannot seem to, but more often they do conceive in the presence of fibroids. A large, boggy uterus may mean a low-grade, chronic infection with an endometritis. That might prevent conceiving. The diagnosis of endometriosis is a difficult diagnosis to make. It is a cause of sterility because it glues the tubes to the ovaries. The whole pelvis becomes glued. But I make the diagnosis of endometritis wrongly more often than correctly.

If I had to name one of the commonest causes of sterility, I would give a chronically infected cervix as the most common cause, and that means any cervical infection. The cervix is not clean to look at, shiny, pink, smooth right down to the os, no erosion. Cervical erosion, of course, should be cleaned up from the point of view of carcinoma, preferably by cautery. There is no local treatment worth anything. Douches are useless, any more than gargling for tonsils. You have to cauterize electrically.

Presence of polyps in the mucosa seems to be a factor. Sometimes patients come in for a single examination, and you clean the cervix. They are pregnant the next period. I do not know why erosion and infection might cause a woman to be sterile except from the point of view that if you can walk through a smoke-filled room, you might get to the other side, but you are not much good after you get over there. So are the sperms affected, from going through the infected cervix, by toxins from the infection.

Stricture of the cervix may be a factor in preventing the easiest ascent. If you dilate or take a very fine curet to the cervical canal, it will cure the strictures.

The single, most valuable laboratory test is the basal done on both the male and female. In patients who are not clinically hypothyroid, you will find that they can stand some thyroid. If they have a normal basal, thyroid still seems to be helpful. How it works, I do not know, but it does work in these patients. If you give them thyroid extract, it will often be the factor that tips the scales, and they become pregnant. So, I use thyroid without basals very often if they are patients that obviously can take some. When you use it, use it to tolerance, 1 to 2 grains a day, not indefinitely, but many times it may help the physiology of the ovary. I do not know what it does, but at least these patients conceive much more readily. Then, other laboratory work as indicated should be done.

Now, the procedures. We give first general advice if no obvious cause is found for the sterility. I am sure you have run into the two other things I think of. One is vaginal stenosis where the woman has never actually been entered. We know a woman can conceive without being entered if semen splashes on the vulva. Apparently nature designed the semen to be deposited high in the vagina. That is where it should be. We have seen people married years, and when we examine, we can scarcely get a finger in. When they cannot be entered, it is painful. There is some reason. I am not one who subscribes to dyspareunia because the woman is rejecting the husband. There is usually a reason: a vagina that is sore. Those patients must have a hymenotomy or peritoneotomy to enlarge the vagina.

There is another factor that slips me for a moment. With the general advice that is first given you advise them to have intercourse every second or third day and remain in bed. That reminds me of the other point. We have all run into patients, I am sure, who get up after they have intercourse and take a douche and wonder why they do not conceive. I have seen them, and I am sure you have. You have to tell them. They do not know all the things we know. They have not read the books. We have to tell them these obvious things.

It seems to be helpful in some people to precede intercourse by an hour by the alkaline douche, 2 tablespoons of baking soda to a bag of water. You can add to that Karo syrup, dextrose. You then have the equivalent of the proprietary preparation Nutrisal that is used before the intercourse. I advise them to elevate the legs on the abdomen for a few minutes. It seems to hold the semen in the vagina for a few minutes, then put on a tissue or pad and not to go to the bathroom because they lose more of the semen than they need to.

Now, the tubal insufflation test is easy to do. Use carbon dioxide, never air. Don't hook up your blood pressure machine and pump air. You will kill a patient some day if you do. Nitrogen kills patients. Use carbon dioxide. There has never been a carbon dioxide death reported using an improvised machine. Bubble it through. Have a reduction valve on a cylinder. Bubble it through a fluid if you do not have a volumeter so you can roughly guess the amount that is going in.

I brought with me a cannula, a modified Jarcho (indicating instrument). It is malleable. It is inserted into the cervix, and the tenaculum grasps the cervix. Use a tenaculum with a wide part that does not pinch. It pricks in. The cervix is pulled down, inserted on this handle, and your hands are free. Then you use carbon dioxide to insufflate them. Do not use over 100 cc. at one time, and never have the pressure higher than 200 mm. Hg. If a salpingogram is used, never use Lipiodol. The Huhner's test I found of little use where patients have intercourse and come in in about an hour. It does not tell much about the male. You have to do a count. It is very simple to do in a counting chamber. As for a white count, use a hemacytometer.

Do a prostatic smear on the male. Look for chronic prostatitis, a very common cause of male sterility. For endometrial biopsy use a Novak suction curet. You do not have to suck it. Just push it in. You can bring out strings. Blow them into normal saline. Look for the secretory effect. That is a sign of ovulation.

For rectal temperature you have all seen these sheets (indicating paper). It is very easy to understand. The patient charts the rectal temperature. It gives you some clue to whether she is ovulating.

If they do not conceive after all these tricks and you can find nothing obvious, then we may say they are physiologically incompatible.

The Treatment of Peptic Ulcer

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(From the Department of Medicine, University of Buffalo School of Medicine)

One of the things that we should make emphatic is that the problem of peptic ulcer resides with the active practicing physician in almost all of its phases. This is not the problem of a gastroenterologist until we get into complications. If you get into complications, you may find it necessary to discuss the situation with someone else. But peptic ulcer and all of its complications can be prevented by the active practitioner carrying out a few simple ideas.

Now, we will talk about duodenal ulcers first. Up to the present time no change has occurred in the concept that acid pepsin causes peptic ulcer. Acid is secreted in the fundic part of the stomach. We must remember that the hydrochloric acid is secreted in this area of the stomach. In this area of the stomach, in the antrum root here in the wall of the stomach itself, there is a substance evolved that will stimulate the flow of hydrochloric acid. Unless we bear in mind that hydrochloric acid is made here and in the antrum a substance is made to stimulate the flow of hydrochloric acid and that this substance can be stimulated through or mediated through vagal processes and also through hormonal processes, we cannot understand thoroughly what we are trying to do in the peptic ulcer. Remember, we are talking at this moment about duodenal ulcer.

If you have the problem of a peptic ulcer in front of you, you have only one thing to consider in most of the ulcers, that is, control of the acid gastric secretion. At the present time we have no way of controlling the hormonal method through the suprarenal. Certainly we are not going to take out your suprarenal to stop the stimulation of the antral secretion.

The next thing is vagal blocking agents. In my experience all that I have found is that they give relief of pain. Dr. Bloom of Buffalo had a small group of people that came to him originally with duodenal ulcers. He placed them on vagal blocking agents. While they were on vagal blocking agents, they developed a new gastric ulcer. Therefore, we know that blocking off the vagus at the present time is not the entire cure of peptic ulcer. We could use, and I still do use, belladonna.

We can see we are coming down to only two factors. One is neutralization within the stomach itself. That neutralization is best accomplished first by food, and of the factors in food the three best substances are meat, eggs, and fats. But we must feed frequently, and we must feed during the night hours when the hydrochloric acid secretion is at its highest point. Therefore, milk, cream, butter, meat, fish, fowl, eggs—the proteins—become our most valuable agents in the diet of the treatment of peptic ulcer.

The substances that we omit are those factors that stimulate hydrochloric acid secretion, principally the meat broth soups, mustard, pickles, vinegar, catsup, horse radish—the condiments. The next group we exclude are those that scratch, scrape, and irritate—the raw fruits and vegetables. But give a broad, good, generous diet. You remember our failures with diabetes. Our failure was the strict, narrow diet. Nobody could follow it before insulin. On a broad diet we can do the best neutralization job we have.

Now, we have to discuss three things that always cause a lot of discussion: (1) smoking, (2) alcohol, and (3) coffee. We believe most of the people talking about peptic ulcer believe that alcohol should be omitted. I am one of those who believe that for the time being the alcohol should be omitted in the treatment of active duodenal ulcer. The second factor is, I believe, that coffee should be reduced to a total amount of a cup of coffee with breakfast and a cup of coffee once a day liberally sprinkled with cream so that you have a half and half preparation.

Then, in regard to smoking, I ask them to keep their cigarets down to six cigarets a day. Innumerable experiments are being done with nicotinic acid scars such as that to show they have an effect on hydrochloric acid secretion. We are not positive, but it seems to be the principle prevalent at the present time that smoking should be reduced.

Now, for neutralization, you choose the agent you want to use. I commit myself to two products, calcium carbonate, and any one of the aluminum hydroxide products.

There are two or three differences in them. The best one is calcium carbonate. It does not produce alkalosis. It is high neutralizing. The secret of calcium carbonate is the total number of tablets you give the patient. To start with you give 200 so he knows he is going to be on them for some time. You give 10 grains one hour, two hours, and three hours as he eats. As the peak of acidity rises in the stomach, you neutralize with an adequate agent. If he awakens during the night, you give him a glass of milk and two tablets, or before he goes to bed, you give him two tablets of the calcium carbonate.

The timing of the administration of the neutralizing agent is the single most important factor in the therapy of peptic ulcer. If you are going to use the aluminum product, you can use whatever one you like. We use the solid forms because most of our ulcer people are ambulatory. We do not hospitalize them. It is difficult to give a man working in a hole in the ground a liquid preparation with a teaspoonful to be measured out at one, two, and three hours. You would be surprised how frequently we find ourselves making the error of prescribing a liquid preparation.

I would suggest you use either the aluminum hydroxide or calcium carbonate. The bad factor about calcium carbonate and aluminum hydroxide is constipation.

Under the method that I have briefly given to you, 85 per cent of the ulcers will heal and stay healed. Say to your patient, "If you have heartburn, if you have sour stomach, if you have distress or discomfort, do not forget that you should resume your treatment. We are fluoroscoping our patients about two to three to six weeks after putting them on treatment and giving them this reassurance.

Now, that applies to the duodenal ulcer. The same applies to gastric ulcer with this injunction: There is no such thing as an intractable gastric ulcer. An ulcer in the stomach must heal, must remain healed, and must be proved to be healed by the following criteria: a disappearance of symptoms in the patient and a disappearance of occult blood from the stool. The roentgenologist must say that in his opinion it is healed and has remained healed. If gastroscopy is available, it must be demonstrated that it is healed or remains healed, because if you cannot demonstrate that a gastric ulcer has healed—I do not care if it is on the lesser curvature or on the greater curvature—the responsibility is yours to say whether that is a malignant lesion in the stomach.

Regardless of all the work that we are doing, the single largest cause of death from malignancy in men is cancer of the stomach. Carcinoma of the lung is creeping up on it. But we must make a point in our memory to say that a gastric ulcer cannot be one that does not heal. It must heal, and it must stay healed over a period of time. Otherwise, it is surgical. I do not know of any other method of attack. I am not saying every ulcer of the stomach is surgical, but I do say that the criteria must be in our minds.

A gastric ulcer that becomes intractable, I believe, should be sent to surgery. The morbidity is low, and the possible finding of it being a malignant ulcer is definite.

As to surgery in duodenal ulcer, it is my own personal opinion that there is only one operative procedure—adequate, proper resection. I am not using vagotomy and gastric resection. I am not using vagotomy and gastroenterostomy. I am a proponent of the fact that I must reduce as much of the acid-secreting area as possible and as much of the antral area as possible. Therefore, we are at the present time remaining in the school for those people who have an intractable duodenal ulcer, one that has not healed under the plan that you and I have followed out. The complications of resection are disappearing.

Regarding hemorrhage, the vast number of hemorrhages are small and will respond to medical care. They do not require surgical intervention. Now, when we talk about massive hemorrhage, we mean when the patient shows air hunger, has a rapid pulse, marked pallor, a falling pressure, they have all the clinical aspects of a major hemorrhage. If we can get a blood count and blood pressure, showing that they are constantly bleeding and the bleeding is not stopping, we give them a massive transfusion. We have given as much as 2,000 cc. of blood in a period of about six hours. Dr. Lipp and Dr. Milch have done a splendid piece of work on that. If patients fail to respond to the massive transfusion, then they feel that they are losing blood more rapidly than they can replace it, and surgical consideration must be taken up. Remember that surgery at this time is difficult. Remember, they have got to find the ulcer. Remember, the people are in shock. It is not an easy thing to do, but if they continue to bleed beyond that point, then it becomes irreversible, you have a mortality on your hands.

I have left to the last the question of psychiatry. The psychiatry of peptic ulcer is the psychiatry that you and I can use. You cannot send these people to a psychiatrist. I have some simple pictures in the office of a duodenal ulcer and a gastric ulcer. I show them to the patient. I show them what we are trying to do. I use a diagram of this sort. I tell them what we are trying to accomplish. I find that my educational effort many, many times is inadequate. I am hurried with the telephone. I am trying to do too much. I am not giving the patient individual care and attention. That is where I fail with the people with peptic ulcer. I find it is a serious criticism of all of us that we do not make the educational effort to show why they have an ulcer, how to get it well with food and medication, and how to prevent the complications.

I want to say two things to you about the people that bleed. We find that if we can get a good history of peptic ulcer from them and previous x-ray studies, then we do not have to send a goodly number of our bleeding peptic ulcers to immediate x-ray. Most of the people that have ulcers that we know of have had the ulcer a long time and know about it. We have found that to be invaluable. So, we are not entirely saying we are not doing x-ray on people early, but we can get a lot of good information from history and physical findings. As I said in the beginning, peptic ulcer is a problem of the active, practicing physician. If it is well carried out with the story of the reasons why the patient gets the ulcer, it is seldom that you do not get good results.

Discussion

DR. LIPP: Dr. Aaron, we do have one question that is associated with this subject. What should be done in cases of prolapsed gastric mucosa?

DR. AARON: Well, the literature is just filled with stories about prolapsed gastric mucosa. Many times a prolapsed gastric mucosa to some degree occurs in many people. Dr. Heilbrun is here. Maybe he is going to say something about it.

You could conceive that if there was a large prolapse as it went into the duodenum, it would produce obstruction. Not alone would it produce obstruction, but it might produce stimulation to have an accumulation of a large amount of hydrochloric acid and pepsin in the stomach and produce a digestion process around the prolapse. It produces the signs and symptoms of peptic ulcer.

First, I would say the diagnosis is made by the roentgenologist, the degree of the prolapse is indicated by the roentgenologist. The effect of it on the patient is usually an ulcer-like story, and I believe that in the hands of all those I have heard of, the peptic ulcer treatment brings about a response in the vast majority of people with prolapse of the gastric mucosa.

I do not believe it is too important except if the roentgenologist tells me they have a prolapse producing obstruction with marked changes in the mucosa.

DR. LIPP: One more question, Dr. Aaron. How important is gastric analysis?

DR. AARON: I believe very firmly in gastric analysis. My reason for believing in gastric analysis is as follows: We titrate, but we really do not have to titrate. If you have a gastric lesion, a gastric lesion and low acid values, you have got something to worry about because you have changes in the mucosa of the stomach already.

Here is what we are confronted with: About 20 per cent of all people have an achlorhydria. Elderly people may have an achlorhydria. The disturbing factor to all of us is that in individuals with pernicious anemia, where you have the definite achlorhydria, there is a higher rate of cancer occurrence than in any other group of people.

Therefore, I believe that if you have in front of you a person who has a histamine achlorhydria, that person is entitled to come back once a year to you or me for roentgenography of the upper gastrointestinal tract and another gastric analysis. I worry about people with low acid values, especially if they have a lesion in their stomach.

Pitfalls in Radiologic Diagnosis

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THE radiologic method has been accepted as one of the most reliable and accurate in the diagnosis of diseases of the gastrointestinal tract. In spite of careful fluoroscopic examination and good films, there may be diagnostic errors, and I should like to discuss and present examples of some of the conditions under which these errors in the accuracy of the method may occur.

The most important point to be made is that there should be no hesitation in asking for a reexamination in whole or in part when there are questionable findings or if the findings are not in keeping with the clinical picture. The request should come from the radiologist himself when his findings are questionable or from the clinician if it is felt after consultation with the radiologist that the study has not given complete information in either a positive or negative way.

These pitfalls may come from several sources such as:

1. Lack of briefing of the radiologist by the clinician as to the problem involved.
2. Incomplete preparation for a specific examination.
3. Use of routine methods without individualization in situations where specialized technics are needed.
4. Examination during an interval phase between attacks, especially in obstructions.
5. Acceptance as bona fide by the clinician of a report received from the radiologist when it is at variance with the history and physical findings.
6. Examination of the wrong area due to insufficient history and physical examination.

As an example of the last point, a patient was recently referred for intravenous pyelograms and an upper gastrointestinal study, both of which were negative. Her history revealed that she had been suffering from constant backaches, girdle in type, for six months. She had been seen by her physician all of this time, but the type of pain she was complaining of had not been correctly analyzed. When the skeletal system was examined, a destructive lesion of the ninth dorsal body was demonstrated. This was found to be due to tuberculosis.

When properly performed, the most accurate of all radiologic investigations of the abdominal organs is the gallbladder study. Since the use of the newer contrast substances, higher in iodine content, there is a high percentage of good gallbladder visualization. The correlation of the x-ray findings with the clinical picture should yield an accuracy of 97 per cent or more.[1] In the absence of jaundice, technical difficulties, etc., nonvisualization means disease of the gallbladder with or without stones or obstruction of the cystic duct. Every case of nonvisualization should be repeated with the double-dose technic since some normal gallbladders may not visualize at the first examination. When there is excellent visualization in the presence of a good clinical history of gallstone colic, one must be sure that stones have not been missed because of failure to examine in the upright or decubitus positions.

Case 1.—A young woman developed right upper quadrant pain during her pregnancy. Films taken in the conventional prone position showed questionable radiolucent stones. However, studies in the right lateral decubitus position and in the upright position revealed a definite, very thin, radiolucent layer due to numerous tiny calculi, proved by surgery.

The clinician should check to make sure that exposures have been made in these positions and not accept as bona fide that the study is negative. He should discuss the clinical picture with the radiologist and ask to have the examination repeated if the special projections were not made.

While these positional studies may not be routine in all departments, they should be. They will also help to differentiate between one or two small stones and papillomata of the gallbladder mucosa.

In the presence of a good history suggesting peptic ulcer, the demonstration of the ulcer crater is important since it is the only positive indication of active disease. Deformity signifies associated scarring or spasm but does not prove that active disease is present. The demonstration of the crater by the radiologist is most important. When it is on the posterior wall of the stomach or duodenum, it may be masked by the density of the barium unless compression or double contrast studies are employed. In many cases of duodenal ulcer there may be no apparent deformity of the outline of the stomach or the bulb. This is especially true at the time of a first attack before scarring has developed.

Case 2.—A middle-aged physician complained of periodic distress and heartburn, and a roentgen examination of his stomach and duodenum done in another laboratory was reported to be negative. His distress continued, and he was referred for another examination. He was quite large, and compression of the stomach and bulb was difficult. The conventional film studies in the prone and oblique positions were negative. However, when he was placed upon his back and the antrum and bulb were distended with air in addition to being coated with barium, an irregular ulcer crater, toward which folds were seen to radiate, was demonstrated on the posterior wall of the midantrum. A month after treatment was instituted, the crater was no longer visible, but the radiating folds were still present.

Case 3.—A thirty-nine-year old woman had periodic epigastric pain. The roentgen examination revealed no definite deformity of the stomach or duodenum with routine film studies. Examination of the bulb when the patient was in the supine position produced a double contrast effect and clearly demonstrated an ulcer crater on the posterior wall toward which folds radiated.

Cases 2 and 3 illustrate the application of specialized technics in clinically suspected cases of peptic ulcer for the demonstration of peptic ulcer on the posterior wall of the stomach and duodenum where the routine technics are negative. Many roentgenologists do not employ these methods routinely. Nevertheless, the clinician must be aware of the technics required to visualize posterior wall lesions clearly and be critical of any negative report issued to him unless he is sure that they have been used. If they have not been employed, he should ask for a repeat examination.

If the examination is performed when the patient is asymptomatic following an acute attack of abdominal pain or indigestion, one may have negative findings. However, if the examination is repeated when symptoms reappear, the re-examination may pay big dividends. This is especially true when there is an intestinal tract obstruction as in the case of congenital anomalies, tumors, inflammatory strictures, or volvulus affecting the small or large intestine.

Case 4.—A thirty-six-year old man complained of intermittent epigastric fullness. He was examined a week after the symptoms had subsided. No lesion was found. He was advised to have a re-examination when his symptoms recurred, and he presented himself about three weeks later, approximately eighteen hours after the onset of fullness.

The roentgen examination easily demonstrated marked dilation of the stomach and duodenum due to an obstruction at the duodenojejunal junction. At surgery this was found to be due to a congenital anomaly of the base of the mesentery. The duodenum was completely retroperitoneal. At the duodenojejunal junction the bowel passed through a narrow slit in the base of the mesentery. This slit constricted the lumen. A duodenojejunostomy was performed, and the patient has been well for over two years.

Re-examination at the time of active symptoms will frequently demonstrate a positive lesion.

Let us pass on to the colon where the correct preparation of the patient for the roentgen examination becomes most important. It is well to have a routine method of preparation, but it must be individualized to the clinical situation at hand. Discussion about the preparation between the clinician and the radiologist is important, particularly when there is a clinical history of obstruction, obstipation, or colitis. In these conditions cleansing enemata may be preferred. However, when one is looking for early organic disease of the colon, castor oil ($1^1/_2$ ounces) followed by enemata until the return is clear is the method of choice.

It must be emphasized that direct examination of the rectum and the rectosigmoid colon by means of the examining finger and the proctosigmoidoscope will detect 60 to 70 per cent of the lesions of the large intestine.[2] The examination of the rectum and the rectosigmoid are not primarily the responsibility of the radiologist. Even though this is true, the x-ray examination should be used as an adjunct to rule out lesions higher up in the colon. In a recent cancer detection survey, 4.3 per cent of 576 patients, or 25, were found to have 32 polypoid lesions in the colon beyond the area of direct examination.[3] Five were malignant. Twenty-five per cent of pedunculated polyps removed by colotomy show malignant change in the periphery.

If the roentgen examination of the colon reveals the presence of organic disease, it may be necessary to repeat it for further information or confirmation. Hodges reported a re-examination rate of 42 per cent in 338 cases of organic disease of the colon, whereas in the preponderantly normal groups re-examination was utilized in only 3 per cent.[4]

Recently great emphasis has been placed upon the detection of the polypoid lesions of the colon. Why? Because it is felt that they are the precursors of malignancy. Weber has stated, "It is not certain that all cancers of the large intestine begin as polypoid lesions, but it is certain that a great many do."[5] Twenty-five per cent of resected malignancies of the colon have benign polyps associated. Thus the detection and removal of the polypoid lesion becomes prophylactic medicine and surgery.[6] In addition, the five-year survival rate for early lesions of the large intestine is far better than that for lesions of the stomach.[7] Therefore, the detection of the precursors of and the early small malignant tumors of the large bowel becomes vital.

For the roentgen detection of the small polyp or early infiltrative lesion of the wall beyond the area of direction examination, a clean colon must be obtained. Why? Because it then becomes the responsibility of the radiologist to explain any defect in the barium column. The degree of penetration and the concentration of the barium suspension must be such that the small lesion may be visible in any segment of the bowel. The technic of the examination may vary from one examiner to the other, such as preference for plain film studies, double contrast studies, obliques, decubitus, etc. However, it must be realized that there is no substitute for hard work and meticulous technic in the suspicious cases.

When a small polypoid lesion is suspected, the examination must be repeated at least once for confirmation. At the re-examination the examiner may utilize a different technic from the original one, but the goal is to demonstrate the suspected lesion in the same place as well as or better than it was initially visualized.

The following cases illustrate the need for proper preparation and re-examination in the evaluation of small benign and malignant colon lesions.

Case 5.—A forty-five-year old physician had had intermittent episodes of passage of bright blood from the bowel for two years. Two roentgen examinations of the colon in other laboratories were reported to be negative. The patient was correctly prepared for a colon study, and the examination revealed a pedunculated polyp of the distal transverse colon. This was removed surgically and on section was benign.

The previous studies were reviewed. It was found that the bowel had not been properly cleansed of fecal material before the examination and contained many scybalous masses. There was an area of radiolucency at the site of the polyp, but this had been interpreted as a fecal mass. There was no defect or dimple in the wall at the site of the pedicle.

Proper preparation of the bowel prior to the earlier examinations would have obviated the misinterpretation of the polyp for a fecal mass.

Case 6.—A fifty-three-year old woman was referred for study of the gastrointestinal tract because of indefinite abdominal distress. There had been no bleeding. The conventional posteroanterior view of the colon was negative. However, the lateral study of the redundant sigmoid revealed a radiolucent area, 1.5 cm. in diameter, which was thought to be a polyp in the distal sigmoid area. Re-examination of this area with and without double contrast showed the defect to be persistent. A benign polyp was removed.

All segments of the bowel must be visualized free of overlap. In addition, any suspicious area must be re-examined to see if the defect remains in the same location.

Case 7.—A forty-seven-year old executive was examined because of indefinite pain in the right abdomen. There had been no bleeding. The cecum was not completely empty of feces and did not fill well during the fluoroscopic study. There was no reflux into the terminal ileum. A postevacuation study showed a 2.5-cm. defect in the lateral wall of the contracted cecum. Since the terminal ileum was not filled, it was uncertain whether this was a mass lesion or an hypertrophied ileocecal valve. Re-examination was asked for. Studies with and without double contrast showed a sessile polypoid mass on the lateral wall of the cecum opposite the ileocecal valve which was visualized at this time. This was removed surgically and on section was benign.

The exact nature of the defect noted on the postevacuation study was not clear. Re-examination with the usual technic supplemented by double contrast, plus the visualization of the ileocecal valve, established the true nature of the defect.

Case 8.—A sixty-seven-year old woman had an abdominal hernia which was to be repaired. She was referred for examination of the gastrointestinal tract to see if any bowel was caught in the hernia. There were no significant gastrointestinal complaints. No definite abnormalities were noted during the fluoroscopic observation, but the film study showed a 1.5-cm. defect on the medial wall of the redundant proximal sigmoid and a questionable, small 8-mm. area of radiolucency just above it. Re-examination was particularly directed to this suspicious site by means of regular and double contrast technics. Both the wall defect and the radiolucency were confirmed. The former was felt to be a malignant infiltration and the latter a benign polyp. These findings were confirmed at the surgical resection of the colon which was done instead of the herniorrhaphy.

This case emphasizes that any defect in the barium column, no matter how small, must be confirmed by re-examination. This is especially true when the bowel has been properly prepared for the examination. It also emphasizes the fact that approximately 25 per cent of resected malignant lesions have benign polyps associated with them.

Summary

Reliance upon a single examination for the detection and complete evaluation of lesions of the gastrointestinal tract in all cases is erroneous and may lead to many pitfalls. Proper rapport between the clinician and the radiologist will help to avoid them by recognizing the need for a re-examination under the following circumstances:

1. When the roentgen report is negative and there is good reason to believe that a lesion exists.
2. When the roentgen report is positive and there is a discrepancy between the clinical and roentgen findings.
3. When a lesion is discovered and its significance is indeterminate.
4. When there is need to differentiate between disease, congenital anomaly, or physiologic variation.
5. To identify and localize a lesion before surgery, especially when there has been an interval between the last examination and surgery.
6. To help in evaluating the benignity of a lesion where surgery is not feasible or is rejected by the patient.
7. To determine the healing progress of a known benign lesion.
8. When new clinical or laboratory data are discovered and a new tentative diagnosis is suggested.
9. When important data in the history are obtained which were not known at the time of the first examination.
10. And finally, whenever there is any doubt as to the roentgen findings whether they be positive or negative.[8]

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Common Proctologic Problems

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PROBABLY the most common symptom presented by the patients who consult us for rectal disorders is bleeding. Bleeding has become annoying, startling, and confusing to many of the patients who consult the doctor, because of the great amount of campaign work that the Cancer Society and other people have given out to the laity. It has, I think, confused them in addition to startling them.

We all know there are many causes of rectal bleeding. Probably the most common cause is hemorrhoid. The second most common that we see is bleeding from an anal fissure. The third most common cause is from a rectal polyp. The fourth is from carcinoma, and the fifth is from chronic ulcerative colitis.

For many years the proctologists have been stressing the point that adequate rectal examinations are needed before a diagnosis can be made and treatment instituted in individuals with rectal bleeding. I do not think there is a more opportune time for me to stress this point again than with the subject of rectal bleeding. We still see people who come into our offices who have had rectal bleeding, who have been prescribed suppositories, ointments, salves, etc., without even a physical examination. Of course, we feel there is no excuse for a thing like this, and even if a digital examination has been done in some instances, further examination higher up in the rectum has not been accomplished.

To do an adequate proctoscopic examination, and even a sigmoidoscopic examination after a digital examination is done, a proctoscope is introduced into the rectum with the patient in a Sims's position, a knee-chest position, or inverted on a proctologic table. If this is not done, a large number of diseases which produce rectal bleeding are going to be missed. Dr. Hennessy is going to tell us at the Section on Proctology and Gastroenterology that 75 per cent of all carcinomas of the large bowel are within the reach of an 8-inch proctoscope. Too many cases are still being operated on for hemorrhoids, only to find in eight or ten weeks that the bleeding persists. Further investigation reveals a carcinoma.

Hemorrhoids that bleed are internal hemorrhoids. If this is the rectal and this is the colorectal junction (indicating diagram on blackboard), and this is the mucocutaneous line, or the anorectal junction, or the so-called dentate line, the internal hemorrhoids lie in the rectum just above the anorectal line. They are varicosities, as you know, of the superior hemorrhoidal vein which perforates the serosa and lies in a submucosa position in the lower third of the rectum. These are the veins that become varicose, become enlarged, and bleed.

These hemorrhoids, if they are the only pathology present at the anorectal line or at the rectum, are amenable to ambulatory injection treatment. I am not an ambulatory proctologist. I do not go along with the theory that any rectal disease can be treated on an ambulatory basis. But this disease can be treated very satisfactorily on an ambulatory basis. Injection treatment of uncomplicated internal hemorrhoids will stop the bleeding and cause enough fibrosis usually to prevent further trouble. Solutions used for the injection treatment of internal hemorrhoids are urea and quinine or phenol in oil or glycerine. It does not make much difference, I think, which solution you use, as long as you do the thing adequately.

An internal hemorrhoid that is injectable should be injected high at the apex of the hemorrhoidal node. You can do one, two, or sometimes three of the main hemorrhoidal nodes at one sitting. We feel it is better, particularly if you are using urea and quinine, to do the injections in a single hemorrhoid at the first visit. About 3 per cent of the individuals who are injected with urea and quinine are sensitive and will have a syncope-like reaction an hour or so following the injection treatment. If this happens and they tell you about it at the next visit, no more urea and quinine should be used. Phenol in oil or glycerine should be substituted. A total of 1 cc. of urea and quinine should be sufficient or 1 to 5 cc. of phenol in oil or glycerine in each hemorrhoidal node.

We will leave fissures for a moment until we discuss inflammatory disease at the anorectal line. Rectal polyps occur in approximately 5 to 6 per cent of individuals who have proctoscopic examinations with or without bleeding. The so-called sessile polyps are the type that undergo malignant degeneration early and become the well-established cancer. A rectal polyp on a pedicle can be removed simply through a proctoscope with an electric snare. It is not advisable, I believe, to try to fulgurate a rectal polyp that has a long pedicle, because of the possibility of missing early malignancy that may occur in the polyp. After early malignancy is found and the specimen is removed by an electric snare and sent to the laboratory, if the malignancy is found extending into the stalk of the polyp, it is a well-established carcinoma and needs further radical treatment.

Sessile polyps under 1 cm. in diameter that occur on the wall of the bowel should be biopsied and then fulgurated. Always biopsy first to be sure there is no established malignancy. This, as I say, can be done safely up to the colorectal junction through a proctoscope. We do not feel it is safe to remove any polyp that has a pedicle extending into the pelvic colon by electric snare. It should be removed by abdominal approach.

Carcinoma of the rectum, of course, is a serious disease and is treated by radical measures. The measures used today are becoming more and more radical, including massive pelvic dissection.

Chronic ulcerative colitis is usually only a disease we see in consultation, for we proctologists believe chronic ulcerative colitis is a medical disease to be treated by the medical man. Probably 5 per cent of all the cases of chronic ulcerative colitis seen develop complications requiring surgery. These complications are serious situations, and the patients require a radical operation for the cure of the complication.

Of the inflammatory diseases at the anorectal line, the first one we see and see commonly is cryptitis. The second one is papillitis or hypertrophied anal papillae, then fissure, abscess, and fistula. Now, if you will remember, at the anorectal line there is a series of small pockets, lying between the folds of mucous membrane but in the anal canal, which are called anal crypts. Because of faulty elimination, abrasions of the anal canal and the crypt area from foreign bodies, a lowering of resistance from other systemic diseases, these crypts will become infected. The infection, if it stays localized in the crypt, is usually of no consequence. The only symptom that the patient presents is occasional bouts of tenesmus from irritation of the sphincteric mechanism. If the cryptitis progresses, the inflammatory reaction will extend down along the wall of the anal canal, and with a movement this area will open up as an anal fissure. The anal fissure is a direct, secondary reaction to inflammation at the anal crypt.

Alongside the crypts are small anal papillae which can be seen through a proctoscope or anoscope. As the infections spread laterally, these papillae will become enlarged, and we see them occasionally large enough to be prolapsed through the anal orifice following bowel movements. The presence of the hypertrophied papillae plus the infected crypt sets up a vicious cycle. The stool lodges behind the papillae and feeds the infection in the anal crypt. Secondary changes result. Number one is the fissure.

If the infection travels deeper than the underlying lining of the anal canal, it will travel out into the ischiorectal spaces on either side or into the so-called postanal space, causing an abscess. This abscess does one of two things, either ruptures by itself or is incised by the doctor. You then have a communication between the infected crypt and the outside, the fistula.

Now, the treatment of anal fissure, like the internal hemorrhoid, also can be done on an ambulatory basis. An acute, early fissure can be treated by two methods. The pain is severe and has to be alleviated. The pain is usually due to a spasm of the sphincteric mechanism.

The typical history the patient presents with a fissure is a bowel movement followed shortly after by pain which will become very severe, progress, and gradually diminish. The reason that the peak is reached quickly is because there is a sudden contracture of the sphincteric mechanism which persists for one, two, or even twelve hours after a bowel movement. What you want to do is relax the spasm of the sphincteric mechanism. This can be done by the injection of a prolonged or long-acting anesthetic. For years we have used procaine and oil. Recently there has been a new repository-type of anesthetic called Efocaine on the market. I have used it sparingly, because there has been some adverse criticism of the use of the drug. It has caused sloughing and changes in the nerve fibers, and there is investigation going on now to prove whether or not it is dangerous. The proctologists who have used it have apparently had little difficulty with it. It has been used in other parts of the body with severe reaction.

This anesthetic, either procaine and oil or procaine and Efocaine, will last for a period of about five or six days. And with the use of some type of sterilizing suppository placed in the anal canal after bowel movements and on retiring, the cryptitis will in many instances clear after five or six days. You will notice that the fissure is usually completely healed.

If the fissure has persisted for a long time and becomes chronic, there is not only a small rent in the anal canal, but the edges become undermined by secondary infection. This is an anal ulcer. An anal ulcer will rarely heal with the ambulatory methods of treatment. They have to be treated with surgical excision of the entire area.

Likewise, we do not feel a fistula is a disease that can be treated on an ambulatory basis. Different types of drugs have been injected into the fistulous tract to cause a sclerosis of the tract. In my experience they have been worthless. As long as you have the infected crypt at this area, you are going to have continual feeding of the tract with inflammatory products and a constant drainage. Occasionally the external opening of the fistulous tract will heal. These patients may go along for a matter of weeks without difficulty. You will think they are cured, only to have recurrence of the abscess.

If the abscess recurs, it does not recur at the site of the old one. It will recur laterally, anteriorly, or superiorly because the infection takes the line of least resistance. This area is usually fibrotic. This gives you a secondary opening. We have seen many people with secondary external openings and the single internal opening.

Another situation that people consult us about is an ill-defined, deep-seated pain in the rectum. They cannot localize it except to tell you it is deep in the rectum. About eight or ten years ago, Dr. George Thiele of Kansas City reported what he described as the Thiele syndrome. Because of chronic cryptitis and papillitis at the anorectal line, the inflammatory reaction will spread upwards along the fascial planes of the levator ani muscle. These muscles, like the exterior sphincteric mechanism, develop a kind of spasm as a result of the inflammatory reaction. These individuals with this type of pathology will complain of a deep-seated rectal pain. It has no relation to bowel movements. It has no relation to position of the body. It is just as bad when they lie down as when they stand up. Sometimes even walking will seem to make it better. In addition to this deep-seated pain, they will have occasional attacks of a very sharp, short-lasting pain right in the anal canal. This usually occurs at night.

When you examine these individuals, you will find that the sphincteric muscles are rather tense and resist examination. But as you sweep your hand up along the levator ani muscles that can be felt laterally in the rectum, you will feel these muscles to be very tense and fairly tender. Dr. Thiele has treated these individuals as we treat cryptitis, with the addition of massage of the levator ani muscles. He has reported over 600 cases with remarkable results.

Now, going back to rectal bleeding, I want to talk for just a minute about rectal bleeding in children. We see at the Children's Hospital many cases that present rectal bleeding. We feel that the primary cause of rectal bleeding per se in a baby under the age of five is the presence of a rectal polyp. The second most common cause is anal fissure. There are many other diseases that can cause rectal bleeding in children such as intussucception, etc., but those are rare.

In the children with just rectal bleeding, it is very important to do an adequate proctoscopic examination to rule out the presence of rectal polyp, because in children as in adults, they can be malignant.

The treatment of an anal fissure in a child is the same as it is in an adult; inject the area with a long-lasting anesthetic to stop the pain, and treat the child with a sterilizing type of suppository.

The Differential Diagnosis of Jaundice

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THE management of jaundice usually is not a difficult problem. However, there is a certain percentage of cases in which we have to call forth all of the aids that we might have at hand—the diagnostic aids to make an accurate diagnosis, namely, the laboratory. In certain other cases we have to go a little further and obtain a needle biopsy of the liver. In some cases it is helpful. Still, with all the aids we have, there are a few remaining cases in which we must depend on the laparotomy to give an accurate description of the underlying pathology.

So, with all the advances in diagnoses of liver disease we must remember they fall short of the mark oftentimes. As with every other system of the body—and probably more so here—again we must emphasize the signs or symptoms in the history, the physical findings plus the laboratory, and then the histologic study of the tissue if it is available.

We do not have time, of course, to consider all of the symptoms that can occur in the underlying pathology, i.e., liver disease or obstructive phenomenon of the biliary system in the patient with jaundice. Certainly, we must point out a few symptoms that become important!

Pain of varied descriptions can occur with intrahepatic jaundice. In fact, the type of pain itself is often not reliable unless we are fortunate enough in an obstructive situation to have the characteristic pain of a biliary, colicky type with characteristic radiations following chills and fever since in intrahepatic disease of the liver we have varied symptoms that simulate even the abdominal catastrophe of the surgical lesions. So, pain itself, unless we are fortunate to have it very typical, is not a dependable symptom on which to base a diagnosis unless it is well evaluated with the other findings that we have at hand.

In the symptoms of liver disease again we must take the patient's word for the changing color of the stool and the urine and carry this on ourselves, when the patient is under observation, to note the color of the urine and the stool. This is most helpful if we take the time to carry out personal observation.

The other important symptom that we have to mention in jaundice is that of anorexia. Anorexia is a cardinal symptom of intrahepatic liver disease or intrahepatic disease associated with jaundice, whereas many times in obstructive situations anorexia is not an outstanding symptom. We might say it is only occasionally that the patient with hepatitis exhibits a pretty good appetite. It is important.

As we go on with the physical findings, we must be conscious of the underlying pathology because many times they can be more important than the laboratory tests themselves. The intensity of the jaundice is seldom an important outstanding consideration because intense jaundice can be found in both types, that is, intrahepatic or extrahepatic jaundice. We are concerned with whether the obstruction is in the liver or the biliary tree, so intensity does not give conclusive ideas about the type of jaundice.

As we go further, the size of the liver in the course of the jaundice is important. Early in jaundice if the liver is large, this certainly points to intrahepatic disease. This cannot be overlooked. On the other hand, in obstructive disease of the biliary tree hepatomegaly early is not very common. Localized muscle spasm or localized tenderness, however, makes us point our attention away from the liver itself as the cause of the jaundice. However, substantial tenderness of the liver itself, if it is diffuse, becomes significant of intrahepatic disease.

A palpable spleen early in the course of jaundice again points our attention to the liver itself because of the underlying physiologic changes. If there is obstructive jaundice due to stone or tumor, one is hard put to explain the splenic enlargement and these causes. Splenomegaly is associated with intrahepatic liver cell sickness. So, if we find splenomegaly, this points our attention to intrahepatic disease.

It is interesting to note that when the liver cell is very acutely ill, that is, when there is an acute insult to the liver, or if the liver cell sickness has been present for a long period of time, certain other chemical changes take place in the body. We might point these out as spider angiomata, little areas on the skin that appear as spiders, which, when we depress the center and release it, fill from the middle with armlike projections appearing in the skin. These usually appear on the surface of the body drained by the superior vena cava: head, trunk, and arms. These are found in intrahepatic disease, although they may be seen in pregnancy. But angiomata are usually not found in people who have obstructive jaundice unless it has been present for a long period of time. Therefore, this dermal finding may become important in the patient who has acute hepatitis or portal cirrhosis with acute hepatic insult.

Longstanding liver diseases also may disturb the endocrine function and interfere with the hair distribution. Sparse external, sparse axillary hair may give us a clinical inkling that this patient has had longstanding liver disease. If we look for these dermal changes, which are thought to be due to excess circulating estrogens in the body, one may suspect this patient has liver disease of longer duration than is clinically apparent, which would influence our decision in the cause of the jaundice.

Again early in the obstructive pathologic states we might be hard pressed to explain ascites. However, mild ascites is common with intrahepatic disease, especially of long standing. The cause of this is portal hypertension or severe change in proteins giving a shift in fluid balance. However, in surgical lesions the so-called ascites due to the primary cause of the jaundice is not common so early. When the jaundice appears, the appearance of ascites becomes clinically important. Too, we may say the same for ankle edema. Ankle edema may be an important symptom in the absence of renal or cardiac pathology.

So much then in summary for the physical findings in the patient who has jaundice: hepatomegaly, splenomegaly, ascites, and edema. Of course, a palpable gallbladder becomes just as important as an indication to the clinician that this patient has obstructive jaundice if he feels the gallbladder.

However, most of the people whom we present as a problem do not have the associated symptoms or findings that we mention, and we have to go further in the diagnostic survey of the patient with jaundice. We think next of x-ray. We might say that a flat plate of the abdomen may give us certain information, such as the size of the organs. If we are fortunate enough, a calculus may be found, but then we must evaluate the location and importance of the calculus in this particular patient. Occasionally, the haze over the abdominal plate may suggest ascites and reinforce some clinical impression we have. If an esophagram searching for esophageal varices is definitely positive, that may be helpful if the x-ray man can outline esophageal varices. The gastrointestinal series for duodenal sweep, unless it is very, very positive, is to me a questionable procedure and must be evaluated with the rest of the clinical picture. Of course, if we find a primary site of carcinoma of the intestinal tract, it is helpful. We cannot go on without saying there are occasional gastrointestinal series that show a wide sweep for a pancreatic tumor. As a rule it is not one of the important studies in the management of jaundice.

Then we turn to the laboratory for further study. And here again we evaluate the physical findings: the liver, spleen, and ascites. We must evaluate each test with the patient. We must consider the time of the jaundice in which we do the test. For instance, if a patient has liver cell sickness, certain tests are positive. If, on the other hand, a patient has obstruction but this obstruction, extrahepatic obstruction, continues for a long period of time because of the mechanical, the secondary infectious changes, inflammatory changes, or ascending cholangitis that occur, then we may have secondary liver cell or hepatocellular damages. Then, if the jaundice persists for any length of time, the liver cell tests, as we think of them, later become positive in the patient who has extrahepatic obstruction. So, if we wait too long with our tests or if we do not repeat them, we may have a confused picture of liver cell sickness late in the patient who has obstructive jaundice. We must correlate the laboratory findings and emphasize this: Do the tests early in the patient who has jaundice, and repeat them.

Certain of the tests that are important are, of course, a total bilirubin which helps us measure the course of the jaundice. Personally we think that for the most part the indirect and direct van den Bergh are inconclusive evidence of intrahepatic or extrahepatic jaundice and are difficult to evaluate. Since we have other tests, it is probably better to carry on the others and keep this test for the chemical measurement of the jaundice. Contingent upon the bilirubin we are interested in the urobilinogen which is made from bile in the intestinal tract. When it is made from the bacteria, the other chemical action in the intestinal tract, some is secreted, but a good portion is reabsorbed into the system. This urobilinogen, when it is reabsorbed, goes back to the liver, but some is secreted in the urine. This is our chance for detection; then we can visualize. If we depend upon this bile to get into the intestinal tract and there is an obstruction, it cannot. Since it cannot get into the intestinal tract, of course, we cannot measure it in the urine because there is none to be manufactured, none to be reabsorbed and excreted in the urine.

Thus, if we have a constantly negative urobilinogen determination in the urine, this speaks strongly for extrahepatic obstruction. It is a very important, not too difficult laboratory determination if we do this on fresh urine samples. It is not a difficult procedure but very helpful in detecting prolonged obstruction if we do it daily. When there is an absence of urobilinogen for three or four days, this usually means extrahepatic obstruction. There is an occasional case of intrahepatic obstruction in which we will have a complete lack of secretion from the bile and intestinal tract for several days.

There are other tests that we do. Cephalin flocculation tests are those which measure an abnormality of protein circulating in the patient who has a sick liver. It also may be positive in other diseases, but in liver disease it is helpful. This is the test we talk about when we mean early detection because when the liver cells are sick early, the flocculations become positive early because there is some swelling or inflammation of the liver cells themselves. However, in a patient who has jaundice due to obstruction, the cephalin flocculation test is negative early, but as the obstruction and the cholangitis goes on early, the cephalin flocculation test becomes positive.

If total proteins and albumin-globulin ratio are abnormal or the ratio is reversed, it indicates disorder of the liver cell or parenchymal disease. If alkaline phosphatase becomes elevated, it usually means extrahepatic obstruction. This is a useful test in determining extrahepatic obstruction.

Last, the response of vitamin K. I might say that if the prothrombin time in jaundice is abnormal early and if we give vitamin K parenterally early and the prothrombin time returns to normal, it means the liver cells can use vitamin K to manufacture prothrombin and is a helpful test in depicting the state of the liver cells. If it does not become normal, it means the liver cells are too ill to carry on prothrombin manufacture, and we have intrahepatic jaundice. So, too, prothrombin time in response to vitamin K is an important test.

Last, needle biopsy of the liver is not a 100 per cent diagnosis of the type of liver cell damage causing intrahepatic or extrahepatic jaundice. If we have a liver needle biopsy early, it is more useful than one done late because late needle biopsies have been confusing in making the diagnosis of jaundice.

The Use of ACTH, Cortisone, and Phenylbutazone

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This might almost be a prosaic subject four years after ACTH and cortisone have been made available. I am sure that except for the antibiotics there has been no group of drugs that has been used more extensively. Even though we have gotten into difficulties, we still have come up with the feeling that these drugs represent most significant advances in the treatment of a variety of conditions.

When we have a new drug made available, it appears to be one of the idiosyncrasies of every new drug—and this depends in part upon its wide use—that for a period of time there is a latent safety period. The drug is used under experimental investigation by qualified observers. At least some of its merits are recognized, and then it becomes available generally. Then comes the latent period in which sometimes we have some difficulties. Frequently, we have a false sense of security for a longer period of time than is justified. Then we begin to get into difficulties. These may appear in six months or twelve or eighteen months when there is a great wave of alarm, and then things quiet down for a period of time. Eventually, and I think we can say that we are now in that period, we realize a good many of the advantages. We appreciate, we hope, many of the possible side-effects, and we are again able to use these newer and powerful agents with proper perspective.

ACTH and cortisone are essentially equal as far as their therapeutic efficacy, not milligram for milligram, but the order of magnitude of cortisone is approximately twice as much cortisone per milligram as ACTH, the old regular ACTH, per milligram. And if we have been thinking in terms of 100 mg. of intramuscular ACTH, probably in divided doses of the regular ACTH, we should think the equivalent amount of cortisone would be approximately twice as much as that. This is a change in our feeling because originally we felt about 1 mg. of cortisone, either by injection or in the last three years by oral route, was the equivalent of about 1 mg. of regular ACTH intramuscularly. Then we began to use ACTH by the intravenous route with the slow infusion, and much to our surprise we found that ACTH administered intravenously as a slow infusion was five to eight to ten times as effective per milligram as the old intramuscular regular ACTH in divided doses.

An ACTH gel, which has been available during the past year and a half, is somewhere in between as far as potency in the intravenous versus the regular intramuscular route. I would say that the gel is two to four times as effective as the regular. The one advantage of the ACTH gel, of course, is we need give only one injection in twenty-four or possibly thirty-six hours, while the regular ACTH must be given at six-hour intervals at least. Again, the best of the intravenous ACTH has a serious disadvantage in that it ties up the patient. It ties up the patient's arm for a period of at least six hours. In some instances it is desirable to use the material through a twenty-four-hour period.

I am sure some of you were here yesterday when Dr. Norcross talked about the newer agents in the treatment of arthritis. There is considerable overlapping in what I have to say with what Dr. Norcross had to say yesterday. There may also be some difference of opinion between what Dr. Norcross had to say and what I have to say.

It is my feeling at the present time, and I am sure most of you do share the feeling, that either cortisone or ACTH, when used for relatively short periods of time, is a relatively safe preparation. And the occasional instance of activation of an ulcer or formation of a new peptic ulcer either with or without bleeding, where a coronary occlusion occurs, where acute psychosis develops is an unusual circumstance. Any drug we are dealing with, many of the drugs Dr. Levy talked about, has its harms and potential dangers. There is no drug, including aspirin and mineral oil, that does not have some untoward effect. We take a calculated risk in using any preparation, old or new. But I think we are justified in a feeling of assurance that at least for short periods of time, and by "short periods of time" I am talking in terms of several weeks, not a day or two, we are justified in taking a calculated risk because the calculated risk is a very small one.

In the use of either cortisone or ACTH for long periods of time the comparable, possible untoward effects are about the same. In other words, if we have a patient who is on ACTH or cortisone for many months at a time—six months, twelve months, or eighteen months, we are running into the possibilities, and I am certain Dr. Norcross did mention some of these possibilities that may occur after prolonged steroid therapy.

Compound F has been available for the past year and a half specifically for intra-articular injection. There was the hope when Compound F became available for oral use that it would replace Compound E cortisone, at least in some instances where water retention was a serious factor. Of course, one of the most important physiologic, as well as in some instances pathologic, effects of steroid therapy is the sodium and water retention. I think we have the feeling at the present time that Compound F, when given by mouth, and it may be administered by mouth in certain circumstances as well as intra-articularly, milligram for milligram, probably has about the same degree of water and salt-retaining properties. So, we have not eliminated, we have not obviated one of these undesirable side-actions. But in most instances if we do have water and salt retention following either Compound E or Compound F, elimination of the drug for a relatively short period of time will probably be responsible for a return to the pre-edematous state.

One of the fears we had for some period of time was that ACTH, because it stimulates the adrenal to excessive elaboration of one or more of the hormones, and cortisone, because it replaces a normally elaborated hormone, might be associated with atrophy of the adrenal. There was a feeling that possibly if we were carrying patients for long periods of time on steroid therapy, we should alternate. If we started out with ACTH and got adrenal hypertrophy, then it probably would be desirable after a period of time, a month, six weeks, or two months, to stop ACTH and give cortisone which then might be associated with a return of the hypertrophied state to the normal. There might then be a subsequent reduction in the amount of adrenal tissue. Then one could reverse the process, go back to ACTH, and carry on indefinitely.

Pathologic studies that have been conducted on a respectable series of patients in various clinics have largely dispelled the fear that we need worry about hypertrophy of the adrenal after long periods of ACTH therapy or atrophy of the adrenal after long periods of cortisone, Compound F therapy. At the present time if we have a drug that appears to be effective insofar as the individual is concerned and it appears we want to continue for some long period of time, theoretically it might be desirable to alternate the steroids. I do not think that if we do not alternate the steroids, we are necessarily doing any serious harm to the patient.

I will mention only a few specific maladies. Most of my discussion will be in general terms. In regard to acute rheumatic fever, for instance, there is the feeling generally that steroid therapy has a definite part to play in the treatment of the acute exacerbation of rheumatic fever. The sooner steroid therapy is begun, the more likelihood we have of a return at least of some of the laboratory abnormalities to normal and a marked improvement in the critical state. Originally there was some difference of opinion as to whether or not ACTH or cortisone was of real value in the treatment of acute rheumatic fever. We had used one preparation, salicylates, for forty or fifty years, and again there was waxing and waning of enthusiasm in regard to the value of the salicylates in the treatment of acute rheumatic fever.

I think the best evidence we have at the present time is that there are several large clinics conducting a long-term study of ACTH and cortisone in the treatment of acute rheumatic fever, and as part of this study there have been smaller studies in which a comparison has been made of the relative value of salicylates in subtoxic doses—3, 4, 5, or maybe 6 Gm. a day—versus steroid therapy in the treatment of the acute rheumatic episode.

At the present time I think it can be stated that there is less and less feeling that there is a marked difference in the clinical effects of either steroid therapy or salicylate therapy. So, I think if we have some feeling against the use of the steroids, or if there is some specific contraindication, if this patient has severe pericarditis with acute rheumatic fever or is in cardiac failure with an exacerbation, then we are justified in choosing salicylates without steroids without the fear we are depriving the patient of possible gain.

The second and probably most important factor in the treatment of acute rheumatic fever with either steroid therapy or salicylate therapy is the hope that we will minimize the incidence of chronic valvulitis. In order to obtain satisfactory information we have to have a much longer period of observation for the evaluation of whether or not at the present time, by the use of steroid therapy or massive salicylate therapy, we are influencing significantly the incidence of chronic valvular heart disease ten, twenty, or thirty years from now. Until that time I think we are justified in giving the patient every advantage. Unless there is an obvious contraindication, I would have the feeling that steroid therapy is certainly indicated for a period of time in the acute exacerbation of rheumatic fever, maybe two or three weeks either with or without salicylate therapy, and salicylate therapy possibly continued for some long period of time, maybe three months or six months, for as long as there is any clinical or laboratory evidence of the rheumatic state.

One other item in regard to acute rheumatic fever is the prophylaxis of the recurrence of a streptococcal infection with antibiotics in patients susceptible to rheumatic fever. I think we are now justified from evidence, based in large part upon the work that has been done under the auspices of the Army at Camp Warren in Wyoming, in continuing antibiotic therapy certainly for six months of the year in susceptible individuals, possibly twelve months of the year, for some years after all evidence of the acute rheumatic episode has disappeared.

Next is phenylbutazone. This has been available for eighteen months. I am certain this was discussed by Dr. Norcross yesterday, and I will merely mention it very briefly. It is a powerful analgesic. It is much more powerful as an analgesic, I think, than any of the other preparations we have had available. It is more powerful as an analgesic than steroids and salicylates, more than Synkamin.

Again this illustrates one of the instances I mentioned at the beginning of this short presentation about a latent period of safety. Originally there were some instances of leukopenia agranulocytosis. We felt we were safe in using phenylbutazone for some periods of time. I think this opinion must be revised. More and more cases of fatal agranulocytosis have appeared, and we must be very cautious in using phenylbutazone, not only for long periods of time but for short periods as well. I think the shortest duration of therapy for a patient to develop fatal agranulocytosis was a patient who had 600 mg. only for a period of eleven or twelve days. Certainly, we felt if we were over the hump of four or six weeks with phenylbutazone therapy, we were over the critical period. Now, I think we have a short as well as a long critical period that we must be careful of.

Finally, Benemid has again been available for approximately three years, and I think we have used it for a long enough period of time. It has been used both in the laboratory and generally so that we can, I think, after at least a three-year period say what Benemid will and will not do and what its potential toxic effects are. Benemid is one of the least toxic of any drugs available. It has some undesirable effects upon the gastrointestinal tract if the therapeutic amount is surpassed. That is usually about 2 Gm. a day. Most patients with gout can tolerate 1, 1.5, and 2 Gm. This preparation is available in a 0.5-mg. tablet. Patients can tolerate two or three tablets daily for an indefinite period of time without the incidence of side-effects. The incidence of side-effects in the several series reported justifies our original feeling that it was a relatively benign drug and very useful. I believe that with but few exceptions it should be routine for all patients suffering from chronic gout or arthritis.

The Vesical Sphincters and the Nervous System

A Note on the Pathways Conducting Cerebral Control of Micturition

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(From the Departments of Neurology and Urology, State University of New York College of Medicine at New York City, and the Neurologic Services of Kings County Hospital and the Jewish Sanitarium and Hospital for Chronic Diseases)

SOME alteration in control of micturition is a frequent symptom in many pathologic states. Moreover, in many normal individuals urgency and frequency of urination occur. Emotional factors are the usual basis for the latter. Pathologic change influencing micturition is commonly related to the spinal cord, especially the vesical reflex areas in the lumbosacral regions. However, lesions in any segment of the spinal cord, as well as the brain stem and the cerebral hemispheres, may result in urinary retention or incontinence. Disease of the lumbosacral nerve roots or the peripheral nerves may also cause impaired control of urination.

A description of the anatomy and physiology of the urinary bladder may be found in any standard textbook and therefore will not be discussed in any detail in this communication. Many structures concerned with the act of micturition have been adequately described physiologically in animal as well as in human studies, but some of the links in the chain are not known definitely. Thus, the authors do not consider as established physiologically any references to a cerebral or cortical bladder center in the paracentral lobule or to bladder centers in the midbrain and diencephalon. Lesions of these structures may be associated with impaired vesical sphincter function, but it seems obvious that this results because corticospinal pathways or the cortex are affected bilaterally in all these areas. It has long been known that abnormalities of bladder and rectal sphincter control may occur in patients with pathology in both cerebral hemispheres but are not present in unilateral cerebral disease.[1]

Furthermore, it has been stated that afferent fibers from the bladder transmit to the spinal cord sensations of fullness of the bladder as well as touch, temperature, and pain. One of us (S.H.R.) has demonstrated in the human that the bladder mucosa is insensitive to pain and temperature stimuli and does not appreciate touch. Pain is complained of only on pressure stimuli causing distention of the bladder wall.[2]

The clinician attempts to correlate the patient's complaints with his knowledge of disorganized physiology. At times there is a disparity between the presumed pathology and the symptomatology. It has long been the belief that inability to control micturition occurs in patients with bilateral pyramidal tract disease. However, we have observed patients with undoubted bilateral pyramidal tract disease who do not complain of vesical sphincter discomfort. In this group are cases diagnosed amyotrophic lateral sclerosis, combined sclerosis, and syringomyelia.

The literature devotes little if any attention to discussion or explanation of this apparent discrepancy. In general, the matter is ignored. Regarding amyotrophic lateral sclerosis, one textbook states, "In typical cases—sphincter disturbances are absent during the entire course of the disease."[3]

Our studies of these cases have included cystometry. This procedure has revealed some degree of bladder hypotonia, but bladder sphincter control has been intact. A number of these cases have been routinely studied of which three typical cases are herewith described.

Case Reports

Case 1.—R. A., a twenty-seven-year-old female, was admitted to the Jewish Sanitarium and Hospital for Chronic Diseases on April 27, 1949, and expired October 25, 1951. The pertinent objective findings included muscular atrophy and fasciculations in the upper extremities, spastic paralysis of the lower extremities, bilateral Babinski sign with ankle

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Presented, in part, at the 77th Annual Meeting of the American Neurological Association, Atlantic City, New Jersey, May 10, 1952.

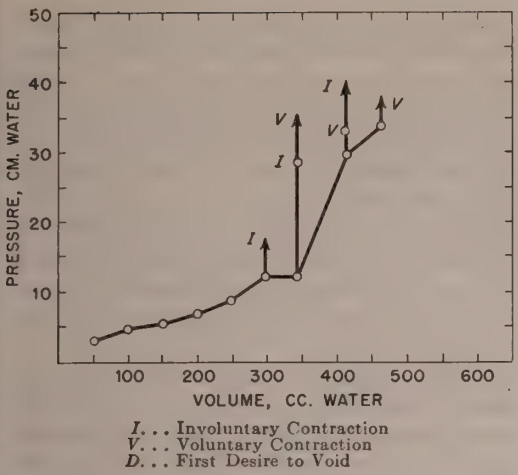

FIG. 1. Case 1—Cystometrogram showing mild hypotonia, maximal voluntary effort at 35 cm. water, maximal involuntary contraction at 40 cm. water, and first desire to void at 5 cm. water with a volume of 20 cc.

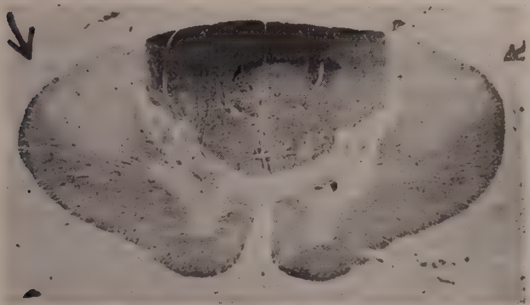

FIG. 2. Case 1—Degeneration of both corticospinal tracts in the lateral columns.

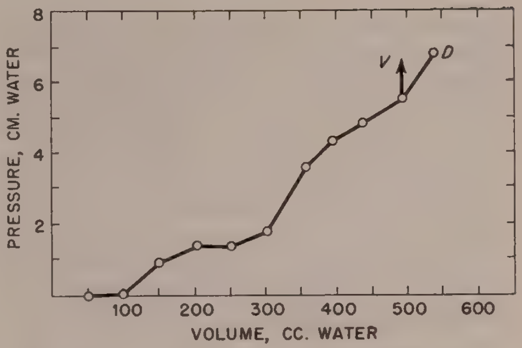

FIG. 3. Case 2—Cystometrogram showing marked hypotonia, increased urinary bladder capacity, and intact sphincter.

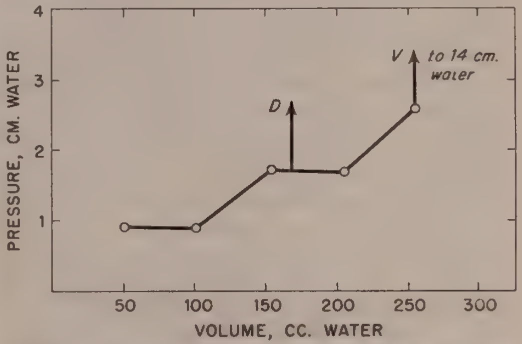

FIG. 4. Case 3—Cystometrogram showing severe hypotonia, intact sphincter, and bladder capacity within normal limits.

clonus, and hyperactive tendon reflexes in all extremities. The abdominal skin reflexes were elicited. Weakness in the legs had been present eleven years, and she had not been able to walk for five years. She denied ever having any difficulty in control of bladder or rectal sphincters.

A cystometrogram revealed "the capacity of the bladder approaches normal limits with some hypotonia of the detrusor muscle. The urinary sphincter was intact at all times" (Fig. 1). Pathologic study of the spinal cord revealed severe degeneration of the anterior horn cells. Weigert-Pal stain revealed degeneration of the white matter, most marked and confined to the posterior portion of the lateral columns and in the anterior columns (Fig. 2). Diagnosis was amyotrophic lateral sclerosis.

Case 2.—R. S., female, age fifty, married with three children, was admitted to the Jewish Sanitarium and Hospital for Chronic Diseases on January 22, 1952. For eight years there had been increasing weakness of both lower extremities so that for two years she had not been able to walk. For several years she had complained of numbness and tingling in all four extremities.

On examination all modalities of sensation were perceived normally. Both lower extremities were paralyzed with spasticity and bilateral Babinski. The patellar tendon reflexes were hyperactive, but the tendoachillis reflexes were not obtained. The neurologic status was otherwise negative. Routine studies revealed no evidence of anemia, lead, or other possible etiologic basis for the primary lateral sclerosis syndrome such as is often seen in combined sclerosis. Of interest, however, was the fact that at no time in the eight years of her illness had there occurred inability to control normally bladder and rectal sphincter functions. Cystometrogram revealed a bladder of increased capacity with evidence of hypotonia and intact urinary sphincter function (Fig. 3).

Case 3.—J. H., a fifty-six-year-old white, male truck driver, was admitted to Kings County Hospital on December 14, 1951. There was a twelve-year history of increasing weakness of both lower extremities. Examination revealed horizontal nystagmus, atrophy and fasciculations of the tongue, atrophy of the shoulder girdle and arm muscles, spastic paralysis of both lower extremities with hyperactive knee and ankle reflexes, and bilateral Babinski. The tendon reflexes in the upper extremities were not elicited, and abdominal skin reflexes were absent. Pain and temperature were not perceived from the first cervical to the tenth thoracic segments on the left and to the first lumbar segment on the right. The diagnosis was syringomyelia. He denied any impairment of bladder or rectal sphincter control. Cystometrogram revealed a bladder of normal capacity with hypotonia. The urinary sphincter was intact (Fig. 4).

Comment

Micturition occurs on completion of a spinal reflex. It is apparent that reflex emptying of the bladder is modified through cerebral influences.[1] These influences have been termed inhibitory in which volition plays an undoubted role, and Denny-Brown and Graeme-Robertson discuss a "release from cerebral control."[4] The pathways over which these influences are conducted have not been definitely determined.

After experiments on the spinal cord of the dog, Mosso and Pellicani[5] (1882) concluded that the motor fibers for the bladder pass by the dorsal columns or by the dorsal part of the lateral columns. Stewart[6] (1899) stimulated the dorsal half of the lateral column of the cord in the cat and obtained contractions of the bladder. Spiegel and Macpherson[7] (1925) noted that destruction of the lateral columns abolished contractions of the bladder in decerebrate cats. Barrington[8] (1933) concluded that the centrifugal and centripetal paths of micturition are situated in the dorsal half of the lateral column near its periphery. Contraction of the bladder and relaxation of the sphincters can be obtained by stimulation of the upper portion of the cortical motor area in the paracentral lobule, and it is probably through this region that voluntary control is exerted over these reflex activities.

Langworthy and Kolb,[9] (1933) believed that the cerebral cortex exercises a control over the reflex activity of the bladder similar to the inhibitory control over the postural reflexes of the skeletal musculature. When this cortical control is removed, hyperreflexia develops and is characterized by urgency, frequency, limited capacity, and a markedly heightened contractility of the bladder in response to rapid filling.

Unilateral cerebral lesions interrupt cortical control over spinal reflex arcs of the skeletal musculature, but unilateral cerebral lesions do not affect cortical control on reflex activity of the bladder. Vital functions like swallowing, chewing, breathing, etc., have reflex arcs with the synapse in the medulla and pons. Their nuclei have a bilateral cerebral representation through the corticobulbar tract which accompanies the pyramidal tract.

Similarly, a bilateral cortical representation is conveyed to the spinal reflex bladder center in the cord over a fiber system corresponding to the corticobulbar tract. These fibers travel with the pyramidal tract.

In corticospinal tract involvement by vascular disease, inflammation, or a neoplastic lesion, there is usually implication of all the fibers in the pathway. The patient develops paralysis, spasticity, hyperreflexia, pathologic reflexes, and loss of superficial reflexes. In disease entities, however, like amyotrophic lateral sclerosis, some fibers are affected, others are not. The involvement of the pathway is not uniform. The difference in the pathologic picture in these two types of disease is of interest. "The bleaching of the direct and crossed pyramidal tracts are conspicuous by their relatively greater involvement through the entire cord to the sacral region but this is never as clear cut as with lesions of a secondary kind, e.g., from cerebral vascular disease."[10]

Because of this selectivity of the fibers, it is not unusual for a patient with amyotrophic lateral sclerosis with spastic paralysis of the lower extremities, hyperreflexia, bilateral Babinski, and ankle clonus to have normal abdominal skin reflexes. It is justifiable to conclude that for each of the functions mediated through the pyramidal tract, there are individual fibers and some are more resistant to interruption of their conductivity than others. Micturition is an old function; voluntary motor power is relatively younger phylogenetically. The newer pyramidal fibers are more susceptible to invasion, whereas the older fibers for bladder sphincter control are involved late, if at all.

Conclusions

1. Disturbed control of bladder and rectal sphincters occurs in pseudobulbar palsy or other clinical syndromes with bilateral pyramidal tract disease.

2. Despite severe bilateral pyramidal tract involvement in a group of patients with amyotrophic lateral sclerosis, syringomyelia, and

primary lateral and combined sclerosis, urinary sphincter control was not impaired. Cystometrogram revealed mild hypotonia of the bladder but intact sphincter functions.

3. The spinal reflex center in the sacral cord is controlled through fibers originating in the cerebral cortex and traveling with the pyramidal tract. The lower motor neuron cells in the cord have a bilateral cerebral representation, and thus sphincter control is not impaired in patients with pathology in one cerebral hemisphere.

4. With corticospinal tract involvement due to vascular disease or other exogenous causes, all the fibers in the tract are implicated, and symptoms resulting from complete interruption of this tract ensue. In amyotrophic lateral sclerosis and similar disorders, some fibers are involved early, others are more resistant. The fibers for cerebral control of micturition are older phylogenetically than the younger pyramidal tract and are involved late in the course of the disease, if at all.

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A New, Simple Curet for Diagnostic Curettage of the Uterus

J. IRVING KUSHNER, M.D., F.A.C.S., AND JOSEPH W. TANDATNICK, M.D., BRONX, NEW YORK

(*From the Pathology and Gynecology Departments of the Bronx Hospital*)

AT THE present time there appears to be no simple uterine curet available by means of which sufficient endometrium for diagnosis can be obtained with certainty every time it is used. The only instrument that approaches this objective is the suction curet. However, the latter entails a somewhat cumbersome technic which militates against its widespread use.

To fulfill the requirement, we have developed an instrument which assures an adequate specimen all the time, yet requires no special skill or any additional equipment. This new curet* consists of a perforated metal plate placed so as to make a floor for the loop at the end of the instrument (Fig. 1). With this floor in position, the loop is converted into a cup that will securely hold the endometrium. The perforations in the floor plate are 1 mm. in diameter and number 20 to 30 to allow for the escape of blood and mucus while still retaining the endometrium.

When it is desired to obtain a small specimen, as for endometrial biopsy, the cup of the curet is long and narrow, measuring approximately 21 by 5 by 4 mm. in its longest diameters (Fig. 1A). The terminal portion of the cup is tapered almost to a point but with a smooth tip. This acts as a dilator and allows the instrument to slip easily into the cervical and uterine canal. Only two or three up-and-down strokes are then required to obtain a sufficient specimen.

If a more extensive curettage is intended, then an oval or pear-shaped cup is used, and the operation requires previous dilatation of the cervix (Fig. 1B). A half dozen or more strokes up and

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* Manufactured by J. Sklar Manufacturing Co., Long Island City, New York.

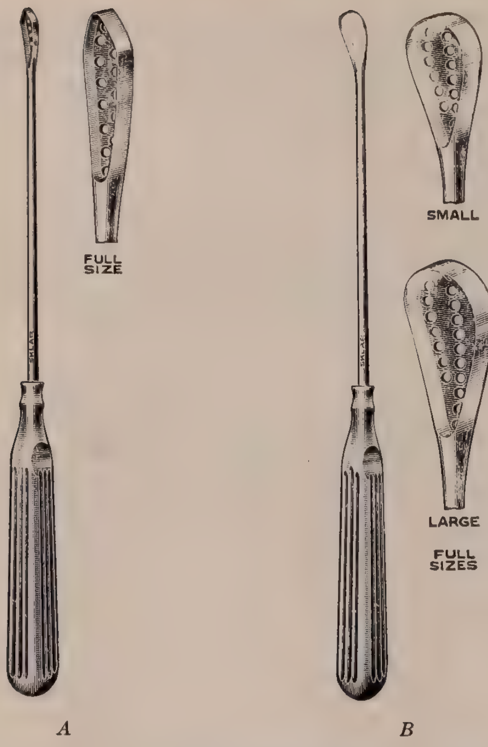

Fig. 1. (A) Curet with long, narrow cup for endometrial biopsy. (B) Curet with oval or pear-shaped cup for more extensive curettage.

down are made, and abundant endometrium is solidly packed into the cup of the curet.

This new curet is made with cups of these two different shapes. One cup is long and narrow and is to be used for endometrial biopsy without previous dilatation of the cervix (Fig. 1A). The cups of the second type are similar to the standard uterine curet, but with the perforated plate added (Fig. 1B). This type is made in two sizes, large and small, and is intended for use after dilatation of the cervix. The cup of the large size measures 23 by 10 by 4 mm. and that of the small size 17 by 8 by 4 mm. in their longest diameters.

When the operation is completed, all that is required is to shake out the tissue in a small jar of formalin. This eliminates the use of gauze or a bag at the entrance of the vagina to catch the endometrium, with the distinct advantage for the pathologist that the tissue is very easily found and immediately fixed.

The instrument intended for endometrial biopsy (with the long narrow cup) can be used with equal ease both in the physican's office and in the hospital operating room. The fact that no other special equipment is required makes the operation of endometrial biopsy so simple that it need not be carried out in the hospital.

There were 58 cases of uterine curettage performed with these instruments, and on all occasions an adequate amount of endometrium was secured for diagnosis. Fifty-three of these cases were done at the Bronx Hospital, New York, from March 7 to September 6, 1952. At least 15 different surgeons used the instruments with equal success on all occasions. Five of the cases were carried out in the office of the senior author as endometrial biopsies, and the curet was satisfactory at all times.

We believe that the provision of so simple an instrument, which assures sufficient endometrium for diagnosis on all occasions, will encourage more widespread practice of endometrial biopsy, especially by the general practitioner in his office.

The instrument is not intended to be used for curettage of the uterus following incomplete abortion or after delivery where portions of placental tissue have been retained.

Summary

A new, simple, special curet has been designed for diagnostic uterine curettage which always assures an adequate specimen for pathologic examination.

1840 Grand Concourse
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We wish to express our appreciation for the advice and help given us by Dr. Joseph Felsen, Director of Laboratories and Research, and to Dr. Abraham J. Fleischer, attending gynecologist. Also, we are indebted to the members of the Obstetrical, Gynecological, and Surgical Departments of the Bronx Hospital for their cooperation in the use of the instrument.

The aggressive invite aggression; the hateful, hate; the loving, love. We reap what we sow.—Dorothy Thompson

Ilotycin (Erythromycin) in the Treatment of A Prime Influenza

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(From the Department of Health and Preventive Medicine, Syracuse University)

A TOTAL of 263 cases of A prime influenza were admitted to the Infirmary of Syracuse University between January 10 and March 7, 1953. The effects of Ilotycin* therapy on this disease were observed and recorded.

Methods and Materials

All subjects had been hospitalized because of temperatures in excess of 100 F., severe symptoms, or both. Prior to the start of Ilotycin observations, 91 cases had been treated with routine analgesic drugs and symptomatic therapy. Controlled observations of Ilotycin therapy were obtained by administering the antibiotic to all patients admitted on one day, then using Ilotycin placebo with all patients admitted on the next day, and continuing such procedure on alternate days.

Ilotycin was administered in the form of coated 100-mg. tablets; two tablets (200 mg.) were given four times daily.

All cases were subjected to standard throat cultures for streptococci and predominating organisms, throat washings for virus isolation, acute and convalescent blood samples for antibody titers, and, in most cases, to blood counts and urinalyses.

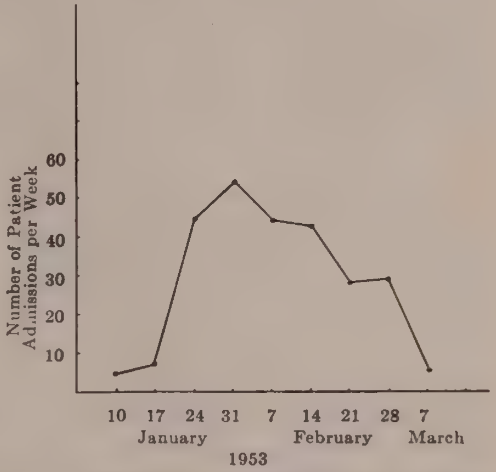

FIG. 1. Distribution of patients by week of admission.

TABLE I.—DISTRIBUTION OF CASES ACCORDING TO AGE AND SEX

Age (Years)	Male	Female	Total
17	3	6	9
18	23	29	52
19	19	24	43
20	30	25	55
21	27	8	35
22	19	9	28
23	17	2	19
24	4	3	7
25	5	1	6
25 and over	6	2	8

Epidemiology

The incidence of influenza had a wide range of distribution with reference to living center, college, age, and sex. Table I shows the distribution of cases in comparison to age and sex.

One hundred thirty-four living centers were represented in the total cases hospitalized. These units usually house from 12 to 30 college students. Eighty-six units furnished only one case each. Five units had multiple cases during a single week, but no subsequent cases developed during the influenza period. Forty-three units had multiple cases over the entire influenza epidemic period. No definite pattern was established. Figure 1 shows the case distribution by weeks. The peak, as indicated, occurred between January 24 and February 25, 1953.

Virology

The virus identification studies in this investigation were performed by Dr. Seymour Kalter.[1] Throat washings were obtained from 263 patients hospitalized with clinical influenza. Of this group 100 paired serum specimens taken two weeks apart were studied.

Virus isolation was obtained from 82 per cent

*** Supplied by Dr. J. W. Smith, Eli Lilly and Company.**

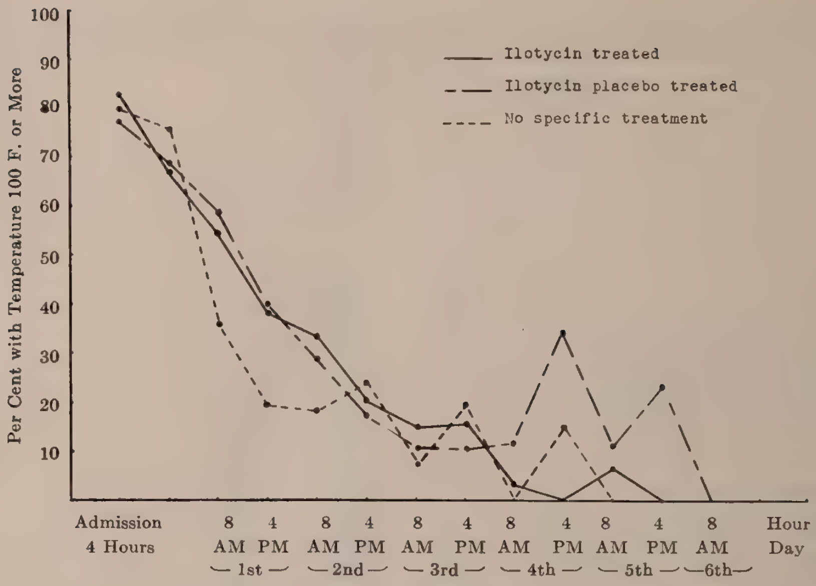

FIG. 2. Temperature responses in cases studied.

TABLE II.—NUMBER OF DAYS OF HOSPITALIZATION

Hospitalization	Untreated Control	Ilotycin Placebo	Ilotycin Treated
1 day			
Number	1	0	0
Per cent	1	0	0
2 days			
Number	28	15	16
Per cent	30	24	17
3 days			
Number	41	21	24
Per cent	43	34	27
4 days			
Number	15	12	22
Per cent	16	19	24
5 days			
Number	3	9	20
Per cent	3	14	22
6 days			
Number	3	3	5
Per cent	3	4	5
7 days			
Number	0	1	2
Per cent	0	1	2
TOTAL	91	61	89

of the throat washings tested. The virus was identified as A prime by complement fixation tests with known hamster antisera. Of 75 paired sera tested by complement fixation tests and hemagglutination tests 91 per cent were positive for influenza virus A prime. A few of the patients also demonstrated a significant antibody increase to influenza virus A.

Results

Attempts to evaluate therapeutic efficacy were based on (1) subjective response of the patient, (2) objective findings, (3) temperature response, and (4) the number of hospital days required to accomplish recovery.

In Table II the numbers of hospital days required for the three groups studied are presented. No significant difference in time requirement was observed.

The percentage of patients with temperatures in excess of 100 F. was used for the standardization of observations; these are presented in Fig. 2 in relation to days of hospitalization. The temperature curves of all three groups are parallel during the first three days of observation. On the fourth hospital day 34 per cent of the Ilotycin placebo treated cases and 16 per cent of the nontreated cases had temperatures in excess of 100 F. as compared with 0 per cent of the Ilotycin treated cases.

Secondary Infections

The possibility of secondary infection as the cause of the second temperature rise in the control groups was considered. Secondary infections, however, were not observed in significant numbers in either the control or treated groups as determined by physical examination, throat culture, or chest x-ray examination. This is in keeping with the previous experience in our clinic with over 1,000 cases of A prime influenza in which the number of secondary bacterial infections has been negligible.

Toxicity

Seven (7.8 per cent) out of 89 cases treated with Ilotycin developed untoward symptoms. All were of the gastrointestinal variety. Three patients developed diarrhea, one after twenty-four hours of treatment (0.8 Gm. Ilotycin) and two after forty-eight hours of treatment (1.6 Gm. Ilotycin). Three patients developed nausea after twenty-four hours of therapy, and one patient developed nausea and vomiting after forty-eight hours of therapy. The antibiotic was discontinued in all such cases, and the gastrointestinal symptoms subsided within twenty-four hours.

Comment

Many well-documented pandemics of influenza with their disastrous effect on world population are well known to every lay person and are firmly impressed on medical students and physicians. The attitudes thus created cause much anticipation anxiety on the part of both physicians and patients. With little rhyme or reason and with this fear as motivation, antibiotics are commonly used in this era with the philosophy that if the antibiotic cannot favorably affect the influenza itself, secondary bacterial invaders will be discouraged.

The effectiveness of Ilotycin in a wide range of bacterial infections and in experimental infections with larger viruses (psittacosis) has been established. Its effect on infections caused by smaller viruses such as influenza has not been established to date.

In a study of the natural history of influenza, a secondary rise in temperature on the fourth or fifth day of the disease has been a common experience. This reaction has been interpreted as a result of tissue breakdown due directly to the influenza virus, to the action of secondary bacterial invaders, or to both. In previous pandemics a large number of fatalities usually occurred forty-eight to seventy-two hours after the second temperature rise. In the current series a second temperature rise occurred in both control groups (34 per cent and 16 per cent) on the fourth hospital day in contrast to 0 per cent in the Ilotycin-treated group. While definite secondary infection as a cause of the second temperature rise could not be established, the results of this study would suggest a beneficial effect from Ilotycin.

Summary and Conclusions

1. A total of 263 cases of A prime influenza were hospitalized and studied between January 10, 1953, and March 7, 1953.
2. A prime influenza virus was isolated from 82 per cent of cases studied.
3. Ninety-one cases were treated with bed rest and analgesics, 61 cases were treated with bed rest and placebo-Ilotycin, and 89 cases were treated with bed rest and Ilotycin, 200 mg. four times a day.
4. Thirty-four per cent of the placebo-Ilotycin treated cases and 16 per cent of the nontreated cases exhibited a second temperature rise on the fourth hospital day. None of the Ilotycin treated cases showed a second temperature rise on the fourth hospital day.
5. No significant secondary infections were demonstrated in any of the three groups.
6. Gastrointestinal irritation was observed in seven patients (7.8 per cent) receiving Ilotycin therapy.

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Ignorance is a blank sheet on which we may write, but error is a scribbled one from which we must first erase.—C. C. COLTON

CLINICOPATHOLOGIC CONFERENCE

STATE UNIVERSITY OF NEW YORK COLLEGE OF MEDICINE AT NEW YORK CITY
AND THE MEDICAL AND PATHOLOGICAL SERVICES, UNIVERSITY DIVISION,
KINGS COUNTY HOSPITAL, BROOKLYN, NEW YORK

Conducted by WILLIAM DOCK, M.D.

MAY 21, 1953

Case History

M. A. was a thirty-four-year-old, Negro housewife who was admitted to the Kings County Hospital on February 22, 1953, because of marked weakness of the upper extremities of two days duration and progressive paralysis of the lower extremities of seven weeks duration.

Present Illness.—The patient was in fairly good health until December 31, 1952, when she noticed the onset of stiffness in all extremities, especially the legs, after she returned home from a long bus trip. The next day, the patient developed a low-grade fever, chilly sensations, generalized malaise, polyarthralgia, and marked stiffness and weakness in both legs. The muscular weakness in the legs gradually progressed until four days later the patient was no longer able to get out of bed or stand on her feet. She was still able to move her legs slightly in bed, and she had no difficulty in voiding or moving her bowels.

Since then the patient had remained bedridden and gradually lost all muscle function in her legs. She also had generalized muscular weakness and persistent aches in the shoulders, hands, and knees. A physician was called to see the patient at home; hospitalization was advised, but the patient was reluctant to go to the hospital.

In the last week in January, 1953, the patient was admitted to another hospital for evaluation. Laboratory studies, including urinalysis, spinal puncture, sickle cell preparation, blood chemistries, serology, and x-rays of the chest, abdomen, hands, and knees, were reported as negative. Other laboratory work revealed the following: hemoglobin less than 50 per cent, red blood cells 2,900,000, white blood cells 8,900 with a normal differential, cephalin flocculation 3 plus, total protein 7.1, albumin-globulin ratio 3.1:4.0. The patient was signed out of the hospital after one week by her husband because she wanted to go home. No definite diagnosis was established.

After the patient returned home, she had further progression of her generalized weakness, and her legs began to feel numb. In the evening, two days prior to admission, the patient suddenly lost all sensation in her legs and developed marked weakness and numbness in both arms. She was seen by a physician a short time later, and immediate hospitalization was advised for treatment of her "severe anemia."

Family History.—Mother and father were living and well. One sister had died of "arthritis." There was no family history of any other medical illnesses.

Past History.—The patient had always been in good health except for a chronic anemia of several years duration. She had had no major illnesses or operations. Approximately five years earlier, she had been told that she had a thyroid goiter which had never given her any difficulty. There had been no pregnancies during ten years of marriage.

Review of Symptoms.—The patient had noticed very dark stools in the past two months, but there had been no other gastrointestinal symptoms. Menses had been regular until the last menstrual period which began February 8, 1953, and continued with spotting and passage of small blood clots.

Physical Examination on Admission.—Examination revealed a poorly nourished, pale, emaciated, Negro female who appeared chronically ill and very weak. She was lying flat in bed, in no acute distress, mentally alert, and cooperative. Temperature was 100.2 F., pulse 120, respirations 16, and blood pressure 110/56.

The head was normal, the skin dry and warm. Sclerae were normal, conjunctivae very pale, pupils equal and reacted to light and accommodation. **Fundoscopic examination** revealed pale retinas, normal arteriovenous ratio, and no pathologic findings. The mucosa of the nose was pale and edematous. The ears were normal. The mouth showed poor oral hygiene with several missing and decayed teeth; the tongue protruded in the midline and appeared pale. The pharynx was injected.

There was moderate rigidity of the neck but no pain on passive flexion. However, the patient was unable to lift her head off the pillow. A 3 by 3-cm. thyroid nodule, which felt firm and moved on swallowing, was felt in the suprasternal notch. The neck veins were flat with no masses.

There was slight dullness on percussion over the right lower lung field posteriorly; fremitus was normal. Auscultation revealed loud rhonchi throughout both lung fields and no rales.

The heart showed regular sinus rhythm. Point of maximal impulse was located in the fifth left interspace just to the right of the midclavicular line and easily palpable. The first mitral sound was greater than the second, and the second aortic sound was greater than the second pulmonic sound. Heart sounds were of good quality. A grade II, high pitched, systolic murmur was heard over the precordium and loudest just to the left of the sternum in the third interspace.

The abdomen was slightly distended and tympanitic over its entire area. There were no palpable organs or masses, and bowel sounds were hypoactive. Marital introitus and a small amount of blood in the vagina were visible on pelvic examination. The cervix was small and firm; the uterus was anteflexed and of normal size. No adnexal masses were felt.

Rectal examination was normal. Axillary lymph nodes were bilateral, firm, discrete, and freely movable. The joints were normal.

Neurologic Examination.—The cranial nerves were intact.

There was diminished to absent perception of pinprick over the lower extremities and the trunk up to the sensory level of the second thoracic anteriorly and posteriorly. Touch sensation was intact. Vibratory sensation was slightly impaired in the lower extremities. Position sense was absent in both lower extremities.

There was marked atrophy of all muscle groups, complete paresis of lower extremities, and marked weakness of upper extremities. There were no tremors, spasm, or fasciculations.

All deep tendon reflexes, except the biceps bilaterally, were absent. Abdominals were absent, as were Babinski signs.

There was no difficulty in voiding, and rectal sphincter tonus was normal.

Laboratory Findings on Admission.—Hemoglobin was 3.5 Gm.; red blood cells 3,000,000; white blood cells 26,000 with a differential count of polymorphonuclears 92 per cent, lymphocytes 5 per cent, and monocytes 3 per cent. The red cells were markedly hypochromic and normocytic to microcytic; there was marked anisocytosis, and poikilocytosis and no target or sickle cells were present. Urine was cloudy, yellow, and acid; specific gravity 1.011; negative for sugar; trace of albumin; urobilinogen 1:80. Microscopic examination showed many crystals and no cells. Sickle cell preparation was negative. Bleeding and clotting times were normal.

Additional Laboratory Findings.—Blood serology was negative. Blood urea nitrogen was 25, blood sugar 123, total protein 6.5, albumin-globulin ratio 2.4:4.1; cephalin flocculation 3 plus. There was no free hydrochloric acid after histamine on gastric analysis. Urine was negative for porphyrins and Bence Jones proteins. Six blood cultures were all negative.

X-ray Examination.—Hypertensive configuration of cardiac silhouette with left ventricular preponderance was visible on chest x-ray. There was no evidence of pulmonary or pleural pathology. The abdomen was negative. X-ray of the vertebral column showed spina bifida at seventh cervical and twelfth dorsal levels. Long bone survey revealed small areas of rarefaction in the cortices of both humeri.

Course in Hospital.—The patient was admitted to the medical service because of her severe anemia, and an emergency neurosurgical consultation was obtained. It was felt at this time that the patient had a cervical cord lesion which should be investigated after the patient's severe anemia was corrected. During the first twenty-four hours in the hospital the patient was given 1,500 cc. of packed red cells, and her hemoglobin rose to 8.5 Gm. Following the transfusion the patient's generalized weakness and neurologic findings remained unchanged. Throughout her entire hospitalization the patient ran a febrile course with temperatures ranging from 100 to 103 F. daily. Blood cultures were taken daily for six days.

On February 24 the patient was transferred to the neurosurgical service. A lumbar puncture at the level of the third and fourth lumbar vertebrae was performed, and the Queckenstedt test demonstrated a rapid rise and fall of pressure with no evidence of a block. A myelogram was then done, and there was "no evidence of obstruction to the flow of the column from the third lumbar to the first cervical." Spinal fluid was crystal clear with cell count of 16 red blood cells. Pandy trace, serology negative, total protein 16, chlorides 700, and sugar 78.

On February 25 the patient developed urinary retention. A Foley catheter was passed, and tidal drainage was started. Abdominal distention was relieved by daily Harris irrigations. She was given 500 cc. of whole blood; hemoglobin rose to 10.5 Gm. On February 27 the patient was on a liquid diet and intravenous fluids. White blood cells were 12,200 with a normal differential, urinalysis was negative. The paraplegia, generalized weakness, and fever persisted, and the patient developed decubitus ulcers on the buttocks on March 4.

Findings on neurologic examination on March 5 remained essentially unchanged. Hemoglobin was 10 Gm., white blood cells 36,000 with differential of polymorphonuclears 96, lymphocytes 1, and monocytes 3. Patient was started on March 12 on aqueous penicillin, 300,000 units every three hours, and streptomycin, 0.5 Gm. every six hours for five days.

Gynecologic consultation and examination was called for on March 16. The impression was that there was no gynecologic disease. Dilatation and curettage was done. Pathology report of the endometrial biopsy noted cystic polypoid hyperplastic endometrium; normal cervical tissue was reported from the cervical biopsy.

On March 17 the patient's condition deteriorated; she was not eating well, and the decubitus ulcers were progressing.

Hematology consultation was held on March 18. Peripheral blood smear showed 94 polymorphonuclears, 4 lymphocytes, and 2 monocytes. Bone marrow smears showed (1) marked myeloid hyperplasia with shift to left in all granulocyte elements, (2) plasmocytosis, (3) increased megakaryocytes, and (4) increased reticulum cells.

On March 23 the patient became semicomatose and only responded slightly to painful stimuli. Respirations were slow and labored. Emergency chemistries revealed carbon dioxide combining power 14 volumes per cent, blood urea nitrogen 135, and creatinine 4.6. On March 24 the patient became deeply comatose and expired quietly.

Discussion

Dr. William Dock: Dr. Watson will now discuss the case.

Dr. R. Janet Watson: The protocol today concerns a thirty-four-year-old Negro housewife who died after an illness of three months characterized by fever and a spinal cord syndrome. I saw her twice when she was alive on the wards and was entirely uncertain as to what her diagnosis was. Now after reading the protocol, I am still very uncertain as to what she had, but I might orient you as to my final conclusions at the beginning. It now seems to me that the most likely diagnosis is periarteritis nodosa, although I cannot exclude a diffuse myelitis of the spinal cord with a terminal hydronephrosis and uremia.

To go back to the protocol, she was admitted because of marked weakness of the upper extremities of two days duration and progressive paralysis of the lower extemities of almost two months duration. She noted the onset of stiffness in all extremities, especially the legs, after she returned home from a long bus trip. I cannot ascribe any etiologic relationship to the bus trip. The next day the patient developed a low-grade fever, chilly sensations, malaise, polyarthralgia, and marked stiffness and weakness in both legs. One wonders here whether with the fever there is an infection and whether the polyarthralgia is a secondary reaction to the paralysis or whether there is joint or even muscle involvement. The muscle weakness in the legs progressed until within four days she was no longer able to stand up or to get out of bed, and from then on she was bedridden for most of the time for the duration of her life. At that time she had no difficulty with bowel function or urinary function. She gradually lost all muscle function in her legs and had generalized muscle weakness with persistent aches in the shoulders, knees, and hands. She was reluctant to go to the hospital, but in the last week of January she was admitted to another hospital for study.

In that hospital the entire workup was negative with the exception of the discovery of a low hemoglobin (50 per cent), a low red count, and a normal white count with a normal differential. The cephalin flocculation was 3 plus, and the globulin was slightly elevated to 4 Gm. per cent.

She was taken out of the hospital one week later by her husband without a definite diagnosis. At home she continued to show progression of this weakness and paralysis and then developed numbness in her legs. Two days before the admission to Kings County Hospital she lost all sensation in her legs and then developed involvement of her arms with weakness and numbness. She was seen by a physician who advised hospitalization because of her severe anemia.

In her past family history the only finding was that one sister died of arthritis. In her past history she was said to have a chronic anemia of several years duration. No clues are mentioned as to the cause of this anemia. Five years before she was told she had a thyroid goiter, but she had had no symptoms relative to that. Then in the review of symptoms, she was said to have had dark stools for the past two months. The menses had been regular with the exception of the last period which was prolonged with some spotting and some small blood clots.

In the physical examination on admission she was pale and had lost weight and appeared very weak and chronically ill. Her temperature was 100.2 F. She had a tachycardia of 120 and normal respirations. Her blood pressure was 110/56, the low diastolic pressure being a reflection of the anemia (3.5 Gm. per cent) that is mentioned later. As to the other findings, there is nothing of any significance till we come to the neck, where it is mentioned that there was moderate rigidity and also a thyroid nodule, 3 by 3-cm. in diameter, in the suprasternal notch. The lungs showed nothing of significance other than some loud rhonchi.

In examination of the heart there was a grade II, high pitched, systolic murmur heard over the precordium, loudest just to the left of the sternum in the third interspace. This point with the spinal cord lesion and fever makes one wonder about the possibility of subacute bacterial endocarditis with emboli to the spinal cord, although there is no story of past rheumatic heart disease. When I first saw her, she had been transfused so that her hemoglobin had risen to 10 Gm. per cent. The murmur was completely inaudible, not only to myself but to Dr. Metz and several others of the house staff at this time. Hence the original murmur presumably was hemic. This makes subacute bacterial endocarditis then quite unlikely.

The examination of the abdomen showed nothing of significance. The only other positive finding mentioned here was that there were bilateral axillary lymph nodes, firm, discrete, and freely movable. I might add that they were only about 1 cm. in diameter and did not seem particularly significant. They certainly were not large enough to biopsy.

The neurologic examination is of course of the greatest importance here. There was no involvement of the cranial nerves. Sensation was diminished over the lower extemities and the trunk up to a sensory level of second thoracic anteriorly and posteriorly with intact touch sensation. Vibratory sensation was only slightly impaired in the lower extremities. The motor function showed marked atrophy of all muscle groups with complete paresis of the lower extremities and marked weakness of the upper extremities; there were no tremors, spasm, or fasciculations. The deep tendon reflexes were absent with the exception of the biceps, and the superficial reflexes were also absent. There was no Babinski. The bladder and rectum showed no physiologic abnormalities. In summary, we have a neurologic examination that shows essentially paresis and atrophy of all of the extremities, especially of the lower extremities, with a sensory level, and I will go back to this later after we hear about the neurologic opinion.

The laboratory work on admission showed a 3.5 Gm. hemoglobin with 3,000,000 red count, giving a very low color index. In the blood smear the red cells were markedly hypochromic and microcytic. All of this indicates iron deficiency. I cannot relate this anemia to the present illness, and I feel that it is probably the iron deficiency anemia that is common in women of this age group (especially in this vicinity where the nutritional intake may also be poor) and is partly the result of menstrual blood loss over a period of years. Whether there was also a mild superimposed anemia secondary to the illness cannot be determined of course. Her white count was very high (26,000) with 92 per cent polymorphonuclears. The leukocytosis is not seen in iron deficiency anemia and is presumably secondary to the disease. It points, of course, to an infection. The sickling preparation was negative so that we don't have to concern ourselves with the problem of sickle cell anemia. The urine showed a specific gravity of 1.011 with a trace of albumin and a urobilinogen of 1:80. Her reticulocytes were normal, I know. Since she had no other evidence of hemolytic anemia, I assume this elevated urobilinogen probably means liver damage rather than hemolysis. (The urobilinogen is low in iron deficiency anemias.)

I might mention two things that were omitted from the protocol. The sedimentation rate was very rapid, as one would expect; 24 mm. in twenty minutes. The stool was negative for blood so what the dark stools meant two months before admission will not be known. At least the stool did not seem to be a source of blood loss.

The serology was negative. The blood urea nitrogen was normal, as was the sugar, and again we have the globulin, slightly elevated, of 4 Gm. per cent and the cephalin flocculation of 3 plus. These can be reflections of liver involvement, or they may be the nonspecific reaction to a febrile illness. (During the patient's stay in the hospital she ran a temperature of 103 F. almost every day.) It is not uncommon in a variety of febrile illnesses to have an elevated globulin and positive cephalin flocculation.

The urine was negative for porphyrins, which is an important point; since the paralysis started in the lower legs and went up to the arms, there is a question whether this is a form of Landry's paralysis. Then one always should think of acute porphyria as a possible cause. The fact that the urine was negative for porphyrins I think excludes this diagnosis. Also porphyrins will give a false positive for urobilinogen of 1:200. Hence the urobilinogen titer here is not in the usual range for porphyrins in cases of acute porphyria.

Then there was no Bence Jones protein, and six blood cultures were all negative. Of course, with the persistent fever and with the murmur present on admission it was very important to be sure whether one was dealing with subacute bacterial endocarditis since that is a treatable disease, and I think that these negative blood cultures, along with the fact that the murmurs disappeared after the hemoglobin went up to normal, again make subacute bacterial endocarditis highly unlikely.

In the x-ray of the chest it is mentioned that she had a left ventricular preponderance. We can ignore the fact that it is said to be a hypertensive configuration. She did not have hypertension. This is quite compatible with the enlarged heart of anemia. There was no evidence of any pulmonary pathology. The only positive findings on x-ray were some small areas of rarefaction in the cortices of both humeri, which I wonder if we could look at now. As I remember, they seemed rather insignificant.

Doctor: This is the chest (film), Dr. Watson. There is a slightly enlarged left ventricle, probably on the basis of the anemia rather than hypertension. Shall I go through all of them?

Dr. Watson: Since they were all negative, let us just see the humeri.

Same Doctor: This shows a spina bifida, which was not reported. I don't know who interpreted the films. They don't go along with any particular cystic changes or any unusual rarefactions in the cortices. I would be more likely to say that these were perfectly normal long bones. I found nothing grossly abnormal with any of the osseous structures visualized. As far as I am concerned, the x-rays are normal.

Dr. Watson: Fine. Then we don't have to consider that in the differential diagnosis.

While in the hospital, the patient was immediately seen by the neurosurgical service. They felt that there was a cervical cord lesion present. Their lumbar puncture showed nothing of any significance: crystal clear spinal fluid. The 16 red cells could have caused the trace of Pandy. The total protein was 16 mg. per cent, which is a low normal; there was a negative serology. So now it looks as if the Guillain-Barré syndrome is unlikely. This diagnosis must be seriously considered with somebody who is febrile, with a type of ascending Landry's paralysis, and who also has sensory changes with a loss of the deep tendon reflexes. But in that syndrome the Pandy is strongly positive, and the total protein is high with a normal cell count. So it is evident that the spinal fluid findings do not uphold the diagnosis of Guillain-Barré syndrome.

The Queckenstedt test showed no evidence of block, and the myelogram showed no obstruction to flow of the column from the third lumbar to the first cervical, so it did not seem likely that there was a tumor pressing on the cord in the cervical region giving rise to all of these neurologic symptoms.

On February 25, about a month after admission, the patient developed urinary retention and from then on had tidal drainage. One urine analysis done about that time was negative. The white count at one time fell to 12,000 per cu. mm. The paralysis persisted. An important point is that during the one month of hospital stay the patient ran a temperature from 100 to 103 F. daily, reaching 103 F. almost every day, one of the prominent features of her hospital course. Another white count on March 5 showed 36,000 cells per cu. mm., again with 96 per cent polymorphonuclears. On the whole she had a very persistent polymorphonuclear leukocytosis.

She was finally given penicillin and streptomycin. She was obviously dying, and one did not want to omit a chance to treat subacute bacterial endocarditis, even though that seemed highly unlikely. This therapy was given during the last two weeks of the patient's life. There was no response, so again it seems that this was not an infection that would respond to either penicillin or streptomycin. The thought of tuberculosis would again seem unlikely because of the absence of response to streptomycin. The tuberculin tests are not mentioned here, but they were done and were negative up to 1:1,000.

As far as tuberculosis goes, the common involvement of course is a meningitis, which the patient did not have. It would not cause a spinal lesion unless there was a cold abscess, and that should have shown up on the x-ray. It would seem, then, that tuberculosis could not cause this picture.

The gynecologic consultation added nothing to the diagnosis.

The patient continued to go downhill. The hematology consultation verified the white blood count differential reported by the house staff. The bone marrow showed a nonspecific type of marked myeloid hyperplasia. There were a few areas of small collections of plasma cells, but the plasma cell differential did not exceed 5 per cent, and there were no abnormal plasma cells. Certainly it would not seem to be multiple myeloma. A multiple myeloma lesion in the vertebra should have shown up by x-ray.

The patient finally became semicomatose. Then an emergency chemistry came out with the surprise (in view of the rather negative urines previously) of a carbon dioxide combining power of 14 volumes per cent, a blood urea nitrogen of 135 mg. per cent, and a creatinine of 4.6 mg. per cent. The patient died in uremic coma the day after the chemistries were taken.

The problem then arises as to whether she had a kidney lesion from the beginning or whether, since this was a month after she had a "cord" bladder, she had developed kidney insufficiency from pyelonephritis.

I think that I will now mention a few other diseases that I have not already excluded in commenting on this protocol. The thyroid nodule seemed to me an adenoma; a carcinoma of the thyroid with metastases would not be expected to cause this type of picture.

One thinks of lupus erythematosus in a lady of this age running a fever, but I have never seen or read of cases in which the white count persistently was elevated to this degree, nor am I aware of any cord lesions in that syndrome.

When we come to the lymphoma group, Hodgkin's sarcoma is the one lymphoma that may occasionally infiltrate the spinal cord diffusely, and on very rare occasions this manifestation of Hodgkin's sarcoma has resulted in death before the occurrence of the other generalized manifestations, such as generalized adenopathy and enlarged liver and spleen. Of course, the bone marrow in Hodgkin's will show the type of myeloid hyperplasia that was mentioned, but again that is very nonspecific reaction. I feel that Hodgkin's sarcoma is a possibility that cannot be excluded with certainty, but statistically it would be unlikely to have such extensive involvement of the spinal cord without other organ involvement.

Then we come to other types of spinal cord lesions that might produce this picture. Syringomyelia starts with involvement of the upper extremities and goes down to the lower extremities (which was not the case here), and it is not characterized by high fever unless there is secondary infection. I think the important thing is that this lady was running fever from the very beginning in the hospital, and there was no evidence of any infection whatever, either of the urinary tract or in the lungs, so we would have to attribute the fever to the primary disease itself. For that reason multiple sclerosis would be automatically excluded. In that disease usually one has increased rather than absent reflexes.

We come back then to the question of whether this is periarteritis nodosa or acute myelitis of the cord.

Acute myelitis appears to be a poorly defined entity that is secondary to a variety of diseases, such as acute respiratory infections, measles, and the like. We have no such story here. In its idiopathic variety it is thought to be a virus disease. It would be expected to cause some change in the spinal fluid, and there was none here. None of the cases reported have run such a high fever or have had such a marked degree of leukocytosis. Otherwise, possibly there could have been diffuse lesions of the cord of this idiopathic variety from the cervical level on down. As I said, in that case one would explain the terminal uremia as due to a secondary infection of the kidney, resulting from a "cord" bladder.

Then if we go back to periarteritis nodosa, kidney involvement is the most common manifestation of the disease, and liver involvement is next. There is some evidence that the patient might have had liver involvement with the elevated urobilinogen, cephalin flocculation, and globulin. The patient might have muscle involvement because of aches and pains in the muscles and peripheral nerve involvement, and all of these run high on the list in periarteritis and show multiple organ involvement. Also the great majority of cases run a high fever with a high degree of leukocytosis, usually neutrophilic. Eosinophilia is reported in a third of the cases, but the third of the cases in which it is reported have pulmonary involvement such as asthma or skin manifestations. Since this patient had neither, we would not expect eosinophilia. Arthritis and sensory involvement are seen in about a third of the cases, and a third die in terminal uremia. Spinal cord lesions are very low on the list, at 2 per cent. If this is periarteritis nodosa, it is a very unusual case in which there would be lesions of the blood vessels in the spinal cord as the main involvement giving rise to the death of this patient. In periarteritis nodosa the majority of the cases of the acute form terminate in less than four months after the onset of the illness. This patient died three months after the onset of the first symptom. Lesions of vessels in the spinal cord would not be expected to give rise to any change in the spinal fluid, nor would they give rise to any evidence of tumor or block.

I feel that it is still very difficult to be at all certain about a diagnosis in this case. I am prepared to have some unusual syndrome dug up by the pathology department, but my primary diagnosis is periarteritis nodosa, although I feel I cannot completely exclude acute myelitis with secondary kidney involvement from the spinal cord lesion and cannot completely exclude Hodgkin's sarcoma.

Dr. Dock: Thank you, Dr. Watson!

Certainly it is an extraordinary case of a thirty-four-year-old woman with two bouts of trouble, the first involving her lower extremities, the second some weeks later involving her upper extremities, running a fever for three months before her death, running a high white count over 20,000 before she had any evidence of lung or kidney damage. The possibility of periarteritis and the possibility of Hodgkin's disease on these grounds alone would be the ones with the greatest concern to us. Theoretically she might have had two bouts of acute porphyria and be entirely free of porphyria when she entered the hospital, but that would not account for fever and leukocytosis, so that porphyria, if she had been afebrile without leukocytosis, could still be entertained in the absence of demonstrable porphyria several weeks after the last bout of paralysis. How many here think this is periarteritis nodosa, agree with Dr. Watson? (Several so indicated.)

How many think it is Hodgkin's? A few more. How many have some entirely different diagnosis they would like to advance?

Dr. Grace: I am not going to advance this with any confidence on my part, but some years ago I did see a young girl, younger than this one, who had gotten into difficulties quite similar to this after vaccination for smallpox from the vaccine. There had been an epidemic. She was far away from the tropical country at this time, and this girl had a smallpox vaccination, had fever, progressive ascending paralysis of this kind. I am wondering if this woman had a vaccination for smallpox or for recurrent herpes simplex as is done occasionally. That was the thought.

Dr. Dock: Some form of virus myelitis would not be likely to give fever for such a long time without kidney involvement. This patient had no difficulty with the sphincters until the myelography. This is not the first case where myelitis had spared the sphincters. The sphincters developed complete loss of control after myelography. If there had been a cord tumor and myelography had not been done, we would feel very badly. On the other hand, the outcome might have been different without the myelography and if she had not developed decubital ulcers after the myelography. Sometimes that apparently is just the shove it takes with a critical cord lesion to push the patient from the point where he doesn't have trophic lesions and is able to control the bladder to the point where he no longer can control the sphincters. It seems likely that death in this case was accelerated by the loss of sphincter control and the development of decubitus ulcers.

We will find out now from the pathologist what the lesions were which underlay this lady's illness, and we can probably learn something from them as to whether the myelography produced any histologic evidence of meningeal and other irritation.

Pathologic Report

Dr. Gherardi: Dr. Sullivan will present the gross findings.

Dr. Sullivan: The body showed evidence of emaciation and weighed approximately 105 pounds. There were multiple small, irregular ulcerations on the medial aspects of the knees and ankles and several large irregularly outlined decubiti on the buttocks, the largest measuring 5 by 10 cm.

The salient findings in the internal organs were found in the kidneys, of which the right weighed 300 Gm. and the left 250 Gm. Both were somewhat enlarged and appeared swollen. The capsules stripped with ease, revealing a relatively smooth surface with diffusely scattered, irregular, but sharply outlined yellowish areas in a red depressed background. The background redness was more accentuated in a narrow zone immediately bordering the edges of yellow fields. The yellow areas were reflected in the parenchyma seen on cut section and were broader along the kidney surface, tending to become narrower as one approached the hilum. The yellow tissue was opaque and, although involving mainly the cortex, also extended appreciably into the medullary portions. Some of the interlobular vessels appeared slightly enlarged and were filled with a purplish material.

The heart was of normal size, shape, and dimensions and weighed 250 Gm. The valve leaflets were intact and showed no vegetations, and none of the chambers contained thrombotic material. The coronary arteries were patent throughout and revealed only slight thickening of their walls.

The lungs were congested in both lower lobes and weighed 500 and 350 Gm., respectively. The liver weighed 1,200 Gm., the spleen 400 Gm. The capsule of the latter was slightly thickened, and the splenic parenchyma was red brown and firm. The thyroid was bilaterally enlarged, cystic, and weighed 50 Gm. The only abnormalities noted in the genital organs were a small polyp on the posterior wall of the uterine cavity, of which the endometrium was slightly and irregularly hemorrhagic, and a severe bluish-black congestion involving approximately three quarters of the portio vaginalis of the cervix.

In the central nervous system the most striking changes were noted in the cervical and upper thoracic segment of the spinal cord. In this area the cord was small and boggy, and gross serial sections revealed that the softening was due to a malacia of the substance, most marked centrally and ventrally, involving both white and gray matter. The gray matter of the thoracic portion displayed a brownish to tan discoloration. The cerebrum was intact except for some atrophy of the gyri with concomitant diffuse widening of the sulci. None of the cerebral vessels showed gross abnormalities. The rest of the organs were within normal limits.

Dr. Gherardi: The lesion underlying these gross changes was seen histologically. This consisted of a markedly widespread and focal, acute, necrotizing arteritis involving all coats. The adventitia was markedly widened with infiltration by inflammatory cells, most of which were small mononuclear cells, histiocytes, and polymorphonuclear leukocytes. No eosinophils were noted. There was also increased fibrosis. The intima showed a rather active fibroplastic proliferation, very probably in response to the changes which were evident in the media.

These changes consisted of a fibrinoid degeneration which was most marked in the inner portion of the muscle coat but which also involved the entire coat in some of the smaller vessels. The muscle fibers showed degenerative changes, hyaline as well as fibrinoid in character. The intimal proliferation in some arteries became lost in what appeared to be recanalized old thrombus.

This necrotizing lesion was an eccentric one in some of the arteries, and in the area where it was most marked, one saw the greatest degree of infiltration by leukocytes and mononuclear cells.

There was evidence of old arteritic lesions. In these older lesions the acute exudative phenomena were generally minimal, as indicated by the absence of polymorphonuclear leukocytes and fibrinoid change. Some of these lesions were quite acute, as in the kidney, and involved smaller vessels. Where they were so, one noted a prominent cuff of inflammatory cells, mainly in the outer coats but also in the muscularis.

Some of the arteries had aneurysmal dilatations, most marked where the greatest amount of necrosis of the wall was present. These changes were seen both in the larger arteries as well as in the smaller arteries of the kidney and were responsible for the formation of the infarcts.

Some of the smaller branches of the coronary arteries also showed these changes. The lesions seemed to be limited to vessels mainly in the pericardium. They apparently did not involve the underlying myocardium, which showed nothing more than a very mild reactive interstitial myocarditis. One large artery, about the size of the iliac, was modified in the process and was completely filled with a thrombus undergoing liquefactive changes, strongly suggestive of sepsis.

These arterial changes occurred not only in the heart but also in the bronchial arteries. They occurred in the liver, in the portal arteries, producing in the parenchyma some degree of focal, ill-defined atrophy, but nothing more. They occurred in the spleen where there was one moderately large, not too old, infarct. They were seen in the retroperitoneal tissues around the adrenal, of which the parenchyma was partly destroyed by quite a few small, recent, and slightly older infarcts.

This thrombotic lesion was also present in the anterior spinal artery and extended along the branches of the anterior central artery into the substance of the cord. Corresponding to this thrombotic lesion, one noted a malacia which involved mainly the central and ventral portions of both white and gray matter.

In summary, we have an acute necrotizing arteritis of the polyarteritis nodosa type involving the kidney, liver, spleen, heart, lungs, adrenal, retroperitoneal tissues, and spinal cord. As part of the disease picture, there was infarction of the kidneys, of the spleen, of the adrenals, of the spinal cord; there were old hemorrhages of the cerebellum, cerebrum, and basal ganglia; thrombosis of the pulmonary arteries, old and recent; thrombosis of a large artery, presumably the iliac, and terminally a very minimal acute bronchopneumonia.

Secondarily there were a nodular goiter, an endometrial polyp, embryonic rests in the retroperitoneal lymph nodes, and an acute cervicitis with severe congestion. I could find no periarteritic lesion to account for the latter, but that might have been the underlying cause.

The cause of death was acute, necrotizing polyarteritis.

Summary

Dr. Dock: Dr. Gherardi has shown us that urinary obstructive troubles had not involved the kidneys and so did not contribute to the death. The management of the bladder was carried out effectively, and no infection occurred either in the bladder or in the urinary tract, so this is a good example of managing a cord bladder for a month without getting ascending urinary tract infection. His first slide also showed this curious cortical necrosis which is not the standard variety. It looked from the pictures as though it was not cortical necrosis but made it more likely periarteritis and ruled out the other alternative diagnosis that we could entertain, namely, Hodgkin's disease.

Now to go back to the beginning. This case obviously ended up badly right from the beginning. When the patient entered, she already had irreversible cord lesion. There is no question. We will never know whether her myelography caused further trouble.

This is the third case of myelitis I have seen where the bladder was all right until myelography was done and immediately, as in this case, within twenty-four hours, all control of sphincters was lost. I am worried about this. If I see somebody else who has had four weeks of fever and has a transverse myelitis and a leukocyte count of 26,000, which I cannot account for either by urinary tract or pulmonary infection, my first thought will be to give the patient some cortisone to shrink the lesion in the cord if it is a lymphoma. Thus you might affect the fever, whether it was due to lymphoma or due to periarteritis. Faced with this problem again, rather than investigate the cord too seriously, I would like to see what the effect was of this highly nonspecific therapy which works in Hodgkin's and works in periarteritis nodosa. In neither case does it cure the disease. It controls certain features of the disease. I don't believe giving this patient cortisone would have prevented her renal lesions from developing. Whether it would have changed the time when uremia set in, we cannot tell.

Obviously in a patient like this antibiotic therapy right from the start had nothing to offer. We had no positive blood cultures. We had nothing to prove this, a pyogenic infection, although there was a very marked leukocytosis, and the x-rays showed almost immediately that we were not dealing with tuberculosis of the cervical spine, which in a woman of her age, getting into trouble on a bus ride, would have been a very attractive initial guess. It would not have accounted for the very high white count without urinary tract infection. So knowing there was no spinal column lesion, I think antibiotics probably should not have been given except for the development of urinary tract infection and perhaps for the control of infection around the decubital ulcers.

In this connection, Dr. Austrian, what do you think of giving antibiotics for decubitus ulcer? Do you think it is better to treat them locally with thyrotrycin or gramicidin, or should the patient receive general antibiotics when there is infection?

Dr. Robert Austrian: I think in this situation you are confronted with a difficult problem for which there is no easy solution. I prefer systemic therapy. For any sizable lesion I think it is very difficult, unless one is able to debride the lesion adequately, to get the drug level to where it should be to do you much good.

I would like to ask the pathologist whether any skeletal muscle and skin were examined at the time of necropsy and whether one would do that procedure before giving the cortisone. The diagnosis of a widespread lesion might have been made before death.

Dr. Gherardi: Skeletal muscle was seen microscopically, but the sample was not taken from the site which one would ordinarily be able to obtain on a routine biopsy. I think certainly that a muscle biopsy might have helped.

Dr. Dock: You saw lesions in the skeletal muscles too?

Dr. Gherardi: No, I had a very small piece of muscle. A lesion might very well not have been present in it.

Dr. Dock: Dr. Austrian's point is very well taken that muscle biopsy is indicated in fevers of unknown origin, especially associated with leukocytosis. In both Hodgkin's and arteritis, leukocytosis may be associated with eosinophilia. The diagnosis can be made either by getting a lymph node or liver biopsy, which might have given you the diagnosis in this case, more lesions being in the liver, I suspect, than in the voluntary muscles. That is often the case in periarteritis. Of the two I think I prefer liver biopsies.

I had one experience where a muscle biopsy was done in a hypertensive as part of a routine study at Stanford of muscle changes in hypertension. It was diagnosed as periarteritis nodosa. It was a routine study of the hypertensive. No one looked at the pathologist's report, and the patient had sympathectomy done for hypertension and bled to death into his pleura. At autopsy we had four blocks of muscle, lumbar, pectoral, intercostal. These were big blocks. There was no arteritis seen in any one of these sections, but we had the little biopsy taken from the deltoid muscle which had been taken for an entirely different purpose, which we could show at the same time that we showed the other material. Cutting into the liver or into a muscle to get a diagnosis is always a gamble. You can miss the Hodgkin's. You can miss the periarteritis, but the gamble is always worth taking because it does not do the patient any harm.

As far as I am concerned, if I had Hodgkin's disease with high fever, I would rather start with cortisone than anything else. So to start management I would not need the biopsies. But it is quite right for them to be taken, and both liver biopsy and muscle biopsy should be done in fever of unknown origin with a high white count.

Dr. Austrian: In the absence of hypertension, was it that the patient developed an autosympathectomy?

Dr. Dock: These were very acute renal lesions, as though a lot of kidney went out very fast.

Dr. Gherardi: They are relatively recent.

Dr. Dock: In acute cortical necrosis the pressure often goes up, sometimes it does not. I don't know why in this patient hypertension did not occur. I would say if one had done the sympathectomy it would, but in Dr. Heuer's observations on patients and Dr. Glenn's on the dog, renal hypertension may return or develop after transverse cord lesions. It takes them about three weeks for the hypertension to develop, which is just when the dog with normal blood pressure begins to get back his normal blood pressure after cervical interruption.

So just what kept the pressure down, I am not sure. Certainly it is a most interesting case. While Dr. Watson pointed out that only 2 per cent of the documented cases of periarteritis have this sort of neurologic lesion, this is equally rare in Hodgkin's, so that it would come out 50:50. In a case like this it would be better for the neurosurgical service to explore the cord, which would really give them the diagnosis, rather than to do myelography after having shown by Queckenstedt a full free, rapid motion of the fluid around the spinal cord.

Major Objectives for Mental Health Programs

A 13-point program on which individual state and county medical societies may base their mental health activities to further improve mental hygiene throughout the nation was outlined recently by Dr. Richard J. Plunkett, Chicago, secretary of the American Medical Association's Committee on Mental Health.

The points are:

1. Study medical service plans to determine ways by which they may more effectively provide for treatment of mental and emotional illness.
2. Establish citizen groups for promotion of mental health education services.
3. Recommend to legislatures increased budgets for mental institutions.
4. Serve as a central office for dissemination of information on programs for mental health to the medical profession and public.
5. Expend efforts toward establishing psychiatric departments or services in general hospitals and increasing other psychiatric services in the community.
6. Recommend to legislative committees of state medical associations that changes or amendments be made in medical practice acts to include "mental illness" and "psychotherapy" as being within the legal definition and responsibility of the practice of medicine.
7. Improve facilities and level of professional care in state institutions for care of mentally ill.
8. Establish facilities for psychiatric consultation to courts and penal institutions.
9. Review and sponsor legislation for state mental health activities relating to problems of alcoholism and drug addiction.
10. Sponsor improved state laws for commitment to mental institutions, and provide for and encourage voluntary admissions to mental institutions.
11. Sponsor programs for postgraduate education of physicians in the utilization of psychiatric principles in the practice of medicine.
12. Sponsor programs in psychiatry and mental health in county society meetings during Mental Health Week in May of each year.
13. Encourage the setting up of collaborating committees on mental health in all county societies.

Dr. Plunkett pointed out that a survey of state medical societies has shown that many have already established committees on mental health or mental hygiene, and have active programs underway.

"Mental health is an acute problem," Dr. Plunkett stated. "The prevention of mental illness and the care of those already afflicted is everyone's responsibility, especially that of physicians. For many centuries, people just didn't talk about mental illness. Now that the subject has been brought into the open, many steps have been taken to improve the care of patients suffering from mental diseases, and to prevent mental illness. However, there is still a long road to travel, and to be successful, everyone's help is needed."

The Committee on Mental Health is the newest scientific group of the A.M.A. It was founded in 1952 to study and advise the association on all matters pertaining to psychiatry and the related field of mental health—*California Medicine, September, 1953*

CASE REPORTS

Mondor's Disease

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In December, 1939, Mondor[1] described acute thrombophlebitis of the anterolateral wall of the thorax, characterized by a cordlike line extending vertically downward to the inguinal ligament. Leger[1] in 1947 reported 22 cases, including Mondor's original cases. We wish to present a case, seen on the Peripheral Vascular Service at Beth-El Hospital, which would be the twenty-third case in the literature.

Case Report

The patient, J.K., age thirty-seven, was admitted to Beth-El Hospital on March 16, 1952, on the vascular service with the complaint of "drawing pain" under the left breast with a cordlike line underneath it. She had first noticed it three weeks previously when it was associated with slight pain; the pain gradually became worse, and the tender strand became longer until it extended all the way to the groin. There was no history of injury, and the past history was noncontributory.

Physical examination revealed a firm, indurated strand, 4 mm. in diameter, below the left breast, and extending down to the inguinal ligament (Fig. 1). All other peripheral vascular signs were normal. The temperature was normal. There were no palpable breast tumors nor any adenopathy. X-rays of the chest, gastrointestinal tract, and gallbladder and barium enema studies were normal. The urine and blood count were normal, and the blood chemistry was within normal limits. The patient was discharged on April 2, 1952, in an improved condition. She was followed up in the outpatient department, and by November, 1952, the cordlike line had completely disappeared.

Comment

The etiology of Mondor's disease is unknown. Adults, most often females, are affected. The ages range from twenty-five to fifty-five years. There appears to be a predilection for the left side. The disease is insidious in onset, steadily progressive, and is often associated with pain which is increased in severity by deep breathing. It is not associated with respiratory, alimentary, or liver disease nor with tumors of the mammary gland or adenopathy. There is no elevation of temperature, and the urine and blood count are normal. The lesion is a fibrous, indurated, cordlike band adherent to the skin and subcutaneous tissue; it terminates by gradually blending into the adjacent tissues.

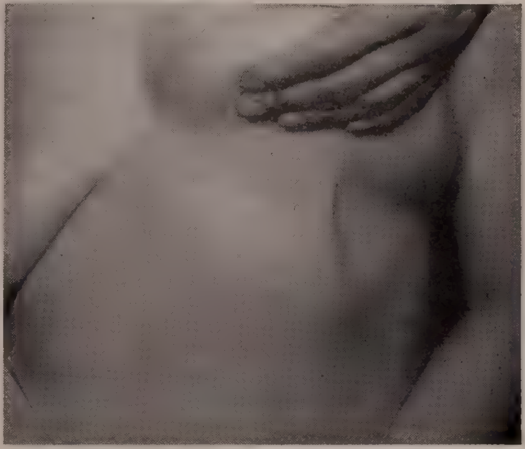

FIG. 1. Firm, indurated strand below left breast extending down to inguinal ligament.

It has been postulated that the thoracoepigastric vein, the long superficial vein of the anterolateral thoracic wall, is the anatomic basis for the lesion. Histologically, the lesions have the appearance of small veins and lymph vessels manifesting subacute obliterative endophlebitis associated with a certain degree of thrombosis; the vascular tissue in many places is replaced by dense fibrous tissue. The lesion is benign and disappears by itself but may persist for many years.

Summary

An unusual case of thrombophlebitis of the anterolateral wall of the thorax has been presented. The etiology, symptoms and signs, course, and prognosis conform to the original description of Mondor's disease.

10 EIGHTH AVENUE

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Periarteritis Nodosa Due to Penicillin

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THERE are six diseases that show similar pathogenesis and pathology: rheumatic fever, rheumatoid arthritis, lupus erythematosus, scleroderma, periarteritis nodosa, and possibly glomerulonephritis. Their similarity is based on the involvement of connective tissue which is derived from mesenchyme, the latter also giving rise to smooth muscle, endothelium, and mesothelium.

As early as 1942 Rich[1] reported necropsy findings in a series of patients who died during serum sickness subsequent to anaphylactic shock. The striking pathologic feature in these cases was the absolute identity of the lesions with those found in periarteritis nodosa. Since then a great amount of research has been done showing the possible effects of drug sensitivity on the incidence of cases of periarteritis.[2,3]

With the introduction of sulfonamides periarteritis nodosa became more prevalent, and today these drugs are accepted as causative agents in many cases. Horse serum, thiouracil, and even iodides have been causative factors.

This case is reported because we feel that penicillin was the cause of periarteritis nodosa. It may be that with the wide use of penicillin more and more cases will be reported in the future since already we have the other manifestations of allergy to penicillin, well known to the clinician, such as asthma, urticaria, dermatitis, and angioneurotic edema.

Case Report

The patient, I. J., age twenty-eight years, a white female of Puerto Rican extraction, was admitted to the general medical service of the Norwegian Hospital on March 8, 1952, with the admission diagnosis of acute cellulitis of both legs.

Her chief complaints were swelling and pain in the left ankle although both feet and ankles were involved. She had had the usual childhood diseases; there was no history of tuberculosis or rheumatic fever. There were no operations. Her mother had died of "kidney disease," and her father is living and well. A review of the respiratory, gastrointestinal, genitourinary, and central nervous systems elicited no pertinent information. She had three children, all living and well. The last delivery was three months previously in the maternity division of the Norwegian Hospital and was normal. She had had a slight vaginal discharge and had had no postpartum examination.

The present illness began on February 15, 1952, when the patient was treated in the outpatient department of another hospital for a "sore throat." She was given oral penicillin tablets of which she took about 40. At the time of admission, we assumed that these tablets were one of the sulfonamide drugs. The patient spoke very little English so that all information was gotten through outside sources over a period of days. About the third day of treatment the patient developed definite chills and fever although she did not take her temperature. She felt very hot. With the onset of chills she developed painful spots over the dorsum of her feet. She remained at her home and appeared to be getting worse. No other medication was taken at home. Finally, because of pain and recurring fever, she came to the Norwegian Hospital emergency clinic and requested treatment.

The physical examination on admission showed a twenty-eight-year-old, white female, moderately developed and moderately nourished, in no acute distress but apprehensive and toxic in appearance.

The tonsils were hypertrophied but not inflamed. The heart, lungs, and abdomen were essentially negative. The left ankle was swollen and painful to touch, and the skin overlying this area was discolored a deep, dull red. The right ankle was slightly tender to touch, and over the dorsum of the right foot there was a large, macular, red area which also was tender to palpation. The patient stated that these areas had been much redder before. Surrounding these areas, the skin was slightly bluish in color as seen in small hemorrhages. The toes were cold and moderately blanched.

The blood pressure was 130/100, temperature 99 F. orally, and respirations 22. The admission blood count showed hemoglobin 12 Gm.; red blood cells 3,860,000; white blood cells 10,400 with polymorphonuclear cells 84, lymphocytes 14, and monocytes 2; platelets 206,000; coagulation time five minutes; bleeding time three and one-half minutes. The prothrombin time was 22 seconds (control sixteen seconds); blood chemistry showed urea nitrogen 13.8, glucose 76, chlorides 483. Sedimentation rate was 51 mm. per hour. The Wassermann was negative. Admission urine revealed a trace of albumin, specific gravity 1.010, no sugar, casts, or blood cells. The electrocardiogram showed auricular and ventricular rate of 107; regular sinus rhythm; electric axis normal; conduction PR 16, QRS 0.06; convex ST segment in the right side precordial leads with inversion of T waves; ST 3 convex; myocardial ischemia from left precordial leads 1 to 3; regular sinus tachycardia. The findings pointed to myocardial disease due to toxemia.

The first two days of the hospital stay the temperature did not go over 99.4 F. orally. It was on the third day that we discovered this error in temperature-taking, and from then on rectal temperatures were taken. We felt sure that the patient had had an elevated temperature the first two days. She did not cooperate well in taking oral temperatures. After the third hospital day the patient's temperature began to fluctuate from 98.6 F. rectally to 102, 103, 104.4 F. rectally, each day for nine days. On the third day of the hospital stay, when the temperature became elevated to 101.8 F. rectally, a member of the house staff ordered Crysticillin, 400,000 units daily which were given intramuscularly. This was given because the patient appeared increasingly toxic and apprehensive.

On March 10, the day after the first penicillin injection, the erythematous areas on the dorsum of the right foot flared up. The area became larger and redder, and the bluish surrounding area increased in size. The same occurred in the previously involved areas of the left foot and ankle. For the next two days, March 11 and 12, the temperature rose to 103 F. rectally. New skin lesions identical to those in the feet but smaller in size then began to appear over both lower anterior tibial regions. It was on the sixth hospital day, March 13, that we received confirmation that oral penicillin tablets had been previously prescribed and not sulfonamide drugs as we had assumed. Penicillin was immediately discontinued, and because of the septic temperature and the toxicity of the patient, we placed the patient on oral aureomycin, 250 mg. every four hours. At this time we still did not know definitely with what clinical entity we were dealing, and so the aureomycin was given empirically.

Erythema nodosa and lupus erythematosus were considered, but the latter was held improbable because of the lack of findings in the heart and lungs. X-rays of the lungs taken on March 8 and April 3 were negative. There were no heart murmurs or changes in the heart sounds. A repeat and final electrocardiogram on April 2 showed no changes from the first electrocardiogram noted above.

On March 12 a sternal puncture was done. This showed a cancellous bone with normal amount of fat and normal hematopoietic activity of the erythrocytic and myelogenous series except for some increase of cells in both of these series. There was a moderate amount of calcific deposition in the cancellous bone segments. Areas of hemorrhage were seen. Examination of the smears taken from this bone marrow aspiration showed some increase of both the erythrocytic and myelogenous series, but no evidence of any blood dyscrasia was seen. Opinion was that of mild hyperplasia of the bone marrow with segments of cartilage and cancellous bone.

The blood culture was negative. Tuberculin patch test was positive on March 16. A pelvic examination was done by the gynecologic department and was negative. The fluid intake and output was normal. Trichinosis complement fixation test was negative. Other laboratory tests done were as follows:

March 15—Total proteins 6.43, serum albumin 4.04, serum globulin 1.85, fibrinogen 0.54.

March 17—Cephalin flocculation 2 plus, Takata-Ara negative.

March 31—Cholesterol 238, cholesterol esters 119, glucose 108, urea nitrogen 10.6, icteric index 5, total proteins 7.38, serum albumin 4.08, serum globulin 2.91, fibrinogen 0.39.

March 24—Hemoglobin 11.5 Gm., red blood cells 4,440,000, white blood cells 10,500 with polymorphonuclears 68, myelocyte 1, stab 1, eosinophil 1, lymphocytes 26, monocytes 2.

March 31—Hemoglobin 11.5 Gm., red blood cells 4,560,000, white blood cells 6,600 with polymorphonuclears 68, eosinophils 2, basophil 1, lymphocytes 27, monocytes 2.

The urine examination on March 10 showed a trace of albumin, and subsequent analyses were negative.

The patient responded well and was afebrile from March 19 until the day of discharge, April 19, 1952. The skin lesions gradually faded and left scaly brown areas.

Pathologic Report.—The pathologic report of the skin biopsy done under local anesthesia on March 19 and taken from above the right knee, below the left knee, and the dorsum of the left foot was as follows: The skin showed a layer of stratified squamous epithelial cells with hyperkeratosis and papillary pegs covering a fibrous connective tissue stroma supporting sudoriferous glands, sebaceous glands, and hair follicles.

One section in particular showed a dense increase of fibrous tissue stroma with some adipose tissue in deeper segments. In this vicinity there were also zones of necrosis and hemorrhage, indicated by the loss of distinctness of cytologic outline and infiltration of red cells in some areas. One region in the deeper portion of the section adjoining the adipose tissue showed a few arterioles with thickened walls and fibrinoid-like structure of these walls with perivascular infiltration of some polymorphonuclear leukocytes, macrophages, and an occasional lymphocyte. An adjoining zone showed a venule with intact wall and an adjacent area of numerous polymorphonuclear leukocytes and some macrophages and lymphocytes in this vicinity.

Another section showed a similar layer of skin and fibrous tissue stroma as previously described with focal and diffuse areas of hemorrhage in the deeper portion of the section adjoining the adipose tissue and some of the sudoriferous glands. In this section there was an arteriole with rather marked thickening of the wall and fibroblastic proliferation in this layer together with fibrinoid degeneration and occasional macrophages and polymorphonuclear leukocytes. There was definite evidence of necrosis over the perivascular areas with scattered macrophages and occasional lymphocytes. Other small arterioles showed similar thickening and fibrinoid degeneration of the media. Scattered lymphocytes, plasma cells, and macrophages were also seen in the stroma adjoining the epithelial border.

A third section showed merely a thickening of the fibrous tissue stroma with small focal areas of hemorrhage. The pathologic diagnosis was periarteritis nodosa.

Summary

A case of periarteritis nodosa due to penicillin allergy with complete recovery is reported.

47 Gelston Avenue

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Concomitant Malaria and Appendicitis

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With the return of veterans of the Korean conflict, malaria is assuming the position of an important disease entity in this country. It is well known that when antimalarial suppressive therapy is employed, the patient is usually asymptomatic at the time he is parasitized. Clinical malaria may never occur, or it may become manifest several months after suppressive therapy has been discontinued. Exacerbations of the disease are common up to three years from the time of infection. Acute malaria often goes unrecognized by the clinician.[1] Relapses may be caused by any condition which lowers general body resistance.[2]

In a review of 15 cases of malaria by Aquilina and Paparella,[3] precipitating causes of the attacks were discovered in three patients. These were an alcoholic debauch, cellulitis of the jaw, and nonspecific urethritis. Another recent report[4] implicated an attack of acute appendicitis as the cause of an exacerbation of malaria.

The case to be presented illustrates how acute appendicitis may mask itself by activating a previously dormant malarial state.

Case Report

B. P., a twenty-one-year-old, white male, entered the Griffiss U.S.A.F. Hospital on November 28, 1952, because of a shaking chill on that date. He had been well until three days previously when he gradually developed a feverish feeling, anorexia, and mild dull aching epigastric pain. The pain would last about two hours, subside, and then recur. In the evening the patient vomited once. On the following day he felt fairly well except for mild epigastric distress, and he was able to carry on with his usual daily routine. In the afternoon of the following day epigastric distress grew more severe, and fever recurred. That evening the patient developed a biparietal headache, a "roaring sound" in his head, and a shaking chill which lasted about forty minutes. When the chill ceased, the patient sought medical attention.

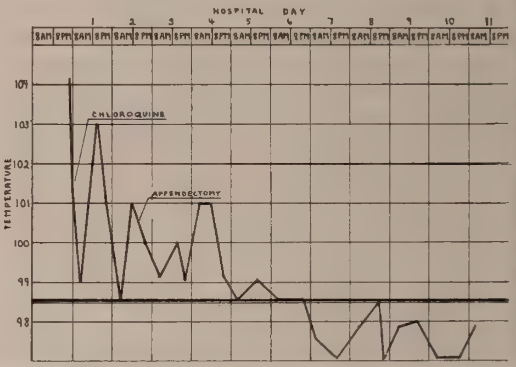

Fig. 1. Course of temperature during period of therapy.

The past history was noncontributory except that until a year previously he had lived in Texas and Arkansas where malaria occurs endemically.

At the time of admission the patient appeared acutely ill. The temperature was 104.2 F. orally, pulse 132, respirations 24, and blood pressure 124/72. There was mild injection of the conjunctiva, nasal mucoperiosteum, and pharynx. Mild right lower quadrant abdominal tenderness was found, but there was no muscle spasm or rebound tenderness. Digital rectal examination revealed mild tenderness on both the left and right.

The chest x-ray, flat plate of the abdomen, and electrocardiogram were negative. The urine showed 7 to 10 white blood cells per high power field. The complete blood count revealed hemoglobin 12.5 Gm. and white blood cells 11,800 with 71 neutrophils, 28 lymphocytes, and 1 monocyte. Malarial parasites, classified as Plasmodium vivax, were found in large numbers in the blood smear.

Chloroquine disphosphate therapy was initiated within three hours of the patient's admission to the hospital (Fig. 1). On the following day he complained of abdominal pain, nausea, and inability to retain food or fluids. There was mild abdominal tenderness but no rebound tenderness or muscle spasm. That evening the patient had a shaking chill with an elevation of his temperature followed by sweating. On the next day abdominal pain grew more severe, and right lower quadrant tenderness increased. Muscle spasm, rebound tenderness, and definite right-sided rectal tenderness developed. A repeat blood study showed white blood cells 12,600 with 88 neutrophils, 8 lymphocytes, and 4 monocytes. The patient was then taken to the operating room.

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At operation free pus was found in the peritoneal cavity. The area about the cecum was inflamed and covered with a fibrinous exudate. The appendix was gangrenous and had perforated. An appendectomy was performed, and the patient was given aureomycin postoperatively. He made an uneventful recovery.

Comment

When a young adult develops an acute illness, one may be loath to attribute his symptoms to more than one disease process. Consequently, the finding of malarial parasites in the blood of a patient with acute appendicitis may lull the clinician into a false sense of security. The clinical manifestations of malaria are dramatic as compared to those of simple acute appendicitis. The latter condition, therefore, may be overshadowed by the former. Anorexia, nausea, vomiting, abdominal pain, and fever are common in malaria or appendicitis singly. All of these factors tend to delay the diagnosis of appendicitis when there is coexisting malaria.

A blood smear often establishes the diagnosis of malaria with ease. The early diagnosis of appendicitis may present a much more formidable problem, and it is this condition in which early treatment is the more urgent. Since the blood leukocyte count may be elevated, normal, or depressed in the course of a malarial episode,[2] this ordinarily valuable test may lead the clinician astray. However, the persistence of leukocytosis after the fever has started to subside is strongly suggestive of some complicating disease other than malaria. Probably the most helpful diagnostic tool in a case of appendicitis with malaria is an alertness to the likelihood of such a combination.

In the case which has been presented, antimalarial therapy was instituted in less than three hours after the patient had first been seen. Surgery was delayed for an additional thirty-seven hours.

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Interstitial Cell Tumors of the Testis

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INTERSTITIAL cell tumors of the testis are rare. Since first described by Sacchi in 1895 and by Chevassu in 1906, only 43 cases have been reported in the entire literature.[1–11] These tumors, usually associated with endocrinologic changes, are generally benign and are found at all ages. They are rarely found in children. When encountered in children below the age of puberty, they are reported to be associated with macrogenitosomia. In adults apparent endocrinologic changes were infrequent, with the exception of gynecomastia, which has been more frequently reported. Interstitial cell tumors appear to be most frequently encountered in young adults and rarely after the age of fifty. Because of their clinically benign behavior, their slow growth, and the scarcity of symptoms associated with their presence, they are often discovered late and as an incidental finding.

There has been much speculation as to the exact nature of this type of tumor, whether hyperplasia or neoplasia, and as to the cell origin, whether connective tissue or epithelial. It is generally accepted that these growths are true neoplasias, usually benign but occasionally malignant, with invasion of the tubules and the capsule and distant metastases. They are generally believed to arise from the Leydig cells or, as the name implies, the interstitial cells of the testis, in contrast to the Sertoli cell tumors, the arrhenoblastomas, and the adrenal cortical rests.

As mentioned above, the interstitial cell tumors may be endocrinologically active and associated with varying degrees of endocrine disorders. Some investigators believe that the lipid granules found in the individual cells are related to the androgens produced and that the lipid content of the Leydig cell is proportionate and in direct ratio to the production of androgenic substances. In an effort to explain the diversity and often conflicting manifestations of endocrine disorders found in association with Leydig cell tumors, Teilum[3] pointed out that while a marked hyperplasia of the Leydig cells may be present, the individual cells may be nearly completely devoid of lipid in contrast to the "estrogen-producing" Sertoli cells of the tubules. The latter may concomitantly display large amounts of cellular lipid, thus causing an "estrogenic predominance" in spite of the Leydig cell hyperplasia. With this consideration in mind, it is not difficult to explain why Leydig cell hyperplasias or neoplasias are not always and exclusively associated with excessive androgen production and why the endocrine manifestations are so variable, i.e., macrogenitosomia in children of prepubertal age, only gynecomastia in adults with little or no changes in the genitalia and the libido, and finally complete absence of endocrine activity including gynecomastia.

It is not within the scope of this paper to attempt to clarify the relationships between endocrine activity and the cell pattern or the definite type of hormone produced by any type of individual cell. The similarity of the chemical structure between the different steroids may account for the similar or closely related endocrine manifestations produced by very different hormones. It is also possible that more than one hormone may be produced by cells hitherto thought to produce only one type of hormone. This may account for the presence of conflicting endocrine manifestations or the complete absence of endocrine activity. The following examples may be cited: Testosterone has been known to produce "estrogen-like" response in animals. Androgens appear to have a remarkable similarity to progesterone in their action on both experimental animals and humans. In the opposite direction granulosa cell tumors of the ovary, luteomas and thecomas, which are known to produce mainly estrogenic clinical manifestations, such as precocious puberty and feminizing effects, have been occasionally known to cause hirsutism and other masculinizing effects.

Case Report

A fifty-five-year-old, white male was first seen on September 23, 1952. His chief complaint was frequency and urgency for the past two years, becoming increasingly worse.

Past history was noncontributory. Patient disclosed that a thorough study and workup of his case was done at a New York hospital two years ago for what appeared to be epileptic-like attacks occurring in the morning. Patient stated that he was much better and that he had had only occasional mild attacks since.

Examination findings were listed as follows: diffusely enlarged thyroid gland, marked osteoporosis, compression of the bodies of the dorsal and lumbar vertebrae, elevated blood calcium to 12.3 mg. per 100 cc., phosphorus 3 mg. per 100 cc. giving an impression of possible hyperparathyroidism, left inguinal hernia, idiopathic epilepsy, and neoplasm of right testicle. Genitourinary data included nocturia two or three times, frequency every three hours and every hour in bad weather, slow starting and terminal dribbling for the past year. Urinalysis was completely negative; residual urine measured 150 cc. The prostate was smooth and elastic and showed a 1 plus enlargement and absence of median sulcus. Prostatic smear revealed 5 to 10 white blood cells with one large clump of white blood cells. The left testis and epididymis were normal, but the right testis was smooth, nontender, well differentiated from the normal epididymis, and enlarged to one and one-half times that of the left testis (9 by 5 by 4 cm.). Cystoscopic examination showed coarse trabeculation with cellules, deep bas-fond in retrotrigonal region, prostatic urethra elongated with a 2 plus lateral lobe intrusion in the midline, and a 1 plus middle commissural lobe hypertrophy.

The patient was admitted to the Jamaica Hospital on October 5, 1952, and a transurethral resection of the prostate and a right orchiectomy were performed. The scrotal wound healed well, and recovery was uneventful. The patient was examined upon discharge and was found to be completely asymptomatic. The left testicle was normal. After discovery of the nature of the tumor the patient was re-examined and further questioned in connection with possible endocrine manifestations. No abnormal endocrine effects, such as gynecomastia or changes in the genitalia, were noted. No history of change in sex habits or libido was admitted by the patient.

Unfortunately no preoperative studies were made for excretion of androgens, gonadotropins, pregnandiol, or 17-ketosteroids, the endocrine potentialities of the tumor not having been suspected.

Pathologic Report.—*Gross description:* The testicle was removed with epididymis attached. It measured about 8 by 5 by 4 cm. The testicle was firm, grayish-white, and slightly lobulated at the upper pole. The tunica albuginea was intact. The cut surface displayed a well-circumscribed, bulging tumor mass which occupied two-thirds of the entire surface and was finely granular, brownish-yellow, and homogeneous. The centrally located tumor was surrounded by a wide zone of normal testicular parenchyma. Sections through the tumor mass showed streaks of fibrous tissue separating the small lobules of yellowish-red tumor alternating with areas of fibrous trabeculation, which was grayish, firm, and rubbery.

Microscopic description: Microscopic study of sections from the tumor revealed cords and nests of large, pale polyhedral cells showing a striking similarity to the normal interstitial cells of the testis, although somewhat larger in size. The nuclei were small and uniform in size.

In some areas the cytoplasm was finely granular and showed varying amounts of intercellular granular brown pigment (Fig. 1). Other areas showed the cells to be foamy in appearance, resembling adrenal

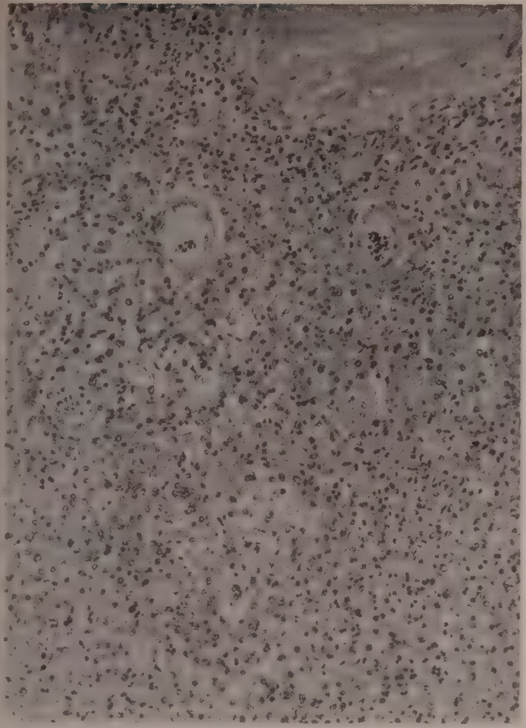

FIG. 1. Low-power photomicrograph showing finely granular cytoplasm.

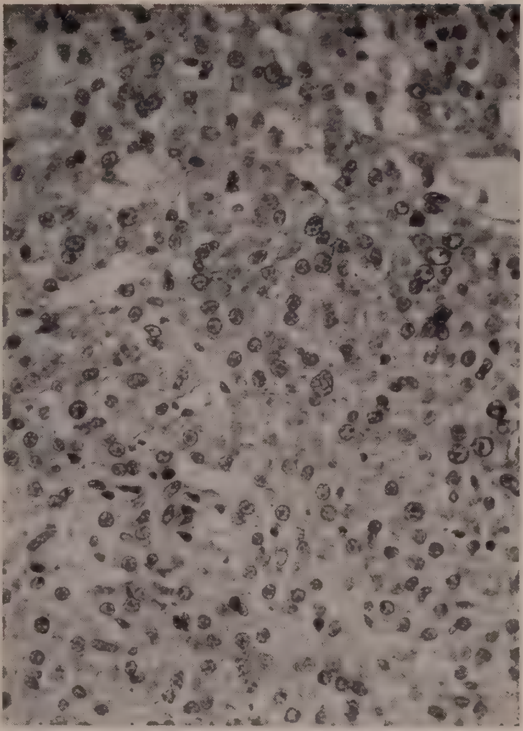

FIG. 2. High-power view of Fig. 1. Note typical "liver-cordlike" architecture.

cortex cells. In still other areas a typical "liver-cordlike" architecture was noted (Fig. 2). At the periphery of the tumor an attempt at a tubular arrangement was seen. There was no evidence of invasion of the tubules, the capsule, or the vascular channels by neoplastic elements. Occasional mitotic figures were noted.

Pathologic Diagnosis: Interstitial cell tumor of testicle. A slide was sent to the Armed Forces Institute of Pathology where the diagnosis of interstitial cell tumor of the testis was confirmed.

Summary

Interstitial cell tumors are rare. Only 43 have been reported so far in the literature.

Endocrine manifestations associated with these tumors are variable. In prepubertal children macrogenitosomia is always present. In adults gynecomastia is usually the only endocrine manifestation noted. In still other cases no evidence of endocrine dysfunction is found. As a possible explanation of the diversity of endocrine manifestations associated with these tumors, a number of factors have been presented: (1) the variation in the lipid content in the individual cells and the interaction of the hormones produced by the different cell groups, (2) the close chemical structure of the different steroids and the possibility that ordinarily different hormones may on occasion produce similar effects, and (3) the possibility that more than one hormone may be produced by the same cells.

Interstitial cell tumors are clinically benign. Occasionally, however, some have been known to invade the tubules and the capsule and to produce distant metastases.

A case report of an interstitial cell tumor is presented. The patient showed no evidence of endocrine manifestations, and the tumor appears to be clinically benign.

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Agranulocytosis with Recovery Following the Use of Phenylbutazone (Butazolidin)

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The initial enthusiasm for the use of phenylbutazone in rheumatoid arthritis is now being tempered by accumulating data concerning its toxicity. Numerous reports[1-3] have already appeared stressing the occurrence of untoward symptoms following its use, such as edema, gastrointestinal disturbances, reactivation of peptic ulcer, skin eruptions, and hepatic damage. Blood dyscrasias such as secondary anemia, leukopenia, and thrombocytopenia have also been noted but agranulocytosis has not been reported until recently. Attention was first called to this toxic effect by Kuzell and his coworkers[4] who stated that they had observed four instances of agranulocytosis following the use of phenylbutazone and that all four patients had recovered. Three other cases with one fatality have since been described.[5-7] Two cases were recently added by Engleman[8] and Hollander.[9]

In the following case agranulocytosis occurred after phenylbutazone had been taken in the usual manner for a period of approximately two weeks.

Case Report

R. J., single female, age forty-three, was originally seen by one of us (M.K.) eighteen months previously for a painful arthritis of the right knee. The pain was relieved in about two weeks but was followed by involvement of the left knee. This pain also disappeared spontaneously in one week.

After this episode the patient had no joint pain until six months later at which time, without any apparent exciting cause, both knees and both hands became swollen and painful. There was no response to salicylates or to physiotherapy. The patient then consulted a rheumatologist who treated her with vaccine which was given subcutaneously once a week for 12 injections. There was no improvement from this therapy. Phenylbutazone was then prescribed, and a 200-mg. tablet was taken three times a day for two weeks. There was no change in the patient's condition. The dose was increased from 600 mg. to 800 mg. daily at the beginning of the third week and was followed by an immediate improvement in the arthritis. However, after taking the increased amount of the drug for three days, the patient suddenly became ill with a severe sore throat and a temperature of 102 F.

The evening of that day, July 25, 1952, the temperature rose to 105 F., and one of us (M.K.) was called to see the patient. A diagnosis of streptococcus sore throat was made, and the patient was given Terramycin, 250 mg. three times a day, and an injection of 300,000 units of procaine penicillin in oil. She also received 3 tablets of sulfadiazine, but this drug was discontinued on the following morning. Procaine penicillin, 300,000 units twice a day, was then administered for the next three days but produced no improvement in the patient's condition. During this time the temperature fluctuated from 102 to 106 F. daily, and the pain in the throat continued unrelieved. On August 1 she was removed to the Royal Hospital for further observation.

Physical examination on admission revealed a middle-aged female, acutely ill, toxic in appearance, and with a marked pallor of the skin. The tongue was dry and coated. The pharynx was fiery red with pustular follicles scattered over the posterior pharyngeal wall and a few small pustules present over the rest of the oropharynx. The lungs were

TABLE I.—Serial Blood Counts in a Case of Agranulocytosis

Date (1952)	Hemoglobin	Red Blood Cells	White Blood Cells	Differential Count
August 1	51%	4,160,000	300	Occasional lymphocyte, 0 neutrophils
3	75%	5,080,000	550	Polymorphonuclears 0, eosinophils 25%, small lymphocytes 63%, large monocytes 6%, metamyelocytes 2%, plasma cells 4%
7	77%	5,280,000	1,550	Polymorphonuclears 28%, eosinophils 6%, staff cells 10%, small lymphocytes 35%, large monocytes 5%, myelocytes 8%, metamyelocytes 4%, promyelocytes 1%, blasts 1%, Turk cells 1%, plasma cells 1%
12	81%	5,750,000	8,300	Polymorphonuclears 52%, staff cells 16%, lymphocytes 16%, myelocytes 4%, juveniles 8%, blasts 2%, plasma cells 2%
15	81%	5,130,000	8,100	Polymorphonuclears 60%, staff cells 9%, eosinophils 1%, small lymphocytes 21%, large monocytes 6%, blasts 1%, plasma cells 2%
20	93%	4,990,000	7,400	Polymorphonuclears 50%, staff cells 2%, small lymphocytes 34%, large lymphocytes 12%, large monocytes 2%
26	81%	4,520,000	13,400	Polymorphonuclears 51%, staff cells 17%, eosinophils 8%, small lymphocytes 19%, large lymphocytes 2%, large monocytes 3%

TABLE II.—BLOOD COUNT AND BONE MARROW STUDY IN A CASE OF AGRANULOCYTOSIS

Blood Count	
Hemoglobin	11.2 Gm. (72%)
Red blood cells	5,020,000
White blood cells	700
Platelets	200,000
Polymorphonuclear eosinophils	17%
Lymphocytes	71%
Monocytes	2%
Plasmacytes	8%
Reticulocytes	2%
Bone Marrow	
Myeloblasts	4.0%
Promyelocytes	5.3%
Eosinophilic myelocytes	5.0%
Eosinophilic band cells	2.3%
Plasmacytes	15.3%
Lymphocytes	34.7%
Hematogones	12.0%
Reticulum cells	4.3%
Proerythroblasts	0.7%
Erythroblasts	5.7%

clear. The heart was rapid in rate with a tic-tac rhythm and a systolic murmur at the apex. The abdomen was distended and tympanitic. The liver and spleen were not felt. No masses were palpable. There was no adenopathy and no peripheral edema. Blood pressure was 120/80. Deep reflexes were hyperactive, but there were no abnormal reflexes.

Laboratory Examinations.—The urine was essentially negative. The sedimentation rate was 32 mm. in one hour (Cutler). The blood was type O, Rh positive. The initial blood count showed a hemoglobin of 51 per cent (Sahli), red blood cells 4,160,000, white blood cells 300. There were no leukocytes present on blood smear and only an occasional lymphocyte could be seen after careful examination. Subsequent blood counts are noted in Table I.

Course.—On admission the patient was put on procaine penicillin, 1,000,000 units every two hours. She was also given 10 cc. of pentnucleotide intramuscularly twice a day. In addition, she received 2,000 cc. of 5 per cent glucose daily and was given a transfusion of 500 cc. of whole blood on August 1 and a second transfusion of the same amount of blood the following day.

The patient was seen by Dr. Nathan Rosenthal on August 3. He confirmed the diagnosis and stated that the blood picture and bone marrow were characteristic of the lymphoid form of agranulocytosis. His blood count and bone marrow findings are shown in Table II.

On August 4 the penicillin was reduced to 1,000,000 units every four hours and was further decreased gradually during the next ten days, at which time the patient was put on procaine penicillin in oil, 300,000 units twice a day. After four days the procaine penicillin was given once daily and two days later was discontinued.

On August 6 the patient was more alert, and the oropharynx began to clear. However, both conjunctivae became markedly injected and in the right eye showed two small ulcerated areas. The patient was seen by Dr. Wincor who made a diagnosis of febrile conjunctivitis with meibomianitis.

On August 8 some rales were heard in the right base, but a portable x-ray of the chest revealed no evidence of consolidation or infiltration of the lungs. There was, however, some evidence of slight pleural thickening in the left costophrenic angle.

During the first four days of her hospital stay the temperature fluctuated from 102 to 105 F., with a peak of 105 F. on August 5. The following day the peak temperature was 103.5 F.; the next day it reached 102.5 F. and then fell by lysis during the next four days to 100 F. Four days later, on August 14, the temperature was normal and remained so for the following two weeks. She was discharged on August 31.

Follow-up.—Since leaving the hospital the patient has felt well except for her arthritis which has become progressively worse. She was last seen on March 14, 1953. On that day her sedimentation rate was 21 mm. in one-half hour and 26 mm. in one hour (Cutler). The blood count showed a hemoglobin of 72 per cent (Sahli). The red blood cells were 4,060,000 and white blood cells 6,100 with a differential count of polymorphonuclear neutrophils 35 per cent, basophils 1 per cent, lymphocytes 57 per cent, and monocytes 7 per cent.

Comment

It was to be anticipated that phenylbutazone, which is chemically related to aminopyrine,[5,6] would produce bone marrow depression. The clinical severity this depression can reach has now been shown by the report of ten cases of agranulocytosis following its use. Whether this is a toxic effect of the drug or is due to an individual susceptibility to the drug, the fact remains that there seems to be no way of predicting which patient will develop this serious complication when given phenylbutazone. Moreover, it would appear that even discontinuance of the drug on the first sign of bone marrow depression will not prevent the subsequent development of agranulocytosis in some patients.[6] However, it should be emphasized that if the drug is to be employed at all, it is imperative that blood counts be done regularly.

In this case, failure to perform any blood count during the time the patient was taking phenylbutazone was a serious error of omission. It was also unfortunate no blood count was done when the patient was first seen at home since more intensive therapy could have been employed sooner if the diagnosis of agranulocytosis had been made earlier.

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Papilloma of the Ureter

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Benign tumors of the ureter, although similar to those of the urinary bladder and renal pelvis, are known to occur much less frequently and are a relatively uncommon finding. They have been divided into two general categories: the epithelial growths or papillomata, which constitute the vast majority of benign ureteral neoplasms, and the nonepithelial or stromal tumors, e.g., myoma, fibroma, hemangioma, lymphangioma, and neurofibroma. The epithelial lesions are usually multiple, and they are present either as fine vegetations covering the entire mucosa or as one large tumor with several smaller growths. The right ureter is affected somewhat more frequently than the left. Although any portion of the ureter may be involved, the lower part is affected in 75 per cent of all cases with the growth protruding through the ureteral meatus in 30 to 35 per cent.[1,2]

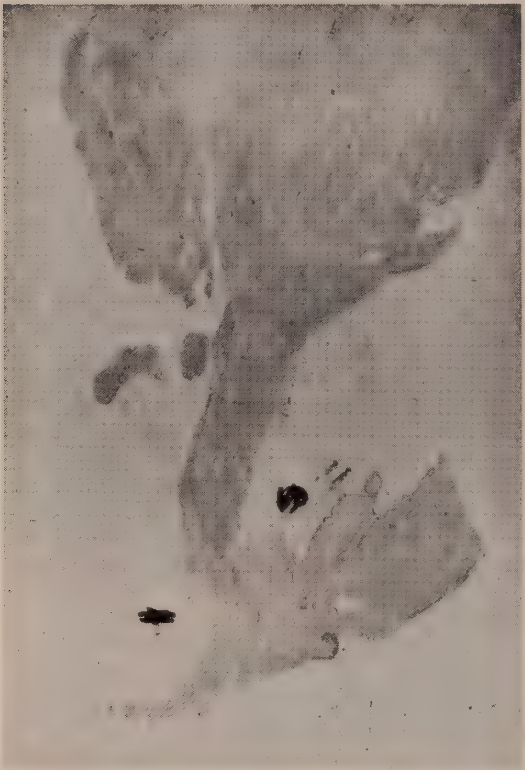

FIG. 1. The narrow-stalked, fan-shaped tumor arising from the ureter.

Grossly, papillomata appear either as villous, verrucous, or, frequently, fan-shaped structures attached by a narrow stalk or pedicle to the ureteral wall (Fig. 1). Histologically they are papillary growths consisting of a thin core of quite vascular connective tissue stroma covered by a well-differentiated epithelium. The cells may be cuboidal, columnar, or spindle-shaped, but their arrangement is always orderly (Fig. 2).[3,4]

Hormonal activity,[5] various parasites,[6] local irritation due to infection or calculi, and chemicals such as aniline dyes and arsenic[6,7] have been implicated by various investigators, but the evidence is inconclusive and rests on somewhat tenuous

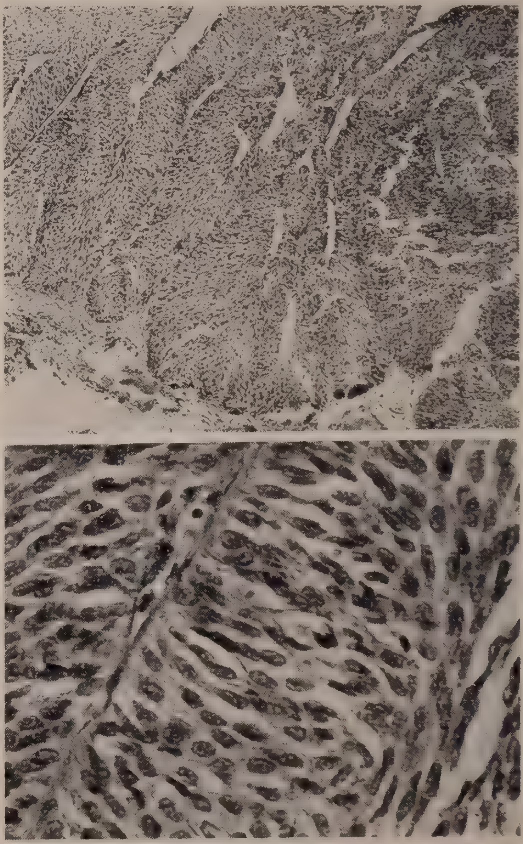

FIG. 2. Microscopic sections of the tumor.

Presented at the April 8, 1952, meeting of the Brooklyn Urological Society.

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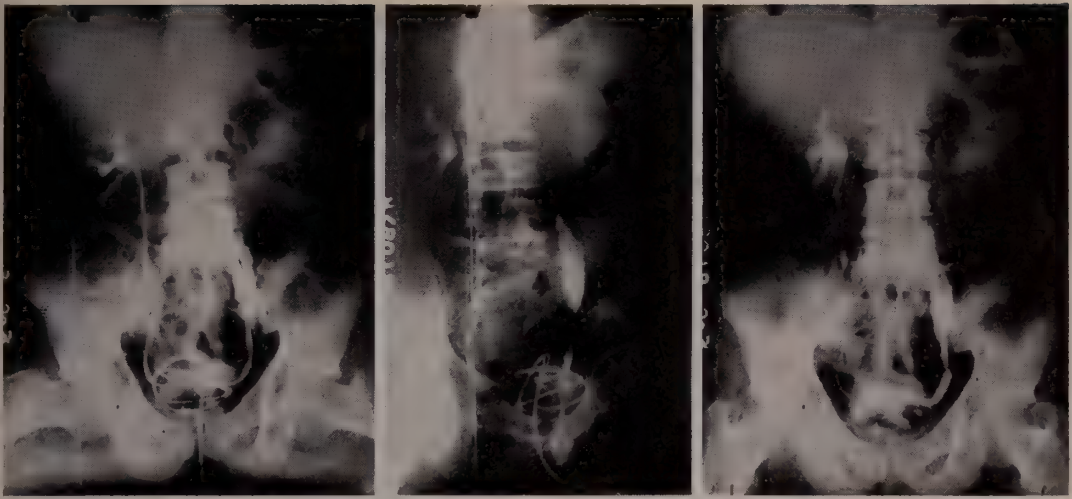

FIG. 3. (*A*) Retrograde pyelogram, anteroposterior view. (*B*) Left oblique view. (*C*) Ureterogram.

grounds. The etiology of these as well as other tumors must as yet remain unknown.

Because of their location and vascularity the presence of papillomata is suggested by the common clinical triad of pain, hematuria, and a palpable mass in the flank. Hematuria is present in 75 per cent of cases, and pain from either the passage of clots or hydronephrosis is found in 60 per cent. The palpable mass is reported never to be the neoplasm per se but a hydronephrosis secondary to the mechanical obstruction caused by the tumor mass.[8]

Obviously none of these findings is diagnostic, and the pathology may be obscured further by an accompanying stricture or calculus. Although cystoscopy may reveal the tumor protruding from the ureteral meatus or urinalysis may disclose either atypical cells or detached portions of papillomatous villi, retrograde pyelography generally remains the single, most important diagnostic tool. Suspicion should be aroused if any obstruction is encountered in attempting to pass an ureteral catheter, particularly if profuse hematuria results. Unfortunately, the only pathognomonic sign of ureteral tumor, a filling defect in the pyeloureterogram, is found only in 15 per cent of cases.[7,9] Lesions not large enough to obstruct the retrograde flow of dye may appear on x-ray as irregular or nodular filling defects projecting into the ureteral lumen. When the tumor is large enough to cause such obstruction, a sharp "cut-off," generally with irregular or lobular edges, is visible at the top of the column of dye. Such a mass tends to dilate the lumen of the ureter, permitting some dye to flow partially about it outlining its lower pole (Fig. 3).[10]

An impressive number of cases has been collected from the literature by Cooney,[11] Vest,[2] and others, but the number has been reduced to 32 by the more exacting criteria defined by Edelstein and Marcus.[12] Since the appearance of their paper in 1948 several cases of benign tumors of the ureter have been recorded in the domestic and foreign literature. To this total we wish to add an additional case.

Case Report

A sixty-six-year-old, white male was admitted to Kings County Hospital on October 29, 1951, complaining of hematuria and left flank pain of two weeks duration. The hematuria was profuse and associated with the passage of clots. The pain and dysuria were relieved as the clots were voided. Short episodes of painless hematuria had been experienced on five previous occasions, the first having occurred twelve years prior to the present admission with recurrences at approximately two-year intervals.

The physical and laboratory examinations were normal except for a markedly bloody urine and a hemoglobin of 6 Gm. per cent (Sahli). Cystoscopic examination performed three days after admission revealed an injected, edematous, left ureteral meatus which spurted bloody urine. An intravenous pyelogram done on the same day revealed no function of the left kidney thirty minutes after administration of the dye. A film taken twenty-four hours later showed the dye well concentrated in the left kidney in which hydronephrosis and hydroureter were present (Fig. 4). A retrograde pyelogram was done at this time, and an obstruction to the passage of a number 5 ureteral catheter was encountered 15 cm. up the left ureter. The urine obtained from this catheter contained innumerable red blood cells. The same size catheter passed easily 25 cm. to the right renal pelvis. This kidney appeared normal on the retrograde pyelogram, but only the distal two thirds of the left ureter was visualized. The proximal half of this portion of ureter was markedly dilated, and its wall appeared irregular and serrated (Fig. 3).

A preoperative diagnosis of papillary carcinoma was entertained and exploration advised. On the

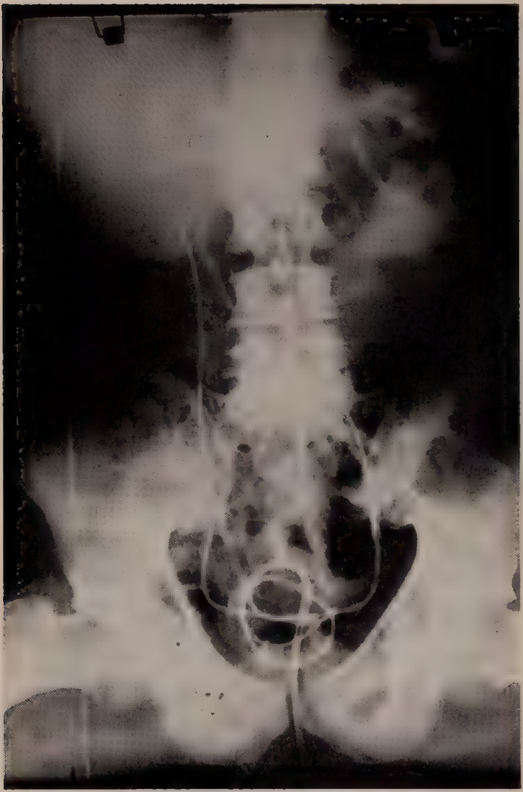

FIG. 4. A flat plate with the ureteral catheters in place. Dye administered intravenously twenty-four hours previously remains in the left kidney.

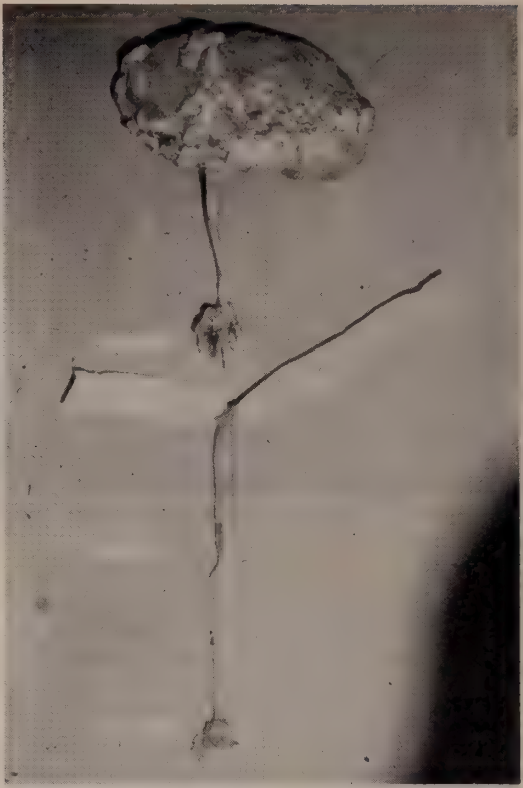

FIG. 5. The specimen as it appeared at time of operation. The uppermost arrow points to the neoplasm, the middle arrow marks the distal extent of the dilated portion of ureter, and the lowermost arrow points to the cuff of bladder tissue removed. The rubber drain was tied to the end of the distal portion of the ureter to facilitate its identification during the ureterectomy part of the operation.

thirteenth hospital day, after the hemoglobin had been restored to normal by transfusions of whole blood, a left nephroureterectomy was performed through left flank and left pararectus incisions. The middle third of the ureter was moderately dilated for several centimeters, and a firm mass was palpated in this region. No other lesions could be felt either in the ureter or the renal pelvis. On opening the ureter a narrow-stalked papillary neoplasm presented through the incision. A nephrectomy was performed; the remaining portion of ureter was located retroperitoneally and mobilized to its junction with the bladder. The bladder was opened widely and inspected carefully for tumor that might have been missed on cystoscopy. The distal segment of ureter was resected with a $^1/_2$-inch cuff of bladder. The site of resection was closed with an inverted purse-string suture and the bladder sutured about a cystostomy tube.

The postoperative course was uneventful. Cystoscopy five and eleven weeks and six, nine, twelve, and eighteen months later was normal on each occasion. Intravenous pyelograms and urinalyses were consistently negative as were chest and long-bone x-rays.

Pathologic examination revealed two tumors (Figs. 5 and 6). In addition to the pedunculated 1.5 by 1.0 by 0.6-cm. neoplasm found at operation, a nodular growth, 1 cm. in diameter and granular in appearance, was present at the ureteropelvic junction. Microscopic examination showed both neoplasms to be epithelial in character and to consist of rather broad, convoluted, frondlike masses of hyperplastic, transitional cells supported by very narrow, vascular fibrous stalks (Fig. 2, top). The epithelial cells were regular, elongated, and oriented perpendicularly to the axis of the stalks. Their ovoid nuclei were regular and delicately vesicular with occasional longitudinal chromatin condensations and slightly prominent, small nucleoli (Fig. 2, bottom). Diagnosis was multiple, benign, papillomata of the ureter.

Comment

This is a case of nephroureterectomy performed for two benign papillomata of the ureter. Only one, however, had been recognized preoperatively. We believe this illustrates their occult multiplicity, and even at laparotomy careful inspection and palpation may fail to disclose the presence of a second lesion. This can be a serious disadvantage in the conservative management of these tumors.

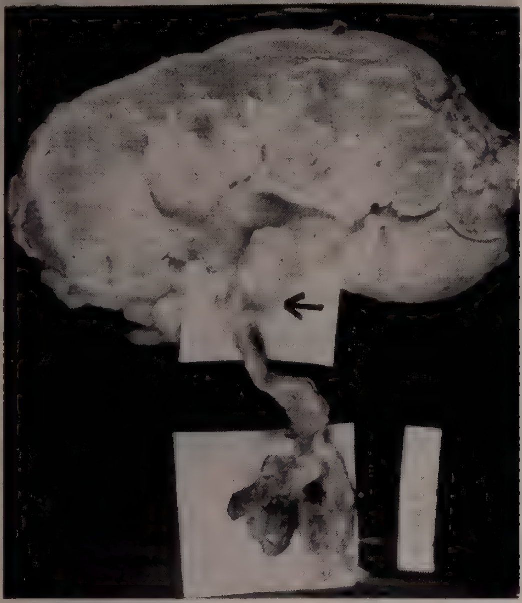

FIG. 6. The opened specimen showing the broad based lesion at the ureteropelvic junction and the pedunculated tumor lower down the ureter. The arrow points to the base of the uppermost lesion.

We have noted that hematuria severe enough to depress the patient's hemoglobin to dangerously low levels was the chief complaint of a patient who had ignored five previous bleeding episodes. The x-ray evidence of hydronephrosis indicated the danger inherent in any space-occupying lesion of the ureter, be it benign or malignant. In fact, the clinical course may be anything but benign, and the discovery of such a tumor demands its complete removal.

The surgical technics employed in the past in its treatment have included fulguration, ligation of the pedicle, local excision, nephroureterectomy in one or two stages, and partial ureterectomy with end-to-end anastomosis or a reimplantation of the ureter into the bladder.

The selection of the treatment of choice is conditioned in part by the unresolved question of the potential malignancy of ureteral papillomata. In common with those found elsewhere in the body (gastrointestinal tract, breast, pharynx, etc.) their tendency to recurrence or malignant degeneration has been stressed by many who consider papillomata to be grade I carcinomas.[4,12-15] Vest,[2] however, in a survey of the literature was unable to find a single case of metastatic growth from a benign, ureteral tumor. Because of the paucity of case reports and the inadequate follow-ups of these cases, we do not feel that their potentially malignant nature can be ruled out and agree with Cooney and others that the more radical nephroureterectomy is the operation of choice. Also, papillomata involving uroepithelium have a notorious tendency to recur.

Since it adds little to the trauma of the operation and avoids a second procedure with its attendant difficulties, most authorities prefer a one-stage nephroureterectomy. Barnes and Kawaichi[16] and Smith[17] favor local excision and suggest that the ureterectomy be performed first, thereby enabling the tumor to be visualized and biopsied before removing the ureter and committing oneself to a nephrectomy.

We feel that conservative treatment such as local excision should play a very minor role in the management of these tumors. Cooney suggests that a benign, single growth with a narrow stalk may be removed by the high-frequency current. Edelstein and Marcus reserve local excision for the much rarer nonepithelial lesions whose benign nature can be established by frozen section. Vest performed limited surgery in three cases which were complicated by hypertension and impaired renal function to the extent that he felt the sacrifice of a kidney would have jeopardized the patient. However, he recognizes the limitations of such conservative therapy and has urged that the utmost care be exercised in the selection of these cases.

Summary

1. A case of papillomatosis of the ureter is presented, and the literature of benign ureteral tumors is reviewed.

2. Nephroureterectomy is advocated as the treatment of choice for papilloma because of its occult multiplicity, malignant potentiality, and tendency to recur.

The technical assistance of Dr. Lee Binder is gratefully acknowledged.

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T. Gale, the Man of Mystery

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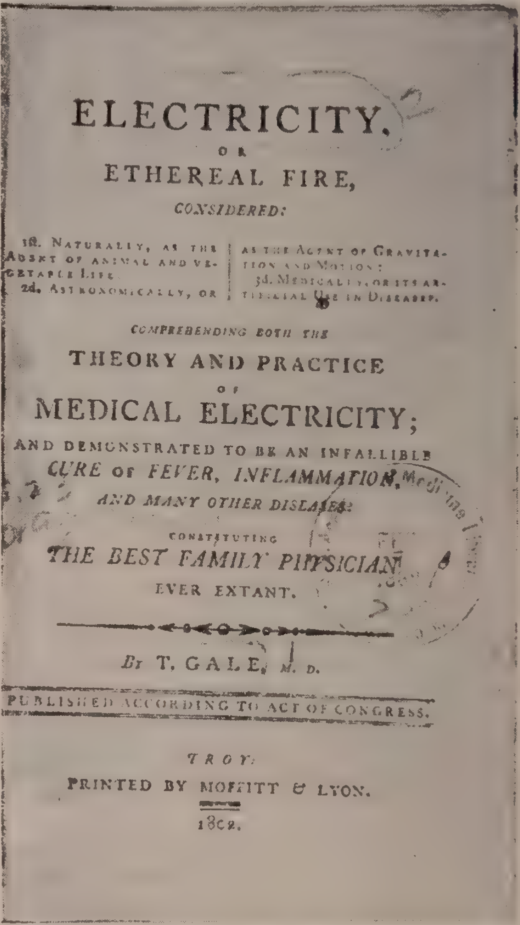
WHILE looking for rare medical books in the Hixon Library of the University of Kansas Medical School, I found a volume printed in 1802. It was owned by the late and great Logan Clendening and was given by him with many other books to the Library. The book was written by T. Gale, M.D., of Ballston pool, New York.

T. Gale was the first American to apply electricity to the treatment of disease. He called it his "shock treatment." He constructed his static machine in 1786 and subsequently wrote his book entitled *Electricity or Ethereal Fire*,[1] which was printed in Troy, New York, in 1802 (Fig. 1). The friend of Benjamin Franklin, he was a contemporary of both Priestley and Lavoisier. The quality of his writing and depth of his investigations equaled those of the English and French physicists and was superior to the work of Franklin. Extremely feeble attempts had been made before this time to use electricity in the treatment of disease, but it had fallen into disrepute because there were no machines to produce sufficient current for medical application and what weak currents were used had no beneficial effects.

In his foreword Gale stated that in spite of the opposition of a great many practitioners of his day, he had applied electricity to the treatment of disease with great success and frequently called it "shock treatment": "I have long since despaired of the aid of physicians to promulgate medical electricity, yea, been convinced that many of them were, to a degree of malice, opposed to it."[2] In spite of his interest in electricity as a medical agent, he could not restrain himself from discussing the physics of this agent and its relationship to gravity and energy. In his opinion not only was this ethereal fire the energy that animated all living things, both animals and



ELECTRICITY,
OR
ETHEREAL FIRE,
CONSIDERED:

1st. NATURALLY, AS THE AGENT OF ANIMAL AND VEGETABLE LIFE.
2d. ASTRONOMICALLY, OR AS THE AGENT OF GRAVITATION AND MOTION:
3d. MEDICALLY, OR ITS ARTIFICIAL USE IN DISEASES.

COMPREHENDING BOTH THE
THEORY AND PRACTICE
OF
MEDICAL ELECTRICITY;
AND DEMONSTRATED TO BE AN INFALLIBLE
CURE OF FEVER, INFLAMMATION,
AND MANY OTHER DISEASES:
CONSTITUTING
THE BEST FAMILY PHYSICIAN
EVER EXTANT.

BY T. GALE, M. D.

PUBLISHED ACCORDING TO ACT OF CONGRESS.

TROY:
PRINTED BY MOFFITT & LYON.
1802.

FIG. 1. Title page of Gale's book published at Troy, New York, in 1802 (from copy in the Library of the New York Academy of Medicine).

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[1] Gale, T.: Electricity or Ethereal Fire, Troy, Moffitt & Lyon, 1802.

[2] *Ibid.*, Preface, p. 6.

plants, but it also had known effects upon inanimate objects. He felt that the spiritual world was related to it so that man's ego and life were also the result of the action of this ethereal fire upon the living cells. He stated that he perfected the machine for the treatment of disease, but he also pointed out all the pitfalls incident to its use.

Like all great men who have investigated a new method of treatment or a broader conception of the causes of disease, he was so enthusiastic that he applied it to all types of maladies. In that he was not much different from the modern scientists who have produced the wonder drugs and apply them to all diseases without discrimination, in many instances with disastrous results. The wonder drugs are being sifted to their level, and had not Gale's work been lost, the use of electricity in medicine would have advanced much further than it has, despite its magnificent place in medicine today. "Moreover so far as experience hath gone no person under the use of electricity hath ever been arrested by any fever, pleurisy, peripneumony or inflammation of the lungs, rheumatism or any kind of inflammatory disease, for it is absolutely anti-febrile to all intents and purposes, and generally anti-spasmodic; it expands every vessel, more or less, according to the strength of the shock, ... Some will reply according to this plan, man will live forever [that is, if we understood the full force of electricity in the body]. I mean no such thing; but I mean this much, that there is no doubt but that the greater part of mankind will spin out their years to great length, and escape much pain, sickness and distress."[3]

Gale believed that deficiency of ethereal fire caused diseases of debility, and intense heat caused a deficiency of this quickening effluvia. This remarkable man believed that gravity and motion have their origin in the various states or degrees of density of this ethereal electricity.

A great deal of the forepart of the book was taken up with the description of the physical properties of electricity, its effect upon tides and winds, its effect upon lesser objects such as the changing of metallic objects so that they expel ethereal fire. In making these observations he made many experiments which today seem simple but in his time were works of great importance. In speaking of electricity he said these new principles of gravitation and motion have high importance in accounting for the diurnal rotation of our globe upon its axis. In treating of the polar effusions he considered the center of gravitation to be the vertical of the sun's zenith. "Let these reasonings be applied to the human body and we shall discover at once that the fluids are the principal conductors of electric shock and as the blood makes the greater part, the blood does consequently receive and convey the shock to the body." He called attention to the fact that many times when a person is struck by lightning and materially injured, electricity is conducted by the blood through the blood vessels. Not only will the blood vessels dilate but, in some instances, burst when this effluvia passes through them. Also the pores will open wide all over the body, thus allowing the escape of heat and vapor from the human organism. He was very much impressed with the use of electricity in the treatment of fever. In this day we know that it has no effect upon febrile diseases, but, on the other hand, we know that one can induce fevers by its use.

His reason for inventing his machine was his theory that all living things were activated by electricity or ethereal fire which flowed through every integral part of the organism. The reason that metals were better conductors than dry wood or ground, he reasoned, was the assumption that ethereal fire could more easily enter the metals than it could dead organic materials. His theory of disease was that there was a lessening of this ethereal fire in the human organism and that if one used the human body as a conductor of the fire he could cure many diseases, since in his opinion all disease was due to a disturbance of electricity within the human body. He stated that as far as he knew, his was the only machine that could be successfully used in the treatment of disease under all conditions and types of climate. Similar machines had been manufactured in France and England, but they did not produce a constant current in changes of weather and their action was unpredictable at any time.

Gale made his own machine. It is a little difficult to understand just how he made it. Evidently it was a scaffold-like structure consisting of two beams set upon a wooden platform and topped by a crossbeam. A glass cylinder with an axle on each end was set into two holes opposite each other in the upright beams. To one end of the glass cylinder was fastened a crank.

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[3] *Ibid.*, Preface, pp. 7–8.

It was rotated by hand. A piece of silk was draped over the cylinder and under some deerskin impregnated with his malgam, an alloy made by mixing equal parts of melted pewter and hot quicksilver. His main lead wire was flattened at the end and made into three points which were placed within a quarter of an inch of the glass cylinder so that the electricity was picked up and stored in a large wine flask, the same as static electricity is stored in the clouds. He was perfectly familiar with the negative and positive changes in and on this vessel. "The chain that brings on the shock I have named 'plus conveyance' because it conveys the plus electrification."[4]

He was able to produce a spark that jumped 4 inches by placing a glue in the bottom of the jar and sprinkling it with gold and silver shavings. He placed his wire through the cork of the flask and screwed a brass ball upon it, thus making the first spark cap, so far as I know, ever made by man. His two lead wires came from the flask, were several feet long, and about as large as a thin pencil. Both terminals ended in chains made of wire loops. One of them remained as a chain. The other ended in a long pointed wire. The chains made the terminals flexible so that one could be placed on one part of the body and the other thrust into the clothing next to the skin on another part.

Evidently he tried this machine, which was cranked by hand, and found that he had no way of measuring the amount of current produced and must have had some amazing results. He realized that he must have some method of measurement so he invented an electrometer. "The electrometer is an artificial measurement of the quantity of the charge in any particular receiver; but the quantity or charge is greater or less, according to the bigness of the receiver;... The little cork balls, in the electrometer, as the machine charges, condense around themselves, globular atmospheres; the atmospheres increase as the machine charges and as the atmospheres increase, the balls are separated by their own atmospheres. When the machine charges freely the balls may be propelled to a horizontal plain; and if there is no body intervening, to affect the natural attitude of their atmospheres, they cannot be altered by an increase of the charge from that horizontal position. If any body less electrified approaches the globules of the electrometer, it will attract to it; but if higher electrified, it will be propelled by that body."[5] In the forepart of the book he tells how he made the electrometer. He was familiar with the fact that an electric aura around the charged wire will repel a cork. He attached several small corks to linen threads about 6 inches long and fastened them to his lead wire with beeswax, then turned the crank of the machine faster and faster until the little corks stood in a horizontal plane. That represented the strongest charge of electricity that could be used safely in the human body.[6]

The table upon which he placed his patients for electric shock treatment was called an insolator. He stated that some patients should be on the table for a long time, and since it was manifestly impossible for human strength to turn the crank of the giant wheel for so long a period, he had considered taking advantage of a water wheel to turn his machine. This would produce a constant current which he could break at will by simply removing one of the terminals from the patient's body. He also reasoned that the full impact of the current would be more than the human body would stand. By rotating the machine at a slower rate he could produce any strength of current that he wished, even to that which could hardly be detected.

Gale does not say whether he used this machine experimentally on animals before he did on human beings so we do not know how he determined what strength of current to use in any particular disease, but we know from his writings that in the treatment of madness he used the strongest current which he could produce and gave the patient several shocks while he was on the table. It produced convulsions and twisting of the muscles. He did not state which type of disease was the first on which he used electricity, but it must have been with a great deal of fear and trepidation. Evidently the results were so encouraging that he continued his work for sixteen years before he published his book in 1802. He used this treatment on every type of disease that was recognized as a clinical entity at the time. Under the heading of "Investigated" he treated diseases that he termed Fevers and Inflammations, Infections. For fevers he used the oblique system, from one hip to the opposite foot, giving six or eight shock treatments at one sitting.

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[4] *Ibid.*, p. 254.

[5] *Ibid.*, pp. 255–256.

[6] *Ibid.*, Preface, pp. 27–28.

"This operation is performed with all safety, and will soon abate the action in the whole system; by enlarging the diameters of the vessels in the lower extremities, and opening the pores, the blood will incline towards this relieved part, and ease the head of pain, and in a little time will recover from delirium. It is very expedient to conjoin with this operation woollen or flannel cloths, dipped in hot water and wrapped about the feet. It helps greatly to promote perspiration; and when the shock is applied to the whole body, it is useful to dip a firebrand in water, and with flannel wrappings around it, apply it to the patient's back or sides."[7] Gale goes on to say that the process is greatly aided by the drinking of hot herb tea. Here was a man in the eighteenth century using diathermy in the treatment of disease and evidently using it successfully. It was not until a century and a quarter later that conventional diathermy was used in the treatment of illnesses.

Peripneumony was treated in the same manner and evidently with very good results, as was also pleurisy. St. Anthony's fire, or erysipelas, was one of the favorite diseases in which he applied electricity. He stated that his results were excellent. Inflammatory rheumatism, inflammatory sore throat, smallpox, and measles also fell before this type of treatment. Ague, St. Vitus's dance, hysteria, and epilepsy were successfully treated. He even treated consumption with it and reported that he got results but not so good as in other diseases. Palsy was one of the diseases in which he used the mild shock. He also used it in dropsy, gout, dysentery, colic, asthma, diabetes, king's evil, quinsy, vertigo, headache, deafness, inflammation of the eyes, Gutta Serena (a type of blindness of unknown origin which evidently was due to vitamin deficiency), cataracts, infection of lachrymal glands, hemorrhage, hemorrhoids, ulcers and abscesses, rickets, lockjaw, bruises, contracted nerves, sprains, felons or whitlows, pains in different parts, wounds, drowning, suppressed respiration, and burns and scalds, but the greatest success he had was in the treatment of nervous diseases and in cancer. "When madness is attended with a strong hard pulse, and with or without redness of the face, and there is an indication of a redundancy of blood in the head, and a compression and irritation of the brain, or of those nerves that proceed from the brain, or the base of the brain, the cerebellum medulla spinalas, etc. all which may take its rise from a redundancy of blood in the head. This compression and irritation of the seat of sensation, of those nerves of such exquisite sensibility, is sufficient to produce disorder in the mental faculties, such as madness or delirium."[8]

"If the electric shock can be applied in the first stages of madness, before indirect debility takes place, it may be immediately removed."[9]

Dr. Gale then enumerated some cases of madness that he successfully treated by the shock method. He cited the following case:

> "The person was a young married woman and lived in Milton, Saratoga County; she came to me at Ballston pool, in the summer of 1795, if I remember right. She was attended by her mother and some others; her mother was the only person she would correspond with; who had, in consequence thereof, taken her to her house; she was terrified at the sight of her husband, with whom she had lived in perfect cordiality, until she became insane. She had a young child, in suckling of which she was reduced to that debility that gave rise to her insanity; and perhaps there was some other corroborating causes, that might contribute more or less to confirm that degree of debility. Her child she would take no notice of, nor suffer any person to come nigh her, but her mother. It was with much difficulty that her mother could prevail with her to take the most trifling sustenance, and that must be done in absence of every one but her mother.
>
> "Such was her situation after being attended about five months, to no good purpose. She was emaciated almost to a skeleton; deep dejection of spirits, gloomy and melancholy.
>
> "I observed all the decorum mentioned page 106; used all the address in my power to ingratiate myself into the number of her friends, which consisted then of her mother only; this I knew was previously necessary, as I could have no opportunity of administering to her in that situation. Her husband came to the house—I observed her terror—I laid hold of this opportunity to gain upon her feelings; I would not suffer him to come nigh her, pretendedly so: It had the intended effect. To be brief, it was not long before I was able to persuade her to take a little wine; after this, under the appearance of entertainment, we got her to the machine, when I passed some very light shocks in all the before mentioned directions. We regaled her with all the lively appearances in our power. The next day she could be induced to

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[7] *Ibid.*, p. 98.

[8] *Ibid.*, p. 122.

[9] *Ibid.*, p. 125.

> smile; this gave me great encouragement. I alternated light shocks, with wine, diluted brandy, etc. and as her mind began to be caught with lively appearances, we endeavoured to furnish all the variety that was possible. The consequence soon was, all that gloominess of mind was dispelled, and she gradually assumed the appearance of cheerfulness; her digestion was promoted, and she began to take nutritious food freely. To be short, in four or five weeks she was able to unite with her husband again in keeping house."[10]

He related another case of a man who, in a fit of insanity, cut his throat, but the local doctor was able to save his life by ligating the artery. The patient was given the electric shock treatment for a few weeks with entire recovery as far as his insanity was concerned. The most interesting case, however, was a man who was brought to Gale's clinic violently insane. So uncontrolled were his actions that he broke the chains with which he was bound. In this case Dr. Gale gave him the strongest current that he could produce in his machine. Even after the first treatment the man was improved. After two series of treatments this man became tractable and was returned to his home with no recurrence of his madness.

Perhaps the most remarkable thing that T. Gale did was to use the electric current in the treatment of cancers. We think that our propaganda against cancer in these modern days is a new and totally untried idea, but such is not the case. Said Gale, "A great part of the world of mankind have been busied in combating cancers. Thousands of nostrums and infallible cures have been invented and almost anybody you meet on the road can prescribe a certain cure for this obstinate and dangerous disease."[11] Despite the fact that people of all civilized nations are supposed to be better educated and more conversant with modern medicine it still remains a fact that the majority of the people of certain classes are influenced more by the medical knowledge of their neighbors than they are by the doctors themselves. They will use almost any remedy or take any medicine without question that an acquaintance may prescribe. It means that medicine is still a priestly function in the minds of a great many people. "It is not my intention to advise anybody to throw away any infallible remedy, for electricity; nor any valuable specific, that may aid or assist in the cure; nor absolutely to believe that electricity can cure all sorts of cancers, without any assistance of some other medicine. . . . I hope I may be pardoned in recommending electricity to those who are employed in the art of healing, as a very valuable assisting mean. . . . I have used electricity on several cancers; the first was on myself."[12] He also reports on several other patients with remarkable success. (His method was fulguration. He placed the chain from one lead wire around the neck then brought the steel point toward the cancer. The discharge of electricity charred the lesion and was a great deal like our modern diathermy.)

"It is to be regretted, that electricity hath ever been used as a medicine, until its nature and effects are better understood. Its use hath been greatly perverted, and the first expectations of many greatly frustrated and disappointed. Want of a due degree of knowledge to administer it, hath generally rendered abortive every intention of cure by the application."[13]

By his own statements in the book and the complete absence of mention of him as a figure in the medical history of Saratoga County, the conclusion must be drawn that he was considered a quack by his contemporaries and thus lost to medical history, but the soundness of his conclusions and his discourse upon the physics of electricity thoroughly demonstrate that he was a man of great ability and at least a century ahead of his time.

He was of a profoundly religious nature and was firmly convinced that there was no conflict between science and the Great Pattern Maker of the Universe. He was a great patriot and deeply deplored our brief enmity and warfare with the French Republic. This is well shown in the last chapter of his book entitled *Thoughts of the Times.* The very nature of his writings clearly demonstrates the fact that he was an educated and cultured gentleman, whose knowledge of physics, especially of electricity, was equal if not greater than any of his contemporaries among whom were the English physicist, Priestley, and his French contemporary, Lavoisier, and our own revered Benjamin Franklin. It is hard to account for the fact that this man disappeared from the medical horizon and that only a very few of his prized books are still preserved in rare book collections in libraries.

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[10] *Ibid.*, pp. 126–127.

[11] *Ibid.*, p. 186.

[12] *Ibid.*, pp. 186–188.

[13] *Ibid.*, Preface, p. 5.

Comment

At my suggestion my wife, Glynn Dennie, made a visit to Ballston Spa, where T. Gale used his electric machine in 1786 and to which town he referred as Ballston pool. From a check of the county real estate records which date from 1791 it was ascertained that persons by the name of Gale owned and exchanged real estate in the county some forty to fifty years after the time in question, but no record of any real estate stood in his name or that of his family at that time. No books in the Ballston Spa Library which dealt with early history of the county and its residents made any mention of T. Gale. A book entitled *Our County and Its People, A Description and Bibliographical Record of Saratoga County, New York*, prepared and published under the auspices of *The Saratogian*, contained a special chapter treating of the medical facilities of the county and named many of the practicing physicians. The book dated its findings from 1800 and also contained a short section dealing with doctors who practiced prior to 1800. It further stated that the Saratoga County Medical Society was organized at the courthouse in Ballston Spa in July, 1806, and existed until 1884 when most of the members united with the State organization. The county organization then became extinct. It listed names of those attending the meeting for organization and later listed the names of all officers and members, but T. Gale was not among them. There was also available the *Centennial History of the Village of Ballston Spa, Including the Village of Ballston and Milton* by Edward F. Grose, who had published the *Ballston Journal*. The centennial period covered dated from 1807. Both books were made available by A. G. Eede, a grandson of Edward F. Grose, who had lived all his life in Ballston Spa and, although quite familiar with Ballston Spa early history, had never heard mention of one T. Gale.

In none of the books or records inspected was there any mention of "Ballston pool" which is often referred to in the book under discussion, but there is a lake nearby called "Ballston Lake" which may be considered to be the body of water in question inasmuch as the book states he also lived in Galway, and records indicate that Galway was formed by a subdivision of Ballston and is in the vicinity of Ballston Lake.

A check of the genealogic records of the Gale family reveals no mention of T. Gale of Saratoga County, nor do any of the books in the New York Academy of Medicine Library, but the library does contain a copy of the book *Electricity or Ethereal Fire*. In that library also was found a catalog of the card index of books in the Library of Congress, and therein was listed this card: "Gale, T. Brief Instructions for Administering Medical Electricity; Intended as a Mere Substitute for a More Comprehensive Work, Which Work, Containing Electricity Astronomically and Medically, Will Be Offered to the Public in a Few Months. By T. Gale, Medicoelectrician. Hartford: Printed for the Author, 1805." The Custodian of the Library of Congress was requested to search his files for the manuscript. He responded in a short time that copies of both editions were in the Library. He very kindly sent photostatic copies of the title page and first three pages of the volume published in 1805 and several pages from the volume published in 1802.

Gale himself states on pages 105 and 106 of *Electricity or Ethereal Fire* that he had been in New York City in September, 1798, that he had treated one Mrs. Abraham Bower, Washington Street, and by advice from Dr. M'Lain he had gone to Bellevue where he "relieved a few convalescents." One patient mentioned by name was Christian Pineroot who left the hospital without being discharged, and Gale "returned his name to Dr. Bailey." Perhaps the records of the Hospital may disclose more information concerning our subject.

The successful people are the ones who can think up things for the rest of the world to keep busy at.—Don Marquis

MINUTES OF THE COUNCIL

The following is a summary of the minutes of the November, 1953, meeting of the Council of the Medical Society of the State of New York.

The Council met November 12, 1953, from 9:15 A.M. to 1:30 P.M. at the Manhattan Club, Madison Square, New York City. Dr. Andrew A. Eggston, president, presided.

Secretary's Report

Executive Committee

Communications.—Dr. Anderton reported the following communications were considered at the Executive Committee meeting on November 11, 1953:

"1. A letter from the Coordinating Council of the First District Branch about a matter which is also in the report of the Economics Committee, in regard to elucidation of the *Principles of Professional Conduct.* Dr. McCarty writes:

> 'At the meeting of the Coordinating Council held on October 13, it was voted that the Coordinating Council request you, as Secretary of the Medical Society of the State of New York, to inform the American College of Surgeons and Dr. Philip Wilson, a regent of the American College of Surgeons from New York City, of the fact that the following clarification of the *Principles of Professional Conduct* of the Medical Society of the State of New York, Chapter 3, Article 6, which was passed by the Medical Society of the County of Kings, had been approved in principle by the Medical Society of the State of New York (Committee on Voluntary Health Insurance), by the Council of the Medical Society of the State of New York, and by the House of Delegates prior to the time in which this clarification of the *Principles of Professional Conduct* was approved by the Medical Society of the County of Kings.
>
> 'Below is the clarification as it was voted by the Medical Society of the County of Kings:
>
> "Chapter 3, Article 6—Section 7, Proration of fees
>
> "It is not unethical for a fee to be prorated between two or more physicians when such physicians actively participate in the rendering of medical and/or surgical care, and the fee therefore be commensurate with the services rendered; and the patient to whom such care shall have been rendered shall be advised of the participation and of the distribution of the fee through an itemized combined statement or separate statements. Such proration would be considered ethical if it was limited to instances where a contracted fee payment for a service has been made by an insurance company."
>
> 'Sincerely yours,
>
> CHARLES F. MCCARTY, *Secretary'*

"This principle has been adopted by the Council, on recommendation of the Subcommittee on Medical Expense Insurance, and was unanimously carried by the House of Delegates, as a result of a reference committee report, in 1953."

It *was voted* that action be deferred until the Subcommittee on Medical Expense Insurance reported.

"2. A letter from the American Medical Education Foundation expressing appreciation for the $25,000 which was sent by our Society."

"3. Approval was voted, at the Executive Committee's request, for President Eggston's invitation to United Medical Service to hold a ceremony of its three millionth subscriber induction at the termination of this Council meeting.

"4. Mr. President, Dr. Frank E. Wilson, who is director of the Washington Office of the American Medical Association, has sent a copy of a resolution on the International Labor Organization. The resolution was approved by the House of Delegates of the American Medical Association in June, 1953. It was introduced by a delegate from Illinois and advocates the United States withdrawing from the International Labor Organization. Dr. Wilson hopes that the Medical Society of the State of New York will further this resolution by sending word to each of the representatives and senators in Congress from New York State urging that they use their best efforts to have the United States withdraw from the International Labor Organization."

After discussion, it *was voted* to refer this to legal counsel for report at the next meeting.

"5. The last two items of correspondence come from the Education Department. The first is from Mr. Robert Killough, Jr., Assistant Commissioner for Professional Education, requesting two nominees for positions on the Medical Grievance Committee of the State Education Department. This request is routine because the term of office of Dr. Griffin and Dr. Mallon of Brooklyn will terminate on December 31. It is the expressed intention of the Regents to reappoint both of these gentlemen; however, they request the State Society to nominate two alternates for them in accordance with their usual custom. The Executive Committee yesterday approved of the nomination of Dr. Edward C.

Veprovsky of Queens and Dr. Thomas F. McCarthy of the Bronx for these two alternate positions."

Approval *was voted.*

"6. Mr. Killough also has requested a nomination for appointment to the Nurse Advisory Council of the State Education Department. You have already nominated Dr. Elton R. Dickson of Binghamton for that post, which will become vacant the first of January, as a result of not appointing Dr. Norman Moore since he has served two terms. The Education Department would appreciate the naming of one other candidate for that position, and the Executive Committee yesterday voted to recommend to you Dr. Homer Nelms of Albany. Dr. Nelms is a retired Surgeon. He graduated from Jefferson Medical College in 1923, which makes him about thirty years in practice. I move the confirmation of this recommendation."

It *was voted* to confirm the recommendation.

Dues Remission.—Upon recommendation of the Executive Committee the Council voted to remit 1953 dues of eight members because of illness and of 23 members because of military service. It was also voted to request remission of American Medical Association dues of three members for 1951, four members for 1952, 17 members for 1953, and one member for 1954.

General

Dr. Anderton reported:

"Your secretary has become aware of criticism of the length of the Council minutes, particularly as published in the JOURNAL. I have perused them and feel that I should bring to you a respectful plea for short committee reports.

"On October 23 Messrs. Langman, Miller, Rifkan, and Rochester, P & S 1955, called on your secretary to learn as much as possible about our Society as part of their course in public health.

"Since our last meeting, your secretary has attended meetings of the Second and Ninth District Branches; also, meetings of the Finance Committee and Planning Committee for Medical Policies, and Medical Expense Insurance, Scientific Program, General Practice, and School Health Subcommittees. Meetings of the Membership Standards Committee of the Blood Banks Association and its Assurance and Clearing House Committee and Board of Directors have also been attended. I also attended Dr. Alfred P. Ingegno's dinner before his formal inauguration as president of the Medical Society of the County of Kings, and the celebration of the twenty-fifth anniversary of Columbia-Presbyterian Medical Center.

"In accordance with your instructions, through the Committee on Medical Licensure and Medical Service, Dr. Percy G. Waller, of New Baltimore, was nominated to the American Medical Association for its award of the outstanding general practitioner of the year.

"Also scheduled for November are meetings of the American Cancer Society, regarding carcinoma of the lungs, Planning Committee for Medical Policies, Publication, Office Administration and Policies, and Executive Committees, as well as a meeting of the JOURNAL's Associate Editorial Board and a reception of the American Public Health Association.

"President Eggston has presented to the Society a five-volume *History of Medicine in New York*, by James A. Walsh, M.D., Ph.D., Sc.D., published in 1919. As the Society's library in Brooklyn has a copy of this work, Dr. Eggston's handsome present will be kept in your headquarters. It is recommended that a vote of thanks be accorded to our president."

A vote of thanks *was accorded* Dr. Eggston.

Supplementary

Dr. Anderton made the following supplementary statement:

"On October 8, 1953, the Board of Trustees took action on several matters in which you are interested:

"1. The secretary was instructed to write to the metropolitan county medical societies, as suggested by the Council, regarding the surplus funds of our Society's American Medical Association Convention Committee.

"2. The Board of Trustees established the following funds, to be taken from our surplus: (a) Building Fund, (b) Employees' Beneficiary Fund, and (c) Depreciation, Repair, and Replacement Fund. The Board voted to have its own interest accrue to each of these funds.

"3. The Public Relations Committee was authorized to use, out of its unexpended balance, the sum of $4,000 for pamphlets.

"4. Summary of cost to State and county societies of collecting American Medical Association dues in 1950, 1951, and 1952 is in your hands."

It was brought out in discussion that there was a great inequality in the figures supplied by various county societies and that it might be well to study the report further and have some counties recheck their figures.

It *was voted* to postpone action on the report for a month.

The Secretary's report *was adopted* with thanks.

The Treasurer's report was accepted. It included the 1954 budget, which was considered in executive session. The Council voted to transmit this budget to the Board of Trustees and also passed a vote of thanks to the Finance Committee.

Reports of Committees

Blood Banks Commission.—Dr. J. Stanley Kenney, president of the Blood Banks Association, reported:

"The Blood Banks board of directors met on November 5. Since the preceding meeting, all of its principal committees have met.

"The audit which I reported last month has been adopted for the balance of 1953, at a cost not to exceed $50. A budget committee is now preparing the budget for 1954.

"We have publicized all of the activities of the blood banks through district branch sessions and our newsletters.

"I reported to you at the last meeting we had 42 members that had applied and sent checks; they had been passed upon by our committees. Since that meeting that total has become 64.

"The directors decided, during this period of growth, to publish a monthly news release to keep the membership at the county level informed on our progress.

"We have set in motion the machinery to establish a clearing house, which we hope will be functioning by February.

"It was felt that the blood assurance program would be developed after the pilot project in Genesee is established, and we agreed to try to start that by the first of April.

"I have been asked by the board of directors to request the Council to advocate the appointment of two members in each county medical society to act as an advisory committee to the Blood Banks Association at the local level."

Dr. Vickers moved, and Dr. Azzari seconded the motion, that this be done.

Approval *was voted*.

Dr. Kenney continued:

"The tentative program for the scientific session on Thursday morning of the annual meeting has been approved; I think you will find it interesting.

"Progress is definitely being made, gentlemen. I again bespeak your interest and your activity at your local levels to keep the membership informed because by the spring we will need a great deal of local public relations help and advice."

Constitution and Bylaws.—Dr. Frederick W. Williams, chairman, stated:

"The bylaws of the Eighth District have been rewritten and have passed all the criteria of the counsel, the secretary, and the Committee on Constitution and Bylaws. Similarly for the Fourth District and also for Dutchess County. They are before you; so I move that these amended constitutions be approved by the Council: Dutchess County, Fourth and Eighth Districts."

The Council *voted* approval.

Economics.—Dr. Renato J. Azzari, chairman, presented the following:

"*Report of the Bureau of Medical Care Insurance.*—The director, Mr. George P. Farrell, reported that he had attended all of the district branch meetings, where he presented a display and distributed material on the New York State Blue Shield plans. He spoke at each meeting on the material distributed. He also spoke at the annual conference of the Woman's Auxiliary; viewed, with Mr. Al Golden, vice-president of United Medical Service, a film, 'Operation Herbert,' recently released by the Department of Public Relations of the American Medical Association; attended a meeting of the Subcommittee on Medical Expense Insurance; and conferred with the Voluntary Health Insurance Committee of the Nassau County Medical Society on the relative merits of voluntary nonprofit medical care plans."

Report of the Subcommittee on Medical Expense Insurance.—The Subcommittee met October 15, 1953, at the Syracuse Hotel, Syracuse, the chairman, Dr. Carlton E. Wertz, presiding.

The purpose of the meeting was further to stimulate local plans to activate as quickly as possible the uniform State-wide contract and to obtain clarification in regard to the functions of Health Service, Inc., and Medical Indemnity of America, Inc., the national Blue Cross and Blue Shield agencies, in relation to coverage for national accounts in local areas.

On invitation of Dr. Wertz, Mr. Reginald Cahalane, executive vice-president of the national agencies, was present.

In his remarks Mr. Cahalane stressed the importance of local plans maintaining their basic functions as far as possible. He pointed out that the original concept of the national corporations was to supplement local benefits where national accounts wanted uniform coverage in excess of the benefits offered by local plans. He stated that although Medical Indemnity of America did not yet have a contract available, a contract committee was working on three types of contracts with applicable fee schedules which would soon be available.

It was emphasized that Medical Indemnity of America, Inc., would have to be licensed in New York State in order to reinsure local plans. Mr. Cahalane stated that steps would be taken for such licensure.

It was voted that a change be made in the medical indemnity rider to the uniform State-wide contract in regard to physical therapy benefits, to read as follows: "Each subscriber shall be entitled to an amount of $10 per contract year for physical therapy while hospitalized, with report on patient's chart." The previous provision was for consultation in physical therapy. This was objected to because no provision was made for consultation in any other specialty.

A representative of Genesee Valley Medical Care, Rochester, stated his plan was unwilling at this time to offer the uniform State-wide contract on an ndemnity basis, because the plan is now issuing a service contract with a $5,000 income level. However, they had no objection to another New York State Blue Shield plan, which had agreed to sell the State-wide plan, underwriting employes in its area as a State-wide group.

Attention was called to an article appearing in the *New York Herald Tribune* of October 8, 1953, where Dr. Philip D. Wilson, the regent from New York to the American College of Surgeons, "labeled as fee-splitting a recent resolution approved by the Kings County Medical Society where a fee paid by an insurance company on behalf of a patient would be split between two physicians rendering care to the patient."

In view of the fact that this resolution was practically identical to a motion passed by the Subcommittee on Medical Expense Insurance on November 13, 1952, regarding the proration of fees where two or more doctors are involved in services rendered under an insurance plan, after discussion, it was recommended that the A.M.A. and the

College of Surgeons be notified of the action taken by the Subcommittee and approved by the Council.

At the July 16, 1953, meeting of the Subcommittee, Dr. Wertz appointed a special committee composed of Dr. Chas. Gordon Heyd and Dr. Fred M. Miller, Jr., to consider and make recommendations to the Subcommittee concerning additions to the Standards for Approval of Medical Care Plans and also to take into consideration the recent action of the House of Delegates of the State Society where it disapproved the practice of a plan making a patient's hospital accommodations the sole basis for remuneration to the physician regardless of the patient's income.

At the July 16, 1953, Subcommittee meeting a change in Article IX of the State-wide contract was approved and inadvertently omitted from the minutes. This article deals with continuance of coverage. The original article provided that an applicant "may continue this contract," whereas the new article gives the applicant the privilege of continuing coverage under a contract available in another enrolled group at the place of new employment, or a transfer to a contract which the local plan is offering on a direct pay basis. This change was necessary because from an administrative point of view it was not feasible to permit applicants to continue as direct pay subscribers under the State-wide contract.

Dr. Azzari stated:

"Approval of this report will automatically do away with the necessity of approving the resolution from Kings County, which is practically the same.

"I move, Mr. Chairman, that the director of the Bureau of Medical Care Insurance's report be approved and also the report of the Subcommittee on Medical Expense Insurance.

"That carried with it instruction to the secretary to notify the American Medical Association, the American College of Surgeons, and Dr. Philip Wilson, a regent of the American College of Surgeons, of the actions taken by the House of Delegates and the Council."

Approval *was voted.*

Ethics.—Dr. Thurman B. Givan, chairman, reported:

"The Committee on Questions of Ethics met at the State Society office, 386 Fourth Avenue, New York City, on Tuesday, November 10, 1953, at 9:15 A.M.

"Present were Drs. Thurman B. Givan, chairman, Frank LaGattuta, Ezra A. Wolff, and W. P. Anderton, secretary.

"The first thing that I would like to bring up is a letter received by Dr. Anderton, November 2, from Dr. John C. McClintock of Albany County:

> 'By now you should have received a copy of a resolution unanimously adopted by the Medical Society of the County of Albany at its meeting last Wednesday. This resolution was introduced at the suggestion of members of the American Medical Association Council on Medical Service. It was their hope that such a resolution could be endorsed by the executive group of the State Society in time to be considered at the American Medical Association meeting in St. Louis in December.
>
> 'This grew out of a request made to the American Medical Association Council on Medical Service in relation to a plan put into partial effect in one of our hospitals without prior consultation with the medical profession. A copy of the proposals made by the hospital is enclosed for your study.
>
> 'Prior to the time that this was announced, a committee in the Departments of Surgery, Gynecology, and Obstetrics had been appointed to study ways and means of providing financial assistance to the medical college. Dr. Stanley E. Alderson is chairman of this committee, and I am its secretary. This committee is most anxious to obtain a ruling from the proper authority in the State Medical Society as to whether or not practice under such a plan would be within the principles of ethics as laid down by the State Society. Is there a Council committee to whom this matter should be referred, or can you advise me?
>
> 'Would you advise me whether or not it is desirable for a member of the Albany County Medical Society to attend the next Council meeting of the State Society. I suggest this to make available to the Council all information pertinent to the resolution that might help to get a resolution to the American Medical Association House of Delegates in time for its December meeting. Both Dr. Bauer and Dr. Wertz, former presidents of the State Society, attended the American Medical Association Council meeting where this matter was discussed. If you feel it desirable to have someone from here attend the meeting, would you be kind enough to call me collect at Albany 3-0638, between two and three in the afternoon.
>
> 'With kindest regards.'

"Dr. Anderton informed Dr. McClintock he did not think it was necessary for anyone from the Albany County Medical Society to be personally present at this meeting of the Council."

Dr. Givan then read a communication from the Albany Hospital.

> "1. Whenever the hospital provides office space, secretarial help, and other appurtenances to any chief of service or other physician, it is with the understanding that there will be an agreed upon ceiling placed on the physician's total income which is derived from his medical activities, and the hospital, at its option, may bill directly or indirectly all private patients seen by the physician. The hospital expects to establish central billing within the next few months.
>
> "2. Physician's income for the purpose of this agreement will consist of all earnings received as a result of seeing patients. It shall include fees from Veterans Administration hospitals, fees for consultation in other hospitals, royalties from books and articles, honoraria for addresses, and other income of a like nature. It shall be computed on a cash basis beginning July 1, 1953, regardless of when the fees were earned.
>
> "3. Each chief of service will be responsible for the proper teaching of medical students and house officers assigned to his service and for the efficient administration of his department. He will further be responsible through the attending staff and resident staff for the medical care of patients on his service. His department will assume responsibility for meeting the consultation needs of the area which cannot be met by other practicing physicians not on a salary basis.
>
> "4. Each chief of service will undertake to see

that he and the other participating members of his department engage in enough private practice to provide an adequate income for the program from his department but, on the other hand, retain enough free time to carry out properly the teaching, research, and administrative functions of the department. The allotment of time for administration, teaching, research, and practice among the members of his department will be the responsibility of the chief of service.

"5. Each chief of service will submit an annual departmental budget for administrative review and approval.

"6. Appointments, consultations, requests for laboratory services, and hospital admissions will be handled for the time being by the departmental secretaries, as at present. Some or all of this work may eventually be taken over by a central office when established.

"7. The hospital will carry malpractice insurance covering all salaried employes. In addition, each physician not on a completely full-time basis will carry his own malpractice insurance.

"8. It is understood that office facilities will not be made available to any physician, other than those presently participating in this program, without the approval of the hospital administration.

"9. The total of the budgets approved for the clinical departments for the year 1953–1954 amounts to $273,510. Income from grants and other sources totals $108,580, leaving a deficit of $164,930 to be made up. The hospital has agreed to contribute $120,000 for the coming year, which will reduce the deficit to $44,930. This residual deficit, therefore, must be made up by the earnings of those individuals who have offices in the hospital.

"10. The budgets of the clinical departments include all expenses of operating the departments. It is anticipated that the combined earnings of the physicians in this program, over and above their ceilings, will exceed the deficit of $44,930. If and when this occurs, the first 50 per cent of such surplus will be made available for the use of the department which earned it, on a pro rata basis, subject to the general approval of the dean of the medical college and the director of the hospital. The remaining 50 per cent will be put into a teaching and research fund which will be administered for the benefit of the teaching and research program by a committee composed of the participating departmental heads, the dean of the medical college, and the director of the hospital. Contributions of physicians outside the program will be handled on the same basis.

"11. It is the hospital's hope that it will be able gradually to withdraw its financial support of this program, as more and more contributions come in from other sources, thereby reducing costs to patients in the hospital.

"12. The Medical Board will continue to have the privilege of making recommendations concerning the allocations of beds and the admission of patients to the hospital.

"13. It is understood that this program, at the outset, will affect only those physicians who presently have offices in the hospital or medical college. If and when more office space becomes available, it is planned that the program will be enlarged."

Dr. Givan stated:

"The Albany County Medical Society sent the following resolution:

'WHEREAS, the Medical Society of the County of Albany has expressed its disapproval of hospitals engaging in the practice of medicine by endorsing the recommendation of the House of Delegates of the Medical Society of the State of New York; and

'WHEREAS, plans are being introduced by administrative decision, often without prior consultation with the medical profession, to finance hospital and/or medical college deficits by requiring practicing physicians to contribute their earnings above a predetermined limit; and

'WHEREAS, in many of these plans the practicing physician is denied any voice in the management or disposition of these funds; therefore be it

'*Resolved*, that the Medical Society of the County of Albany reaffirms its disapproval of hospitals engaging in the practice of medicine; and be it further

'*Resolved*, that the Medical Society of the County of Albany disapproves any plan restricting the income of practicing physicians; and be it further

'*Resolved*, that the Council of the Medical Society of the State of New York be requested to consider and endorse this resolution; and be it further

'*Resolved*, that the Council of the Medical Society of the State of New York be requested to forward this resolution as endorsed to the House of Delegates of the American Medical Association for their consideration and endorsement.'

"As a result of a communication to Dr. W. P. Anderton, secretary of the State Society, from Dr. Albert Vander Veer, II, secretary of the Medical Society of the County of Albany, concerning the resolution I just read, the committee proposes to the Council the following resolution in substitution for the one from Albany County Medical Society:

'WHEREAS, the Medical Society of the State of New York has expressed its disapproval of hospitals engaging in the practice of medicine; and

'WHEREAS, plans are being introduced by administrative decision, often without prior consultation of the medical profession, to finance hospital and medical college deficits by requiring practicing physicians to contribute their earnings above a determined limit; therefore be it

'*Resolved*, that the American Medical Association disapproves of hospitals engaging in the practice of medicine; and be it further

'*Resolved*, that participation of a hospital in the professional earnings of a physician (except for equitable payment to the hospital for services it renders the physician, such as provision of office space, secretarial service, supplies) constitutes practice of medicine by the hospital and is therefore disapproved.'

"We are communicating this to the Council because, as you know, the House of Delegates meets the first of December, and we thought we had better give some answer to this problem."

It was moved by Dr. Geis and seconded by Dr. Dorman that this report be adopted.

After discussion, it was moved by Dr. Anderton and seconded by Dr. Givan to amend the motion to read that the delegates to the American Medical Association be given power to decide whether or not this substitute resolution should be introduced, after they have had an opportunity to confer with the Albany County Medical Society.

The amendment was put to a vote and *was unanimously carried.*

Then the motion as amended was put to a vote and *was unanimously carried.*

It *was voted* that the Secretary be instructed to write to Albany County that their resolution, presented to the Council, raises no question of ethics; that they should hold hearings to determine all of the facts. Those facts should include the proportion of salary to be charged for rent, secretarial service, and all other factors; and then determine at the local level whether it is unethical and so advise the parties; also that the Education Law, Article 131, Section 6514, paragraph 2 (f) seems applicable to the situation.

Dr. Givan continued:

"A resolution was received from the Bronx County Medical Society by Dr. Anderton on November 2, 1953, concerning physicians addressing podiatrist societies on the subject of 'Causes, Management, and Surgical Amputation of Gangrenous Toes,' in which it has asked the State Society for a specific opinion.

"The committee approves teaching of podiatrists by the medical profession, but such teaching or lectures should be confined to that part of the anatomy which the law permits the podiatrists to treat. It is also suggested that guidance be sought from the forthcoming regulations of the Workmen's Compensation Board of the New York State Labor Department, Miss Mary Donlon, Chairman, 80 Centre Street, New York City.

"I move the adoption of this opinion and suggestion."

After discussion it *was voted* to take no action.

Dr. Givan continued:

"Another communication from Mr. Nicholas Gesoalde, secretary of the New York State Pharmaceutical Association, concerns resolutions that were acted upon at the last meeting of the Executive Committee of the New York State Pharmaceutical Association, at Saranac Lake, New York, June 18, 1953.

"The first resolution, which it is not necessary to read, concerns telephone use between physician and pharmacist. The committee recommends to the Council its approval and that each county medical society be notified of this action. This has to do with a hookup between telephones of a doctor and a pharmacist. The State Pharmaceutical Association disapproved this, and we went along with them."

It *was voted* to approve the recommendation of the committee.

"From the same source, the New York State Pharmaceutical Association, Resolution No. 7B, concerning the channeling of prescriptions to preferred pharmacists. It is along the same idea of a doctor using one pharmacist and requesting that all of his prescriptions go through that pharmacist. They disapproved of that, and the committee recommends to the Council its approval of this resolution of the New York State Pharmaceutical Association, and that each county medical society be notified of that action."

It *was voted* to approve the recommendation of the committee.

"Also from the New York State Pharmaceutical Association, Resolution No. 14, which concerns advertising on prescription blanks and is against the idea of advertising of pharmacists or doctors on prescription blanks. The committee voted to approve the resolution and that the county medical societies be notified."

The recommendation of the committee *was approved.*

Dr. Givan continued:

"A letter dated September 30, 1953, was received from Dr. Lester Lando of Monsey, New York, concerning a question of ethics, namely, whether a physician prescribing contraceptives and dispensing them to patients is ethical. The committee wishes to recommend to the Council that we feel it is a matter for the county societies to settle. Section 6 of Chapter I of the *Principles of Professional Conduct* covers this point. I move this information be referred to the county societies."

It *was voted* to approve the recommendation of the committee and refer this information to the county societies.

"Lastly, the Council referred to the Committee on Ethics a motion from the House of Delegates 'that the question of the study of any resolutions having to do with the code of ethics be referred to the Council who will report to that House next May an implementation to find some better way of modifying the code of ethics than that which has been done in the past.'

"The committee suggests to the Council that, as a check for hasty action, one year elapse before the change is made, and that Chapter XVII of the Bylaws be amended so that, following the word 'bylaws' in Section 1 of Chapter XVII, there will be inserted the words, 'or the *Principles of Professional Conduct.*' "

It *was voted* to approve the recommendation.

The report as a whole, as amended, *was adopted.*

Hospital and Professional Relations.—Dr. James Greenough reported for Dr. Harold F. Brown, chairman, who was ill:

"Dr. Brown asked me to report for that committee. As the primary objective to be attained, we felt that one premise should be adopted: Any physician may rightfully enter into a contract with a hospital for remuneration to administer, teach, or engage in research. Any fee paid by a patient for professional care, diagnosis, or therapeutics should be paid directly to the physician rendering this care. Salary paid for administration, teaching, or research is a legitimate hospital cost, and the hospital may charge for it.

"It follows then that some uniform cost accounting system should be instituted in all hospitals which would demonstrate the financial arrangements between physician and hospital.

"As part of the agreement between physicians and hospitals all interns and residents should be adequately supervised.

"For the benefit of the hospitals the physicians should work actively to support the doctrine that all cases in the hospital whose charges are paid by a third party shall pay the actual cost of care.

"A continuing committee should be formed to arbitrate disagreements between physicians and hospitals."

He then introduced a motion that the president be empowered to appoint a special committee from the Medical Society of the State of New York further to discuss the suggestions of the Committee on Hospital and Professional Relations, to try to arrange joint meetings with representatives of the medical schools and the hospital administrators, and at those meetings to bend every effort to establish a satisfactory agreement between the physicians, the hospitals, and the medical schools.

After discussion, it *was so voted.*

Legislation.—Dr. James Greenough, chairman, reported:

"Since the last meeting of the Council your chairman attended the final meeting of county legislation committee chairmen on October 16 in Albany. While we have been unable to meet all the upstate legislation chairmen, we have discussed with the majority of them our plans and program for the 1954 session of the Legislature. I feel that we are in much closer touch with these chairmen and, as a result, may expect better response when we need it during the next session. On the whole, the chairmen who have attended these meetings have been enthusiastic, and I feel that if continued another year, we may expect even better results.

"Your chairman met Dr. Harold F. Brown, chairman of the Hospital and Professional Relations Committee, in Buffalo, November 7, and discussed with him proposals for action in a conference of the Medical Society with representatives of the hospitals and the medical schools.

"Last night a meeting was held by Drs. Eggston, Anderton, Gibson, and Smith, Mr. Martin, and your chairman to discuss a new Medical Practice Act. Many features of the act were discussed, and some progress made toward an understanding of the problems involved."

Dr. Greenough stated that Dr. Kenney referred to him a request from a component society for the State Society to furnish 4,000 printed postcards to be sent to Albany legislators regarding their votes relating to chiropractor's bills. Dr. Greenough had replied that such stereotyped pressure had little value, that at present there seems little likelihood of passing a chiropractor's licensing act in 1954, and that a sporadic campaign might hamper our Albany office.

Executive Officer.—Dr. Harold B. Smith stated:

"I would like to call the attention of the Council to the retirement of Miss Adeline Briggs as of the first of November. Miss Briggs was a faithful and competent employe in the Albany Office for twenty-nine years. She started her employment about one month after Dr. Joseph Lawrence commenced his duties as the first executive officer of the Society, and I know you want to join me in extending to Miss Briggs our best wishes for a very fruitful and interesting happy retirement. I think those sentiments should appear in such form as is usually the case under such circumstances."

The Secretary *was requested* to extend the above sentiments to Miss Briggs.

Malpractice Insurance and Defense Board.—Dr. Thomas M. d'Angelo stated:

"Your Malpractice Insurance and Defense Board is holding practically all day meetings every month. We began yesterday morning at 9:30, and we finished at 11 o'clock at night. The committee as a whole is viewing every applicant whose malpractice insurance we are considering cancelling or getting information about. The committee is doing this as a whole and not apportioning out to each individual member some of the work. I think that is one reason for the budgetary increase today. We were running short of funds because we have to run our meetings now for the entire day and most of the night."

Dr. Eggston reported that he had appointed Dr. J. Stanley Kenney to the Malpractice Insurance and Defense Board to fill the vacancy left by Dr. Chas. Gordon Heyd's resignation.

Office Administration and Policies.—Dr. John J. Masterson, chairman, reported that, at a meeting of the committee on November 11, authorization was given for the employes' Christmas party and for the allowance of a half day for Christmas shopping.

He stated:

"There was a general discussion of changing the procedure regarding the dropping of delinquent members on December 31 of any year, rather than waiting till March 31 of the following year. It was voted to request the Council to approve the following memorandum:

> 'To the Secretaries and Treasurers of the County Societies:
>
> 'Heretofore, it has been the policy of the Medical Society of the State of New York to drop from its membership rolls any member whose State Society assessment was not received by the State Society by March 31 of the succeeding year. This policy is to be discontinued.
>
> 'The Bylaws of the Medical Society of the State of New York, Chapter I, Section 2(c), state:
>
> > "A member whose dues and assessments are unpaid after December 31 of any current year shall automatically be dropped from the rolls of membership of both his county society and the State Society, without notice to such member by his county medical society or the Medical Society of the State of New York, or without further action on the part of either the county society or the State Society, and upon such date, he shall automatically cease to be a member of both the county society and the State Society."
>
> 'Therefore, in accordance with the Bylaws, a member whose State Society assessment has not been received in the office of the State Society by December 31 will be considered dropped from the membership rolls of the Society on December 31 for nonpayment of State Society assessment.
>
> 'State Society assessments received in this office after December 31 for a delinquent member are to

be accompanied by payment of the State Society assessment for the year he wishes to be reinstated in order that he might be returned to good standing in the State Society.

'This policy commences with the year 1953.'

"I move the acceptance of the report."

After discussion, the report *was accepted.*

It was agreed that, if the dues were in the mail by the 31 of December, they would be acceptable. It was felt that January 15 should be the final date.

Publication Committee.—Dr. John J. Masterson, chairman, reported that, at a meeting of the committee on November 11, the reports of the editor and of the business manager were accepted; it was decided to permit editorials in the JOURNAL to carry the initials of the author; to publish, at the discretion of the editor, Dr. Tasker Howard's letter regarding Dr. Max Einhorn; to notify tobacco advertisers that the JOURNAL will not accept tobacco advertisements containing medical implications or claims; and it was agreed to request authorization from the Council for the editor of the JOURNAL to attend future clinical and annual meetings of the American Medical Association.

He stated:

"There was a general discussion of a letter received from Mr. Harold Howell, in which he suggested that county society bulletins be supplied with material of interest to members. It was the sense of the meeting that, for budgetary reasons, we could not go to the expense of such a program. It was suggested that Dr. Anderton answer this letter by suggesting that the American Medical Association News Letter, the *Newsletter* of our Public and Professional Relations Bureau, and columns of the JOURNAL be used as sources.

"There was a general discussion regarding the mimeographing of a bulletin containing resolutions presented to the House of Delegates at its annual meetings with the action taken by the House noted thereon. It was the sense of the meeting that this be tabled to the March, 1954, meeting of the committee.

"There was a general discussion of the enormous amount of work attached to verifying *Directory* information. It was decided that we verify only hospitals and certifying medical agencies in the biographic data of the 1955 *Medical Directory of New York State.*

After discussion, it *was voted* to accept the report.

Public Health and Education.—Dr. Theodore J. Curphey, chairman, reported that he had attended the meeting of the Scientific Program Subcommittee of the Convention Committee, the annual meeting of the Second District Branch, and meetings of the subcommittees on General Practice and School Health.

His report stated:

1. The meeting of September 29 of the Subcommittee on Geriatrics with the Public Medical Care Subcommittee of the Committee on Economics was not reported at the October meeting of the Council. The primary purpose of the meeting was to determine the specific area in which each of the subcommittees should operate, inasmuch as they must both deal, in part, with the same segment of the population. Discussion brought out two conclusions: (*a*) The functions of each subcommittee should be redefined and submitted to the Council; (*b*) a letter should be written to Dr. I. Jay Brightman, Director of Medical Services for the State Welfare Department (or to Commissioner Lansdale), requesting statistics concerning the number of physicians in the State caring for the indigent aged, where they are located, how many calls are made, the adequacy of the care given them, and other pertinent data.

The committees also discussed the resolution from Monroe County submitted to the House of Delegates in May, 1953, recommending that the Governor appoint a commission composed of prominent persons, medical and nonmedical, to study the problem of the aged and to make recommendations. The point was raised as to whether or not Dr. Horn, who introduced the resolution, had been aware of the existence of the Joint Legislative Committee on the Problems of the Aging, known as "the Desmond Committee." That committee's latest report contains considerable information from the economic aspect which might be of use to the two subcommittees. It was decided that (*a*) it should be determined from Dr. Horn whether or not he was aware of the existence of the Joint Legislative Committee.

Dr. Anderton stated:

"Mr. President, as a result of the direction of the House of Delegates, I wrote to the Governor, and previously so reported to the Council.

"I also have been in communication with Dr. Horn and have told him about the Desmond Committee, and he has received a copy of their last report."

Dr. Curphey's report continued:

"(*b*) The report of the Desmond Committee should be sent to all members of the two subcommittees.

"2. At the meeting of the Convention Committee on October 17, it was agreed that a morning session would be given to a program in geriatrics. Your chairman is to discuss the details with Dr. Bernard Pisani of New York University College of Medicine, associate chairman of Postgraduate Lectures for the annual meeting.

"3. The principal agreement reached at the meeting of the Subcommittee on General Practice on October 29 concerned a survey of all the hospitals in the State outside metropolitan New York in an endeavor to determine their position with respect to the status of the general practitioner in the hospital. A questionnaire, with a covering letter on the Council Committee's stationery, will be sent to the head of each medical board, with a copy to an active Academy of Practice member in the corresponding locality.

"4. Dr. William E. Ayling, chairman of the Subcommittee on School Health, reported on the Fourth National Conference on Physicians and Schools, which met in Highland Park, Illinois, September 29 to October 2, 1953. He emphasized that there is need for a standard for communication between school and physician. He said that an effort should be made to have local medical societies discuss this problem of interchange of health information with local school authorities, with the view of jointly devising simplified and up-to-date methods of communication."

Dr. Curphey supplemented his report as follows:

"I would like to add a summary of the number of lectures that have been arranged by the committee in the past month. There have been 24 lectures among 15 counties.

"I should also like to ask, Mr. President, that you consider reappointing Dr. Garra Lester, of Chautauqua, to the Subcommittee on General Practice. This is based on the desire and request of the Chairman of the Subcommittee on General Practice, Dr. Bratt. I so move."

It *was so voted.*

Dr. Curphey continued:

"I have also been asked by the New York State Academy of General Practice to present this resolution that was recently passed at their annual meeting. It is called:

'RESOLUTION NO. 15

'WHEREAS, the Education Law of the State of New York requires medical inspection of each school child yearly by a competent qualified physician, and

'WHEREAS, the quality and thoroughness of such examinations varies widely throughout New York State, and

'WHEREAS, the problems involved vary widely between a small rural school and a large centralized district, and

'WHEREAS, requirements have been set up for full time school physicians; therefore be it

'*Resolved*, that the New York State Academy of General Practice go on record as recommending:

'1. That the New York State Education Department in collaboration with the New York State Academy of General Practice, the New York State Medical Society, and the New York State Association of School Physicians set up standards and qualifications also for the office of part time school medical inspector or physician.

'2. That a term of office for such position shall be four years in order to obtain continuity of direction.

'3. That equitable salary standards be established.

'4. A copy of this resolution should be sent to the Commissioner of Education, New York State Medical Society Council, New York State School Physicians Association, and the chancellor of the Board of Regents.' "

It *was voted* that this resolution be referred to the Committee on Public Health and Education for report at the next meeting of the Council.

Dr. Curphey added:

"There is one final matter that I should like to be advised on by the Council. On October 8, Dr. Nelson, the Chief of Surgical Service, of the Veterans Administration Hospital in Albany, wrote a letter asking whether the Committee on Public Health and Education will support a program which had been set up some months before contingent on the receipt of an adequate budget from the Veterans Administration for postgraduate education in the hospital. He says that these programs are for the joint benefit of the staffs and residents of the Albany Veterans Administration Hospital and the Albany Hospital, as well as the students at the Albany Medical College. They are also to be considered as part of the postgraduate training program of the Albany Medical College and as such to be available to all interested local doctors.

"There are four lectures included in this plan: by Drs. Hinton, Randall, Ray, and Pool. These men are all in our course outline book, and he wants to know whether it would be possible for us to finance the visits of these lecturers to Albany as part of the postgraduate program. He says also:

'Can we, in our combined teaching and postgraduate training program, make use of others of your listed lectures if we do it properly in the future, making all arrangements through your office?'

"I answered briefly by saying it was not our policy at the moment to subsidize postgraduate education developed by a governmental medical facility and that I would present the matter to the Council for advice and direction."

After discussion the Council *voted* that they did not approve the principle of subsidizing Federal agencies for postgraduate medical education and that the chairman be instructed so to notify Dr. Nelson.

"The feeling was that we should cooperate at a local level, both in county and in the State, but that we should oppose Federal agencies coming into the practice of medicine in New York State."

It *was voted* to adopt the report as a whole as amended.

Public Relations.—Dr. Floyd S. Winslow, chairman, submitted the following report:

Continuing the work of publicizing the district branch meetings, special releases were sent to local papers in the Second and Ninth Districts. Registration of guests at these two meetings was handled by the field representatives. Mr. Walsh was at the Ninth District Branch meeting in New City while Mr. Tracey worked at the Second District Branch in Patchogue. Mr. Miebach attended both meetings for the purpose of taking care of representatives of the press.

One of our principal projects was the promotion of the series of 12 pamphlets now being prepared by the Bureau's staff. These will present the medical profession's views on important medicoeconomic and public relations matters. The field men spent a great portion of their time in visiting county medical societies in order to get firm commitments for quantities of the pamphlets. To date the Bureau has obtained orders for approximately 50,000 copies of each pamphlet or a grand total of 600,000 pamphlets.

Mr. Miebach attended the meeting of the New York State Health Council which was held at the DeWitt Clinton Hotel in Albany, October 22 and 23.

A request was received by the Bureau from the A.M.A. for copies of several items in the PR Kit distributed at the recent Public Relations Conference. The A.M.A.'s Public Relations Department asked for 180 copies of four items for the purpose of including them in its "PR Doctor," a compilation of the latest materials on medical public relations which is sent to key medical people throughout the country. The requested copies, or permission to reproduce them where copies were not available, were sent to the A.M.A. Public Relations Department.

Carrying out the instructions of the Public Relations Committee, the editors of the *Newsletter* published a questionnaire about the *Newsletter* in the November issue. The questionnaire asked doctors whether they were satisfied with the *Newsletter*, what they liked or disliked, and invited constructive suggestions.

The Bureau also cooperated in the promotion of Diabetes Week, November 15 to 21. A special news release was mailed to New York State daily newspapers, wire services, and radio stations containing a message from Dr. Eggston urging all residents to take advantage of the free testing facilities offered during that week.

Several releases were prepared and mailed to newspapers announcing the holding of postgraduate lectures in the following counties: Chautauqua, Onondaga, Ontario, Otsego, Steuben, Suffolk, and Sullivan.

Assistance was given to the Woman's Auxiliary in many activities as reported elsewhere. Among the more important projects undertaken was a letter by your chairman addressed to all county medical society public relations chairmen urging them to cooperate in the implementation of the Health Poster Contest in their counties. Mr. Miebach and Mr. Walsh addressed the Seventh Annual Conference of Presidents and Presidents-Elect of the Auxiliary at the Hotel Utica. Speeches were also made at the First, Sixth, and Ninth District Branch Auxiliary meetings.

Acting in cooperation with Dr. James H. Lade, director, Office of Medical Defense, New York State Department of Health, the field representatives contacted county societies concerning the Medical Aide Recruitment Program. The field men followed up the letter sent by Dr. Eggston to each county medical society president for the purpose of clarifying details of the program. They also assisted by supplying Dr. Lade's office with certain requested information.

It *was voted* to accept the report.

Woman's Auxiliary.—Dr. Edward T. Wentworth, chairman, reported:

"The National Auxiliary has organized a Committee on Mental Health. The State Auxiliary wants to know if it is all right for them to have a Committee on Mental Health."

Approval was expressed, and Dr. Wentworth stated he would have them contact the Mental Hygiene Subcommittee of this society for details.

Workmen's Compensation.—Dr. Gerald D. Dorman, chairman, presented the following report:

"Your director attended two meetings of the special reference committee on the Podiatry Fee Schedule, on October 9 and 16, 1953. The committee consisted of a representative of the Podiatry Practice Committee, Dr. Teresa McGovern; the Podiatry Society of the State of New York, Dr. M. Wolfson; the Associated Industries of New York State, Inc., Mr. J. M. McDonald; the Self-Insurers Association, Mr. J. J. Regan; the New York State Federation of Labor, Mr. Thomas J. Curtis; the New York Compensation Insurance Rating Board, Mr. Henry D. Sayer; Mr. Leo Murin, Associate Counsel of the Workmen's Compensation Board, and Dr. David J. Kaliski of the Medical Society of the State of New York. Mr. Henry Sayer was elected chairman of the committee.

"The Committee received a draft of the proposed podiatry fee schedule dated September 30, 1953, which schedule had been discussed at the first meeting of the committee before Miss Donlon on October 9, 1953. At the latter meeting, both your chairman and director and Dr. George H. O'Kane were present. As a result of these two meetings a suggested fee schedule was drawn up which was agreed upon by a majority vote.

"Reference to the original fee schedule proposed by the podiatrists will show that fees recommended by the reference committee are substantially lower in those instances where it was agreed that these services could be rendered by podiatrists. A larger number of items in the original fee schedule were not considered because at the original meeting on October 9 it developed that there was opposition on the part of the Medical Society of the State of New York and others to the rendering of certain services by podiatrists which seemed to be outside of their legal rights. The question of promulgation of the fee schedule so far agreed upon is now up to the chairman of the Workmen's Compensation Board.

"Your director participated in arbitration proceedings in Westchester County on October 27, 1953, and in Nassau County on October 29, 1953.

"There has arisen a delicate situation in Buffalo in which a physician who obtained an unfavorable award at an arbitration on June 26, 1953, has appealed to the court for review of the arbitration proceedings. Your director has been appealed to by both parties to try to effect an amicable settlement of the dispute, and discussions are now going on."

Dr. Dorman stated:

"Today I have received a letter from the Podiatry Society of New York. They wish that the Council would reconsider the instructions given Dr. Kaliski last time authorizing him to request lower rates for podiatrists than are used by general practitioners in this State for compensation fees. The Fee Schedule Committee approved a schedule on a divided vote which gave the podiatrists 20 per cent less than the general medical practitioner. It is a recommendation to the chairman of Workmen's Compensation. After it had been passed on a 20 per cent lower than the general practitioner basis, the podiatrists then moved that they get the 8 per cent increase which the physicians got back in May of 1951 I believe it was, and that was passed, the implication being that they were satisfied with it, but now they come up with a formal request:

'The Podiatry Society feels that authorized podiatrists should receive the same fees as general medical practitioners. Naturally, the podiatry fees should only cover that area of practice which is permitted us by the State Education Law. We are not requesting that our membership receive the same fees as paid to medical specialists.

'In view of the above, I hope that you can bring this matter to the attention of the Council of the Medical Society, and that they, in turn, will withdraw their present objections to the proposed podiatry fee schedule.'

"That was the one that did not include the 20 per cent decrease, and I would like to get an expression of the Council's opinion on this matter."

It *was voted* that the fees as authorized at the last Council meeting, with a 20 per cent decrease, stand.

Dr. Dorman continued:

"A telegram came from Dr. Charles McCarty, of the Coordinating Council, First District Branch:

'The following letter is being referred to the Council and to the State Compensation Committee for an opinion as to whether: (1) a physician is allowed to charge for transfusions which were administered by an intern and supervised by the physician. (2) Whether the New York City Department of Hospitals is allowed to charge for Medical Services other than those which are named in the State Compensation Law.'

"This letter has been received by the Coordinating Council from Dr. David Teplitsky, 135 Eastern Parkway, Brooklyn:

'Dear Dr. McCarty,

'A situation has arisen by which the Commissioner of Hospitals of the State of New York has demanded a refund of compensation fee paid to me for transfusion or intravenous injection which were administered on my service and under my direction at the Kings County Hospital in Brooklyn. In the past I have always billed the insurance company for these services, and it was my belief that no hospital could charge for my medical services with a very few exceptions which are provided by law. Under the Workman's Compensation Laws of the State of New York as amended in 1944 no physician could give any part of a fee with the exception of a certain part of the x-ray fee, and no hospital itself was allowed to collect fees for any type of medical care. In 1947 the laws were amended to allow voluntary hospitals to bill for x-ray services and for physical therapy, anesthesia and pathology. When rendered under the supervision of a salaried physician on the staff, in 1938 General Order 307 of the Department of Hospitals provided that infusions and transfusions could be billed for by the Department of Hospitals when these services were performed by salaried physicians. It is my belief that the Workman's Compensation Law of the State of New York as amended in 1944 and in 1947 superseded any general order issued by the Department of Hospitals.

'Signed by Dr. David Teplitsky

'Chas. F. McCarty, Secretary Coordinating Council, First District Branch, Medical Society State of New York, 1313 Bedford Avenue, Brooklyn, N. Y.'

"Under the Workmen's Compensation Law it has been decided by the courts that a doctor is allowed to charge for those intravenous treatments given by interns to patients under his care on his compensation cases, and it has been held that the Workmen's Compensation Law supersedes the directives of the Department of Hospitals. I request the authorization of the Council to permit Dr. Kaliski, our director, so to answer this telegram."

After discussion it *was so voted.*

Dr. Dorman stated:

"I also would like to report that I sat in on the Disabilities Benefits Advisory Committee on October 20 with Miss Mary Donlon. There are a couple of things that I have asked Dr. Redway to bring out in the JOURNAL because they have been late in getting reports on the disabilities benefits from people employed in industry. The reports reach the department as the people are ready to get back to work, and technically those are outlawed under the law. We are drawing it to the attention of the general practitioner to get those medical certificates in and renewed every two weeks so that people can draw their disability benefits as well as compensation benefits.

"There is one thing that I would like to call to the attention of the Legislation Committee, and that is that the podiatrists are planning to put in a bill at this coming legislature so that they will get the disability benefit provisions such as they enjoy under compensation. I don't imagine there is anything particular to be done about it, but that is a matter of information."

The report as a whole *was adopted.*

The best reformers the world has ever seen are those who commence on themselves.—GEORGE BERNARD SHAW

THE MONTH IN WASHINGTON

The second session of the Eighty-third Congress is getting down to its task under conditions that could mean passage of considerable legislation of importance to medicine. Holding over from last session, or certain to be introduced this year, are bills touching on virtually every phase of medicine where the Federal government could become involved. New laws are being proposed on veterans' care, social security, national health plans, care of military dependents, medical scholarships for military personnel, and many other subjects.

What will be done with this mass of legislation depends on an administration whose control over Congress is tenuous and a Congress looking forward to the fall, when all members of the House and one third of the Senate must be elected or re-elected. As is the case every two years, most lawmakers will be listening closely to what is being said back home.

Awaiting congressional action is the administration's plan for extending the social security system to bring more than ten million additional persons, including physicians, under Old Age and Survivors Insurance (OASI). This legislation is known to have less support in the House Ways and Means Committee, where it is being handled, than it has in the Executive Branch.

The American Medical Association, supported by dentists, lawyers, farmers, and many other groups of self-employed, has consistently opposed inclusion under OASI. The question now is whether this opposition will be articulate enough to convince Congress.

In place of social security for physicians, the A.M.A. for several years has actively promoted legislation identified first as Reed-Keogh, then as Jenkins-Keogh, named for the sponsoring congressmen. This would allow physicians and other self-employed to defer income tax payments on a portion of their income, placed in restricted pension funds, obtainable in the form of benefits only in case of disability or at the specified retirement age. In this effort the physicians again are joined by a large group of associations representing the self-employed.

Other possible amendments to the social security law involve total and permanent disability payments and waiver of OASI premiums for the disabled, so their final pensions will not be reduced because of periods when they had little or no income. In each of these, medical determinations would be required. In the past these bills have threatened an expansion of the Federal medical program, have laid out an unreasonable role for the physician, or have called for compulsory rehabilitation. While not opposed to the objectives, the A.M.A. has urged that both the patient and the physician be protected. In place of waiver of premium the A.M.A. proposes that pension rates be based on the ten best earning years, thus obviating the need for medical determinations.

As in other sessions Congress this year probably will be asked to pass legislation providing free hospitalization under OASI for all persons past sixty-five covered by OASI and for other beneficiaries of the program. In other years Congress has not taken this idea seriously.

The veterans program is certain to provoke action. Last November the Veterans Administration amended its forms to require more financial information from veterans applying for hospitalization of nonservice-connected disabilities, who must state that they cannot afford private care. Congress may want to clarify further the government's obligation to veterans. It is expected also that special effort will be made to expand medical benefits for veterans by such methods as increasing the periods in which certain diseases may be presumed to be of service origin.

The A.M.A.'s position on the care of nonservice-connected cases is well known. It consists of three points: (1) the best possible care by VA for actual service-connected cases, (2) until local and state facilities are adequate, VA care for long-term tuberculosis and neurologic cases when the veteran himself cannot pay, and (3) all other nonservice-connected cases to be the responsibility of the veteran himself, his family, or his community.

The Defense Department has served notice that it will press hard this session for implementation of the Moulton Commission's recommendations for broadening the medical care program for military dependents. The Commission favored caring for as many dependents as possible at military installations, with the others receiving private care and the Federal government paying all but a token of the cost. At its December meeting the A.M.A.'s House of Delegates proposed that in this country the military provide medical care for dependents only where private facilities are not adequate.

Also up for decision this year is a Defense Department proposal that the Federal government furnish medical, dental, and nursing scholarships with the recipients obligated for government service at the rate of one year for every year of the scholarship.

There is a strong possibility of pressure to enact a program under which the Federal government would in one way or another subsidize private health insurance plans. The idea is known to interest Representative Charles Wolverton (R., N.J.), chairman of the House Interstate and Foreign Commerce Committee, which last fall conducted a series of hearings on health matters. Senators Ives (R.,

[Continued on page 422]

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MEDICAL NEWS

County Medical Societies Elect Officers

Officers for the current year of county medical societies have been reported as follows:

Genesee County Medical Society—Dr. George S. Young, Batavia, president; Dr. Paul J. Maloney, Batavia, vice-president; Dr. Ralph B. Smallman, Batavia, secretary, and Dr. Alfred L. George, Batavia, delegate.

Livingston County Medical Society—Dr. Vincent I. Bonafede, Sonyea, president; Dr. Emerson Learn, Mt. Morris, vice-president; Dr. Charles Greenberg, Sonyea, secretary-treasurer; Dr. G. E. Lynch, Avon, delegate, and Dr. E. Sanders, Lima, alternate.

Monroe County Medical Society—Dr. Fred W. Bush, Rochester, president; Dr. Gordon M. Hemmett, Rochester, vice-president; Dr. John H. Schultz, Rochester, secretary; Dr. Robert J. Calihan, Rochester, treasurer, and Dr. Joseph P. Henry, Rochester, Dr. Donovan M. Jenkins, Webster, Dr. Christopher Parnall, Jr., Rochester, and Dr. Ellis B. Soble, Rochester, as delegates and alternates to the State Medical Society.

Orleans County—Dr. Arden Snyder, Holley, president; Dr. James G. Parke, Albion, vice-president; Dr. Kenneth Clark, Medina, secretary, and Dr. John G. Ellis, Albion, treasurer.

St. Lawrence County Medical Society—Dr. Abraham Levine, Massena, president; Dr. Harry Mills, Gouverneur, vice-president; Dr. Morris Elder, Massena, treasurer; Dr. William R. Carson, Potsdam, secretary; Dr. Thomas M. Watkins, Potsdam, delegate to the House of Delegates; Dr. M. D. Stevenson, Potsdam, delegate to the district branch, and Dr. Thomas M. Watkins, Potsdam, Dr. P. T. McGreevy and Dr. D. C. Tulloch, Ogdensburg, to the board of censors.

Schenectady County—Dr. Arthur Q. Penta, Schenectady, president; Dr. William J. Jameson, Schenectady, vice-president; Dr. Ralph E. Isabella, Schenectady, secretary, and Dr. Carl F. Runge, Schenectady, treasurer.

Seneca County Medical Society—Dr. Oscar Diamond, Willard, president; Dr. Willis Allen, Ovid, vice-president; Dr. Bruno Reimer, Romulus, secretary-treasurer; Dr. Stanley Folts, Interlaken, delegate to the State Convention; Dr. Arthur Baldwin, Waterloo, alternate delegate to the State Convention; Dr. Oscar Diamond, Willard, delegate to the district branch; Dr. Saul Towers, Seneca Falls, alternate delegate to the seventh district branch; Dr. Roy Wallace, Seneca Falls, new member of the compensation committee, and Dr. Oscar Diamond, Willard, chairman of the compensation committee for 1954.

Steuben County Medical Society—Dr. J. Frederick Kenzie, Bath, president; Dr. Charles A. Rose, Hornell, vice-president; Dr. Milton Tully, Hornell, secretary-treasurer; Dr. W. J. Tracy, Hornell, and Dr. R. E. Travis, Hornell, delegates, and Dr. G. W. Chessman, Hornell, Dr. J. J. Sanford, Bath, Dr. H. E. Elwood, Jr., Corning, Dr. M. J. Chimera, Corning, Dr. E. P. Smith, Bath, and Dr. A. J. Karl, Hornell, to the board of censors.

Suffolk County Medical Society—Dr. Fred Bromberg, Bay Shore, president; Dr. Victor K. Young, Riverhead, first vice-president; Dr. S. Shlimbaum, Bay Shore, second vice-president; Dr. B. L. Feuerstein, Bay Shore, secretary; Dr. W. H. Eller, Sayville, treasurer; Dr. W. C. Carhart, Bay Shore; Dr. A. E. Corwith, Bridgehampton, and Dr. C. E. Drysdale, Northport, to continue for one year on the board of censors; Dr. L. F. Garben, Islip, Dr. P. S. Horenstein, Bellport, Dr. M. W. Molinoff, Brentwood, and Dr. W. C. Travis, Northport, to the board of censors for two years; Dr. V. K. Young, Riverhead; Dr. F. J. O'Neill, Central Islip; Dr. J. L. Sengstack, Huntington, and Dr. S. Shlimbaum, Bay Shore, delegates to the State Society; Dr. D. J. Wexler, Islip Terrace, alternate, and Dr. P. S. Horenstein, Bellport, and Dr. W. S. Stakes, Patchogue, delegates to the district branch.

Warren County Medical Society—Dr. Lester C. Huested, Glens Falls, president; Dr. W. P. Simmonds, Glens Falls, vice-president; Dr. Seymour Hopfan, Glens Falls, secretary; Dr. Norman A. Harvey, Glens Falls, treasurer; Dr. Morris Maslon, Glens Falls, secretary; Dr. Norman A. Harvey, Glens Falls, treasurer; Dr. Morris Maslon, Glens Falls, delegate to the State Medical Society, and Dr. H. A. Bartholomew, Glens Falls, Dr. B. B. Blodgett, Chestertown, and Dr. I. R. Juster, Glens Falls, to the board of censors.

Washington County Medical Society—Dr. Milton Greenberg, Hudson Falls, president; Dr. Charles H. Cole, Cambridge, vice-president; Dr. Newton Krumdieck, Cambridge, secretary; Dr. R. E. Borrowman, Fort Edward, treasurer; Dr. Leo R. Thume, Fort Ann, Dr. Philip Harff, Cambridge, and Dr. Eric Seligman, Whitehall, to the board of censors; Dr. W. S. Bennett, Granville, and Dr. Leslie A. White, Whitehall, to the committee on legislation, Dr. R. Leith Skinner, Greenwich, Dr. John L. McCann, Hudson Falls, Dr. Ward Jenkins, Salem, Dr. Newton Krumdieck, Cambridge, Dr. R. E. Borrowman, Fort Edward, and Dr. Leslie Ofner, Whitehall, to the public relations committee; Dr. W. S. Bennett, Granville, delegate to the State Society; Dr. Clayton I. Oestreicher, Cambridge, alternate delegate, and Dr. V. K. Irvine, Granville; Dr. Clayton I. Oestreicher, Cambridge, and Dr. Joseph Feingold, Fort Edward, to the workmen's compensation committee.

Wyoming County Medical Society—Dr. Melvin S. Martin, Warsaw, president; Dr. Paul G. Sternberg, Perry, vice-president; Dr. P. A. Burgeson, Warsaw, secretary-treasurer; Dr. G. S. Baker, Castile, delegate to the State Society, and Dr. W. J. Chapin, Perry, alternate.

American Medical Education Foundation—Contributors to the American Medical Education Foundation for November, 1953, from New York State were: *Binghamton*—Dr. J. G. McMahon; *Bronx*—Dr. Maxwell Spring; *Cobleskill*—Dr. John Wadsworth; *Elmhurst*—Dr. John P. Keating; *Glens Falls*—Dr. B. C. Tillotson; *Honeoye Falls*—Dr. Niels G. Madsen; *Ithaca*—Dr. John Hirshfeld; *Jackson Heights*—Dr. P. Palew; *Jamestown*—Dr. N. Barone; *Little Falls*—Dr. Fred C. Sabin; *Malone*—Dr. John T. St. Mary; *Marlboro*—Dr. W. B. Harris; *Middleburg*—Drs. B. W. Andrew, Duncan L. Best, and Donald Lyon; *Millerton*—Dr. Gilbert S. Tabor; *Newburgh*—Dr. F. R. Small; *New York City*—Drs. Joseph E. Connery, Carl Eggers, Eli Moschcowitz, B. Schaffner, M. H. Tewksbury, and Joseph G. Wishner.

Poughkeepsie—Dr. Ernest Kaluza; *Queens Village*—Dr. Max Utens; *Richmondville*—Dr. Franz Konta; *Rochester*—Dr. Rufus B. Crain; *Saratoga Springs*—Dr. Thomas J. Goodfellow; *Schenectady*—Dr. Roland Faulkner; *Schoharie*—Dr. Harry Plaskov; *Strykersville*—Dr. M. A. Valente; *Suffern*—Dr. David J. Fant; *Warrensburg*—Dr. Patrick Huntington, and *Warsaw*—Dr. Charles O. Wagenhals.

Progress in Hospital Construction—Status of all Hill-Burton hospital construction in New York State as of November 30, 1953, is as follows:

Completed and in operation: 57 projects at a total cost of $43,859,252, including Federal contribution of $14,010,852, and supplying 2,760 additional beds.

Under construction: 17 projects at a total cost of $50,799,532, including Federal contribution of $8,391,433, and designed to supply 1,516 additional beds.

Approved, but not yet under construction: 8 projects at a total cost of $15,826,690, including $3,674,099 Federal contribution and designed to supply 949 additional beds.

Two New York Physicians Named to Medical Task Force—Dr. Theodore G. Klumpp, Sands Point, director of the New York Heart Association, the World Medical Association, and the American Foundation for Tropical Medicine since 1943, and Dr. Basil C. McLean, Rochester, dirctor of the Strong Memorial Hospital, and professor of hospital administration at the University of Rochester, have been appointed to serve on a seventeen-man medical task force, by former President Herbert Hoover, chairman of the Commission on Organization of the Executive Branch of the Government.

This task force, like others being appointed, will survey the experience of the Federal government in various activities, with the purpose of recommending ways to improve efficiency and economy in Government operations.

Meetings—Future

New York University College of Medicine

The New York University College of Medicine, Department of Radiology, will present the Honorable Clay Greenberg, Justice, Supreme Court of the State of New York, in a talk on "The Medical Witness and Medical Testimony in Negligence and Malpractice Cases," in the Main Lecture Hall on February 1 at 8:30 P.M.

Discussants will be Mr. William F. Martin, Counsel, Medical Society of the State of New York; Mr. Harry A. Gair; Dr. Thomas M. d'Angelo, Malpractice and Insurance Board, Medical Society of the State of New York; Dr. Henry K. Taylor, professor of clinical radiology, New York University College of Medicine, and Delmar Karlen, professor of law, New York University School of Law.

Dr. Maxwell H. Poppel, professor and chairman, Department of Radiology, New York University College of Medicine, will preside. Members of the medical and legal professions are cordially invited.

New York Cancer Society

The fourth meeting of the New York Cancer Society for the 1953 to 1954 year will be held at the New York Academy of Medicine on Tuesday, February 2, at 8:30 P.M. The subject will be "Physiologic Alterations in Cancer."

Dr. Robert Elman, Washington University School of Medicine, St. Louis, Missouri, will discuss "Metabolic Observations in Cancer Cachexia," and "Alterations in Gastrointestinal Tract Physiology Following Gastrectomy for Cancer of the Stomach" will be discussed by Drs. Henry T. Randall, Gordon McNeer, George T. Pack, Kathleen Roberts, and

Jacob Weissman, Memorial Cancer Center, New York City.

The discussant will be Dr. I. S. Ravdin, University of Pennsylvania Hospital, Philadelphia, Pennsylvania.

Second Annual Cardiovascular Teaching Day

The second annual cardiovasular teaching day, sponsored by the Heart Association of Albany County, the Albany Medical College, the New York State Department of Health, and the Veterans Administration Hospital, Albany, will be held at the Albany Law School, Thursday, February 4.

Dr. I. Jay Brightman, chairman, professional educational committee, Heart Association of Albany County, will preside at the morning session which will run from 9:30 A.M. to 12:30 P.M. Dr. Harry Goldblatt, director, Department of Laboratories, Mount Sinai Hospital, Cleveland, will present a paper on the "Renal Aspects of Hypertension"; Dr. William Goldring, associate professor of medicine, New York University School of Medicine, "The Definition and Clinical Course of Hypertensive Disease," and a panel discussion on "Hypertensive Disease" with Dean Harold C. Wiggers, chairman of the Department of Physiology, Albany Medical College, as moderator, and Drs. Harry Goldblatt, William Goldring, John Filippone, and Raymond Harris as members of the panel, will be presented. Drs. Filippone and Harris are members of the Department of Medicine, Albany Medical College.

Dean Harold C. Wiggers will preside at the afternoon session which will convene at 2 P.M.. "The Use of Radioactive Iodine in Coronary Heart Disease" will be presented by Dr. A. Stone Freedberg, assistant professor of medicine, Harvard Medical School, and associate director of medical research, Beth Israel Hospital, Boston. Dr. Paul M. Zoll, associate in medicine, Harvard Medical School, will discuss "Current Approaches in Management of Coronary Heart Disease," and Dr. Frank M. Woolsey, Jr., chief, Medical Services, Veterans Administration Hospital, Albany, and associate professor of medicine, Albany Medical College, will preside as moderator of the panel on "Coronary Heart Disease." Members of the panel will be Drs. Ralph Reynolds, and Joseph Doyle, Department of Medicine, Albany Medical College, and Drs. A. Stone Freedberg and Paul M. Zoll.

Congress on Medical Education and Licensure

Postgraduate medical education needs, and how these best can be met by medical schools, will be considered at the fiftieth annual Congress on Medical Education and Licensure in the Palmer House, Chicago, February 7 to 9.

The meeting will be sponsored by the American Medical Association's Council on Medical Education and Hospitals, with the cooperation of the Federation of State Medical Advisory Boards of the United States and the Advisory Board for Medical Specialties.

Three panel discussions will be built around a preliminary report of a survey on postgraduate medical education undertaken by the Council on Medical Education and Hospitals. These panels will consider the objectives of such education, how to achieve these objectives, and the needs of such programs—faculty, facilities, and finance.

Dr. Edward J. McCormick, Toledo, president of the American Medical Association, who will be one of the principal speakers, will stress the importance in undergraduate medical education of instruction in fundamental professional ethics, public relations, and medical practice.

This being the golden anniversary of the formation of the Council on Medical Education and Hospitals, Dr. Herman G. Weiskotten, Skaneateles, chairman of the council, will highlight the contributions of the American Medical Association to the training of doctors.

Dr. Louis H. Bauer, New York City, president of the American Medical Education Foundation, will discuss the drive for financial contributions by physicians to aid medical schools.

With military needs for medical personnel a problem which may arise unexpectedly, Dr. Frank B. Berry, Washington, assistant secretary of defense (health and medical), will be asked to express the views of military authorities on how these requirements best can be met.

Frank G. Dickinson, Ph.D., Chicago, director of the A.M.A.'s Bureau of Medical Economic Research, will report on physician distribution as disclosed by a survey undertaken by the bureau. Aura E. Severinghaus, Ph.D., New York City, associate dean of the Columbia University College of Physicians and Surgeons, will present the highlights of a survey on preprofessional education.

The program to be presented by the Advisory Board for Medical Specialties will consider the potentialities of postgraduate medical training in hospitals not affiliated with medical schools. The current trends in licensure and examination procedures also will be discussed.

The Federation of State Medical Boards will consider the effect of medical licensure on medical education and the relationship between hospital internship and licensure.

New York Society for Circulatory Diseases

The New York Society for Circulatory Diseases will hold its eleventh regular meeting in room 440 of the New York Academy of Medicine building, on Tuesday, February 9, 1954, at 8:30 P.M.

The meeting will be devoted to a symposium on "A Review of Newer Antihypertensive Drugs," with panel discussion. Dr. Rudolph E. Fremont, Chief, cardiovascular department, Brooklyn Veterans Administration Hospital, will speak on "Pharmacological Evaluation." Dr. Milton Mendlowitz, assistant attending physician, Mount Sinai Hospital, will cover "Clinical Evaluation." Dr. Simon Dack will preside.

Nineteenth Annual Fracture Day

The New York and Brooklyn Regional Committee on Trauma of the American College of Surgeons will hold the annual "Fracture Day" on February 13 at 9 A.M., in the Einhorn Auditorium, of the Lenox Hill Hospital. Dr. James A. Nicholas will present the introduction discussing "The Ancillary Care of the Fracture Patient, Nutrition, Electrolyte Balance, Etc." and at 9:30 A.M., Dr. Arthur J. Barsky will discuss "Treatment of Acute Facial Trauma." "Indications and Contraindications for Early Use of Artificial Hip Prosthesis," by Dr. Frederick R. Thompson, will be presented at 10 A.M., and at 10:30 a symposium on "Vascular Trauma," with Dr. John L. Madden as conductor. Dr. Lester Blum will discuss "Specific Arterial Injuries," case presentations; Dr. Jere W. Lord, "Arterial Grafts and Their Use Relative to Blood Vessel Trauma," and "The Surgical Management of Blood Vessel Trauma, Both Early and Late," by Dr. Gerald H. Pratt.

Following lunch, the afternoon program will begin at 1:30 P.M. and the subjects to be presented will be: "Management of Bone Cysts," by Dr. J. Earl Miles, chairman, New York and Booklyn Regional Committee on Trauma; 2 P.M., "Early Recognition of Impending Nonunion," by Dr. William H. Cassebaum; 2:30 P.M., symposium on "Intramedullary Nailing of Fractures" with Dr. Robert Hayward Kennedy, conductor, and Dr. Frederick Vom Saal discussing "Fractures of the Forearm"; Dr. Robert Green, Philadelphia, "Fractures of the Humerus"; Dr. Frederick M. Marek, "Fractures of the Tibia," and Dr. Sawnie R. Gaston, "Fractures of the Femur."

Dr. Edgar M. Bick, New York City, is the chairman of the Fracture Day program.

Geneva Academy of Medicine

Dr. Abner Weisman, clinical assistant professor of obstetrics and gynecology, New York Medical College, will present a paper on "Problems of Fertility and Sterility" before the Geneva Academy of Medicine on February 15. The meeting will start at 8:30 P.M. and will be held at the Belhurst.

Jewish Sanitarium and Hospital for Chronic Diseases

Dr. Saul B. Gusberg, assistant professor of gynecology, Columbia University College of Physicians and Surgeons, will speak on "Developmental Concept of Cervical Cancer," on February 25 at 8:30 P.M. The lecture which is presented by the gynecologic service will be held in the auditorium of the Freeman Pavilion.

Industrial Health Conference

The fourteenth annual congress on Industrial Health will be held February 23 to 25 at the Brown Hotel, Louisville, under the sponsorship of the American Medical Association's Council on Industrial Health. The role of industry in the maintenance of the health of the nation will be the subject of the opening general session on February 24 and a clinic on health programs for executives will be presented in the afternoon.

The President's award to the physician making the outstanding contribution to employment welfare of the handicapped in 1953 will be presented at a dinner which will be cosponsored by the Jefferson County Medical Society.

Thursday morning, February 25, the problems of a small plant operator will be considered and the presentation of how a plant can prepare for emergencies. A joint session with the American Medical Association's Council on National Emergency Medical Service will be held in the afternoon.

A preliminary conference with chairmen of state medical society committees on industrial health will be held on Tuesday, February 23, as well as group conferences on subjects related to industrial health.

A dinner will be given in honor of two retiring members of the Council on Industrial Health, Dr. Anthony J. Lanza, New York City, chairman, and Dr. Clarence D. Selby, Detroit, in the evening.

National Conference on Rural Health

The ninth annual National Conference on Rural Health will be held in Dallas, Texas, March 4 to 16. Sponsored by the American Medical Association's Council on Rural Health, the conference will be held in the Baker Hotel. Dr. Edward J. McCormick of Toledo, Ohio, president of the American Medical Association, will be speaker at the closing session.

State committees on rural health will hold a preconference meeting with the American Medical Association Council on Rural Health on the morning of March 4.

Manhattan State Hospital

The first in a series of lectures on psychoanalytic theory was held at the Manhattan State Hospital, Ward's Island, on January 8, at which time Dr. Hyman L. Rachlin spoke on "Basic Concepts of Psychoanalysis."

On March 19, Dr. Sarah Breitbart will speak on "Therapeutic Implications of Horney's Theory of Neurosis." This second group of lectures will end on May 28, 1954.

The meetings will be held in the Keener Building, every Friday afternoon at 1:30 P.M. promptly. Programs may be obtained by request from Dr. John H. Travis, director, Manhattan State Hospital, Ward's Island, New York City 35.

Cancer Teaching Day

A Cancer Teaching Day program will be held at the Albany Medical College from 9 A.M. to 5 P.M. on Thursday, March 25, under the sponsorship of the Albany Medical College, the Albany County Medical Society, the Medical Society of the State of New York, and the New York State Department of Health, Cancer Control Division.

A group of physicians from Jefferson Medical College with Drs. John Gibbon, Jr., Peter Herbut, Louis H. Clerf, and Theodore Eberhard taking part, will speak on various aspects of cancer of the lung at the morning session.

During the afternoon session, the treatment of leukemias will be discussed with Drs. Franklin R. Miller, John S. Flint, and Theodore Eberhard participating in the discussion.

Personalities

Honored

Drs. C. E. Goodwin, Weedsport; H. E. Anthony, Moravia; F. A. Lewis, Auburn, and George C. Sincerbeaux, Auburn, by Cayuga County Medical Society, for fifty years service. . .Dr. Charles Gordon Heyd, New York City, the degree of Doctor of Laws from the University of Toronto. . .Drs. George N. Papanicolaou, New York City, and Howard A. Rusk, New York City, the 1954 *Modern Medicine* Award for Distinguished Achievement.

Appointed

Dr. Curtland Chester Brown, Jr., Glenmont, as assistant dean of the Albany Medical College. . .Dr. Charles L. Buxton, New York City, as professor of obstetrics and gynecology, and chairman of the department, at Yale University College of Medicine. . .Dr. John R. Cobb, New York City, and Dr. William F. Harrigan, Hempstead, as members of the advisory board of the State Athletic Commission. . . Dr. Samuel Feinstein, Ogdensburg, as chief psychiatrist of the University of Buffalo's Chronic Disease Research Institute. . .Dr. Edward E. Fischel, New York City, as full-time director of medicine at the Bronx Hospital. . .Dr. Lynwood Heaver, New York City, as medical director of the National Hospital for Speech Disorders. . .Dr. Morris A. Jacobs, Port Richmond, as senior general medical superintendent of the Department of Hospitals and director of its Bureau of Medical and Hospital Services.

Dr. Charles Neil Jeffries, Mamaroneck, as director of obstetrics at United Hospital, Port Chester. . . Dr. Solomon A. Kaplan, Long Beach, as assistant professor of pediatrics, and Dr. Herman D. Ruskin, as assistant professor of medicine, at the State University of New York College of Medicine at New York City. . .Dr. Walter C. Levy, Syracuse, as temporary principal public health physician in the division of local health services of the New York State Department of Health. . .Dr. Jean Redman Oliver, Brooklyn, as Distinguished Service Professor Emeritus of the State University of New York College of Medicine at New York City. . .Dr. Algernon B. Reese, New York City, as president-elect of the American Academy of Ophthalmology and Otolaryngology. . .Dr. Roscoe D. Severance, Syracuse, as chief of the section on orthopedics in the Department of Surgery at the State University of New York College of Medicine at New York City.

Elected

Dr. Frederick Beck, Ray Brook, as secretary-treasurer of the Eastern Section of the American Trudeau Society. . .Dr. Duncan W. Clark, Brooklyn, as chairman of the Conference of Professors of Preventive Medicine, State University of New York College of Medicine at New York City. . .Dr. Herman E. Hilleboe, Albany, as president-elect of the American Public Health Association. . .Dr. Aaron Kellner, New York City, as president of the American Association of Blood Banks. . .Dr. W. Alex Newlands, Tarrytown, as president, and Dr. David Fertig, Hartsdale, as president-elect, of the Westchester County Medical Society. . .Dr. Howard C. Taylor, New York City, as vice-president and president-elect of the American Cancer Society. . .Dr. Waring Willis, Bronxville, as an officer of the Adoption Service Fund of Westchester.

The Month In Washington

[Continued from page 417]

N.Y.) and Flanders (R., Vt.) are offering a bill along the same lines in the Senate.

The controversial Bricker resolution holds over from the last session and may receive early consideration in the Senate. Senator Bricker believes that Congress should have some check on the President's treaty-making powers. The American Medical Association repeatedly has indorsed the Bricker resolution as a safeguard against the introduction into this country by treaty of government-controlled medical plans without Congress itself having a chance to pass on them.

Awaited with interest in Washington are the findings of two commissions appointed last year to look into the relationships between the Federal government on the one hand and state and local governments on the other and to investigate operations of the executive branch. The former is headed by Clarence Manion and the latter by former President Hoover. The Hoover Commission has until next year to make its report. The Manion Commission was instructed to have a report ready by March, but it may ask for more time.

NECROLOGY

Jacob William Bayliss, M.D., of Buffalo, died on December 4, 1953, at his home at the age of seventy-one. Dr. Bayliss graduated from the University of Buffalo School of Medicine in 1906. He did postgraduate work at Harvard University in 1908 and then went into general practice for several years before specializing in radiology and roentgenology. At the time of his death, Dr. Bayliss was chairman of the Subcommittee on Radiology of the Council Committee on Workman's Compensation. He was a Diplomate of the American Board of Radiology, a Member of the American College of Radiology, a member of the Buffalo Radiological Society; and a consultant in roentgenology for the Mercy and Millard Fillmore Hospitals in Buffalo. Dr. Bayliss belonged to the Buffalo Academy of Medicine, the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Albert S. Blau, M.D., of Elmhurst, Queens, died at the age of seventy-nine on January 5 at his home. Dr. Blau was born in Vienna and came to the United States in 1938. He received his medical degree from the University of Vienna in 1899. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

L. Edward Cotter, M.D., of Red Hook, Dutchess County Medical Examiner, died on December 25, 1953, at his home at the age of sixty-five. Dr. Cotter received his medical degree from Fordham University in 1913 and was a member of the American Academy of General Practitioners. He was on the attending staff of the Northern Dutchess Health Service Center, working in electrocardiography. Dr. Cotter was a member of the Dutchess County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Lynn Lyle Fulkerson, M.D., of New York City, a surgeon and gynecologist for forty-six years, died on December 31, 1953, at the Harkness Pavilion, Columbia-Presbyterian Medical Center. He was seventy-two years old. Dr. Fulkerson was graduated from the College of Physicians and Surgeons, Columbia University, in 1907. A Diplomate of the American Board of Obstetrics and Gynecology and a Fellow of the American College of Surgeons, he also belonged to the New York Academy of Medicine and the New York Obstetrical Society. From 1932 to 1948, Dr. Fulkerson was associate professor and instructor in gynecology at New York Post-Graduate Medical School and Cornell University Medical College, as well as associate attending obstetrician and gynecologist at the Lying-In Hospital. He was a member of the New York County Medical Society and the Medical Society of the State of New York.

Jacob Goldey, M.D., of New York City, died at his home on December 28, 1953, at the age of eighty-two. Dr. Goldey graduated from Bellevue Hospital Medical College in 1895 and was associated with the City Department of Health for forty-three years. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Joseph Heichler, M.D., of the Bronx, died on September 12, 1953. He was sixty-nine years old. Dr. Heichler received his medical degree from the University of Vienna in 1913. He was a clinical assistant at Mount Sinai Hospital.

Daniel Bartholomew Kirby, M.D., of New York City, died on December 29, 1953, at his home in Pelham Manor at the age of sixty-two. Originator of the "Kirby Technique" of extracting cataracts, Dr. Kirby also introduced the use of curare in cataract surgery in 1947. He was the author of many books and papers on eye surgery. Born in Cleveland, Dr. Kirby received his medical degree from Western Reserve University in 1916 and interned at Bellevue Hospital before entering private practice in New York City in 1923. He was a Diplomate of the American Board of Ophthalmology, a Fellow of the American College of Surgeons, a member of the American Academy of Ophthalmology and Otolaryngology, the American Ophthalmological Society, as well as the New York Academy of Medicine. He was a consulting surgeon in ophthalmology at the New York Eye and Ear Infirmary, Manhattan Eye, Ear and Throat Hospital, and St. Clare's Hospital, and attending surgeon in ophthalmology at Bellevue Hospital. Dr. Kirby was professor emeritus in ophthalmology at the New York University Post-Graduate Medical Center. Dr. Kirby belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Anne Elizabeth Kuhner, M.D., of New York City, died on January 1 at the age of fifty-nine. A graduate of Long Island College Hospital Medical School in 1921, she interned at Booth Memorial Hospital and at the New York Skin and Cancer Hospital. She was surgeon-in-charge of the Department of Urology of the New York Infirmary and from 1925 to 1950 she was on the staff of the Department of Urology of the New York Hospital. Dr. Kuhner was a member of the New York County Medical Society and the Medical Society of the State of New York.

Howard T. Langworthy, M.D., sixty-eight years old, died suddenly of a heart attack at his home in West Edmeston on November 30, 1953. He was graduated from the College of Physicians and Surgeons, Columbia University, in 1911 and interned at Methodist Hospital in Brooklyn, where he was a consultant in urology until 1951. Dr. Langworthy at one time was chief surgeon of Methodist Hospital and instructor in surgery at the Long Island College of Medicine. He was a Diplomate of the American Board of Urology, a Fellow of the American College of Surgeons, and a member of the American Urological Association, the Brooklyn Urological Society, the Chenango County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Montgomery Elihu Leary, M.D., of Rochester, died on January 3 at the age of eighty-five. Dr. Leary received his medical degree from the University of Pennsylvania in 1895. During World War I he served with the U.S. Army Medical Corps and was commissioned by Surgeon General George C. Gorgas to fight disease among members of the Armed Forces; during World War II he held the rank of colonel in the organized reserve. Dr. Leary had practiced medicine for fifty-eight years. In 1908 he organized the first open air school for tubercular children in New York State and two years later became the first superintendent of Iola Sanatorium in Rochester. Dr. Leary was a member of the American Academy of General Practice, the Rochester Academy of Medicine, the Rochester Pathological Society, the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John Edwin Leonard, M.D., of Johnson City, died on December 8 at the age of eighty-six. Dr. Leonard received his medical degree from the Long Island College Hospital Medical School in 1889 and in 1939 was honored at a testimonial banquet for having practiced for fifty years, in Harford Mills. Until his retirement he had been health officer of the Town of Harford and former coroner of Cortland County. Dr. Leonard was a member of the Cortland County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Richard Loewenthal, M.D., of New York City, died on November 25, 1953, at the age of sixty-one. Dr. Loewenthal received his medical degree from the University of Göttingen in 1919, and served as clinical assistant attending physician at Beth David Hospital in the Outpatient Department. Dr. Loewenthal was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Dudley Howard Neustein, M.D., of the Bronx, thirty-two years old, was killed on December 29, 1953, in an automobile accident at Belleville, Illinois. Dr. Neustein was serving as a Captain in the United States Army Medical Corps at the time of his death. He graduated from Chicago Medical School in 1948 and had been a resident psychiatrist at the Veterans Administration Hospital in the Bronx.

George Warren Phelan, M.D., of Brooklyn, died on December 31, 1953, at the age of sixty-four. Dr. Phelan received his medical degree from McGill University in 1913. He did further work at Heidelberg University, transferring to the University of Edinburgh during World War I. He served in the United States Army Medical Corps as a major and was assigned to the British services, receiving a British Military Cross. Dr. Phelan was an attending obstetrician and gynecologist at Long Island College Hospital.

Samuel Rose, M.D., died on December 23, 1953, at his home in Brooklyn at the age of seventy. Born in Russia, Dr. Rosen received his medical degree from the Long Island College Hospital Medical School in 1908. He interned at Montefiore Hospital in the Bronx. A draft board examiner in both World Wars, Dr. Rosen was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Erich Seligmann, M.D., of New York City, aged seventy-three, died at Beth Israel Hospital on January 1. Dr. Seligmann received his medical degree from the University of Heidelberg in 1904 and studied under Dr. Robert Koch, the pioneer bacteriologist. From 1907 to 1933, Dr. Seligmann was bacteriologist in the public health service of Berlin, Germany, later becoming director of the Department of Bacteriology and Hygiene and deputy health commissioner. He came to the United States in 1939 and served as assistant professor of public health practice at Columbia University. In 1941 he became bacteriologist at Beth Israel Hospital and also director of the Salmonella Center there, investigating food poisoning and infections of the typhoid type. The author of many articles on bacteriology, he was a member of the American Public Health Association, the New York Academy of Medicine, the Society of American Bacteriologists, and the New York Academy of Science.

Harold Michael Shorr, M.D., of New York City, died on December 16, 1953, at the age of thirty-six. Dr. Shorr was graduated from the New York University of Medicine in 1941. At the time of his death, Dr. Shorr was a major in the Army and was

[Continued on page 426]

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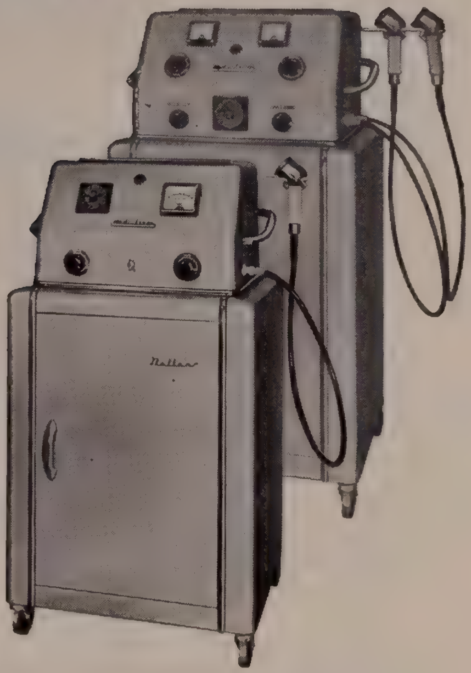

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the assistant chief of medical service at the Camp Rucker Hospital, Camp Rucker, Alabama. Formerly assistant professor of clinical medicine at the New York University College of Medicine, he also was a visiting physician at Bellevue Hospital and assistant attending physician at the University Hospitals.

Dr. Shorr was formerly a director of the New York University Medical Group, a Diplomate of the American Board of Internal Medicine, a Fellow of the American College of Physicians, a member of the American Heart Association, and the American Public Health Association, as well as a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Karl M. Sommer, M.D., of New York City, died on December 26, 1953, at his home at the age of forty-nine. Dr. Sommer, who received his medical degree from the University of Vienna in 1930, served on the staff of the outpatient department of the allergy clinic at the Mount Sinai Hospital. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Walker Ely Swift, M.D., formerly of New York City, died at his home in Sarasota, Florida, on December 22, 1953, at the age of seventy-two. Dr. Swift graduated from the College of Physicians and Surgeons, Columbia University, in 1919 and interned at the Presbyterian Hospital. Before leaving New York City, Dr. Swift had been associate attending orthopedic surgeon at the Lenox Hill Hospital, consulting orthopedic surgeon at Sharon Hospital, Connecticut, Englewood Hospital, New Jersey, Rockland State Hospital, Orangeburg, Middletown State Homeopathic Hospital, and Goldwater Memorial Hospital.

Julius Tamar, M.D., of New York City, died on December 30, 1953, at the Wadsworth Hospital at the age of fifty-five. Dr. Tamar received his medical degree from the University of Vienna in 1923 and came to this country in 1939. He had been associated with the Wadsworth Hospital for thirteen years. At the time of his death, Dr. Tamar was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Administration Probing Doctor Shortage

President Eisenhower's decision to ask Congress to extend social security coverage to physicians in private practice has already stirred up a reaction, though conclusive action will not come before next year.

And now another touchy situation is being probed by the Administration, namely, whether there is a shortage of doctors in the U.S.

Mrs. Oveta Culp Hobby, a member of the President's Cabinet, has raised the issue. Heretofore, neither she nor the President has chosen to come out flatly and say there is or there is not a shortage. Governmental policy—at least up to now—has been to avoid any head-on argument with the A.M.A., which holds that the country is not faced with a scarcity of physicians.

Addressing the annual meeting of the American Hospital Association in San Francisco on August 31, Secretary Hobby said: "Our doctor shortage looks nonexistent at first glance. But we should not delude ourselves. Before World War I, we were graduating roughly 6,000 doctors a year. And now we are graduating only about 7,000 a year.

"In the United States, while the population has jumped from 105,000,000 to 160,000,000, the number of doctors graduating each year has climbed only 1,000. . . . We need to face the fact that we need more doctors of all kinds."

These observations by the Secretary of Health, Education, and Welfare have given rise to speculation concerning whether she will ask Congress for remedial action. This might take the form of medical school subsidies or creation of scholarships, or both.—*G.P., October, 1953*

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†Kimble, S.T., and Stieglitz, E.J.: Geriatrics 7: 20, 1952.

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The Auxiliary's Nurse Recruitment Program

During 1952 and 1953 a total of 66 nursing scholarships were awarded by 33 county auxiliaries of the Woman's Auxiliary to the Medical Society of the State of New York. From 1947 to 1952, 180 additional scholarships were awarded by 29 county auxiliaries.

In terms of dollars this represents $41,779 which the Auxiliary has raised to help deserving young women. Of this sum, $8,205 was expended for scholarships, loans, gifts, and cash awards during 1952 and 1953.

In 1947 the program was enlarged until it is now carried on in three separate phases, each with the same objective: to help alleviate the nurse shortage and thus enable the physician to provide better and more comprehensive medical care.

During the early stages the Auxiliary concentrated on providing scholarships so that interested and capable young women of limited finances, who might otherwise have to forego nursing as a career, might realize their ambition. The scholarships were, and still are, of three different types. The first is a complete scholarship in which the Auxiliary provides all the funds the student will need during her course, the second is a partial scholarship, and the third is in the form of a loan or grant which the student is expected to return sometime after she graduates so that it may be available to other girls.

The second phase of the program is nurse recruitment. Some insight into the methods the Auxiliary employs to acquaint young women (and in a limited number of cases, young men) with the opportunities and advantages that a career in nursing offers can be gained by a review of a panel on nurse recruitment conducted at the 1953 Conference of County Auxiliary Presidents and Presidents-Elect. The panel included talks on "Methods of Recruiting Nurses," "Why I Have Chosen Nursing as a Career," "How to Raise Money for Scholarships," "Nurse Recruitment Programs and Scholarships," and "How to Organize Future Nurses Clubs."

The panel leaders demonstrated how they make contact with girls who may be interested in nursing, namely, through the deans of girls' junior and senior high schools, articles in the local press and school papers, and talks before local service clubs and women's organizations. Other points discussed included a review of the factors considered in evaluating a girl's interest in nursing through her responses to a questionnaire, her character, and her adaptability to unusual situations. In determining eligibility for scholarship the speakers suggested reference to the girl's financial needs, character, scholastic record, interest in nursing, and possible assistance from other sources.

The third and newest phase of the program is the establishment of "Future Nurses Clubs." The mechanics of this activity are simple, but efforts are rewarded a hundredfold. Upon approval by its county society advisory committee the Auxiliary chairman contacts the school authorities for permission to activate a Future Nurses Club in the local high school. Where possible, an Auxiliary member addresses the entire student body at assembly or extends an invitation to all interested students to assemble at a given point. The Auxiliary chairman outlines the purpose and the function of the club. The girls then elect a regular slate of officers. Although the primary function of these clubs is to interest young girls in nursing as a career, they also have a practical side. In some communities the club members act as nurses aides and serve regular tours of duty on certain afternoons and on weekends in the local hospitals and perform many of the routine tasks such as the making of beds, sweeping of floors, etc. This allows the trained nurses to concentrate on the more intricate nursing problems.

The Woman's Auxiliary to the Allegany County Medical Society organized the first Future Nurses Club in the State of New York, and now, Erie County Auxiliary and several other auxiliaries have organized or are in the process of organizing similar clubs.

Health authorities estimate that by 1960 the demand for nurses will double. Therefore, the Auxiliary is anxious to interest as many young women and men as possible in this important work. Any suggestions physicians may make that will help the Auxiliary reach any interested young women will be appreciated.

Your county chairman of nurse recruitment will be particularly interested in receiving the names and addresses of any girls who, although interested in a career in nursing, might be deterred, because of finances, from thoroughly exploring the many ways in which their ambition may be attained.

Mrs. Benjamin L. Feuerstein, *Chairman*
Nurse Recruitment Committee

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BOOKS RECEIVED

(*The following books were received during the month of December, 1953*)

Bright Children. A Guide for Parents. By Norma E. Cutts, Ph.D., and Nicholas Moseley, Ph.D. Octavo of 238 pages. New York, G. P. Putnam's Sons, 1953. Cloth, $3.50.

Sergei N. Winogradsky. His Life and Work. The Story of a Great Bacteriologist. By Selman A. Waksman, Ph.D. Octavo of 150 pages, illustrated. New Brunswick, Rutgers University Press, 1953. Cloth, $4.00.

Diseases of the Retina. By Herman Elwyn, M.D. Second edition. Octavo of 713 pages, illustrated. New York, Blakiston Co., 1953. Cloth, $12.

Safer Smoking. What Every Smoker Should Know and Do. By Clarence William Lieb, M.D. Octavo of 106 pages. New York, Exposition Press, 1953. Cloth, $2.50.

An Approach to General Practice. By R. J. F. H. Pinsent, M.D. Octavo of 166 pages. Edinburgh, E. & S. Livingstone (Baltimore, Williams & Wilkins Co.), 1953. Cloth, $3.50.

Textbook of Physiology and Biochemistry. By George H. Bell, M.D., J. Norman Davidson, M.D., and Harold Scarborough, M.B. Second edition. Octavo of 1,002 pages, illustrated. Edinburgh, E. & S. Livingstone (Baltimore, Williams & Wilkins Co.), 1953. Cloth, $10.

The Winslow Weight Watcher. By Thyra Samter Winslow. Octavo of 384 pages. New York, Abelard Press, 1953. Cloth, $3.50.

Diagnosis of Acute Abdominal Pain. By William Requarth, M.D. Octavo of 243 pages, illustrated. Chicago, Year Book Publisher, 1953. Cloth, $5.00.

Braces, Crutches, Wheelchairs. By George G. Deaver, M.D., and Anthony L. Brittis, M.D. Quarto of 61 pages, illustrated. New York, New York University-Bellevue Medical Center, 1953. Paper, $1.00. (Rehabilitation Monograph #5.) Publication made possible by the Association for the Aid of Crippled Children.

Planning Guide for Radiologic Installations. By the Committee on Planning of Radiologic Installations of the Commission on Public Relations of the American College of Radiology, Wendell G. Scott, M.D., Chairman. Octavo of 336 pages, illustrated. Chicago, Year Book Publishers, 1953. Cloth, $8.00.

Frontal Lobes and Schizophrenia. Second Lobotomy Project of Boston Psychopathic Hospital. Edited by Milton Greenblatt, M.D., and Harry C. Solomon, M.D. Octavo of 425 pages, illustrated. New York, Springer Publishing Co., 1953. Cloth, $12.50.

Review of Physiological Chemistry. By Harold A. Harper, M.D. Fourth edition. Quarto of 329 pages, illustrated. Los Altos, Calif., Lange Medical Publications, 1953. Paper, $4.00.

The Digestive Tract in Roentgenology. By Jacob Buckstein, M.D. In Two Volumes. Second edition. Quarto of 1,202 pages, illustrated. Philadelphia, J. B. Lippincott Co., 1953. Cloth, $30 set.

Miami Society Conducts Plaque Poll

Universal display of the AMA plaque, "To All My Patients," in doctors' offices was recommended by the majority of the Miami, Florida, physicians responding to the recent informal poll conducted by the Dade County Medical Association. Many favorable comments on the plaque were received from physicians whereas only one doctor gave a definitely unfavorable response. Typical patient comments noted by these physicians ranged from "a good idea" to "glad to see we have a humanitarian amongst the profession." Only one doctor reported a negative patient response which implied that medicine is "becoming too commercialized."

This poll brings out the fact that most patient fee questions concern the cost of doctors' services, the cost of hospital services, making arrangements to pay doctor bills, and insurance. From the doctor's point of view, the discussion of fees was indicated to be "easy" by 42 per cent of the group, "relatively easy" by 35 per cent, "fairly difficult" by 15 per cent, and "difficult" by only 8 per cent. The questionnaires were distributed to 112 physicians —representing a cross section of the medical society membership—about a month after some 1,000 plaques had been distributed free.

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1. SIMON, S. W.: ANN. ALLERGY 11:218, 1953. 2. KESTEN, B. M.: ANN. ALLERGY 6:408, 1948. 3. LOEW, E. R.: MED. CLIN. [illegible]. AM. 34:351, 1950.

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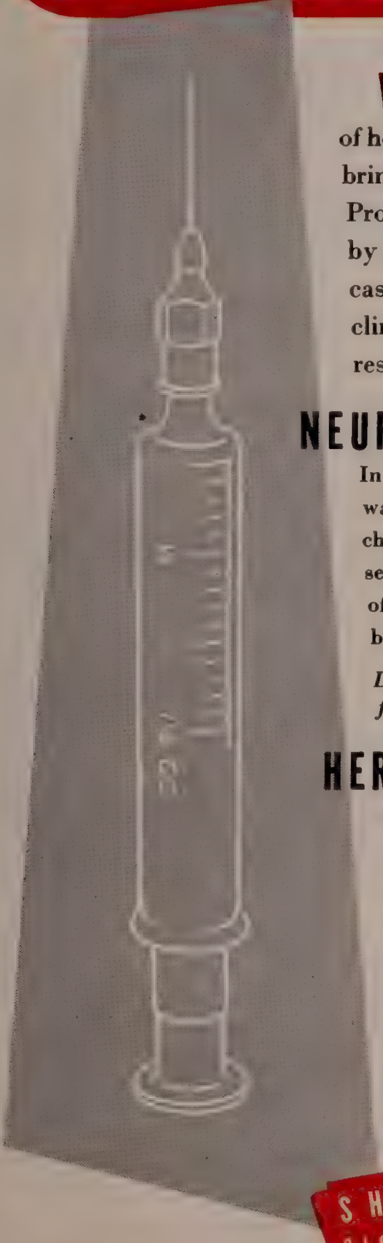

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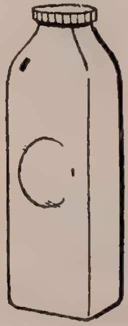

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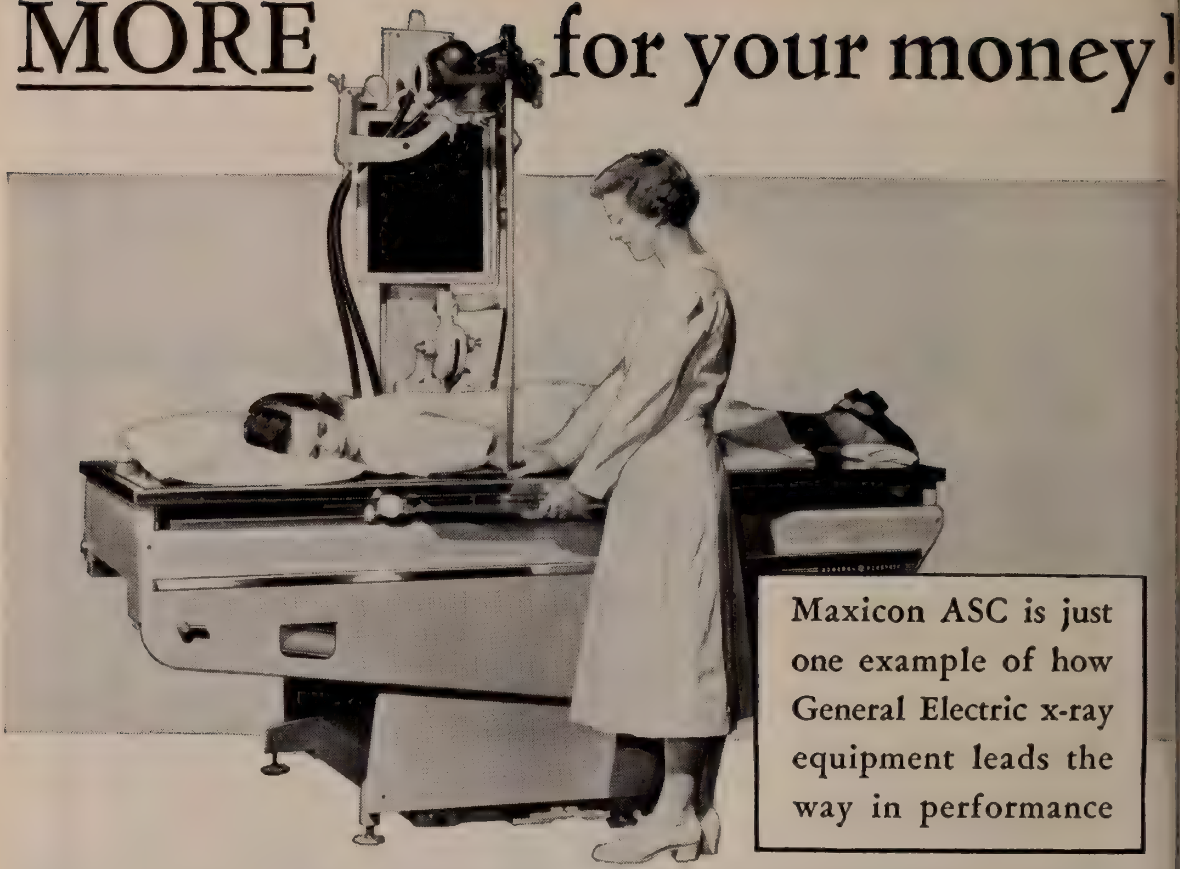

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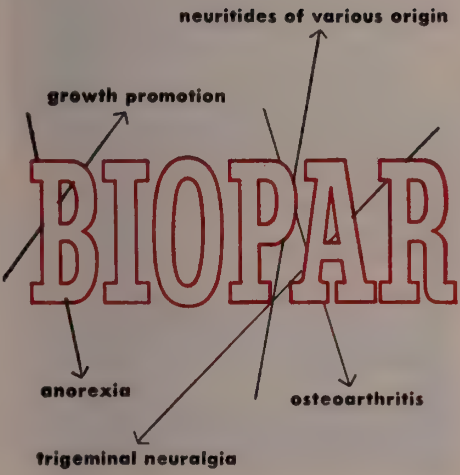
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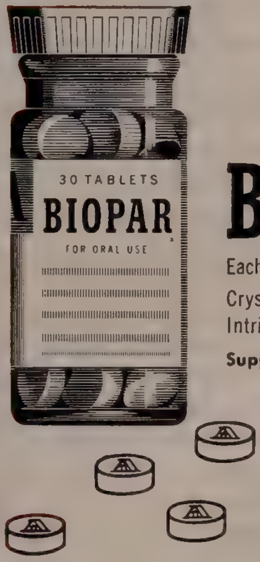
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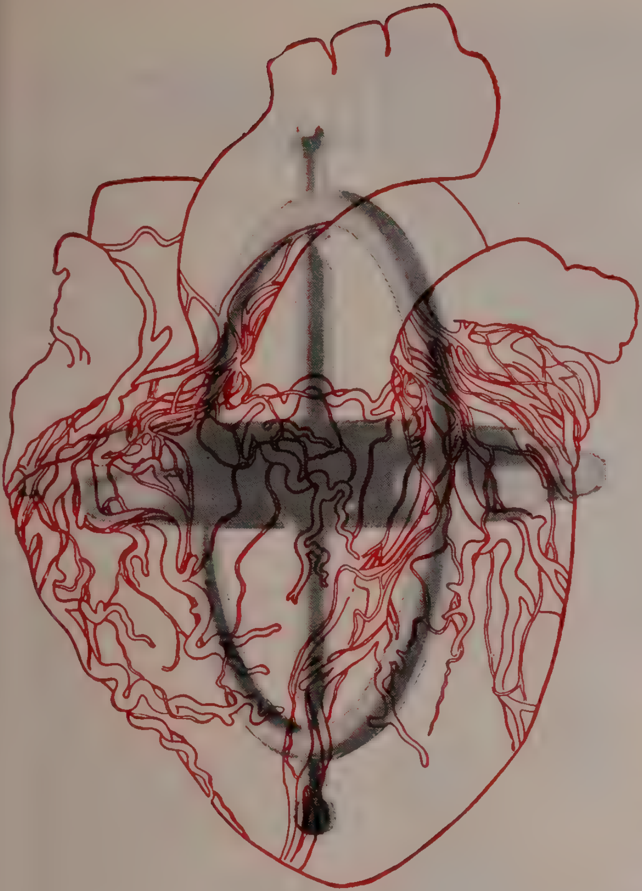

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treated with
Cobaden

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[1] De Lucia and Strosberg, Med. Times 82:1, p. 47, 1954.

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large gastric ulcer

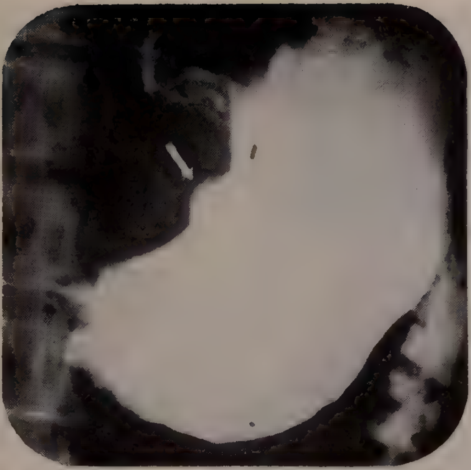

Fig. 3, Case 103 before therapy.

healed with

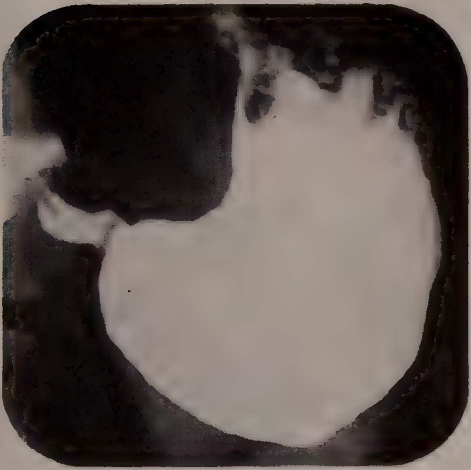

Fig. 6, Case 103 after 4 months PRANTAL therapy.
* Heineken, T. S.: Rev. Gastroenterol. **20**:829, 1953.

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facilitates healing • *"least side actions"**

widest variety of dosage forms

PRANTAL® Methylsulfate, brand of diphenmethanil methylsulfate.

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This new filter is made of a filtering material so efficient it has been used to purify the air in atomic energy plants of microscopic impurities.

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TWENTY
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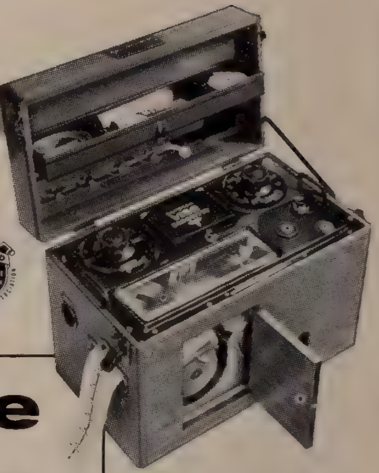

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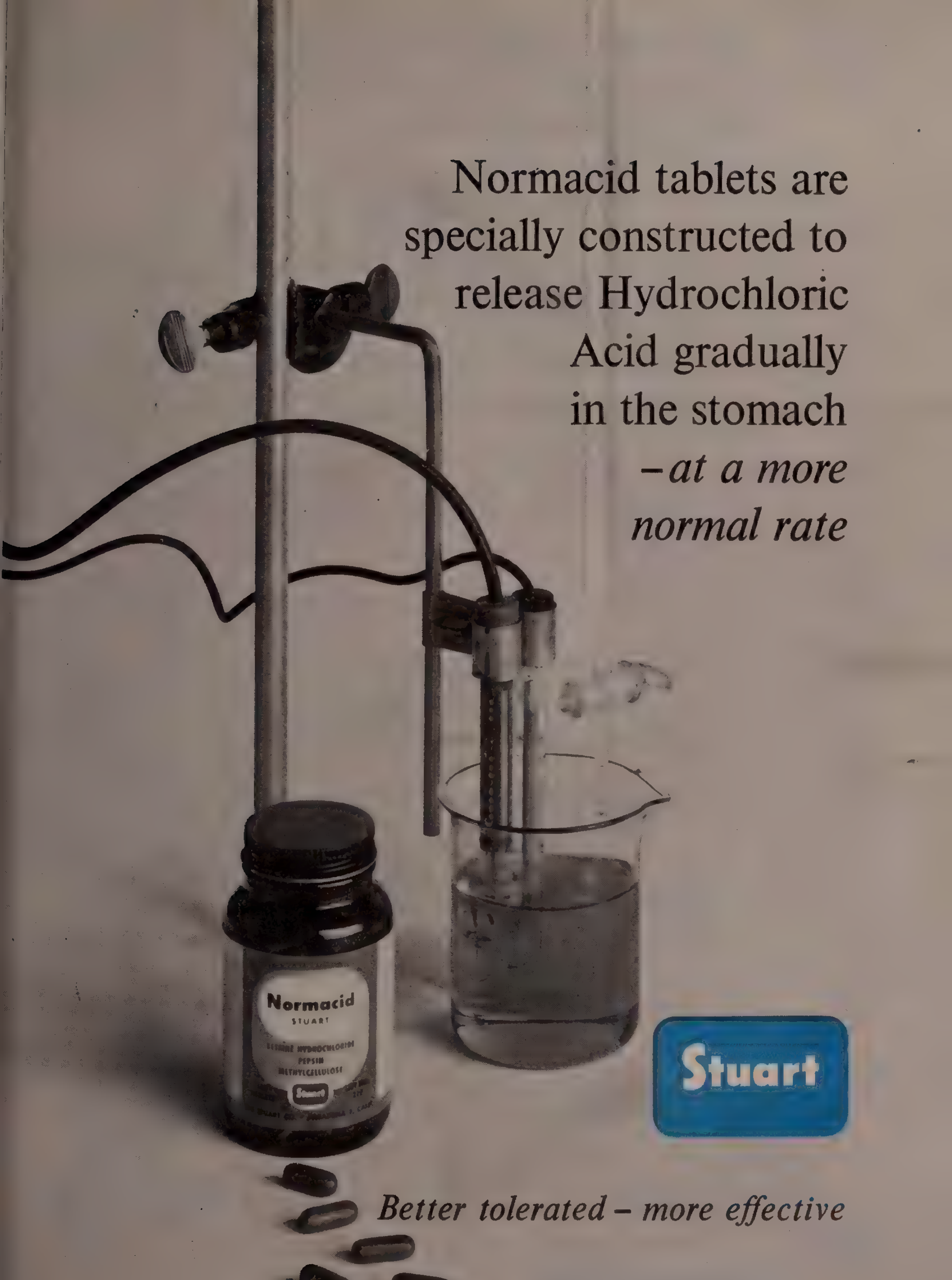
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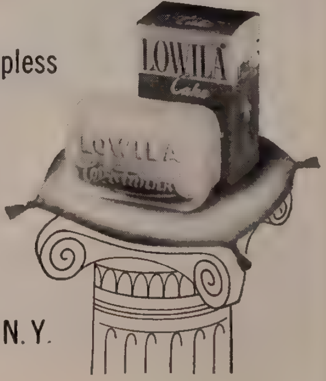

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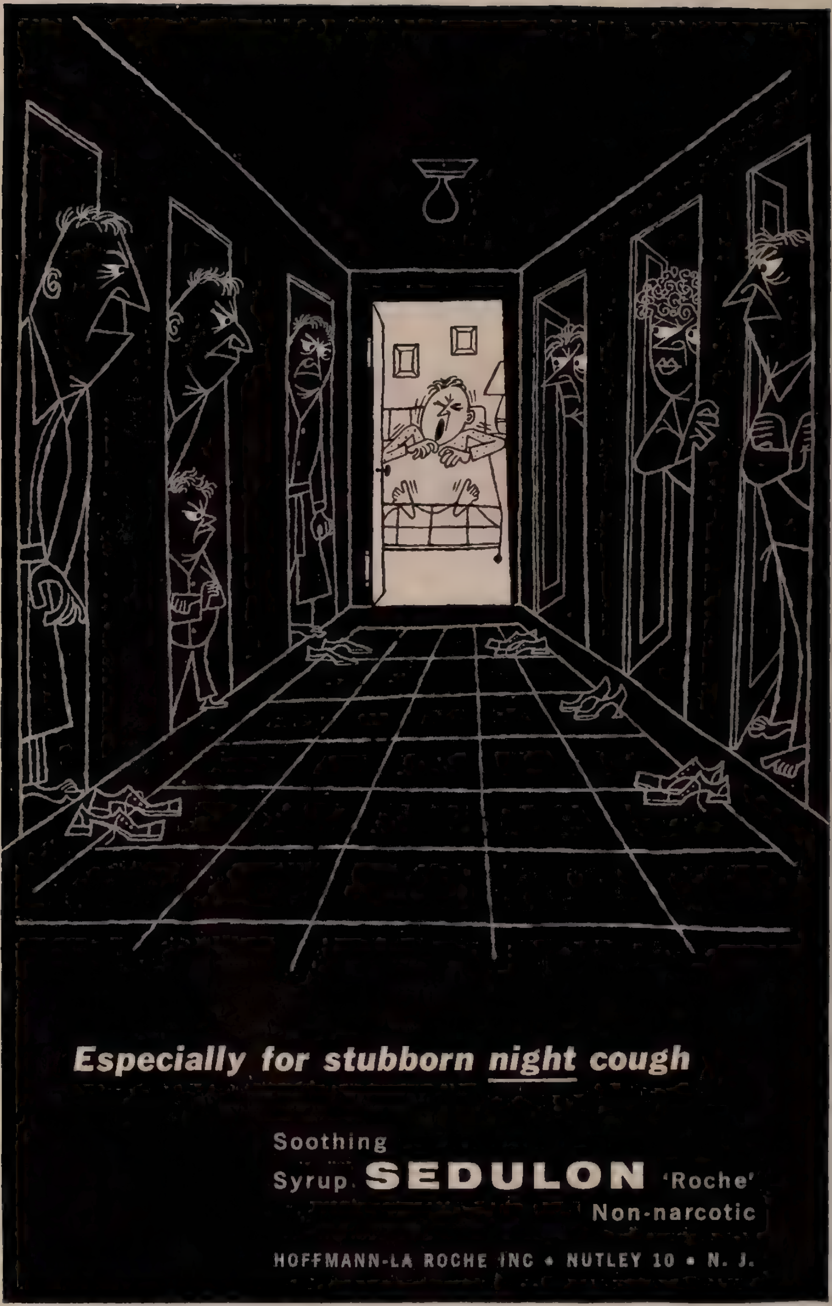

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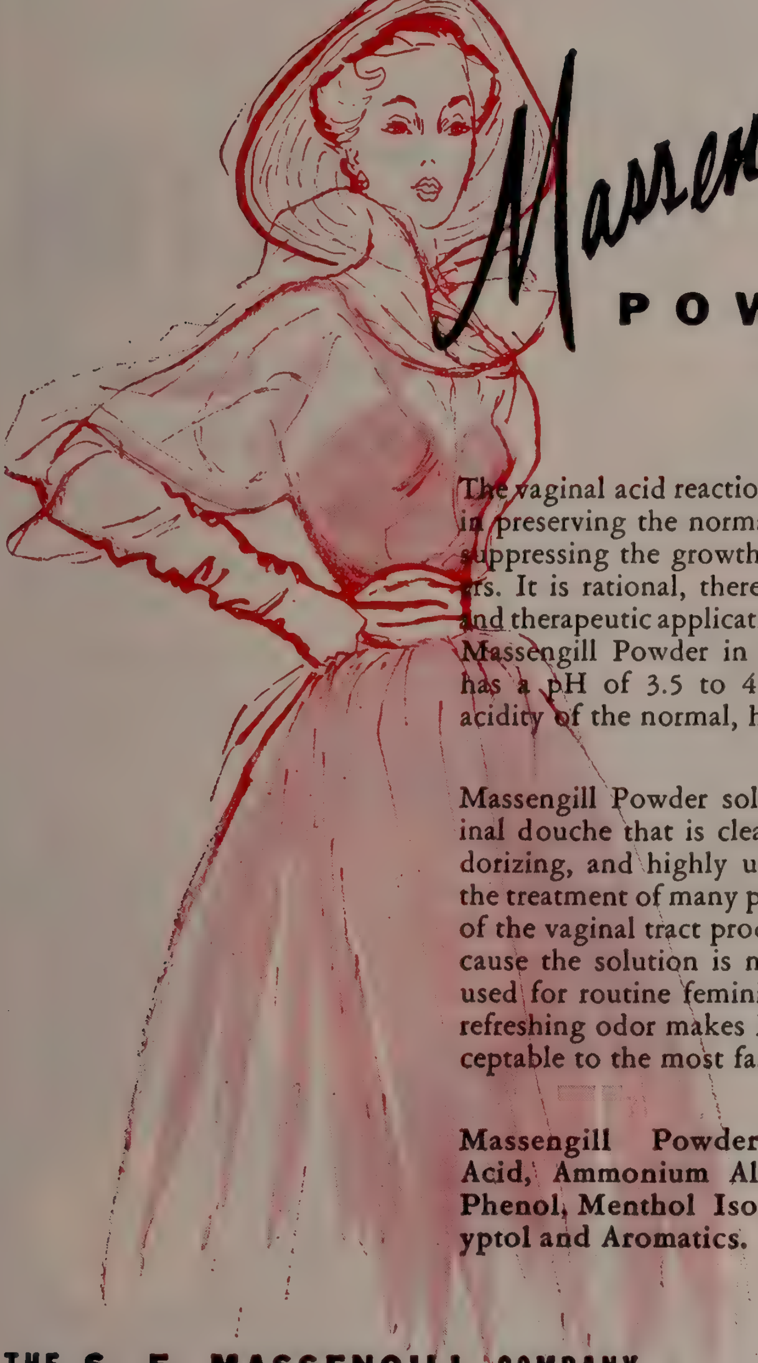

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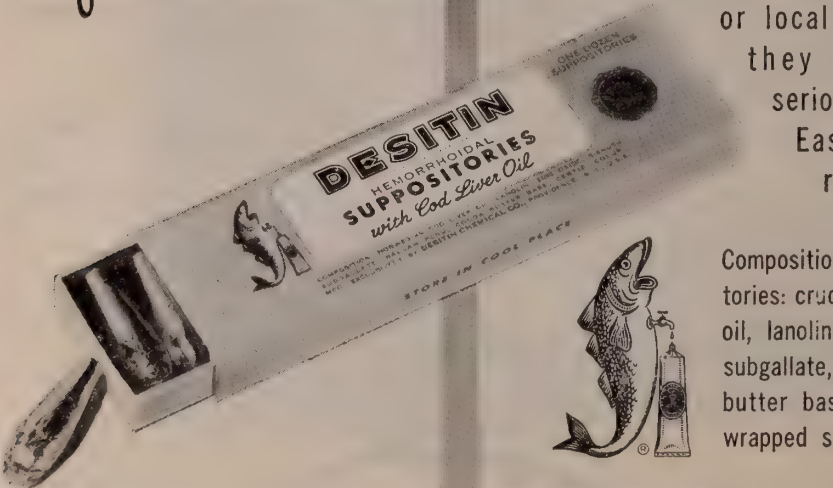
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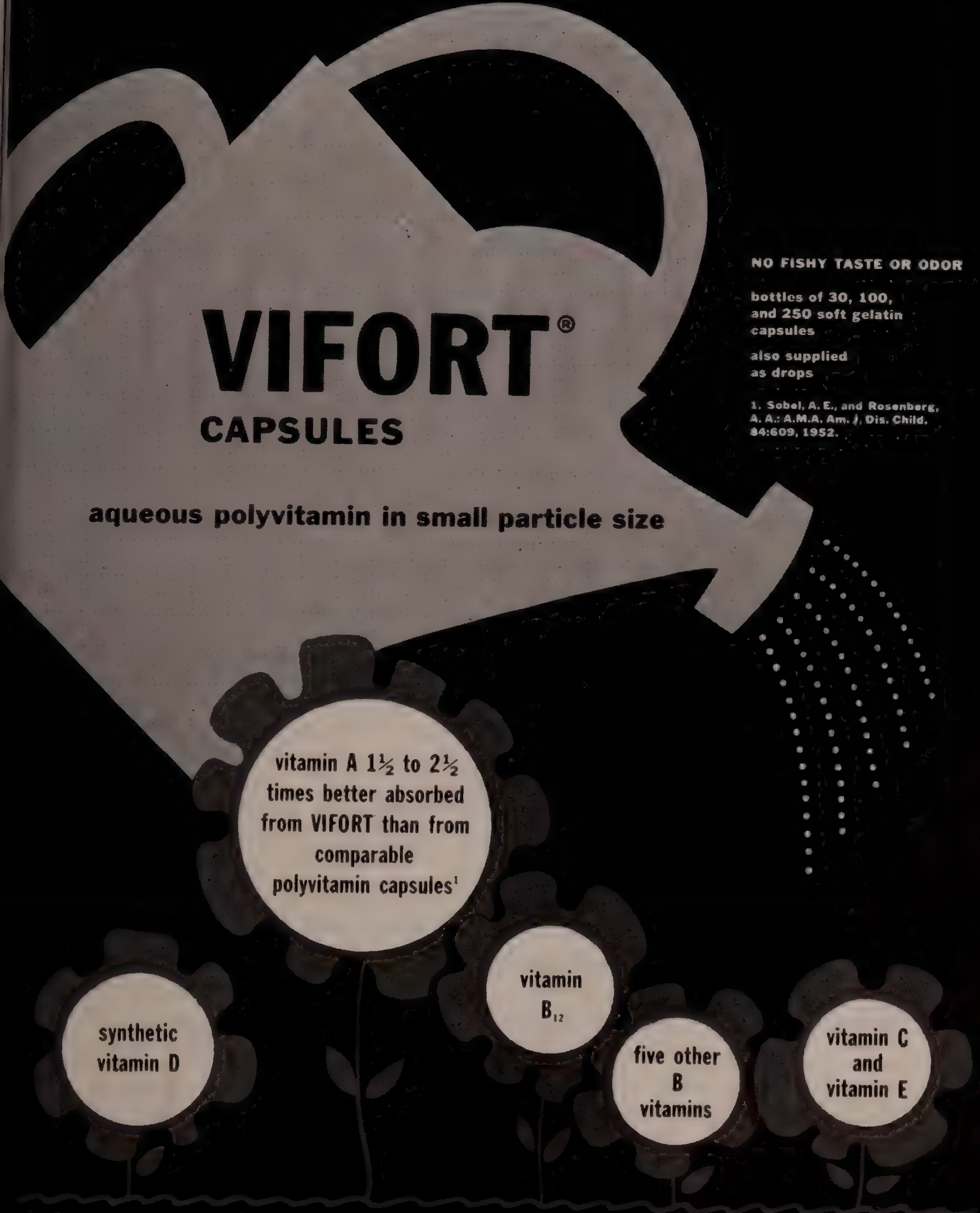
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[1] Sobel, A. E., and Rosenberg, A. A.: A.M.A. Am. J. Dis. Child. 84:609, 1952.

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EDITORIAL

Social Security Extension, II

The last House of Delegates of the American Medical Association meeting at St. Louis, in December, 1953, again considered the controversial question of OASI.

Approving a recommendation by its Reference Committee on Legislation and Public Relations, the House passed a resolution reaffirming its opposition to the compulsory coverage of physicians under the Old Age and Survivors Insurance provisions of the Social Security Act and advocating passage of the Jenkins-Keogh bills now pending in Congress. These bills were described as providing for "the development of a voluntary pension program which is equitable, free from compulsion, and satisfies the retirement needs of physicians."

The reference committee report adopted by the House said:

> The purpose of these bills is to eliminate the discrimination and inequities which exist under present tax laws by extending the tax deferment privilege to the country's ten million self-employed and also to millions of employees who are not covered by pension plans. The purpose of the resolution is to reaffirm our support of the voluntary pension program provided in the Jenkins-Keogh bills and to reaffirm our strong opposition to the extension of compulsory coverage of physicians and other self-employed persons under Title II of the Social Security Act.

In a previous editorial[1] we noted that opposition to compulsory social security coverage of self-employed professional people had been expressed not only by the American Medical Association but also by the American Dental Association, the American Farm Bureau Federation, and other national organizations composed largely of self-employed persons and by the governing body of the American Bar Association. However, we note that at its 1953 meeting the House of Delegates of the American Bar Association "refused to adopt a resolution reaffirming its previous stand against coverage of lawyers by Social Security and referred the matter back... for further study."[2]

The previous picture of opposition to compulsory coverage by social security is thus changed. The quoted article by Mr. Arthur Larson, dean of the University of Pittsburgh Law School, is well worth reading by anyone who desires information concerning social security as it might affect the legal profession. Arguments for and against are presented at length and from the point of view of self-interest as well as the public interest. Mr. Larson says on this latter point, "Success or failure of our social insurance program and the form it takes in the future will have a more profound bearing on our economic system and our national and individual character than any other domestic issue." He states further: "... whether we like it or not, the action of Congress on the pending proposal will depend more on broad considerations of the value of universal coverage than on piecemeal arguments by individual professions on how the plan affects naturopaths, morticians, or certified public accountants." If the plan passed, he says that we would have for the first time a piece of social legislation in this country with substantially complete coverage, greater and fairer average benefits, fewer forfeitures, and in a matter of ten years or so would reduce the need for public assistance to the bedrock minimum.

Worth noting also is an article by F. J. L. Blasingham, M.D., and Frank G. Dickinson, Ph.D.,[3] of which we present the concluding argument.

This past half-century has brought striking changes in our way of life. Transportation improvements have made all points closer in distance; radio and television have made the nation closer in thought. New methods of warfare and defense have been frighteningly evident. Yet we have seen a more important development than these changes in material things; there has been an upward-sweeping surge in length of life. Dying old instead of dying young presents us with problems of attitude.

We need to re-evaluate our approach toward old age. Much current thinking about the aged has dealt with the problem of supporting older persons financially. We tend to assume that we will always have an increasingly large nonproductive group over age sixty-five who will be dependent on social welfare. This shows an unwarranted lack of faith in what American medicine and American industry can do to develop the potentialities of older persons. Medicine's job is to keep them well enough to enjoy working. Industry's job is to find something useful for them to do. We have been encouraged lately to observe positive efforts to integrate older persons into our community and business life as productive units rather than merely to put them out to graze in ever greener pastures. Private enterprise has got to begin to think of methods of solving this problem in a private enterprise way. Older persons must be given the opportunity to be productive and thereby self-sustaining and self-respecting. We should not promote a planned old age of meager subsistence.

Those of us who are benefiting by health progress need now, more than ever, a moral philosophy to live by. We face life with the

[Continued on page 478]

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[1] New York State J. Med. **54:** 183 (Jan. 15) 1954.

[2] American Bar Association Journal, Nov., 1953, vol. 59.

[3] J.A.M.A. **153:** 924 (Nov. 7) 1953.

Diabetes in Pregnancy

ANNA R. SPIEGELMAN, M.D., NEW YORK CITY

(*From the Department of Medicine, New York University Post-Graduate Medical School; Fellow, Clinical Society of the New York Diabetes Association*)

SINCE the introduction of insulin therapy there has been no notable sterility among diabetic women. About one in every 500 pregnancies occurs in a diabetic. This is approximately the figure estimated for the incidence of diabetes in all women of childbearing age.[1] However, experience has indicated that the diabetic pregnancy is subject to hazards for both mother and child.

Diagnosis

The diagnosis of diabetes mellitus during pregnancy in a previously undiagnosed, mild diabetic often presents difficulties. Reducing substances commonly occur in the urine in pregnancy. These have been ascribed to lactose or glucose which has not been absorbed from the glomerular filtrate because of a lowered renal threshold. The differentiation of lactose from glucose may be made by fermentation tests. If glucose is identified, it is necessary to differentiate renal glycosuria from diabetes mellitus. Here the glucose tolerance test may not be as valuable a diagnostic aid as in the nonpregnant. A high three-hour blood sugar level is definitely diagnostic of diabetes. The two-hour blood sugar level may be of less diagnostic significance. Of 25 normal pregnant patients who had serial glucose tolerance tests, 81 per cent showed two-hour levels over 120 mg. per 100 cc. (Folin-Wu) at some time during the pregnancy.[2] High peaks were also common. These curves should be repeated and evaluated after termination of the pregnancy. The impaired glucose tolerance curve may become normal after delivery. Nevertheless, these patients should be followed carefully, because frank diabetes may appear after a lapse of years or persist after detection during pregnancy.

Those pregnancies which occur prior to the diagnosis of diabetes are termed prediabetic pregnancies. This phase has a fetal loss practically identical with that of the established diabetic patient.[3] An outstanding feature concerns infant weight; the majority of infants born alive to these patients weigh over 3,500 Gm. Hence a history of oversize infants in previous pregnancies may be a diagnostic clue.

Management

It is generally agreed that once the diagnosis of pregnancy is established, meticulous care should be given to the control of the metabolic disorder. The diet should consist of 150 to 180 Gm. of carbohydrate, 75 Gm. of protein, and an adequate amount of fat to meet the nutritional requirements. If diet alone does not control the hyperglycemia and glycosuria, protamine zinc, globin, or NPH insulin may be used. The type of insulin and dosage should be individually adjusted. Patients should be seen at weekly intervals because the insulin dosage may need frequent adjustments, especially during the second and third trimesters. Because of the lowered renal threshold for glucose during pregnancy, urine examinations alone are unreliable indices, and frequent blood sugar determinations are necessary.

If there are no complications the patient may be carried along in this manner until the thirty-third to thirty-fifth week when she should be hospitalized for evaluation and decision of the time and type of delivery. X-rays of the abdomen and pelvis may be necessary to determine whether or not vaginal delivery is possible. Vaginal delivery after spontaneous onset of labor should be permitted in patients who have no cephalopelvic disproportion and who have no definite contraindication to normal delivery. Cesarian section should be reserved for those who have a manifest obstetric indication such as toxemia, cephalopelvic disproportion, placenta previa, etc. Diabetes mellitus itself is not an indication for cesarian section.

During labor it is advisable to reduce the dose of insulin, and two or three small doses of regular insulin should be given instead of the usual one dose of one of the slow-acting insulins. The patient is given fruit juice with regular insulin adjusted to reduce the glycosuria. If labor is prolonged and food intake inadequate, acetonuria may occur. This is treated with intravenous glucose in water with sufficient doses of regular insulin.

After delivery blood sugar determinations should be made on the mother and infant. Careful observations of the mother's blood sugar are necessary because of the frequent precipitous drop in the insulin requirement after delivery. It is not unusual for the diabetic mother to require no insulin for a day or two postpartum. The insulin requirement, however, soon reaches the level at which it was before pregnancy. The infant's blood sugar varies. Few have hypoglycemia of any consequence during the first hours of life. When hypoglycemia does occur it rarely causes any difficulty. It is assumed that there is some endogenous release of glycogen in the newborn similar to that in the older child.

Complications

The course of the pregnant diabetic is marked by need of control of the diabetes and the complications of the pregnancy. Frequent upper respiratory infections and urinary tract infections add to the already variable insulin requirements characteristic of the advancing pregnancy. Acetonuria, therefore, occurs readily in the pregnant diabetic. So far as the pregnancy itself is concerned, the common complications observed in the diabetic are hyperemesis, hydramnios, and toxemia.

Hyperemesis may lead to serious complications. Treatment should be the same as that of the nondiabetic. If ketosis occurs, the patient should be hospitalized, and appropriate intravenous feedings along with adequate amounts of insulin should be used.

Hydramnios may occur with or without hypertension. It is most frequently encountered after the thirtieth week of gestation and is often associated with edema of the abdominal wall. Treatment consists of dehydration with ammonium chloride and mercurial diuretics and restriction of salt intake. It has been suggested[4] that the amniotic fluid be withdrawn. So far the only form of therapy is termination of the pregnancy if the infant is viable. If the fetus is not viable intrauterine death is almost certain.

The incidence of *toxemia of pregnancy* in the diabetic varies from 27.0 to 42.0 per cent.[5–9] These figures are considerably higher than those for nondiabetic subjects (7 or 8 per cent). The high toxemia rate is related to the increased fetal mortality and late accidents of pregnancy in the diabetic. Review of the world literature up to 1944 revealed reports of 924 diabetic pregnancies.[10] The fetal mortality rate in these cases was 37.6 per cent.

The last decade has been notable for the emphasis given to the study of the hormonal balance of toxemic patients with a view to establishing a possible relation to the high fetal mortality. The first suggestion of a likely hormonal imbalance in toxemic diabetic pregnancies was made by Smith and Smith in 1933.[11] Succeeding workers have enlarged upon the concept until at present it can be set forth in brief in this way (Fig.1).

Chorionic gonadotropin is the product of the Langerhans' cells of the placenta. It is broken down to alpha estradiol and progesterone. Alpha estradiol can be further broken down by either the metabolic or the oxidative pathway. In the metabolic breakdown a-estradiol is converted to estrone. This reaction is reversible. Estrone is further broken down to estriol—an ir-

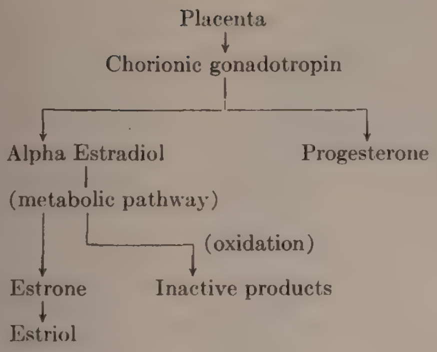

FIG. 1.

reversible reaction. The second, oxidative, breakdown of a-estradiol results in the production of inactive products. The inactive products in turn stimulate the production of estrogen and progesterone by chorionic gonadotropin. Progesterone, the alternate product of the breakdown of chorionic gonadotropin, promotes the metabolic breakdown and inhibits the oxidation of a-estradiol.

In the normal pregnancy chorionic gonadotropin is present in large amounts during the first trimester. As it is utilized for the production of estrogen and progesterone the gonadotropin level falls and the estrogen and progesterone levels rise gradually. During the beginning of pregnancy estrogen is largely oxidized, the inactive oxidation products stimulating the further production of estrogen and progesterone. The progesterone level rises, preventing the formation of oxidation products, so that at term the level of oxidized estrogen has fallen to a point where the production of estrogen and progesterone is no longer stimulated. Consequently, the blood levels of estrogen and progesterone fall and the level of chorionic gonadotropin rises. *Estrogen increases the blood supply* of the placenta. Therefore a decrease in the estrogen level leads to a decrease in placental vascularity and the beginning of labor. In the late pregnancy accidents the fall of estrogen level begins early with resulting toxemia and fetal death.

Toxemia of pregnancy can be predicted by a study of the serum chorionic gonadotropin levels. An abnormal rise after the twentieth week[12] is a prediction of a toxemia of pregnancy caused by a failure in the production or metabolism of estrin and progesterone. Because of the low estrogen and progesterone levels in toxemia, substitution therapy was suggested. When this form of therapy was introduced both estrogen and progesterone were used. More recently diethylstilbestrol alone has been used. It is thought that diethylstilbestrol acts like the estrogenic oxidation products to stimulate production of progesterone. Actually the Smiths have shown that diethylstilbestrol is about 100 times more active than estrone in stimulating the pituitary to release gonadotropic hormone.

There is a great deal of controversy regarding this form of therapy. The underlying rationale of the treatment has not been corroborated and its aims have not been fulfilled. Fetal wastage is about the same for those treated with and without stilbestrol. Hurwitz and Higano[13] report a fetal mortality of 19 per cent in a small group treated with stilbestrol. Nelson, Gillespie, and White[4] in a recent study report a 10 per cent fetal loss after twenty-eight weeks of gestation. In this series stilbestrol was used, and those patients who had therapeutic abortions for retinal or renal disease were excluded. Hall and Tillman[14] report a fetal loss of 18.3 per cent without the use of stilbestrol. Reis, De Costa and Allweiss[15] report a fetal mortality of 13.6 per cent without the use of hormones. Again, without stilbestrol, Tolstoi, Given, and Douglas[16] report a fetal wastage of 22 per cent. Before any comparison of these results can be made the following points must be considered: age of the mother, duration of the diabetes, severity of the diabetes, presence or absence of renal and vascular complications, and the standards of diabetic control. Most of the reports do not include these data, and without them it is difficult to evaluate the effects of hormonal therapy.

The final objective is the prevention of neonatal death. Hypoglycemia is no longer considered a real threat. Hypoglycemia during the neonatal period is physiologic in infants of both diabetic and nondiabetic mothers. In spite of the low blood sugar levels, newborns rarely have symptoms of hypoglycemia. The most common causes of death are pulmonary atelectasis, cerebral hemorrhage, and congenital defects. These babies are usually edematous and regardless of weight behave like premature babies.

Immediately after delivery the mouth, nose, and pharynx are aspirated and a catheter is passed into the stomach for the aspiration of gastric contents. The infant is then placed in an incubator where oxygen is supplied constantly. Aspirations of the nasopharynx are done at regular intervals—hourly, or more frequently if necessary. If there are signs of atelectasis antibiotics are administered prophylactically to prevent pneumonia. Edema is treated by withholding regular feedings until the edema subsides. Some have advocated the use of 0.1 cc. of a mercurial diuretic intravenously to hasten diuresis. The first few days of life are crucial for the infant of the diabetic mother. If the infant survives, improvement thereafter is rapid.

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(*Number seventeen of a series on Current Concepts in Diabetes Mellitus*)

Editorial

[Continued from page 474]

confidence produced by long life. We have faith that we will live to carry out most of our plans for our children and to see our hopes for them fulfilled. But is our longer lifetime giving us a clearer picture of our relationships, or are we closing our eyes to the next generation, thinking of our own desires, and losing our standards of right? Now as never before it is time to search for and cling to moral honesty. We can expect a long life. By what kind of social morality will we live?

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round table discussion

REVIEW OF RECENT ADVANCES IN DIAGNOSIS AND TREATMENT

M. LUTHER MUSSELMAN, M.D., BUFFALO, *Chairman*

DISCUSSANTS

SAMUEL SANES, M.D., Buffalo, Moderator, Associate Professor of Pathology, University of Buffalo School of Medicine

ALBERT F. R. ANDRESEN, M.D., Brooklyn, Clinical Professor Emeritus of Medicine, State University of New York College of Medicine at New York City

MARSHALL CLINTON, M.D., Buffalo, Assistant Professor of Pharmacology and Instructor in Medicine, University of Buffalo School of Medicine

DEXTER S. LEVY, M.D., Buffalo, Assistant Clinical Professor of Medicine, University of Buffalo School of Medicine

WILLIAM F. LIPP, M.D., Buffalo, Assistant Clinical Professor of Medicine, University of Buffalo School of Medicine

ELMER MILCH, M.D., Buffalo, Assistant Clinical Professor of Surgery, University of Buffalo School of Medicine

DR. SANES: I am very glad to welcome all of you to this innovation in the program of the Medical Society of the State of New York, this round table discussion on treatment. We are sorry that Dr. A. H. Aaron has been prevented from being with us because of illness.

It may be of some wonder to you to see a pathologist moderating a program on treatment. Perhaps I do this in a feeling of self-preservation because so fast and so efficiently has treatment moved ahead in the past twenty years since I have been in pathology that we are finding less and less to do, and that is the specific truth. The number of deaths is decreasing in our hospitals, and certain diseases are not seen any more or, relatively, not seen any more in autopsy experience. The infections have disappeared from the postmortem room, and it is very difficult now, even during the winter, to find a case of lobar pneumonia at autopsy to demonstrate to students. The diseases we do see are those connected with the cardiovascular or renal system or with malignant tumors or with certain blood dyscrasias and other states.

This evening's program is one that depends for its success not just on the panel, but on the participation of the audience. I think we might say that what makes tonight's program is the audience. If you have any complaints after this program is over, I do not think they should be fully directed against the panel. The audience will get what it can out of this program by submitting questions to the panel.

Dr. Musselman, who has been in charge of the arrangements of the program, has distributed cards and pencils. We would like to have you write any questions or as many questions as you wish. Dr. Musselman will collect these questions, and then I will read the questions to the

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panel as a whole or to specific members of the panel. From that point on it will turn into a program to stump the experts, and you ladies and gentlemen will have a good chance to see what they can do with some of these important problems and questions in the treatment of disease.

We want you to feel that the subject is not limited this evening. Dr. Musselman has told me and has told the newspaper reporters here that this is a round table on the treatment of disease in its broadest sense.

If there are any questions available at the present time, Dr. Musselman will pick them up.

Dr. Musselman: Now we can start with the ones we picked up.

Dr. Sanes: As an old member of the union of moderators, I have a few questions that I have picked out of my pocket. You cannot find a moderator who does not walk around with some questions in his pocket. I have a few questions here which I will present to the panel to start the discussion this evening.

The first question has to do with biliary tract disease. It is a question which, I think is a crucial one in a fair number of cases. What do you do about silent gallstones? If you have a patient who comes in with complaints, a study is done and stones are found, say on the x-ray examination, what do you do for that? What do you advise that patient?

Dr. Albert F. R. Andresen is here tonight. I am going to call on him first. What do you do about silent gallstones?

Dr. Andresen: I looked up the subject in surgical literature so that I would not be considered too radical. I find that the consensus of opinion now is that silent gallstones should not be operated on unless there is some very definite indication.

I consider that age has a bearing on that. I think silent gallstones in people under forty had best be operated on because of the possibility of trouble with stones in later life. I set a deadline at sixty beyond which I try never to have them operated on unless the people cannot be relieved of symptoms by medical treatment. That leaves us with a twenty-year interval from forty to sixty when I am on the fence myself regarding operation. I prefer to see whether medical treatment will relieve them entirely of symptoms and, if not, then have them operated on.

Dr. Sanes: This evening's program is a round table. A round table just does not refer to this table we have in front with the experts sitting around it but refers to an imaginary table around which all of you are sitting with the men on the panel. I think as we go along it might be of interest to ask secondary questions on the answers that have been given to the primary questions.

You have heard Dr. Andresen's reply to the primary question, "What do you do about silent gallstones?" Does anybody either on the panel or in the group want to ask a question on that or, perhaps, enlarge on it?

Question from the Audience: Is it true that gallstones predispose to cancer of the gallbladder?

Dr. Andresen: Well, that is a favorite contention when you want to sell a patient an operation for gallstones. As a matter of fact, carcinoma of the biliary tract is one of the rarest things in medicine. We very rarely see cancer of the gallbladder or biliary tract. For that matter, we see more carcinoma in the pancreas, which they say sometimes has something to do with gallstones.

On gallstone cases if you figured the mortality of carcinoma, it would be so minute as compared with the mortality of operation and of postoperative complications that it really would not count.

Dr. Sanes: Any further questions?

Comment from the Audience: Dr. Andresen has said that he tries medical treatment on this forty to sixty age group, but he did not say what the medical treatment consisted of.

Dr. Sanes: I think we were waiting for somebody to ask him this. Dr. Andresen.

Dr. Andresen: I believe that the treatment of gallstones consists of making use of our knowledge of the physiology of the biliary tract and that the most important part of the medical treatment is to promote drainage of the biliary tract.

That drainage is accomplished best in the natural way by the use of fat. Fat, we know, stimulates the emptying of the biliary tract. It causes relaxation of the sphincter and contraction in the gallbladder and permits the flow of bile into the duodenum. It reduces pressure in the biliary tract and permits drainage from the gallbladder.

Personally, I do not use any medication. I do not use any sedatives particularly. Sometimes they are necessary at first because a diet containing fat may irritate the patient for the first few days. But after that the patients feel a great deal better.

We have a perfectly natural, well-balanced diet containing fat, cream in cereal and an egg and milk for breakfast, vegetables and egg or cream cheese, bread and butter, salad and fruit—just ordinary meals containing fat. Then we give between-meal and bedtime feedings of either milk and cream or, if we do not want the patient to gain weight, we use milk with gelatin. We have found that milk and gelatin will also stimulate the emptying of the gallbladder. Six stimulations to emptying per day will eventually clear up symptoms. We have proved by x-ray that it will restore a nonfunctioning gallbladder to functioning unless there is some definite obstruction causing the lack of filling of the gallbladder or the lack of emptying.

QUESTION: Dr. Andresen, does a single silent gallstone predispose to empyema of the gallbladder or perforation of the gallbladder with gallstone ileus or obstruction of the bowel? If so, would that influence your decision to operate on a single silent gallstone?

DR. ANDRESEN: I think a single large stone is more apt to cause mechanical trouble because it is a large foreign body. It is pressed into the surrounding organs. It is apt to cause symptoms. These people say, "I feel as if I had a stone here," without knowing anything about the gallbladder. So large stones are very rarely silent. But when they are silent, I believe anyway that the possibility of their causing trouble is rather great.

Most of the stones that perforate, though, are not of large size. They are mostly smaller. The largest I have ever seen was about the size of a grape, and that caused an obstruction at the ileocecal valve when it perforated into the duodenum.

COMMENT: I would like to know how Dr. Lipp and Dr. Milch feel about the treatment of gallstones.

DR. SANES: Let's call on Dr. Milch. This is a round table. We ought to have a well-rounded view.

DR. MILCH: I do not know whether I approve of Dr. Andresen's library. I would like to ask Dr. Andresen why, if this stone is silent, he bothers putting the patient on medical treatment for gallbladder disease. And I would also like to ask Dr. Andresen whether, by using the so-called biliary flush, he has precipitated an acute exacerbation of gallbladder colic by pushing the stone into the cystic duct and producing an acute empyema.

DR. ANDRESEN: I have never seen acute empyema develop that way. I have seen colics. We treat colics by continuous feeding and shorten the period in that way. But I have never seen an infection resulting from it. I have never seen an empyema. And by draining the gallbladder, by keeping the gallbladder drained, we can prevent stones from getting into the neck of the gallbladder subsequently and causing more colics.

DR. MILCH: In answer to Dr. Lester's question, anything we say is based upon our own past personal experience. Being surgeons, naturally, we are called in to see the complications that exist. For that reason I am frank to admit that we may get a distorted viewpoint of this entire picture because we see only the bad results.

We see gallbladders that perforate and produce peritonitis. We see the odd carcinoma of the gallbladder that Dr. Andresen made reference to. We see the acute pancreatitis, the hepatitis, the cholangitis, the cholangeolitic cirrhosis, and all the well-accepted complications. Seeing these patients, we feel that probably an ounce of prevention is worth a pound of cure.

I cannot quite agree with Dr. Andresen in his statement that in a patient over sixty years of age he looks upon surgery with considerable fear and trepidation.

Our feeling is that as long as that patient has a gallstone in his or her gallbladder, it is just like a stick of dynamite in that particular individual's abdomen with the fuse lit. It all depends on how long the fuse is before the dynamite is going to blow up and make a complicated procedure out of something that should be comparatively simple.

I do not quite understand what is meant by the term "silent gallstone." How was the gallstone picked up, why was this patient x-rayed? It certainly was not picked up on physical examination. Was it picked up because of suspected anginal attacks or coronary insufficiency for want of a better term? Was it picked up because of vague symptoms of pyloric spasm, nausea, emesis, or what have been variously termed reflex mechanisms that may be based upon a neurogenic basis?

A gallstone is something that does not belong in the gallbladder. If patients live long enough with it, we are going to get them at eighty if not at forty-five.

DR. SANES: You have heard these two views.

I am sure you have heard them before. Dr. Lipp, what is a silent gallstone? Maybe we took this question, like the question asked the witness in court, "When are you going to stop hitting your wife?"

Dr. Lipp: Well, to my way of thinking—and this is entirely personal—there are two kinds of gallstones. One is silent, one is loud. The loud gallstone is causing biliary colic.

I happen to belong to the group that does not feel that stones produce indigestion and minor symptoms of dyspepsia, flatulence, and symptoms such as that. In part I base my argument on this: from the point of view of treatment the only good luck I have with surgical intervention in the treatment of gallstones is in those people who have had attacks of true biliary colic. I have not had good luck in treating those people who have minor symptoms of indigestion by cholecystectomy.

We have talked in many instances about the postcholecystectomy syndrome. I think it is the same thing as the precholecystectomy syndrome. We are just not treating the source of the symptoms. So, a silent gallstone to me, as Dr. Milch has indicated, is a stone picked up incidentally because we are so complete in our physical examinations and investigations. I do not feel that it is producing symptoms. Consequently, it happens that in my own practice I am sure I have just as many people walking around with stones that I know about as I have patients to whom I have recommended cholecystectomy. I feel that we cannot use the argument, and Dr. Andresen has implied this, that carcinoma is a good reason for urging cholecystectomy when we find stones. So, I tell most people they have the stones. If they are having biliary colic, I recommend cholecystectomy. If they are not having true biliary colic, I use the rule Dr. Andresen has indicated. In my own mind I pick the age of fifty. In young people I urge cholecystectomy if I have found stones. Older people without symptoms I try to carry along. In the young people I feel there is a long tour ahead of them, and there is a greater risk of complications from the gallstones. Therefore, they should have the gallbladder removed. I know of no medical treatment for cholelithiasis. So far as I am concerned it is a mechanical lesion, and mechanical troubles have to be treated in a mechanical fashion which means surgical intervention.

Dr. Sanes: I want you to know we were not aware this question was coming up so we could put Dr. Andresen at this end of the table, Dr. Milch at the other end, and Dr. Lipp in the middle, giving the medium view on the subject.

We have had a couple of other questions. I can put mine back in my pocket and use them at the next round table I moderate.

We have two questions here concerned with a particular subject. I think we will take them now. They are concerned with the medical treatment of biliary tract disease. The first one is, "Are decholin and related bile preparations of any value in the treatment of gallbladder disease?" Dr. Andresen. If you will pardon me, we can begin it with this: Of what value are bile salts or bile acids?

Dr. Andresen: This is practically the same question. I do not use them. The way they have been used in the past is as follows: The patient gets a fat-free diet, and who invented the fat-free diet, I do not know. But the patients get a fat-free diet, and it is recognized that without fat there is no stimulation to biliary drainage. So the attempt is made to promote biliary drainage by means of these bile salts.

As a matter of fact, bile salts are choleretics. They increase the quantity of bile, somewhat increase the pressure of bile in the biliary ducts for that reason, and thin out the bile, perhaps promoting drainage to some extent. But ordinarily you can accomplish your biliary drainage a good deal better with fat in the diet.

When I went to school, we were taught to use olive oil. If a patient had gallstone attacks, we gave a half pint of olive oil morning and night. The patients were relieved of their symptoms by the oil. Then, for some reason or other, somebody came up with the fat-free diet. I began to notice it along about 1916 or 1917, and I wrote my first paper about 1917 or 1918 on the importance of fat in the diet. I have been working on it ever since.

Dr. Lipp: Dr. Sanes, I am going to interrupt and agree with Dr. Andresen. I think bile salts and bile acids are now largely a promotional experience on the part of pharmaceutical houses. There may be rare exceptions, which do not occur to me at the present time, but I know of no reason to order any of those preparations, bile acids, bile salts, or the dehydrocholic acid derivatives.

Dr. Sanes: We have other questions on the biliary tract diseases, but I want to give the other men on the panel a chance to speak. Dr. Levy.

Dr. Levy: We can bring the important field for discussion of the evening, namely, cardiovascular disease, into the picture. Two aspects are suggested by it, and perhaps more of the discussants and the panel themselves can pick this subject up and take it from here.

I would like to bring up two major things. Number one is the word "silent." I will not debate with my colleagues as to what a silent gallstone is. I do not know. I will leave that to their good judgment and what they have said. But silent coronaries! And, second, what is the relationship of gallbladder disease and coronary artery disease?

As far as silentium goes in disease of the coronary arteries, I feel there is no such thing. You are going to say, "We see coronaries that are not having pain." If you mean a silent coronary, you are not using the same term. You are speaking of a coronary without pain, but I do not feel that any coronary is silent. It will manifest itself, perhaps not with the typical substernal oppression of anoxia, but will probably show itself in other ways, such as nocturnal dyspnea, progressive dyspnea, arrhythmia, paroxysmal in origin—whatever type it is. It may be manifest typically by the tight wrist where the wrist-watch is loosened, the suspected bursitis, even the right arm syndrome, the fellow that goes to the dentist because of pain in his jaw, the person that thinks he is having an esophageal lesion because he cannot swallow, or the individual with abdominal distress due to reflex upper belly distribution. Therefore, when it comes to the term "silent coronary," I cannot go along with that particular connotation.

The second point will probably evoke discussion. I hope it does. What is the relationship of gallbladder disease and coronary vessel disease? This particular problem has a panel here that should probably be able to bat it about a bit. Personally, I have been impressed by the close relationship between the presence of precordial oppression and the anginal equivalent or true anginal distress in individuals with gallbladder disease. Particularly in women who have no hypertension, diabetes, or syphilis does one see this precordial pain. And I feel that in an adequate workup of an individual who does not demonstrate the classic picture of an infarct or anoxia due to coronary pathology, gallbladder disease must be ruled out. That has been our experience in such cases.

I would go along with the surgeon in this case for I feel that where this possible reflex exists, the initiation or aggravation of underlying arteriosclerosis may be favorably influenced by the removal of a diseased gallbladder. Where there is a rock, there is gravel; where there is gravel, there is disease; where there is disease, there is potential trouble. You do not take a gallbladder out at seventy, usually after acute infarct—although I will supplement my statement and say I think the average cardiac who is compensated is probably as good or maybe a better risk for surgery than many people at the same age not showing abnormal signs.

Dr. Sanes: I am going to end this discussion. We will come back to it. I want to pay personal recognition to a friend of mine in the audience who sent up a question for the moderator: What per cent of people at autopsy show the presence of gallstones?

In our material we find that in persons over forty years of age up to eighty or with increasing years, anywhere from 20 to 40 per cent of gallstones are found at autopsy in persons dying of other disease.

We have several questions here of an endocrine nature, and one concerns itself with the use of estrogens orally. Dr. Clinton, do you want to discuss that question?

Dr. Clinton: As far as the use of estrogens is concerned, I would say that except under rare circumstances there is practically no justification for the use of estrogens any way except orally. If you have an adequate oral preparation, there is really little or no sense in giving a person an injection. As far as estrogens are concerned, we have excellent oral estrogens available. Anyone using estrogens parenterally is using psychotherapy and not adequate hormone therapy.

I would like to make an assertion about the use of estrogens. Promotional literature that comes across your desk at the present time contains a great deal of misinformation about the value of naturally occurring estrogens. If you put this thing on a cost basis, there is little justification for most of the naturally occurring estrogens because synthetic estrogens will do a better job at far less cost. It is true that some patients will be upset by certain of the synthetic estrogens, particularly stilbestrol, but there are other synthetic estrogens available, such as ethinyl estradiol, which are effective in small doses, 0.02 to 0.05 mg., and are much better to use than any of the so-called naturally conjugated estrogens.

Dr. Levy: Testosterone has little, if any, value in angina.

Dr. Sanes: Are there any questions from the audience on estrogens and their uses? (*No response*)

There is another question here on the use of estrogen and androgen therapy. Why should they both be equally successful in the late metastases in the breast primarily treated either by surgery or x-ray? That is sort of a loaded or leading question.

Dr. Clinton: I would like to start on that. I am sure Dr. Milch will have more to say on the subject. To begin with, I would not say they are equally successful. We can say that by and large in the premenopausal woman testosterone is an effective agent in the palliation of inoperable or metastatic malignancy, particularly in the presence of soft tissue metastases.

By and large we can say estrogen in the postmenopausal woman, by postmenopausal we mean at least five years postmenopausal, is an effective agent in the palliation of breast tumors, particularly in the presence of soft tissue metastases and less so in the presence of osseous metastases. Unfortunately, with both agents we see patients whose disease apparently is accelerated by the administration of hormonal therapy.

Hormonal therapy in malignancy is always a double-edged sword. I believe Dr. Sanes will corroborate this. There is no way the pathologist can predict whether the particular breast tumor is going to be inhibited, untouched, or accelerated by the use of estrogen therapy. We believe it is a modality reserved for the hopeless situation after surgery and radiation have passed their usefulness.

Dr. Milch: I have nothing to add to what Dr. Clinton has said. I spoke to Dr. Nathanson, who did some of the pioneer work in this. He frankly does not know why it works either. There are times that testosterone works when theoretically it should not work.

I would like to emphasize that the use of androgens in malignant disease is a two-edged sword. As Dr. Cushing once said, "It is a red danger light, and it should only be used in the hopeless cases."

While we are on the subject, not speaking of malignant disease, I would like to ask Dr. Clinton's opinion of the entity of chronic cystic mastitis. We see people coming into our office in surgical consultation almost every day because of painful breasts, particularly a week or ten days before their menstrual periods, and they are all loaded with injections of the androgens of one type or another. I would like to know how you feel about the administration of the androgen products to women who have chronic cystic mastitis. I think Dr. Sanes will bear me out. Approximately 30 to 35 per cent of women do have some evidence of chronic cystic mastitis.

Dr. Clinton: I think that is an abused field to begin with. I do think though that chronic cystic mastitis apparently is aggravated by estrogen excess. Some of the people who have chronic cystic mastitis are helped to some extent by the administration of progesterone and also occasionally by the administration of testosterone. I am frank to admit I am not sure how much of this is purely pharmacologic and how much is psychotherapeutic.

The amount of pain involved is never particularly intense. Many of these women depend not only on the fact they are getting an androgen preparation, but also on the reassurance they get and the reassurance they are not suffering from cancer. That is one of the chief things concerning a woman who has chronic cystic mastitis. She feels the presence of lumps in her breast. She has a pain. She fears malignancy. If she can be reassured, I think she can tolerate her pain better. Much of the hormone therapy is psychotherapy, I think.

Dr. Sanes: Here is a question. What, if any, is the relationship of estrogen to arteriosclerosis, Doctor?

Dr. Clinton: Well, I do not think that any satisfactory answer can be given. I do not think any definite relationship between estrogens and arteriosclerosis has been established.

Dr. Sanes: Dr. Levy?

Dr. Levy: Buffalo didn't get a hit last night. (*Laughter*)

Dr. Clinton: Dr. Andresen has handed me a question: Have you seen palliative relief in advanced carcinoma from the use of estrogenic or androgenic therapy? I think the answer is definitely yes in certain individuals. Relief of bone pain is most dramatic in advanced carcinoma of the breast following androgen. Curiously, in cancer of the prostate dramatic relief of bone pain follows the use of estrogen.

Dr. Levy: You did not give me a chance. You asked me a question.

Dr. Sanes: You stepped out of the batter's box.

Dr. Levy: I think David Barr has done a considerable amount of work in the production of arteriosclerosis wherein he has applied dietary approaches plus injectable substance in animals who had previously been prepared by the use of estrogen substance. He reported in a lecture at the American Heart Association meeting in Atlantic City in April a very definite decrease in the number of circulating S. F. 12 = 20 molecules which are the lipoprotein molecules associated with arteriosclerosis. So, I feel that this particular problem has a considerable future in investigating whether or not the estrogens will play a part in decreasing the subsequent production and laying down of cholesterol lipoprotein products for sclerosis.

Dr. Sanes: Is there any danger, Dr. Clinton, in the development of cancer in sustained estrogenic treatment?

Dr. Clinton: So far as I am aware, in human beings there is absolutely no evidence to substantiate the development of carcinoma from estrogen therapy. It is true that susceptible strains of mice will develop breast carcinoma or carcinoma of the reproductive system following the administration of estrogens, but so far as human experience is concerned, I think the answer is definitely no.

The big difficulty with estrogen therapy in humans is that if a person is getting estrogen therapy, she bleeds a little. We assume the bleeding is from the estrogen therapy. It may be a malignancy in the uterus which we consider not to be a malignancy because our fears are allayed by the fact the person has been getting estrogen therapy. It has a masking effect in making you unappreciative of the significance of uterine bleeding.

Dr. Sanes: In a given case of metastatic tumor when do you stop, if you ever stop?

Dr. Clinton: You stop when the patient either is progressing rapidly or has died.

Dr. Sanes: Any other questions in this group? Here is one. What is the effect of estrogenic therapy in osteoporosis?

Dr. Clinton: The effect in osteoporosis is one of relief of bone pain, usually within a week's time and long before you could demonstrate any appreciable change in nitrogen balance. Estrogen promotes nitrogen. Therefore, that deficiency in osteoporosis is not one of calcium metabolism. When you give androgen, presumably you allow a building block to be laid down within which calcium can be deposited. Albright has done much of the pioneer work in this field and has shown tremendously beneficial results from androgens and, incidentally, from estrogens as well. Yet it has taken about four years to show an appreciable recalcification of the skeletal system following the use of either hormonal modality.

Dr. Sanes: Here is a single question. It has two question marks after it. Does cortisone cure anything?

Dr. Clinton: I doubt it.

Dr. Sanes: We will stop these questions here on hormonal therapy. I think we have a question to stop any discussion on hormonal treatment. What type of treatment did Christine receive?

Dr. Clinton: After reading *Time,* and I trust most of you have read *Time,* it is obvious she did not receive very good psychotherapy. He was emasculated. I do not think many people recommend emasculation for very much except prostatic carcinoma. I doubt if Christine had one.

Dr. Sanes: Does anybody have any inside information?

Dr. Milch: I would like to ask Dr. Clinton how he would have treated her or him.

Dr. Clinton: I would have referred him to one of the psychiatrists.

As far as inside information is concerned, we did hear inside information from one of the residents down in Syracuse who had been an exchange resident in Denmark. According to him, the story as it came out in *Time* is entirely correct.

Dr. Sanes: A reporter is here. We better be careful.

Dr. Clinton: I refer him to *Time* magazine.

Dr. Sanes: There is no time like the present to go to another subject. Dr. Levy I can see has been straining at the leash. I have been on programs with him before. If I do not call on him, he just gets up and talks. To tell you the truth, it happened once when I was on television with him. I was moderator of the program. They presented him with a script that did not include any mention about coronary disease. Of course, once the program goes on the air, we have no control. We sat there. He did stick in something about coronary disease and hypertension.

Here are a couple of questions on hypertension that he can pursue. First, please discuss the use of antihypertensive drugs, particularly Apresoline, in essential hypertension and toxemia in pregnancy. Apparently that is an important question because we have two on the same subject. Dr. Levy.

Dr. Levy: The present management of essential hypertension is still in a state of flux. Since time immemorial this disease has had no specific etiology. In 95 per cent of cases, if one can exclude nephritis, concussion, brain tumor, drug infection, and psychoneurosis, he is left with essential hypertension. Being left with essential hypertension indicates immediately we have no known pathologic status producing such. Therefore, the treatment has been divided between medical and surgical approaches to try and block the sympathetic impulses that have been stimulating vasoconstriction and resulting in a rise of blood pressure.

In such an approach one has comfort with drugs that are classified in two types: (1) andrenergic blocking drugs in which we include Apresoline, sedatives, veratrum maxitate with its concomitant combinations of barbital and rutin, vitamin C, etc., and (2) the ganglionic blocking drugs of which Lexomathonium is an example.

It has been our experience in a series of cases with the blocking drugs that Apresoline's greatest value lies in cases with severe hypertension in which one of the other blocking agents of the andrenergic type has been used and exhibited very mild effects. In other words, Apresoline per se has not been associated with the satisfactory response one would like with an antihypertensive drug. Its administration in 10-mg. doses four times a day with a gradual rise by pill per dose until an effective toxic level is reached which would include effects upon the head, that is, dizziness, the gastrointestinal tract with nausea, vomiting, and diarrhea, and on the cardiac system with actually ectopic rhythms. The rise of the drug to a point of effective toxicity is essential before one can get a drop. Therefore, as a useful agent per se it has not been satisfactory. However, if one uses methonium compound as a ganglionic blocking drug to a point of near toxicity with similar signs and symptoms and then tries maintenance with an equal distribution of Apresoline, there it has been impressive.

Being a neophyte with toxemia in pregnancy, I can say Apresoline is secondary to veratrum products in toxemias. Probably its greatest value has lain in postsympathectomies for hypertension where there has been a return of hypertension and symptoms. There Apresoline seems to exert its greatest effect.

I think the gamut is going to run in hypertension as it has over the past fifty years when extract of mistletoe started, went dead, and now is being pushed again. The substances being used medically have not been successful. Until we find a cause, I doubt very much whether we will have a drug.

Dr. Sanes: Dr. Clinton?

Dr. Clinton: I would like to ask Dr. Levy if he is not impressed by the fact that most of the proprietary preparations contain phenobarbital and whether this does not point to the central nervous system origin of hypertension.

Dr. Levy: I am in agreement on that.

Dr. Sanes: Did everybody hear? Dr. Levy is in agreement. When he is in agreement with anybody, I want you to hear about it.

Dr. Levy: There is one other drug I did not mention. It is coming out soon. As a matter of fact, it is on the drug counters. Rauwolfia Serpentina, another andrenergic blocking drug.

Perhaps Dr. Andresen and Dr. Lipp have something to say, or Dr. Milch wants to mention sympathectomy and hypertension.

Dr. Sanes: We will leave it for a moment. Here is a question which could not have been more direct nor specific. Is salt restriction alone sufficient to control cardiac failure in hypertensive cardiovascular disease when regular sinus rhythm is present?

Dr. Levy: I could not be more specific than to say no. In the presence of congestive failure a variety of things is needed. You cannot help a heart unless you give it its key stronghold to work with, digitalis, regardless of rhythm.

Dr. Sanes: Any comments? (*No response*)

There is a question here addressed to Dr. Lipp. I do not know whether it comes from a friend or enemy. It depends on how he can answer it. Discuss penicillin resistance to organisms, particularly staphylococcus, in regard to treatment and drug.

Dr. Lipp: That was an enemy, Dr. Sanes.

Dr. Sanes: How do you deal with your enemies?

Dr. Lipp: In this way. Our own interest, of course, lies in the digestive tract in regard to infection and the use of antibiotics. Dr. Andresen and I sat in on a meeting a few days ago where this subject came up, and we were able to contribute a little bit toward it because of some experiences we had had at the General Hospital.

A year or so ago we found some seven or eight patients developing a very severe toxic state leading to shock with marked dysentery which resembled, I am told and from what I have read, cholera.

The majority of these patients died, and it was not until after exhaustive study that it was determined that these patients had died from an overwhelming staphylococcus enteritis. It was concluded that the use of wide-spectrum antibiotics, such as Chloromycetin, aureomycin, and Terramycin, would allow the staphylococcic organisms to grow and become mightily pathogenic and lead to local symptoms within the digestive tract and to systemic symptoms of shock and finally death.

Within the last month we have had two more deaths from this entity, and these patients were all reported as a group before the Society—Dr. Sanes would know it better than I—of Pathologists in St. Louis by Dr. Kornel Terplan, the pathologist at the Buffalo General Hospital.

Even before you can get stool cultures to confirm it, the minute you see a severe dysentery with systemic reaction on the part of the patient who has received a wide-spectrum antibiotic, the treatment is to start an antibiotic that is exceedingly effective against the staphylococcic organism. The one at present is erythromycin. That should be started at once! You cannot wait for the stool cultures because that will take several days.

The interesting thing to me in all of this is that in a great laboratory at Rochester, Minnesota, where, as everyone knows, the sensitivity of various drugs to various agents has been tested over the last four or five years, this curious and very important observation was made. I am speaking of the hemolytic staphylococcus. In 1950, three years ago, 95 per cent of these organisms were sensitive to the wide-spectrum antibiotics and to penicillin. Now, three years later, so resistant have these organisms become that only 45 per cent are sensitive to the usual antibiotics.

So, the survival of the fittest seems to obtain even in the bacterial world. And it is conceivable that, with all of the pencillin and the other antibiotics you and I use, not always with wisdom, in future years we will have a group of organisms that will be greatly pathogenic to our human population. Our only hope seems to be that as time goes on, just as the resistant strains develop, newer antibiotics will be developed.

In summary, our feeling is that we have seen deaths and serious illnesses of a dysentery nature due to the staphylococcus in the intestinal canals of those people treated routinely with wide-spectrum antibiotics. Now we have erythromycin to use, and that is apparently in a few instances—we have not had the opportunity to test it widely—our present answer. But it will not be our future answer as we develop more and more resistant strains to these various agents.

Dr. Sanes: Dr. Milch, do you want to talk on it?

Dr. Milch: No.

Dr. Clinton: I think Dr. Lipp has done it.

Dr. Sanes: That answer is also related to a question by somebody else in the audience on the comparative efficacy of the current antibiotics against staphyloccic infections.

We have just covered the first part of this round table program. To me it passed rapidly. In fact, we cannot stop it. A question from the audience.

Question: Didn't the late Emmanuel Schoenbach in a publication last year show that the "staph" do not become resistant to chloramphenicol, but they do become resistant to the other antibiotics? He did, I think.

Dr. Lipp: I am not certain of that observation, but I know several of our patients who developed overwhelming staphylococcic septicemia did receive other mycins. As a matter of fact, that drew our attention to it.

In order of value it seems to me, and now I am talking quite a ways from your own particular interest, that penicillin is the first agent to be used against staphylococcic agents. Chloromycetin, aureomycin, even Terramycin are not so effective. We have felt we should reserve erythromycin for those organisms resistant to the first two, that is, aureomycin and Terramycin.

Comment: We are not always the same. Why should the bacteria always be the same?

Dr. Sanes: I guess we cannot argue with that. Let's start a question here so we can get the panel wrestling among themselves.

How do you treat gastric ulcer? Dr. Andresen.

Dr. Andresen: You are distinguishing between gastric and duodenal, are you?

Dr. Sanes: The question says, "How do you treat gastric ulcer?" You can make any qualifications as you go along.

Dr. Andresen: It is a good question. In any ulcer you have to consider the possibility of cancer, and treatment should be directed along the line of the usual smooth diet with frequent feedings, an adequate diet so far as protein, carbohydrates, and fats are concerned with sufficient minerals and vitamins added so that it is well balanced. The diet should be fairly smooth for its mechanical effect, and patients do not necessarily have to be kept in bed. They can be ambulant.

However, I think the most important thing is to check at regular intervals in order to find out what is happening to the gastric ulcer. I think the first x-ray should be made within three or four weeks, and usually within that time you can tell whether the ulcer is getting smaller. Sometimes you will find it will be entirely healed in a case of a simple ulcer. If it shows no improvement at all or shows a spread, as they usually will if they are malignant, then it should be operated on.

Dr. Sanes: That is a crucial question like silent gallstones. Any comments?

Dr. Andresen: One more thing. The idea of waiting has been challenged by Dr. Palmer in Chicago. Everybody quotes him, especially the surgeons, because they feel that the operation should be done right off for the gastric ulcer. Dr. Palmer showed three cases of ulcers which have been widely quoted. These were lesser curvature craters with induration which, he said, showed evidences of healing. Then subsequently in operation they showed carcinoma.

It is perfectly true that the carcinoma tissue may sometimes fill up or partly fill up the crater of that ulcer, but a careful study of the x-rays by competent x-ray men and clinicians who understand x-ray will show that the base of the malignant ulcer, if it is filled in, is not smooth, as the simple ulcer would be. Also the ring of induration around it will be found to have advanced and is usually irregular in outline. I saw those pictures that Palmer showed, and if I had seen them, I would not have made the mistake of saying that they showed healing of the ulcer. I would have said undoubtedly they were malignant.

Dr. Sanes: Any comments from the audience?

Question: Do we not have the question that we, perhaps, promote cancer with a high-protein diet?

Dr. Sanes: The question is: Do we perhaps promote the growth of cancer by giving a high-protein diet? Anybody on the panel?

Dr. Lipp: I would say no.

Dr. Clinton: I would say we might accelerate the growth of cancer on the basis of animal experiments which have shown cancers will grow more rapidly as any tissue if you provide an adequate substance to grow on. So far as the development of cancer, no. It might help existing cancer to get along. I think the answer, as Dr. Lipp has said, is no.

Dr. Lipp: I do not think it is advisable to starve cancer patients.

Question: Would Dr. Andresen qualify his answer as to the site of the gastric ulcer?

Dr. Sanes: Let's say site, age of the patient, duration of symptoms, etc.

Dr. Andresen: As a rule, an ulcer on the greater curvature is considered to be malignant, although recently some cases were shown in Atlantic City where there were greater curvature ulcers that were benign. Louis Gregory Cole had an offer of one thousand dollars for anybody that would show him definite evidence that an ulcer on the greater curvature proved not to be malignant when operated on. But there are cases reported.

In general, we feel that an ulcer on the greater curvature is a malignant ulcer. The ones I am referring to particularly are those along the lesser curvature. I do not believe that you can say they are more prevalent in the immediate prepyloric region. You can see just as many benign ulcers near the pylorus as on the greater curvature.

Dr. Clinton: I want to ask a question. I would like to ask Dr. Andresen and Dr. Lipp both how many gastric cancers proved pathologically they have seen that are now living.

Dr. Andresen: That is a question we often ask ourselves when we get together in a small group. We read a lot about the mortality of cancer of the stomach, and it looks almost as if it were hopeful. I know of only one in my forty years of practice who is alive after having had a cancer operation on the stomach. I had two until just about three years ago, one who had lived nine years. In fact, they were both operated at the same time. The one had a recurrence at the end of nine years. He had general metastases. The other one is still alive, a practicing dentist. I see him every once in awhile. It is now eleven years.

Dr. Sanes: Dr. Lipp reviewed this subject in the material at the General Hospital two years ago. I am going to put another question to his answer. What can we do about it?

Dr. Lipp: So far as the second question goes, right now at this moment I am going to say nothing. I am very pessimistic about gastric carcinoma. You read in the literature such glowing reports. As a matter of fact, four years ago from a great center in New York City there emanated a report with this flavor: Of patients with cancer of the stomach upon whom they had operated, 34 or 35 per cent were alive after five years. As you read the article, you see a maze of statistics and criteria which start with a total number of patients, those they consider operable, those they consider resectable, what they have called resectable lesions. Many of those statistics include not the kind of cancer that you and I know proliferates, but a benign ulcer with a few cells on the outside by happenstance or a polyp with a few cells at the tip.

That is the way glowing reports look before you read the entire article carefully. We were disturbed by reading of 5, 10, and 15 per cent five-year survival rates. And, as Dr. Andresen implied by citing one of his two cases, I do not think we can talk in terms of cure of cancer of the stomach at the present level of our knowledge. So disturbed were we that we thought we would review all of the cases seen in a teaching hospital in this city, the Buffalo General Hospital, that is, all of the cases of cancer of the stomach in which we had an adequate follow-up with a five-year survival. We had 300 patients with cancer of the stomach who were encountered at the Buffalo General Hospital. I can tell you nothing about operability or resectability or how many were operated because I do not know. I was just interested to see how many of the patients were alive at the end of five years.

We found that eight of the 300 patients were alive at the end of five years. However, one of those succumbed in his sixth year. Of the eight patients, which makes an over-all survival rate of 2.6 per cent, one had a few cells at the tip of a polyp which was reviewed by several pathologists before it was decided it could be called cancer, and one had a large benign ulcer which had a few cells on one margin. The others were polypoid lesions near the pylorus which produced obstructions which got the patient to the physician a little earlier than usual. At any rate, we were disturbed by our yield of five-year survivals. I was further disturbed because we have one five-year survival of a patient with carcinoma of the stomach who was never operated upon.

There are many facets to this. When the surgeon talks to us and says, "Get us patients early," we have learned that mass photofluorographic surveys like the mass tuberculosis x-ray surveys have a very poor rate of yield. They are impractical because of the expense involved and for many other reasons, especially the fact there are not enough radiologists to examine all patients over forty-five years of age. Several years ago I think Dr. Andresen gave a very fine report in Buffalo on cancer of the stomach and gave a statistical analysis that supported that shot.

Furthermore, it is disturbing to us that 50 per cent of carcinomas have metastasized before they have displayed symptoms. Finally, the most disturbing thought of all is that doctors die of this disease and quite frequently, not only just doctors like you and like me, but doctors who are gastroenterologists and who are not only diagnosing this disease in patients but who are teaching students to diagnose this disease, for example, one of the Mayos, Wilkie, and two or three others. All these people died with inoperable cancers without recognizing the symptoms themselves.

It has been shown that the same time elapses between the onset and discovery of the lesion and going to a doctor in doctors as the lay public, that is, eight or nine months. Dr. Milch has two patients to my knowledge, one that I know of, who is alive at the end of five years. I hope he may controvert my very pessimistic attitude toward this disease. I have the hopeless feeling that until some biochemist discovers a serologic test with universal application, we are stuck as far as cancer of the stomach is concerned.

When we talk about ulcers and polyps, to the best of my statistical knowledge they apply only to 10 per cent of the cancers of the stomach leading to death. The rest are just cancer.

Dr. Sanes: I am sure you saw the look Dr. Andresen threw Dr. Milch's way. You heard the remarks Dr. Lipp threw Dr. Milch's way.

Dr. Milch: I was about to steal a page out of Dr. Levy's book. I am not going to quibble with anything these learned gentlemen have said. But you know there is essentially a difference between an internist and a surgeon. If I were to put some water in this glass and ask Drs. Andresen and Lipp the relationship of the water to the glass, I am sure they would both say it was half empty. If you were to ask a surgeon, he would say that it was half full. I think essentially therein is the difference between an internist and a surgeon.

Nobody quibbles with their statistics. They are 100 per cent true, but I would like to ask them what the five-year survival rate was in carcinoma of the breast twenty-five years ago. Today we know that if we can get a carcinoma of the breast before there are axillary metastases, we can have between 80 and 85 per cent five-year survival rate with the proper surgery being done. We also know that if we get a carcinoma of the breast with early axillary metastases, we still can get a 30 to 35 per cent five-year survival rate with proper surgery being done.

The profession is faced with a five-year survival rate at the present time of gastric carcinoma of 2.5 to 3 per cent. What are we going to do about it? I for one firmly believe that the answer to all malignancy—I do not care whether it is in the lung, in the brain, the breast, or the uterus—will eventually be through some agent which we can give intravenously or through the blood stream so that every tissue in the body can be attacked equally. But in the light of our limited knowledge at the present time we have just certain things to offer these patients, and one of them is, and here the same criterion in the handling of any form of malignancy holds true, early recognition, that is, in the light of our limited present knowledge.

I think this discussion stemmed from the question that was put to Dr. Andresen, "How would you treat a gastric ulcer?" I think that the questioner had in mind, "How long would you treat this patient?" In my own limited experience I have had two patients in the hospital at one time, both with gastric ulcers. One healed remarkably well under medical regime. We used them as teaching cases at exactly the same time. The other failed to respond to medical treatment. As a matter of fact, the ulcer became larger.

The one that failed to respond to medical treatment I presented as gastric carcinoma, took the patient to surgery, operated upon him. Lo and behold, the report came back a benign gastric ulcer. The man that healed up completely within a month from discharge from the hospital had a mass in his abdomen and presented an inoperable carcinoma.

I am sure Dr. Sanes will bear me out. If not he has changed his feeling from the time I worked with him and he taught me, namely, that the pathologist will make an 8 to 10 per cent error in the gross diagnosis by merely handling the lesion. If that is true, I do not know how we can expect a roentgenologist, using an indirect medium to come out and tell us "This lesion is healing, and that lesion is not malignant. It is benign."

I am given to understand that at the last gastroenterologic meeting Dr. Lahey retracted his stand. He was one of the advocates of the procedure that any lesion of the stomach which did not show complete roentgenologic healing in three to four weeks should be subjected to surgery. I respect Dr. Lahey tremendously. However, the only hope I know of to reduce this poor five-year survival rate at the present time is by earlier surgery, more radical surgery upon these lesions of the stomach in spite of our apparent poor results at the present time.

Dr. Lipp: This is an important question, and I cannot let Dr. Milch get away with everything he said. He was talking about the breast, and I can show him better statistics for the skin.

Now, you read of all these reports from cancer detection centers. I am one who is not very enthusiastic about cancer detection centers because until they do x-rays of the stomach and the bowel and sigmoidoscopic examination, they are not really cancer detection centers. I would think it would be much more profitable for them to examine the breasts and cervix in a woman and do a rectal examination, perhaps, on a man.

However, you read their statistics, which come out with great yields of malignancy. Then you look at the statistics and find that 85 per cent of the lesions they have found are on the skin. Well, that is a rather innocuous form of cancer which usually yields rather readily to treatment. I do not think then that it is fair to compare these two areas of the body except as Dr. Milch indicated. He is comparing them only in that we have made progress in the breast, which we have. He holds that there is only one way we can make progress in cancer of the stomach, and I agree with him, by operating them.

That brings me to two questions I'd like to ask him. Before I ask him these two questions. I'd like to point out that the quotation was a little bit of a misquotation. A year ago at one of our meetings Dr. Lahey got up and said, "We routinely recommend, if Dr. Sarah Jordan will allow us to, gastric resection for gastric ulcer." No relationship to healing time or anything like that was mentioned.

Then he said this, and I do not know if it is because he is growing more mellow or what: "In entire fairness if I had an ulcer in my stomach, no one would operate on me." Now, that he made as a direct statement. It was rather disturbing to me. And he made that same statement on the Pacific Coast a month or two ago before a surgical meeting.

The question I would like to ask Dr. Milch is this: If we are going to operate on the stomachs of patients with a neoplasm, should we do a total gastrectomy? If we operate on patients with a lesion in the breast that is malignant, we do a total mastectomy and axillary dissection. I should think the same thing would hold true for stomach lesions. Moreover, perhaps we should resect the glands all the way up the esophagus into the supraclavicular fossae. That would seem reasonable to me.

The other question which I am going to direct to our pathologist who is acting as moderator is this: Does he believe that benign gastric ulcers undergo malignant degeneration?

Dr. Sanes: They are getting nasty now, Dr. Milch.

Dr. Milch: I expected a question like that from Dr. Lipp, having been on panels with him before. The first thing I would like to do is correct an erroneous impression he left when speaking of cancer of the skin.

Dr. Sanes: May I say we have many other questions, and we want to get to everybody in the panel tonight.

Dr. Milch: When speaking of cancer of the skin, the big point to make is that we see it, and we get it early, and we do not procrastinate until we see a node, when it is inoperable. It is subject to immediate attack the minute it is visible. The earlier you see it, the better.

In answer to Dr. Lipp's question regarding whether total gastrectomy is the right procedure in the treatment of gastric carcinoma, I do not know. It is now in the stage of surgical experimentation. Personally, I do not think it will be because at the time we do gastric surgery we do high resections on these lesions, unless the lesion is up in the cardiac end of the stomach, and we do biopsies at the table. We feel that if we are beyond the point of the lesion, then we are in a safe area.

This is further borne out because when carcinoma of the stomach spreads, it does not spread as a rule by direct submucosal extension unless one is dealing with a linitis plastica. It spreads by means of direct extension to the mediastinal lymph nodes through the preaortic group. We know we can find a very small carcinoma and find the preaortic lymph nodes involved. So I do not believe the actual extent of the removal of the stomach in this particular case, after they have had a sufficient time to analyze results, is going to make much difference.

Dr. Sanes: In our experience we feel the peptic ulcer only infrequently becomes malignant, less than 5 per cent, less than 2 per cent perhaps.

Any other questions? Dr. Andresen.

Dr. Andresen: Dr. Lipp told us that Dr. Milch had two patients that he had cured by operation. He did not add to those, but are we to assume he has only the two?

Dr. Lipp: That is all he has, Dr. Andresen. That is two more than I have.

Dr. Milch: Dr. Aaron came over and apologized last month. He found another one. That is three.

Dr. Sanes: Any other questions?

Question: What is the mortality rate of gastrectomy?

Dr. Milch: Carcinoma or benign ulcer? For carcinoma of the stomach?

Questioner: Benign.

Dr. Sanes: Benign peptic ulcer.

Dr. Milch: Benign peptic ulcer? In the region of 2 or 2.5 per cent.

Question: Won't you lose more patients by operating than you will save from carcinoma?

Dr. Milch: Leaving out Dr. Lipp's most unusual case, which he has still got to prove to me, all I know is that if I have patients with a carcinoma of the stomach, it will be a 100 per cent fatal disease untreated. At least I think that I may be able to save two or three of them by surgery.

Dr. Lipp: The doctor has a good question. This was discussed at our recent gastroenterologic meeting by a clever man from Denver who said that out west of the Mississippi perhaps they practice country fashion. At any rate they had respectable mortality figures. Now, we are talking not about obvious cancers diagnosed by x-ray, subtraction defects, filling defects; we are talking about a gastric ulcer, not saying whether it is benign or malignant. He feels that the chance of death through surgery is greater than the risk of death by it being a cancer or becoming a cancer.

Dr. Sanes: Any other questions?

Question: One brief one. Did I understand Dr. Milch to say that carcinoma of the breast with axillary metastases has a 30 per cent five-year cure?

Dr. Sanes: The question is: Did Dr. Milch say a carcinoma of the breast with axillary metastases has had a 30 per cent five-year cure?

Dr. Milch: Yes. If the metastases are early and limited to the axilla, if a radical mastectomy is performed, if the supraclavicular nodes and internal mammary nodes show no evidence of metastases, our experience has been such that we can promise a 30 to 35 per cent five-year survival rate.

Comment: Then the Buffalo surgeons must have microscopic eyes.

Dr. Milch: May I answer that? In this group of cases when we do radical mastectomies, we routinely go up and clean out the supraclavicular spaces. We may crack the second interspace and take out some of the internal mammary nodes. We take out the anterior sheet of the rectus and split the round ligament. If everything we have is negative except for positive axillary nodes, we show about 35 per cent five-year cures in a recent analysis of our cases at the Buffalo General Hospital.

Comment: Dr. Lipp, I did not know whether you did know Dr. Lahey has had a duodenal ulcer about twenty years. Also, you did not mention, as you might, about the balloon with the silk net for discovering early carcinoma of the stomach. It still seems to me that that should be the nearest to a quick early diagnosis of any of the methods now proposed.

Dr. Sanes: The question is this: Is the cytologic method by use of an intragastric balloon of any value in early diagnosis of carcinoma of the stomach? I am glad Dr. Andresen is here. Do you want to take that question?

Dr. Andresen: I have not had any experience with it. We have tried some cytologic studies, but we have not been particularly successful; except for a few clinicians that you read about, I do not believe that the cytologic diagnosis in stomach cancer has been particularly good. It seems to have been fairly good in genital cancer in the female, but I do not know about stomach.

Dr. Sanes: In our experience at the Meyer Hospital our results have been unrewarding in the cytologic diagnosis of gastric cancer. Maybe our methods are no good; maybe we are just dumb. But that is the answer for us.

Question: I would like to ask the panel if they have any figures of gastric ulcers that have been reported healed by x-ray and have turned out to be carcinoma later on.

Dr. Sanes: Dr. Andresen mentioned Dr. Palmer's experience. Maybe he can give his personal experience and Dr. Lipp his personal experience. The question was any figures on the number of ulcers diagnosed probably as peptic that go on to radiologic healing and turn out to be carcinoma.

Dr. Andresen: I do not want to appear to brag, but I have not seen any that subsequently turned out to be carcinoma when we said they were ulcers.

Dr. Lipp: Again I am going to come back to the man from Denver whom I liked because he was refreshing and agreed with what I thought. The day before he left to come to give his paper he called up every surgeon in Denver and the gastroenterologic internists, and not one of them could cite an instance where radiographic appearance of healing had occurred in cancer of the stomach.

We are left with the thought that, except for the three instances that Dr. Andresen cited from Dr. Palmer's clinic, one that Dr. Milch mentioned, and two or three in the Scandinavian literature, we can forget about that. So far as we are concerned, cancers do not heal, and the radiographic picture, if examined carefully as Dr. Andresen indicated, should betray whether the lesion is malignant and not benign.

Dr. Sanes: I want to ask Dr. Levy a question. Does chain cigaret smoking produce peptic ulcer in a panelist who cannot answer a question while the internists take over?

I have a question for you. Should you or can you use Dicumarol in a patient with gastric bleeding who develops a coronary thrombosis?

Dr. Levy: It would be very inadvisable.

Dr. Sanes: Let's take the question about Dicumarol.

Dr. Levy: The use of the anticoagulant in myocardial infarction has received impetus with the work of Wright. I should not like to delve into any specific reports of his but bring to you several important observations I feel worthy of your notice.

It has been our experience in a hundred posted cases of myocardial infarction on adequate Dicumarol therapy that it is an individual drug. We consider two and one-half times the normal prothrombin level as adequate unless there has been no indication to bleeding in the head, liver disease, splenic disease, or the like. It is not a drug to be used routinely in the treatment of a disease but is to be used individually in the person who has that disease.

In cases of acute myocardial infarction with persistent hypertension, in cases of acute myocardial infarction, in severe diabetics usually requiring over 50 units of insulin who have previous evidence of capillary rigidity and bleeding, in individuals who have with the presence of their infarct acute peripheral vascular collapse with a specific gravity of their urine below 1.010, we feel the routine administration of Dicumarol can be attended with further bleeding. Bleeding gastric lesions or bleeding anywhere in the gastrointestinal or spinal tract has been a contraindication.

We have also used anticoagulant with caution in cases where an initial manifestation of acute pericarditis exists with considerable friction, suggesting hemorrhagic bleeding into the pericardial sac. My plea is to use it with care and individualization.

Dr. Sanes: Any comments from the group? (*No reply*)

Dr. Clinton and Dr. Milch probably can address themselves to this question. What treatment is given the painful gynecomastia in a male, say a boy fourteen years old or an adult? What do you do diagnostically when you see a patient?

Dr. Clinton: So far as the child, the adolescent with painful gynecomastia, I think that the best treatment is reassurance because they all get over it. At least 99.44 per cent of them are going to get over it with the passage of time. It occurs not infrequently in puberty. It is alarming to the individual, more especially to his or her parents, but they get over it.

I think surgical intervention in the adolescent is contraindicted.

Dr. Sanes: How do you feel, Dr. Milch?

Dr. Milch: Definitely!

Dr. Sanes: How about the adult?

Dr. Clinton: So far as the adult is concerned, you seldom see painful gynecomastia in the adult male. Occasionally you see it in the male who is approaching what might correspond to the male climacteric, if there is such a thing. That is open to question. Again, unless the pain is of serious import I do not think surgical intervention is indicated, although occasionally if the breast gets quite large and firm, surgical intervention may be justifiable.

Dr. Sanes: Any comments from the group? There is always a question on this lesion.

Comment: Hormone therapy.

Dr. Clinton: Hormone therapy in gynecomastia is generally rather unsatisfactory. Hormone therapy of almost any breast condition is rather unsatisfactory, as all endocrinologists learn when they are approached by two groups of women, those who, how shall we say, have the fried egg syndrome and wish to have increased mammary development. There is nothing we can offer them endocrinologically. Conversely, to those who have obese and pendulous breasts, there is nothing we can offer endocrinologically or even from a weight reduction regime. We cannot control fat distribution.

Dr. Sanes: Here are a couple of questions. I want to get to them because they touch on an important problem, the treatment of infectious hepatitis. Dr. Lipp.

Dr. Lipp: The only treatment for infectious hepatitis that I know of consists of two measures: (1) bed rest and (2) a nutritious diet. As opposed to chronic affections of the liver, in my experience the use of lipotropic substances is questionable at best. Also, in my experience antibiotic treatment has no value.

I think that over the years, although we have made progress in the treatment of chronic disease like portal cirrhosis, infectious hepatitis should be considered like acute nephritis, a self-limited disease. Rest and a good diet are the only two suggestions I have. Perhaps Dr. Andresen has other suggestions.

Dr. Sanes: Dr. Andresen?

Dr. Andresen: No. I agree with that entirely. I also feel in regard to the diet that today we are swinging back to the idea of giving a well-balanced diet. I noticed that in the discussion this afternoon. We are not sticking to fat-free diets. We are not having high-protein, high-meat diets. We are getting back to a balanced diet. I think perhaps frequent feedings, feedings between meals and at night, and as I mentioned this afternoon we use milk and gelatin, will help to promote biliary drainage, which is desirable no matter what is going on in the biliary tract, rather than to let the bile accumulate from, perhaps, a decrease in flow of the biliary tract.

Question: When would you stop the rest in a hepatitis? What criteria will you use?

Dr. Lipp: I do not know, except when the jaundice has subsided, when the spleen is no longer palpable, and when subjectively the patient feels well in bed. Then I would start him on modified activities and gradually increase them.

I am impressed, and there has been considerable debate about this—it was brought out, I think, by Dr. Snell, Dr. Andresen—that so often chronic hepatitis and tenderness in the right upper quadrant will follow for many months or maybe a year or so after an episode of acute hepatitis. As Dr. Snell pointed out, we must be careful not to use chronic hepatitis as a wastebasket, as we did chronic brucellosis, in all people who were tired in whom, perhaps, a neurosis or anxiety state might be at the base of it.

Furthermore, I do not feel there are any serious sequelae to acute hepatitis. I think like acute nephritis, like pneumonia, the majority of people, 90 or 95 per cent, get well and are well.

It is interesting to know in the Army Registry, which has probably the greatest number of cases on record due to the experience in the camps during the war and overseas, there is no instance of cirrhosis recorded following acute hepatitis. That is open to question, but if it does occur, it must be like malignant degeneration in a benign gastric ulcer in the range of two, three, four, or five per cent and no more.

Question: Do you think cortisone is a useful agent in the treatment of hepatitis?

Dr. Lipp: My own feeling is no, based upon my own experience with people in coma, let us say, or impending coma in the course of portal cirrhosis. I think it is of no value in acute hepatitis. I think it is of doubtful value as in other diseases where ACTH and cortisone have been used and people have thought they have had an effect from it. As someone pointed out, it produces more worries and troubles when you use it in a person with impending coma or coma than it helps.

Dr. Sanes: How about antibiotics? I understand they were used for a time.

Dr. Lipp: Not in acute hepatitis. They have no effect in acute hepatitis. In impending coma or coma, to my way of thinking, there is no doubt that the wide-spectrum antibiotics can reverse coma. During the last year or two we have had for the first time in a number of years three or four patients who have gone into coma who, from our past experience, we would have expected to remain in coma until death, and they have come out of the coma.

The same experience was reported in Atlantic City last week where in one series of cases from Washington it was stated that 60 per cent of patients with coma occurring in the course of portal cirrhosis came out of the coma. However, of all the cases only 25 per cent came out of it enough so that they eventually left the hospital.

Dr. Sanes: Any further questions?

Question: Do you suggest the use of gamma globulin in the prevention of secondary cases of hepatitis?

Dr. Sanes: The use of gamma globulin has been suggested for the prevention of secondary cases of hepatitis.

Dr. Lipp: There is no question of its value in preventing secondary cases of acute hepatitis, curiously not serum jaundice but infectious or viral hepatitis. You are not going to be able to get gamma globulin, as you know, for another year or so due to the exigencies of the polio epidemics, and it can be used for legitimate reasons such as measles prevention. However, largely the supply is going only into the centers where poliomyelitis is indeed epidemic.

We know that to be useful in preventing secondary cases gamma globulin should be used when there is an epidemic of this disease as might occur, as it so often does, in a school or a college or in a summer camp. In a family or in a city it is unlikely that it would be wise to use gamma globulin to prevent infectious hepatitis for practical reasons.

Comment: My point of information is that out of the pools for polio, those pools which do not have antibody strains against the three known strains of poliomyelitis virus, gamma globulin will be made available for measles and infectious hepatitis and will be available through Red Cross channels as heretofore.

Dr. Sanes: Thank you very much for that information. Any further comment? (*No response*)

We have one for Dr. Milch here. It touches on a real question on a lesion that is not too common. What is the present concept of surgical treatment in acute pancreatitis? What is the approach, say, when you are sure of the diagnosis or when you get into the belly and make the diagnosis?

Dr. Milch: If one is sure of the diagnosis that he is dealing with an acute hemorrhagic pancreatitis, our present concept of the treatment is not to indulge in surgical intervention but to treat the patient conservatively. However, when one is faced at the bedside with making a differential diagnosis as to whether we are dealing with a perforated ulcer, acute cholecystitis, or any of the other acute abdominal catastrophes, in the interest of the patient perhaps surgical judgment indicates one should operate.

If that patient is operated upon and acute hemorrhagic pancreatitis is found, the less done to the pancreas the better. If one finds definite gallbladder pathology associated with it or stones, the gallbladder is taken out. Here again we are giving you our opinion, and you may find others in the literature that differ with this.

The common ducts in about 50 per cent of the cases are drained when no evidence of gallbladder pathology is found. If evidence of gallbladder pathology is found, the common duct is always drained.

We feel that the majority of cases in which a definite diagnosis can be made will respond to conservative supportive therapy, and then at a later date, whatever remnant of the disease remains can be handled with much more safety to the patient.

Dr. Sanes: Any comments on that? Dr. Andresen.

Dr. Andresen: There is one form of pancreatitis which Dr. Milch did not mention. I am sure he intended to. That is the one in which a duodenal ulcer has perforated posteriorly into the pancreas. We sometimes get quite acute symptoms from that which resemble not so much a perforated ulcer as an acute pancreatitis.

Although they resemble each other, by watching them and treating them exactly as you would an acute hemorrhagic pancreatitis, we have been able to demonstrate afterwards what occurred. We had an accessory pocket with a duodenal ulcer perforated into the head of the pancreas. That can be taken care of surgically later.

Dr. Sanes: I do not know if you mentioned any antacids in the treatment of ulcer, Dr. Andresen. The question is: What antacids do you use?

Dr. Andresen: I do not use any.

Dr. Lipp: You can use any antacid you want so long as it does not upset the patient or make him constipated. We still use calcium carbonate because it is cheap.

We do use antacids and only for pain relief. I would say right now that I know of no agent, whether it is a cholinergic drug or antacid that will heal the ulcer. Nature will heal the ulcer. We are bringing comfort to the patient so the ulcer can heal more readily.

Dr. Sanes: Those of you who have discussion will speak to Dr. Lipp.

Dr. Milch, what is the present status of vagotomy in duodenal ulcer?

Dr. Milch: Simply this: If one is operating for a so-termed intractable ulcer and, upon opening the abdomen, is faced with a technical situation in which there is duodenitis, perforation, penetration, involvement of the common duct—in other words, one cannot do an adequate physiologic resection by removing the entire hormonal secreting area—for heaven's sake don't do a gastric resection. Do a vagotomy. Under those circumstances we will do an inadequate gastric resection and give a perfectly good operation a black eye. Vagotomy is used under those circumstances.

The second indication for vagotomy in our hands is in a patient who happens to have had an adequate gastric resection previously, taking at least 85 per cent of the stomach, and now presents himself with a marginal ulcer. Rather than go on and do a total gastrectomy on that individual, we will resort to vagotomy.

Dr. Lipp: We do not do vagotomy alone in the first instance, do we, Dr. Milch? We do the vagotomy plus some drainage procedure.

Dr. Milch: That is right.

Dr. Sanes: What is the present status of the use of drugs in coronary vessel disease?

Dr. Levy: Number one, for the acute attack of angina, nitroglycerine. The best drug for coronary dilatation in persons you want to give a drug to, in my opinion, is Peritrate. The statistics reveal aminophylline would be next. Down the list would come khellin, Paveril, Pavatrine, and testosterone. I would say nitroglycerine for pain, Peritrate for a prolonged effect.

Dr. Sanes: Dr. Clinton, of what value is radioactive iodine in thyroid disease?

Dr. Clinton: Of limited value in selected cases. In patients who have contraindications to surgery, either due to toxicity or other organic disease, particularly in the older patient, it is a very useful agent. In the young individual who can undergo surgery we still believe surgery is to be preferred.

Dr. Sanes: What is the value of thyroid in the treatment of obesity, if any? What thyroid preparation should be used?

Dr. Clinton: First, thyroid has practically no value in the treatment of obesity because thyroid is one of the best stimulators of appetite. So far as thyroid preparations are concerned, U.S.P. thyroid is the only thyroid preparation one should use because of its lack of expense. All the fancy ones such as Parke-Davis Thyroid Strongettes are unnecessary and wasteful from an expense point of view. So, stick to thyroid extract U.S.P. You will save your patient a lot of money, and you will be dealing with a constant product.

Dr. Sanes: Is the old treatment with a magnesium sulfate for gallbladder drainage used now?

Dr. Andresen: I do not believe it is. It has no better effect than fat. In fact, the effect is not as good. It produces, besides that, a catharsis and weakening of the patient.

Dr. Sanes: Dr. Lipp, will massive doses of intramuscular vitamin B_{12} benefit sciatic neuralgia? Somebody must have been sitting here too long.

Dr. Lipp: I do not know, but I do not know why you could not try it and see.

Dr. Sanes: Is crude liver or B_{12} best for pernicious anemia?

Dr. Clinton: Parenteral B_{12}.

Dr. Sanes: Dr. Milch, to close the program, we have a few questions on gallbladder disease. That will show we have run the gamut in the time we have been here.

Discuss the surgical treatment of common duct obstruction. That is pretty general. Let's say for stone.

Dr. Milch: Perhaps it is best to start that discussion with the indications for opening the common duct. The indications for opening the common duct are the presence of small stones within the gallbladder that are big enough to get down into the common duct or, of course, a history of jaundice. Suffice it to say we open 80 per cent of the common ducts in patients on whom we do routine gallbladders.

We cannot close a discussion like this without a word about cholangiograms. In approximately 75 to 80 per cent of the gallbladders we do, we routinely set up for cholangiograms, and routine cholangiograms are taken. However, cholangiograms without proper assistance will get a black eye. One must have an anesthetist that can produce a state of apnea for a number of seconds, a trained roentgenologist who can interpret the x-rays and take them in the proper fashion. We feel that since we have adopted this particular approach to the common duct question, we have not increased our mortality rate and have picked up a lot of common duct stones.

Dr. Sanes: Should x-ray treatment be given routinely after surgery for primary carcinoma of the breast, or how would you give it?

Dr. Milch: It is our feeling that x-ray therapy is not given in carcinoma of the breast in which there have not been any axillary metastases demonstrable at the time of surgery. If axillary metastases are demonstrable, why then x-ray therapy is given at the time or immediately following surgery.

I might add that if a lot of these cases of what appear to be hopeless, inoperable carcinomas with extensive, ulcerating masses are given x-ray preoperatively, many of these cases can undergo surgery if not from a curative standpoint, at least from a palliative standpoint.

Dr. Sanes: It is one minute to ten o'clock.

Question: One question. Did anyone on the panel ever see an acute ulcer from cortisone therapy, not an exacerbation of an old one, but an acute gastric ulcer from cortisone therapy?

Dr. Sanes: Dr. Andresen?

Dr. Andresen: No.

Dr. Sanes: Dr. Lipp?

Dr. Lipp: We think we have, but we have no proof. A lady with rheumatoid arthritis was treated with cortisone and hemorrhaged and required a resection. It was a deep ulcer when we went in on her. Dr. Milch happened to operate on her. She had no previous history of ulcer. In the small town from which she came two years before she had had stomach x-rays, but we did not know why. They revealed nothing. There may have been some reason for her having those films. I don't know.

Dr. Sanes: Dr. Clinton?

Dr. Clinton: About the same answer as Dr. Lipp. One patient we are suspicious of, but we are not sure but what she had had previous ulcer history in earlier life.

Dr. Sanes: You have been here two hours. I hope it was interesting to listen to the panel.

How long does the average of Dr. Andresen's patients have gallbladder disease before they submit to surgery?

DR. ANDRESEN: How long do they have the disease? You mean symptoms.

DR. SANES: I read it the way it is written. It comes from the audience.

DR. ANDRESEN: If they have had it for a long time before they come in, I cannot say how long it would be. The ones we advise operation on may have had it for a long time, may have had it for a short time. But I always treat them for at least six or eight weeks before I have them operated upon to get them in the best possible shape. I try to avoid all the complications. Dr. Milch listed the complications that occur from medical treatment. I listed something like 12 in my talk this afternoon that follow operation. They were much more frightening.

DR. SANES: We have made the whole circle. The surgical and medical men have come together. I have enjoyed being the moderator.

I want to thank the panel for the fine work they have done. I hope some of their answers are as true as they have been dogmatic, and I am sure they have all given you sincere answers to your questions. Your questions were all good.

I may wisecrack now and then. It was to lighten the atmosphere. I hope nobody has taken anything I have said here in a wisecracking way personally in regard to his question. I am sure we all understand each other and all know what sort of an atmosphere we want it to be when we conduct one of these panels. You have been a wonderful audience. Halfway during the discussion I was going to call for a few minutes' recess. I noticed the State Society has not supplied any coke machine here. It was too long a walk to the lounge. I was afraid I would lose you, so I have kept you here for the two hours. You can do what you want now. Our best wishes for a speedy recovery go to Dr. A. H. Aaron. We are indebted to him for the large part he played in planning this round table discussion.

Chinese Medicine Before Christ

In the second century before Christ, a Chinese medical student studied principally feeling the pulse, observation of the complexion, treatises on drugs, and ancient recipes. The course of apprenticeship was from one to two years.

According to Chinese medical works, observation of the complexion, limited to the patient's face, was classified into the divisions of eyes, nose, tongue, lips, ears, teeth, eyebrows, and hair. This was called the "five-color diagnosis." The next step was observation of the patient's physical condition; whether a patient was stout or thin, had swelling in the eyes, face, or feet, and whether he was harsh in breathing or convulsive.

The theory of diagnosis by pulse maintained that there were three positions where the pulse might be easily felt; namely, the temporal artery on the head, the arteria radialis at the wrist, and the arteria dorsalis pedis at the anterior of the foot. The upper pulse indicated the condition of the head, mouth and teeth, and ears and eyes; the middle pulse indicated the condition of the lungs, chest, and breast, and the lower pulse the condition of the liver, kidney, spleen, and stomach. The pulse rate was measured by the physician's breathing. The normal pulse was considered to be four beats to one cycle of respiration (inspiration plus expiration).

This theory of the pulse was adopted by the Japanese in the 7th century A.D., by the Arabs in the 10th century A.D., and by the Hindus in the 12th century A.D.—*Chinese Medical Journal, September–October, 1953*

POSTGRADUATE LECTURES

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WILLIAM F. LIPP, M.D., *Chairman*

Laboratory Aids in the Diagnosis of Collagen Diseases

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In the past few years a group of diseases previously considered individually and separately has been lumped under one heading, "the collagen diseases." This concept was first set forth by pathologists, and the clinicians have taken over the name and used it almost in a dogmatic way so that now the pathologists are fearful that the name is being used beyond limits that they had anticipated.

Now, various diseases are placed in this group. As I have just indicated, perhaps too many are labeled by the clinicians as collagen diseases. I have selected for our discussion a group under this heading which, I think, would be accepted by most pathologists and clinicians. At the top we have disseminated lupus erythematosus, scleroderma, dermatomyositis, periarteritis nodosa, rheumatoid arthritis, and rheumatic fever. This is a point we pathologists would like to stress: grouping these separate diseases under one heading does not necessarily imply that they have the same etiologic basis. As you all know, the causes of most of these diseases are for all definite purposes unknown, although we may have certain ideas in regard to their etiologic background.

These diseases, however, do have definite features in common. Pathologically they are related because according to our present philosophy of the collagen diseases, the mesenchymal tissue of the body is involved in various ways in these diseases. And although the mesenchymal tissue of the body will show proliferative, degenerative, and inflammatory changes, these changes may vary in quality and quantity in these diseases. Of course, I think most of you here—I see one or two pathologists—are interested in the clinical aspects and the aid that the laboratory can offer in that diagnosis.

From a clinical aspect we can also point out certain common features. These common features make the recognition by the clinician of these diseases difficult in certain patients. Of course, when these diseases appear in a clear-cut manner, there is no difficulty. It is only when symptoms are not present or when atypical symptoms are present or when there seems to be an overlapping of symptoms, as you might expect with the somewhat common pathologic background, that you have confusion in the differential diagnosis.

Some of the clinical features that make for this difficulty and bind this series of diseases into a common consideration from your standpoint include fever, and in most of the diseases I mentioned, the skin changes are obvious. In disseminated lupus erythematosus, scleroderma, dermatomyositis, and rheumatic fever, skin changes may appear. In various of these diseases, of course, you have pains of joints or actual clinical signs of arthritis. Disseminated lupus erythematosus and scleroderma may appear with symptoms referable to the joints; rheumatic fever, periarteritis nodosa, and rheumatoid arthritis also show joint findings.

Again in various of these conditions, such as disseminated lupus erythematosus, periarteritis nodosa, rheumatic fever, scleroderma, and in a certain percentage rheumatoid arthritis, we have lesions in the heart. And in various diseases changes in the serous membranes may appear to vex the clinician in differential diagnosis. Renal and vascular changes may be present.

Now, in going through the presentation of the laboratory aids in these diseases, I have adopted the approach that the clinician might adopt after he sees the patient clinically, takes a history, makes a physical examination, then has to sit down in his office or the hospital ward room and write down a list of orders for the laboratory which gain for him information or help in differentiating these various diseases. Of course, first in that order would be the clinical laboratory tests.

I shall consider these tests in simple order. Some of these might be ordered routinely in the hospital.

In rheumatic fever changes may be found in the urine. These changes are not of much help. They are the changes that appear in any disease with fever and in which albuminuria may be found. In a certain number of these cases casts and red blood cells may be detected in the urinary sediment. In the active stages of the disease leukocytosis will be present. This leukocytosis will show a left shift. In cases of rheumatic fever, particularly of the prolonged type, anemia may be found.

These blood findings, of course, are not constant. They are most prominently present in the active phases. The platelets may be increased or decreased. The sedimentation rate in rheumatic fever in the acute and active phase is markedly increased. This laboratory test may not be of much aid in the diagnosis, but it is of use to the clinician in managing and prognosticating the case of rheumatic fever.

In certain cases of rheumatic fever there has been an increase of serum globulin. (As we go through these diseases, you will note from a clinical laboratory standpoint that this is another feature they have in common, a change in the albumin involved in the blood, generally with a relative or slight absolute decrease in the albumin with an increase in the globulin.) Rarely the Wassermann test may show a false positive. The blood culture in rheumatic fever taken under ordinary conditions and examined under routine methods will be negative. Of course, the electrocardiogram may be of help in detecting cardiac changes.

In our laboratory we do not do antistreptolysin titers. This test is reported to be increased in rheumatic fever. The synovial fluid is not used as a diagnostic measure. If synovial fluid is studied in rheumatic fever, as probably all of you know, it will show an increased number of cells. These will be in the polymorphonuclear group. This, I think, will constitute the pattern of tests that might be ordered from the laboratory to aid in the diagnosis of rheumatic fever.

On occasion, material may be removed from a patient by a biopsy. During the course of rheumatic fever, as you are well aware, subcutaneous nodules may come up. These nodules usually are small and multiple and are short-lived. One of these nodules may be biopsied and submitted to the pathologist for examination.

With microscopic examination of a subcutaneous nodule, a rather definite picture may be seen. I have not included illustrations of these various lesions because I did not think you, as clinicians, would be too interested. The picture will show central degeneration and necrosis with cells arranged around the center and edema and inflammatory cells around the main lesion. The only trouble is that this subcutaneous nodule may be difficult to distinguish from nodules that appear in two other diseases in this group, the rheumatoid arthritis and the disseminated lupus erythematosus. In the laboratory sometimes you may get other tissue besides the subcutaneous tissue in which rheumatic inflammation may be suspected because of the microscopic findings.

We go from rheumatic fever and follow the same pattern for a rheumatoid arthritis in considering laboratory aids. We find again in rheumatoid arthritis the urine in the average case, unless the disease is active, late, or complicated by amyloidosis, will not show many presenting findings. In recent years certain rare cases of rheumatoid arthritis have been reported with lesions in the kidneys, in which instances urinary findings may be present. Here again in the active phase of rheumatoid arthritis, leukocytosis and anemia may appear.

We have to remember that in certain types of individuals with rheumatoid arthritis, there may appear a variant of rheumatoid arthritis that is discussed in the literature as Felty's syndrome. In this variant lymph nodes appear, the spleen may become enlarged, the blood count will, instead of showing a leukocytosis, present a leukopenia and lymphocytosis. The sedimentation rate will be increased. The synovial fluid, if submitted to the laboratory, will show an increase in cells of the polymorphonuclear group. The albumin-globulin ratio may be reversed. False positive Wassermann tests may occur.

In biopsy we have a wider range of material that can be submitted to the tissue laboratory for diagnosis. In certain cases of rheumatoid arthritis, subcutaneous nodules may appear. These may be multiple. They are somewhat different clinically from the nodules of rheumatic fever in that they last longer. They may persist for years. These nodules may occur any place in the body and usually are prominent over the extensor surfaces of the extremities, particularly the olecranon. These nodules can be removed and studied under the microscope and give more or less a definite picture. The only difficulty is to differentiate this picture from that of the nodule of rheumatic fever. Some pathologists maintain this differentiation can be made regularly. I have had difficulty in certain cases.

A nodular myositis showing lymphocytes and plasma cells, etc., may be present. It was thought originally this might be specific for a rheumatoid arthritis. We now know that other lesions may show a similar, if not identical, type of myositis, and this may be also seen to a certain degree in disseminated lupus erythematosus. If synovial tissue is presented from a joint with rheumatoid arthritis, pathologists can give fairly definite information in some cases as to the type of inflammation. In our experience lymph nodes removed from cases of rheumatoid arthritis have given more difficulty than aid. In some instances there is a marked hyperplasia of the lymph nodes, and we have almost been caught in diagnosing something serious and not detecting a simple hyperplasia associated with rheumatoid arthritis.

Now we consider periarteritis nodosa. The urine can show marked changes with albumin, red blood cells, white blood cells, and casts. Anemia and leukocytosis with left shift occur. Eosinophilia becomes prominent. The sedimentation rate is increased. The globulin may increase. Wassermann test may show a false positive. Blood cultures are negative here. If there are cardiac findings, the electrocardiograph may show them. A biopsy may be of great help. The material that is submitted to the pathology laboratory can come from the skin, the subcutaneous tissue, muscle, or liver. If the biopsy is positive, there will be found degenerative and inflammatory lesions of the vessels. A negative report on the biopsy does not exclude periarteritis nodosa. Again we have to point out that in certain cases of the other diseases, rheumatic fever and disseminated lupus erythematosus, inflammatory changes may occur in the blood vessels.

It is interesting to note that sometimes the diagnosis of periarteritis nodosa is made for the first time in tissue removed surgically from the patient. For example, a patient showing symptoms relative to the gallbladder or thyroid may have an operation, or a patient may have an appendectomy. The pathologist will be able to report to the clinician that in the specimen there are signs of periarteritis nodosa.

Here we have dermatomyositis. Albuminuria and hematuria may occur in severe and late cases. Creatinuria is present. Here again a point that goes along with the laboratory findings in dermatomyositis is eosinophilia. The sedimentation rate will be increased; the globulin may be increased.

Biopsy may be of help to the clinician. The condition involves the skin and the muscle. The pathologist can make a diagnosis of myositis. Of course, there are various types of myositis. The interpretation should be taken into consideration with the total clinical and laboratory picture.

Considering scleroderma, we have creatinuria. The blood may not be too changed. Sedimentation rate will ordinarily not be increased. If the heart is involved, electrocardiographic findings may be present.

Here again the biopsy of the skin can be of value. In these cases changes in the skin may be definite enough for the pathologist to give great help to the clinician.

In disseminated lupus erythematosus, one of the diseases most prominent in this group and one that may give difficulty in diagnosis, we follow again the pattern of laboratory tests. In disseminated lupus erythematosus, because of the pathologic lesions in the kidneys, a definite urinary change may be found. A certain percentage of disseminated lupus erythematosus cases die from uremia. In contrast to practically all the diseases I have mentioned, a leukopenia is found, but we must know that in certain instances of disseminated lupus erythematosus leukocytosis may be present or the count may be normal. In contrast to rheumatic fever and the other diseases, in a percentage of disseminated lupus erythematosus there may be a reduction in the blood platelets. As a matter of fact, certain symptoms may be referable to this reduction. An anemia often occurs. There is a definite increase in the sedimentation rate. The albumin-globulin changes occur in this condition, perhaps more prominently than in others. A false Wassermann test and anticomplementary test may be found. This test may vary in results when it is taken on various occasions.

Under biopsy in disseminated lupus erythematosus, again you have a variety of lesions in tissues that you can submit to the pathology laboratory for help, and some of these present pictures that are fairly definite or definite enough to give you real aid. Of course, certain cases of disseminated lupus erythematosus may be found without skin lesions. But if skin lesions are noted, they may be of sufficient degree and diagnostic significance to allow the pathologist to diagnose lupus of the disseminated type or changes compatible with this diagnosis. In a negative way this biopsy of the skin may be of help to you because if there is a definite clinical skin picture, the pathologist may be able to say, as far as he can go, that the changes are not compatible with the disseminated lupus erythematosus.

Lymph nodes may show inflammatory changes and focal necrosis. We have not been able to help the clinician in a specific way with biopsy of lymph nodes. In the past two years Dr. Klemperer has published material calling attention to certain hematoxylin-staining bodies that may be picked up in the tissue of patients with disseminated lupus erythematosus. Thus far we have not had a biopsy from a case that allowed us to look for these lesions. I have already mentioned that there may be confusion because in disseminated lupus erythematosus biopsies of muscle or subcutaneous nodules may lead one to consider rheumatic fever or rheumatoid arthritis.

The most encouraging laboratory test that has come out in the past several years is the test pointed to finding the so-called lupus erythematosus cells. I am sure that you are all acquainted with the test. I will not go into detail. In the bone marrow of patients with lupus erythematosus, these cells occur, polymorphonuclears with ingestion of material that stains bluish, and also in the marrow of normal persons that may be incubated with the plasma of patients with lupus erythematosus. These bodies which are present in the lupus erythematosus cells may be found free in the specimen examined and may sometimes be found encircled by polymorphonuclear leukocytes giving the rosette picture. There has been discussion on the specificity of the lupus erythematosus cell. In active cases there is high specificity. Negative results may be obtained in less severe stages.

Summarizing then, we can take the various tests and bring out which diseases reveal the most important findings.

In the urine—disseminated lupus erythematosus and periarteritis nodosa. In the others urinary findings are less significant.

In the blood, anemia—rheumatic fever, rheumatoid arthritis, and disseminated lupus erythematosus. The others are less significantly important in their findings in the blood. As far as the white cell count is concerned, in the active phases rheumatoid arthritis up, rheumatic fever up, periarteritis nodosa up, disseminated lupus erythematosus in the average case down. The others are less significant in their findings in the white blood cell count. Thrombocytopenia stands out in lupus erythematosus.

Eosinophilia—periarteritis nodosa and dermatomyositis, not constant, but on a fair average to help make a diagnosis. In the sedimentation rate, practically all the diseases show changes with the most important changes in rheumatic fever and disseminated lupus erythematosus.

Changes common to most of the diseases and not of much significance or help: the albumin-globulin changes, the false Wassermann test. The electrocardiogram is most important in rheumatic fever.

In the biopsy—in rheumatic fever, the nodule; rheumatoid arthritis, the nodule and the muscle; periarteritis nodosa, the skin and muscle; dermatomyositis, skin and muscle; scleroderma, skin; disseminated lupus erythematosus, the skin and the lupus erythematosus cells are most helpful.

Newer Agents in the Treatment of Tuberculosis

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THE subject of drugs and tuberculosis has become an important one if you consider merely the fact that in this one large metropolitan area approximately 25 per cent of the drug-treated tuberculous are on home care for good or ill.

The first important point is accurate diagnosis. This does not mean merely the diagnosis of tuberculosis. Two things are important. You must know precisely the location and the nature of each lesion, particularly the distribution and size of the cavities, and the presence of complicating tuberculous bronchitis or tuberculous pleurisies. Your x-ray consultant will help you if necessary.

The second point is to identify the organism. There are too many cases of tuberculosis started on treatment before bacteriologic confirmation has been established. There are two reasons for establishing bacteriologic confirmation: (1) so that you will not mistake a lung abscess or a fungous infection for tuberculosis; (2) if the patient has previously been treated by drugs, it is possible that the organisms are resistant to those drugs, and you will want bacteriologic help in defining the degree and nature of the resistance. The county laboratory in selected cases can help you on that point.

The treatment of the disease falls in two phases. It can be simplified around the stereotyped form of treatment for syphilis used twenty years ago. You can separate the periods of care into blocks. You can specify the drugs to be used. You can divide the over-all treatment into two phases: (1) the control of the infection by drugs and (2) repair of mechanical defects.

Of the drugs employed there are three in common use, and we advocate the use of all three. The reason for using multiple drugs is the development of resistance through genetic selection. In every bacterial population, no matter what the noxious agent for that population is, there are a few organisms resistant to the noxious agent, even sodium hydroxide. If you use a single drug, you permit the germ population to be overgrown by these few resistant variants. If you use multiple drugs, the resistance of an organism to one drug will not interfere with its susceptibility to another drug. So, by using multiple drugs you postpone the emergence of resistant strains in the germ population within the patient.

Two general principles: You must use multiple drugs—at least two, preferably three. Second, they must be used simultaneously and without interruption until arrest of the disease is assured. Interruption allows a few organisms that have not been reached by drugs presumably to emerge, and they are likely to be resistant organisms. Do not interrupt therapy until arrest of the disease is assured.

I shall not discuss the dosage because I have listed these in Table I. So far as toxicity is concerned, you need not worry about it in the dosages recommended here. You must, however, instruct the patient carefully. My recommendation is to write it down with a carbon copy for your own folder. Have them come back in one week and recite back to you exactly what their program is, including their exercise program.

Do not be deceived by symptomatic relief. This is the most devastating failure of the practitioner in the treatment of tuberculosis. The patient, after all, comes to you essentially for symptomatic relief, but you are the only one who has insight enough to know that lasting symptomatic relief depends on arrest of the disease. In ten days to three weeks the patient usually experiences dramatic relief of symptoms. That is the end of the beginning.

Usually at that time it is well to sit down with the patients; have a heart-to-heart talk. Tell him that he has a long period of treatment ahead and that it falls into two phases, drug therapy and mechanical correction.

Especially in people who have been previously treated with drugs, the problem of drug resistance is important. I have listed five things to look for: (1) failure of symptoms to subside, (2) return of symptoms, (3) failure of sputum to turn negative, (4) return of a positive sputum, and (5) laboratory tests indicating resistance. If there are resistant organisms, get help.

In cases with extensive tissue destruction, that is, large areas of necrosis represented by

TABLE I.—Outline of Treatment of Pulmonary Tuberculosis

Accurate Diagnosis
1. Confirm diagnosis bacteriologically
2. Ascertain extent of disease
    - (*a*) Location, size, and nature of all cavities
    - (*b*) Extent of tuberculous bronchitis
    - (*c*) Pleural complications

Treatment in Two Phases
1. Control of infection by drugs
2. Repair of tissue defects by collapse or excision

Drug Therapy (Triple Drug)
1. Streptomycin—1 Gm. daily if fever, 1 Gm. three times a week if no fever
2. Isoniazid—100 mg. three times a day
3. Para-amino salicylic acid, sodium salt—9 to 12 Gm. per day. Give as pill, 20% solution, or granule

Precautions
1. *Do not be deceived by symptomatic relief*
    - (*a*) Symptoms usually subside quickly. This is merely the end of the beginning
    - (*b*) Refuse to treat a patient who will not consent to complete the program, or who has previously and persistently been recalcitrant
    - (*c*) Treatment with drugs must be ***sustained, uninterrupted***, until arrest of the disease is assured
    - (*d*) Instruct patient on above points ***ahead of time***
2. Drug resistance suggested by
    - (*a*) Failure of symptoms to subside
    - (*b*) Return of symptoms
    - (*c*) Failure of sputum to turn negative
    - (*d*) Return of positive sputum
    - (*e*) Lab test shows resistance

    Get Help
3. In cases with extensive tissue destruction, drug therapy is merely preparatory to tissue repair by collapse or excision
4. ***Do not use drug singly. Always use two or preferably three. Use them simultaneously, not in succession***

Follow-up
1. From the beginning have a definite program, preferably in writing
2. Temperatures to be taken and recorded daily by patient
3. Check clinical condition weekly if febrile, monthly if afebrile
4. Take sedimentation rate monthly
5. Test sputum for tubercle bacilli monthly
6. Exercise: febrile abed, afebrile semiambulant, normal sedimentation rate ambulant
7. Get x-ray analysis in 3 months

Subsequent Program
1. If disease nonulcerative
    - (*a*) Give another 3-month block of drug therapy
    - (*b*) After this get help to determine whether necrotic residues need mechanical therapy (excision)
2. If disease ulcerative
    - (*a*) Get help in planning collapse or excision
    - (*b*) Warn patient that ultimately some sort of mechanical procedure is likely prospect
    - (*c*) Continue triple drug therapy

cavities reported by a roentgenologist, you should get help. Again, do not use drugs singly. Do not use them in succession. Use multiple drugs. Do not interrupt their use until arrest of the disease.

Your follow-up should be written down. It includes the following: Have a definite program. Temperature to be taken daily. Check the clinical condition weekly if febrile, monthly if afebrile. Take the sedimentation rate monthly; a single sedimentation rate is not of much help. Sputum should be tested once a month by a reliable laboratory. If resistance is suspected, a sample should be sent to a laboratory able to give you a report on resistance.

The hygienic care of the patient is important but not as essential as the drug therapy in this day. As for the physical activity of the patient, the general rule is febrile abed, afebrile semiambulant, and normal sedimentation rate ambulant. X-ray analysis, not just an x-ray but an analysis, should be done in three months.

At the end of the first three-month block of therapy the patient should be gone over carefully, first of all from a standpoint of the residues. By the end of three months in most cases you will see a good deal of resolution by x-ray. At that time you have to start planning the approach to mechanical therapy. You want to know what residual cavities are present. Your roentgenologist can help you with this. Necrotic residues that are not ulcerative sometimes have to be removed.

If the disease is originally limited in extent, drug therapy and hygienic care may suffice. Usually the period of drug therapy is sustained over a period of six months to a year. In any event drug therapy should not be discontinued until there has been a thorough analysis of the pulmonary condition including clinical examination, x-rays taken in whatever projection seems indicated, laminograms of necrotic residues suspected of ulceration, sedimentation rate, and cultures of several fasting gastric samples. If necrotic residues even show suspicious evidence of ulceration, excision should be considered. Decision in such case is properly the function of the chest specialist and the thoracic surgeon, particularly because of the conflicting views about the indications for excisional therapy and the fact that major surgery, even in the best hands, is not a matter to be taken lightly. The necrotic residue in tuberculosis is thought to be the basis of relapse. The removal of such foci is essentially prophylactic surgery. The best results are obtained when the decision to excise such areas rests on the combined judgment of the clinician, the roentgenologist, and the thoracic surgeon and when the surgery is performed in an environment specially designed for the purpose and provided with safeguards.

The Treatment of Skin Infection

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(*From the Department of Dermatology and Syphilology, University of Buffalo School of Medicine*)

I AM very glad to talk on this subject of skin infections because it is a subject in which tremendous advances have been made in the last few years, particularly during and since World War II.

Most of you are familiar with the work that was done in surgical research on skin infections demonstrating the optimum time that a surgeon should scrub to secure the lowest possible bacterial count of the skin. That work has been amplified and carried on in many other ways and channels. For instance, from a surgical standpoint two and one-half to three minutes is the optimum time to scrub the skin without increasing the bacterial count. Any scrubbing of the skin beyond that time will increase the bacterial count. A curious paradox but understandable if you realize some of the facts regarding bacteriology. Soap, for instance, is an irritant. It is an alkali. The superficial cells of the epidermis are irritated. There is an exudation of serum and a perfect medium for the growth of bacteria. That is one phase of the study of skin infections that has already been of tremendous importance in surgery. You must not overscrub!

Further application of that in so far as skin infection is concerned is in the newborn. We know from bacteriologic studies now that within twenty-four hours the general skin surface of a newborn baby has thousands and millions of bacteria on it. In fact, within fifteen minutes after passage through the birth canal bacteria can be grown from the surface of a newborn child. The reason is obvious. The skin becomes infected with the passage of the child through the birth canal.

Now, if that is true, there should be a complete revision of the care of the skin of the newborn from the standpoint of infection. Of course, that revision has already taken place in a large number of hospitals.

I urge all of you here that have anything to do with the care of the skin of the newborn to take heed of some of the things we know today. I haven't too much time, and I will summarize many of these things that I want to say. For instance, along the line of the newborn, water should never be used on the skin of the newborn during the first day or two or three or four unless it is absolutely essential. The remains of the membrane should be left intact for as long as possible so that when the child is cleaned, a simple water solution and no soap should be used. It is doubtful whether any alkaline soap should be used on the skin of a newborn for many months unless it is absolutely essential, and I doubt that it is.

I hate to mention commercial products, but along this line one must do so when you are dealing with such a valuable preparation as we have today that is nonirritating. I mention pHisoderm. I do not know who makes it. It cleanses as well as soap. It is neutral in reaction, does not irritate, and surpasses all the sulfonated products on the market today. In cleansing the skin of the newborn pHisoderm, which is a liquid, is extremely valuable. And, of course, it is valuable in the skin of adults also.

Bacteriologic experiments and determinations on the skins of newborn infants after all kinds of procedures following birth indicate that there is really a phenomenal increase in bacterial count following the daily use of soap on the skin of a newborn infant. There is simply no excuse for it. If you do not want to use any soap of any kind, you can use a colloid bath with a little cornstarch and baking soda in a shallow tub or bathinette to cleanse the skin.

Furthermore, daily washing of the entire skin surface of the newborn is entirely contraindicated. Cleansing of the soiled areas leaving the general glabrous skin untouched is more valuable. Bacterial studies indicate that the normal secretions of the skin protect it against infection. That is what they are there for. They not only protect against infection but against physical violence, whether actual physical violence or chemical violence, another reason for leaving the secretions on the skin.

There is another factor in the skin infection of infants that is extremely important today because of our newer knowledge regarding the function of the sweat apparatus. The use of oils on the skin of a newborn infant is absolutely contraindicated. Oils plug the orifices of the sweat and sebaceous glands. The overuse of oils and greases on babies' skins accounts for a large number of the cases of prickly heat and secondary infection. The bacteria are held in the pores, and prickly heat eczema results.

I cannot emphasize too strongly that the overuse of soap and the use of oils on the skins of newborn infants particularly, and almost as important as the children get older, be stopped. The skins will be a lot healthier. There will be a lot less skin disease. So much for the skin of babies.

As you are all well aware, there has been a tremendous interest in the bacteriology of the skin from other angles on account of the development of antibiotics. I want to say, before I go into detail regarding the treatment of specific skin infections, a few words first regarding some contraindications. You all know how valuable the use of penicillin is today. It is invaluable in countless otherwise hopeless cases of generalized infection. I do not even need to mention any of them. You are all familiar with those. In view of that, there is absolutely no indication in medicine for the use of penicillin locally on the skin. It is a sensitizing chemical, highly sensitizing. Too many people develop a dermatitis from its local use on the skin. We have antibiotics now for use on the skin that are far superior to penicillin in so far as skin organisms are concerned. Thus, there is no indication at the present time for the use of penicillin locally on the skin.

The same thing, of course, has been true of sulfa drugs for quite a number of years. The sulfanilamide drugs are among the most highly sensitizing chemicals that we have today in medicine, and there is no indication today whatever for the use of a sulfanilamide drug locally on the skin. There have been reports of deaths from sensitization to the local use of sulfanilamides.

Now, what are the preparations that we use today that are of such benefit in treating skin infections? Well, the best over-all antibiotic, without any question of doubt, is neomycin. It affects the widest variety of cutaneous organisms. Neomycin is supplied in powder form, in ointment, and in some places in tablet form, although I find it difficult for many patients to get the tablet form. It should be available. Generally speaking, you will be detailed to use the ointment form of neomycin. Let me urge you not to use it. In all of the cases of sensitization to neomycin, aureomycin, and all the other antibiotics that we have had, well over 90 per cent have been due to the synthetic wax bases in which the antibiotics are put up. And the cases of sensitization dermatitis from the use of ointments are far too many to use these proprietary ointment bases. We prefer to use all our antibiotics in water solution. The best dilution of neomycin is 100 mg. in 4 ounces of water or 200 mg. in 8 ounces.

Now, the advantages of neomycin are many in addition to its bacteriologic effect on the skin. First, it is a stable drug. It will last in water solution at room temperature about three months and retain its potency. Second, it is colorless. It does not stain the skin. Third, I know of no place on the entire skin surface where it cannot be used as often as you want to use it. If you want to use it in moist dressing form, I suggest that you add it to Burow's solution or weak boric acid solution so that you have the hypertonic effect of the wet dressing. Furthermore, when it is made up in that form, it is extremely cheap. The initial cost may be high, but it is very cheap over a long period of time.

Now, another antibiotic of great value on the skin is aureomycin. As you know, this is powdered and comes in capsules and tablets. The easiest way to prescribe it for use on the skin is tablet form. Don't fall for the ointments! We have had many cases of dermatitis from the ointment. One 50-mg. tablet should be dissolved in 1, 2, 4, or 8 ounces. It makes no difference. The bacteriologic effect is essentially the same whether 50 mg. is put in 1 or 8 ounces. This can be sponged on the skin three or four times a day and can be used in moist dressing form. Now, aureomycin does not have as wide a spectrum in its effectiveness against bacteria as does neomycin.

Terramycin, although bacteriologically about equal to aureomycin and in some cases a little superior, has proved useless in treating the skin surface. The reason is that it deteriorates so fast it is valueless at the end of twenty-four hours. Aureomycin must be made fresh every third day. We have discarded the use of Terramycin locally on the skin. As a matter of fact, with neomycin, we seldom use aureomycin any more. But I must mention it because it is a very valuable antibiotic.

Now, you have all been familiarized in recent months with the newer antibiotics like polymixin B that are effective against the rodlike Bacillus pyocyaneus, Proteus, and some of the gram-positive organisms that the ordinary antibiotics do not reach. These drugs have turned out to be extremely effective.

One of the most effective mixtures on the market today is bacitracin combined with polymixin. One drug company puts this up under the name of Polycin. Another company puts it up in ointment form under the name Basiquent Ointment. I do not want to favor any particular drug company. The combination for skin infections of neomycin in water solution and Polycin, which comes in tablet form and can be made into water solution, or Basiquent Ointment will get every single bacterium that is pathogenic to the skin. They make a very effective combination.

Let us take some of the specific skin infections that you are all familiar with. The first, impetigo contagiosa. The treatment is extremely simple today. Soap and water, as always, twice a day to remove crust and scales and cellular debris. Sponge on your neomycin water solution three or four times a day, and 99 per cent of patients will be well in five days. If you want to combine that with the use of Polycin or Basiquent Ointment, it is all right. But you will find your neomycin water solution is effective in most cases without anything else. Occasionally you will get a patient who has an organism that is resistant, and if prompt healing is not shown within three or four days, you can shift to the Polycin or Basiquent combination.

Now, in furunculosis, ordinary boils, where these lesions are of any size at all, of course, we advise the use of penicillin. We usually find that 600,000 units every second day are entirely adequate, again with the entire skin surface involved being sponged over twice or three times a day with the neomycin water solution or put on a dressing with the Basiquent or Polycin.

For ordinary folliculitis, infection of the hair follicles usually around the scalp in the occipital region and other areas, again the use of the same remedies is extremely effective.

In industrial medicine where cases of ecthyma develop pustulating ulcers from trauma or pustulating ulcers follow scratching of scabs or insect bites of any type, again you can combine the use of neomycin and Polycin or Basiquent Ointment. You can use moist dressings of the neomycin or Basiquent to remove the pus, scales, and cellular debris.

One more word about the use of antiseptics in industrial medicine. If I were an industrial physician having under my care a few or thousands of workers, I certainly would limit my antiseptics to the local use of these harmless, nonsensitizing water solutions, neomycin, Polycin, etc. I can see no indication today for the use of sensitizing mercurials, sulfas, and all the other drugs that we have used for so many years with great benefit but which do not hold a candle to our present armamentarium with antibiotics.

There are many other skin infections. In the few minutes left I do not need to cover any more of the bacterial infections. They are practically all the same. Use parenteral penicillin where infections are deep. Penicillin is not effective in impetigo contagiosa. It is too superficial.

Some of the other skin infections might be mentioned. I must say a word about tight ringworm of the scalp because it is still so common, at least in western New York. I want to state briefly without going into too much detail that the dry noninflammatory type that constitutes 99 per cent of the cases responds to only one type of cure, proper epilation with x-ray. We know now if you treat these youngsters with ringworm of the scalp with any fungicidal preparation, the percentage of cures is no greater than if you use plain vaseline. Time alone cures them all in three and one-half years. So, if you want to cure ringworm of the scalp rapidly, there is only one satisfactory treatment, and that is the proper use of x-ray. It is fast and relatively cheap. There are proper facilities for the care of any child, whether they can afford it or not, in western New York and most other places.

One or two words about fungicides along the line of what I have said about ringworm of the scalp. The introduction of these fatty acid derivatives gave us originally the hope that we had a valuable drug. I merely want to say that our hopes have been almost completely shattered. Fatty acid derivatives are of extremely little value. It explains why we get so many cures with things that have no fungicidal value. When you use them, you remove the superficial layer of epithelium in the cleansing-off process. They have little effect on the organisms.

The best single preparation still for the ordinary ringworm of the feet or groin is Whitefield's ointment in some strength, one-quarter, one-third, or one-half strength up to full strength.

You can combine that Whitefield's ointment with 1, 2, 3, or 4 per cent ammoniated mercury and 1, 2, or 3 per cent sulfur precipitate.

Another thing about ringworm; keep the feet dry. In the groin keep the parts dry. If you correct the soil, the organisms will fade out and disappear spontaneously. The best powder is one containing zinc oxide, boric and tannic acids.

The Growing Problem of Cancer of the Lung

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(From the Department of Surgery, University of Buffalo School of Medicine)

WE SHOULD not spend very much time on material that you can easily gather for yourselves from magazines and surgical journals. There is objective evidence, however, that cancer of the lung has increased in incidence during the last fifteen or twenty years. This material has been gathered from objective sources, that is, autopsy material in the university hospitals of this country and abroad. We must realize, therefore, as the years go by that the problem of cancer of the lung is likely to increase in our everyday practice.

We should stress the point also that up to the present period the majority of the treatments outlined for cancer of the lung have, unfortunately, been methods of a palliative nature and therefore the percentage of people with this disease that we cure is still relatively small.

Now, there are various factors to be considered in this problem. The one we should like to spend a little time on today is the problem of early diagnosis. Without improving the technics we have today, without necessarily expanding the scope of the resections or the completeness of the pre- and postoperative care, we could increase both our cures and the benefits to the patient perhaps twicefold if we were more adept in the early diagnosis of these lesions. Whenever one studies a disease, it is of fundamental importance to understand the natural course of the disease in question. This leads one to suspect the disease, even when it appears under its more unusual manifestations.

Let us use the blackboard to go over some of these features. About 25 per cent of the cancers of the lung that we see are in the periphery of the lung. You should remember one principle about cancer of the lung which often applies to malignancy elsewhere: The effects of a tumor, as long as it remains local, are largely either mechanical or due to blood loss. In pulmonary neoplastic disease this principle is particularly applicable. The lesions in the periphery, as one would expect, are silent for the most part. They grow in the parenchyma causing few if any symptoms until late in the disease. The mobile x-ray units have been of great assistance in the detection of these tumors.

Let us spend some time on the tumors that arise near the hilum of the lung. One can assume that we have here a miniature bronchial tree which is not truly anatomic but will suffice (*drawing on blackboard*). The earliest tumor seen at autopsy in our clinic approximated the size of the head of a pin and appeared as a white speck under the normal bronchial mucosa. Many of the tumors of the lung probably originate in somewhat similar fashion. As the tumor becomes larger, it frequently ulcerates. The cilia in the bronchi may be irritated by the active discharge of this tiny ulcerated surface. That gives rise to one of the first and also the commonest symptom of carcinoma of the lung, a brassy cough.

As the patient continues coughing, he further irritates the ulcerated surface. A little bleeding may occur; hemoptysis then may follow. As the nodule becomes larger, it occludes the lumen of the bronchus. Normally, as one inhales, the bronchi open; as one exhales, they close. When one inspires, then, the lesion may not interfere too much with air flow, but on expiration some obstruction to flow develops. This gives rise to one of the first x-ray signs of this disease; namely localized emphysema of a segmental or lobar area of the lung. Now let us indicate this complication on the board (*indicating*). How are we going to detect this early lesion? Since it cannot be easily seen in the normal inspiratory film because the inflow and filling is normal, then, when the patient expires, this segment will remain distended with air. Therefore, *the patient suspected of cancer of the lung* should have *expiratory films* made in addition to the conventional exposures, should the usual films prove negative.

As the tumor becomes larger, it occludes the entire bronchus in all stages of respiration. Now, a set of pathologic processes ensues, which is common to all intraluminal obstructions in the body, whether the subject be a ureter, a common duct, or a bronchus. First, one has a loss of function, and second, one develops infection behind the obstruction. The air becomes absorbed from the segments obstructed, and a pneumonitis supervenes. This is truly an obstructive pneumonitis. The lung itself becomes partly solidified, and there is some volume loss which must be filled by a mediastinal shift, elevation of the diaphragm, or expansion of other lobes. We now have a patient who has developed "pneumonia." He may or may not also have atelectasis.

One third of the patients in clinic practice and approximately one third in my own practice with carcinoma of the lung have a history of an attack of pneumonia, three to four months previous to our meeting, from which they had not quite recovered. The lesson is obvious and should be well marked. *Every patient in the latter half of life who has had an attack of pneumonia should have an x-ray taken six weeks after he seems to be perfectly well.* He may feel well, but he also may have a patch of atelectasis in an area of lung signifying an early obstructing lesion of the bronchus which was responsible for the so-called attack of "pneumonia."

This obstruction, of course, continues because it is a tumor. There are organisms capable of producing suppuration locked behind this obstruction, and therefore (*indicating on diagram*) an abscess may easily form. An empyema may also develop subsequently. If the tumor extends through the obstructive pneumonitis spreading along the lymphatics, one may develop first clear fluid, then later cloudy fluid, and finally bloody fluid in the pleural cavity, depending on the extent of invasion of the pleural surface and the character of lymphatic and venous obstruction at the hilum of the lung.

We can now see clearly that a cancer of the lung may mimic many other diseases: bronchitis, pneumonia, abscess of the lung, empyema, hemothorax, etc.

While the above process marches on, the tumor may also extend to the periphery, invade the interspaces, and involve the ribs and intercostal nerves. One may develop a neuritis of the chest wall or arm, depending on the position where the invasion occurs. At the same time metastases may have been developing in other areas.

Let me draw you a survey of the lymphatic drainage of the lung (*drawing on blackboard*). While this is not strictly accurate, and of course cross metastasis occurs, in general, lesions of the upper half of the left lung tend to drain in the upper left supraclavicular fossa. Those on the lower left and all the right lung frequently drain up to the right supraclavicular region. Therefore, we must stress the importance of examining the supraclavicular regions in all patients.

How do we look for these nodes? One should not be limited to passing one's hands over the supraclavicular regions. In addition, put the patient's chin forward; using the index finger and the thumb to palpate, stand in front of the patient on the same side as the supraclavicular region you wish to examine; take the fingers and, with the chin flexed forward, and rotated toward the side you want to examine; carry your fingers behind the supraclavicular muscle, and feel deeply behind the head of the clavicle. There should not be anything there normally. If you feel a firm mass behind the supraclavicular head, it is strongly suspicious of a metastatic node which probably deserves exploration and biopsy.

We will not go on to discuss the metastases which are familiar to all of you. They may appear in organ or surface of the body, although the adrenals, bone, brain, and opposite lung seem to be the most favorite locations.

Now in recapitulation can we go about improving the early diagnosis of these lesions? First of all, one must of course suspect carcinoma. One must suspect it every time one sees any one of the types of pathology outlined earlier in this lecture. When confronted with a chest problem that does not rapidly subside, ask yourselves this question: Does he have pulmonary tuberculosis, bronchiectasis, or cancer of the lung? Do not rest until the diagnosis is clear.

Remember also that in carcinoma of the lung, while it may occur at almost any age, it most frequently occurs in the latter half of life. If you have a male patient that has never had any pulmonary difficulties before and now enters your office with a pulmonary problem of one sort or another which does not promptly resolve itself in two or three weeks, remember that that unfortunate man may well have a carcinoma of the lung. This disease occurs predominantly in a ratio of eight to one in males. In the routine examination of the patient, which we haven't time to discuss today completely, one has to think of the other two diseases of course. Every suspected cancer patient should be investigated for tuberculosis. Ten per cent of patients with carcinoma of the lung have reactivated an old tuberculous lesion sufficiently that we can occasionally recover definite tuberculous organisms from their sputum. Bronchiectasis is a disease which usually has been bothering the patient off and on most of his life. His chronic pulmonary history should help you with this differential, and of course, bronchograms will be diagnostic. But remember also he may have both diseases.

Finally, let us again repeat some of the practical features of this problem. First, you must x-ray patients with suspected lesions and with symptoms of cough, pain in the chest, and hemoptysis. We mean x-ray their chests carefully using expiration as well as inspiration exposures. If they have lesions which are suspicious, the indications for a thorough workup are clear. This means bronchoscopy, bronchial washings, and sputum examinations in addition to thorough physical and roentgenologic studies. Also give the patient a bottle with 70 per cent formalin in it. Tell him to take it home, cough into the bottle, and bring it to the laboratory. An interested pathologist can section this material, work over it carefully, and produce a high percentage of positive results.

If you cannot disprove the diagnosis of cancer of the lung with real certainty at the end of a careful and not too protracted workup, you should advise an exploratory thoracotomy.

There are some cases where even when we have the lung in our hands we cannot decide with certainty whether the lesion is a cancer or nonspecific infection. This remains a question of judgment and must be settled in each case on its own merits. In general, we remove the lesion if the patient can at all tolerate it.

I would like to conclude this informal lecture with a few final statements. One is that carcinoma of the lung is becoming very much more frequent. Second, you must be able to make an early diagnosis, and you must do it by suspecting the presence of carcinoma in the early phases of the disease. Remember the natural course of this disease, and I think you will be able to visualize how many different aspects it may assume and what steps to take to detect it in its earliest stages.

Rx for a Doctor's Wife

The life of a doctor's wife is no bed of roses, concedes Mrs. E. W. Coyle, president of the Woman's Auxiliary of the Texas Medical Association. But, she adds, there *is* a prescription for success. Its simple ingredients: "a pinch of patience, an ounce of common sense—and a pound of humor."

—*Medical Economics, December, 1953*

New York City's Program for the Handicapped Child

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THE practicing physician is the key professional person in any program designed to prevent disabilities in children and to rehabilitate children once they are disabled. It is the practicing physician who is able to prevent handicaps attributable to prenatal and natal causes, such as birth injury and cerebral palsy, through better care during the antepartum and intrapartum periods. And it is the practicing physician who takes care of well and sick children during the infant, preschool, and school periods.[1] Thus, he is the one most likely to know well the family members and their health problems. We must rely upon him for finding the child with a suspected handicap; for making the correct diagnosis or for referring the child to other medical individuals or agencies for consultation in diagnosis; for making and carrying through the plan for treatment and rehabilitation or for using the available community resources and agencies for that purpose; for making the medical recommendation for special educational opportunities for handicapped children in the public schools when indicated for the individual child; and for referring handicapped children, when indicated, to the community vocational agencies for vocational guidance, testing, training, and placement so that as young adults these handicapped individuals may take their rightful place in society as independent, productive, and self-supporting members of the community. The program of the Bureau for Handicapped Children of the City Health Department in essence provides supportive services so that the practicing physician may more fully carry out his important role as the key person and so that these children may be assisted toward maximum rehabilitation as quickly as possible.

How Many Handicapped Children Are There in New York City?

One of the basic problems in planning services and programs designed to assist the practicing physician in caring for handicapped children is the fact that the total numbers of handicapped children in the various diagnostic groups are unknown in most instances. While the total needs of some individual children are known, the total services needed for all handicapped children in the City are unknown. Thus, in some instances for some types of handicapped children there may actually be an overprovision of certain kinds of services with some empty beds in institutions, some overinstitutionalization of children, and some wastage of community funds. This fact would appear to apply particularly to some services provided for children with orthopedic handicaps. On the other hand, it is equally well known that there are few adequate services for the evaluation, diagnosis, and rehabilitation of certain kinds of handicapped children, such as those with hearing and speech problems, convulsive disorder, and cleft palate. Services for the mentally retarded children and their parents are also known to be greatly inadequate. Table I gives a picture of current knowledge of the numbers of handicapped children in the City based either upon data from studies made in the City in 1941 or upon current estimates.

Accurate information on the numbers of handicapped children, on the type and degree of handicap, and on evaluation of current services provided and unmet needs is essential if maximum rehabilitation of handicapped children is to be achieved as quickly as possible and if the available community funds and resources are to be used to their fullest advantage. The logical step would be a survey of the current status in the City so that a sound plan might be made.

Medical Rehabilitation Program of the Bureau for Handicapped Children

Under the aegis of State law the City Health Department provides payment to hospitals and institutions for the hospital, convalescent, and rehabilitation care of certain kinds of handi-

TABLE I.—NUMBER OF HANDICAPPED CHILDREN IN NEW YORK CITY

Type	Infant and Preschool Children	School Children	Total under 21 Years of Age	Annual Incidence
Orthopedic				
Total	?	?	6 per 1,000 children, or 20,000[2]	?
Cerebral palsy	?	?		
Based on Phelps' formula[3]			11,760	7 per 100,000 population, or 560
Based on Schenectady formula[4]			18,900	6 per 1,000 live births, or 900
Cardiac				
Rheumatic	?	At least 7,000 of whom 90% are rheumatic and 10% congenital[5]	?	?
Congenital	?		?	?
Cleft palate or lip	?	?	3,150	150 newborn babies reported[6]
Convulsive disorder	?	1,000	16,000	?
Visual				
Total	?	140,000 to 250,000[7]	?	?
Strabismus	1 to 2%	1 to 2%	?	?
Hearing	?	40,000[8]	?	?
Birth injury	?	?	?	400 babies reported
Congenital malformations	?	?	?	1,500 babies reported

capped children up to twenty-one years of age. Approximately $1,000,000 is expended annually in this program, of which 96.3 per cent is paid from governmental funds and 3.7 per cent by family and other sources. The governmental expenditure is shared equally by the City and State. The types of handicapped children cared for under this program are (1) children with orthopedic handicaps for surgery, convalescent care, rehabilitation, appliances, and braces; (2) children with congenital heart disease requiring diagnostic workup or surgery; (3) children with disability due to accidents or malformations requiring plastic surgery; (4) children with certain pediatric conditions amenable to surgery and rehabilitation; (5) children requiring orthodontia care; (6) children with cleft palate or cleft lip requiring surgery, and (7) children with convulsive disorder requiring inpatient diagnostic workup or surgery. Two new categories of patients have recently been added: (1) children with visual handicaps remediable by surgery and (2) patients over twenty-one years of age needing hospital, convalescent, or rehabilitation care for handicaps resulting from poliomyelitis, as required by State law. In general, with few exceptions, inpatient care is paid for only. In order for a child to be eligible for care under this program, several requirements must be met: (1) The diagnosis must be one which is amenable to rehabilitation; (2) the family must fall within a financially eligible group, as determined by a means test formula established by the City Health Department, and (3) the child must be mentally "normal." Exceptions may be made on an individual basis where there are substantiating reasons and extenuating circumstances.

How does a practicing physician go about referring one of his patients for care under this program? When a physician has a patient with an eligible condition and when it would appear that the family needs financial assistance for the child's care and rehabilitation, the physician may refer the family directly to one of the participating hospitals. The lists of participating hospitals have been published in the monthly bulletins of the various county medical societies in the City, or the names of the participating institutions may be secured by calling the Bureau for Handicapped Children. The participating hospital undertakes a financial investigation in accordance with the formula set up by the City Health Department, and the hospital from then on fills out the necessary application forms, etc. Decision regarding the child's medical workup and inpatient admission is, of course, made by the medical staff of the participating institutions.

Hospital Consultation Program

In any program which provides payment for patient care, steps should be taken to assure that a reasonably good quality of care is given and that public funds are being spent wisely and to their fullest advantage. For these reasons a consultation program is gradually being developed in the Bureau for Handicapped Children with the assistance of appropriate advisory committees and various community agencies.

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This consultation service consists of the performance of surveys of institutions participating or wishing to participate in the Medical Rehabilitation Program. The survey consists of a visit to an institution on the basis of an appointment made well in advance. Both the inpatient and outpatient services and related ancillary facilities are reviewed in regard to personnel, policies of patient care, equipment, physical setup, home follow-up, records, and health examinations of personnel. The survey is made by a team of specialists representing the major professions concerned with patient care. For example, the team surveying orthopedic services is composed of an orthopedic surgeon, a physiatrist, a pediatrician, a nursing consultant, and a medical social worker. Following the survey the survey team prepares a joint report and letter of findings and recommendations which is sent to the key personnel on the staff of the institution. After a brief period of time has elapsed, the survey team returns to the institution to hold a conference to review the findings and recommendations.

The surveys, in general, are conducted on the basis of standards which have been drawn up with the assistance of appropriate advisory committees to the Commissioner of Health and related community agencies, such as the New York Heart Association and the Greater New York Hospital Association. The standards are used as a guide in making recommendations which are intended to assist the individual institution in improving patient care.

Although this program has been in operation less than one year, and, therefore, it is too early to make sweeping general statements, it is already apparent that patient care can be improved and that there is some overinstitutionalization of handicapped children. From a long-range viewpoint it is hoped that this consultation program will prove of assistance to the participating institution toward the solution of some of these problems.

Diagnostic and Consultation Services

The Bureau for Handicapped Children operates a number of diagnostic and consultation services where the practicing physician may refer his patients for further diagnostic evaluation and consultation. The extent of this service is illustrated in Table II.

TABLE II.—CHILDREN SEEN IN DIAGNOSTIC AND CONSULTATION CLINICS OF BUREAU FOR HANDICAPPED CHILDREN IN 1952

Type of Service	Number of Clinics	Number of Children Seen	Number of Children's Visits
Eye	23	29,217	58,976
Cardiac	5	6,668	6,931
Orthopedic	1	306	306
Otology	1	5,000*	5,000*

* Approximate figures.

An example of the type of service rendered to the practicing physician and his patients in this program is illustrated by the five Cardiac Consultation Service Clinics. In addition to the usual patient's history and physical examination, these clinics provide electrocardiograms, fluoroscopy, blood counts and sedimentation test, and urinalysis. The practicing physician may refer his patient directly to one of these five cardiac clinics where the diagnostic workup is done. The patient is then returned to the practicing physician and the report of the diagnostic workup and recommendations sent to the physician.

Of the 6,668 children referred to the cardiac consultation clinics in 1952, 1,788 children (26.8 per cent) were referred by private physicians and the remainder by the Health Department's child health and school health services. It is gratifying that practicing physicians have used the service to this extent for their patients. Of the 6,668 patients seen in the cardiac consultation clinics, 50.4 per cent were diagnosed as noncardiacs; 16.6 per cent as potential heart disease (patient without heart disease, whom it is advisable to follow because of the presence or history of an etiologic factor which might cause heart disease); 12.8 per cent as possible heart disease (patients with symptoms or signs referable to the heart but in whom a diagnosis of cardiac disease is uncertain); 2.9 per cent as possible and potential heart disease. Seventeen per cent of the patients were diagnosed as having organic heart disease, of whom 8.1 per cent had rheumatic heart disease, 7 per cent congenital heart disease, and 2 per cent organic heart disease of undetermined type.

It will be apparent that one of the major functions served by these consultation clinics is the "de-labeling" of over one half of the children referred, that is, by the diagnosis of noncardiac.

Special Educational Placement of Handicapped Children

By arrangement with the New York City

Board of Education the Bureau for Handicapped Children is responsible for the medical review of children with cardiac, orthopedic, and visual handicaps who may require special educational opportunities because of the degree of their physical handicap. The types of special educational opportunities provided for such children by the Board of Education are home teachers; special cardiac, orthopedic, sight conservation, Braille, and cerebral palsy classes in public schools; bus transportation to and from school; elevator privileges in school, and special teachers in hospitals and convalescent institutions. In general, the special classes for physically handicapped children in schools have approximately 12 to 20 children per class, which is about half the size of regular classes in the public school system.

Each of the children requiring special educational opportunity because of the degree and severity of the physical handicap must be examined by a practicing physician or hospital staff prior to the child's special educational placement, twice a year during the period of the child's special educational placement, and prior to withdrawal of the child from this type of special placement. The functions of the Bureau for Handicapped Children are twofold: (1) the establishment of criteria for such special educational placement with the guidance of appropriate advisory groups; (2) the review of all such children by the Bureau's consulting orthopedists, cardiologists, and ophthalmologists prior to initial placement, semiannually during the period of placement, and prior to withdrawal from placement. The volume of this program is shown in Table III.

One of the urgent and interesting problems encountered in this program is the fact that special studies of children assigned to a home teacher or to special classes in the public schools have found that a considerable percentage of such children are overplaced. For example, two studies of children in special cardiac classes in public schools showed that 38 per cent and 80 per cent, respectively, of the children so placed could attend regular classes in the schools. Two studies of children in special orthopedic classes in public schools showed that 33 per cent and 50 per cent, respectively, of the children so placed could attend regular classes in the schools. One study of children in sight conservation and Braille classes in the schools showed that 33 per cent of

TABLE III.—ACTIVITIES IN SCHOOL PLACEMENT PROGRAM OF BUREAU FOR HANDICAPPED CHILDREN IN 1952

Type of Child	Applications Processed	Number of Children Recommended for—												Census as of March, 1952	
		Home Teacher		Special Class		Regular Class		Cerebral Palsy Class		Bus and Elevator		Miscellaneous		Special Class	Home Teacher
		Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent		
Orthopedic	6,471	1,518	23.6	945	14.7	3,630	56.5	9	0.1	257	4.0	66	1.0	622	781
Cardiac*	3,123	722	23.3	385	12.4	1,183	38.1	..	...	98	3.1	549	17.7	727	318
Vision	2,087	...	...	...	...	419	20.7	..	...	...	...	115	5.6	...	...
Sight conservation	...	...	...	1,429	70.6	...	...	..	...	...	...	...	...	1,334 }	22
Braille	...	...	...	61	3.0	...	...	..	...	...	...	...	...	105 }	

* In addition, 163 (5.2%) children were referred to the Bureau's Cardiac Consultation Service Clinics for further diagnostic workup.

this group was overplaced, i.e., the children in sight conservation classes could attend regular classes and the children in Braille classes could attend sight conservation classes.

A special program of medical review of all children with orthopedic handicaps on home instruction is now being conducted jointly with the staff of the Institute of Physical Medicine and Rehabilitation of the New York University-Bellevue Medical Center; preliminary data indicate that one third of the initial homebound group evaluated could be immediately returned to either orthopedic or regular classes in the schools. Not only is unnecessary segregation of potential psychologic harm to the child, but also education of children in special classes and with home teachers is more costly to the community.

For this reason the Bureau for Handicapped Children is now sending a team of specialists in cardiology, orthopedic surgery, and ophthalmology into these special classes, beginning in the fall of 1953, to review these children annually. Where a child is found to be inappropriately placed, the specialist on our staff will discuss the problem with the practicing physician or hospital staff and will attempt to work out an amicable agreement from a medical viewpoint for the education of the child in accordance with his individual needs. Practicing physicians and hospital staff members are urged to cooperate in and support this program and to give serious consideration to this problem.

Newer Developments in the Program for Handicapped Children

In addition to the four basic programs described above certain steps have been or are being taken to meet the needs of handicapped children more fully. Some of these steps of interest to the practicing physician are described below.

Patients with Poliomyelitis.—Although a number of cities and communities throughout the country have made special provision in the form of special respirator centers for poliomyelitis patients requiring care in respirators, until the past year similar steps have not been taken in New York City. Preliminary surveys[9] in the City indicated that the current care of these patients left much to be desired and that some of these patients were being transferred to the nearest special respirator centers in Boston, Buffalo, and Baltimore. For this reason with the great cooperation of the New York City Department of Hospitals and the National Foundation for Infantile Paralysis, two special respirator centers are planned in the City, and one recently opened in the fall of 1953.

In addition to payment for hospital, convalescent and rehabilitation care, appliances, braces, etc., assistance is given to the practicing physician in the care of his poliomyelitis patients in another area, namely, through the provision of public health nurses visiting the homes of these patients for a brief period after the reporting of the disease to the City Health Department.[10] Patients originally reported as nonparalytic, in general, are visited for a three-month period, paralytic patients for a one-year period after onset. The purpose of such visiting is to assist the practicing physician and the family in any health or related family or social problems associated with the patient's illness and to assist the family in the patient's maximum rehabilitation as quickly as possible.

Patients with Cerebral Palsy.—In addition to the provision of hospital, convalescent, rehabilitation care of children with cerebral palsy, the City Health Department and Board of Education jointly operate four special school units in public schools for children with cerebral palsy who are four to ten years of age. Each unit has 25 children and provides orthopedic and pediatric supervision, physical therapy, occupational therapy, speech therapy, special teachers, social service, and psychologic testing and service. These special school units are for the more severely handicapped children who otherwise might require institutional care or a home teacher if this service in school were not provided them.

Perhaps the experience of one school unit will graphically portray the progress which these children are making (Tables IV and V).[11] It is evident that the children admitted to this unit on the whole were quite severely handicapped. One third to almost one half of the children during the period of stay in the unit were able to develop the ability to perform certain functions essential to their carrying on as independent individuals in marked contrast to their condition on admission. Of the 59 children admitted to the cerebral palsy school unit, 34 were discharged. The average length of stay of the 34 discharged children in the unit was 14.2 school months. At the time this analysis was made, 25 children were still in attendance with an

TABLE IV.—DEGREE OF HANDICAP OF 59 CHILDREN ON ADMISSION TO CEREBRAL PALSY SCHOOL UNIT

Independent Function	Unable to Perform Number	Unable to Perform Per Cent	Able to Perform Number	Able to Perform Per Cent
Sitting	27	46	32	54
Feeding	30	51	29	49
Toilet care	49	84	10	16
Ambulation	50	85	9	15
Dressing	55	93	4	7

TABLE V.—DEVELOPMENT OF INDEPENDENCE DURING ATTENDANCE OF 59 CHILDREN AT CEREBRAL PALSY SCHOOL UNIT

Independent Function	Unable to Perform on Admission	Developed Ability to Perform Number	Developed Ability to Perform Per Cent
Sitting	27	12	44
Toilet care	49	20	41
Dressing	55	20	37
Ambulation	50	16	32
Feeding	30	10	30

average length of stay of 12.1 school months. Of the 34 children discharged, 12 had improved sufficiently to progress to an orthopedic class in school, eight were found to be mentally retarded, six were transferred to another cerebral palsy school unit in another borough when it opened, and eight children were discharged for a variety of reasons.

At present there are several gaps in this program. The children of Staten Island have no such service, and there is no such service for older children. Both of these groups urgently need the same type of services now provided for the younger age groups in Brooklyn, Manhattan, Bronx, and Queens.

CHILDREN WITH CLEFT PALATE OR CLEFT LIP.—Some communities now provide comprehensive services for the child with cleft palate or cleft lip. These services, to be truly comprehensive, require a battery of experts who function together as a team and include pediatrician, plastic surgeon, dentist, dental surgeon, orthodontist, prosthodontist, speech therapist, psychologist, psychiatrist, social worker, services for hearing evaluation, and skilled nursing care for the feeding of these children while they are hospitalized. Throughout the country these services have been banded together in hospitals and are known as "Cleft Palate Rehabilitation Centers."

The Bureau for Handicapped Children and the Bureau of Dentistry of the City Health Department are now working with a small number of hospitals in the City in an effort to assist them in establishing similar services in centers in the City.[12] One such center has already been established at the Mount Sinai Hospital in Manhattan, assisted by a grant from the State Department of Health. It is hoped that a small number of additional centers may be set up in hospitals in the City in the near future.

CHILDREN WITH HEARING AND SPEECH PROBLEMS.—Some communities now provide comprehensive care for the child who is suspected of having hearing impairment. Such comprehensive care and rehabilitation usually include such services as a careful hearing evaluation by modern methods; otologic examination; any necessary medical or surgical treatment, including treatment with radium; speech therapy; auditory training; selection, fitting, and instruction in the use of hearing aids and payment for such aids; social service assistance; psychologic testing; and psychiatric assistance if indicated. It is obvious that these services are expensive and time-consuming for the individual patient and in order to be truly effective for the maximum rehabilitation of the child must be integrated.

From studies done in New York City and in other communities approximately 4 per cent of school-aged children fail crude screening audiometric tests annually; this means that there are 40,000 children in schools who need the type of services listed above. In addition, it is realized that many hearing problems begin or may be recognized in the preschool period, and it is in the preschool period that the child normally should begin to speak and, therefore, may require help with speech. The extent of hearing problems in the preschool period is unknown.

For this reason the Bureau for Handicapped Children is working intensively to assist interested hospitals in the City in the development of hearing and speech centers to which the practicing physician may refer his patients for any indicated service.[13] The City Department of Hospitals has already indicated their great interest in this field and is now working on plans for the development of three or four such hearing and speech centers in municipal hospitals. In addition, several voluntary hospitals are also showing great interest and are working on similar plans. At the present time one hospital in New York City has complete services for the evaluation, diagnosis, treatment, and rehabilitation of children with hearing problems.

CHILDREN WITH CONVULSIVE DISORDER.—Some communities are now providing comprehensive services for the diagnosis, medical and surgical treatment, and rehabilitation of preschool and school children with epilepsy. Here, too, a battery of integrated services is required consisting of pediatrics, neurology and psychiatry, psychometric testing, electroencephalography, laboratory tests, neurosurgery, social service. From a practical viewpoint epilepsy presents one of the least expensive public health problems because (1) it has been amply demonstrated that 80 per cent of children with epilepsy can have their convulsive disorder controlled and (2) the cost per child of operating such a program is considerably less than for many other types of handicapped children. For this reason intensive efforts are now being made in the City to secure funds and assistance to expand the service of one of the hospitals in the City so that any practicing physician may refer any of his patients for diagnosis and consultation. After this initial workup suggestions may be made to the referring physician, if he wishes, so that the patient may be returned to him for the continuing treatment phase. It is hoped that ultimately there will be one such diagnostic and consultation center in each borough of the City for use by practicing physicians for their patients.

Summary

It is apparent that New York City to date has provided a wide variety of services and programs for certain kinds of handicapped children, particularly the child with a cardiac, orthopedic, or visual handicap. Less attention has been paid to the child with cleft palate or cleft lip, hearing impairment, convulsive disorder, and mental retardation. In general, much more assistance is needed by handicapped children in the area of vocational guidance, testing, training, and placement if such children are to become truly effective, productive, independent, and self-supporting members of the community. The practicing physician is the key person to assist handicapped children and their families because he is the person to whom the family usually turns for care and guidance. The City's program and efforts are directed to a great extent to assist in providing supportive services of various kinds to help the practicing physician in the diagnosis, care, and rehabilitation of his patients.

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Fable for Physicians

"Our worries will soon be over," the Hospital Administrator boasted to the President of the Board of Trustees, "our machine shop has nearly perfected an Electronic Intern, equipped with automatic diagnosticator and radar-activated psycho-analyzer, guaranteed against refractory periods, and protected against tampering by student nurses. In time these mechanical marvels will carry a bedside manner as standard equipment."—*Mercurius*

Carcinoma of the Esophagus

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DESPITE the recent progress in thoracic surgery carcinoma of the esophagus still has a poor prognosis. According to Burgess and associates[1] it is now feasible to attempt surgical cure in 20 to 30 per cent of the cases; however, in a collective series of 794 cases by DeBakey and Ochsner[2] only 14.5 per cent were resectable, and of those resected only 11 per cent survived five years. Further, Boyd[3] states that carcinoma of the esophagus is one of the most hopeless conditions with which the surgeon has to deal. However, Sweet[4] reports one five-year survival of 30 patients with resected carcinomas of the midthoracic esophagus, and Ravitch *et al.*[5] states that there have been no five-year cures at the Johns Hopkins Hospital. Jackson and Sallow[6] point out that the disease is mild, slow, and for a long time a purely local process. Because of these encouraging possibilities the cases at Albany Hospital admitted between 1941 and 1950 have been reviewed in an effort to see whether we might learn how the physician can render a greater service to these patients.

Sixty-four cases of carcinoma of the esophagus in which the diagnosis has been proved were admitted to Albany Hospital between 1941 and 1950. Sixty-three were Caucasians, and one was Negro. Males outnumbered females 55 to nine, and 97 per cent of the cases were individuals fifty years of age or older (Table I). In the 36 records which contained family histories, 30 per cent were found to be positive for carcinoma, one patient having a family history for carcinoma of the esophagus. In the 23 cases in which an alcoholic history was recorded, 20 were found to be either moderate or heavy drinkers. Similarly in 20 cases 18 were found to be smokers of tobacco. No mention was made of tobacco chewing. The only interesting finding in the occupational history was that three patients were bartenders. Of course, no conclusions can be drawn from this.

Each patient sought medical aid because of symptoms, there being none who sought additional aid because of abnormal findings on routine physical examination, survey roentgenograms of the chest, etc. Dysphagia was by far the most common initial symptom, occurring initially in 73 per cent of the cases (Table II). Anorexia and pain, usually described as substernal discomfort, were the next most frequent initial symptoms, occurring in 8 and 9 per cent of the cases, respectively.

TABLE I.—RACE, SEX, AND AGE DISTRIBUTION

	Number of Cases	
Race		
Caucasians	63	
Negro	1	
TOTAL	64	
Sex		
Males	55	
Females	9	
TOTAL	64	
Age distribution		
20 to 29 years	1	3%
30 to 39 years	0	
40 to 49 years	1	
50 to 59 years	16	97%
60 to 69 years	23	
70 to 79 years	20	
80 to 89 years	3	
TOTAL	64	

TABLE II.—INITIAL SYMPTOM

Symptom	Number of Patients	Per Cent
Dysphagia	47	73
Pain	6	9
Anorexia	5	8
Weight loss	3	5
Fatigue	2	3
Cough	1	2
TOTAL	64	100

The symptoms present at the time the patients were admitted to the hospital are recorded in Table III. It is interesting to note that dysphagia was present in 100 per cent, weight loss in 88 per cent, and pain in 55 per cent of the cases.

Methods of Diagnosis

A routine posterior-anterior roentgenogram of the chest is of little aid in the diagnosis of

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TABLE III.—PRESENTING SYMPTOMS AT ADMISSION

Symptoms	Number of Patients	Per Cent of Patients with Symptoms
Dysphagia	64	100
Weight loss	56	88
Pain	35	55
Regurgitation	24	38
Cough	20	31
Fatigue	18	28
Hoarseness	12	20
Anorexia	8	13
Dyspnea	7	11
Melena	7	11
Hemoptysis	4	6
Hematemesis	4	6
Chills and fever	2	3
Hiccough	2	3
Palpable mass	1	2

TABLE IV.—INTERPRETATION OF ROUTINE CHEST ROENTGENOGRAM AT ADMISSION

Diagnosis	Number of Patients
Abnormal	
Tumor mass	6
Pulmonary fibrosis	4
Old pleurisy	3
Atelectasis	2
Total	15
No lesions	37
No x-ray	12
	—
TOTALS	64

TABLE V.—RESULTS OF ESOPHAGOSCOPY AND ESOPHAGOGRAMS

	Number	Per Cent
Esophagoscopy		
Performed	53	82.8
Biopsy	51	...
Positive for tumor	44	86.3
Negative for tumor	7	13.7
No biopsy	2	...
Not performed	11	17.2
TOTAL	64	
Esophagograms		
Performed	59	92.2
Diagnostic of tumor	57	96.6
Not diagnostic of tumor	2	3.4
Not performed	5	7.8
TOTAL	64	

carcinoma of the esophagus. This is noted from the fact that of 52 patients so examined, 37 cases were interpreted as having normal chest roentgenograms. Of the 15 patients who had routine chest roentgenograms interpreted as abnormal, six were suggestive of tumor masses, and two were read as showing atelectasis (Table IV). When an esophageal carcinoma has progressed to the point where such lesions are found in a routine chest roentgenogram, there is then no hope of complete surgical excision.

Of the 53 patients who were esophagoscoped, a diagnosis of carcinoma was made in each case on the basis of the appearance of the lesion. Of the 51 patients from whom a biopsy was taken to confirm the clinical impression of the esophagoscopist, 44 were positive for carcinoma, a positive biopsy percentage of 86.3 (Table V).

Esophagograms proved to be the most valuable adjunct in confirming the clinical impression of esophageal carcinoma. Of the entire series 59 patients (92.2 per cent) were examined in this manner. Fifty-seven, or 96.6 per cent, of those examined showed evidence of a tumor of the esophagus (Table V). The high incidence of positive findings by this method of examination possibly may be related to the late stage of tumor developments; however, it can be said that whatever the circumstances, this method was very effective for diagnosis. Of the five patients not examined by barium swallow four were esophagoscoped and showed definite evidence of esophageal carcinoma. The third patient died three hours after admission to the hospital. Three patients were found to have a bronchoesophageal fistula when examined by fluoroscopy with barium swallow.

Delay in Diagnosis

An attempt was made to see whether information could be obtained that would aid in getting the patient with carcinoma of the esophagus to a surgeon capable of excising the tumor before it had extended beyond the limits of the esophagus. If this tumor is for a long period a "silent tumor," as many have suggested, how best can the situation be handled? Where lies the fault, if any, in allowing the tumor to progress to a point where it cannot be eradicated surgically? In reviewing these cases the time lapses from first symptom to first medical consultation, first medical consultation to first esophagogram, first esophagogram to surgical consultation, and diagnosis to attempted treatment were tabulated.

The average interval from first symptom to first medical consultation was one hundred eleven days, with a distribution as recorded in Table VI. Thirty of the 57 patients on which this information is available sought medical aid within three months of their initial symptom.

There was an average of twenty-seven days between the first medical consultation and the first x-ray examination of the esophagus with barium, although 32 patients of the 53 patients tabulated were so examined within the first week (Table VI).

In the group of 51 patients in which the period of time elapsed from the first x-ray examination

TABLE VI.—Time Elapsed from First Symptom

Time Elapsed	Number of Patients
From first symptom to first medical consultation (average 111 days)	
0 to 1 month	8
1 to 2 months	15
2 to 3 months	7
3 to 4 months	8
4 to 5 months	3
5 to 6 months	4
6 to 12 months	8
Over 12 months	4
Total	57
Not known	7
From first medical consultation to esophagogram (average 27 days)	
0 to 7 days	32
8 to 14 days	2
15 to 21 days	2
22 to 30 days	2
31 to 60 days	5
61 to 90 days	4
Over 91 days	6
Total	53
Not known	11
From esophagogram to surgery consultation (average 23 days)	
0 to 7 days	31
8 to 14 days	8
15 to 21 days	3
22 to 30 days	6
180 days	1
210 days	1
365 days	1
Total	51
Not known	13
From diagnosis to attempted treatment (average 19 days)	
0 to 7 days	13
8 to 14 days	15
15 to 21 days	7
22 to 30 days	3
31 to 60 days	4
120 days	2
Total	44
Not treated	19
Not known	1

of the esophagus with barium to surgical consultation could be ascertained, it was found that 31 patients were seen within one week, the average being twenty-three days (Table VI).

Once the diagnosis had been established, there was additional average delay of nineteen days before an attempt at treatment was undertaken (Table VI). This delay was usually necessary to get the patient into better condition for the planned surgical procedure.

When all the delays are grouped, we find that the average time elapsed from the first symptom to diagnosis was six months, although four patients were diagnosed in less than one month of initial symptom and 24 patients in less than three months (Table VII). The distressing finding is, however, that the diagnosis was delayed from three to six months in 19 patients and longer than six months in another 19 patients.

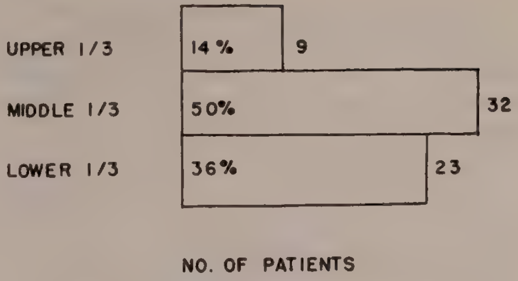

Fig. 1. Location of tumor in esophagus.

TABLE VII.—Time Elapsed from First Symptom to Diagnosis

Time Elapsed (Average 6 Months)	Number of Patients
0 to 1 month	4
1 to 2 months	13
2 to 3 months	7
Total	24
3 to 4 months	10
4 to 5 months	5
5 to 6 months	4
Total	19
6 to 12 months	10
Over 12 months	9
Total	19
Grand Total	62
Not known	2

Pathology

The tumor was located in the upper third of the esophagus in nine cases, in the middle third of the esophagus in 32 cases, and in the lower third in 23 cases (Fig. 1). This distribution is similar to that reported by others.[1,7] A tissue diagnosis was obtained in 50 of the 64 cases: squamous cell carcinoma in 45, adenocarcinoma in 3, and anaplastic carcinoma in 2. It is interesting that all of the adenocarcinomas were located in the lower third of the esophagus, thus raising the question of whether these tumors actually arise in the esophagus or from the gastric mucosa just below the esophageal-gastric junction. Some[8] have suggested that these adenocarcinomas may originate from intraesophageal gastric mucosa. In the series of 88 cases of esophageal carcinoma reported by Burgess and associates[1] every adenocarcinoma was located in the lower third of the esophagus.

Treatment and Survival

Twenty-six patients underwent an exploratory thoracotomy, but of this group only eight cases had an esophagogastrostomy with resection of the tumor. There was one operative death in this group. A total of ten patients received roentgen ray therapy for their tumors. The average survivals were 5.2 months for those receiving roentgen ray therapy, 6.3 months for those receiving no treatment, 7.3 months for those having gastrostomy only, and nine months for those having resection with esophagogastrostomy. Of the six patients who survived longer than one year two had gastrostomies only, three had no therapy whatever, and one had an esophagogastrostomy with resection of his tumor. This latter patient is alive and well today three years postoperatively. Of the 64 cases studied, 61 were followed to death, two were lost to follow-up, and one is alive and well at this time.

Comment

It is significant that each patient sought aid because of symptoms, no cases being brought to the physician's attention by other means. Dysphagia, since it occurred as the initial symptom in 73 per cent of the cases and since it was present in every case at the time of admission to the hospital, should lead the physician to suspect esophageal carcinoma in the male patient fifty years of age and older. Weight loss, substernal pain, and cough were frequently encountered symptoms in this group of patients, but since these are also frequent symptoms of chronic illness in disease other than esophageal carcinoma, they lack the significance of dysphagia as a sign of esophageal carcinoma.

Ochsner and DeBakey's report that 40.7 per cent of 1,025 collected cases showed no evidence of metastasis at autopsy supports Jackson's belief that the disease is a mild, slow, and for a long time purely local process. Apparently, high malignancy observed clinically is due in a great measure to the obstructive character of the lesion resulting in early starvation. If the survival is to be improved, it is then imperative that the patients be treated as soon as possible after symptoms develop. Of those tabulated in this series approximately 50 per cent delayed longer than two months in seeking medical aid. while 12 were known to have delayed six months or longer. Perhaps the present educational program for the laity will tend to shorten the period of delay between initial symptom and medical consultation. Fifteen of 53 patients on which this information is available did not have esophagograms within one month of the first medical consultation. Since this method of examination proved so fruitful as a diagnostic aid and because of its relative simplicity, it is evident that it should be done immediately on all suspects.

Although the number of patients who experienced considerable delay between the various steps from first symptom to diagnosis may not appear great, it is found that when these time intervals are grouped, there were 38 patients in whom the delay from first symptom to diagnosis was three months or more, nine of these patients having a delay of more than one year.

Esophagoscopy proved a valuable diagnostic aid in this group of patients, positive tumor biopsies being obtained in 86.3 per cent. The routine chest roentgenogram was of little value in establishing the diagnosis.

Summary

1. Sixty-four patients with proved carcinoma of the esophagus are presented.

2. Dysphagia was the initial symptom in 73 per cent, it being present in 100 per cent at the time of hospital admission.

3. In 38 cases there was a delay of three months or longer from first symptom to diagnosis, nine of these cases having a delay of more than one year.

4. Esophagoscopy proved a valuable diagnostic aid in this group of patients, positive tumor biopsies being obtained in 86.3 per cent.

5. Esophagograms were interpreted as showing evidence of esophageal carcinoma in 96.6 per cent of patients so examined.

6. The average survivals were 5.2 months for those receiving roentgen ray therapy, 6.3 months for those receiving no treatment, 7.3 months for those having gastrostomy only, and nine months for those having resection with esophagogastrostomy.

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Minor Physical and Mental Troubles

Medical Essay

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In our effort to understand and to treat important illnesses we often disregard the minor troubles and discomforts from which even those people suffer who boast "never" to have been sick. They are usually noncomplicated, slightly abnormal conditions which may or may not be connected with deeper ailments.

For some people, in some areas for the majority, the most frequent are the so-called "colds" or nose catarrhs, which may involve other respiratory organs and sometimes amount to a real disease. At any rate they make an individual miserable while they last. Or do headaches occur more often, and are they more annoying? To be sure, they are symptoms of other afflictions which are not always recognized, sometimes even of a mental nature, but they can disable a person for an hour or a day or a fortnight, taxing the victim's patience and disturbing the self-confidence of the strongest. One of the most habitual causes of trouble is constipation which, if unrelated to some known organic affection, is tolerated as a second nature, although it is derived in its turn from a series of other conditions and leads to all sorts of disturbances of which the headache is but one. Perhaps transitory indigestion from indiscretions in food matters and accompanied by unpleasant symptoms and, here and there, bellyaches come next in frequency. Various other aches, musculaa or articular, due to fatigue, among which is the recurring backache, can be exceedingly irritating.

Toothaches are usually acute. If slight and constant, they are boring and vexatious. If vicious and violent, they drive one "out of his mind" and, as in all cases of suffering, make one say that "death is preferable." By the way, both desires, to live and to die, are always present in everybody's mind. A toothache is a good example of the fact that the violence of a pain is not, as a rule, a sign of danger to life. One may die of pulmonary tuberculosis or of cancer without any pain whatsoever. A corn or a callus could be very distressing. Sudden nasty leg "cramps" or spasms in otherwise healthy persons, while temporary and usually independent, are tormenting and may be excruciating. An itch without a skin trouble may be connected with an abnormal mental state, either as cause or effect or, in a vicious circle, as both. Insomnia, for an infinite array of reasons, always makes one unhappy unless he is a philosopher and has learned how to disregard it, to put up with it, or how to deal with it. We may accuse ourselves of neglecting to dress properly, or we may lack the wherewithal, but being too cold or too hot is unpleasant. When hunger is prolonged or chronic, it is not called a sickness, but it provokes suffering. Nor is the habit of overeating in the list of diseases, but its immediate consequences are distressing and as a cause of other causes of ill-health, it could be fatal or bring on invalidism.

To be forced to wear glasses for the correction of the vision, while acceptable and usually necessary, is sometimes disagreeable enough. Hearing aids, while a blessing when efficacious, are even more unwelcome. But how wretched deafness or myopia makes one, although as a whole the sufferer is "well!" Potential hernia, not a real illness and not always remediable, is a Damocles sword. Sexual impotence is almost never a sickness, but it can "sap one's life," as some victims express themselves. The loss of hair, while of scant importance to some people, is a torment to others, and so is the growth of unwanted hair.

Tiny, inconsequential accidents and trauma harass us ceaselessly. No one, not even the most careful person, is free from them. No one can prevent all of them. Foreign bodies on the conjunctiva or the cornea may amount to temporary calamities. Small burns, cuts, pinches, stings, falls accompany us and annoy us from birth until our last breath. Burning the tongue with hot food is almost a daily visitation. Insect bites cannot be entirely avoided.

If we add such miseries as tight shoes and narrow or stiff collars or, in the past, taut fastened corsets—which may come back to plague the women again—the picture of the exasperated civilized citizen is somewhat more complete, but it is by no means exhausted.

Someone tried hard to figure out for how many minutes or hours daily he was happy or contented or free from discomfort, and, after much figuring, he gave it up as a bad job. He did not know. Of course, it would depend on the social position and point of view of the investigator.

On the other hand, many people are badly ill without knowing it, without ever regarding themselves as patients. Perhaps the majority of human beings, even in this country where dentistry is popular, have defective teeth and abscessed roots. Numberless individuals are infested with organic pathologic conditions without being aware of them. We learn this best from the dissection of the bodies of those who apparently died from other diseases than those found prominently at autopsy. Sometimes we are at a loss to understand how they had lived as long as they did. Specimens seen at pathologic conferences in hospitals are eloquent in this respect. Malignant growths which necessarily had to take years to invade all the involved parts or systems or apparatus showed no subjective symptoms and provoked no complaints. Almost complete destruction of organs is encountered. Some patients were alive by a thread only and, although seemingly operating properly, had their functions performed by a small portion of those organs. Degeneration of kidneys, lungs, pancreas, liver, heart does not always kill their possessors.

We are amazed at the horrors we can carry in our bodies. But we are also astonished to learn how stubborn life is. After all, do we not see this well illustrated in nonhuman vitality? Does not a trapped animal bite off or pull off his leg or tail, an heroic act with which hardly a person can be credited? However, on the whole, this persistence is perhaps less visible in our wild fauna because handicapped creatures enjoy but little of the famous "mutual aid," and if they cannot look for food or are unable to hide or to fight, they perish or are destroyed by another beast. But many plants, full of parasites, missing large limbs, with hollowed trunks, having but comparatively few healthy leaves, are still capable of producing a good many flowers and some fruit. Of course, plant physiology is different from zoologic functional processes. A living fragment of a tree, if still connected with the soil, may be complete and in fine health while the rest is totally dead. All this goes to show again how obstinate physical life is.

The circumstances are naturally not the same with the human mind, although we cannot inspect its pathology by dissection. There is no question but that many of us suffer through life from mental irregularities or illnesses unknown to ourselves and to our closest environment. In some cases this is not really suffering but amounts to a sort of enjoyment. If a good deal of the mind is distorted or ruined, it ceases to adjust itself, although even then some health may persist side by side with illness. Not only is it difficult to define mental normality, but we are unable to say how much normality there is in so-called normal minds, that is, in all of us or in the average. Abnormality seems to be excessive normality. As the three-year-old answered his mother who, on a winter day, had admonished the boy to button himself because it was cold, "But it's a little bit warm too." And later, when she told him that it had started to drizzle and the air was wet, he replied, "Mommy, it's dry too." And she commented, "It's damp." Which, in other words, meant that even such a well-known condition is subject to various interpretations.

All the above-mentioned organic troubles, no matter how slight or how troublesome, have an effect upon the mind and leave their imprint on it. Some of us are less disturbed by them than others. A good many cannot endure vexation of any kind without being provoked, upset, excited, or depressed. Others exaggerate the disorder and become quite unhappy.

Furthermore, the normal mind undergoes infinite small disturbances of its own, perhaps comparable to the nonessential mishaps of the body. But, while most of us bear them nicely or emerge from them with flying colors, others are excessively frightened by them, puzzled, confused, saddened, defeated, or angered. A healthy mind, even if pained, will forget and straighten out and heal the mental sore. It will react like grass which has been trodden on but manages to lift its blades to the sun. For the oversensitive a prick is a major hurt. And since there is no day without some frustration, insult, and other unpleasantness, the easily affected mind is a constant target for all forms of suffering.

On the whole, we are physically and mentally both strong and weak. We often pass through pneumonia alive, we mostly withstand a major surgical operation or even a bad automobile accident, but we may succumb to a tiny injury which hits our skull. We do not flinch at a terrific siege of mental anguish, but we may lose our mind due to some petty failure.

No matter how many inventions and discoveries are made, no matter how we facilitate our way of living, the human body remains the same "old-fashioned" organism, and the mind cannot be divorced from it, cannot free itself from it. No woman, whether in a hut in the heart of Africa, on New York's Park Avenue, in a New England mansion, or homeless under a bridge—if she is surrounded by poverty and ignorance or by the finest care and latest science that money can buy—gives birth in any other than the age-old manner. By the way the throes of normal parturition, although in itself not an illness and even if artificially allayed, must also be classed among those fleeting ailments which make life thankless and disagreeable and leave some mental scars or wounds—in some persons amounting to irascibility, moodiness, and a readiness or potentiality for diseases of the mind; in others a fine contentment to have withstood the ordeal.

Nor is our nutrition substantially different, either from that of primitive man or even from our brethren in the animal kingdom. Nor is love-making or sexual intercourse or the parent-child relationship. Nor is elimination.

We die in the same old way. And, like the animals in the jungle, we never die a "natural" death, no matter at what age. There is no simple, uncomplicated death due to exhaustion only—or it must be rare indeed.

So far civilized society, although it is slowly bettering our living and has made us less insecure than in the past, has not brought us full security—we are a long way from that. The thin veneer of advancement is not even skin deep. Under adverse circumstances a smaller aggressive modification in life could push us backward to primitiveness or savagery, the elements of which we still conserve within us.

In essence, nothing is altered in respect to the bedecking of the body with what is proclaimed as jewelry, or to facial adornments, or to reddening the cheeks and the lips, or to coloring or arrangement of the hair, except that primitive man and woman did it or do it with greater artistry.

War is in principle the same as in the most ancient times; only the weapons have changed. Perhaps also its causes, which now are more of a social nature.

So are the economic connections and feuds between man and man. And so is faith still based on worship of some spiritually idolatrous being not understood by anybody.

The newest technical gadgets and contraptions, no matter how clever, have failed to change the fundamentals of life, although they have succeeded in complicating it. While passengers in an airplane, we are subject to the same physical necessities, and we suffer from the same mental hardships as if we were plodding on solid ground. Being aloft does not diminish our sentiments, passions, hatreds, or guilty feelings and knavish thoughts. Character is not improved by mechanical perfection.

Some observers are full of praise for the marvelous adaptation of human populations to the most modern machines. The fact is that the tremendous number of industrial casualties, chemical and mechanical, and automobile and airplane accidents is not a good certificate for our adaptability. Or perhaps this is the best result that can be expected and obtained. But we should not forget that primitive life was—and is—also quite complicated, what with the lack of specialization and the need for skill, nimbleness, and rapidity in hunting, fishing, climbing, swimming, boating, building, and avoiding becoming a prey, and other duties for everybody like tribal and war necessities.

In many respects we are undoubtedly far behind the primitive or so-called savage man. If socially we are more developed, individually we have lost a good deal. Only those of us who live outside of towns, far from suburbs, and who have some contact with real rural life, or still better with broad and open fields, hills, woods, mountains, know something of nature. Of course, the farmer is much more acquainted with the real world than the city dweller, but even he may be mostly unconcerned with what confronts him, and often he sees only a little more than do his cows, horses, sheep, and dogs. But the ordinary Main Street inhabitant pays no attention to trees, shrubs, birds, or insects at all, or he is acquainted, often by hearsay, with their unpleasant sides only. Nature rhythms pass over his head. He hardly lifts his eyes to the skies and ignores the stars and heavenly bodies altogether. He thinks he is living, but how far he is from that! This narrows his vision, concentrates his interest, and brings him too near to others, that is, too close to conflicts and to mental disorders. Only the complete individual with an all-around, open-minded outlook, who can enjoy what he sees and can drink deeply in the fountain of life, is the truly happy human being. He need not be a scientist, but he has a scientific, loving, tolerant mind, always eager to learn and able to ignore picayune matters. He does not overworship nature, but he is an intelligent pagan, a sort of pantheist, unconsciously. He does not have to reach the heights of a John Burroughs, but he steadily and instinctively converges toward nature at great sacrifices to himself. He is in the minority; everywhere he is called a "crank," a surname which he cheerfully accepts. He, of course, knows that he is mentally normal. He is always in love with the world, even if he rebukes it for its sins and blunders.

The physicist, Helmholtz, dealing with the human eye, regarded it as a very imperfect organ and said that if a craftsman brought him a device with so many faults, he would throw him out. How about our most central and superlatively indispensable organ, the one upon which our very life depends every second of our existence, the heart? Is it well fashioned for its task? It is the pivot around which the entire blood circulation turns. Is it well provided itself? Is it not so constructed that at times—and, unfortunately, too often—it will play the role of the shoemaker who goes barefoot? Of course, it will endure a good deal of abuse before it weakens or collapses, but even so its coronary supply is quite precarious. Indeed, the entire body could stand some betterment and mending.

However, this fact should not be interpreted as if nature as such is either to be blamed or, when successful, to receive the entire credit. Exaggerated nature veneration is foolish and based on untruth, but we, being part and parcel of nature, cannot be rebels against it and take refuge in completely artificial living. If we do, our penalty is worse. We must submit. We cannot have another body, and we better keep it, individually and socially, as well as we can and prevent illness where it is at all possible.

Walt Whitman glorified the flesh and sang paeans to each separate part of the body, especially to his own organs, chiefly because of his sexual makeup, because of his narcissistic self-love or love of other males. But, by accepting optimistically and without a shadow of criticism what was given to him, he taught us to respect and even to elevate that which had been despised and relegated to the realm of unvirtuous, evil, filthy regions and associated with sinful thinking.

But compared to the body, the mind has even a harder time. To keep alive, to adapt itself to the body, to lead it or at least to steer that part of it which functions less automatically and to be influenced by its internal and vegetative life, to navigate our tiny being in the midst of society's incessantly raging storms and rough rocks is no mean thing. No wonder so many of us suffer derailment and cannot hold our own!

Fickle, fragile, and changeable as the bodily functions are, the mind is and, in order constantly to adjust itself, must be much more unstable and extremely restless. Not only do all the above-mentioned imperfections and impairments change it and sway it, but it has its own major and minor troubles. Just as the sea, when the weather is balmy and serene, shows no high billows but never rests completely, so do the ordinary psychic wavelets move incessantly. Most of us do not become necessarily deranged, but we are steadily exposed to mental difficulties. Sad moods, never-forgotten insults, daily frustrations, and mean clashes, comparable to small accidents, produced by no sickness but, by the vicissitudes of life and association and resulting in no visible or tangible damage, must also be counted among the infinite number of transitory disturbing conditions and incidents.

Mental fatigue is worse than its physical counterpart, and often it fails to disappear after rest. I know a man who had been a good worker, disciplined, contented with his lot, with no other aspirations than to satisfy his employer. He had a wife and a few children whom he loved. After twenty years at the same job in a small shop, something rebelled in him. He became restless and irritable, and he was sent to my office by his employer, who telephoned, "He is touchy like a boil." The patient said, "Oh, how I hate the shop! I quarrel with the boss and tell him things that I never dared to bring to my lips before. He likes me, but if I go on that way, he'll surely fire me." This man was tired of working so long in the same place. The sameness, the lack of adventure exasperated him. Questioning and prodding revealed no other problem. There was none at home. Not yet. He, who had been eager and ambitious to please and to do his duty fully, now was slow and arrived often late at work. He commented, "It takes me so long to shave or to decide to wash up. I linger as much as I can. In the street, I loiter. I yawn the whole day, although I sleep too much." There was an accumulation of mental fatigue. Some change, any change, would have been welcome. To cure this condition an absolute modification of his work would have been desirable. This would have been necessary to avoid a real breakdown.

A woman who adored her son and whose husband treated her ideally began to feel aggravated by the humdrum in life at forty. Her doctor's first guess was "involution," but treatment in that direction made matters worse from the physical angle. Indeed, years later we learned that she had menstruated regularly up to the age of fifty-two. She attended to her house duties, but she accomplished less than half of her former task. She would sit for an hour between one chore and the next before making up her mind to start something else. "I'm so tired, and I don't know why, and I don't know what I want. I'm unorganized. I have lost my pep," she said. She tried to explain her predicament, "Maybe I'm worried about the world situation. So now I've stopped reading the papers. But that doesn't help. Not a particle of difference."

She too needed some adventure, but nothing happened. Life was gradually becoming a burden. She was sent to her mother, several hundred miles away, but there she longed for her home.

This, however, was a mixture with a real, although mild, depression through which she passed for two or three years until her boy left college and returned home. A case is rarely so simple as to be caused or developed by one factor only. But mental fatigue can be either at the bottom of a disorder or can be its complicating agent. Sometimes none of our guesses or conjectures can fathom the causes of such a lapse into mental fatigue. But when it has taken hold of a person it envelops him or her, at first like a faint cloudiness which threatens to thicken into a deeper gray, finally shrouding the thoughts in utter darkness. For many minds life itself, life as such, represents a hardship, a "tough proposition," as one patient expressed it. They cannot endure or accept "the thousand natural shocks that flesh is heir to," as another said.

Most of us want both immobility and motion, novel experiences and the old and old-fashioned, to accomplish vivid and interesting feats and yet be lazy and inactive, to experience perilous adventure while simultaneously enjoying paralyzing safety. But we usually postpone our tendencies toward heroism or repress and bury them in both day and night dreams while we let our lives remain unchanged.

Of course, for the purpose of advancement in civilization and for the sake of general progressiveness, it might perhaps be more advantageous for all of us if we were mentally more unsettled. Most of us, however, after adolescence have silenced or suppressed the rash and dashing adventurer within ourselves and have settled for peace with life and overadaptation to circumstances.

Mental equilibrium is often weak and can easily lose balance. But thoughts have the power of knowing more than our consciousness is aware of. Their contact with the world is great and reaches far distances. They are, therefore, more exposed and infinitely more vulnerable than the body as such and its organs.

However, I would not like my readers to misunderstand this perhaps oversimplified description and believe that because they are all possible candidates for mental abnormalities, they cannot escape them. If they were haunted by such ideas, they would already be abnormal, and I would ask them to discontinue reading these lines right here and now. Not everything that may happen will happen.

When speaking about adaptation, it is necessary to add that it does not mean conformity or submissiveness to all the rules created by the majority or destruction of one's own personality. This surely would not be an unalloyed blessing, and to teach it as the proper behavior would undoubtedly be a mistake from the viewpoint of the development of a stable character.

Explaining the effects of maladjustment as one of the causes of mental disorders is not an encouragement to a complete "falling in line" or to an advocacy of extreme adjustment. On the contrary, it is worth while insisting that there is a limit to adjustment and that strong minds are not to be discouraged from their opposition to an adaptation that is painful or impossible to them. The most powerful instance is the challenging exclamation, "*Hier steh' ich und kann nicht weiter!*" Or, "*Allez dire au roi que nous sommes ici par la volonté du peuple et que nous n'en sortirens que par la force des baïonettes!*" Or, the famous, "*J'accuse!*" Or, "Give me liberty, or give me death!" Or again, "I am in earnest—I will not equivocate—I will not excuse—I will not retract a single inch—and I will be heard."

The mental giants who opposed majorities or established, powers and uttered such challenges were normal and well adapted in their private lives. So were those who went to the North or South Poles, or tried to climb Mount Everest, or explored new continents at the risk of their lives, confronting those who called them "crazy."

There is no denying that adaptation may signify adjustment to an inferior environment. But the superior and mentally normal person knows how to keep independent even in the midst of an undesirable milieu.

Contrary to those "teachers" who are making fortunes by imparting the so-called skill of "making friends," one often feels like being educated in a successful, although perhaps tactful, way of telling truths even at the peril of making enemies!

If most laymen and some physicians remain unconvinced in the face of many moderately advanced mental cases, so much less would they consider anyone as mentally ill if he suffered from a disorder which although sometimes a torment to the patient, is hardly noticeable outwardly, and never at a first glance. Such disturbances, however, are frequent. They are transitions between mental health and mental disease. Their existence has been noted and described by psychiatrists, but insufficient attention has been paid to them. They are neglected or dismissed as unimportant. They are regarded as less interesting than the fully developed psychoses or the unpleasant and disturbing neuroses. The more exceptional, the more advanced, the more unusual, the rarer cases fascinate our specialists more intensely. The more difficult the solution of his mental problem, the more welcome is the patient. The more intricate the diagnosis, the stronger the appeal of the case to the mental physician's imagination.

The transitional forms, on the contrary, although not sensational, are ubiquitous, and all physicians, whether they are psychiatrists or general practitioners or specialized in any branch of medicine, deal with them, knowingly or unknowingly. Many of these patients never see a doctor at all, and their troubles are among the well-guarded secrets of their families. They may properly be called sufferers of neuroses, or incipient or light or borderline psychoses, or they may not even reach that significance.

To this writer, such conditions have always seemed more worthy of being studied than the worse and more advanced forms of mental disease. Not only are they met with unceasingly, but with the proper approach they are more amenable to a cure, an improvement, a return to adequacy, or, what is more worth while, to prevention against further inroads of illness. To be sure, they are far less spectacular than most institutional cases, and when cured or ameliorated, the contrast between their present and their past appearance is not so dramatic as in the hospital patients. Their treatment in our present stage of individual mental hygiene can be chiefly psychotherapeutic with the possible addition of a solution of the family problems or other difficulties where this is feasible.

65 West 95th Street

Why Johnny Couldn't See

Ironton, Ohio, December 28:—Johnny Earhart, six, complained to his parents that he could not see the blackboard at school. So Common Pleas Judge and Mrs. Warren S. Earhart took him to Dr. John Dole.

The doctor found nothing wrong with Johnny's eyes.

"Why can't you see the blackboard?" he asked.

Replied Johnny: "Because there's a great big boy sitting right in front of me."

Papa Earhart said he'll ask to have Johnny's seat changed.—*New York Daily News, December 29, 1953*

Meckel's Diverticulum

Report of 100 Cases

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MECKEL'S diverticulum is probably the most common congenital anomaly of the intestinal tract. Its complications always present a serious problem to the surgeon. The present report summarizes the cases of Meckel's diverticulum from the Departments of Surgery and Pathology of the New York Hospital from September, 1932, to January 1, 1952. Two cases of unusual interest are more fully described.

While Johann Frederick Meckel presented in full the story of this anomaly to the medical world, many authors contributed to the subject prior to his writings during the period from 1808 to 1815. Such men as Hildanus (1598), Lavater (1672), Littre (1700), Ruysch (1701), Morgagni (1769), and Bose (1779) furnished the background on which Meckel's work was probably based. However, Meckel is generally credited with the description of the anatomic aspects of this lesion and of its origin as the result of incomplete obliteration of the omphalomesenteric duct.[1-3]

The detailed embryology of the origin of this variant, from its appearance as the yolk stalk around the second embryonic week to its obliteration occurring in the sixth to seventh embryonic week, has been well worked out by other authors. Manning *et al.*,[4] Morlock,[5] and Thompson[6] have presented some of the interesting variations this process may take.

The 100 cases of Meckel's diverticula herein presented were found during a period of twenty years in a general hospital. Approximately a third of these anomalies were encountered at autopsy, 34 diverticula among 6,821 autopsies, an incidence of approximately 0.5 per cent. There were 61 in males and 39 in females, which is the ratio usually reported. Approximately half (48) of the diverticula were removed incidentally at operation, which parallels the percentage of so-called incidental diverticula noted by Jay *et al.*[3] and others. Heterotopic tissue was present in nine of these 48 diverticula. Five of the diverticula observed at operation were not removed and 32 were not examined microscopically.

TABLE I.—SUMMARY OF FINDINGS IN CASES OF MECKEL'S DIVERTICULUM WITH PATHOLOGIC CHANGES

Pathologic Change	Number of Cases
Inflammation	15
Acute diverticulitis (2 with perforation)	8
Subacute diverticulitis	2
Chronic diverticulitis	5
Obstruction	6
Intussusception	2
Band	2
Volvulus	1
Inflammation	1
Heterotopia*	18
Gastric (2 with ulcer, 8 with hemorrhage)	11
Colonic	4
Duodenal	1
Pancreatic	1
Gastric and duodenal	1

* Among 68 diverticula examined microscopically.

In classifying diverticula as pathologic, we have included all those with complications in addition to those showing heterotopic tissue on microscopic examination (Table I).

In the present series inflammation was present in 15. In two of these, perforation had occurred. In his collected series Moses[1] found inflammation in 10 per cent with perforation in 13 per cent of these. Jay *et al.*[3] noted inflammation in only about 6 per cent, while Sneierson[7] and also Chaffin[8] report this complication in about 25 per cent of cases. However, in the cases of Schwei *et al.*[9] and in McQuaid's[10] smaller series inflammation makes up one half and one third of the complications, respectively.

Obstruction was encountered in 6 per cent of our patients, which is similar to the percentages recorded by Jay[3] and Gadbois.[11] Moses[1] found obstruction in one fourth of the complications encountered. Three cases in our series required resection of ileum: two of these were for obstruction, and in one case inflammation had extended to the neighboring ileum to such an extent that its removal was indicated. There were no deaths in this group.

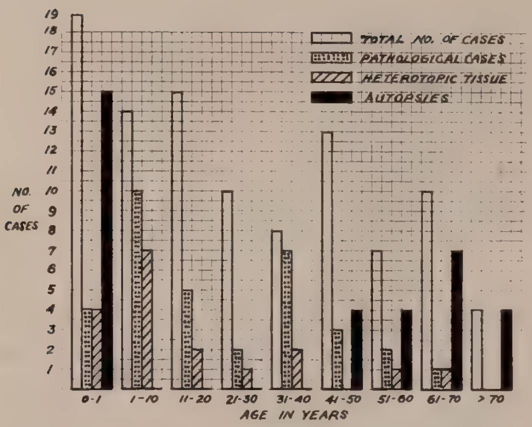

FIG. 1. Graphic representation of age incidence, occurrence of pathologic specimens and heterotopic tissue, and the number of autopsies at various ages in 100 patients with Meckel's diverticulum.

The one death occurred in a twenty-three-year-old woman who was subjected to an operation for "acute abdomen." She was found to have a Meckel's diverticulum and a hemorrhagic ovarian cyst. Neither of these was removed. The patient failed to respond well and subsequently died with peritonitis. Since no autopsy was obtained, the cause of death could not be ascertained.

Tissue in the diverticulum other than that normally found in the ileum occurred in 18 specimens (26 per cent of those examined microscopically). Moses[1] in his report of 1,605 cases gleaned from the literature recorded heterotopia in 34.9 per cent. Jay *et al.*[3] also found an incidence of approximately 34 per cent. In 11 patients gastric mucosa was present, and hemorrhage occurred in eight of these. Colonic mucosa was found in four and pancreatic and duodenal tissue in one each. In one patient (described below) the unusual combination of gastric and pancreatic tissue occurred in the diverticulum.

Table II and Fig. 1 show the age incidence, occurrence of pathologic specimens and heterotopic tissue, and the number of autopsies at various ages among 100 patients with Meckel's diverticulum. It is of interest that none of the autopsy specimens obtained came from people between the ages of one and forty years. The large number of Meckel's diverticula obtained in autopsy material came from neonatal deaths. Only four patients under the age of one year were operated upon, and there were pathologic diverticula in all. Heterotopic tissue occurred for the most part in individuals under the age of twenty years, indicating that, when present, these lesions usually cause trouble in early life. This is in agreement with the findings of others. There is a fairly even distribution of the other complications throughout all age groups up to the age of sixty years.

TABLE II.—MECKEL'S DIVERTICULUM

Age	Number of Cases	Pathologic Diverticula	Heterotopia	Autopsies
Less than 1 year	19	4	4	15
1 to 10 years	14	10	7	0
11 to 20 years	15	5	2	0
21 to 30 years	10	2	1	0
31 to 40 years	8	7	2	0
41 to 50 years	13	3	0	4
51 to 60 years	7	2	1	4
61 to 70 years	10	1	1	7
Over 70 years	4	0	0	4
	100	34	18	34

Much discussion may be found in the literature on the distance of these lesions from the ileocecal valve. Of the 75 cases in our series in which this distance was noted, the diverticula were found within 100 cm. of the ileocecal junction except in four cases where they were at from 120 to 140 cm.

Of the 67 patients operated upon, there were no late complications, and none of the patients required further procedures.

Case Reports

CASE 1.—A forty-year-old, white, married male was in good general health until one year prior to his first admission to the New York Hospital when he noted episodic discomfort in his periumbilical region, at first readily relieved by heat but becoming more refractory to this treatment. Four months before admission, he developed an abscess just below and to the right of the umbilicus which was incised and drained at another hospital. Following this procedure the patient became acutely ill, developed generalized peritonitis, was in coma for twelve days, and recovered only after extensive and long-continued use of antibiotics.

Five days before his first admission to this hospital (April 25, 1951), the patient noted recurrence of pain in the right lower quadrant of his abdomen and over the ensuing two days developed a localized area of inflammation at the site of the previous incision and drainage. He had no other symptoms referable to his gastrointestinal tract.

At his first admission the patient was a well-developed and well-nourished white male in moderate distress with a temperature of 38.5 C. rectally. In the right lower quadrant of the abdomen below and to the right of the umbilicus there was a 4 by 4-cm., indurated, erythematous, tender area in the center of which could be seen the scar of the previous operation. No fluctuation or drainage was noted. The remainder of the patient's abdominal and rectal examinations was negative. There was a leukocytosis of 15,000 per cu. mm.

Treatment consisted of the application of continuous hot, wet packs to the inflamed area, aureomycin, 250 mg. four times daily, and bed rest. On the day after admission the inflamed area spontaneously drained grossly purulent material, cultures of which revealed Staphylococcus aureus and nonhemolytic streptococci. Under local anesthesia the wound was opened widely to provide adequate drainage. A probe could be introduced laterally and inferiorly for approximately 8 cm. The wound gradually closed by secondary intention. X-ray examinations of the gastrointestinal tract including a small bowel series showed no abnormalities. A cystourethrogram was likewise unremarkable. Repeated cultures of the wound after about two weeks of oral aureomycin revealed Bacillus fusiformis, Proteus vulgaris, Clostridium welchii, Aerobacter aerogenes, and no fungi.

Six weeks after discharge he again noted an area of inflammation at the same site on the abdominal wall. Aureomycin was administered again, and this area once more localized and drained. The drainage became serous, and a persistent tract formed. At the time of the patient's second admission (June 12, 1951), he was ambulatory and feeling well. Physical examination revealed a sinus tract in the right lower quadrant, the mouth of which was surrounded by granulation tissue. There was slight tenderness over the umbilicus but none in the region of the tract. No rebound tenderness could be elicited in any portion of the abdomen.

Following admission oral aureomycin was continued with little change in the tract. He developed an upper respiratory infection, and plans to operate were postponed. Prior to discharge the patient was given charcoal by mouth, and this appeared in the tract within twenty-four hours after administration. In addition, Lipiodol injected into the tract entered what was interpreted to be small intestine (Fig. 2).

The patient was readmitted in June, 1951, with the fistula still present but otherwise in good health.

At operation the abdomen was entered through a right rectus incision. Upon opening the peritoneal cavity filmy adhesions were encountered. The cecum and appendix were normal. Arising from the antimesenteric border of the ileum at 50 cm. from the ileocecal valve was a diverticulum, 10 cm. in length with its own mesentery. Attached to the distal end of the diverticulum was a mass of indurated tissue which extended to the anterior abdominal wall in the region of the opening of the fistula and also extended more medially to a point on the anterior abdominal wall directly beneath the umbilicus. The diverticulum was transected at its base. The opening in the ileum was closed transversely with interrupted sutures of number 3-zero silk. Dissection was then carried distally to the point of opening of the fistula which was excised along with some of the surrounding anterior abdominal wall. Dissection was then carried medially and the umbilicus excised in like manner. The abdominal wound was closed with silver wire stay sutures through all layers of the abdominal wall and interrupted sutures of number 1-zero chromic catgut in the peritoneal and fascial layers. The subcutaneous tissue and skin were not sutured.

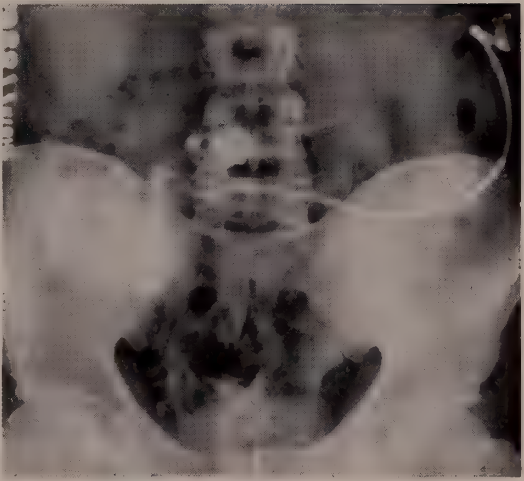

FIG. 2. Roentgen film of abdomen showing contrast medium entering small intestine following injection through a catheter in the fistula.

The specimen was described as a typical Meckel's diverticulum, the walls of which showed no inflammation or heterotopic tissue. Distal to the diverticulum there was fibrous tissue densely infiltrated with plasma cells. A section taken from immediately below the umbilicus showed many plasma cells and lymphocytes.

The patient's postoperative course was benign save for transitory ileus which passed with the aid of enemata. He was afebrile after his fourth postoperative day. He was discharged on the twentieth day after operation with the wound almost healed.

Eighteen months later he reported no abdominal pain or difficulty at his operative site, and examination revealed no weakness of the abdominal scars and no masses or tenderness.

The occurrence of an enterocutaneous fistula as a complication of Meckel's diverticulum is rare.

This complication occurs most commonly in children as noted by Kittle *et al.*,[2] and the usual cause is a patent omphalomesenteric duct. Merritt *et al.*[12] described a case in which an intra-abdominal abscess of undetermined etiology was incised and drained. Postoperatively the patient developed a persistent, draining tract, which proved to arise from a Meckel's diverticulum that was subsequently removed. Morlock and Bennett[5] reported a case of a seventy-five-year-old female who, while under observation, developed an inflammatory process of her umbilicus. Over a three-day period this spontaneously opened as a fecal fistula which at necropsy proved to be secondary to a persistent omphalomesenteric duct. Seeley *et al.*[13] described the development in a twenty-six-year-old male of a fecal fistula at the umbilicus, found at operation to arise from Meckel's diverticulum.

These cases and the one herein reported serve to reinforce the opinion generally held that a Meckel's diverticulum is a potentially dangerous structure, and age is no warranty against its complications. The unique position of this fistula and its history suggest that abscesses of the abdominal wall may be associated with a Meckel's diverticulum.

Case 2.—A three-and-one-half-month-old infant was admitted to the New York Hospital in 1942 with a history of rectal bleeding. There had been a normal delivery, growth, and development. On the day before admission the child passed two stools, each of which contained bright red blood. Physical examination revealed only the presence of bright red blood in the rectum. A proctoscopic examination was attempted soon after admission but had to be abandoned because of much stool and blood in the rectum. Plain x-ray film of the abdomen showed no abnormality. The hemoglobin on admission was 10 Gm., and the patient was therefore transfused with 110 cc. of whole blood. Under anesthesia he was given a cleansing enema and proctoscoped. No intrinsic lesion was evident, but blood was seen to come from above the depth of the scope.

The patient was explored through a right rectus incision. On entering the abdomen a small antimesenteric diverticulum was noted, arising about 17 cm. above the ileocecal valve. This did not appear to be pathologic on gross inspection, but since no other source of intestinal bleeding could be determined, this was excised with a longitudinally placed elliptic incision in the wall of the ileum. The defect in the ileum was closed transversely. A small ulcer was found at the base of the diverticulum.

On microscopic examination the mucosa at the proximal end resembled that of normal small intestine. More distally, however, a delineated area of typical gastric mucosa was seen, and beyond this there was a small patch of pancreatic tissue with typical acini and islet cells.

The infant passed no more blood per rectum after the first postoperative day. Eighteen months after operation he was in good health, undergoing normal growth and development, and with no symptoms referable to his gastrointestinal tract.

This case is of interest because of the unusual finding of both gastric and pancreatic tissue in the diverticulum. Only eight similar cases have been recorded. Heterotopia is generally considered to be quite common in Meckel's diverticulum with an incidence in various series of 15 to 20 per cent. When cases with symptoms are considered, this incidence rises to 60 or 70 per cent. Saltzer in 1904 first described gastric heterotopia, and Schaetz first drew the analogy of ulcers in diverticula containing gastric tissue to those occurring higher up in the gastrointestinal tract. He is also credited by Moses[1] as being the first to demonstrate free and combined acid in a diverticulum's secretions. That the secretions also contained pepsin was shown by Dragstedt *et al.*[14] Bigelow *et al.*[15] in 1950 reported a case of combined gastric and pancreatic heterotopia in the same diverticulum and found only seven other cases reported in which this situation existed. Barbosa, Dockerty, and Waugh[16] demonstrated histologic evidence of pancreatic function, i.e., secretory granules, in 76 per cent of the cases with pancreatic heterotopic tissue they reported. Islet cells were present in 39 per cent of the same series.

Summary and Conclusions

The experience with 100 cases of Meckel's diverticulum occurring during the years 1932 to 1952 at a general hospital is reported.

Complications (including cases with heterotopic tissue in the diverticulum) occurred in 34 per cent, an incidence so high that, unless strong contraindications are present, excision is recommended whenever Meckel's diverticulum is encountered.

A case of an abdominal wall abscess arising secondary to Meckel's diverticulum is described, and a case with both gastric and pancreatic tissue present in the same diverticulum is presented.

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Saphenous Vein Stripping Under Femoral Nerve Block Anesthesia

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It is the purpose of this paper to present a method of anesthesia for the stripping operation for varicose veins. Prolonged general or spinal anesthesia, which is necessary for the stripping itself, is often contraindicated or undesirable, especially in the older age group. For this reason less extensive and less satisfactory procedures are often performed under local anesthesia. These factors have prompted us to seek a method of regional anesthesia with which to perform as extensive surgery as may be desired. Femoral nerve block anesthesia has been found to be especially well suited to this type of operation because of the accessibility of the nerve to the field of the high ligation.

In various reports from the literature, spinal or general anesthesia was used in almost all cases.[1-6] Emerson and Muller[7] stated that they used local infiltration of procaine for the incisions and were then able to strip without other anesthesia or heavy narcosis. We have been unable to duplicate this without severe pain occurring during the stripping and especially when tearing off tributaries. Harkins and Schug[8] in 1942 used local anesthesia for their incisions but infiltrated the course of the vein with procaine to facilitate stripping. We have found this to be successful for short segments supplementally but tedious and not completely efficient for complete stripping. Labat[9] in his monograph on regional anesthesia mentions the use of femoral nerve block for the Mayo operation.

Anatomy

The anterior femoral cutaneous nerve and the saphenous nerve are the sensory branches of the femoral nerve carrying the major innervation of the tissues overlying the distribution of the saphenous vein in its course upward along the medial aspect of the leg from its origin anterior to the medial malleolus to its entrance into the femoral vein at the fossa ovalis.[10,11] Along this course sensation is overlapped through branches of the genitofemoral and ilioinguinal nerves in the groin below Poupart's ligament, occasionally by branches of the obturator nerve along the medial aspect of the lower thigh and upper leg, by the superficial peroneal nerve anteriorly near the ankle, the sural nerve posteriorly at the lower aspect of the leg, and by the posterior femoral cutaneous nerve near the posteromedial aspect of the knee. Irrespective of these overlap areas it has been our experience that complete block of the femoral nerve almost always gives adequate anesthesia for incisions and stripping along the course of the vein.

The femoral nerve enters the thigh by emerging beneath the inguinal ligament at a point approximately 1 to 1.5 cm. lateral to the femoral artery in the femoral sheath. It lies in the groove between the iliacus and psoas major muscles and almost immediately divides into its terminal branches. Its largest cutaneous branch, the saphenous nerve, approaches the femoral artery and lies in front of it in the adductor canal. At the termination of the canal it leaves the artery, pierces the fascia and becomes subcutaneous between the tendons of the sartorius and gracilis muscles, and descends along the medial aspect of the leg in close proximity to the greater saphenous vein.

It has been found that subcutaneous infiltration of a local anesthetic agent below the inguinal ligament with concomitant femoral nerve block at this level has given adequate anesthesia for ligation and stripping of the greater saphenous vein.[12,13]

Technic

Premedication.—All patients are given a barbiturate preoperatively. Half of our series received morphine and atropine one hour before surgery while the other half did not. In some of the latter group morphine had to be administered during surgery because of a low pain threshold.

Anesthetic Agents.—Procaine 1 per cent with epinephrine 1:100,000 was used for local infiltration and procaine 2 per cent with epinephrine for the femoral nerve block except in cases where epinephrine was medically contraindicated.

Surgery.—The limb was prepared for vein ligation in the usual manner. The skin and subcutaneous tissue was infiltrated over the fossa ovalis. Deeper subcutaneous infiltration should extend to the inguinal ligament medially and laterally. Three cubic centimeters of solution were deposited below the deep fascia. A high ligation was then performed in the usual manner. When this is accomplished, the femoral vein should be well exposed at the fossa and the artery easily palpated lateral to it. With the index finger on the artery as a guide the needle was directed either percutaneously or directly through the subcutaneous tissue to the region approximately 1 to 1.5 cm. lateral to the artery and cephalad under the inguinal ligament. By probing with the needle in this area an attempt was made to elicit paresthesia, the pain usually radiating to the lower thigh, knee, or medial aspect of the leg. This could usually be elicited with several attempts, and when it was obtained, 5 to 10 cc. of solution was deposited at this point after preliminary aspiration. When paresthesia could not be obtained, this same area was flooded with 10 to 20 cc. of solution in a fanlike fashion. It must be remembered that at this level the femoral nerve has split into its branches, and the structure is brushlike rather than a single nerve. The patient was then tested for cutaneous sensitivity at various levels along the saphenous vein. Five to ten minutes may elapse before anesthesia is complete and the operation continued; therefore, it is recommended that this infiltration be done before the high ligation is completed so that time will not be lost awaiting the onset of anesthesia. The vein may now be stripped down to the medial malleolus in the usual fashion. Occasionally, supplemental local infiltration must be used for skin incisions close to the medial malleolus because of the overlap innervation from the sural and superficial peroneal nerves. This occurred in 25 per cent of our cases.

Clinical Material

Our last 19 cases were managed by the above technic. Of these there were 13 unilateral and six bilateral high ligations and stripping, all performed at one session, a total of 25 extremities with high ligation and stripping. The ages of this group ranged from twenty-one to sixty-six; there were nine males and ten females. Of the 25 extremities 20 were primary procedures, and five were recurrent cases of high or multiple ligations. All of these cases were made ambulatory the day of operation after the effects of the anesthesia had worn off. It is important to be sure that quadriceps function has returned before ambulation is attempted. There were no complications in this group referable to the type of anesthesia used except for one mild procaine reaction treated with Sodium Amytal. In the patients hospitalized for vein ligation and stripping alone the hospital stay varied from one to four days after surgery unless the stay was prolonged by a complication unrelated to the anesthesia. In many of the above cases hospitalization could have been terminated on the first or second day postoperatively.

Comment

Femoral nerve block is suitable for vein stripping. It is a segmental type of anesthesia well localized to the area requiring surgery. The occasional incompleteness of the skin anesthesia at the lower portion of the leg and ankle is easily overcome by the use of local infiltration. When paresthesia was obtained in the course of performing the block, anesthesia was always more reliable and complete than when it could not be elicited. Surgery is easily performed without pain, the patient being aware of only a slight tugging or pulling as the vein is stripped. These minor disadvantages are far outweighed by the advantages of being able to perform stripping without the necessity of using spinal or general anesthesia for a period of one to three hours. Elderly and poor risk patients are particularly good candidates for this method. It is valuable in instances where qualified anesthetists are not available. In addition, there is the added advantage of being able to ambulate patients within a few hours after the completion of the procedure, which we feel helps in the prevention of stasis thrombosis. Suitable candidates can be discharged the same day, thus shortening the hospital stay.

The nerve block is easily performed and the technic readily mastered. The only complication noted was apprehension and restlessness in one patient as previously mentioned. Both private and ward cases have been included in this series. The occasional high-strung, apprehensive individual will be encountered who will not tolerate incision under local infiltration. These candidates are unsuitable for any form of regional anesthesia.

Summary

1. The application of femoral nerve block anesthesia for varicose vein stripping is presented.

2. The regional anatomy is described, and the particular suitability of the block, because of the accessibility of the femoral nerve to the field of high ligation, is pointed out.

3. The technic is outlined in detail.

4. Results of 25 extremities stripped of varicosities by this method are discussed.

5. Femoral nerve block anesthesia is particularly suitable for elderly or poor risk patients.

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"The young physician starts life with twenty drugs for each disease and the old physician ends life with one drug for twenty diseases."—Dr. William Osler

Editor's Note: The following account of the development of podiatry from folk medicine to its present status is noteworthy not only as a contribution to history, but also because it reveals the life and aspirations of a prodigious personality. Dr. Lewi's mental vigor is a pleasant reminder that life's later years can be productive.

Medicine and Podiatry in New York State

A First-Hand History

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In my student days at the Albany Medical College, my father, a physician, a sufferer from intermittent attacks of metatarsalgia, spoke deprecatingly of the failure of medical schools and of medical societies to establish instruction in the treatment of so-called "minor foot ills." "Some day you may be able to correct this situation," was his comment.

In the middle eighties of the last century I became secretary of the Committee on Legislation of the New York State Medical Society. Living in Albany at the time and until 1892, during all of which period I served, it became my duty to pilot all legislation proposed by the Society through many ramifications to adoption and, on the other hand, to thwart the many attempts at law-making contrary to the best interests of the public and, naturally, opposed by our State Society.

At the time medical empiricism was rampant in the State. In the membership of the Legislature there was a sizable group known as the "Black Horse Calvary" whose voice and vote were vulnerable to influences other than conditions which bespoke public welfare. There were all sorts of individuals and cults preying on the public in the guise of furthering public welfare, such as the vegetarians, the eclectics, the osteopaths, the hydropaths, the naturopaths, the corn-cutters, etc.

Great difficulty was experienced in formulating some procedure concerning the chiropodists. They were nondescripts, carrying on their craft without legal authority, but if they were barred from performing their tasks, who would care for the so-called minor foot afflictions of the public? My father's words came back to me. I proposed, and it was agreed, that I should visit the deans of the various medical colleges in this State and strive to have them appoint a lecturer to teach their students the care and treatment of minor foot ills. Each of those interviewed negatived the proposal. Their total objections can be summarized as follows: "It is too minor a subject thus to dignify it. If we taught it, who would practice it? We haven't the time to give to it in the face of our manifold tasks in teaching the conditions on which life or death depend. Whom could we get to teach it? We haven't funds enough to waste on such teaching services." All agreed, however, that the suggestion had merit. Dr. Egbert La Fevre, the dean of New York University Medical College, expressed his sympathy with the proposal, opened one of the drawers of his desk, took out a leathern pouch, opened up its contents, and displayed a set of chiropody instruments with the words: "A chiropodist gave me this kit, and I use it. If a patient of mine needs foot care, he gets it from me, and I believe that I am in a class by myself in thus doing. Do you know of another?" Thus the situation remained unchanged.

In 1892 I moved to New York City, largely induced to take that step by reason of the suggestion of Mr. James Russell Parsons, at the time secretary of the New York State Board of Regents, who realized that nine tenths of my work as secretary of the State Board of Medical Examiners and as secretary of the Committee on Legislation was in New York City.

Whenever time permitted, I visited the various libraries seeking printed matter relating to chiropody written by chiropodists, as well as all medical contributions bearing upon foot conditions. In the former category little came to light from the pens of these practitioners; in the latter group very little of it had a bearing upon the minor foot ills. Later on, I associated myself with a downtown clinic on the west side and helped in treating the foot cases. During this period I visited the various hospital clinics to learn all that was available along the lines of minor foot ills and their treatment. Through my official position, I had ready access to all existing facilities of that nature. As a result of this protracted survey, I was amazed at the barrenness of the literature on the subject and the meager attention and lack of helpfulness accorded these foot sufferers. True, in the clinics the patients predominantly were old; their lesions were chronic, and most of the treatments were of the placebo order.

The idea came to mind that if I undertook to specialize in foot care and made a success of it, such a specialty in medicine might give promise of being established. I felt that medicine had been, for all the years, recreant to itself and to the public in failing to provide scientific teaching to its disciples whereby the public could be assured of proper treatment of its foot ills, no matter how minor.

When I came to live in New York, Dr. Abraham Jacobi, probably by reason of his friendship with my father (they were both "forty-eighters") asked me to consider his home and his table as open to me. (He had come to Albany to be present at my graduation in medicine and at that time wanted me to intern at Mount Sinai Hospital and then become his assistant. I preferred to do graduate work in Europe.) Frequently, I visited him and now and again dined with him *en famille.* On one of these visits I asked his opinion as to my taking up foot care as a specialty. He heartily agreed and volunteered his help. On 85th Street between Broadway and West End Avenue, I began this new departure, having a few days previously written personal letters bearing upon the innovation to a total of about fifty personal medical friends. Through advertising, I engaged the services of a chiropodist (a foreigner) who proved to be so unskilled that I discharged him on the third day after engaging him and thereafter took on all of the work. Promptly, patients arrived, and on the close of the forty-eighth day of this undertaking, my records showed that I had treated 20 patients.

With the following morning's mail there came a letter from the Commissioner of Education, Andrew S. Draper, containing an order to the effect that from a given (near) date, all heads of Departments were to have their offices in the New York State Education Building in Albany. Here was indeed a vexatious situation. I had a lease on the house (four floors and basement) for two years. If I went to Albany, that lease would be my obligation. If I failed to comply, I would have to resign. I felt as though I were still needed to round out the duties of my office, held since it was inaugurated by legislation, the latter largely fashioned by me. My wife was, as always, ready to do what was best for my work and my ambitions. Again I sought Dr. Jacobi's advice. He took the position that civic duties were superior to those of a personal nature. If I felt that I was still needed to serve as secretary of the State Board of Medical Examiners (and he thought that I was needed), I owed it to my profession, as well as to the State, to cease my professional labors in New York and obey the dictum of Mr. Draper. And so, back to Albany.

Now comes the paradox. Within a few months the Commissioner reversed his decision. Promptly I was offered a position as medical director of a life insurance company which I accepted and again became a resident of New York City. We had sold all our furniture at a sacrifice, and although the house was there, unoccupied, and the lease was still active, to refurnish the house would have involved a cost beyond my means. We rented a modest apartment. Time moved apace, finding me a busy man striving to carry on my official educational work and my medical insurance tasks and not averse to meeting occasional calls upon me for professional service.

One day in the early part of 1912, I was waited on by Mr. George Erff, a chiropodist and manager of a bath house, located on a street off Broadway a few blocks from my office (St. James Building, Broadway and 26th Street). He said that a Dr. Foote, an orthopedic surgeon, had advised him to consult me with reference to legislation that the chiropodists were seeking because he had been told I had great experience in framing legislation for the medical profession, dentistry, and nursing. He further stated that he was chairman of a committee of the Pedic Society who wanted my help. I agreed to this request, appointing a night later in the week for them to call at my residence at 401 West End Avenue. Those who came were George Erff, Eliott Johnson, Alfred Joseph, and a Mr. Marx, their counsel. They wanted to have the legal right to organize a school that would be authorized to issue diplomas. The trustees of the school were to be largely members of political groups. Thus their lawyer on their behalf introduced the subject.

Immediately, I told them that they had come to the wrong person for help. They wanted to know my objections to what Mr. Marx had outlined as their program, whereupon I made the following statement: "I will be glad to help you if you conform to the following: All efforts at legislation must be based on the premise that the Board of Regents of the University of the State of New York, as representative of the educational interests of the State, are primarily to be consulted as to the wisdom and practicability of what is being proposed. Politics and politicians must not figure in the picture. The further purpose must be that the newly planned educational features must be carried into effect with science as the background and empiricism to be cast out. There must be no profit involved for anyone to be associated with any movement, excepting that salaries for services in connection with the educational program are to be properly paid to those rendering them." Mr. Marx protested, saying that unless power and patronage were utilized, the politicians would kill any bill that might be prepared. I said, "Gentlemen, if that is your conviction, you will have to excuse me from participation. If, however, you want my help on the basis stated by me, I will gladly fight for the legislation that I believe is fitting."

They asked if they might discuss the issue in privacy, whereupon I left the room. In less than five minutes they returned with the verdict that they were unanimous in the opinion that the direction of the legislation and all else being sought should be left solely to me. I requested Mr. Erff to call at my office the following day at the noon hour when I would present him with a typewritten draft of my conception of what a fair bill for their purposes should contain. A toast was proposed for the success of the movement and was drunk, standing, from glasses containing Rhine wine.

After the group had departed, about 11 P.M., I went to a desk, and on my social stationery drew up what I conceived would be an appropriate measure of legislation for this new departure. I confess to having become intrigued with this first real opportunity to launch an undertaking in keeping with my father's long-ago expressed hope.

My first act on reaching my office was to have my secretary type this proposed bill, and when Mr. Erff called, I handed it to him. Upon his inquiry, "What am I to do with it?", he was told to take it to Albany, hand it to Dr. Augustus S. Downing, Associate Commissioner for Professional Education, with the statement that I had fashioned it and believed it to be meritorious. Mr. Erff followed instructions. Shortly thereafter I received an official typewritten letter from Dr. Downing, at the bottom of which there were written words to this effect: "Haven't you enough to do in connection with your affairs to keep you from devoting your time to a group of corn-cutters?" From these lines I promptly and correctly concluded that Dr. Downing was opposed to the proposed legislation.

In those days, I traveled to Albany every week end to attend to official business in the Department and to visit my family. As soon as I reached Albany, I went to the Department, transacted such business as was necessary, and by telephone (he was in conference and could not be disturbed) asked for a chat with Dr. Downing. We arranged to meet at his office on the next day (Sunday) at 2 P.M. For four hours we debated the pros and cons of what was contemplated. He finally succumbed, and the argument that caused him to yield was that the New York State Education Department had been the constructive force in practically every innovation in education, particularly so in medicine. "If we don't take up the cudgels for what is contemplated as to foot care, some of the younger states will surely do so, and we will become followers instead of as of now continuing as leaders."

Once agreed to this course, Dr. Downing made contact with the upstate Regents and I with those in and about Greater New York. Every one of the Regents agreed to the proposed legislation. Dr. Downing placed the bill in the hands of a leader in each of the two houses; we won over the legislative committee of the medical society, the bill promptly passed both houses and was signed by the then Governor (Dix), and its terms became effective January 1, 1913.

Now came trouble to the leaders of the Chiropody Society. They were members of a business corporation that had launched "The New York School of Chiropody," from which they were deriving small dividends. However, it was a business venture, and under the terms of the new law that could not be tolerated. As secretary of the State Board of Medical Examiners, it became my duty to inspect this and other so-called schools and colleges and report my findings and recommendations to the Regents. All of these units, excepting the above college, were ordered closed. When told that similar action towards their college was in the offing, they pleaded for time to purge themselves of their commercial taint, and their request was granted, the latitude accorded them to expire in eighteen months.

My attitude in thus recommending was conveyed to the Regents about as follows: I met these men on many occasions. I believe them to be thoroughly sincere in their desire to elevate their calling. Each of them has agreed to cooperate to the end that as soon as possible their stock holdings will be eliminated with them agreeing to sustain any concomitant loss. They agreed that the former procedure whereby their practitioners were licensed was not only unworthy and incompetent but ridiculous. The public, so long deprived of scientific service in connection with its minor foot ills, would at last come into a righteous and scientific field of endeavor, and the public, too, would profit.

My recommendation was accepted, provided I would oversee the sincerity of their action in meeting the terms of the agreement. At once, I made myself familiar with the finances of this unit, advising them as to procedures to redeem the stock holdings with a view to early freedom from commercialism. They proved not only willing but anxious to wipe off the slate. They asked me to select some medical doctor to lead them on their new journey. I sought to oblige them, but familiar as I was at the time with the rank and file of the medical profession, those whom I considered fitted for the task failed to be interested. Then the original committee, exclusive of their counsel, called on me. The gist of the talk with me took the form of an inquiry, as follows: "If we agree upon a physician as an executive, will you help us to secure his services?" I readily promised. The following day, Mr. Erff telephoned for an interview which was granted. He came and told me they had agreed upon the physician and exacted that I redeem my promise to aid them in securing his services. "You are the man," he said. Laughingly I told him of my commitments of an official nature, and although I felt that I would love to be their Moses, I told him "No." Then began a series of importunings by mail and by personal appeals. Weeks went by during which I was urged to cut loose from immediate labors to cast my lot with these unselfish pioneers. I called a meeting of the State Board of Medical Examiners, placed the subject in mind before them, and asked their opinion. With one exception they voted no. George R. Fowler was the exception. He thought that I should accept the call, arguing that if I did, the medical profession would feel at ease, whereas if another of their choosing was selected, the medical profession would probably be faced with the fight against another cult. He was outvoted.

I had reached the point where I was really eager to take on this new task. Again, I consulted Dr. Jacobi. He was firm in the opinion I owed it to my profession, which had so often favored me, to lead these people who in time would be able to accord a character of practice which the medical profession had denied to the public. He said that, now, under your leadership as a medical man, this much-needed medical service will be made available. Inasmuch as this was practically my own viewpoint, I was greatly cheered by his attitude. Even so, I still retained some qualms. Within the next few days I interviewed Drs. Walsh, Stewart, Van der Veer, Theobold Smith, Will Park, Campbell, Keyes, Morris, Arthur Booth, and others of high standing in the profession. All of them not only thought that I should accept but agreed to aid me in lecturing to students of the "college."

The decision was made after the following occurrence. Mrs. Joseph Bryant knew that I enjoyed her fish luncheons. One Friday morning I accepted her invitation to lunch at their apartment on Central Park South. Dr. Bryant was a sufferer from arthritis and walked aided by a cane. After the luncheon, the hostess having left the room, Dr. Bryant and I began to chat. Seated in a high-backed thronelike chair, he asked me to tell him about the rumors that I was about to resign my State "job" for the purpose of building chiropody into a scientific specialty. I told him the story in detail. When I had finished, he rose from the impressive chair, pointed his cane at me, and said, "Lewi, damn it, you've got to take on that job. You owe it to medicine to lead it straight; otherwise it might go crooked!"

The next day I notified Mr. Erff of my decision to accept their leadership. That same day I sent my resignation to the Regents as of September 1, 1912. Dr. Downing asked me to withhold it until later on, fearing that the succession would, if known that early, lead to a political football contest. I agreed and later on, twice postponed, the resignation was made effective as of December 31, 1912, with the understanding that I was to be permitted to devote as much of the interim as necessary to develop plans to carry on in this newer field.

With the assistance of my good friend Almuth Vandiver, of the firm of O'Gorman, Battle, and Vandiver, counsel of the New York County Medical Society, a contract was drawn which gave me absolute power in any and all aspects of the undertaking to direct and to contract. Without demur the contract was signed, and, incidentally, that same contract was ratified when the First Institute of Podiatry was merged with the Long Island University as its College of Podiatry.

I was to receive a salary of $6,000 per year. No part of this became available since the expenses contingent upon launching the craft and setting it in motion with an adequate crew (faculty and employes) absorbed all available funds. This lasted for a year and a half. Devoid of all other income, having resigned salary-paying positions, and without any reserve, I accepted a post with an insurance company (medical director) on half time and later on one with the Metz Laboratories. Then came hectic times. From 9 A.M. until noon I served on my medical job and then repaired to the college, miles away, where I continued on regularly until midnight, or even later.

Within three years our enterprise was on a paying basis. This was made possible through the self-sacrifices of the doctors on the faculty, all of whom served without pay, and the chiropodists of course who did likewise, excepting those who became full-time teachers.

The history of the educational and professional uplift of this unit is an open book. With Dr. Augustus S. Downing, the then Associate Commissioner for Professional Education, we mapped out a program of procedure contemplating a twenty-five-year period. That schedule, as it related to educational prerequisites, was fulfilled within the limitations prescribed and had as its climax the following: a minimum of two years of college work, including biology, physics, inorganic chemistry, organic chemistry (the like prerequisites for medicine) with the doctorate degree to graduates. The road to these achievements was strewn with obstacles, and it would need a volume of large proportions to relate them fittingly. The loyal support of the faculty, the zeal of the major numbers of the practicing podiatrists, and the self-sacrificing services of the members of the clinic staff—all aided in what has been accomplished.

As the initiators of the project to place the care of the human foot, in connection with its so-called minor ills, on a scientific and professional basis, we can well feel proud of our achievements, now being followed all over the English-speaking world. Whereas, at our anabasis, there were but a handful of such practitioners without knowledge of cause and effect, today in the United States there are 7,000 men and women professionally groomed as specialists in foot care. They are organized nationally, state-wise, and by districts. They have their own literature (textbooks, magazines, and scientific societies), have created their own specific instruments, implements, and modalities, and have even developed medicinal agents for their special use. Their approved colleges are the charges of a Council on Education, appointed by their national organization. The yield has been plenteous, has become a national need, and is growing by leaps and bounds, always regulated by scientific leadership and research.

Thus, this youngest offshoot of the healing art has grown to stature and bespeaks for itself the acclaim that is vouchsafed those who achieve.

NOTE: The following letter from Dr. Jacobi, dated 1917, is of interest:

July 14, 1917

My Dear Dr. Lewi:

My congratulations are due you on your fabulous success and upon your results, results obtained yourself and through your own work. I shall be glad to follow your farther and final labors.

You deserve much credit. If you had the misfortune of being a Prussian, you would be punished with a red eagle. You are an American; you will be blessed with the appreciation of your peers such as I am.

Sincerely yours,
A. JACOBI

SPECIAL ARTICLES

Design for Tomorrow

Responsibilities and Opportunities of the Medical Center in the Next Twenty-Five Years

HERMAN E. HILLEBOE, M.D., ALBANY, NEW YORK

(*Commissioner, New York State Department of Health*)

It is our task here to attempt a definition of the future opportunities and responsibilities of a great medical center. A precise prediction is not possible, of course, because the application of science to an understanding of disease has so brief a history, but the trends and usages of scientific discoveries permit us some foresights of medical destinies.

To stress the relative infancy of medicine as a science, I need only to remind you that, merely one hundred and fifty years ago, bloodletting by venesection, cupping, or leeches was a common practice. The theory of humors and vapors has not been long discarded. With the formulation of the germ theory of disease and the introduction of antiseptic methods late in the nineteenth century, the medical profession after stubborn resistance came to perceive that the Age of Magic had at long last achieved its terminal episode. The development and use of immunizing agents, antitoxins, and other means of thwarting disease; the discovery and the mass use of antibiotics, hormonal substances, and hundreds of other benefactions of the laboratory; the productive wedding of mathematics and medicine and its result in epidemiologic facts and implications—all of these and many more scientific eventualities seem to have happened only yesterday. Yes, with the increase of knowledge through objective experimentation in the first half of the twentieth century, medicine as an empiric art went through a difficult transition into scientific medicine.

The application of science to medicine in the last fifty years has done more than ease suffering and reduce the rate of dying. It has profoundly affected the age distribution and the total number of our fellow men. The reduction in communicable diseases among children and the improvement of the sanitary conditions of the human environment have markedly changed the age structure and length of life of the population. As public health problems, acute communicable diseases of childhood are speedily retreating before the advance of those chronic diseases which are a consequence of the debilitations of the aging process.

The causes of these major chronic ailments, such as heart disease, cancer, cerebral hemorrhage, and diabetes, are not known. We cannot, therefore, cure them except in that minority group amenable to surgery. Consequently, we bear the unhappy burden of treating, not curing, increasing numbers of aging persons with chronic diseases. This means that a relative increase of older people in our population, an absolute increase in our total population, and a medical proficiency in prolonging the lives of the aged will increase the demand for continuing care and clinical treatment. In other words, the greater the proportion of aged people in our population, the higher the incidence of the chronic diseases. The higher the incidence of chronic diseases, the heavier will be the cost of medical care to society in terms of numbers of patients alone. Add to this the increased costs of anesthesia, x-ray therapy, surgical procedures, laboratory tests, and new synthetic chemical compounds, and you can easily see that the economic burden imposed on society by the chronic diseases may soon become insupportable.

Diagnostic refinement, the proliferation of laboratory controls, the complexities of hospital services, have so inflated the price of being ill that both official and private appropriating bodies are confused and distressed. Meanwhile, the public is torn between a need for help in times of trial and a a deeply imbedded anxiety about medical costs. Therefore, I am compelled to say that the plans of such a medical center as this, for the next twenty-five years, must include an assessment of the economic inequities that have been imposed on medical care.

Medical science not only enhances the public health, but it also renders obsolete many traditional practices. This is all to the good, but a great medical teaching center must do more. It must expose medical obsolescence, irrational practices, and every deviation from sound professional ethics. It must train future physicians in the encompassing disciplines of scientific medicine and also instill in them

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an uncompromising professional morality. There is room for improvement in the medical profession's public and interpersonal relations.

Our primary purpose is to teach future physicians this fundamental principle: preventive and therapeutic services must be continuous over the total span of a person's life. The physician who practices preventive medicine on every able or ailing person who comes to him for advice adds to the total health of the community. He cannot seek out on a mass basis, as does his public health colleague, those multitudes of persons who have asymptomatic disease. If he publicizes his desire to give preventive services on a community-wide basis, he risks professional censure. But he can do a better job of teaching his patients sound principles of physical, mental, and public health.

For instance, the social and economic problems of elderly people who have a variety of chronic diseases are as demanding of considered judgment and practical solution as are the vagaries and enigmas of the disease themselves. In addition to this responsibility, which requires at once a high degree of insight and a sure sense of practicability, the physician must seek to become more than an anatomic and physiologic technician. He must use the tools of the sociologist and the psychologist as he practices prevention of disorders and diseases of the mind and the body.

The assertion leads logically to a new challenge that cannot be denied. A great medical center must accept as an integral factor of its curriculum more extensive teaching of psychosomatic medicine. The psychiatrist has posted no forbidding signs against the entry of the general practitioner into this thorny field. Indeed, the physician who is designed for tomorrow should be an examiner of the spirit as well as of the flesh.

A large body of evidence is accumulating to support the validity of a psychosomatic specificity for such diseases as asthma, ulcerative colitis, and peptic ulcer. Perhaps in twenty-five years we can advance so far in the group therapy of psychosomatoses that patients may be enabled to help one another in the relief of their internal abnormalities. Only this last summer in a psychosomatic clinic in Amsterdam, Holland, I observed seven asthmatics successfully aiding one another in group therapy under the expert guidance of an internist.

The medical center of the future has the opportunity and the responsibility to bring together into closer working relationships practicing physicians, medical schools, hospitals, and health departments. The medical center can provide the knowledge and leadership to accomplish such a fortunate integration of interdependent professional groups.

Community health in turn depends upon the adequacy of these unified disciplines. Under such a consolidation of principles, the medical faculty, the hospital staff, the general practitioner, and the health officer derive lasting benefits in terms of professional effectiveness; as a result the community experiences higher standards of medical care, a more compassionate form of medical practice, and the more frequent release of stricken human beings from the frustrations and hopelessness of chronic illness.

It is clear that chronic diseases with their attendant disability and prohibitive cost offer the medical profession its greatest future challenge and opportunity. With a few notable exceptions like tuberculosis and some forms of cancer, we lack screening methods for the early discovery of chronic abnormalities. Early detection of disease before severe disabilities occur or metastases begin enables the clinician to achieve the best results at smallest cost. Therefore, it should be a fundamental enterprise of a medical center to develop a host of new case-finding skills and tools.

The medical center is uniquely fitted to carry on research from which will emerge new methods for the mass detection of both physical and psychic disorders. Health departments stand ready to apply these new mass methods as soon as they are eligible for field trial. Only by the application of screening technics on a community-wide basis will the general practitioner and specialist be given the opportunity to treat chronic diseases on a scale that will measurably modify their perseverance, severity, and lethality.

To teach social and preventive medicine, to broaden the physician's outlook toward the economic and psychosomatic problems of the patient, to bring together in working relationship all the professional groups concerned with the health of the community, to eliminate medical obsolescence in teaching and in practice, to take the leadership in research in mass methods of detection of chronic disease—these are the challenges to be met by the great medical center of the future.

This, then, is the design for tomorrow in medical teaching, research, and service that I suggest for the Columbia-Presbyterian Medical Center. Its realization demands intellectual curiosity, devotion, and a rigorous discipline of integrated effort. We have no choice but to scrutinize our professional motives and their adequacy and pertinency in a changing world. The potency of this design will free us from the strictures of yesterday and will provide that lasting satisfaction which comes to the true physician from a sympathetic and scientific exploration of the human body and mind.

United Medical Service Inc.—"The Doctors' Plan"

Part VII—Physicians' Relations

CHAS. GORDON HEYD, M.D., NEW YORK CITY

(*Chairman, Board of Directors, United Medical Service, Inc.*)

In concluding this series of articles on "United Medical Service—The Doctors' Plan," I have reserved for the final installment a brief summary of "physicians' relations" as they concern United Medical Service.

According to the *Medical Directory of New York State*, 1951 edition, there were 28,380 duly licensed physicians in New York State. These physicians were distributed as follows: Manhattan 8,643, Bronx 1,984, Brooklyn 4,490, Queens 2,393, and Richmond 251. These figures indicate that 17,761 physicians are in the five boroughs of Greater New York and the remaining 10,619 are distributed throughout the State of New York.

It is apparent that the major portion of the services rendered by UMS is provided by the physicians of the five counties of the metropolitan area. These are significant figures and indicate that the conditions that apply to medical services in the five counties of New York are vastly different from the conditions that apply to some of the upstate counties.

The participating physician in United Medical Service must be a duly licensed practitioner of medicine who, over his signature, has agreed to the following: "I hereby agree to render service under terms of the contracts to such United Medical Service, Inc. subscribers *as I accept for treatment*. It is understood that this agreement is subject to termination by either party upon receipt of written notice to such effect by the other party." It is obvious from this agreement that there is a "meeting of the minds" between an individual physician and United Medical Service. The physician has agreed to certain conditions, and he may terminate such agreement when he wishes. The same privilege is afforded the corporation. Therefore, there must be a harmonious relationship between the participating physician and UMS. The participating physicians, in fact, are the final underwriters of UMS operations.

United Medical Service has approximately 76 per cent of the duly licensed practitioners of medicine in their area as participating physicians. If an allowance is made for physicians who are employed in full-time positions in industry, hospitals, medical schools, laboratories, welfare and health groups, and for physicians who have retired, it is quite probable that the vast majority of duly licensed practitioners of medicine have signed an agreement as a participating physician with United Medical Service.

United Medical Service feels that this is a bilateral trust of great significance and confidence. It should be remembered that there are a number of physicians—percentage-wise, very few—but in the aggregate a substantial number who, for various reasons, have been unwilling or unable to become participating members.

Attention should be drawn to the phrase in the agreement between the physician and UMS ... "subscribers as I accept for treatment." This is an incontrovertible statement and at all times permits the participating member to exercise his own judgment in the acceptance of patients for treatment. It may be contended that the participating physicians should derive benefits over nonparticipating physicians in the operations of United Medical Service. This question has engaged the attention of UMS and I personally believe that the participating physicians should receive treatment somewhat different from the nonparticipating physicians.

For many reasons, chiefly legal, it has not been possible up to the present to have any differential status between participating and nonparticipating members. However, as has been written thousands of years ago—"He that is not with me is against me."

A very impressive aspect of prepaid medical plans and the subscriber is the almost uniform desire to have "service." Strongly organized groups of employers are insisting that service coverage be included in all collective bargaining agreements.

The principle is being established, rapidly in some areas and rather more slowly in others, that any increase in service benefits should carry with it a relative increase in the remuneration to the physicians who render the service. In other words, there is a close approximation between the amount of service that may be extended and the remuneration to the physician.

The acceptance of this principle in no way infringes upon the ceiling limit. If buyers of group prepaid medical insurance wish more benefits, then the premium rate is correspondingly raised to pay for the additional benefits written into the contract plus the administrative cost and to pay more ample compensation to the physician.

It may be stated, at this point, that there is "no small type" in United Medical Service contracts, and the terms of the contract and the benefits, together with the schedule of allowances and periods of aftercare, are all set forth in bold type.

In previous articles it has been brought to your attention that there has been a tremendous revolution in the practice of medicine and in the distribution of medical services. Numerous factors entered into this revolution: increase in population, prepaid medical insurance, extension of hospital services, and, of outstanding importance, modern transportation.

As indicating a remarkable change in the general economic and social level of the United States, I suggest for your consideration two very closely related factors.

In the last seven years, from 1946 to 1953, there has been an increase in the population of the United States of 18,000,000 people.[1] If you add to this figure the increase in the life span of the individuals living in the last seven years, it gives a total of something in excess of 22,000,000 people. This tremendous number of individuals must be provided with adequate medical and hospital care, and, since the adults are largely of the low-medium income status, they are potential candidates for enrollment in prepaid medical insurance.

Another factor of great importance is the number of women who are employed in the various industries. There are 19,000,000 women employed in the United States; 10,500,000 of this number are married and only 1 per cent have incomes of over $5,000 a year, while 80 per cent have an annual income of less than $2,500.[2]

Recently United Medical Service was confronted with a situation that demanded prompt and active cooperation between the physicians and the corporation. A large employer of labor requested a meeting with the chairman of the board and the president of United Medical Service. A meeting was held on a Thursday at noon. The employer asked, "What will UMS do to obtain 44,000 new members? We would like an answer by next Tuesday noon!" Four days with an intervening week end was all the time that could be expended in producing a proposal.

On Sunday, seventy-two hours later, a meeting was held with the presidents, the secretaries, and the chairmen of the economics committees of the 17 county medical societies in the UMS area. These officers from the various societies agreed in principle that the conditions set forth by UMS were fair, equitable, and in the best interest of the subscribers and the physicians. These various officials of the county medical societies assumed a great responsibility in committing their societies to a program that could not be submitted to their respective members before the time stipulated.

Here is an episode that illustrates a very pressing problem. United Medical Service cannot determine the "time interval" but must act as the exigencies of their business arises. It seems obvious that the county medical societies must trust in the judgment of their president, their secretary, and the chairman of their economics committee, who have been duly elected. This reaffirms the suggestion that principles and policies of prepaid medical plans should concern the medical society but the technical administration of the plan should not.

Since the responsibility under the law for the conduct of United Medical Service rests with a board of directors who, in turn, employ executives to manage and conduct the operations of the company, it would seem reasonable that the physicians, through the elected officers of their county medical societies should consider, advise, and recommend the general principles of policies but should not attempt any entrance into the management of the company in regard to its productive function. The finances of the corporation are under close observation by a finance committee composed of experts in their field. The underwriting function is carried out by an expert actuary. United Medical Service is not an FBI or an adjunct to a district attorney's office, and the relationship of the corporation with the participating physicians and with the subscribers must, at all times, be safeguarded by privacy and confidence.

However, on rare occasion, usually upon the complaint of a subscriber or a subpoena in a malpractice suit, there is brought to our attention an episode of an alleged maltreatment or an exorbitant charge for services. As management looks objectively at this particular case problem it may be evident that the physician has been either unfair to the patient, to the corporation, or has violated the spirit and letter of his contract with UMS.

The author of these articles believes that UMS is a great ethical force in the community and that its influence has been a stabilizing one.

Conclusions

1. United Medical Service—The Doctors' Plan—is a mechanism for the distribution of high quality medical services under the caption "free choice of physician." It is an answer to the great social impacts of increase in population and the wider distribution of income and wages under the competitive system of free enterprise.
2. It is and can be made more potent as an ethical factor in the relationships between the public, industry, and the physicians.
3. It is a discipline to enforce accurate, truthful, and verifiable statements upon the part of the physicians and the subscribers.
4. UMS is required to report to the Department

of Internal Revenue any aggregate amount of reimbursement to a physician over $600 per annum.

5. The medical societies have a great responsibility which must be exercised by them through their grievance, mediation, or complaint committees, that the quality, the ethical standards, and the economic relationships of the physicians with the public may be maintained with progressive improvement in these relationships.

6. Every physician should personally, of his own free will and accord, support United Medical Service and assist by his professional relations to make a better medical service available for all of the people.

7. UMS employs no solicitors and no physician is referred to patients, nor are patients referred to any physician by UMS. There are no welfare workers, no shop stewards, no "free riding boys" routing patients to any particular physician or group of physicians. UMS stands on its stated position, as must every physician, on his personal concept of his duty to society.

References

1. Cleveland Trust Company: Business Bulletin **34**: 12 (Dec. 16) 1953.

2. New York Herald Tribune: This Week, January 10, 1954, p. 10.

"Lady Luck" Formula Aided in Many Medical Advances

An alert mind, coupled at times with chance, accident, or error, often equals what some people refer to as "Lady Luck." This "Lady Luck" formula has played a prominent role in many of the great advances of medicine, some of which were recounted by Dr. H. E. Kleinschmidt, Manhasset, in the October *Today's Health* magazine, published by the American Medical Association.

The stethoscope, for instance, was invented in 1816 by a young French physician, René Théophile Hyacinthe Laënnec, after he chanced to observe a group of young boys playing in a lumber pile. One of the boys would tap lightly with his fingertips at one end of a long plank while the others would press their ears to the opposite end and listen to the tapping coming clearly through the board. Laënnec hurried to the hospital, rolled a paper-backed book into a tube, pressed the tube to a patient's chest, and clearly and crisply heard the heart beat.

Chance also played a role in bringing to the medical profession the valuable technic known as "thumping the chest." Leopold Auenbrugger, a Viennese physician, wondered one day if he could obtain different sounds from the human chest by tapping it as his innkeeper father tapped the wine casks to determine how much wine was left in the casks. Dr. Auenbrugger was able to recognize the different characteristic sounds produced by various conditions of the chest.

The invention of the x-ray machine is another valuable diagnostic aid which occurred through astute observation of an incident of chance. The discoverer, Wilhelm Röentgen, was experimenting with a sort of a light bulb, known as Crookes' tube, in a light-proof box when he happened to observe a screen in the room glowing. The screen was made of a sensitive fluorescent substance that glowed when the slightest beam of light struck it. Röentgen could think of no answer for this phenomenon other than that the Crookes' tube gave off rays through the box that caused this to happen. He later found that these rays also would affect a photographic plate and make a shadow picture of the solid objects penetrated.

Ephedrine, a valuable drug used by doctors to shrink the mucous membranes of the air passages when they are swollen and cause stuffiness, is a product of China and "Lady Luck." Used for centuries in China, the drug was brought to the attention of Western medicine by a Chinese laboratory assistant following his visit to an uncle who operated a Chinese apothecary shop. During an animal experimentation in the United States, Dr. Carl F. Schmidt and his Chinese assistant, Dr. Chen, used the drug to revive an animal which was dying. Further experiments led to the refinement of this respiratory stimulant.

In bacteriology there are many examples of how the prepared mind takes advantage of accidental happenings, Dr. Kleinschmidt pointed out in the article. A classic example may be drawn from the experience of Louis Pasteur, father of bacteriology. One day while working on chicken cholera, Pasteur accidently used old cultures of the cholera instead of fresh ones and found that chickens injected with the old cultures became ill but did not die as expected. Upon infection later with virulent cholera germs, they did not even get sick. Further experiments established the principle which now protects us from a number of deadly diseases—vaccination.

NECROLOGY

J. Roy Allen, M.D., of Sandy Creek, died on December 19, 1953, at the age of seventy-seven. Dr. Allen graduated from Syracuse University College of Medicine in 1901. He had been in semi-retirement for several years but continued to practice opthalmology when his health permitted.

Juliette Bernat, M.D., of New York City, died on November 11, 1953, at the age of sixty-five. Dr. Bernat received her medical degree from McGill University in 1927. At the time of her death she was a resident psychiatrist at Bellevue Hospital. She belonged to the New York County Medical Society and the Medical Society of the State of New York.

Crawford Brown, M.D., of Rochester, died on December 3, 1954, after an illness of more than a year. He was fifty years old. Dr. Brown received his medical degree from the University of Pittsburgh Medical School in 1931 and interned at Highland Hospital in Rochester. During World War II he served with the U.S. Navy as a lieutenant, senior grade, and saw duty in the African campaign aboard the *USS Augusta*. A member of the Monroe County Medical Society, Dr. Brown also belonged to the Medical Society of the State of New York and the American Medical Association.

Kalman Eisenbud, M.D., of New York City, died on January 20 at the age of seventy. A graduate of New York University and Bellevue Hospital School of Medicine in 1909, Dr. Eisenbud was a consultant at Harlem Hospital at the time of his retirement in 1951. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Samuel Gitlow, M.D., of the Bronx, died January 6 in Miami, Florida, following a heart attack. He was sixty-four years old. Dr. Gitlow graduated from the Columbia University College of Physicians and Surgeons in 1912 and interned at Lebanon Hospital. He was a fellow of the College of American Pathologists and a member of the New York Academy of Medicine. He served as president of the Bronx County Medical Society in 1928, and was also president of the North Bronx Medical Society in 1943, and of the Bronx Pathological Society in 1933.

Dr. Gitlow was assistant professor of biological chemistry at the College of Physicians and Surgeons in 1917–1918. Associated throughout his career with Lebanon and Daughters of Jacob Hospitals, he served variously as chief of the medical and diabetic clinics, pathologist, attending physician, and consultant. He had been retired for several years.

Dr. Gitlow was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harold Gluck, M.D., sixty-two years old, of Forest Hills, died on October 30, 1953. Dr. Gluck graduated from New York University and Bellevue Hospital School of Medicine in 1912, and limited his practice to laryngology. He was a member of the Queens County Medical Society and the Medical Society of the State of New York.

Milton Dempsey Graham, M.D., of Utica, died on January 18 of a heart attack. He was seventy-two years old. Dr. Graham graduated from Syracuse University College of Medicine in 1904. A cardiologist, Dr. Graham was senior attending physician at St. Elizabeth's Hospital. He was a former president of the Oneida County Medical Society, and a member also of the Utica Academy of Medicine, the Medical Society of the State of New York, and the American Medical Association.

Eugene Joseph Hanavan, M.D., sixty-four years old, of Buffalo, died of a heart attack on December 20, 1953. Dr. Hanavan graduated from the University of Buffalo School of Medicine in 1915. He was assistant attending surgeon on the staff of Our Lady of Victory Hospital in Lackawanna. Dr. Hanavan was a member of the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John L. Hoffman, M.D., of Buffalo, died in Coral Gables, Florida, on December 23, 1953, at the age of fifty-six. Dr. Hoffman graduated from the University of Buffalo School of Medicine in 1924 and interned at Meyer Memorial Hospital. He served as a captain in the United States Army Medical Corps during World War II. In 1945 he became assistant medical director of the John Hancock Mutual Life Insurance Company. Dr. Hoffman was an attending physician at Millard Fillmore Hospital and served on the board of censors of the Erie County Medical Society. He was also a founder of the Western New York Heart Association and served for two years as its president. He was a member of the Erie County Medical Society, the Medical

Society of the State of New York, and the American Medical Association.

Edwin Stanley Ingersoll, M.D., sixty-seven years old, of Rochester, died on January 8. A graduate of Cornell University College of Medicine in 1912, Dr. Ingersoll was a Diplomate of the American Board of Otolaryngology and a Fellow of the American College of Surgeons. He was a member of the American Laryngological, Rhinological, and Otological Society and the Rochester Academy of Medicine. Dr. Ingersoll was a consultant in otolaryngology at Strong Memorial Hospital, Rochester General Hospital, and Frederick Ferris Thompson Hospital in Canandaigua. He also belonged to the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Louis M. Leibow, M.D., of the Bronx, died on November 25, 1953, at the age of fifty-three. He received his medical degree from the New York Homeopathic Medical College in 1926 and interned at Flower and Fifth Avenue, New York, and Beth David Hospitals. Dr. Leibow was a member of the American Academy of General Practitioners, the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Robert Reuben Malach, M.D., forty-five years old of New York City, died after a long illness on January 18, at St. Clare's Hospital. Dr. Malach graduated from Long Island Hospital College of Medicine in 1935. He served in the U.S. Army Medical Corps overseas with the Third Army for six years, as a lieutenant colonel. He was an assistant attending physician at City and St. Clare's Hospitals.

Horace J. Mann, M.D., of Brockport, died on December 16, 1953, at the age of eighty-eight. Dr. Mann was one of the oldest surviving alumni of the University of Buffalo School of Medicine, from which he graduated in 1888. One of the first presidents of the New York State Health Officers Association, he was also one of the founders of the Rochester Academy of Medicine. During World War I he served as a captain in the U.S. Army Medical Corps. He was for many years the health officer of the Town of Sweden.

Dr. Mann belonged to the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Samuel Barlow Moore, M.D., of New York City, died on January 17, following a heart attack. He was seventy-five. Dr. Moore graduated from New York Homeopathic Medical College in 1901 and interned at Metropolitan Hospital. He was a member of the New York Academy of Medicine and consulting physician emeritus at Metropolitan Hospital. He belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

George Schoenholtz, M.D., of the Bronx, died on September 26, 1953, at the age of fifty-five. Dr. Schoenholtz received his medical degree from the Medical College of Virginia in 1924. He interned at Cumberland Hospital, in Brooklyn. He was associate visiting physician in pediatrics at Fordham Hospital, and served in the Bureau of Preventable Diseases for the New York City Department of Health. Dr. Schoenholtz was a member of the New York County Medical Society and the Medical Society of the State of New York.

Archibald Wilson Stiles, M.D., eighty-one years old, died at his home in Owego on December 23, 1953. Dr. Stiles received his medical degree from Baltimore Medical College in 1897. He spent most of his working lifetime in private industry and had been retired for ten years.

La Verne Francis Waters, M.D., of Medina, died on January 15 at the age of sixty-nine. Dr. Waters graduated from the University of Buffalo School of Medicine in 1908. He was a former coroner of Orleans County and was on the staff of Medina Memorial Hospital. He was a member of the Orleans County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Edward Judson Wyncoop, M.D., of Syracuse, died on December 17, 1953, at the age of eighty-four. Dr. Wyncoop graduated from Syracuse University College of Medicine in 1892. He was a Licentiate of the American Board of Pediatrics and a member of the American Academy of Pediatrics, the Syracuse Academy of Medicine, and the New York Academy of Medicine. A past president of the Onondaga County Medical Society and the Syracuse Academy of Medicine, Dr. Wynkoop was honored in 1946 for his fifty years of service on the faculty of the University Medical College. He was senior attending pediatrician at Memorial Hospital and consultant in pediatrics at University Hospital and the Syracuse Dispensary. At the time of his death, he was supervising physician for the Onondaga County Welfare Department, a post he held for twelve years.

Dr. Wynkoop belonged also to the Onondaga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Hedwig Zweig, M.D., fifty-seven years old, of New York City, died on May 14, 1953. Dr. Zweig received her medical degree from the University of Breslau in 1922. At the time of her death she was a clinical assistant in pediatrics at Beth Israel Hospital. She was a member of the New York County Medical Society and the Medical Society of the State of New York.

MEDICAL NEWS

Group Travel Plan to Ninth Congress of International College of Surgeons—Group rates for those attending the ninth Congress of the International College of Surgeons at Sao Paulo, Brazil, in April are being arranged by Dr. A. L. Cantelmo. Either a two-week or three-week trip can be arranged and further information can be obtained by writing to Dr. Cantelmo, 144 South Harrison Street, East Orange, New Jersey.

Three Counties Reduce Dues—The Medical Society dues in the Counties of Oneida, Herkimer, and Madison have been reduced by $10 a year. The reduction been made possible by revenue derived from the Medical Economics Bureau and the *Bulletin*, both of which are integral parts of the Oneida, Herkimer, and Madison County Medical Societies public relations program.

Eastern New York Eye, Ear, Nose and Throat Association—The new officers for the 1953 to 1954 year of the Eastern New York Eye, Ear, Nose and Throat Association are: Dr. Stanley L. Edmunds, Glens Falls, president; Dr. John A. Center, Albany, vice-president, and Dr. Frank C. Furlong, Schenectady, secretary-treasurer.

Association for Research in Nervous and Mental Disease—The Association for Research in Nervous and Mental Disease held its thirty-third annual meeting in New York City, December 11 to 12, and elected the following officers for 1954:

Drs. Rustin McIntosh, president; Walter Klingman, first vice-president; William S. Langford, second vice-president; Clarence C. Hare, secretary-treasurer, and Rollo J. Masselink, assistant secretary.

"Psychiatry and Neurology of Childhood" will be the subject of the 1954 meeting.

New Publication—The first issue of a newsletter, edited by Dr. Richard A. Loomis, Ellicottville, was recently issued for the members of the Cattaraugus County Medical Society.

American Board of Obstetrics and Gynecology—It is called to the attention of candidates who have been notified of their eligibility to Part II examinations that their case abstracts are now due. The next scheduled examinations, part II, for all candidates will be conducted at the Edgewater Beach Hotel, Chicago, Illinois, by the entire board from May 10 through May 17, 1954. Formal notice of the exact time of each candidate's examination will be sent to him several weeks in advance of the examination dates.

Candidates for re-examination in part II must make written application to the secretary's office, Dr. Robert L. Faulkner, 2105 Adelbert Road, Cleveland 6, Ohio, not later than April 1, 1954.

Openings on Staff of Goldwater Memorial Hospital—There are a number of vacancies available for the positions of residents and assistant residents on the house staff as well as for clinical assistant and assistant visiting physicians on the visiting staff on the Second Medical and Neurologic Service of the Goldwater Memorial Hospital, a hospital for chronic diseases with special facilities for the study of geriatric medicine.

Further information may be obtained by writing: Dr. Benjamin Jablons, acting director, Second Medical Division, Goldwater Memorial Hospital, Welfare Island 17, New York.

Waldemar Medical Research Foundation—The Waldemar Medical Research Foundation, Inc. officially opened its laboratory at 16 Sintsink Drive East, Port Washington, on January 9. The laboratory was formerly located in Brooklyn.

Russell M. Wilder Fellowship—The establishment of the Russell M. Wilder Fellowship was announced in January by the National Vitamin Foundation. The fellowship is a three-year $15,000 fellowship for postdoctorate training in the science of nutrition, and will be given to a candidate holding a doctorate in medicine or one of the biologic sciences as part of the Foundation's program designed to stimulate the training of qualified young men and women to pursue research and teaching in the science of nutrition.

Candidates for the fellowship must write to the National Vitamin Foundation for application forms, and must hold a doctor's degree in medicine or in one of the basic sciences, biology, physiology, chemistry, or biochemistry. Application must be made on National Vitamin Foundation official forms and must be mailed to the National Vitamin Foundation, Inc., 15 East 58th Street, New York 22, New York, on or before March 15, 1954. Action taken by the advisory committee will be sent to all applicants before July 1, 1954, and the fellowship will become effective for the accepted applicant at the beginning of the academic year in September, 1954.

Postgraduate Course Held in Obstetrics and Gynecology—A postgraduate course in obstetrics and gynecology was held at the University of Buffalo School of Medicine, February 10 and 11. Subjects presented were: film on "Management of Labor," "Diseases Complicating Pregnancy," "Management of the Third Trimester," clinical demonstrations of "Anesthesia, Analgesia, Infant Resuscitation," "Management of Labor," "Manikin Drill," and Ward Rounds: "Postpartum Care," "Ovarian Pathology," "Management of Irregular Bleeding," "Abortion and Prematurity," office gynecologic procedures consisting of "Papanicolaou Smears and Biopsies," "Differential Diagnosis of Leukorrhea," and "Treatment of Cervicitis," and a question period on "Common Problems in Obstetrics and Gynecology."

Doctors participating in the program were: Drs. Edward G. Winkler, Dexter S. Levy, Richard C. Porter, Kenneth M. Alford, Paul K. Birtch, Louis A. Trippe, Harry G. LaForge, Clyde L. Randall, Milford Childs, Robert W. Moyce, E. Dean Babbage, Richard N. Terry, William A. Potts, Donald W. Hall, David Nichols, Raymond W. Mitchell, Jr., Robert C. McDowell, Charles J. Woeppel, Chester J. Kaminski, and David H. Weintraub.

Electrocardiography Course Announced—St. Mary's Hospital, Rochester, has announced a course in "Basic Electrocardiography" to be given by Dr. James Carroll on Tuesday nights, from February 16 to April 20. The course sessions will begin at 8 P.M.

Journal Changes Name—*The Review of Gastroenterology*, the official publication of the National Gastroenterological Association, changed its title to *The American Journal of Gastroenterology* with the January, 1954 issue. The publication first appeared in 1911 and was published by the American Hospital for Diseases of the Stomach of Philadelphia.

In December, 1953, the National Gastroenterological Association and *The American Journal of Gastroenterology* moved into new offices on 33 West 60 Street, New York City 23.

Hill-Burton Grants—Status of all Hill-Burton hospital construction in New York State ending December 31, 1953, was: completed and in operation, 64 projects at a total cost of $53,759,422, including Federal contribution of $16,574,820, and supplying 3,328 additional beds. Under construction: 10 projects at a total cost of $40,912,554, including Federal contribution of $5,130,692, and designed to supply 948 additional beds. Approved but not yet under construction: eight projects at a total cost of $15,826,690, including $3,674,099, Federal contribution and designed to supply 949 additional beds.

Public Forum Presented by Yonkers Academy of Medicine—A public forum on "The Curability of Cancer" was held by the Yonkers Academy of Medicine on November 18, 1953, in a local public high school auditorium. The program was sponsored by the local board of education as a part of its adult education program.

The panel consisted of 12 local physicians who represented the field of general practice or a particular specialty and the questions used consisted, almost entirely, of those received by mail or from the floor at the time of the forum. The forum was received with such enthusiasm that instead of an hour program, it ran for one hour and fifteen minutes. Some of the comments from the audience heard at the end of the meeting indicated that the forum had been the best thing ever done for the town by the doctors in some time and that it was hoped there would be more forums held in the future.

The Yonkers Academy of Medicine is planning another public forum for the spring of 1954 to be on a topic of general medical interest.

American Medical Education Foundation—Contributors to the American Medical Education Foundation for December, 1953, from New York State were: *Albany*—Drs. Ralph D. Alley, Beatrice Belser, John B. Clancy, Gilbert Dalldorf, Fredrick E. Dexter, John J. Farrell, Robert R. Hannon, Raymond Harris, Morton L. Levin, Harold P. McGan, Walter C. Mott, Claude C. Nuckols, Thomas J. O'Donnell, John C. O'Keeffe, Fredrick L. Patry, William C. Rausch, Rudolf Ruedemann, Jr., Joseph J. Russo, Francis A. Stephens, Allan Stranahan, Arthur J. Sullivan, Robert C. Towse, Albert E. VanderVeer, and Thomas S. Walsh, Jr.

Albion—Dr. Walter Shifton; *Alton*—Dr. Ralph Munzer; *Auburn*—Drs. Augustus B. Chidester, Bernard L. Cullen, and Richard Joachim; *Batavia*—Dr. Max A. Almy; *Bath*—Dr. Ernest P. Smith; *Binghamton*—Drs. Irving Werner and James B. Woodruff; *Brockport*—Dr. Harold J. Collins; *Bronx*—Drs. Sidney B. Burke, H. E. Diamond, Felix P. Gianatasio, Harry H. Kaufman, Morris Leff, and Abraham Raab.

Also: *Brooklyn*—Drs. Charles H. Birnberg, William Bloom, John D'Albora, Francis P. Ferrer, Abraham Kopp, David B. Monheit, and Samuel Solomon; *Buffalo*—Drs. Kenneth M. Alford, Mitchell Oestreich, and Sigmund A. Zawadski; *Chappaqua*—Dr. Harold F. Bishop; *Clifton Springs*—Dr. Stephen W. Brouwer; *Clyde*—Dr. John L. Pulvino; *Corfu*—Dr. Sidney L. McLouth; *Elmira*—Dr. Francis T. Hassett; *Endicott*—Dr. John A. Kalb; *Fillmore*—Dr. Stefan B. Rose; *Flushing*—Dr. Saul S. Daiell; *Garden City*—Dr. Thomas V. Miles; *Hempstead*—Dr. David D. Dexter; *Hudson*—Dr. Robert H. Little; *Huntington*—Dr. William W. Heroy; *Jackson Heights*—Dr. Tobias M. Watson; *Jamaica*—Dr. Jacob Werne; *Kingston*—Dr. Saul Ritchie; *Laurence*—Dr. Adrian Brodey.

Little Falls—Drs. Bernard J. Burke and Joseph W. Conrad; *Long Island City*—Drs. John A. Herrlin, Jr. and Elmer Schusdek; *Lyons*—Dr. Myron E. Carmer; *Maybrook*—Dr. Daniel Rakov; *Newark*—Dr. James D. Tyner; *Newark Valley*—Dr. G. C. Lusk; *Newport*—Dr. Timothy J. Howard; *New York City*—Drs. Irvin Balensweig, David N. Barrows, Leon A. Bryan, Reginald Burbank, Michael S. Burman, Joel Dasch, Edward A. Dolan, Phebe L. DuBois, Haven Emerson, Emil Endreny, Charles L. Fox, Jr., Emil Froeschels, John H. Garlock, Salomon Goldschmitt, Isaac Hartshorne, James P. Hennessy, Robert D. Huebner, Samuel M.

Hyman, Edward E. Jenerin, M. Ralph Kaufman, Thomas E. Lee, George M. Lewis, Majorie Lewisohn, William M. Manger, John M. McKinney, William T. Medl, Walter F. Menaker, H. W. Miller, David S. Mintz, Peter M. Murray, John Neilson, Jr., Clarence P. Oberndorf, Loton H. Rasmussen, William Rolph, Jr., Nathaniel Ross, Jerome Selinger, Robert Sheiman, Louis R. Slattery, Hamilton Southworth, John L. Sullivan, Henry D. Taterka, Francis X. Timoney, William G. von Stein, Milton J. Wilson, and Wilfred Yoslow.

Norwich—Dr. H. L. Wilson; *Norwood*—Dr. Henry Vinicor; *Oakfield*—Dr. Raymond L. Warn; *Ossining*—Dr. Jane W. Norman; *Palmyra*—Drs. James D. Bramer and John H. Marsh; *Poughkeepsie*—Dr. George E. Lane; *Richmond Hill*—Dr. William P. Riley; *Rochester*—Drs. Paul W. Beavens, Alfred G. Ebel, Ernest J. Field, William B. George, Andrew J. Giambrone, John L. Norris, Christopher Parnall, Jr., Martin A. Sander, Robert E. Wells, George H. Whipple, Floyd Winslow, Philip Winslow, and Simon L. Wronker.

Rome—Dr. Bradford Golly; *Scarsdale*—Dr. Maurice Woodhull; *Sodus*—Dr. Franklin L. Meyers; *Syracuse*—Drs. Leon A. Chadwick, Mark E. Conan, Arthur D. Ecker, Dwight V. Needham, and Theodore Perl. Also: *Tarrytown*—Dr. Henry Fleischman; *Troy*—Dr. John J. Squadrito; *Tupper Lake*—Dr. Carter R. Morse; *Utica*—Drs. Roy C. Ainsworth, Anthony G. Chanatry, John S. Fitzgerald, Herman J. Segaul, Willard H. Willis; *Webster*—Dr. Jason O. Cook; *Williamson*—Dr. Raymond W. DeSmit; *Yonkers*—Drs. Herbert L. Kennedy and Romeo Roberto.

Physical Medicine and Rehabilitation Postdoctoral Fellowships—Postdoctoral fellowships in physical medicine and rehabilitation, covering a period of one to three years at training centers approved for residencies in physical medicine and rehabilitation, are available through the National Foundation for Infantile Paralysis.

A limited number of short-term fellowships to physicians who wish to become better acquainted with physical medicine and rehabilitation as it relates to their particular specialties are also being made available.

Complete information concerning qualifications and applications on both types of fellowships may be obtained from the Division of Professional Education, National Foundation for Infantile Paralysis, 120 Broadway, New York City 5.

Postdoctoral Fellowship—A limited number of postdoctoral fellowships in the field of public health and preventive medicine have been announced as available by the National Foundation for Infantile Paralysis. The purpose of the fellowships is to prepare physicians to fill the many vacancies existing in public health and preventive medicine, with priority to those interested in entering the teaching field.

The fellowships, for one or two years at an approved school of public health with field experience arranged by the school, which may cover tuition, maintenance, and an allowance for books if required, are based on the individual need of each applicant, and require United States citizenship, sound health, graduation from an approved school of medicine, and completion of at least a one-year internship in an approved hospital.

Complete information concerning qualifications and applications may be obtained from the Division of Professional Education, National Foundation for Infantile Paralysis, 120 Broadway, New York City 5.

Plastic and Reconstructive Surgery Scholarships—The Foundation of the American Society of Plastic and Reconstructive Surgery announces the regulations of the fifth annual scholarship contest: The contest in junior classification is restricted to residents in training and to plastic surgeons who have been in practice no longer than five years; two main prizes are offered; the subject matter of the essay must be the result of some original research, clinical or experimental, in the field of plastic and reconstructive surgery—thesis should be about 5,000 words and in English; work previously published wholly or in part is not acceptable; expenses of travel between the services will be allotted; a silver plaque or a certificate of honorable mention is also offered for a winning essay in senior classification to contestants active in practice of plastic and reconstructive surgery for more than five years; manuscripts will not be accepted by the award committee after July 1, 1954, and the winning essays will be presented in person at a formal program of the Foundation to be held in the fall of 1954.

Dr. Robert M. McCormack, Rochester, New York, and James Calnan, F.R.C.S., Oxford, England, were the winners of the 1953 scholarships.

Further information may be obtained by writing to: Award Committee, care of Dr. Jacques W. Maliniac, chairman, 30 Central Park South, New York City.

Postgraduate Institute—The eighteenth annual postgraduate institute of the Philadelphia County Medical Society will be held at the Bellevue-Stratford Hotel, March 30 to April 2, 1954. Among the subjects to be covered are: viral hepatitis, cerebral palsy, juvenile delinquency, surgery of valvular heart disease, pulmonary tuberculosis, orthopedics, metabolic diseases, radioactive isotopes, pediatrics, viral and other infections, diseases of the ear, nose, and throat, and the newer drugs.

There will be a registration fee for nonmembers of the Philadelphia Society. Attendance will be accepted for credit by the American Academy of General Practice.

Further information may be obtained by writing to the director, Dr. Leandro M. Tocantins, 301 South 21 Street, Philadelphia 3, Pennsylvania.

Eli Lilly Grants—New York hospital and university receiving grants for support of research projects are: The Bronx Hospital, New York City, for work on antibiotics by Dr. Alfred J. Weil, director of the Department of Bacteriology, and Columbia University, New York City, by Dr. Lewis J. Doshay of the Presbyterian Medical Center, to supplement a grant made in November, 1952, for the evaluation of compound 08958 in Parkinsonism.

John and Mary R. Markle Foundation—Twenty-one medical schools have been awarded five-year grants of $30,000 by the John and Mary R. Markle Foundation in support of a scholar at the rate of $6,000 annually. Beginning in 1953, the New York schools chosen to share in the grant were College of Physicians and Surgeons, Columbia University, and Cornell University Medical College.

Doctor Honored at Birthday Party—Dr. Maurice J. Lewi, president and founder of the Long Island University College of Podiatry, was honored on his ninety-sixth birthday at a party held at the Hotel Plaza on December 6, 1953. Among the speakers were: Dr. John H. Garlock, president of the New York County Medical Society, and Dr. Styles D. Ezell, secretary, State Board of Medical Examiners.

Dr. Lewi is the oldest college president in the nation and is believed to be the oldest active physician.

Samuel H. Kress Foundation Contribution—The Samuel H. Kress Foundation has presented a gift of $1,268,941 toward the cost of construction of the Medical Science Building of the New York University-Bellevue Medical Center. The new building will provide facilities for the Post-Graduate School of Medicine and the College of Medicine including research laboratories, offices, library, and student facilities.

AEC Awards Unclassified Biology and Medicine Contracts—Among the recipients of the 69 unclassified research contracts in the fields of biology and medicine awarded by the U.S. Atomic Energy Commission during July, August, and September, 1953 were: Dr. C. P. Rhoads, Sloan-Kettering Institute for Cancer Research, for the biologic effect of radiation, and related biochemical and physical studies, and Dr. John M. Converse, New York University-Bellevue Medical Center, in collaboration with Mario Gaudino, for the effect of refrigeration of human and animal skin upon its use in skin grafts in animals and man and a study of the antibodies produced by homologous skin grafts in animals and man.

Erie County Members to Aid Buffalo Police—The Erie County Medical Society in a joint conference with the Buffalo Police Department has arranged a plan for medical participation in the new Drunken Driver Chemical Test Law. The Society agreed to allow the police to establish a panel of local physicians who will volunteer and agree in writing to cooperate with the department members for a fixed fee paid from the Police Department Funds to make blood withdrawals from allegedly intoxicated drivers whenever requested by a police officer. The doctor will be called upon only when the driver has given his consent and the test will not be made in either the office or home of the cooperating doctor.

Grant by Mental Health Commission for Clinic-Research Project on Alcoholism in New York City—Two additional grants from the Mental Health Commission, totaling over $27,000 annually, to be used for another alcoholism clinic and research project in New York City were announced December 21 by Dr. Newton Bigelow, Commissioner of Mental Hygiene and chairman of the commission.

Contracts were written with the State University of New York College of Medicine at New York City. Operation of the clinic to be located at Kings County Hospital in Brooklyn, as well as direction of the research, will be under the Department of Psychiatry of the College of Medicine. Dr. Howard W. Potter, professor of psychiatry at the college, will be in charge of the project. Raymond G. McCarthy, director of alcoholism research, and Dr. Donald Gerard, research psychiatrist, both of the Mental Health Commission staff, will serve as liaison between the project and the commission.

A breakdown of the total grant allots $17,300 annually to the support of the alcoholism clinic and $10,000 annually for research in connection with the clinic, which is expected to open about the first of the year

In operating the clinic, the psychiatry department of the medical school will direct a multiphasic research program intended to obtain information for use in prevention and treatment of alcoholism. One phase of the research is planned to develop epidemiologic studies in alcoholism. Variations of the alcoholism problem in three different groups will also be studied. The three groups involved include patients admitted to and discharged from the psychiatric division of Kings County Hospital, patients from the hospital's medical service whose admission was for a medical problem associated with more or less continuous use of alcohol, and patients formerly treated in the psychiatric division but now members of Alcoholics Anonymous who have succeeded in remaining abstinent two years.

Staff of the clinic will include a psychiatrist, a fellow in internal medicine, psychiatric caseworker, and a clinical psychologist in addition to necessary secretarial and clerical personnel. Services of the regular staff of the medical school will also be available.

Pan American Medical Association Received by President Eisenhower—Twenty-nine New York members of the Pan American Medical Association were among the group who were received by President Eisenhower at the White House on December 12. Among those attending the reception were: Drs. Joseph J. Eller, Norton S. Brown, Gerald H. Pratt, Frederick L. Liebolt, Harold J. Leonard, Conrad Berens, Louis F. Bishop, Frank A. Calderone, Herbert Conway, Ralph W. Gause, Saul

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MINUTES OF THE COUNCIL

The following is a summary of the minutes of the December, 1953, meeting of the Council of the Medical Society of the State of New York.

The Council met December 10, 1953, from 9:20 A.M. to 1:05 P.M. at the Manhattan Club, Madison Square, New York City. Dr. Andrew A. Eggston, president, presided.

Secretary's Report

Executive Committee.—Dr. Anderton reported the following communications were considered at the Executive Committee meeting on December 9, 1953:

1. Letter of thanks from Miss Adeline Briggs for "the kind expressions of the Council" following her retirement and for the pension granted her.

2. A letter from Mrs. Thomas M. d'Angelo enclosing a check for $79.67, balance left from appropriation given the Auxiliary for the State Fair Exhibit at Syracuse.

3. A resolution from the Medical Society of the County of Kings, after discussion, was tabled. It advocated legal aid and "moral and professional support" in defense of any member threatened by prosecution for alleged criminal negligence in his professional practice.

4. A resolution from the Medical Society of the County of New York was discussed and referred to the Public Health and Education Committee. It advocated that the State Society follow the Medical Society of the County of New York in requesting the State Health Department to extend aid to hospitals in New York City having 4,000 or more annual admissions, on the same basis as to upstate hospitals, toward supplying facilities for or subsidizing chest x-rays of every patient.

5–6. Letters from Dr. Philip D. Wilson and Dr. Paul Hawley in reply to letters informing them of the policy adopted by this society in November with regard to the proration of fees in cases covered by medical care insurance. These were referred to the Committee on Questions of Ethics.

7. Correspondence regarding the request of Dr. Merlyn A. Bissell of Attica to transfer his membership to the Medical Society of the County of Genesee from the Medical Society of the County of Wyoming. This request was approved.

Dues Remission.—The Council voted to remit annual state dues of eight members for 1953 and of five members for 1954 because of illness; to remit annual state dues of one member for 1952 and of 11 members for 1953 because of service in the armed forces; and to request that the American Medical Association remit 1953 dues of 12 members and 1954 dues of six members. It was also voted to request that three members be excused from further payment of American Medical Association dues because they are more than seventy years of age.

General.—Dr. Anderton reported:

"Since your last meeting your secretary has attended meetings of the Maternal and Child Welfare and the Hard of Hearing and the Deaf Subcommittees of the Public Health and Education Committee and the House of Delegates Special Committee on Constitution and Bylaws, and he has conferred with Dr. John J. Masterson regarding an assistant to the secretary.

"Owing to Dr. George W. Kosmak's indisposition, President Eggston is going as an alternate delegate to the A.M.A. in St. Louis, Missouri, December 1 to 3, 1953.

"Your secretary has attempted to implement your directions at the last meeting and has written the letters you directed.

"The annual conference of secretaries of the component county societies was held at The Ten Eyck in Albany, November 18. Thirty-five secretaries or their representatives attended. Charles A. Brind, Ph.D., counsel of the New York State Education Department spoke on 'Unprofessional Conduct as a Cause for Regents' Discipline.' Robert S. Jenks, M.D., Batavia, member of the Clearing House and Policy and Planning Committees of the Blood Banks Association of New York State, Inc., delivered an address regarding that corporation. Peter J. Di Natale, M.D., Batavia, chairman of the Planning Committee for Medical Policies, spoke regarding 'Professional Contacts Between Medical and Osteopathic Physicians.' James Greenough, M.D., of Oneonta, chairman of the Legislation Committee, described the work and program of his committee. Mr. Boyden Roseberry, executive secretary of the Medical Society of the County of Westchester, spoke about the 'Mediation Committee.' Herbert H. Bauckus, M.D., of Buffalo, chairman of the Liaison Committee with U.S. Veterans Administration, addressed the meeting regarding 'Veterans Administration Treatment of Nonservice-connected Disabilities.' Mr. George P. Farrell, director of the Bureau of Medical Care Insurance, talked about a 'State-wide Contract for Medical Expense Insurance.' Dr. Anderton, secretary, commented upon 'Collection of A.M.A. Dues.' Each address was followed by discussion, and subsequently there was a general discussion of other topics. Several of those present commented favorably upon the meeting."

It *was voted* to accept the Secretary's report.

The Treasurer's report was accepted.

Reports of Committees

Blood Banks Commission.—Dr. Dan Mellen, chairman, reported progress in this project, particularly in gaining new members for the Blood Banks Association.

Constitution and Bylaws of the State Society.—Dr. Anderton stated:

"Mr. President, this is a report from the Special Committee on Constitution and Bylaws of the House of Delegates, which consists of Dr. A. H. Aaron, Dr. Thomas O. Gamble, and Dr. James R. Reuling:

"In accordance with a resolution passed by the House of Delegates of the Medical Society of the State of New York, May 4, 1953 (Section 53), which Speaker Holcomb referred to the House Committee on Constitution and Bylaws, to act as a special committee of the Council, the undersigned make the following report:

"1. The representation of the Medical Society of the State of New York in the House of Delegates of the American Medical Association, in accordance with the Constitution and Bylaws of both organizations, is at present satisfactory.

"2. On May 5, 1953, the House of Delegates tabled a recommendation of its Special Committee on Constitution and Bylaws to add to Chapter II a new section regarding membership in our House which would state: 'Delegates shall be members of the American Medical Association.' There was considerable opposition in the House, before tabling.

"3. Dues of county medical societies in New York State, State Society dues, and dues of the American Medical Association are integrated as much as possible at present. Each member receives his bill for all three dues at the same time in January. He can pay them all by a single check.

"4. Attention is drawn to part of the report of the secretary of the American Medical Association, on pages 926 and 927 of the November 7, 1953, *Journal of the American Medical Association*, Volume 153, Number 10. This describes the application of the International Business Machines system in the American Medical Association membership department, some problems of dues collections, and variations in terminology of classes of membership in constituent associations.

"5. Much discord would be avoided if county medical societies, state medical societies and associations, and the American Medical Association had identical types of membership. It would also be advisable if the grounds for dues exemption were the same in all county and state and in the national organizations."

The report *was accepted* and referred to the Planning Committee for Medical Policies.

Dr. Reuling stated:

"Of interest to the Council, the House of Delegates of the American Medical Association has initiated a survey that will look to eventually having membership classifications in the various states and counties on a uniform basis. There are some 2,000 or 3,000 counties.

"Of interest also to this Council is a reversal of procedure that men who were members of the American Medical Association before they began paying dues in 1950 can, during the first half of 1954, be taken into the American Medical Association without paying that first year's dues. In other words, they are now not considered in arrears for the first year's dues that the American Medical Association imposed."

After discussion, it *was voted* that the Secretary be instructed to notify the secretaries of the component county societies of this change in American Medical Association dues policy.

Economics.—Dr. Renato J. Azzari, chairman, presented the following report of the Bureau of Medical Care Insurance, George P. Farrell, director:

November 12, 1953.—Your director attended a meeting in Utica of District III, Blue Shield Medical Care Plans, in conjunction with members of the Subcommittee on Medical Expense Insurance, for the adoption of the uniform State-wide contract for employees of the Niagara-Mohawk group.

November 13.—Mr. Farrell was present at a conference on veterans medical care at the Roosevelt Hotel, New York City, under the auspices of the American Medical Association.

That afternoon your director conferred with Dr. Lawrence Essenson, chairman of a special committee of the Medical Society of the County of New York, in regard to different types of insurance programs providing comprehensive medical care.

November 18.—Attended the Conference of County Society Secretaries in Albany.

*November 29 and 30.**—Attended the Blue Shield Commission meeting at Chase Hotel, St. Louis, Missouri.

Attached to and made part of this report is the

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* A résumé of the activities of the Blue Shield Commission meeting was presented to the Council.

Progress Report on the seven New York Blue Shield Plans for the period ending September 30, 1953.† This progress report has been mailed to the secretaries of each county medical society in New York State, to presidents and executive directors of Blue Shield Plans, and to a selected list of persons interested in medical care insurance. The report has also been released for publication in the January 1, 1954, issue of the New York State Journal of Medicine.

It *was voted* to approve the report.

Ethics.—Dr. Thurman B. Givan, chairman, referred to his November report regarding a resolution of the Medical Society of the County of Albany. He stated that he had presented to the American Medical Association House of Delegates the substitute resolution suggested by the committee and that Secretary Anderton had written to the Medical Society of the County of Albany, as directed by the Council in November.

Acceptance of the report *was voted.*

Hospital and Professional Relations.—Dr Harold F. Brown, chairman, reported:

"Last night the Committee with its advisory committee discussed the encroachment of hospitals in the practice of medicine. Last September the Council instructed the chairman of the Committee on Legislation and myself to work out something that would produce results.

"We met; the Council instructed that we should try to meet the hospital group and some of the deans of medical schools. A special committee was ordered for this purpose. We have requested that some 'elder statesmen' of our Society be appointed because we think that discussions between medicine and hospital representatives should be on the highest level.

"Last night this telegram was handed to me:

> The Coordinating Council of the First District Branch voted unanimously at its regular meeting held on December 8 to ask the Council of the Medical Society of the State of New York to re-examine its position on the Friedman Bill, Senate Introductory 122, January 8, 1953, which would prohibit hospitals from charging fees for medical service rendered by physicians unless such fees were for patients who were public charges. The Coordinating Council also asked that the New York State Medical Society have introduced and work for the passage of a similar bill in the 1954 New York State Legislature.
>
> Charles F. McCarty, M.D., *Secretary*
> Coordinating Council of the First District Branch

"It was the opinion of our committee that for years we have not been able to make any headway legislatively to obtain this objective. While we have not rejected this request, temporarily we feel it should be laid on the table until we see what we can do by this other method that we contemplate.

"It seemed to us the plan of action should be, first, to meet representative hospital administrators. Failing production of results from that, we should have introduced a bill, similar to the Friedman Bill, into the legislature.

"The other possibility is, if we get nowhere either way and there is a continuance of the practice of medicine by hospitals, that we go to court, with a specific case where actually the hospital is practicing medicine and where, according to the Education Law, the splitting of fees is not only unethical but illegal. If we can produce a case where we can show that that is being done, we are told that the Attorney General of the State will take such a case to court. However, that we should first attempt to accomplish our objectives through conferences was the feeling of our committee last night.

"Last night the idea was brought out that this whole problem needs a lot of education, not only of the laity but of the doctors. Some of the members felt that a necessary part of the team to accomplish this is Dr. Winslow's committee so that the educational program will enlighten us in regard to matters concerned with the common problems of physicians and hospitals.

"Another matter that came up last night was regarding tenure in office of hospital staffs. A motion was passed by the House of Delegates in Buffalo this year concerning that. I have appointed a subcommittee, of which Dr. Corr of New York is chairman, and they will report at our next meeting."

After discussion, it *was voted* that a "Friedman Bill" of some form be submitted to the Legislature this year through the Legislation Committee.

It *was voted* that the president be authorized to appoint a special committee to discuss the suggestions of the Committee on Hospital and Professional Relations as voted at the November 12, 1953, Council meeting.

The President named the following committee:

Louis H. Bauer, New York City, *Chairman*
James Greenough, Oneonta, *Co-Vice-Chairman*
Harold F. Brown, Buffalo, *Co-Vice-Chairman*
W. P. Anderton, New York City
Edward R. Cunniffe, Bronx
Andrew A. Eggston, New York City
John J. H. Keating, New York City
John C. McClintock, Albany
James R. Reuling, Bayside
Herman G. Weiskotten, Skaneateles
Floyd S. Winslow, Rochester
Christopher Wood, White Plains

Dr. Wentworth suggested that the Society obtain an independent legal opinion regarding the practice of medicine by hospitals.

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† The Progress Report referred to, pages 83 to 92 inclusive of the verbatim minutes, is attached to the file copy of these minutes.

Industrial Health.—Dr. Peter J. Di Natale, chairman, reported:

"The Industrial Health Committee met yesterday. There were also present President-Elect Mellen and Dr. Kaliski, director of the Workmen's Compensation Bureau. The House voted that a pilot study be held in one or two counties on industrial health. However, I have not been officially informed as to whether or not a director, either part or full-time, has been obtained.

"We were advised yesterday by Dr. Mellen and Dr. Kaliski to present to this Council a request that the amount of salary be mentioned to the Board of Trustees.

"Recalling that the House approved a figure of $25,000 for the establishment of an industrial bureau, but telling us that plans should be made to combine the industrial health bureau and the workmen's compensation bureau, a salary of $15,000 a year was suggested.

"I would like to recommend that this Council advise the Board of Trustees that such a sum be suggested."

> After discussion, it *was voted* that a salary of $15,000 a year be recommended to the Board of Trustees for an Industrial Health Bureau director under Dr. Kaliski.

Legislation.—Dr. James Greenough, chairman, reported:

"The Legislation Committee met on November 12 and discussed the mandates of the House of Delegates and, with the exception of the Friedman Bill, planned how the mandates should be carried out.

"On the Friedman Bill, they requested that a conference with hospital representatives be arranged. If that fails, the executive officer and his counsel will have a bill introduced."

Executive Officer.—Dr. Harold B. Smith reported:

"With relation to prorationing of medical fees, I think it is apt to be controversial enough to suggest what an amendment to the Medical Practice Act will be, so I will read into the record the language we have drafted:

" 'Nothing contained in this chapter shall prohibit a medical expense indemnity corporation, pursuant to its contract with the subscriber, from prorating a medical expense indemnity payment among two or more physicians in proportion to the services rendered by each such physician at the request of the subscriber, provided that prior to such payment such physicians shall submit both to the medical expense indemnity corporation and to the subscriber a statement itemizing the services rendered by such physicians and the charge therefor.'

"I took that particular language to Mr. Brind, counsel for the State Education Department. He did not think what I described was illegal under the present law. However, I expressed the will of the House of Delegates that some such thought be expressed in the law to eliminate doubt. I don't think we will have any opposition from the Department on this particular matter."

Malpractice Insurance and Defense.—The Council went into executive session to consider the appeal of a doctor from a decision of the Malpractice Insurance and Defense Board.

The doctor appeared in person, presented his case, and was questioned. After he left, there was an extended discussion.

> It *was voted* unanimously to uphold the recommendation of the Malpractice Insurance and Defense Board, not to issue coverage to this doctor for cosmetic plastic surgery.

The Council also considered in executive session the appeal of another physician from a decision of the Malpractice Insurance and Defense Board.

The doctor appeared in person, presented his case, and was questioned. After he left, there was a discussion.

> It *was voted* unanimously that the action of the Malpractice Insurance and Defense Board be sustained by the Council, that the doctor's coverage for cosmetic plastic surgery be not extended "beyond the expiration of his present policy."

Office Administration and Policies.—Dr. John J. Masterson, chairman, reported that, at its meeting on December 9, 1953, the committee denied salary increases to two employes because of latenesses, approved the sale of a typewriter to an employe at a price equal to the amount which would have been received in a trade-in, and granted permission for another employe to take, in the summer of 1954, a week's vacation which the employe was entitled to but did not take in 1953. It was the sense of the meeting that physical examinations, postponed during the summer because of the press of work, be given as soon as reasonably possible.

> It *was voted* to accept the report.

Publication.—Dr. Masterson, chairman, stated that, at its meeting on December 9, 1953, the committee referred to Mr. William F. Martin, counsel, a letter which was received from Dr. William J. Roose regarding loyalty oaths, and a complaint from the attorney of a contributor regarding the editing of his article. The committee postponed to its January meeting the question of compiling and publishing a five-year index of the JOURNAL, decided not to carry advertisements from brokers regarding sale of professional practices, approved publication in the JOURNAL of precautions issued by the Presbyterian Hospital in the City of New York against the stealing of prescription blanks by narcotic addicts, authorized the business manager to purchase 146 to 162 tons of paper from the West Virginia Pulp and Paper Company for the JOURNAL for the year 1954, and voted to compliment the advertising salesmen on the increase in JOURNAL advertising.

A letter from Mr. Harold Howell, executive secretary of Herkimer, Madison, and Oneida Medical Societies was read in connection with our inability at this time to supply him with material of interest to members of those three county societies.

The committee decided to continue the policy of not publishing zone numbers in the *Directory;* to supply three complimentary copies of the 1953 Directory to the State Department of Health, as requested by Dr. George James, Assistant Commissioner; to supply a complimentary copy to the Medical Society of the County of New York, without establishing a precedent; and to ask Dr. Anderton to inform Dr. Herbert S. Ogden, secretary of that society, that it is not our custom to give copies of the *Directory* to the county medical societies.

The report *was accepted.*

Planning Committee for Medical Policies.—Dr. Peter J. Di Natale, chairman, reported:

"We have had two well attended meetings. The main topics have been the relationship between the osteopaths and the medical profession and the resolution in regard to the establishment of a Council Committee on General Practice.

"We have conferred with a number of members of the osteopathic profession. We have seen the president of the New York State Osteopathic Society and a former member of the Board of Medical Examiners of the State of New York. We have enjoyed seeing the dean of an osteopathic school, two deans of medical schools, and various others, to hear from them the osteopathic concept. We will have a detailed report later."

Public Health and Education.—Dr. Theodore J. Curphey, chairman, stated he had attended four meetings and arranged eight postgraduate lectures for seven counties.

He reported the approval of the Maternal and Child Welfare Subcommittee of the resolution from the Broome County Medical Society which was referred in October. The subcommittee decided that information regarding agencies to which a child problem might be referred in each community be procured by the regional chairmen and made available to physicians through the county medical societies. It was suggested that information of this sort could be compiled in the form of a handbook on a regional or county basis. Reports were heard by the subcommittee on the inability, due to lack of funds, of the State Health Department and the State Education Department to organize a course for physicians in the examination and care of school children, on the availability of blood, and on the possibility of obtaining matched birth and death certificates from the State Health Department within two weeks. The following changes in the composition of regions were agreed upon by the subcommittee:

Seneca County (never included in any region, apparently through oversight) is to be added to Region 10

Ulster County to be transferred to Region 3 (from 4)

Greene County to be transferred to Region 5 (from 4)

Oswego and St. Lawrence Counties to Region 7 (Oswego from 8 and St. Lawrence from 6)

Herkimer and Hamilton Counties to Region 8 (from 7).

Dr. Curphey presented the following recommendations from the *Subcommittee on the Hard of Hearing and the Deaf:*

1. That a publicity and educational program be initiated through all media possible to inform doctors, especially industrial physicians, ear, nose and throat specialists, pediatricians, general practitioners, child psychiatrists, nurses, parents, school teachers, school administrators, health organizations, ministers, and others of indications of deafness to be looked for, the possibilities of helping the hard of hearing, and the social, emotional, and mental retardation which may result from neglect. In support of this recommendation the subcommittee provided the information that the first five years of life are the most important learning and character-forming period. More than 200,000 children need help in New York State. Only 10 to 15 per cent are now getting it. The majority of hearing loss can be corrected or stayed, and every child can be rehabilitated more effectively to use what hearing he has.
2. That additional audiology clinics be established and that large units be planned in future medical schools for diagnosis, teaching, rehabilitation, and dissemination of information for the hard of hearing.
3. That funds be requested to pay a Commissioner of Health for Hearing and Speech at a salary of at least $15,000, to provide him with a staff similar to that provided for the Commissioner of the Blind, and to enable this unit to function as a coordinator of all activities in this field to see that the best use is made of all voluntary and appropriated money and effort.
4. That at least one state teachers' college provide a major course of study to prepare qualified teachers of the hearing handicapped.
5. That the Commissioner of Health designate some one in authority in his department to confer with the Subcommittee on the Hard of Hearing and the Deaf to further this program.
6. That short articles be published in the NEW YORK STATE JOURNAL OF MEDICINE on the necessity and the means of early diagnosis of ear disease and the detection of deafness.

It *was voted* to adopt this part of the report. The report as a whole *was adopted.*

Public Relations.—Since Dr. Floyd S. Winslow, the chairman, was called away from the meeting, Dr. Renato J. Azzari presented the report and requested approval.

"Since the last meeting of the Council, work has been started on a code of cooperation with the fields of radio, television, the press, and photographers.

"Dr. John McClintock, chairman of the special subcommittee of the Public Relations Committee appointed to draw up such a code, met Mr. Miebach in Albany on November 18. Dr. McClintock has prepared a tentative draft of a code. This has been mailed to members of his subcommittee, Dr. Eggston, Dr. Anderton, and other key persons. It is hoped that there will evolve a code acceptable to the State Society and to representatives of the radio, television, and allied fields in this State.

"Orders for the new series of 12 pamphlets on medicoeconomic subjects have continued to be received. As a result of the efforts of Mr. Messinger, Mr. Tracey, and Mr. Walsh, more than half of the county societies have expressed so much interest that the first printing may exceed 1,250,000 copies. Eighteen counties have already ordered 732,000 copies, while 14 others have promised orders for an additional 546,000 copies.

"On November 18, Mr. Miebach traveled to Albany for the 1953 conference of secretaries of county medical societies.

"Your chairman attended the American Medical Association's Sixth Medical Public Relations Conference in St. Louis, Missouri, on November 30, as well as the American Medical Association Clinical Session, December 1 to 4. Mr. Miebach also was present.

"Assistance was given by the Bureau to several writers. Among them was a representative of *Medical Economics* who is readying an article on emergency service and mediation committees.

"The Bureau mailed to newspapers throughout the State releases announcing postgraduate lectures in the counties of Albany, Allegany, Broome, Onondaga, Ontario, Schoharie, Steuben, and Suffolk.

"The Bureau continued to assist the Auxiliary prepare reports for the NEW YORK STATE JOURNAL OF MEDICINE and in other ways.

"A letter was sent to all county society public relations chairmen and executive secretaries in counties where TV stations are located, urging a report on the action taken on the A.M.A. *TV Film Package.*

"Through the cooperation of the Bureau, arrangements were made for the appearance of Dr. Henry E. McGarvey, past president, Medical Society of the County of Westchester, on a National Broadcasting Company television program. Dr. McGarvey appeared on Ben Grauer's program, *Between the Lines.* This was devoted to a discussion of the law and the 'Drunkometer,' on Sunday, November 30, at 12:30 P.M."

The report was *approved.*

Woman's Auxiliary.—Dr. Edward T. Wentworth, chairman, stated he would like to have appear in the minutes of the Council the formal report to the Council by the president of the Woman's Auxiliary to the Medical Society of the State of New York.

It *was voted* that this report be accepted.

Report of the President of Woman's Auxiliary, to the Council.—Since my last report to the Council (August, 1953), the county auxiliaries have been busy carrying out plans and projects suggested by the State chairmen.

In September Oswego Auxiliary members under the leadership of Mrs. Alton B. Thompson and with help from members of nearby auxiliaries took charge of the State Auxiliary Exhibit at the New York State Fair in Syracuse. The exhibit featured medical society public relations, Blue Shield plans, nurse recruitment, weight and nutrition information, *Today's Health,* and the prize-winning health posters—a little too much for the small space we had. Two student nurses in uniform, a very attractive new feature this year, gave information and answered questions on recruitment. In her report Mrs. Thompson recommended that the exhibit be held in some other building where there would be more visitors and of the kind that needed and would benefit more by our exhibit. This was discussed with Dr. Wentworth, chairman of our Advisory Committee. If the exhibit is taken out of the Women's Building, it cannot be given under the name of "Auxiliary." It was Dr. Wentworth's opinion that we keep it under our name, recommended that we plan it differently, and get more help from the Public Relations Bureau of the State Society. These recommendations will be considered when making plans for the 1954 Fair. Cost of the exhibit was $420.33. Balance from the gift of $500 was returned to the State Society.

Oneida County Auxiliary was hostess for the Seventh Annual Fall Conference held in Utica, September 28 to 30. Our president-elect presided at the conference. State chairmen brought out and discussed outstanding projects. The *Ladder* was distributed.

Attendance of county auxiliary presidents was not good, but there are always many reasons why "homemakers" cannot attend meetings at the last minute. The *Ladder* and other material distributed at the Conference were sent to all absentees.

I attended eight district branch meetings. Our president-elect, Mrs. Arthur Bennett, represented the Auxiliary at the meeting of the Third District in Kingston. I addressed the auxiliary members at all but one of these and also made a few remarks to the doctors of seven districts. Although the district councillors did their best to encourage members to attend these meetings and had prepared programs of interest and value, attendance was not good, but it was better than last year.

Our president-elect and I attended the Conference of State Presidents and Presidents-Elect in Chicago, November 18 to 20. Among the many speakers was Dr. Edward J. McCormick, president of the American Medical Association. State Auxiliary presidents participated in the panel discussions on organization, program, legislation, American Medical Education Foundation, *Today's Health*, nurse recruitment, and civil defense in which I took part.

Our nurse recruitment program is steadily progressing, and as part of this program, county auxiliaries are now planning to organize "Future Nurses Clubs." Two have already been formed, and I am confident that many more will be in existence before the end of the auxiliary year.

Twenty-eight auxiliaries are participating in the second Health Poster Contest. The State-wide judging will take place at the Academy of Medicine in Rochester on April 10.

Dr. Anderton's request that we organize a committee of hostesses to act as guides at convention will be taken care of, and if there is anything else that we can do for the Society, please do not hesitate to call on me.

On behalf of the Auxiliary, may I extend sincere appreciation of the many courtesies shown us and may I wish the members of the Advisory Committee and the members of the Council of the Medical Society a Christmas of great joy and a New Year of good health, happiness, and prosperity.

LIBBY R. D'ANGELO, *President*
(Mrs. Thomas M. d'Angelo)

December 5, 1953

Workmen's Compensation.—Dr. Gerald D. Dorman, chairman, presented the following report:

"The attached night letter was received on November 12 by Dr. Anderton and Dr. Kaliski. Dr. Kaliski was requested by the Council to reply. A similiar inquiry was made by the Nassau County Medical Society in October. This inquiry was referred by the county society to Mr. Martin, counsel, and by him referred to Dr. Anderton, who handed it to your director. Under date of October 27 your director had replied in a letter to Mr. Martin holding that the provisions of the Workmen's Compensation Law are sufficient to permit a physician who supervises a medical service to charge for same. Under section 13-f of the Workmen's Compensation Law, a hospital is not allowed to charge for medical services. Furthermore, a hospital is not allowed to set up a medical bureau, indicative of the right of the hospital to treat only emergency or inpatients and not to practice medicine, per se. A copy of this letter to Mr. Martin was sent to Dr. McCarty, secretary of the Coordinating Council. In a telephone conversation Dr. McCarty indicated that the case which brought about the inquiry was one in which a physician connected with the Kings County Hospital in Brooklyn, Dr. David Teplitsky, had collected money for services rendered by interns under his supervision. The Commissioner of Hospitals had advised Dr. Teplitsky that unless he refunded this money to the hospital, he would be removed from the hospital staff. Dr. Teplitsky had retained Dr. George I. Swetlow (who is an attorney and physician) to represent him. At the request of Dr. McCarty, your director communicated with Dr. Swetlow who indicated he intended to take court action either to prevent the removal of Dr. Teplitsky from his hospital position or to have him restored to same if he was removed. He wished to know whether in the opinion of the State Medical Society a doctor is entitled to collect fees such as was the case with Dr. Teplitsky. On being assured that Dr. Teplitsky personally supervised the work of the interns and the giving of transfusions, etc., an opinion was rendered to the effect that the doctor was entitled to payment.

Subsequently Dr. Swetlow asked that the State Medical Society participate as amicus curiae in any legal action that he might bring. It was suggested that Dr. Swetlow apply to the Kings County Medical Society first, and if the State Medical Society was asked to participate by the Kings County Medical Society, the request would be brought to the attention of the Council.

Dr. Kaliski under date of November 30, 1953, received a letter from Miss Mary Donlon, chairman of the Workmen's Compensation Board, thanking him for his assistance in the podiatry fee schedule. This fee schedule for podiatrists, as devised by a committee appointed by Miss Donlon, on which Dr. Kaliski represented the State Medical Society, was adopted and will be printed in the near future. The schedule is approximately 20 to 30 per cent lower than the fees payable to general practitioners.

In a covering memorandum Miss Donlon states, "problems of diagnosis concern alike the welfare of workmen's compensation and the employers whose financial responsibility workmen's compensation is. Unless there is thorough and competent diagnosis, grave risk is run in many cases that treatment of a foot injury alone may prove not to be adequate to minimize the disability of the worker and rehabilitate him promptly . . . If the injury or condition is one which is outside the limitations prescribed by the Education Law for podiatry care and treatment, or if the injuries that are caused by an accident that arose out of and in the course of employment affect other parts of the body in addition to the foot, the podiatrist may not render care except under the supervision of a duly authorized physician."

The injured worker is entitled to free choice of podiatrists. However, if the injury or condition is one which is outside the limitations prescribed by the Education Law for podiatry care and treatment, or if the injuries are caused by an accident that rose out of and in the course of employment and affect more than the foot, the podiatrist may not render care except under the supervision of a duly authorized physician. Great responsibility thus is laid on the podiatrist to decline independent treatment in cases where the injury or condition concerns some part of the body other than the foot.

COPY OF TELEGRAM

November 11, 1953

The following letter is being referred to the Council and to the Compensation Committee for an opinion as to whether (1) a physician is allowed to charge for transfusions which were administered by an intern and supervised by the physician; (2) whether the New York City Department of Hospitals is allowed to charge for medical services other than those which are named in the State Compensation Law.

This letter has been received by the Coordinating Council from Dr. David Teplitsky, 135 Eastern Parkway, Brooklyn:

"Dear Dr. McCarty:

A situation has arisen by which the Commissioner of Hospitals of the State of New York has demanded a refund of compensation fee paid to me for transfusion or intravenous injection which were administered on my service and under my direction at the Kings County Hospital in Brooklyn. In the past I have always billed the insurance company for these services, and it was my belief that no hospital could charge for my medical services with a very few exceptions which are provided by law. Under the Workmen's Compensation Laws of the State of New York as amended in 1944 no physician could give any part of a fee with the exception of a certain part of the x-ray fee and no hospital itself was allowed to collect fees for any type of medical care. In 1947 the laws were amended to allow voluntary hospitals to bill for x-ray services and for physical therapy, anesthesia, and pathology when rendered under the supervision of salaried physician on the staff. In 1938 General Order 307 of the Department of Hospitals provided that infusions and transfusions could be billed for by the Department of Hospitals when these services were performed by salaried physicians. It is my belief that the Workmen's Compensation Law of the State of New York as amended in 1944 and in 1947 superseded any general order issued by the Department of Hospitals. (*s*) Dr. David Teplitsky"

(*s*) CHARLES F. MCCARTY, *Secretary*,
Coordinating Council, First District Branch
Medical Society of the State of New York

1313 Bedford Avenue
Brooklyn, New York

COPY

October 27, 1953

William F. Martin, Esq.
30 Broad Street
New York 4, New York

Dear Mr. Martin:

I have before me an inquiry from the Nassau County Medical Society concerning the billing of the State Insurance for services rendered by a resident or intern under the direction of a duly constituted member of the hospital staff who is also authorized to treat compensation claimants.

I believe the provisions of the Workmen's Compensation Law provide that medical service may be rendered under the active and personal supervision of an authorized physician by a registered nurse, registered physiotherapist, or other person trained in laboratory or diagnostic technics within the scope of such person's professional training. This would undoubtedly include an intern or resident who is a member of the administrative staff of a hospital assisting the medical staff in treating patients. Section 13-b of the Workmen's Compensation Law provides in paragraph (*c*) that such services may be rendered.

Compensation claimants are not ward or charity cases. They are private patients, and regardless of where they are situated in the hospital, they have the status of private (semiprivate) patients. The employer is liable for the cost of medical care of compensation claimants. Interns or residents are in no different relationship to the physician than is a registered nurse or physiotherapist. They assist the physician in carrying out his functions and are not, except in emergencies, permitted to act independently in rendering medical service. Since they are agents or assistants of the attending physician, any service that they render under his supervision is a charge against the employer or insurance carrier.

A physician is ethically and legally justified in making a charge for services rendered under his personal supervision and by his direction. He is legally responsible for such services.

Under the provisions of Section 13-f of the Workmen's Compensation Law, fees for medical services shall be payable only to a physician or other lawfully qualified person permitted by Section 13-b of the Workmen's Compensation Law to render medical care. An intern or resident is not legally qualified to render bills for the treatment of compensation patients. He is not a member of the duly constituted staff of a hospital. He is merely an assistant to the medical staff and in the category of an administrative official aiding the medical staff to carry out its functions. Hospitals under the provision of Section 13-f shall not be entitled to receive the remuneration paid to physicians on their staff for medical and surgical services. It goes without saying that transfusions and infusions and any other such functions carried out by interns, residents, or other assistants are medical services, and fees for same are payable only to a physician.

It is my considered opinion that the State Insurance Fund is in error when it refuses to pay a physician for services rendered under his direction and for which he is, as you well know, legally responsible should there be any tort or negligence.

If it is deemed that the fees for a transfusion, infusion, etc., when rendered under the personal supervision or order of a physician by an intern or resident are too high it is within the province of the chairman of the Workmen's Compensation Board to make a fee adequate for the services rendered under the direction of a physician rather than by the physician personally; but in any event, I believe the State Insurance Fund is liable for the bills rendered by the doctor.

I feel certain that if these matters are brought to the attention of the Medical Practice Committee which will decide the question of value of the services rendered by the physician, they will render a decision in accordance with the provisions of the Workmen's Compensation Law as stated above

David J. Kaliski, *Director*
Bureau of Workmen's Compensation
Medical Society of the State of New York

Dr. Dorman commented:

"The Workmen's Compensation Report is attached. In addition, there are two or three comments that I would like to make.

"In the attached report you will notice that the podiatrists' allowances have gone through as recommended by your joint committee at a 20 to 30 per cent reduction as compared to the fees of the physicians.

"I would like to mention the nice job that Dr. Kaliski has done in serving on this committee and in helping with the formulation of this schedule.

"Two days ago there was a meeting of the Advisory Committee on Workmen's Compensation, which I was not able to attend, and which Dr. Kaliski did attend, on the problem of noise in industry and the loss of hearing in workmen's compensation cases.

"Following that, there was a report and a meeting all day at the Commodore yesterday. Dr. Kaliski was there in the morning, and I attended in the afternoon. The morning session was given over to background on ways of testing noise in industry, the various ways of measuring loss of hearing, and also a fast anatomic and physiologic study of the ear by Dr. Guild.

"In the afternoon the report of Miss Mary Donlon's Committee on the Hard of Hearing was placed before the meeting. There were about 450 people present, including industrial physicians, insurance carriers, and representatives of the labor unions, as well as the State compensation board. They took the matter up in detail, and the consensus of opinion was that it would take six months after a patient is removed from a noisy area before you could pass judgment on the amount of total disability in hearing. It was brought out that sometimes over a much longer period there is further improvement in hearing. The representatives of labor, C.I.O., and some of the steel workers were pressing for a more rapid settlement where they would get a prompt hearing and a settlement and judgment for the worker within one to three months. Miss Mary Donlon denied this to them and said this was on a temporary basis and was a matter which would be taken up over a prolonged period. She has continued her committee on study of this problem of noise in industry and loss of hearing.

"Dr. Kaliski had pointed out at the Advisory Committee that other factors enter into it. You cannot always prove that a man was injured because of the drop hammer working in some of these heavy steel mills—if somebody let a gun go off right near his ear, for example. He also pointed out there are the other factors of congenital otosclerosis coming on and also the question of certain drug deafnesses, such as quinine, atabrine, aspirin, and in antibiotics, some of which have a temporary effect and some of which show permanent damage."

It *was voted* to adopt the report as a whole.

Report of Delegates to the American Medical Association

Dr. Masterson stated:

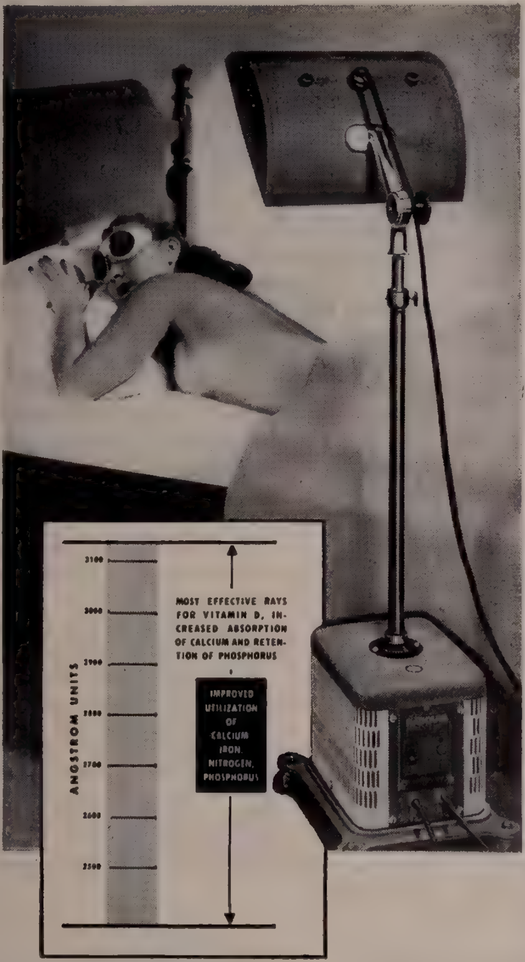
"The delegates from the Medical Society of the State of New York attended sessions of the House of Delegates of the American Medical Association, at the Jefferson Hotel, St. Louis, Missouri, December 1 to 3, 1953. Present were Drs. J. Stanley Kenney, John J. Masterson, Maurice J. Dattelbaum, Peter M. Murray, A. H. Aaron, Renato J. Azzari, Edward T. Wentworth, Thomas M. d'Angelo, Andrew A. Eggston, W. P. Anderton, James R. Reuling, Carlton E. Wertz, Edward P. Flood, Herbert H. Bauckus, Thurman B. Givan, Harold F. R. Brown, and John J. H. Keating. Dr. Eggston was alternate for Dr. George W. Kosmak, who was prevented from attending by illness.

"Also present were Dr. Edward R. Cunniffe, chairman of the Judicial Council; Dr. H. G. Weiskotten, chairman, and Dr. Donald G. Anderson, a member, of the Council on Medical Education and Hospitals; Dr. Louis H. Bauer, past-president and a member of the Council on Medical Service; Dr. Floyd S. Winslow, member of the Council on Constitution and Bylaws; Dr. Leo F. Schiff, past vice-president of the American Medical Association; and Mr. Frederick W. Miebach, director of your Public and Professional Relations Bureau.

"Your delegation met from 8:30 until 9:30 A.M. Tuesday, December 1, 1953, Dr. John J. Masterson, presiding. A resolution from the Medical Society of the County of Albany, as revised, was discussed. It was introduced by Dr. Givan and referred to the Reference Committee on Miscellaneous Business. The committee report expressed sympathy with our resolution and stated that the policy regarding practice of medicine by hospitals had been enunciated in the 'Guides for Conduct of Physicians in Relationships with Institutions,' as adopted by the House of Delegates of the American Medical Association in December, 1951.

"One delegate was assigned to attend each reference committee. We thought by doing that we would be able to obtain information on what happened in the various reference committees and their

[Continued on page 562]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[Continued from page 560]

recommendations. We have several reports from those representatives, a very detailed report especially from Dr. Kenney. We also have a very good report from Dr. Wentworth.

"Other delegates appeared before various of these committees. Your delegates were regular and punctual in their attendance and represented the Medical Society of the State of New York in the traditionally efficient manner.

"The members of the House of Delegates have received a couple of days ago from Dr. George Lull what he termed a roundup of the meeting of the House of Delegates."

The report *was accepted.*

Dr. Dattelbaum stated:

"Mr. President, I want to supplement the report of Dr. Masterson on the House of Delegates meeting at St. Louis. I believe we should go on record thanking Dr. Reuling for inaugurating a procedure which has met so much favor by all of the delegates. The resolutions were expedited, the resolutions were given and so placed before us at the last session that we were able to get through with the work in a fine way without confusion. I thought this should be on our record, because I have spoken to men who have been in the House of Delegates for years, and this procedure has met with so much favor."

The Chair *ruled* that this be made a part of the record.

Medical News

[Continued from page 551]

Heller, B. H. Lean, Locke L. Mackenzie, Herbert C. Maier, Robert Collier Page, Juan Negrin, Jr., George W. Slaughter, Will Cook Spain, Anthony J. Lanza, Lester Carson Spier, John Russell Twiss, Henry V. Wildman, Emery A. Rovenstine, William C. T. Gaynor, Arthur Lejwa, Erwin DiCyan, David Lyall, F. S. Hunter Adamo, and Harry E. Tebrock.

In a letter to Dr. Eller following the reception, President Eisenhower said: "I am profoundly interested in the expansion of the Association's scholarship program, to the end that the level of professional skill may be raised. Moreover, the program you have pursued during the past twenty-six years of interchanging medical knowledge and friendship among the doctors of this hemisphere and which carries out your credo, 'The practice of medicine has no national, racial or religious boundaries,' certainly promotes understanding and cooperation among the American nations."

The President also extended his greeting to the members who participated in the ninth Inter-American Medical Cruise aboard the *S.S. Nieuw Amsterdam.*

Meetings—Past

Society of Medical Jurisprudence

Dr. Robert Tuby, attending surgeon, Swedish Hospital, and assistant surgeon, Kings County Hospital, spoke on "The Medical Aspects in a Trial of a Negligence Case," at the December 14 meeting of the Society of Medical Jurisprudence. Dr. Sol Fineman, associate clinical professor of radiology, Columbia University, and attending roentgenologist, Montefiore Hospital, opened the discussion in which the members and invited guests participated.

At the January 11 meeting, the President's annual report to the membership was given, and an address, "Where Medicine and Law Meet," was presented by Colonel Howard J. Hutter, Medical Corps, U.S. Army (Retired). Dr. Louis W. Granirer, associate in medicine, New York Medical College, and physician-in-charge, Arthritis Clinic, Queens General Hospital, spoke on "Rheumatoid Arthritis—Its Inactivation by a Fraction Isolated from Postpartum Plasma."

Livingston County Medical Society

"The Management of Arthritis" was the subject of a paper presented by Dr. Bernard M. Norcross, instructor in medicine, University of Buffalo School of Medicine, at the January 6 meeting of the Livingston County Medical Society, at Mt. Morris Tuberculosis Hospital.

Meetings--Future

Nassau Ophthalmological Society

Dr. Harold W. Brown will be the speaker at the meeting of the Nassau Ophthalmological Society on February 22. The meeting will be held at McCluskey's Steak House, Sunrise Highway, Bellmore, and will start with cocktails at 6:30 P.M. Dr. Brown will present a paper on "Paralysis of the Inferior Oblique Muscle."

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BOOKS REVIEWED

Annual Review of Medicine. Windsor C. Cutting, M.D., Editor. Henry W. Newman, M.D., Associate Editor. Vol. 4. Octavo of 452 pages. Stanford, Calif., Annual Reviews, 1953. Cloth, $6.00.

The fourth of the series of *Annual Reviews of Medicine* continues to be a superb compilation of authoritative reviews. It can be recommended without reserve to those who would like an up-to-date account of recent advances in medicine. Most of the reviews are short and succinct; some are monographic, such as the one on amebiasis. All in all, it is an achievement of which the editors can be proud.—Milton Plotz

The Medical Clinics of North America. Nationwide Number. March, 1953. Octavo. Illustrated. Philadelphia, W. B. Saunders Co., 1953. Published bimonthly (six numbers a year). Cloth, $18 net; paper, $15 net.

This useful series of symposia volumes from various centers in this country continues its excellent standard of performance with the present volume devoted to neurology and psychiatry. There are nineteen papers devoted to a wide range of subjects in this field and they cover many areas of current interest. The emphasis is on the practical aspect. The level of the contributors is very high indeed. There are papers on convulsive disorders, various infectious diseases, including purulent and tuberculous meningitis and virus infections, acute vascular insults, subdural hematoma, ruptured intervertebral disk, multiple sclerosis, Parkinsonism, myasthenia gravis, behavior problems in children, acute psychotic episodes, and the treatment of chronic alcoholism. This volume is highly recommended.—I. S. Freiman

Living with Cancer. By Edna Kaehele. Duodecimo of 160 pages. Garden City, Doubleday & Co., 1952. Cloth, $2.00.

The social effort directed toward cancer detection has multiplied the normal anxiety about this disease. It has resulted in an often hopeless attitude toward it. This brave story of a patient who knows she has a cancer and has lived with it for more than six years will serve to equilibrate some of our unreasonable fears. As every oncologist knows, and too few other physicians seem to know, there is a very measurable salvage rate even among those patients who are considered incurable. This should give that coloring of optimism which is so badly needed and so often lacking in the attitude of the physician toward the patient and family. It should restrain those thoughtless practitioners who think that euthanasia is a sensible or humane solution.

The reviewer has had many cancer patients and has never felt that anything could be gained by telling them of the diagnosis. He has always believed, however, that members of the family should be frankly informed of the case progress. In this fashion, unnecessary emotional turmoil for the patient is avoided and familial trauma softened. This book will be read with profit by relatives of the patient. If the patient is aware of the diagnosis, the book will be a source of comfort and hope.

The author places a strong value on high protein feeding. While this can do no harm, it should be pointed out that there is no experimental basis for its use. Readers should be reminded that none of the acceptable methods of attack were neglected by the author.—Mortimer R. Camiel

The Principles and Practice of Medicine. A Textbook for Students and Doctors. By L. S. P. Davidson, M.D., and the Staff of the Department of Medicine and Associated Clinical Units. Octavo of 919 pages, illustrated. Edinburgh & London, E. & S. Livingstone, (Baltimore, Williams & Wilkins Co.), 1952. Cloth, $6.75.

The lectures given to students of medicine in the University of Edinburgh have been edited and published in this book. Each section has been written by a teacher interested in clinical medicine and is presented in an elementary and clear fashion. Although it has been written for Scottish students, this textbook could also be used for presentation of the elements of medicine to the American student in the third year of his medical course.—Milton B. Handelsman

The 1952 Year Book of Endocrinology. (January, 1952–January, 1953). Edited by Gilbert S. Gordan, M.D. Duodecimo of 400 pages, illustrated. Chicago, Year Book Publishers, 1953. Cloth, $5.50.

This book stresses foreign contributions to the literature of endocrinology this year. The character of this year book has improved. The clinical features of endocrinology are stressed. The laboratory examinations are put in their proper place where, with few exceptions, the diagnosis is made with a careful history and physical examination.—Bernard Seligman

Twenty-Five Years of Sex Research. History of the National Research Council Committee for Research in Problems of Sex, 1922–1947. By Sophie

[Continued on page 566]

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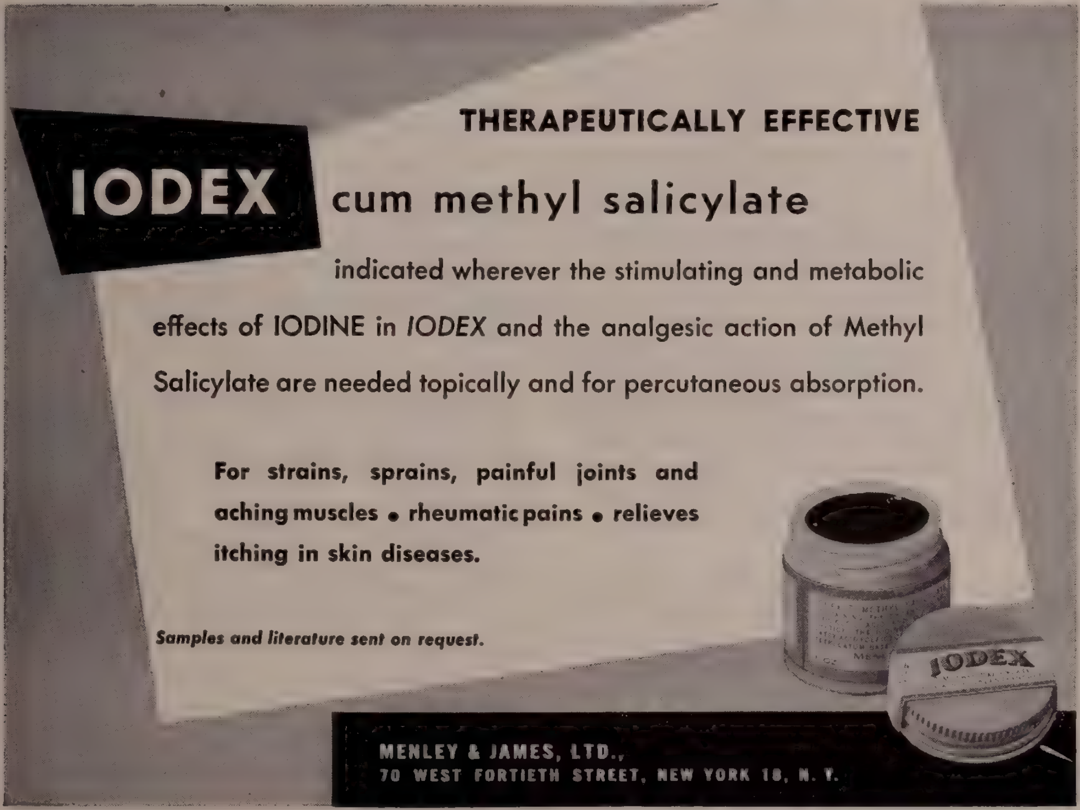

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[Continued from page 564]

D. Aberle, M.D., and George W. Corner, M.D. Octavo of 248 pages. Philadelphia, W. B. Saunders Company, 1953. Paper, $4.00.

Attention is directed to the subtitle. This is a *history* of the Committee. Several chapters contain abstracts of investigations made. However, the book seems to have two main functions. The first is a report to the financial supporters and other persons interested in how the Committee's affairs were conducted and its money spent. This occupies 40 pages. The other object is covered by a very extensive bibliography, 107 pages, of the work done under its auspices. There are 248 pages in all.—Walter D. Ludlum, Sr.

The Microbiological Assay of the Vitamin B-Complex and Amino Acids. By E. C. Barton-Wright, D.Sc. Octavo of 179 pages, illustrated. New York, Pitman Publishing Co., 1952. Cloth, $4.00.

The Microbiological Assay of the Vitamin B-Complex and Amino Acids is a complete revision of an earlier work by Barton-Wright. The author has presented basic principles of assay procedures to enable the beginner to set up assays that meet his special requirements and permit the experienced worker to study his own methods that may have resulted in a varying amount of success. The quality and presentation of the material places this text on a level above anything this reviewer has read in the field of assays.

Under the chapter headings of "General Survey of the Development of Microbiological Assay and Methods of Procedure," "The Microbiological Assay of Vitamins," and "The Microbiological Assay of Amino Acids," and in the appendices describing culture methods and stock solutions, respectively, are presented recommended micro-organisms for specific assays and means of inoculation, basal media, procedures for extracting test materials, and methods for measuring growth or acid production and computing concentrations.

The author recommends as test organisms lactic acid bacteria and the x-ray mutants of the mold Neurospora. The stability of these organisms after repeated subculture permits the performance of assays that may be repeated with a low level of experimental error. The lactic acid bacteria are particularly successful as assay organisms since a few species may perform tests for the detection of a great number of factors.—Harry Frankel

Influenza and Other Virus Infections of the Respiratory Tract. By C. H. Stuart-Harris, M.D. Octavo of 235 pages, illustrated. London, Edward Arnold & Co. (Baltimore, William & Wilkins Co.), 1953. Cloth, $6.00.

The title of this very welcome monograph on virus infections of the respiratory tract gives little idea of its scope. Besides influenza, febrile catarrh, atypical pneumonia, and ornithosis, Q fever and the common cold are reviewed in an authoritative and entertaining fashion. Now that bacterial pneumonia has receded considerably in importance, this volume can be considered a noteworthy discussion of those respiratory illnesses which are most often seen in medical practice today. It should be in every medical library.—Milton Plotz

Neomycin. Nature, Formation, Isolation, and Practical Application. By Selman A. Waksman, Ph.D. With the Collaboration of Hubert A. Lechevalier, Vincent Groupe, Walter J. Nickerson, William L. Ruigh, *et al.* Octavo of 219 pages, illustrated. New Brunswick, Rutgers University Press, 1953.

This monograph, written by the distinguished recipient of the Nobel prize, tells the complete story of neomycin. Beginning with a historical introduction, the author goes on to describe the method of producing, purifying, and assaying neomycin. Other chapters detail its action upon bacteria in vitro and in vivo, and indicate its antibiotic spectrum. Consideration is given to the development of neomycin resistance. The final chapters are devoted to the clinical use of this antibiotic.

A bibliography with over 200 references is appended.—Arnold H. Eggerth

Endocrinology in Clinical Practice. Edited by Gilbert S. Gordan, M.D., and H. Lisser, M.D. Octavo of 407 pages, illustrated. Chicago, Year Book Publishers, 1953. Cloth, $10.50.

This book amounts to a correspondence course by clinicians for clinicians. It is well documented and is the postgraduate course offered by a competent group of specialists from the University of California School of Medicine.

It is easy to read, up-to-date, practical and makes a good addition for ready reference in our office. The Year Book Publishers have made an excellent choice. The contributing authors include Escamilla, Forsham, Goldberg, Gordan, Hinman, Lisser, Naffziger, as well as Robson of Stanford.—Bernard Seligman

Biochemistry of Disease. By M. Bodansky, M.D., and O. Bodansky, M.D. Second edition revised by Oscar Bodansky, M.D. Octavo of 1,208 pages, illustrated. New York, Macmillan Co., 1952. Cloth, $12.

The second edition of this important book has been thoroughly revised and enlarged twelve years after the appearance of the first edition. Dr. Oscar Bodansky, the junior author, has taken over the entire responsibility of this edition since the death of his older brother, Dr. Meyer Bodansky.

The volume is not a conventional textbook on biochemistry, by any means, but is rather a book on clinical biochemistry so constructed as to represent a systematic integration of all the biochemical phenomena related to disease. It is arranged in an

[Continued on page 568]

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[Continued from page 566]

orderly fashion with chapters devoted to diseases of all the organs and systems of the body. Dr. Bodansky documents not only the abnormal biochemical changes in the disease under discussion but presents an intelligent analysis of the pathogenesis of the disease.

He has included, also, an appendix listing mean normal values and standard deviations of all normal biochemical analyses made of the human body. He also discusses the statistical significance of the figures in order to help the physician determine for himself what is to be regarded as normal.

It is one of the best and most authoritative textbooks on the subject of the biochemistry of disease.—W. S. Collens

A Method of Anatomy. Descriptive and Deductive. By J. C. Boileau Grant, M.B. Fifth edition. Quarto of 870 pages, illustrated. Baltimore, Williams & Wilkins Co., 1952. Cloth, $7.00.

In this fifth edition of Grant's *Method of Anatomy* there is some revision of the text of the preceding edition and an appreciable increase in the number of illustrations. Although there are changes and improvements in both text and illustrations, there is no increase in the total bulk of the book, which contains somewhat more than 800 pages.

There is no change, however, in the methods of correlating basic facts and principles of structure and function, which made the original edition unique.

Certainly the use of this book for teaching relieves the student and reader of much of the dry laborious memorizing required by older, conventional methods of teaching. The increasing use of the book in teaching circles is evidence of the popularity of this newer method.

The book is recommended to all who have any interest whatsoever in the subject of human anatomy.

A copy should be on every medical bookshelf.—Walter H. Schmitt

Psychiatry and Medical Education. Report of the 1951 Conference on Psychiatric Education held at Cornell University, Ithaca, New York, June 21–27, 1951. Organized and conducted by the American Psychiatric Association and the Association of American Medical Colleges. Editorial Board, John C. Whitehorn, M.D., Chairman. Octavo of 164 pages. Washington, American Psychiatric Association, 1952.

This is a report of the 1951 conference on psychiatric education which was held at Cornell University in June of that year. Grants from the Federal Security Agency, the U. S. Public Health Service, and the National Institute of Mental Health made this conference possible. The book is truly an elucidation not only of what psychiatry has to contribute to medical science as such, but also it is a report of views expressed by different psychiatrists and teachers about the function and responsibility of psychiatry as a discipline of human behavior in its broadest sense. Represented at the conference were psychiatrists, pediatricians, internists, neuropathologists, deans of medical schools and of nursing schools, anthropologists, and representatives of many private educational foundations. It would be well for the average doctor to read the book since it would enable him to comprehend the scope and function of psychiatry and what is being done to teach it to medical students. It would broaden his own concept and understanding of the problems of human behavior in its broadest sense.—Irving J. Sands

The Pharynx. Basic Aspects and Clinical Problems. Edited by Abraham R. Hollender, M.D. Octavo of 560 pages, illustrated. Chicago, Year Book Publishers, 1953. Cloth, $15.

The author, with the aid of expert contributors, discusses the anatomy and the more common clinical aspects dealing with the pharynx. The book is well written, the topics well discussed and interestingly presented. The author's introduction of the subject matter of each chapter and his final comment are of great aid in the crystallization of many opinions. This book is highly recommended reading for those wishing a more detailed and comprehensive understanding of the problems related to the pharynx.—Sydney Shapin

It's NOT All in Your Mind. By H. J. Berglund, M.D., and H. L. Nichols, Jr. Octavo of 343 pages. Greenwich, Conn., North Castle Books, 1953. Cloth, $3.95.

This volume of 332 pages, although written for the laity, may be read by any physician with pleasure and profit. It contains chapters on "The Nervous System and Glandular System," "Components of Personality," "Neuroses," "Psychoses," "Dreams," "Psychoanalysis," and "Psychosomatic Medicine." Much that it said of some practitioners of the latter is far from complimentary.

About 130 pages are devoted to allergy. Although adding nothing new to the science or practice of allergy, it does point out that allergics differ from normals in some respects. Many carry antigens in their blood streams, which may be transferred to normals by passive transfer, showing that allergy is based on physical findings and is not motivated by the mind, as some physicians would have us believe. The remainder of the book is given over to the glandular system, with some space given to ACTH and cortisone as therapeutic agents.—George A. Merrill

Our Common Neurosis. Notes on a Group Experiment. By Charles B. Thompson, M.D., and Alfreda P. Sill. Octavo of 210 pages. New York, Exposition Press, 1952. Cloth, $3.50.

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[Continued on page 570]

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[Continued from page 568]

discussion and attention from all who are interested in the adequate care and treatment of mentally sick people. It is impossible to say who introduced this form of therapy, but suffice it to say that it has been used sporadically by many workers for many years. Among its earliest exponents was the late Dr. Trigant Burrow. He was a prominent psychiatrist who, very early in his career, saw the validity of Freud's contributions and was among the earliest students of Freud in America. The book deals with a unique experiment in group living which was conducted in our country during the early twenties. Doctors, patients, psychiatrists, and students participated under this study which was conducted by Dr. Burrow and lasted for a period of some three years. From 1923 to 1926 a series of articles appeared in the monthly magazine, *Mental Health*, which was the publication of this particular group. These articles are now in part included in the book and they demonstrate the objective findings of interpersonal and intersocietal relationships that arose within the members of this particular group. Dr. Thompson is an eminent psychiatrist who has gathered the material for the book, and this small volume may prove of great interest to those people who are interested in group behavior both in its normal and abnormal aspects.—Irving J. Sands

The Medical Clinics of North America. New York Number. May, 1953. Octavo. Illustrated. Philadelphia, W. B. Saunders Co., 1953. Published bimonthly (six numbers a year). Cloth, $18 net; paper, $15 net.

The New York number of the *Medical Clinics* contains a symposium on prolonged illness which will be welcomed by all those who wish to keep abreast of trends in modern medicine. There is a useful introductory article on "Long-Term Illness: a Changing Scene" by Cherkasky who, with his predecessor, Bluestone, has been a pioneer in this field. There is an especially useful section on sarcoidosis by Bloch.—Milton Plotz

Dermatology in General Practice. By Jacob Hyams Swartz, M.D. Octavo of 581 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $11.

This book is written for the medical student, general practitioner, and nurse. It is one of several similar books recently coming from medical publishers. The various skin diseases are briefly described, and the recommended therapy frequently includes several prescriptions. Under some diseases are paragraphs describing nursing care.

In general, the book is divided into chapters on care of normal skin, care of abnormal skin, and the skin diseases, grouped from the standpoint of the part of the body most frequently affected—head, trunk, and extremities. Also, separate consideration is given the mycotic infection exanthemata and syphillis.—John C. Graham

Heart and Circulation. Diagnosis and Treatment. By Meyer Sclar, M.D. Assisted by Jacob Melnick, M.D. Octavo of 357 pages, illustrated. New York, Froben Press, 1953. Cloth, $7.50.

The material in this book is clear, practical, and concise. Congenital cardiac anomalies are discussed in detail and in a manner easy to digest. The chapter on electrocardiography treats the subject fully and is up to date. Differential diagnostic points of various types of arrythmias, including heartblock, are treated in a practical and instructive manner. This reviewer is especially impressed with the chapter on the anatomy and physiology of the heart.

We recommend this book unreservedly to all students of medicine interested in diseases of the heart.—Harry Apfel

The Anatomy of the Nervous System. Its Development and Function. By Stephen Walter Ranson, M.D. Revised by Sam Lillard Clark, M.D. Ninth edition. Quarto of 581 pages, illustrated. Philadelphia, W. B. Saunders Co., 1953. Cloth, $8.50.

Ranson's book on neuroanatomy is a textbook that has occupied a position of authority in its field for at least three decades. It has undergone nine editions, the last one being prepared by Dr. Clark, professor of anatomy at the University School of Medicine at Nashville. Dr. Clark has emphasized the relationship of the nervous system to the rest of the living organism, thus stressing the functional significance of the various parts of the nervous system. New material in this edition includes the functional and structural basis of aphasia, defects in correlation, epileptic form seizures, and psychiatric disorders. New data are added to the physiology of the cerebellum, thalamus and hypothalamus, the autonomic nervous system, and the new technic of cerebral angiography. The new edition maintains the usual high standard of printing and contains many illustrations and an excellent bibliography. The book will continue to enjoy the respect of all teachers of neuroanatomy and of neurology.—Irving J. Sands

Sectional Radiography of the Chest. By Irving J. Kane, M.D. Quarto of 154 pages, illustrated. New York, Springer Publishing Co., 1953. Cloth, $7.50.

This volume of 150 pages covers the subject of sectional radiography of the chest and its application in diagnosis and therapy. It is a practical book, printed in readable style on good paper. However, many of the roentgenograms could have been reproduced with more contrast.—L. A. Hochberg

The Physician in Atomic Defense. Atomic Principles, Biologic Reaction and Organization for Medical Defense. By Col. Thad P. Sears, M.D., U.S.-A.R. Octavo of 308 pages, illustrated. Chicago, Year Book Publishers, 1953. Cloth, $6.00.

[Continued on page 572]

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[Continued from page 570]

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Functional Neuroanatomy. By Wendell J. S. Krieg, Ph.D. Second edition. Quarto of 659 pages, illustrated. New York, Blakiston Co., 1953. Cloth $9.00.

This book is truly a description of the structure, form and function of the nervous system. This is the second edition of a work that first appeared ten years ago. It is a unique neuroanatomy in that it constantly stresses the relationship between form and function of the different components of the central nervous system and of the autonomic nervous system. The book also contains an atlas of sections and slice reconstruction which helps in visualizing the structure and form of the nervous system. It is profusely illustrated with photographs and drawings, many of which are in three dimensions. The book is well written and clearly illustrates the relationship between function and structure. It is highly recommended.—IRVING J. SANDS

An Atlas of the Commoner Skin Diseases. By Henry C. G. Semon, D.M.(Eng.). Color Photography originally directed by the late Arnold Moritz, M.B.(Eng.) Fourth edition. Quarto of 371 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $13.50.

This *Atlas of the Commoner Skin Diseases* is in its fourth edition. It consists of 127 plates covering the most common dermatologic conditions and 21 of the less common skin diseases. About eight new plates have been added to the present edition. The illustrations are extremely well done in color and are so accurate that a clinical diagnosis can very readily be made from them. In addition to the color photographs, a concise clinical description and treatment of the condition accompanies each plate. The author in the preface to the first edition says, "The purpose of this Atlas is to portray from the living subject, and in natural color, a collection of the dermatoses most frequently seen in the routine of outpatient practice." He certainly has accomplished this purpose. This book can be highly recommended for students and general practitioners as a helpful guide in recognizing the most common skin diseases.—A. WALZER

Practical X-Ray Treatment. By Arthur W. Erskine, M.D. Fourth edition. Octavo of 195 pages, illustrated. St. Paul & Minneapolis, Bruce Publishing Co., 1952. Cloth, $5.00.

The fourth edition of *Practical X-Ray Treatment* by Dr. Arthur W. Erskine is a well-written, concise little book with a wealth of information, by one of the pioneer radiologists. This new printing enlarges on previous editions. It is up-to-date, with descriptions of some of the newer trends, including the latest technics of grid and rotation therapy. Supervoltage and cobalt therapy receive little attention.

There are chapters on the standard technics, scattering and distribution of x-ray with numerous depth dosage charts, and factors affecting skin dosage. The apparatus used and means of protection are adequately covered. There is a comprehensive discussion of the treatment by radiation therapy of skin lesions and inflammations, as well as benign and malignant diseases.

Throughout the book there is emphasis on the practical aspects of radiation therapy without too much emphasis on theory. For anyone interested in therapeutic application of x-rays, this book should be a valuable guide in a constantly expanding field. The addition of references at the end of each chapter has been an excellent improvement. As in the previous editions, the methods emphasized are the ones that the author has used over many years and found practical and proven, on the basis of extensive clinical material. This book deserves to find a large audience among the younger radiologists interested in the practical application of radiation therapy. The author indicates that it is not written for the older, more experienced radiologists.—LOUIS NATHANSON

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THE MONTH IN WASHINGTON

Although the budget, defense, and farm policy are monopolizing Washington headlines, Congress is paying more than casual attention to the health and social security fields. In these, as in other legislative areas, it has for its guidance a specific program laid down by President Eisenhower in his various messages during the first few weeks of the session. The question now is whether this closely-divided Congress will have the time and/or the inclination to follow through on everything the Administration wants.

Before Congress settled down to its task, the President met with a group of A.M.A. leaders, who discussed with him the Association's position on several important pieces of legislation. Present at the White House meeting, in addition to Mr. Eisenhower and Sherman Adams, Assistant to the President, were A.M.A. President Edward J. McCormick, Chairman of the Board of Trustees Dwight H. Murray, President-Elect Walter B. Martin, and Washington Office Director Frank E. Wilson.

Congress got into the health and welfare field with no waste of time. Five days after Congress reconvened, the House Interstate and Foreign Commerce Committee, under the chairmanship of Rep. Charles Wolverton (R., N.J.), began an exhaustive series of hearings on voluntary health insurance, further evidence that the Administration is determined to get some action in this direction.

Chairman Wolverton as long as four years ago was interested in legislation to help prepaid insurance programs extend their coverage and increase their benefits. In 1950 he incorporated his ideas in a bill, but it was not acted upon by the committee and was not revived until this year. Now the atmosphere is much more favorable for Mr. Wolverton's proposal. Not only is he chairman of the committee and his party in control of Congress, but his ideas have strong support from the Administration.

Basically the Wolverton idea is an FDIC for voluntary health insurance. In about the same way the Federal Deposit Insurance Corporation insures bank deposits up to a certain limit, the Wolverton program would insure (or reinsure) various types of hospital, surgical, and medical insurance programs. The proposal is for the Federal government to set up a national health insurance underwriting corporation. To keep the corporation going, the member plans would contribute a certain percentage of their gross receipts, possibly 2 per cent.

With the national corporation underwriting unusual risks, the individual programs could offer catastrophic or "complete" coverage. By scaling individual premiums to the family income, the member plans also could offer protection to very low income families. The national corporation would pay possibly two thirds of each subscriber's claim in excess of, say, $500 or $1,000 in any one year.

Another piece of legislation receiving favorable attention also would help families with their medical expenses, a proposed liberalization of income tax deductions allowed for medical expenses. Under present law only medical expenses exceeding 5 per cent of taxable income may be deducted. The pending legislation would drop this to probably 3 per cent and raise or eliminate the maximum limit. In past years scores of bills pointed in this direction have been introduced. If this is incorporated in the general tax overhaul legislation, it is believed to have a good chance of enactment.

Secretary Oveta Culp Hobby's Department of Health, Education and Welfare is firmly behind a proposal to have the Federal government show more leadership in vocational rehabilitation of the handicapped.

At this writing it is too early for any good indication as to whether physicians will be brought under social security. The Administration's bill would blanket in most self-employed groups, including dentists, attorneys, architects, and farmers, in addition to physicians. Rep. Carl Curtis (R., Neb.), chairman of the subcommittee which investigated social security, apparently feels the same way. However, a substantial number of the members of the House Ways and Means Committee, which must pass on the bill, are known to feel that compulsion should not be used on groups that do not want Old Age and Survivors Insurance.

From all indications available during the first few weeks of Congress, a showdown fight may be unavoidable on medical care for military dependents. Defense Department, with support from the President, wants dependent care extended and made uniform among the three services, with military physicians carrying as much of the responsibility as they can. Under the Defense Department plan, dependents who could not be taken care of at military installations would be allowed to obtain their care from private sources, with the government paying almost all of the cost.

The American Medical Association agrees with the Defense Department that all dependents should receive medical benefits as nearly uniform as possible. However, A.M.A. contends that wherever possible, dependents should use private physicians and private hospitals and that the military personnel and facilities should be employed only where civilian facilities are inadequate.

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1. Krantz, J.C. & Carr, C.J.: Pharmacological Principles of Medical Practice, Williams & Wilkins Co., Baltimore, Md., 1951.
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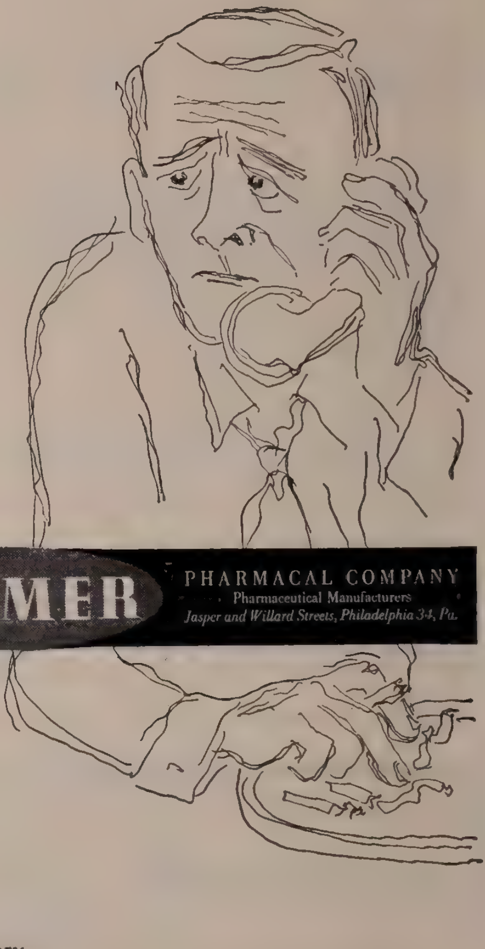

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1. English, A. R., et al.: Antibiotics Annual (1953-1954), New York, Medical Encyclopedia, Inc., 1953, p. 70.
2. Finland, M.: Brit. M. J. 2:4846 (Nov. 21) 1953.

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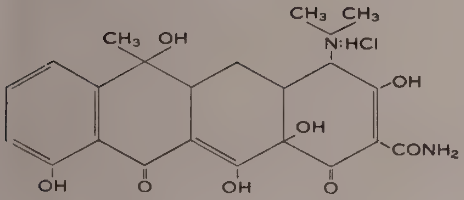
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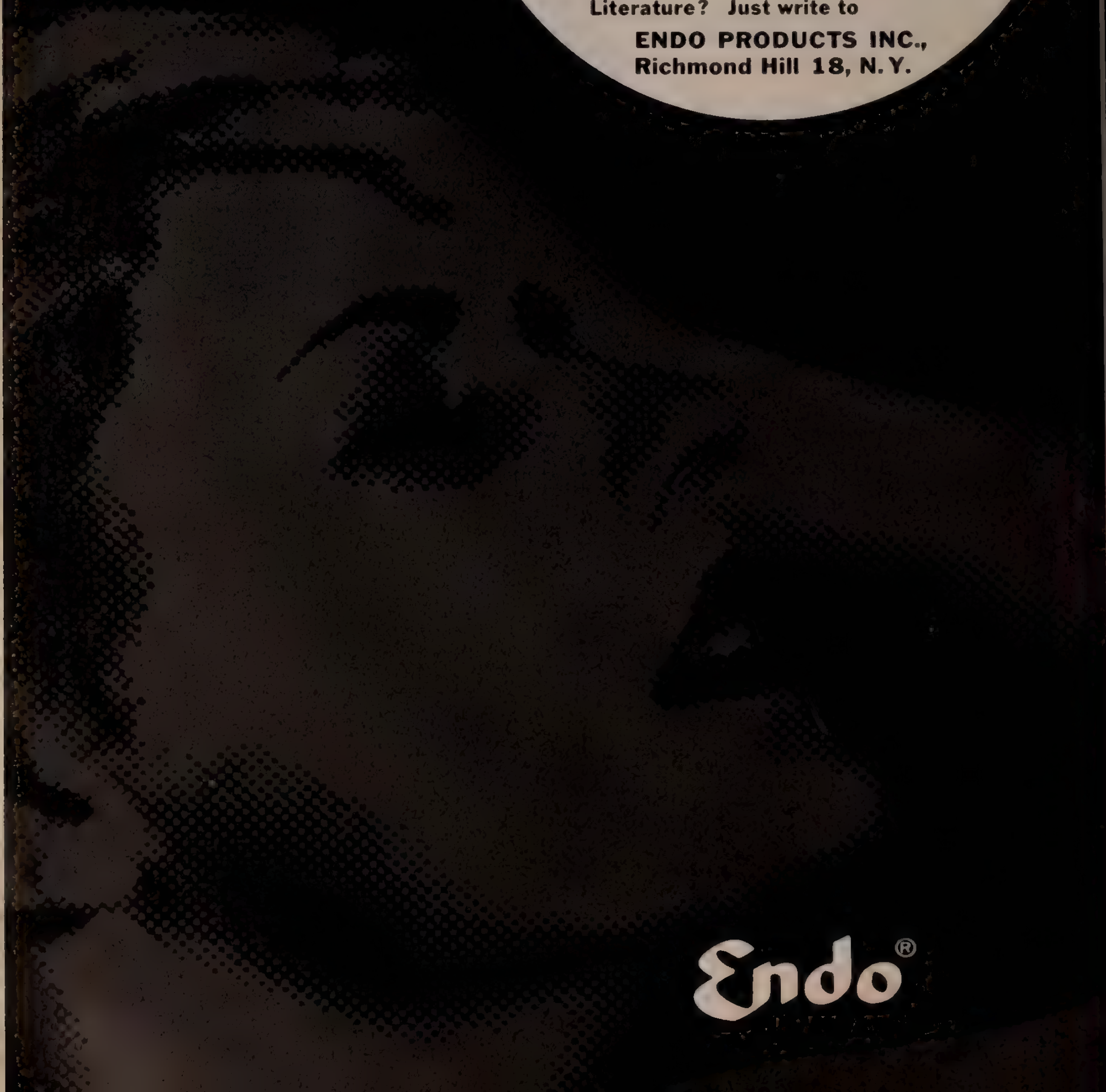

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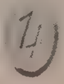
Impressive response in acute rheumatic fever

HydroCortone®

(HYDROCORTISONE, MERCK)

BENEFITS: HYDROCORTONE, like cortisone, readily overcomes the acute toxic manifestations of rheumatic fever. Clinical improvement is usually apparent within twenty-four hours and the temperature generally is reduced to normal limits within several days. Favorable effect on acute carditis accompanied by congestive failure may be lifesaving. Cost of therapy is now comparable to that of cortisone.

SUPPLIED: ORAL—HYDROCORTONE Tablets: 20 mg., bottles of 25 tablets; 10 mg., bottles of 50 and 100 tablets; 5 mg., bottles of 50 tablets.

All HYDROCORTONE Tablets are oval-shaped and carry this trade-mark: 

fast-acting salicylate formula

HIGH in analgesic power

LOW in risk to the patient

Recent studies[1,2] suggest that the time-tried salicylates exert a *hormonal* action similar to that of ACTH, stimulating release of cortisone.

Whenever rapid and sustained salicylate action is desired, **ELPAGEN** gives your patient the benefits of a *potentiated* salicylate combination in *uncoated* tablet form—without the gastric irritation of unmodified salicylates and without the potential dangers (or expense) of ACTH or cortisone itself.

ELPAGEN/PATCH

Each orange-colored, uncoated tablet provides:

Sodium salicylate	5 gr.	(325 mg.)	*POTENTIATED SALICYLATE BLOOD LEVELS*
Sodium para-aminobenzoate	3 gr.	(195 mg.)	
Salicylamide	½ gr.	(32.5 mg.)	
plus			
Ascorbic acid (as sodium ascorbate)	30 mg.		*SAFEGUARD AGAINST VITAMIN C DEPLETION AND CAPILLARY HEMORRHAGE*
Dihydroxy aluminum aminoacetate	½ gr.	(32.5 mg.)	BUFFERING ACTION *OVERCOMES GASTRIC INTOLERANCE*[3]

SUPPLIED in bottles of 100 and 500 tablets.

THE E. L. PATCH COMPANY
STONEHAM • MASSACHUSETTS

---

1. Van Cauwenberge, H.: Lancet 261:374, 1951; Van Cauwenberge, H., and Heusghem, C.: Proc. Soc. Exper. Biol. & Med. 80:51, 1952. 2. Pelloja, M.: Lancet 1:233, 1952. 3. Paul, W. D., et al.: J. Am. Pharm. A., Scient. Ed. 39:21, 1950.

Triple Protection for the Heavily Overweight Patient

1 Protection against hunger pangs

Obocell Complex contains d-Amphetamine and Nicel.* Appetite is curbed *at meals.* Nicel sustains control by extending the effects *between meals.*

2 Protection for his damaged liver

Obocell Complex contains choline,[1] best for transporting neutral fat, and inositol, considered superior in transporting cholesterol.

3 Protection for his enzyme systems

Obocell Complex supplies thiamine, riboflavin and niacinamide in amounts recommended by Zelman.[1] These vitamins are essential in intermediary carbohydrate metabolism and oxidative processes.

1. Zelman, S.: Arch. Int. Med. 90: 141, 1952.

A NEW PRODUCT ANNOUNCEMENT

Each Obocell Complex capsule supplies:

d-Amphetamine Phosphate (dibasic)	5 mg.
Nicel*	100 mg.
Choline Bitartrate	200 mg.
Inositol	60 mg.
Thiamine Mononitrate	0.8 mg.
Riboflavin	1.2 mg.
Niacinamide	8 mg.

Bottles of
50 and 500

*Irwin-Neisler's Brand of High Viscosity Methylcellulose.

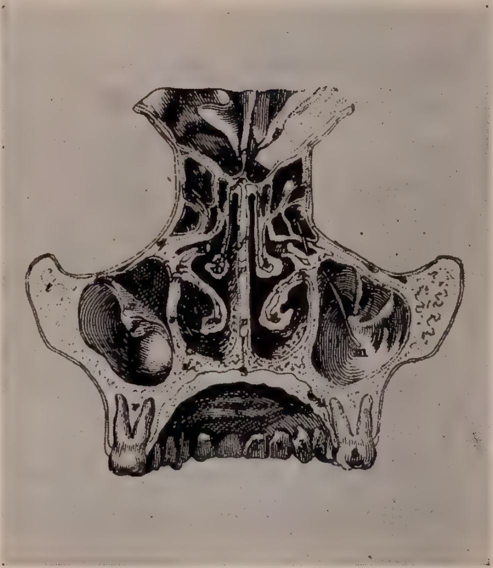
Obocell® *Complex*

IRWIN, NEISLER & COMPANY • DECATUR, ILLINOIS

". . . gives excellent results . . ."

In a recent report on intranasal therapy,

Silbert[1] states:



". . . since mixed infections are common, preparations containing antibiotics effective against Gram-positive and Gram-negative organisms are suggested. 'Drilitol Spraypak', which combines gramicidin and polymyxin with a vasoconstrictor and an antihistamine, gives excellent results."

The author also states:
"Since these antibiotics are seldom used systemically, there is less danger to the patient of sensitization. It also precludes the possible development of resistant organisms through topical use of antibiotics that might later be needed in more critical infections."

1. Silbert, N.E.: GP 8(6):35 (Dec.) 1953.

for intranasal infections specify:

'Drilitol* Spraypak'

the convenient "pocket" spray

or

'Drilitol' Solution

with dosage-adjusted dropper

Formula: Contains gramicidin, 0.005%; polymyxin B sulfate, 500 U/cc.; thenylpyramine hydrochloride, 0.2%; Paredrine* Hydrobromide (hydroxyamphetamine hydrobromide, S.K.F.), 1%. Preserved with thimerosal, 1:100,000.

Smith, Kline & French Laboratories, Philadelphia

★T.M. Reg. U.S. Pat. Off. 'Spraypak' Trademark

for the obese patient . . .

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genuine Obedrin
obtainable
only on
prescription
• •
tablets are
monogramed
for your
assurance of
quality

Obedrin

Semoxydrine HCl	5 mg.
(Methamphetamine HCl)	
Pentobarbital	20 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	0.5 mg.
Riboflavin	1 mg.
Niacin	5 mg.

massengill

Fresh-Frozen and Freshly-Squeezed Orange Juice

Two years ago, findings of importance to dietitians everywhere were published, emphasizing the superiority of reconstituted MINUTE MAID Fresh-Frozen Orange Juice over home-squeezed juice of the same type oranges, in three respects:

(a) *Average levels of ascorbic acid significantly higher in* MINUTE MAID: Obviously, this advantage of MINUTE MAID, observed in the samples tested, is susceptible to variation, from season to season, as crops differ. It should be emphasized, however, that, penny for penny and year after year, the lower-priced MINUTE MAID offers the housewife *more* ascorbic acid than she could get from home-squeezed orange juice.

(b) *Peel oil content significantly lower:* Samples of orange juice, home-squeezed by typical housewives, showed contents of peel oil, a cause of allergic response and poor tolerance, especially in infants, were up to 700% higher than in MINUTE MAID!

(c) *Bacterial counts dramatically lower:* Bacterial counts were found to be as high as 350,000 per ml. in home-squeezed samples, but were uniformly low in MINUTE MAID.

Since publication of the above findings, more and more physicians are recommending MINUTE MAID Fresh-Frozen Orange Juice in place of home-squeezed orange juice where optimum year-around intake of natural Vitamin C is indicated.

And now comes more evidence in favor of MINUTE MAID . . .

New Assays Reaffirm Dietary Advantages of Minute Maid Fresh-Frozen Orange Juice on a Cost Basis

A second report comparing the individual mineral and vitamin values of MINUTE MAID Fresh-Frozen Orange Juice and home-squeezed juice of the same type oranges has recently been published.

In this latest study, each sample was analyzed separately. The analyses showed that MINUTE MAID Fresh-Frozen Orange Juice was equal to, or superior to, the home-squeezed juice in *all* of the components listed below:

TABLE

Mean Values in Samples Tested

COMPONENT	UNITS	MINUTE MAID FRESH-FROZEN ORANGE JUICE	HOME-SQUEEZED ORANGE JUICE
Betaine	mg./100 ml.	49	46
Biotin	mcg./100 ml.	0.26	0.26
Choline	mg./100 ml.	12	12
Cobalt	mcg./100 ml.	74	67
Folic acid	mcg./100 ml.	2.2	2.2
Iodine	mcg./100 ml.	0.24	0.21
Manganese	mcg./100 ml.	33	18
Nitrogen			
Total	mg./100 ml.	104	79
Amino	mg./100 ml.	22	22
Volatile	mg./100 ml.	8	7
Non-volatile	mg./100 ml.	96	72
Pantothenic acid	mcg./100 ml.	146	145
Para-amino-benzoic acid	mcg./100 ml.	4	4
Phosphorus	mg./100 ml.	19	18
Potassium	mg./100 ml.	380	290
Riboflavin	mcg./100 ml.	18	17
Tocopherols	mg./100 ml.	107	104
Vitamin A	mcg./100 ml.	19	16
Thiamine	mcg./100 ml.	87	83
Vitamin B_{12}	mcg./100 ml.	0.0022	0.0012

Although the results are again susceptible to variation according to crop and year, Fresh-Frozen MINUTE MAID was equal to the home-squeezed juice in the samples tested for the largest number of components listed; and in the mean values for iodine, manganese, potassium, Vitamins A and B_{12}, MINUTE MAID showed appreciably *higher* values.

SUMMARY

These new findings help enlarge professional knowledge of the nutrient constituents of orange juice in general and add fresh evidence that, on a cost basis, MINUTE MAID Fresh-Frozen Orange Juice has significant dietary advantages. Penny for penny, MINUTE MAID offers not only *more* Vitamin C, but also *more* of all the other vitamins and minerals listed than home-squeezed orange juice.

Taken in conjunction with the previously published findings, this should confirm the choice of physicians who recommend MINUTE MAID in place of home-squeezed orange juice.

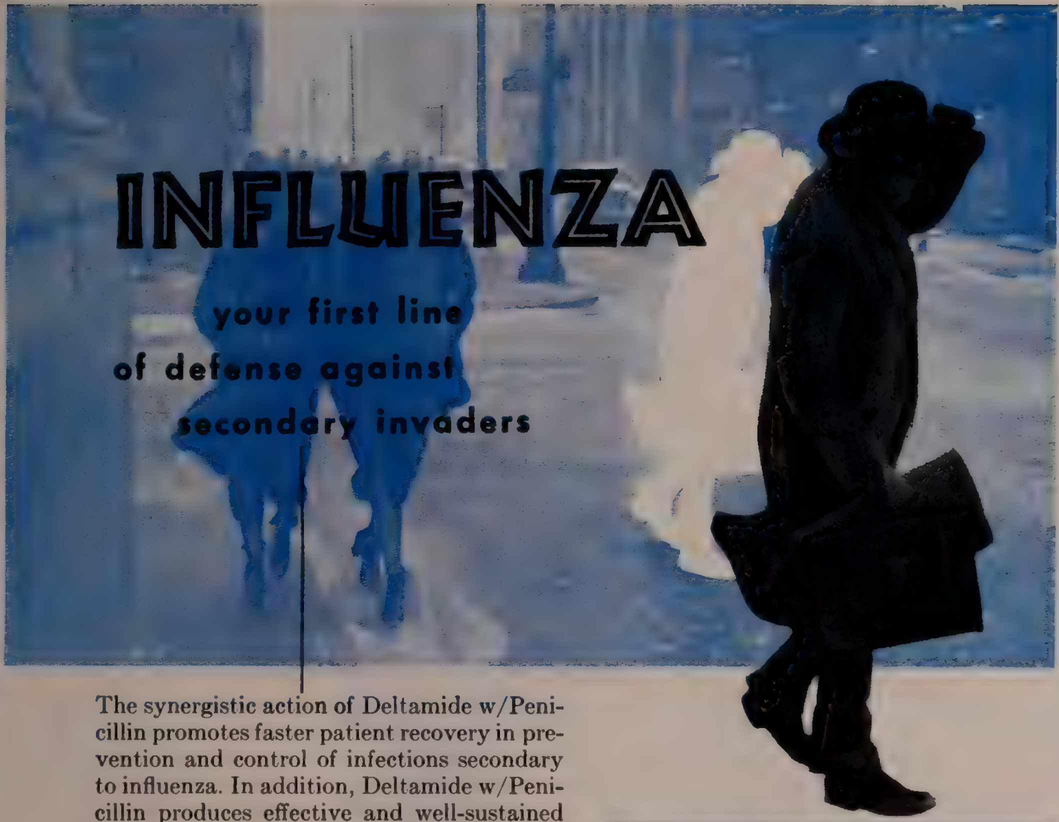
REFERENCES:

(1) Rakieten, M. L., *et al.*, Journal of the American Dietetic Association, October, 1951.
(2) Joslin, C. L., and Bradley, J. E., Journal of Pediatrics, Vol. 39, No. 3, pp. 325-329 (1951).
(3) Rakieten, M. L., *et al.*, Journal of the American Dietetic Association, November, 1952.
(4) Assn. Official Agricultural Chemists: Methods of Analysis, 7th ed. Washington: Assn. Off. Agric. Chemists, 1950.

MINUTE MAID
ORANGE JUICE

Reference #3 still available in reprint form.

MINUTE MAID CORPORATION,
488 Madison Ave., N.Y. 22, N.Y.
WALLACE R. ROY, Ph.D.,
Director of Research



The synergistic action of Deltamide w/Penicillin promotes faster patient recovery in prevention and control of infections secondary to influenza. In addition, Deltamide w/Penicillin produces effective and well-sustained blood levels.

DELTAMIDE w/penicillin

Deltamide w/Penicillin is available in two dosage forms—tablets and pleasant-tasting, chocolate-flavored suspension.

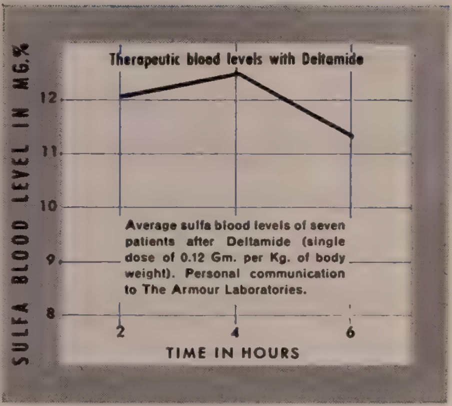
THE NEW QUADRI-SULFA MIXTURES

Each tablet, or each teaspoonful (5 cc.), provides:

Sulfadiazine	0.167 Gm.
Sulfamerazine	0.167 Gm.
Sulfamethazine	0.056 Gm.
Sulfacetamide	0.111 Gm.
Potassium Penicillin G (Buffered)	250,000 units

Tablets: Bottles of 36 and 100.

Powder for Suspension: 60 cc. bottles to provide 2 oz. of suspension by the addition of 40 cc. of water. Deltamide and Deltamide w/Penicillin Suspensions are preferred because of extreme palatability.



Average sulfa blood levels of seven patients after Deltamide (single dose of 0.12 Gm. per Kg. of body weight). Personal communication to The Armour Laboratories.

DELTAMIDE

the new fourth dimension in sulfa therapy

Each tablet, or each teaspoonful (5 cc.) of pleasant, chocolate-flavored suspension, provides:

Sulfadiazine	0.167 Gm.	Sulfamethazine	0.056 Gm.
Sulfamerazine	0.167 Gm.	Sulfacetamide	0.111 Gm.

Tablets: Bottles of 100 and 1000. **Suspension:** Bottles of 4 oz. and 16 oz.

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A DIVISION OF ARMOUR AND COMPANY • CHICAGO 11, ILLINOIS

answering the **ALARM**

Cortril tablets

brand of hydrocortisone

anti-rheumatic

anti-allergic

anti-inflammatory

indicated in:

- *Rheumatoid Arthritis*
- *Osteoarthritis*
- *Acute Rheumatic Fever*
- *Bronchial Asthma*
- *Allergic Dermatoses*
- *Acute and Chronic Ocular Disorders*

and other conditions responsive to adrenocortical hormone therapy, e.g., Addison's disease, intractable hay fever, drug reactions, etc.

Superior anti-rheumatic potency

In comparison with cortisone, hydrocortisone produces maximal therapeutic benefits with smaller dosage requirements, and endocrine complications are fewer and less pronounced.[1,2]

in rheumatoid arthritis

Systemic administration of CORTRIL tablets quickly relieves active inflammatory and constitutional manifestations, often within a few hours. Crippling pain, stiffness, and swelling diminish rapidly and beneficial effects persist with continuance of therapy.

in osteoarthritis

CORTRIL tablets are a valuable adjunct in achieving enhanced function and comfort in weight-bearing joints.

When the joints involved are few in number, or when one or two joints do not respond to systemic therapy, injection of CORTRIL Acetate Aqueous Suspension directly into the joint affords remarkably effective, safe therapy.

the predominant glucocorticoid

supplied:

CORTRIL TABLETS *(hydrocortisone, free alcohol), scored, as 10 mg. tablets in bottles of 25, and 20 mg. tablets in bottles of 20.*

also available:

CORTRIL ACETATE AQUEOUS SUSPENSION
for intra-articular injection, in 5-cc. vials; 25 mg. per cc.

CORTRIL ACETATE OPHTHALMIC SUSPENSION WITH TERRAMYCIN,® *5 cc., in amber bottles with sterile eye dropper; each cc. of sterile suspension provides 15 mg. hydrocortisone acetate and 5 mg.* TERRAMYCIN *hydrochloride.*

CORTRIL ACETATE OPHTHALMIC OINTMENT
in 1/8-oz. tubes in strengths of 0.5% and 2.5%.

CORTRIL ACETATE TOPICAL OINTMENT
in 1/6-oz. tubes in strengths of 1.0% and 2.5%.

Pfizer Syntex Products

references:

1. Boland, E. W.: Ann. Rheum. Dis. 12:125, 1953.
2. Boland, E. W., and Headley, N. E.: J.A.M.A. 148:981, 1952.

Pfizer

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eliminate

intravenous

aminophylline!

TABLETS

AL·AMPHYLLINE

aminophylline-colloidal aluminum hydroxide-magnesium trisilicate compound

Intravenous Results With New Oral Compound—And Without Gastric Irritation.

AL-AMPHYLLINE, a new development of the Raymer Medical and Research Departments, presents aminophylline in a new oral dosage form that produces blood levels comparable to those attained with parenterally administered aminophylline, with the further advantage that these levels are sustained over many hours. In addition, AL-AMPHYLLINE does not cause gastric irritation.

The colloidal aluminum hydroxide and the exceptional purity of the aminophylline contained in AL-AMPHYLLINE Tablets are responsible for the fact that AL-AMPHYLLINE Tablets are so well tolerated. Magnesium trisilicate is also included in the formula, to prevent possible constipation.

Since AL-AMPHYLLINE Tablets are uncoated, aminophylline absorption is rapid, producing satisfactory blood levels within an hour (see table below).

Aminophylline Blood Levels — mg./100 cc. Plasma
(Aminophylline dosage was 0.5 Gm. in each case)

Aminophylline Preparation	1 hour	3 hours	6 hours
AL-AMPHYLLINE TABLETS (4)	1.78	1.65	1.35
AL-AMPHYLLINE TABLETS (4)	1.67	1.84	1.26
AL-AMPHYLLINE TABLETS (4)	1.18	1.54	1.19
AL-AMPHYLLINE TABLETS (4)	0.90	1.16	0.91
Intravenous Aminophylline (0.5 Gm.)	1.33	0.84	—
Intravenous Aminophylline (0.5 Gm.)[1]	1.60	1.30	0.70
Aminophylline Suppository (0.5 Gm.)	0.11	0.22	0.38
Aminophylline Suppository (0.5 Gm.)	0.26	0.51	1.09

1. J. Pharmacol. Exper Therap., 100:309, 1950.

For use in all conditions where aminophylline is indicated. *Dosage Range:* 1 to 4 tablets as required. *Supplied:* bottles of 100, 500 and 1,000 tablets. *Formula:* Aminophylline, 125 mg.; Colloidal Aluminum Hydroxide, 150 mg.; Magnesium Trisilicate, 250 mg. *Also available:* AL-AMPHYLLINE with Phenobarbital (15 mg. per yellow tablet), bottles of 100.

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Gevrine*

Vitamin-Mineral-
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Life can be well worth living in the later years, especially if due regard is given to the altered requirements of the aging patient.

GEVRINE, Lederle's newest geriatric product, provides the protein-anabolic action of combined hormone therapy, as well as vitamin-mineral supplementation.

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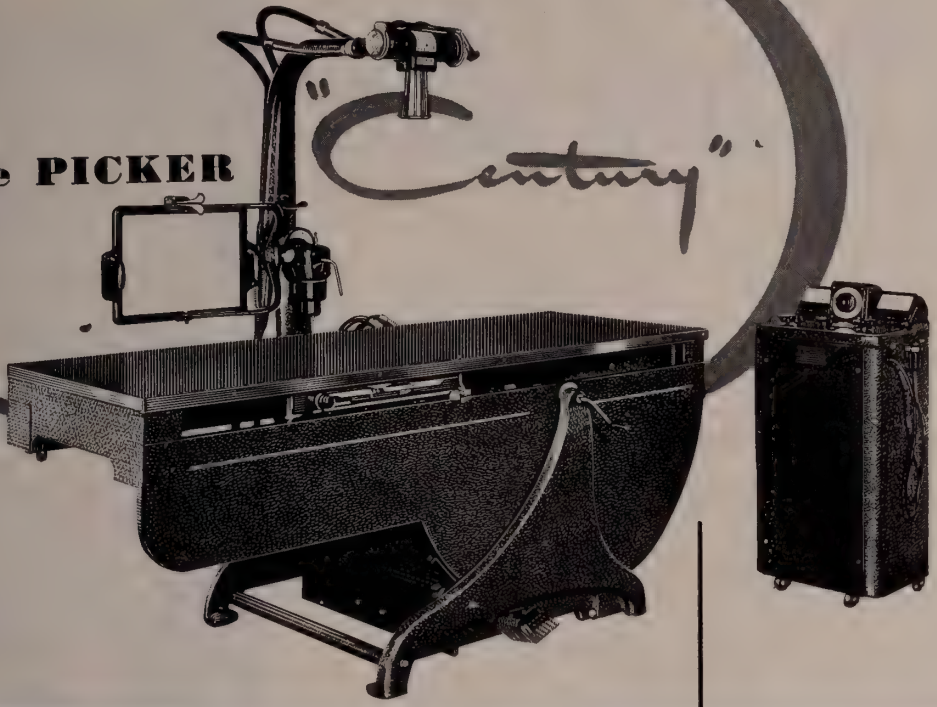

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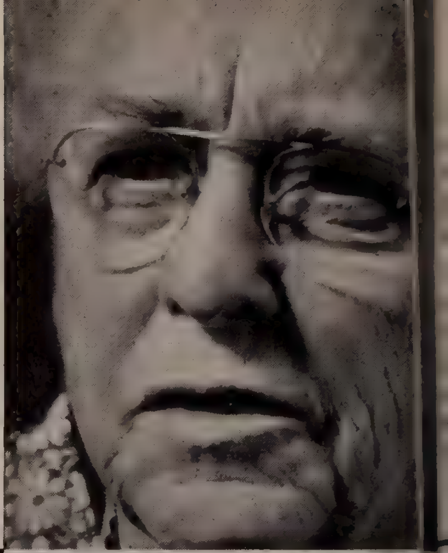
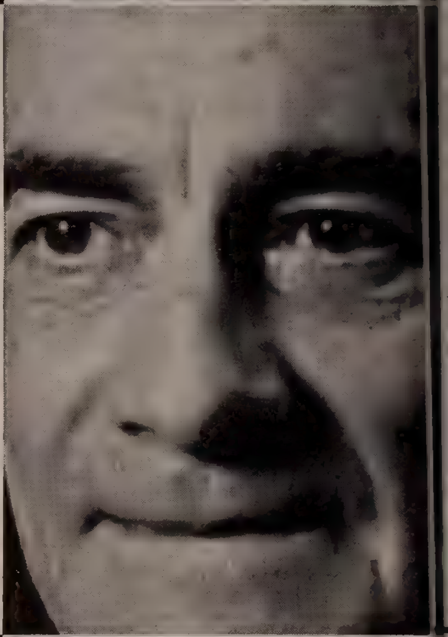
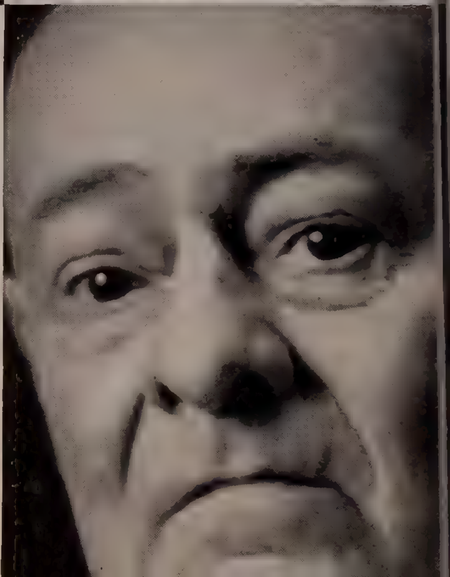
. . . a "confused" old lady



. . . an extremely nervous man



. . . "a typical alcoholic"



(Photographs and excerpts of case histories from the files of a general practitioner.)

Patient S. M. (80) was "plagued with nervousness, profound weakness, vertigo, and pain . . . add to this the untimely catastrophic death of a daughter."

'Dexamyl', initially 4 tablets, then 2 tablets daily, relieved "her nervous uncertainty, her depressive weariness, her melancholia, and her tearfulness . . . also her vertigo. . . . 'Dexamyl' helped her to smile again."

Patient L. H. (51) "had positive tremors of the eyelids, tongue, fingers, lips and voice. . . . His complaints always centered about extreme nervousness, jitteriness, depression, and 'all-gone weakness'.

" 'Dexamyl' allayed inward tension . . . gave him a sensation of amelioration and comfort. . . . Yet, even in this intensely irritable patient, there were no side effects [from dosages] as high as 2 tablets every 3 hours on several attacks. . . .

"He is now able to work and support himself, which he was unable to do for several years."

Patient T. H. (62), although basically a fine individual, had become "a typical alcoholic".

"His emotional balance became seriously disturbed and he would cry and exhibit depressive characteristics, with or without intoxication.

" 'Dexamyl', 2 to 4 tablets daily, decreased his demand for liquor and gave him an increased sense of well-being. Emotional balance was more easily sustained; daily habits more normal. . . . Sleep, for the first time in years, was more tranquil."

Dexamyl* *tablets and elixir*

—relieves both anxiety and depression

—promotes a feeling of composure

Each tablet provides the synergistic action of two mood-ameliorating components: Dexedrine* Sulfate (dextro-amphetamine sulfate, S.K.F.), 5 mg.; amobarbital, ½ gr. (32 mg.). Each teaspoonful (5 cc.) of the elixir is equivalent to one tablet.

Smith, Kline & French
Laboratories, Philadelphia

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To Brighten the Diet...

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An appetite stimulant...mild euphoretic...appealing sedative at bedtime...a supplemental natural source of minerals, vitamins, and readily absorbable nutriments—these are some of the roles that wine can play in the daily diet of your aged or convalescent patient.

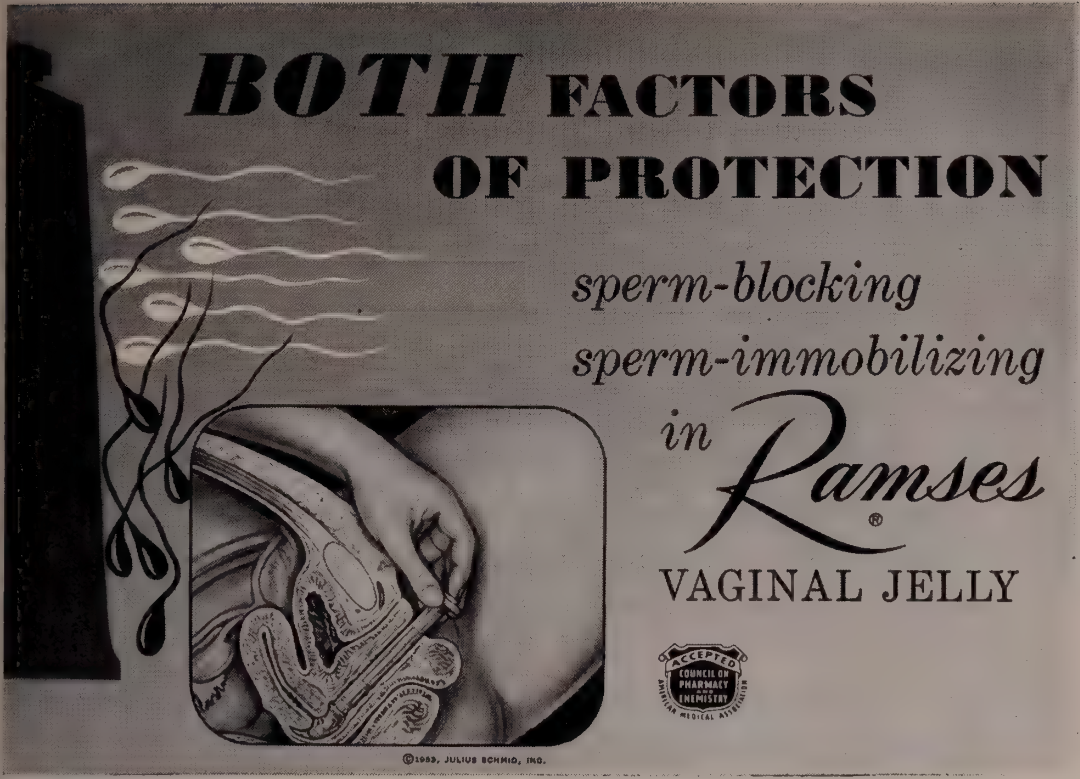
Few substances—natural or artificial—can offer the unique combination of qualities found in wine, the traditional beverage of moderation. Praised through the ages for its "tonic" effect, wine has been intensively studied since 1939 by American laboratory and clinical investigators. These modern tests have revealed the physiological basis for subjective theories of past years, and are now explaining the action and fate of wine and its components in the body.

Many of the important physiological properties of wine differ significantly from those of plain alcohol. Wine increases appetite and heightens olfactory acuity. It stimulates the flow of salivary juices. Buffered by its own natural salts and organic acids, it provides a mild, prolonged stimulation of gastric secretion. This same buffer effect makes the diuresis produced by wine a slow, moderate one.

Wine is also a ready and pleasant source of nutrient energy, and of absorbable iron and other essential minerals. The vasodilating action of wine aids toward improving circulation and increasing cardiac output.

A bit of sherry or light wine before meals, table wine with luncheon or dinner, or a glass of port at bedtime can add a welcome touch of interest and "elegance" to the daily routine of the convalescent and the elderly patient. The day seems shorter and brighter, and the night more pleasant and relaxed.

For a few cents a day your patients can have wines produced from the world's finest grape varieties, grown in an ideal climate and handled with consummate skill. Research information on wine is available upon request. Wine Advisory Board, San Francisco 3, California.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- Maintains necessary viscosity at body temperature
- Does not decompose or separate while stored

Supplied in 3-oz. tubes with a sanitary, durable plastic applicator designed to deliver 5 cc. of jelly in front of the os uteri. Also in large, economy-size 5-oz. tubes.

A recent report by Gamble[1] directs attention to *viscosity* and *barrier effectiveness* as important considerations in the selection of a contraceptive jelly.

"To give efficient obstruction [to spermatozoa]... the material should be sufficiently fluid to spread throughout the vagina and establish a barrier over the os uteri. It should not, however, be so liquid as to leak out of the cavity or be too readily displaced from the os by coital or postcoital movements." RAMSES Vaginal Jelly* fulfills these criteria.

*Active agent, dodecaethyleneglycol monolaurate 5%, in a base of long-lasting barrier effectiveness. 1. Gamble, C. J.: Report to Council on Pharmacy & Chemistry, A.M.A.: J.A.M.A. 153:1019, 1953.

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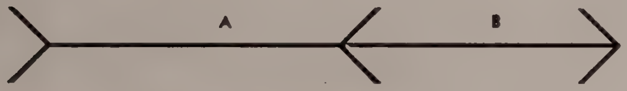

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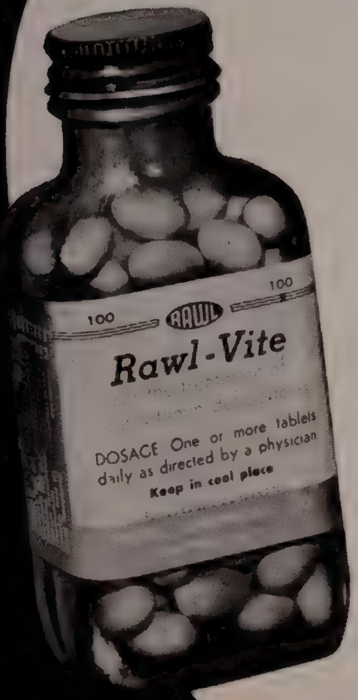
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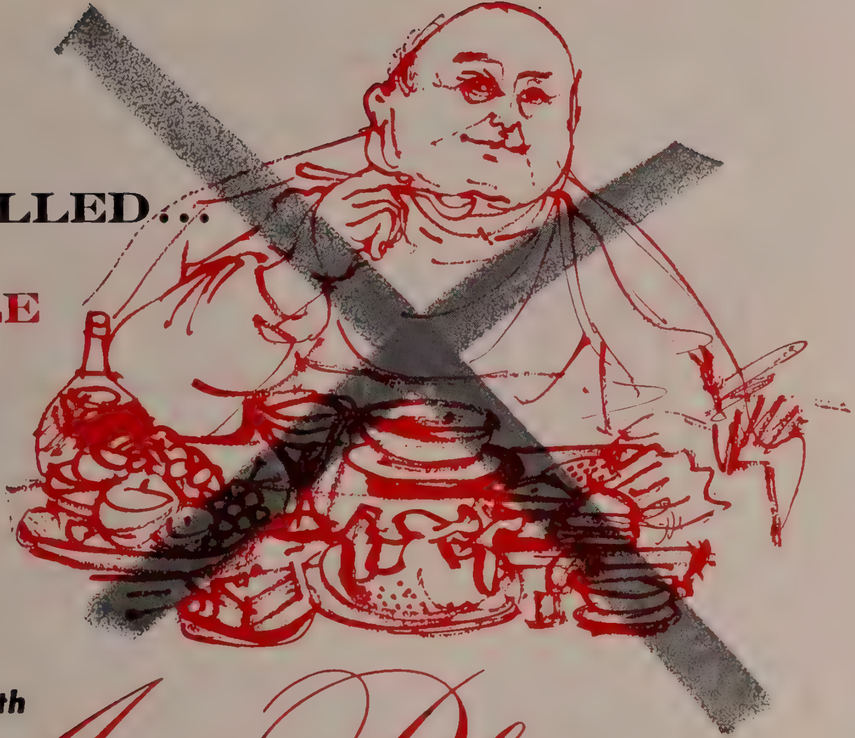

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EDITORIALS

The Annual Meeting

Again the membership is urged to note on their appointment books the time and place of the Annual Meeting and to make plans to attend this year.

Preliminary plans for making the 148th Annual Meeting of the Medical Society of the State of New York at the Hotel Statler, New York City, May 10 to 14, 1954, a most interesting and informative scientific event have been announced by Dr. Alfred P. Ingegno, chairman in charge of the scientific program. Because the new type of program inaugurated last year at Buffalo turned out to be very successful, Dr. Ingegno said, arrangements are being made to follow the same format this year.

Among the innovations of 1953 to be retained will be the popular round table discussion and postgraduate lectures. Scheduled for Monday evening, May 10, the round table discussion, designed to encourage audience participation by attending doctors, will be led by Dr. William Dock, Professor of Medicine, State University of New York College of Medicine at New York City. Dr. Dock is well known for directing not only highly instructive but attention-holding round table conferences. The postgraduate lectures, which are being arranged by Dr. Bernard J. Pisano, an associate scientific program chairman, are on the calendar for the mornings of May 11 and May 12.

The perennial attractions of past years, the general sessions, are planned to be held each afternoon during the meeting. One session, broad in scope and designed to interest both general practitioners and specialists, will be conducted each day. Present arrangements include one specialty meeting for each section and session to be held either Thursday morning, May 13, or Friday morning, May 14.

Details of the scientific program and other features of the Annual Meeting will appear in these columns from time to time. Watch for the Annual Reports in the April 1 or Convention Issue of the New York State Journal of Medicine.

Moreland Commission Investigation of Workmen's Compensation

Under authority of the Moreland Act, Governor Dewey has directed an investigation of the alleged high cost of workmen's compensation in the State of New York. This is, we have every reason to believe, no "witch hunt" for a "whipping boy" but a thorough fact-finding examination, on which legislative or administrative changes or both may be based to reduce these expenses if possible. Medical fees are not in question. Benefits to injured workmen need to be raised. Administration costs under Chairman Mary Donlon have been cut back, but the number of cases requiring multiple hearings, with their unproductive expenses, have increased steadily.

The Medical Society of the State of New York has proffered its help to the Governor's Commission and to its counsel and urges its component societies and its members to cooperate with this committee. The director of the Compensation Bureau of the State Medical Society, Dr. David J. Kaliski, stands ready on request to attend any meetings on a county level where he can be of assistance. If it is found that adjudication of prolonged cases of backache, headache, and rehabilitable injuries can be settled better and sooner through the advice of panels of physician experts, organized medicine will be glad to assist in setting them up.

We earnestly hope that the result of these investigations will be a more expeditious settling of claims in the best interests of the patient claimant with an attendant reduction in over-all costs.—G. D. D.

Health Aspects of the Governor's Message

Several proposals of interest to physicians in Governor Dewey's annual message to the Legislature are worthy of note. Of his objectives in the field of health he said, in part:

> . . . I propose that we authorize the establishment of a permanent local mental health service with necessary State aid. In concept it should be somewhat similar to the program to establish and aid local health boards and departments. The plan would embrace local administration subject to over-all supervision by the State Commissioner of Mental Hygiene. The services which may be provided under this program will include treatment, rehabilitation, and prevention. In addition to psychiatric clinics, it would permit the development of consultant services by psychiatric specialists for schools, courts, health and welfare agencies, and other professional groups; inpatient psychiatric services for short-term treatment or observation in general hospitals; rehabilitation services for those mentally ill, and other community mental health activities.
>
> Such a program could provide services of incomparable value to the community, and by wholehearted cooperation with the medical profession, it can avoid all taint of socialized medicine.

. . . I recommend to your Honorable Bodies the authorization of a $350 million bond issue for this and related purposes to be submitted to the people at the general election next November. As indicated later, this cost can be financed from the war bonus levies on what will amount to a pay-as-you-go basis without additional taxes.

In the field of health, tuberculosis, cancer, and the generative diseases continue to be the prime foci of our efforts. . . .

The State Health Department has developed a pilot project in cooperation with the Albany Medical College for the study of coronary heart disease and high blood pressure . . . Male State officers and employes volunteered to participate in the study by having periodic examinations at the Cardiovascular Health Center. . . A total of 2,100 State workers will take part in the study. Already a considerable number of hidden cases of coronary heart disease and high blood pressure have been discovered, and the patients have been referred to their family doctors for care and treatment. Through this research project we hope to develop more exact methods for the early detection of heart disease and thereby reduce its toll among our citizens. . .

We have clues to pursue in helping to solve a tragic problem through studies which have noted a marked association between cancer of the lung and cigaret smoking. A number of highly qualified and gifted scientists are already at work studying the subject at the State cancer hospital in Buffalo, the Roswell Park Memorial Institute. Great impetus will be given this research by the opening of a new 500-bed installation at the Institute, 250 beds of which will shortly be ready for use. We are creating at the Roswell Memorial Institute one of the great cancer research centers of the world. During the current year $1,900,000 was appropriated by the State for cancer research. I am recommending doubling of the appropriation for cancer research in the coming year, so that no stone may be left unturned in the search for the causes of this killer and for weapons to destroy it. Augmenting the research program is an intensified case-finding program. Nearly one-half million adults are examined each year as part of the x-ray program for detecting tuberculosis. The same films are used for detecting cancer and are uncovering one case of lung cancer for every two cases of tuberculosis detected. . . .

If the trend of the last three years continues, by 1960 the death rate for upstate New York will be down to one per 100,000 of our population per year—a truly magnificent accomplishment. . . .

In the field of mental health, increasing numbers of mentally ill children and adolescents are being certified to our State mental hospitals. . . . To meet this need, the Department of Mental Hygiene has proposed construction of two new units to house 800 children in cottage type facilities of 25 beds each. These units will be located on State hospital grounds separate from the existing hospitals but easily accessible to service facilities and psychiatric staff. . . .

Under the rehabilitation program of the Department of Health, State aid has provided x-ray and surgical treatment to prevent progressive hearing loss or to restore hearing if possible. To make these services even more valuable I recommended that State aid be provided for diagnostic services, for speech training of preschool children, and for purchase and maintenance of hearing aids. . . .

. . . Most notable is the [State's] contribution to medical education. The past year saw the graduation of the first enlarged classes at the two Colleges of Medicine. Eventually, with a total of 1,200 medical students, the State University will take the lead nation-wide in supplying doctors. Work has begun on a $12 million basic sciences building for the downstate Medical Center in Brooklyn. Construction will soon start on a similar building for the upstate Medical Center in Syracuse.[1]

In brief, these are the Governor's objectives in the field of health. For specific proposals to implement them we await events.

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[1] Source: Legislative Bull. No. 2, Jan. 11, 1954.

Annual Meeting May 10 to 14, 1954, New York City

Editorial Comment

Music as a Therapeutic Aid. In many hospitals and some professional offices music as a therapeutic aid has become a well-established procedure after many years of experiment. Commenting on the use of this modality, the *Journal of the American Medical Association* says editorially[1]

> The use of music as a therapeutic modality is the subject of a recent communication by Arrington,[1] who declares that in acutely ill patients music often produces effects of sedation and reassurance, while in chronically ill patients music is able to divert the mind during long periods of convalescence and enforced rest. Patients with tuberculosis, rheumatic fever, malignant tumors, neurological diseases, orthopedic disorders, and many other chronic ailments frequently discover that music helps while away tedious hours and removes flights of the imagination to more pleasant and relaxing spheres of thought. This can be accomplished with the aid of background music, records, books, musical instruments, and singing.

Participation in musical programs on the part of patients may be either passive or active. Much study has been made of the character of programs in use as therapeutic aids where patients participate passively.

Arrington believes that music is a useful adjunct to physical therapy. Since the active participation of patients whose limbs require remedial exercise is often invaluable, the piano, for example, provides a contraction-relaxation pattern for strengthening the upper extremities that is hardly equaled by any other musical instrument. Many patients with arm casts are able to play an instrument when the casts are properly supported. It has been observed that digital motion in patients with contractures due to burns is frequently much improved by the playing of the piano.

According to Pichot mentally defective persons are more easily handled when soothing, rhythmic music is performed. It has been found in dentistry that music allays anxiety, raises the pain threshold, and improves the doctor-patient relationship. Many dentists play background musical recordings in their offices during annoying dental procedures; some obstetricians use music to allay anxiety and raise the pain threshold during arduous hours spent by patients in the labor room. Light observed that music in the operating room served as a beneficial adjunct to the administration of local, regional, or spinal anesthesia and that it diminished apprehension in patients. A survey of a group of patients undergoing various major surgical operations indicated a very favorable response to the calming effects of music.

The National Association for Music Therapy, founded in 1950, published its first book of *Proceedings of the National Association*[2] in 1952, devoted to the development of music therapy as a profession. The preface covers the historical development of musical therapy from the period of World War I through World War II when "the greatest progress was made in army hospitals under the regime of Colonel Howard C. Bronson, Chief of the Music Branch of Special Services." Later, the Music Department at Michigan State College pioneered in setting up in 1944 a four-year course of study leading to a Bachelor's degree. Through the cooperation of Drs. Ira M. Altschuler and T. K. Gruber, then superintendent of Wayne County Hospital at Eloise, Michigan, internship in music therapy was established.

"Knowledge of the dynamics of music and its effects on the human organism requires an awareness of many related subjects, far beyond the conception of music as an art. In order to understand the basic philosophy underlying the functional use of music in relation to personality organization, one should have at least a working knowledge

[Continued on page 626]

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[1] J.A.M.A. 153: 219 (Sept. 19) 1953.

[2] National Association for Music Therapy, Chicago, Illinois, 1952, vol. 1.

Philanthropy Unheralded

It has been the vogue recently among newspapers, magazines, and other periodicals to berate or even condemn the medical profession because of the shortcomings of a very small minority. Such tirades and half-truths leave the impression that those who write them have not the sincerity or honesty or vision to analyze closely or appreciate the contribution that is made by the medical profession to the care of the public. Literally hundreds of millions of dollars are saved the taxpayer for the care of those unable to pay. All over this land of America thousands of doctors contribute of their time and effort and often money to the care of some needy person. Specifically in the State of New York and in New York City this contribution is very difficult to reckon in dollars and cents. Approximate figures *are* available if one wishes to go into the fabulous value of medical philanthropy on the part of the profession. If a foundation or individual gives a fraction of the amount of similar service in dollars, there are headlines in the newspapers praising them for their great generosity. This comparison is not made to detract from any philanthropy. Let them one and all be praised and encouraged to continue the good work.

"Well," you will say, "the doctors contribute this service because it gives them the opportunity to improve their professional skill through more experience." Many of the men who give hours and days to the profession no longer need this experience. They have mastered their problems but continue, day in and day out, without compensation or question of pay from the taxpayer. One has only to visit city hospitals or community hospitals anywhere to be able to appreciate the contribution made by the profession to the community and to the welfare of the people. This service is so unknown to the public that many patients who accept free service in the hospitals sincerely believe the doctors are making money and often are rather arrogant in their attitude. Not only is the public unaware of injustices, but city administrators seldom thank the medical profession for its part in the saving of taxes while they themselves go merrily along increasing their own salaries from the upper down to the lower brackets. Twenty, thirty, forty thousand dollars are getting to be common figures for compensating political administrators. This might not be malfeasance in office, but they often use their positions of influence to obtain free service in many of these institutions for people who are well able to pay not only the hospitals but the doctors.

Not so long ago the slogan back of the increased subway fare was that the extra money so obtained would be used to increase the facilities and personnel of the charity hospitals. Even a superficial inspection makes it evident that very little of these monies were spent to do away with the old furniture, firetraps, and inadequate facilities in many of the hospitals. No, the money went like chaff before the wind.

The situation might surely be scandalous if some of the hospital care to the indigent were really investigated and the findings made public. Just recently the Commissioner of Hospitals stated that many of the personnel taking care of the patients were untrained. He also stated that ambulances go out without doctors or nurses, except in dire emergencies, a situation usually not evident until arrival at the scene. Every day doctors can observe the lack of training of a high percentage of the personnel in hospitals, so much so that many of them have to depend on inadequately trained volunteer aides. In most instances this personnel is very willing to contribute, but they have neither the know-how nor opportunity for training, and consequently the patient receives inadequate attention.

I am also constrained to call attention to the fact that many of our doctors use their automobiles and their own money to defray expenses to and from these institutions, without any expression of gratitude from those who by a mere word of thanks could make these people feel they are appreciated. No, this is not the case. In many instances where there were medical parking facilities the City has installed parking meters, and it has come to my knowledge that doctors have been fined for parking when time runs out on the meter, at the end of one hour. This seems incongruous when, today, most major operations require from two to four hours and even more. It probably is the assumption, therefore, that at the end of the hour a doctor should leave his patient in the midst of an operation and go find an empty parking space for his car. This is not a fairy story; it is a fact. If the doctor does not do so, he gets a ticket for violation of parking rules, even if he could deposit another dime in the meter. A certain amount of lip service has been paid to the profession in allowing physicians to double park or to park in nonparking zones, but this certainly does not add peace of mind to the one who has the responsibility for a life on the operating table when he realizes that the gratitude he receives is a ticket and a fine. Often patients who accept charity park in parking areas which are set aside for the use of medical personnel.

These are only a few of the injustices that befall the medical profession. To go into all of them would require a monograph. Probably there will be some people, who do not think things through to the final analysis, who will say, "Who makes you do this work for nothing?" But the doctors have always been jealous of their independence and have believed in the free enterprise system. They have, to a certain extent, believed in a service that will be repaid in loyalty and understanding by patients that can pay and not in accepting government pay, which could lead to government abuses.

One of the points that is so easily overlooked and probably is not appreciated is that if the government paid for these services, doctors would become part of a system of government medicine, and the very character of their services under this subsidy would depreciate into a position of dependence and, in many instances, carelessness and disregard for the welfare of the public. Physicians are subjected to unjust criticism, reprimands, abuse of both a mental and a physical nature, but they understand their contribution and can with a clear conscience carry on for the principles that they know are best for the future medical care of the public. Their chins are still up and heads unbowed.

Andrew R. Eggston

Conclusion

IRVING GRAEF, M.D., NEW YORK CITY

(*Chairman, Committee on Professional Education, Clinical Society of the New York Diabetes Association*)

With this, the eighteenth article, the series "Current Concepts in Diabetes Mellitus" will be completed. It is hoped that the survey of the many aspects of the problems of diabetes mellitus will be useful to the readers.

Emphasis has been given to the problems of diagnosis, the influence of environmental, emotional, and stress factors in modifying the course and clinical pictures, and to the curious and varied lesions that occur in the kidney, the retina, and the small arterioles generally in some but not all diabetics. Several articles have dealt with the use of insulin, and much space has been given to the nature and indications for the use of the short, intermediate-acting, and long-acting insulins.

Attention has been given to the overlapping effects of slow-acting insulins and the need for regular insulin in emergencies or in states with shifting requirements, e.g., acute infection or following trauma or other stresses. It may be stated as a dictum that the ideal weight and the balanced diet are the prime targets in the regulation of the diet and the use of insulin. The per diem loss of sugar and the effect on the total weight and health govern the introduction and dosage of insulin.

The need for a good relationship between patient and physician cannot be overemphasized in the long-range management of this or any other chronic disease. There is growing awareness of the role of conscious and unconscious forces in the diabetic patient, especially the juvenile, that may influence his adherence to diet, correct use of insulin or other aspects of self-care. New evidence of the sensitivity of ketone production in emotional upsets has been adduced. The physician who understands these forces will help the patient to help himself instead of placing himself (the physician) in an authoritarian position, thus becoming a substitute parent whom the patient may seek or need to defy with resultant metabolic upsets or losses.

The high frequency of vascular disease of an atherosclerotic nature challenges everyone interested in managing diabetes. The possible role of recurrent or sustained lipemia in providing a source of atheromatous material has been suggested. Data are still not available to establish with certainty the role of "control," i.e., rigid dietary and hormonal therapy, in modifying the frequency or severity of the biochemical changes in the lipids, lipoproteins, and other substances or the vascular alterations in diabetes. One reason for this lies in the fact that so much of the data have been accumulated in moderately or severely sick patients. The latent and the mild diabetic patients have yet to be studied or controlled with the same zeal. Unless this is done, we cannot know whether or not the asymptomatic, occasionally glycosuric patient needs the same dietary control to forestall the complications as his symptomatic counterpart with more consistent hyperglycemia and glycosuria.

In the report of the variants of the Kimmelstiel-Wilson syndrome there is a real appreciation of the wide variations between the diabetic state and the vascular and nephropathic complications. In some patients the diabetic state is so mild as to raise the question as to its primacy in this syndrome. There is continuing need, therefore, for critical appraisal of all patients with any part of the abnormalities which taken together may be called "Kimmelstiel-Wilson" or merely diabetes with complications.

The familiar glucose tolerance test has been reappraised, and while found extremely useful, the use of variations, like 100 Gm. of mixed carbohydrate as a meal, may be more helpful, especially in borderline instances.

In hormonal control a beginning appreciation of glucagon (the hyperglycemic factor) is presented. Now, thirty years after the introduction of insulin, a new intrinsic factor, which may be a hormone, challenges students of carbohydrate metabolism to elucidate its role in health and disease.

Special attention has been given to the peculiar and important problems of water and electrolyte shifts in diabetic ketosis and acidosis before and with management. Nutritional needs and the bizarre variants one may encounter in the neuropathic complications of diabetes have been reviewed. The gravity of the fetal loss and the special needs of the diabetic pregnant female have been stressed.

The current state of our knowledge of the metabolic pathways of glucose and the role of hormones in carbohydrate metabolism have been briefly outlined. Space has limited the presentations. No special article has been prepared on genetic or pathogenic factors which have great interest for the thoughtful physician who continues to wonder at the true nature of diabetes mellitus. Another article on the need for good care of the feet and management of the peripheral vascular complications would have completed the survey, but these have been amply and repeatedly dealt with in other publications.

To the average physician we express the hope that the series has been provocative and a reminder that few diseases can be better controlled with the means at hand when diagnosis is made early and great care is exercised in maintaining as nearly normal nutrition as possible, with proper control of the endogenous or exogenous imbalances that may produce severe glycosuria, lipemia, ketosis, anhydremia, neuropathy, vascular disease, etc. For the *latent* diabetic female who is pregnant the alert obstetrician or physician may provide safe management of her pregnancies, noting the need for special control of her total metabolism, especially in the last trimester of pregnancy. This, of course, is especially true for the pregnant female who is obviously diabetic.

The reader may find many of the endocrinologic aspects and recent basic experimental approaches to the problems of altered fat and carbohydrate metabolism, which were not reviewed in this series, discussed in the forthcoming Proceedings of the First Symposium Day of the New York Diabetes Association, to be published by the National Vitamin Foundation.

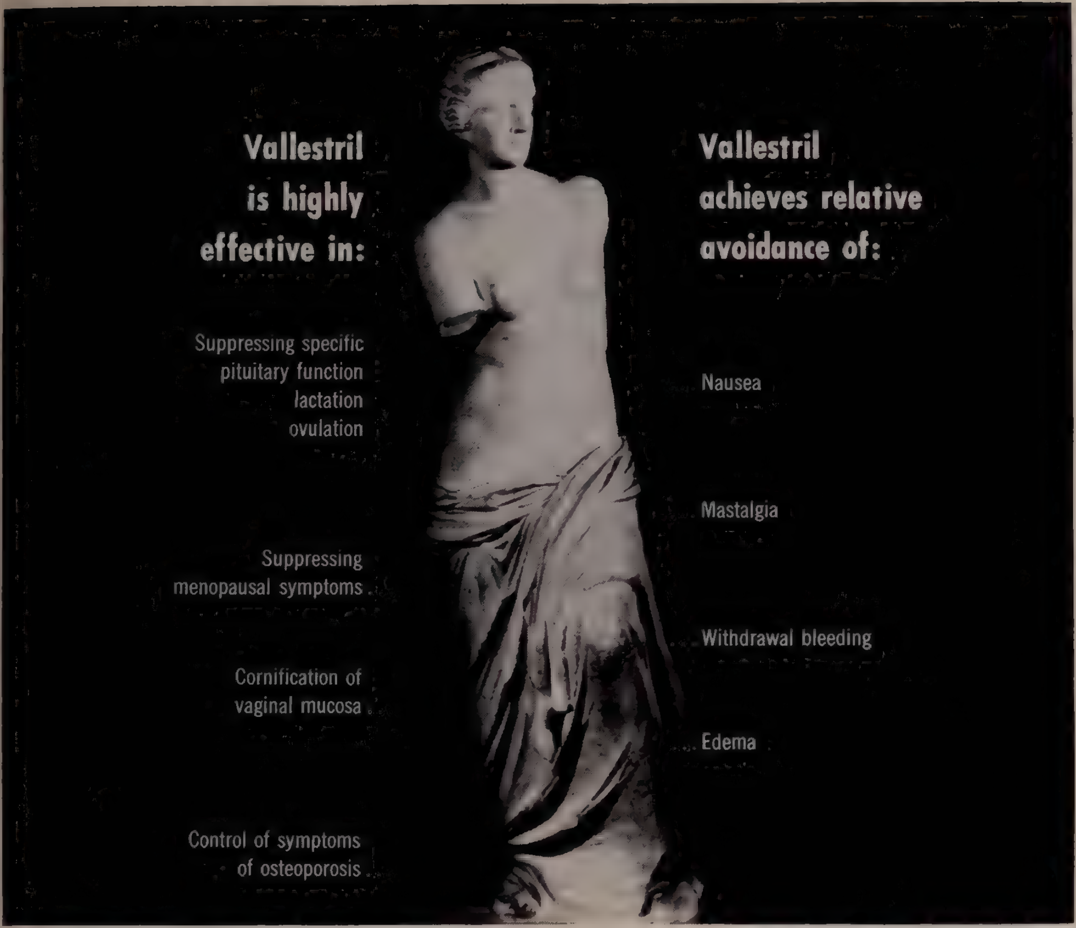
(*Number eighteen, the final paper, in a series on Current Concepts in Diabetes*)

Editorial Comment

[Continued from page 622]

of anthropology, psychology, biology, physiology, physics, esthetics, philosophy, psychiatry, sociology, metaphysics, musicology and music education."[2] Many colleges, as, for instance, Chicago Musical College, University of Kansas, Alverno College of Music in Milwaukee, Wisconsin, New York University, and Columbia University to name but a few, have offered training in cooperation with nearby hospitals. National standards are in process of being studied.

For those seriously interested, an excellent "Bibliography on Music Therapy" is contained in the volume, *Music Therapy, 1951*, published by the National Association.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1. Sturnick, M. I., and Gargill, S. L.: Clinical Assay of a New Synthetic Estrogen: Vallestril, New England J. Med. *247*:829 (Nov. 27) 1952.

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1. Russek, H. I.; Urbach, K. F.; Doerner, A. A., and Zohman, B. L.: J.A.M.A. *153*:207 (Sept. 19) 1953.
2. Humphreys, P., *et al.*: Angiology *3*:1 (Feb.) 1952.
3. Plotz, M.: New York State J. Med. *52*:2012 (Aug. 15) 1952.

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A Critical Review of the Morgagni-Stewart-Morel Syndrome

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During the past twenty years increasing interest has been displayed in a symptom complex occurring preponderantly in the female and characterized by a thickening of the inner table of the calvarium, which is usually most pronounced in the pars frontalis of the frontal bone, and associated with a wide variety of endocrine, metabolic, and neuropsychiatric disorders. From the turn of the century to the year 1938 almost 90 papers dealing with this subject appeared in the world literature,[1] and in the past decade approximately 40 more have been added. Examples of cases showing features of this syndrome appeared as early as 1765 with the observations of Morgagni.[2] Because, prior to the present century, accounts of the pathology of the bony changes in the skull constituted the chief point of interest, various anatomically descriptive phrases attach to the designation of this condition, which persist to the present time. Thus, it will be found described under such titles as exostosis within the cranium,[3] puerperal osteophytes,[4] intracranial osteophytes,[5] hyperostosis frontalis interna,[6,7] hyperostosis verrucosa frontalis interna,[8] calvarial hyperostosis,[9] cranial hyperostosis of the insane,[10] enostoses of the calvarium,[1] and hyperostosis calvarii interna.[11]

Despite many enlightening clinical, roentgenographic, pathologic, and experimental studies bearing on the features of this syndrome and such excellent reviews as those by Knies and Le Fever,[12] Perkins and Biglan,[13] and others, there still remain wide areas of divergent opinion concerning its inclusiveness, its clinical boundaries, and, indeed, doubt as to the existence of the syndrome itself. It is apparent from a careful review of the literature that although there is sufficient information at hand to allow of clarification of some of the issues raised, many authors have failed to perceive the larger background of the condition. It is the purpose of the present communication to establish more fully certain basic concepts, thus perhaps reconciling some of the opposing views now held.

Historical Review

Although the earliest descriptions of thickening of the bones of the skull are to be found in the writings of the eighteenth century, Henschen[14] reports the presence of cranial hyperostosis in museum specimens of skulls found in early Nordic graves. One of the first recorded observations is that of Dupré[15] who described bony excrescences of the inner surface of the cranium in the case of a thirty-year-old male. It was Morgagni,[2] however, who performed an autopsy in the case of a seventy-five-year-old female dying of cardiac rupture and wrote in 1765 the first classic description of a case whose clinical features, notably obesity and virilism, as well as the autopsy findings of bony changes in the skull, have come to be recognized as one of the principal types of the syndrome under discussion and which bears his name. Indeed Henschen[16-18] maintains that there is no other type.

In view of its historical interest and because of the clearly defined picture which it presents, Morgagni's report is given here in part:

> A woman of seventy-five years of age, of a manly aspect and very fat, having been quite slender to her five-and-fortieth year was, in the latter years of her life, become a valetudinarian; yet in such a manner, as never to complain of a pain in her head, much less of any violent indisposition that could be referr'd thereto; but she rather complain'd of other things, among which

> her acquaintance, though but little accustom'd to attend minutely to these lamentations of a querulous old woman, particularly mentioned a kind of swoonings, as it were, and other disorders of that kind . . . These complaints were, in general, much exacerbated in the last six months of her life.

With thé assistance of Santorini, he performed an autopsy of which he gives the following account of the findings in the skull:

> At length having open'd the cranium, we found the dura mater to be so much more closely affix'd to the sutures, and the parts about them, and particularly the sagittal and lambdoid, than it generally is, that it could not be pull'd away without laceration. On the contrary, the pia mater very easily follow'd the fingers, when applied to it to raise it up; for there was water beneath it: which was also seen in the lateral ventricles, in both of them in small quantities. The cerebrum was found, as the cerebellum was also; but the latter was very lax. The basilar artery was somewhat hard; as were also the other arterial branches that lie about the cerebrum. When all these contents were taken out of the cranium (which, as appear'd from the breadth of the sections, was not of a little thickness) on the basis of it, and also upon the hollow surface of the os frontis, those appearances came into view which I have spoken of in the sixth of the Adversaria (Animad. 84). That is to say, the os frontis was prominent in that part, in the form of very frequent tuberosities: and the same kind of appearances were also in the basis of the cranium, especially on the petrose processes; but were less in these parts, at a greater distance from each other, and did not rise so high. All these tuberosities were made up of a more white substance than the bones in any other part of the cranium were; so that they seemed to consist of a new accession, and, as it were, an effusion of bony matter. And though the surface of each of these prominences was very smooth, and shining; yet the very great inequality, and exuberating state of them all, could not but extremely compress the brain, wherein there appear'd to be, in other respects, no kind of injury, in what part soever it corresponded with these tuberosities. The dura mater show'd no mark of injury in itself where it cover'd these tuberosities; nor did it adhere to them very closely, as it did to some other certain parts of the cranium . . .

In the first half of the nineteenth century a number of treatises on pathology included descriptions of thickening of the inner surface of the cranial bones, and although it is quite likely that in the material described there were instances of the Morgagni syndrome, it is equally certain that a great many other conditions were included in the single classification of craniopathy. For example, Lobstein[19] in writing of intracranial osteophytes describes in conjunction with them articular chondro-osteophytes, ossifying spondylitis, and perhaps certain forms of osteosarcoma. Bony growth of any type, even when it had plainly occurred as a result of trauma or an inflammatory process, was described as an osseous vegetation or osteophyte. This kind of grouping served to obscure the recognition of the purely cranial variety of bone thickening.

Similarly, Rokitansky,[4] whose classification of osteophytes was at one time considered standard, included all types of osteophytic growth. In dealing with the affection of the cranial bones the description is obscured by the inclusion of such conditions as osteitis deformans and inflammatory reactions of various kinds. One particular form, however, which Rokitansky mentioned and which he called puerperal osteophytes, deserves special attention. He considered these formations, occurring chiefly in young females, as a separate entity, and in the light of our present knowledge it is quite likely that some of the examples of this class properly belong to the group under present discussion.

Henschen makes the statement that "the Morgagni syndrome of hyperostosis frontalis interna, obesity and virilism may almost be considered as the 'pregnancy syndrome' (puerperal osteophytes) of the elderly female."[16] According to Dreyfus[20] the presence of this bony overgrowth can be demonstrated roentgenographically in 30 per cent of pregnant women. Bartelheimer[21] cites a similar incidence. DeLee[22] says that puerperal osteophytes occur in half the cases of pregnancy that go to autopsy. However, some have taken exception to the opinion that this cranial dysostosis is either peculiar to the pregnant state or the same type of formation seen in hyperostosis frontalis interna.[23,24] DeLee does not consider these osteophytes characteristic since they are found also in syphilis, tuberculosis, and chronic hydrocephalus. Greig[5] points out that so-called puerperal osteophytes differ markedly from intracranial osteophytes in that they have a "hoarfrost" appearance entirely different from the formations found in the syndrome under present consideration. Furthermore, Grieg reports that in his series many of the 95 adult female skulls used in his investigation which had no osteophytes were of women who had had children, and 11 of the female skulls showing intracranial osteophytes were of nulliparous women.

During the latter half of the nineteenth century there appeared a number of reports largely by British neuropsychiatrists which, although they resulted from anatomic investigations of the skulls of patients dying in institutions for the insane and were almost exclusively concerned with the finding of skull thickness, thus giving no clear definition of any specific disease process, nevertheless served as a signpost for later investigators. A review of these studies shows that these observers were impressed with the preponderance of thickening of the skull among females. Balfour,[25] for example, found 68 cases of osseous overgrowth in autopsies on 390 females at the Colney Hatch Asylum, and Bullen[26] at the Wakefield Asylum reported an incidence of 25 per cent. In 234 consecutive postmortem examinations Beadles[27] discovered 51 cases in which the calvaria were distinctly thickened. In this series there were 144 males and 90 females, and the sex distribution of the affected skulls was 22 males and 29 females. Beadles found the frontal bone most often the site of greatest thickening and the occipital bone next. When it was distinctly limited in extent, the former was generally the portion of the cranium affected. He concludes with the statement that "these cases occur with far greater frequency among females and certainly, judging from the experience in Colney Hatch, men are less liable to excessive thickening of the cranial bones." Some British writers, notably Lewis,[28] Bucknill and Tuke,[29] and Clouston[30] speculated on the origin of this thickening, but the century closed with no recognition of the peculiar symptom complex so adequately annotated by Morgagni and which now is so well documented.

It is perhaps not surprising that the modern era, so to speak, in the development of our knowledge of the Morgagni syndrome begins with reports including roentgenographic studies. In 1924 Naito[31] reported on some clinical features and the findings in the x-ray examination of nine skulls with hyperostosis. Casati[32] in 1926 showed x-rays of five cases in museum specimens, and Leri and Cottenot[33] also reported on some of the roentgenographic features of the condition. In the following ten years, as the result of clinical, pathologic, and radiologic studies there began to evolve a clearer concept of the syndrome. Stewart[10] reported the clinical features and pathologic findings, including cranial hyperostosis, in three insane women with obesity of the pituitary type and further findings in two museum specimens. He was the first to draw the conclusion that "we are here dealing with a hitherto undifferentiated type of dyspituitarism."

Greig[5] found 32 examples of thickening of the surface of the inner table of the skull in a study of 188 skulls in the museum of the Royal College of Surgeons of Edinburgh, of which 28 were of the female. In 1930, Morel[6] described the first living example, occurring in an elderly psychotic female. The report in which this case appears was published as a thesis, based, in addition, on four personally performed autopsies at the Bel-Air Asylum in Geneva and the protocols of 11 other autopsies. In this same year van Bogaert[34] reported another living case with neuropsychiatric manifestations, and in 1931 Schiff and Trelles[35] noted a third example of what they called the Stewart-Morel syndrome. As Perkins and Biglan[13] point out, it is difficult to understand why, with the outstanding clinical features and characteristic radiographic findings, these three case reports are the only ones dealing with living patients to be found in the literature up to 1935.

This is a commentary on the confusion which existed concerning the significance of the dysostosis, its pathogenesis and the exact relationships of associated symptoms—and to some extent this confusion exists still.

It is to be noted that the bulk of the literature up to this point emanated from British and continental sources. The earliest reference to cranial hyperostosis in this country is that of Workman[3] in 1858, but this report is of mere historical interest and is to be classed with the writings of the nineteenth century British school. From 1935 on, however, the attention of American observers has been attracted to the study of cranial hyperostosis, and many important contributions have been made. The articles of Sherwood Moore[7,9,36] from the Edward Mallinckrodt Institute of Radiology are particularly noteworthy in that he established a precise roentgenographic classification which led to improved x-ray recognition of the bone changes in the skull and placed the diagnosis during life on a much firmer basis. Since then the studies of Carr,[37] Mortimer and his associates,[38–40] M. T. Moore,[41] Knies and Le Fever,[12] Perkins and Biglan,[13] and others have helped to clarify the concepts of the syndrome.

In the European literature during a similar period, the analyses of Henschen,[8,14,16–18] Stewart,[10,42] Mellgren,[43] Bartelheimer,[21,44] and Dressler[45] have served a similar purpose.

At the present time, therefore, a sufficient body of evidence has been adduced to define rather clearly the association of hyperostosis involving the frontal bone with certain other somatic and psychic factors, although, as has been indicated, some elements in this symptom complex are still in need of elucidation. From a broad viewpoint one may say that the condition is patently an expression of dyspituitarism, with secondary components of dysfunction in other endocrine bodies. The bony abnormality of the cranium to which attention has been called by all observers, and which by some is considered a sine qua non,[18] while it is the most nearly constant finding, is not always present. As knowledge of the syndrome has grown, it has become increasingly evident that cases do exist in which all the other clinical features of the disease are present without the findings in the cranium. In the series reported by Grollman and Rousseau,[46] for example, two patients were found "with clinical findings typical of the disorder, but without the pathognomonic x-ray evidence of the characteristic hyperostosis." Conversely, there are also examples in which typical roentgenographic changes are found without associated symptoms or signs. It is these marginal groups which have elicited controversial reports and have led some to doubt the validity of the syndrome, and it is for this reason that a re-examination of the available evidence and further analysis is desirable.

Clinical Description

It has been indicated in the foregoing review that the papers of Stewart,[10] van Bogaert,[34] and Morel,[6] being the first reports of cases of the syndrome diagnosed during life, their patients exhibiting certain abnormalities of the nervous system, evoked special interest in the neurologic and psychiatric components. Accordingly there has arisen a loosely defined division of the condition into two types. Those cases of frontal hyperostosis found in association with obesity and virilism have been properly named by Henschen[14] after the author of the first description, the Morgagni syndrome. The second type in which neuropsychiatric abnormalities constitute a prominent feature is often referred to as the Stewart-Morel syndrome, a term first used by Schiff and Trelles.[35] Many observers take exception to this division, as will be shown later, and, on the other hand, an even more specific subdivision has been proposed by Somogyi and Bak.[47] However, for present purposes of a description of the clinical features of the syndrome the condition will be discussed without special regard to classification.

Incidence.—Figures as to the incidence of the condition without reference to sex are not reliable because of differing concepts as to terminology, confused definitions, and lack of agreement on some of the main clinical features. Especially is this true of the figures and percentages found in some of the earlier writings. Data from nineteenth century British sources range from 17 to 77 per cent.[48] S. Moore[9] found in a total of 6,650 skull x-rays an incidence of 3.5 per cent, and at the Bel-Air Asylum in Geneva Morel[6] found the incidence 1.4 per cent of all autopsies. In a study of 492 unselected consecutive cases, Tager *et al.*[11] found 66 examples, an incidence of 13.4 per cent, but Grollman and Rousseau's 42 cases constituted 1 per cent of the total patients seen in the Medical Service of the North Carolina Baptist Hospital during a two and one-half year period.[46] On the other hand, Eldridge and Holm[49] report an incidence of 25 per cent in patients admitted to an insane asylum. It is probable that as the concepts of this symptom complex crystallize, one will perceive a greater statistical agreement in future reports. At present one has the feeling that some figures are too high, and that the true percentage lies somewhere between 1 and 2 per cent.

Sex Incidence.—The arresting feature of this syndrome is the fact that the greatest number of patients exhibiting the characteristic signs and symptoms are women. Moore[7] found that 97.2 per cent of his cases were women. In Carr's series of 17 cases, all were females,[37] and Greig[5] reported only four males in a study of 32 cases. Henschen[18] in autopsy material of 1,700 cases, of which 1,000 were female, found frontal enostosis 100 times more often in the female. The frequency of the cranial change in women was about 40 per cent after the age of fifty, but not all are to be considered as cases of the Morgagni syndrome. In fact, Henschen speaks of the menopausal frontal bone hyperostosis as a "tertiary female sex characteristic." Grollman and Rousseau[46] in their series of 42 cases report only one male. The compiled sex incidence in the reports of Naito, Stewart, Morel, van Bogaert, and Schiff and Trelles reveals 82 per cent female cases.[13]

Age Distribution.—Again the earlier reports are not reliable, being in most instances based on autopsy material in an elderly segment of the population. In Greig's series the youngest case was a female age thirty-five, but the average age was 70.12 years at death. The author admits that there were no criteria to determine the age at onset. The syndrome has come to be recognized as a frequent accompaniment of the menopausal state, and the usual age of recognized cases is in the fifth decade. Moore's cases showed an average age of forty-four years.[7] However, there have been cases observed in young individuals. Leri and Lievre[50] reported the condition in a child of five in association with Little's disease. Knies and Le Fever[12] found frontal hyperostosis with endocrine and neuropsychiatric disturbances in a boy of thirteen, and one of Stewart's cases occurred in a nineteen-year-old male.[10] In the series of Grollman and Rousseau[46] the youngest patient was twenty-one years of age. At the other end of the scale are the reports of the syndrome in elderly patients. Morel's living case was eighty-one years old, and Henschen reports the condition in a ninety-five-year-old patient.

Radiologic Features.—With the advent of roentgenographic studies, the changes in the bones of the skull may properly be included in the description of signs and symptoms, especially since the demonstration by x-ray of characteristic cranial changes is considered by many to be essential to the diagnosis during life. As mentioned previously, the elaborate studies of Moore[7,9,36] have served to make the roentgenographic recognition more accurate and reliable. Moore had noted over a period of ten years, on radiologic examination of the skull, a peculiar thickening of the frontal bone which was at first considered a normal anatomic variation or perhaps some indefinite type of osteitis. He was led to review all the radiographic material available in the files of the Edward Mallinckrodt Institute of Radiology because of the finding in 1929 of a case of melorheostosis which it was thought might possibly be the underlying disease process in the previously noted frontal bone thickening. As a result of the examination of 5,955 skull x-rays, Moore found 72 examples of frontal bone hyperostosis. An analysis of the case histories showed that nearly all had neurologic or neuropsychiatric symptoms, and 97.2 per cent were found to be females. There were associated endocrine or metabolic disturbances in many instances, and Moore at first gave to this syndrome the name hyperostosis frontalis interna,[7] independently of Morel. Later,[36] he coined a new term, "metabolic craniopathy," because of the obvious fact that a title which ignores all but one feature of a syndrome, no matter how constant that feature may be, is a misleading one. In the term "metabolic craniopathy" one finds the first attempt to indicate a pathogenetic pattern.

Moore's careful analysis recognizes four types of calvarial thickening:

1. *Hyperostosis Frontalis Interna.*—This is the most definite type, in which is found a deposit of cancellous bone on the inner table. It is covered on the intracranial aspect by a smooth lamella of compact bone. The increase of density progresses from the inner table outwardly through the diploe and may be either nodular or sessile. The lateral extent of the hyperostosis is not easily determined even in the anteroposterior view, and Tager *et al.*[11] consider this view of no particular value in the recognition of the condition. This first type accounted for 1.44 per cent of the skulls examined by Moore.

2. *Nebula Frontalis.*—A triangular or ellipsoid area of increased density in the squama frontalis is present. This is a less clearly defined condition than type 1, with an incidence of 1.14 per cent.

3. *Hyperostosis Calvariae Diffusa.*—This is characterized by a generalized increase in thickness of the entire vault with increase in density of the diploe and was found in 0.6 per cent of skulls.

4. *Hyperostosis Frontoparietalis.*—This type probably represents a step in the development of diffuse calvarial thickening (type 3) and shows maximum thickening of the diploe at approximately the central point of the parietal and squamous portions of the frontal bone. The incidence of this type was 0.3 per cent.

While Moore's criteria are accepted and employed as a yardstick by most authors, it would appear that the classification creates distinctions which are perhaps too finely drawn, and one is inclined to agree with Knies and Le Fever that they merely represent "variations of a central theme."[12] The latter authors describe a fifth group in which is found thinning of areas of the frontal bone or other cranial bones associated with one of Moore's original four groups. This had been noted pathologically by Greig[5] and Dressler.[45]

The outer table is not affected in any of the forms of this condition, and the base of the skull is usually not involved. Morel[6] and Knies and Le Fever[12] have described involvement of the middle fossa by an associated osteoma. Although there are some reports of asymmetric hyperostosis,[42] the thickening is almost always symmetric. Slow increase in hyperostotic formations have been noted by de Lehoczky and Orbán[51] and Schiff and Trelles.[35]

Metabolic Disorders.—Obesity is one of the characteristic findings and the principal metabolic disturbance. Morgagni's case was "very fat," and Morel's patient was also an obese female. In Carr's series obesity was present in 64.7 per cent.[37] Moore[7] reports an incidence of 44 per cent. In a recent study by Harding[52] of 17 cases, the weight was normal in only three patients (who had dieted strictly for years to keep their weight down). The other 14 women had 709 pounds of excess weight, averaging 50 pounds per patient. Grollman and Rousseau[46] found 23 obese patients in their series of 42 cases. The basal metabolic rate is generally within normal variation in these patients, and there is usually no evidence of hypothyroidism. The blood cholesterol determinations in most cases have not been significantly elevated, although one of Bartelheimer's cases showed a hypercholesteremia.[44]

A point is made of the type of obesity observed in this syndrome. Most authors have described the obesity as characteristically rhizomelic, tending especially to have a girdle distribution. However, a number of instances of obesity of a generalized or adiposogenital nature appear in the literature. The case reported by Perkins and Biglan[13] had such a fat distribution, which they term a "hypophyseal-genital type." Morel[6] does not feel that the obesity in this syndrome is specific in character and believes that clinical forms other than the rhizomelic may accompany this condition, as, for example, the Froehlich type which two of his own cases showed. In fact the obesity in this condition shows some basic relationship to other lipodystrophic syndromes. It resembles closely, except for pain, the more generalized diffuse form of adiposis dolorosa of Dercum, and indeed Morel believes that at least half of the cases of Dercum's disease in which pain is not a prominent feature can be considered as belonging to the hyperostosis frontalis interna syndrome.

Polyphagia, polydipsia, and polyuria have been frequent accompanying symptoms. In Stewart's protocols one case is described as having had polyuria in the last months of life. The glucose tolerance in many of these patients is diminished. This is consistent with the finding by several observers of decreased glucose tolerance in old age and in obese subjects and attributed to impaired glycogenesis.[53] Diabetes mellitus has been reported as a frequent concomitant of the syndrome. Bartelheimer[21,44] in particular has called attention to its frequent association with insulin-resistant diabetes which he terms "hypophyseal diabetes." In a great proportion of these cases he found various degrees of hyperostosis in the skull roentgenograms. Henschen[16] also remarked on the relatively great frequency of diabetes in the Morgagni syndrome.

Hypercalcemia has not been a frequent finding despite the obvious conclusion by many of a disturbance in calcium metabolism as a pathogenetic factor. Only Schiff and Trelles[35] and Schneider[54] report an elevation of blood calcium. Moore,[7] Grollman and Rousseau,[46] Harding,[52] and others found normal values.

Hypertension has been found to occur in varying percentages. Some authors, such as Grollman and Rousseau,[46] found it associated in a significant number of patients, more than would be expected if the hypertension were merely a coincidental occurrence. These observers therefore consider hypertension as "another of the protean manifestations of the disease." On the other hand, Carr[37] reported hypertension in only 11 per cent of his series, not more than the usual expectancy in the age groups represented.

Creatinuria has been discovered in some cases as reported by Carr,[37] de Lehoczky and Orbán,[51] and Fagin.[55] The latter observed this condition in a case of hyperostosis frontalis interna associated with dystrophia myotonica and diabetes.

Diabetes insipidus has been reported by Schneider,[54] and Tager *et al.*[11] found one instance of Simmond's disease in their series.

The coexistence of gout and metabolic craniopathy was observed by Feiring.[56]

Endocrinopathies.—Menstrual disturbances are very frequent, being found, for example, in 76.4 per cent of Carr's cases. Usually there is profuse menstrual flow with dysmenorrhea and frequent passing of clots. Some patients have irregularity of the cycle, and in many there are prolonged intervals of amenorrhea. The gynecologic examination is as a rule negative.

Virilism, as seen in male hair distribution, especially hirsutism of the face, heavy bony architecture, and a masculine facial cast, is not infrequent and, as previously noted, is one of the main features, together with obesity, of the Morgagni syndrome. Hyperadrenalism, manifested by precocious puberty and hypertrichosis, has been observed.[47]

Thyroid abnormalities are not a very prominent feature of the endocrinopathic state in this syndrome. Moore[7] reported thyroid dysfunction, especially insufficiency, in 5 per cent of his cases. Casati[32] observed hyperthyroid manifestations.

Acromegaloid characteristics are not uncommon clinically,[14] and instances of the occurrence of the syndrome in association with true acromegaly have been encountered often.[5,18,31,40]

Neuropsychiatric Manifestations.—It is in this component of the clinical picture that one perceives a lack of clear definition and an absence of sharp criteria. In compiling a list of neurologic and psychiatric disorders reportedly associated with frontal hyperostosis, the literature yields examples of so varied a group of symptoms and diseases as to create strong doubts as to the validity of the inclusion of this feature of the syndrome. That is not to say that some of these conditions do not coexist in a significant relationship with the cranial changes so as to constitute one of the clinical forms, and the writer is not in full agreement with Henschen, who, at the 1935 Congress of Pathologists in Oslo, is quoted as expressing doubts as to the existence of the Stewart-Morel syndrome[51] and who has stated that "the so-called Stewart-Morel syndrome is merely imagination."[14] Nevertheless, one can sympathize with this point of view when one examines the literature which reveals in some instances a lack of comprehension of the basic nature of the condition and its clinical limits. This subject will be dealt with at greater length below. Suffice it to say, for the moment, that there are certain nervous and mental disabilities which occur with such regularity as to command inclusion in the classification of truly related symptoms and whose existence together with other evidence may sometimes furnish a clue to the diagnosis of the syndrome. Further analysis is required to determine whether less frequently found disorders ought properly to be included and also whether such extremely common maladies as the neuroses, found in such a large percentage of the general population, can be classed as anything but an incidental finding.

Headache is noted in most series in very high proportion. Carr[37] found this symptom in 82.3 per cent of his patients. Grollman and Rousseau[46] report its presence in 19 of their 42 cases. In Moore's series 62.7 per cent complained of headache.[7] The location is usually frontal but not infrequently is occipital, extending to the neck, or generalized. The severity varies but is often of extreme intensity and does not respond to ordinary methods of treatment. In not a few instances, particularly in cases reported in male patients, the headaches followed some type of traumatic incident,[11,57] and Schiff and Trelles[35] have suggested that an infundibuloglandular injury is the basic cause with resultant metabolic disturbance ending in hyperostosis. Migraine has been observed by Moore[7] in about 5 per cent of his cases, and response to ergotamine tartrate has been noted.[52,58]

Memory defects occur also in a significantly large number of patients. In the series reported by Harding,[52] "most of the patients were forgetful, and some of them had trouble thinking of the right word to say." Carr[37] found defective memory in 88.2 per cent of his series. He states that although the psychiatric changes which were observed varied widely, they consisted mainly of a confusional state of greater or less duration with marked irritability and memory defects.

Other reports in the literature on the neuropsychiatric manifestations show a wide variety of mental and neurologic disease. Cranial nerve defects include disturbances in olfaction, facial palsy, diplopia, and amblyopia. Trigeminal neuralgia has been noted, as well as unilateral facial neuralgia.[12] Trigeminal herpes occurred in de Lehoczky and Orbán's patient,[51] and although these authors claimed no significant relationship for this condition, it has been added to the roster of symptoms by other writers. Hemiparesis and hemiplagia have been described,[14,45] as well as ataxia and wide-based propulsion gait.[12,54] Exaggerated deep reflexes, muscular weakness, vertigo, and visual disturbances such as nystagmus and hemianopsia have also been reported.[37] Convulsive disorders are not uncommon, and the diagnosis of epilepsy has occasionally been made. Reider[57] encountered a case with petit mal attacks, and Andrews[59] described a patient with narcolepsy whose symptoms were controlled by the exhibition of benzedrine. Cataleptic seizures were reported by Morel,[6] and attention may be called here to the "kind of swoonings" noted by Morgagni in his original description. Reversal of the sleep mechanism has been commonly described.[21] Little's disease[50] and Alzheimer's disease[57] have been reported in connection with hyperostosis frontalis interna. However, Reider[57] maintains that it is idle to try to link the Alzheimer's disease noted in his patient and the hyperostosis to a common etiologic factor.

Psychiatric aberrations reported range from personality disorders to true psychosis. Complete mental deterioration and dementia are less common than the psychoneuroses which, according to many authors, are found in a very large percentage of patients of the Stewart-Morel type. Insanity, when it does occur, is of an ill-defined type and may be intermittent,[30] and Eldridge and Holm[49] found in their patients 13 of the 22 types of psychosis recognized by the American Psychiatric Association. Hemphill and Stengel[60] consider that the variety of mental disorders observed in the syndrome is due to an "interaction between the mental constitution of the individual, and the disorder of the brain and endocrine glands."

Henschen is not alone in his opinion that the neuropsychiatric features do not constitute an integral part of the syndrome. Roth[61] considers that they are usually the result of other factors such as cerebral arteriosclerosis, hypertension, etc., and Mellgren[43] thinks these features "must be denoted temporary or secondary complications." Nevertheless, as has been indicated, some of these nervous manifestations occur with too high a degree of frequency to be dismissed as not significant or as an incidental finding. The writer agrees with Reider, however, that the significant neuropsychiatric manifestations are syndromes of organic mental disease and that this organic change is a degenerative one, there being a possible link between the endocrinopathy and degenerative disease of the brain. This view is supported by the observations of M. T. Moore.[41] He and his associates[62] had previously noted cerebral atrophy in pneumonencephalographic studies in cases of dementia paralytica which Moore points out is similar to the atrophy found in metabolic craniopathy (see below). Furthermore, the cerebral atrophy noted in such conditions as presenile sclerosis (Alzheimer's disease), Pick's disease, and progressive subcortical encephalopathy (Schilder's disease), which all present neuropsychiatric symptoms, is added reason to believe that degenerative lesions in cases of the Morgagni syndrome are perhaps the fundamental cause for the neuropsychiatric manifestations.

The connection between the symptomatology and the hyperostosis has been a source of disagreement among several authors. Perkins and Biglan[13] and Moore[7] claim the degree of bony change bears a definite relationship to the other symptoms presented, the more pronounced the hyperostosis, the more intense the clinical symptoms. Reider[57] has explained the headache in one of his cases as due to direct pressure by the hyperostosis. Perhaps the greater number of observers, however, find no such correlation.[5,6,12] There are even those who have found no significant association whatsoever between the cranial dysplasia and any other symptoms, so as to throw doubt on the existence of the syndrome itself.[1,11] This extreme view is based on a misconception which will be dealt with later.

Grollman and Rousseau[46] report a certain number of cases in which typical x-ray changes were found but with no clinical manifestations, and they believe that in all probability these patients will in time develop symptoms. Conversely, M. T. Moore[41] points out that mental symptoms may antedate by ten to twenty years the final establishment of the diagnosis by x-ray, and as previously noted, there are patients seen with characteristic clinical findings in whom roentgenograms reveal no bony pathology. The following case, observed by the writer, will illustrate this type:

The patient, a forty-eight-year-old housewife and former nurse, was referred by the gynecologist* because of complaints of intense frontal and occipital headaches of five months duration and amnesic episodes over a period of two years.

The family history was not remarkable. Her father who died at the age of fifty-eight of a heart attack had been overweight at 280 pounds but had been otherwise in good general health. Her mother died of a "series of strokes" at the age of fifty-eight and had shown no apparent constitutional deviations. Four siblings are all normal as to height and weight and are in apparently good health.

The personal history was significant in that in the past ten years there had been a gain in weight of 140 pounds occurring in two stages. She was married at the age of nineteen, at which time her weight was 98 pounds, and her weight varied between 100 and 110 pounds until ten years ago. In the next year

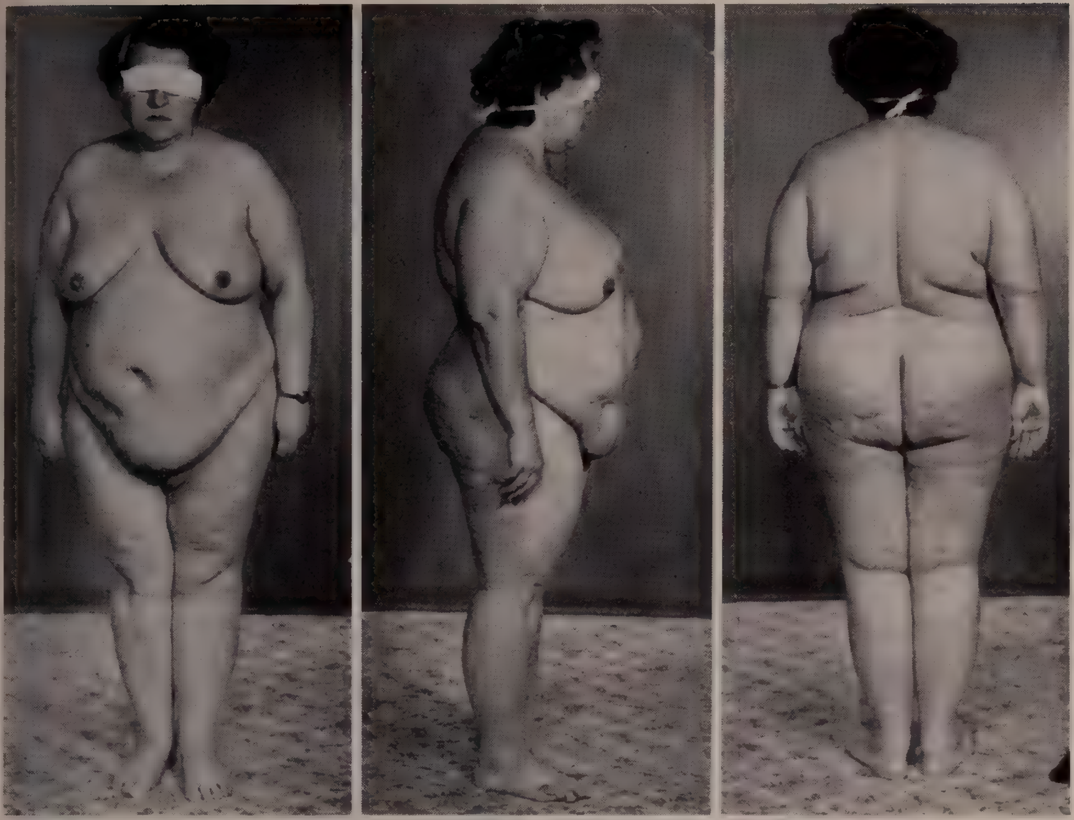

FIG. 1. Views of patient showing generalized obesity.

she gained about 90 pounds, and her weight then remained at 190 pounds for about two years. There was then another period of rapid gain during the following year to a weight of 278 pounds. On a strenuous diet she was able to reduce to about 200 pounds, but in the last two years she has weighed 240 pounds despite diet.

Her past health record revealed no serious illness. An appendectomy had been performed at the age of twelve, and a laparotomy at eighteen years of age because of attacks of abdominal pain and vomiting. At this operation, "gallbladder adhesions" were said to have been found. A review of systems was noncontributory with the notable exception of the obstetric and menstrual history: Onset of menstruation was at age eighteen, with succeeding periods at intervals of three to eight months. The flow was scant, lasting only one or two days and was accompanied by severe dysmenorrhea. Her first pregnancy, occurring at the age of twenty-two, after three years of marriage, resulted in a stillbirth at term. There followed three spontaneous abortions in the succeeding three years, but her last three pregnancies were uneventful, and the patient now has three daughters, ages twenty-two, nineteen, and fourteen. Between pregnancies there were the usual prolonged amenorrheic intervals, and these continued until about two years ago when her periods began to occur at intervals of three to four months with profuse, prolonged flow lasting ten to twelve days. The intervals gradually became shorter until in the last few months there was hardly a cessation of flow, and it was for this reason that she came under the observation of the gynecologist.

The present illness for which the patient was referred began about two years ago when she began to experience peculiar episodes of loss of memory and fugue states. Her first intimation of abnormal psychic manifestations was to find herself sitting on the edge of her bed late one night, with her shoes on and her night attire damp. It was later ascertained that she had walked out of the house, taken a turn about the grounds, and had then returned. Since then there have been rather frequent episodes of a similar nature, occurring during the day as well as at night. Occasionally, for example, she has awakened to the realization that she has completed a whole morning's shopping without any memory of having done so. On numerous occasions she has failed to greet neighbors and friends, passing them without

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* It may be noted here that many patients in the series reported by Carr were also referred by gynecologists.

recognition. She had difficulty remembering appointments, shopping lists, etc., and there is evidenced an inability to concentrate.

About five months before, she had begun to suffer from recurrent, intense occipital and frontal headaches, occasionally associated with nausea but no vomiting. These had persisted and did not respond to the usual analgesics. At about the same time there had begun to occur frequent unaccountable crying spells and melancholia.

In the past eighteen months she had noticed a slight facial hirsutism, not previously present.

On examination the patient was noted to be alert and cooperative, with at least average intelligence. The weight was 242 pounds, and there was a marked generalized obesity not conforming to any specific lipodystrophic pattern (Fig. 1). A moderate hirsutism of the face and extremities was observed; otherwise the skin and mucous membranes were not remarkable. The skeletal structure was of a heavy architecture, including the skull and facial bones, and there was a suggestion of prognathism in the appearance of the jaw. With the exception of hypertension (218 systolic, 120 diastolic) the remainder of the physical examination revealed no abnormalities. The gynecologic report showed no organic disease of the generative tract.

Lateral and anteroposterior roentgenograms of the skull showed no definite hyperostosis conforming with any type of the Moore classification (Fig. 2). There was, however, marked hyperpneumatization as seen in certain pituitary states.

Other laboratory data were not particularly revealing. The blood count was normal. Blood chemistry determinations were calcium 9.5 mg. per cent, cholesterol 182 mg. per cent. The glucose tolerance curve showed a fasting value of 98 mg. per cent, and following the standard oral test of a single dose of 100 Gm. of glucose, the values for the half-hour, hour, and two-hour blood samples were 138, 146, and 87 mg. per cent, respectively. The basal metabolic rate was minus 17 per cent.

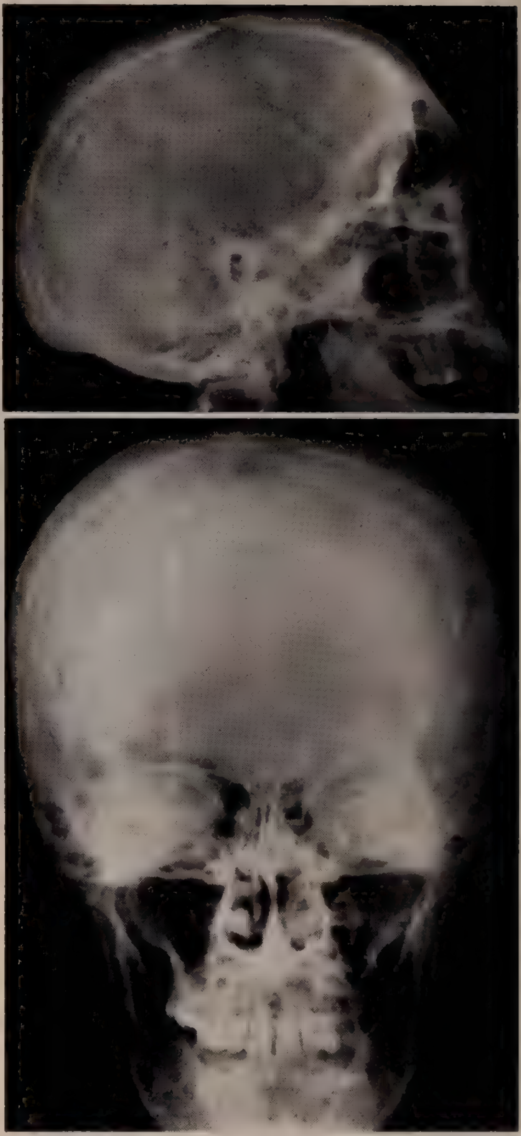

Fig. 2. Lateral and posteroanterior roentgenograms of skull. Note the hyperpneumatization.

In spite of the absence of frontal hyperostosis or one of the other of Moore's types of cranial thickening, the association of obesity, hirsutism, menstrual disorder, and distinct memory defect with peculiar confusional states occurring in a woman at about the menopausal age justifies the assumption that the criteria of the Morgagni-Stewart-Morel syndrome have been fulfilled clinically. It is possible that, as noted by de Lehoczky and Orbán[51] and M. T. Moore,[41] there will occur progression of skull changes which are perhaps too slight as yet to be demonstrable by x-ray. The hyperpneumatization shown in this case, with the exception of the absence of sclerosis, is reminiscent of the type II dysplastic skull of Mortimer which occurs predominantly in women and is the result of pituitary dysfunction.[40] The secondary sclerosis in this type is associated with the hypofunctional phase of the pituitary which is so apt to follow the period of hyperfunction.

Pathology

The skull changes have been the object of close attention, and the bone manifestations are well known. In the earlier stages there is a thickening of the surface of the inner table, having an ivory appearance on section which is in contrast with the compact bone of the inner table. The site of origin of the process is fairly constant and first appears on each side of the sagittal sulcus in the pars frontalis of the frontal bone midway between the foramen cecum and the coronal suture. The process is usually bilateral, and if at first it appears only on one side, the other side soon begins to show changes. However, the degree of thickening is not always equal on the two sides.[42] The process spreads in rather a fan-shaped manner until the coronal suture is reached, and it rarely extends beyond this boundary. Occasionally there is involvement of the orbital plate of the frontal bone, the inner table of the parietal bone, and some cases are reported showing affection of the structures in the middle fossa at the base of the skull, especially the temporal or sphenoid bone, and the bony structures of the hypophyseal fossa. Cases with diffuse calvarial hyperostosis were noted in Moore's classification, and associated extracalvarial bone changes have been noted in the mandible,[63] vertebrae,[4] and as a diffuse osteosclerosis of the entire skeleton.[37] Moore considers such changes, however, as merely those to be expected as skeletal changes due to age or as features of other "incidental" states such as acromegaly.

As the initial thickening noted above continues to progress, it may take on a nodular appearance. The fully formed hyperostosis is composed of cancellous tissue overlaid with compact bone, the surface of which is often polished and eburnated. The diploe is not infrequently invaded in these later stages, but the outer table of the skull is not involved and the skull sutures are surprisingly unaffected. As Greig observes, the cranial changes found in this group do not present the degenerative characteristics seen in bony senile deterioration and therefore may not be considered as merely a local expression of the aging process.

Although Morel noted a mild chronic leptomeningitis in one of his cases, the dura itself shows no inflammation or thickening but is adherent to the hyperostotic area and frequently tears at autopsy, leaving enough attached to the bone to obscure the thickening of the inner table. Thus, prior to the period of x-ray diagnosis many cases were undoubtedly overlooked.

Degenerative changes in the brain have been noted by many observers. Cortical atrophy of varying degree is not uncommon, although neither Marchand[64] nor Henschen[14] found consistent changes in brain weight. Hemphill and Stengel[60] reported histopathologic findings in a sixty-five-year-old patient in which the brain showed diffuse and focal loss of ganglion cells of the third, fifth, and sixth cortical layers in the frontal and parietal lobes, with no marked cerebral vascular changes. Pneumoencephalographic studies[12,41,57] have established the presence of cortical atrophy during life. In M. T. Moore's case[41] the encephalogram showed pronounced cortical atrophy over the frontal and parietal lobes, atrophy of the islands of Reil, and moderately advanced internal hydrocephalus with asymmetry and irregularity of the lateral ventricles. Morel at autopsy observed degenerative changes about the third ventricle, especially in the posterior hypothalamic region, in four cases of frontal enostosis, and Henschen[16] made similar observations but also found the same changes in control cases without bony changes.

Despite the palpably significant role of metabolic and endocrine factors in the pathogenesis of the entire symptom complex, thorough study of the endocrine organs has been undertaken in relatively small numbers when compared with the abundant literature on the clinical aspects of the condition. Because of the association of many of the stigmata of dyspituitarism, the pathologic changes in the hypophysis have been closely scrutinized by a few investigators. Barring the reports of only a few authors who found no pituitary changes,[1,46] significant pathology has been described. Pituitary tumors have been noted by Greig, and Moore[7] found a questionable solid tumor of the hypothalamic region. Mortimer[48] cites a case reported by Cushing in which there was present an eosinophilic tumor of the pituitary gland associated with marked hyperostosis. Stewart[10] observed sclerosis and deficiency of the chromophil elements of the anterior lobe of the pituitary in three insane females with obesity of the pituitary type and frontal hyperostosis. Morel also reported sclerosis of the anterior pituitary and found one case showing a large chromophobe adenoma. In three cases the acidophil cells preponderated, in two cases the basophils were scarce, and in two cases the chromophobes were relatively few in number. Henschen[16] in a pathologic study of a large case material of examples of the Morgagni syndrome found an almost constant increase in the number of acidophils and basophil cells in the anterior pituitary. Ritter[65] reported a case of the Morgagni syndrome with a great increase in the number of basophils. The value of these observations has been questioned on the grounds that these are quantitative findings and that they have not been established by means of quantitative measures.[43] Using the comparison microscope, Mellgren[66] and Floderus[67] found no perceptible differences in the frequency of the basophils, the acidophils, and the chromophobes between examples of the Morgagni syndrome and control cases. However, Mellgren confirms the work of Reider[57,68] who noted definite qualitative changes in the anterior pituitary, namely, the presence of hypertrophic amphophils (large granule-free cells with foamy protoplasm and large nuclei poor in chromatin and at times polymorphous, considered to be a later stage of the degranulation of the basophil in the hyaline change) and enlarged basophils which were found more often and in greater abundance in the Morgagni syndrome than in controls.

Changes in other endocrine glands have not been demonstrated with the same degree of consistency. Morel and Henschen found only the normal senile changes of atrophy and sclerosis in the ovary and together with Grollman and Rousseau could observe no abnormalities of the adrenal.

However, with respect to the latter gland, the work of Mellgren[43] is significant. This investigator found that enlargement of the adrenals was characteristic. Although such enlargement in itself does not necessarily indicate dysfunction, Mellgren adduces further evidence for implicating the adrenal. Using Vine's Ponceau-Fuchsin reaction[69] he found a positive reaction typical in cases of the Morgagni syndrome. (The Ponceau-Fuchsin reaction is the demonstration of a fuchsinophil granule found in abundance in adrenal cortical cells in cases of adrenal virilism. It is negative when there are no endocrine disturbances.) The significance of such evidence becomes apparent when one attempts to integrate the Morgagni syndrome with other endocrine symptom complexes.

Scant reference is found to pathologic changes in the parathyroid glands. Morel described infiltration by acidophil cells. Hemphill and Stengel[60] reported on the examination of four parathyroid glands which disclosed that three of the four glands were unusually small and showed an increase of pale oxyphil cells. The fourth gland was found to contain these cells exclusively.

Etiology

It is now generally conceded that the protean manifestations of this syndrome, of which "the hyperostosis, though the surest sign (may be) the least important . . .,"[7] are the expression of a dyspituitary state. In the earlier literature, however, attempts were made solely to explain the origin of the cranial hyperostosis, and as a result only locally operative pathogenic factors were considered. Clouston,[30] for example, was of the opinion that the osseous growth is a structural effect of repeated congestions of the branches of the carotid artery during periods of intense excitement in the insane. Lewis[28] attributed the thickening to prolonged and very chronic inflammation. Shattock[70] and Knaggs[71] considered the hyperostosis a result of congestion of the dura. Chronic frontal sinusitis leading to a pachymeningitis with resultant bone deposits on the inner table has been postulated as a possible sequence of inflammatory origin.[72] Traction on the dura in the dorsal recumbent position so regularly assumed by elderly persons has been advanced as a cause for the bony overgrowth and/or its localization in the frontal region.[5,6,45] The effect of trauma has been considered as a possible etiologic factor in view of the history of head injury occasionally elicited. The view of Schiff and Trelles has already been noted, that in such instances trauma probably exerts an indirect effect through a disturbed pituitary function with ensuing metabolic disorders leading to hyperostosis.

The role played by brain atrophy in the production of cranial hyperostosis has been a source of speculation. Rokitansky[4] supported the view, concurred in by Naito and Schuller[73] and Dressler,[45] that atrophy of the brain gives rise to deposits of bone on the inner table of the skull as a compensatory hypertrophy. Greig[5] also believed that cerebral atrophy (together with traction on the dura mater) produced a negative pressure between the dura and the frontal bone, thus stimulating bony overgrowth. However, the evidence against such a mechanism is convincing. Bucknill[29] pointed out that some of the thickest and heaviest craniums are found in instances in which there is little or no cerebral atrophy. As a rule, the atrophy is not extremely severe and never in proportion to the amount of hyperostosis. For example, Dressler reported 71 cases, and there was never more than slight atrophy present.

The interesting observation of Stewart[42] has helped to weaken the concept of a compensatory mechanism in the evolution of the cranial changes. He reports the case of an extremely advanced stage of frontal hyperostosis in which the pars frontalis had reached a thickness of more than 2 cm. but with a great difference in the degree of development of the osteophytic masses on the two sides, the left side showing much thicker bone deposition. This patient had had a left hemiplegia three years before death, and on postmortem examination there was gross atrophy of the right cerebral hemisphere, the right frontal lobe forming a shrunken mass. Thus, the brain atrophy was on the opposite side from the increased osseous development, which is evidence that the atrophy does not stand in a causal relationship to the frontal hyperostosis.

Parenthetically, note may be made here that the converse proposition, namely, that the hyperostotic skull formation is the cause of cerebral atrophy by encroachment and pressure, is equally untenable, although supported by Hemphill and Stengel and S. Moore. The latter cites autopsy reports in cases of extreme hyperostosis in which mention is made of the fact that the frontal lobes conform or are molded to the hyperostotic zone, by reason of which he concludes that "this can only mean that the brain atrophies before the advance of the encroaching bone."[7] However, the encephalographic study by M. T. Moore previously noted showed that the areas of cortical atrophy are not in direct contact with the hyperostoses at all points but that fluid-filled spaces exist between the inner table of the skull and the brain. (This finding, it will be observed, is also evidence against the contention that the hyperostosis fills in the "dead space" as a compensatory mechanism.) Furthermore, the hyperostosis is slow growing and widely distributed. De Lehoczky and Orbán[51] made repeated radiographic observations of the skull in their patient and over a period of nine years noted only slow progression of the bony changes. Also, if these changes were the cause of cerebral atrophy, some displacement of the brain substance should be produced, as Stewart points out, as is the case, for example, with a hard fibroblastic meningioma. This question of the relationship between hyperostosis and brain atrophy is more than academic since S. Moore has advocated surgical intervention as one form of treatment in these cases, stating that "massive projection of bone extending into the cranial cavity. . . certainly seems to call for removal as clearly as would a depressed fracture encroaching to this degree on the substance of the brain."[7]

Most recent studies have avoided a mechanistic approach to the question of the origin and localization of the hyperostosis, taking into account the obvious endocrine background of so many of the clinical features of the syndrome. The role of a disturbance in calcium metabolism was an obvious point of attack, despite the fact that determinations of the calcium content of the blood have yielded normal figures according to the reports of nearly all investigators. Greig believed that intracranial osteophytes are due to absorption of calcium and phosphorus salts from the bony skeleton as determined by relative disuse, in excess of the organism's excretory powers, and their deposition as bone in the cranium. He considered this as "an innocuous relief to a system supersaturated with calcium brought about in an area which age renders least important and which has the necessary blood supply of the bone forming cells." It must be recalled, however, that Greig's case material was in an old age group. Moore[7] pointed out in connection with the high preponderance of cranial hyperostosis in the female sex that calcium metabolism is of great significance in gestation, lactation, and menstruation and that the demands upon the female organism are characterized by their periodicity and intermittent nature. He speculated upon the presence in the female of a special structure which governs calcium metabolism, the mechanism of which, if not properly integrated with the sexual physiology, might cause a deviation of metabolism resulting in calcium retention.

The explanation advanced by Roth[61] is perhaps on slightly firmer ground. The latter predicates his theory on an increased permeability of the hematoencephalic barrier and of the meninges, with passage of calcium salts into the cerebrospinal fluid through the meninges and deposition on the inner table of the cranium. The predilection for the frontal bone according to this theory is accounted for by the greater curvature of the skull in this area causing slowing of the flow of cerebrospinal fluid. In cases of the Morgagni syndrome associated with arteriosclerosis and hypertension, these diseases of the vascular system are assumed to produce such a change in the blood-brain barrier. In order to explain the many cases in younger individuals without circulatory disease, Roth invokes the operation of endocrine factors, since experimental work has demonstrated an increased permeability of the barrier during pregnancy, during the premenstrual period and the flow, and on the administration of thyroid and ovarian substances.[74] Roth believes that such data may also explain the sex incidence. However, this is probably an oversimplification since one must make distinction between the sex incidence of a disease and the incidence of that disease in one or the other sex. Although Henschen found cranial hyperostosis in close to 50 per cent of women over the age of seventy, the reports in the literature indicate too low an incidence of the condition to account for it by what are, after all, normal physiologic mechanisms in the female.

Some authors have raised the question of hereditary influences in considering possible etiologic factors. Knies and Le Fever[12] cite the cases of a mother and three children with stigmata of the syndrome and suggest that there may be a hereditary background "not only for the location of the bony changes, but also for the metabolic basis for their occurrence, possibly by means of pituitary determination and the inheritance of a pathologic endocrine pattern." Samson *et al.*[75] reported in detail the findings in a mother, sixty-three years old, and son, age thirty-seven, with characteristic features. There were two younger children, twenty-five and nineteen years of age, who showed the bony changes but no associated symptoms, and a fourth child, age twenty-two, in whom there was no hyperostosis but certain stigmata such as mild prognathism and hyperaeration of the skull, which the authors considered to be an attenuated form of cranial dystrophy. Grollman and Rousseau make the statement that the condition frequently affects several members of the same family, being inherited as a dominant character, and the family history of a number of their patients suggested the existence of the disorder in their relatives. Nevertheless, the claim may not yet be made that heredity plays more than a role of predisposition in the pathogenesis of this syndrome.

A consideration of the endocrine basis for the Morgagni syndrome, no matter what abnormality of internal secretion appears to be the proximate producing cause, leads inevitably to the realization of the paramount importance of pituitary dysfunction in the etiology of the condition. Andrews,[59] for example, has suggested that a disturbed parathyroid function may be the underlying cause for the calcium dysmetabolism postulated by many observers. As has been noted elsewhere, there are reports by some of pathologic changes in this gland. Even if one is willing to accept this as being of etiologic significance, there is evidence for a pituitary background in disorders of the parathyroid. Although it is true that the linkage is largely manifested morphologically, this in itself is a suggestive relationship. In the classic work of Cushing and Davidoff[76] the statement is made that "adenomas of the parathyroids are apparently not uncommon, particularly in diseases where the metabolism of bones is obviously affected, and it is perhaps therefore not surprising to find that they may occur in acromegaly." Josefson[77] reported on the histopathologic findings in an adenoma of the parathyroid in a case of acromegaly in which the lesion resembled closely a hypophyseal adenoma. Hadfield and Rogers[78] and Gerstel[79] also noted parathyroid adenomata associated with hypophyseal tumors. The occurrence of frontal hyperostosis in acromegaly has already been mentioned.

Similarly, because of the frequency of menopausal states, either physiologic or by castration, among these patients a number of observers have inculpated the climacteric change of ovarian function,[10,14,32] although Knies and Le Fever[12] express doubt that this view is tenable in the face of the increasing number of preclimacteric and male cases reported, an opinion also shared by Tager *et al.*[11] who found no evidence that the menopause contributes anything to the lesion. However, even if the observation were valid, it is a generally recognized fact, as Bartelheimer[21] points out, that during and after the menopause, through lack of the ovarian secretion a hyperfunctioning of the anterior lobe of the pituitary occurs. As shown by the work of Mortimer and his associates to be described below, it is therefore not surprising that in association with this process a frontal hyperostosis takes place.

The factor of pregnancy has been touched upon in connection with Rokitansky's puerperal osteophytes. Leszler[80] reported some cases of frontal enostoses in pregnancy. Dressler[45] speaks of the general tendency of the female to undergo bone changes due to pregnancy, and Moore[36] points out that there is to be considered here the physiologic hyperpituitarism or what he terms the "fugitive acromegaly" of pregnancy. However, the figures of incidence in parous women quoted by Greig,[5] Tager *et al.*,[11] Moore,[7] Bartelheimer,[21] and others, which range generally between 30 and 50 per cent, tend to weaken any attempt to assign a specific etiologic role to pregnancy.

Bartelheimer has stressed the association of insulin-resistant diabetes with frontal hyperostosis and found that in a large proportion of his more or less insulin-resistant diabetics roentgenograms of the skull revealed various degrees of calvarial hyperostosis. This bespeaks a common background of pituitary dysfunction.

The experimental work of Mortimer[38,39] on the influence of the anterior pituitary on cranial form and structure is particularly germane to any discussion of the etiology of this syndrome. Mortimer pointed out the enormous complexity of the growth mode of the cranium from a phylogenetic standpoint and the possibilites of a dysplastic pattern in the ontogenetic growth and differentiation of the skull as the result of disturbances in the internal environment of the individual. This environment is predominantly influenced by the presence of the hormones produced by the hypophysis, having a profound effect on the metabolism of protein, carbohydrate, fat, water, and calcium. The administration of the somatotropic fraction of the anterior pituitary hormone in a hypophysectomized animal can lead to growth in both soft tissues and bone for a certain period of time beyond which resistance to further treatment appears, which is due, according to Collip[81] to the formation of a specific antihormone.

Mortimer, working with hypophysectomized animals, used two types of growth hormone, a purified fraction and crude alkaline growth extracts. He found that treatment with the purified fraction led to satisfactory growth for a period of about thirty to forty days before resistance took place, the growth being less than that obtained with the crude extract but with a fairly normal cranial bone modeling. With the crude alkaline extract, on the other hand, treatment could be continued much longer before the animal developed resistance. As this resistance appeared, particularly to the ketogenic effects of such hormones, a well-marked sclerosis of the cranial bones took place. Not only did a greater weight increase occur in this latter group as a consequence of the later advent of resistance, but Mortimer found that these animals showed a marked obesity.

Later, Mortimer, Levene, and Rowe[40] integrated these findings with a carefully planned study of a large case material. Because of interest aroused by the observation of a case of dementia precox in a young acromegalic who showed frontal hyperostosis, these authors studied the question of the interrelationships among skull dysplasia, pituitary disability, and mental disease. They used as material a series of 4,000 cases referred for endocrine diagnosis to the Evans Memorial Hospital in Boston, which included lateral and posteroanterior skiagrams in 3,000 of these, and, in addition to this clinical material, the cranial changes in 11 well-known museum specimens of acromegalic skulls were reviewed. Of the latter the Thomson-Walker skull of Keith proved to be of particular interest. This was the skull of a forty-year-old female which showed atypical acromegalic changes, the striking feature of which was the thickening and great increase in density of the calvarium, affecting mainly the frontal and parietal parts. It was only after the review of hundreds of skiagrams that the significance of this skull was appreciated, for they eventually found 71 cases in their series which showed changes of a similar nature. The great majority (66) were in women showing adiposity as well as other symptoms of pituitary failure. In all, out of a total of 2,950 cranial skiagrams examined, 494 (16 per cent) were abnormal in appearance, and when correlation was then made with clinical and physiologic studies, it was found that three fourths of these cases had evidence of disturbance of putuitary function. Lesions of the central nervous system were three times as frequent in this dysplastic group as in the controls.

The authors classified four types of cranial dysplasia. Types I and II were those skulls showing cancellous overgrowth producing hyperplastic diploe, hyperpneumatization of the face and prognathism, the difference between the two types resting simply on the presence of secondary sclerosis in the second type. Types III and IV were characterized by inadequate growth of cancellous bone leading to hypoplastic diploe, paranasal sinuses, face, and jaws, again the difference between the last two types being the added presence of secondary sclerosis in type IV. Recalling the similar calvarial sclerosis produced experimentally with the use of crude alkaline growth fractions, the authors believe that it is a failure in this direction, occurring spontaneously, which is an etiologic factor in the production of the clinical syndrome. They conclude that the cranial dysplasia is produced by a dyspituitarism in which the hyperfunctional phase is slight, transitory, or nonexistent and the hypofunctional phase is the long-lasting and dominant characteristic.

Further evidence of the etiologic role of the pituitary comes from a consideration of its relation to other endocrinopathic states with recognized dyspituitary components. A number of observers have commented on the clinical resemblance of some cases of the Morgagni syndrome to Cushing's disease. The occurrence of osteoporosis was noted in 42.2 per cent of Henschen's series.[18] Hypogenitalism, hypertension, and diabetes mellitus have been not uncommon features. Bartelheimer[44] reported the case of a diabetic female with a rounded "blue-red" face, rounded back, abdominal striae, and virilism. In another paper[21] the same author cites a second case in a male showing polycythemia, hypertension, obesity, and feminine hair distribution. Both patients had definite thickening of the frontal bone. That this resemblance denotes a possible common pituitary origin is further indicated by studies of pituitary corticotropic function. Bartelheimer and Cabeza,[82] using the method of Jores and Beck,[83] found an increased quantity of the corticotropic factor in the blood in a case of the Morgagni syndrome.

Another clinically similar condition is to be seen in examples of the so-called Cushingoid habitus. This is the symptom complex common in women in the menopause or after oophorectomy, characterized by hirsutism with obesity, usually of the "buffalo type." Achard and Thiers[84] considered this a distinct syndrome and pointed out an external likeness to adrenal virilism. They reported a case of their own showing slightly hypertrophic adrenals. On the basis of similar observations, Berblinger[85] considered that hirsutism in the aging female is due to the predominant influence of the adrenal cortex on the contrasexual sex characteristics when ovarian function becomes weaker. Because of the external likeness between these cases and adrenal virilism in younger women, Broster *et al.*[69] regarded this menopausal syndrome as a form of the adrenogenital syndrome, "postmenopausal virilism."

Mellgren[43] in turn has grouped the Cushingoid habitus with the Morgagni syndrome to constitute what he terms the "menopausal syndromes." His pathologic studies and the conclusions to be drawn from them are highly stimulating and of possibly great significance. Mellgren's observations, based on examination of the hypophysis and adrenals of 261 cases, which included 16 cases of the adrenogenital syndrome and 45 cases of the menopausal syndromes, showed that the anterior pituitary demonstrated, on the whole, the same histologic change in Cushing's syndrome, adrenal virilism, and the menopausal syndromes (Cushingoid habitus and Morgagni syndrome). This change consists in an increase in the number of special cells (hyaline basophils and hypertrophic amphophils) together with a less constant increase in the number of sparsely granulated basophils. The occurrence of hyaline basophils in the anterior pituitary as a characteristic finding in Cushing's syndrome is well known.[86] In a number of such cases the pituitary also shows numerous hypertrophic amphophils, thought to be a later stage of the hyaline basophil. Mellgren found that the only difference between the groups studied is that in Cushing's syndrome and adrenal virilism the pituitary change is quantitatively much more pronounced than in the Cushingoid habitus and the Morgagni syndrome. In addition, Mellgren found that enlargement of the adrenal cortex is common to both groups, and he concludes that "there are strong reasons for taking the menopausal syndromes to be mild forms of the adrenogenital disease."

Grollman and Rousseau[46] deny the relationship between metabolic craniopathy and Cushing's disease and consider the connection more apparent than real, the clinical resemblance being in their opinion merely superficial. In addition, these authors point to their studies on the 17-ketosteroid content of the urine, which is elevated in Cushing's disease and adrenal cortex dysfunction and considered to be of significance in the diagnosis of these conditions. In patients suffering from metabolic craniopathy these authors found a daily excretion of 3 to 7 mg. of 17-ketosteroid, a normal value. Despite such opinion to the contrary, however, the foregoing recital of the evidence, including Mortimer's and Mellgren's brilliant investigations, is sufficiently arresting to lend credence at least to the endocrine and ultimately pituitary origin of the Morgagni syndrome.

Treatment and Prognosis

Recommended forms of therapy vary with the particular manifestation being treated and with the conceptions of the individual therapist. Leri and Cottenot,[33] confusing the bony changes in the skull with syphilitic osteitis ("ostéites spécifique"), gave bismuth to these patients with reportedly good results. This is an example of the erroneous assumptions and misconceptions which have dogged the development of our knowledge of the syndrome.

Carr was impressed by the large number of patients who showed muscular weakness and used large quantities of gelatin daily in an attempt to relieve this symptom. The change in the entire clinical picture was so striking according to Carr,[37] that the use of aminoacetic acid was continued. The creatinuria which was found in several of his patients disappeared under this form of treatment. On the other hand, Reider[57] observed no effect using gelatin sheets as suggested and could not confirm Carr's results.

Knies and Le Fever[12] tried chondroitin with good effect. Bartelheimer[21] was able to improve the excruciating headaches in one of his patients by a course of progynon therapy. The recommendation by S. Moore[7] of surgical decompression in some of these cases has been noted elsewhere. This same author also suggests dietary measures for restoring faulty calcium-phosphorus balance, parathyroid hormone, and a rachitogenic diet to counteract excessive calcium deposit. Irradiation of the hypophysis has been recommended on theoretic grounds,[21] and Grollman and Rousseau[46] report striking improvement in several cases but found this type of treatment of no apparent value in a number of other cases.

The obesity in some instances may be at least partially controlled by strict dietary measures but in many is of little effect. The use of thyroid has been advised, and in the case observed by the writer, the intense headaches were partially abated with its exhibition. Harding[52] recommends appropriate therapy for any of the endocrine or metabolic manifestations and reports response to the treatment of obesity with low caloric diets, of menopausal symptoms by the use of estrogen substitution, of diabetes mellitus by insulin, etc. There were apparently no insulin-resistant cases in this series. Large doses of vitamin B and the use of prostigmin have been suggested in view of the neuromuscular weakness so commonly seen.[12] Rogers[58] reported improvement with the use of ergotamine tartrate.

In a disease with so varied a clinical picture and with so many interacting endocrine factors, treatment cannot attain any degree of specificity, and it is clear that in the present instance palliation of predominating symptoms is, for the moment, the best to be hoped for. The prognosis, in some measure, will be conditioned by the disorders associated with the syndrome, such as hypertension, diabetes, pituitary tumor, etc. Most cases have shown only a slow progression of symptoms, including cerebral changes, although the more severe cases occasionally appear to terminate in actual dementia.

Comment

The functions of the pituitary gland in the economy of the human organism are complex and far-reaching. Its primacy in the growth and development of the body, including the skeletal structure, and its influence on the other glands of internal secretion are well known, and the hypophysis has aptly been called "the motor of the endocrines." It is not therefore a matter of wonder that the manifestations of disturbed pituitary function are many and varied and that there should be instances of overlapping of clinical types of dyspituitarism.

The Morgagni-Stewart-Morel syndrome presented here has been shown to have features in common with other endocrinopathic states, and if one accepts the evidence for a pituitary origin in this condition, certain facts emerge which help to clarify the clinical concepts. One of the chief difficulties has been to reconcile the views of different observers concerning the symptoms manifested by patients with frontal hyperostosis. Henschen, it has already been noted, does not recognize the inclusion of neuropsychiatric disorders in the clinical manifestations, a view also held by Mellgren[43] and others.[21]

Further, Tager *et al.*[11] as a result of their studies found the cranial changes to exist in a variety of unrelated clinical states, with no consistent association of metabolic or endocrine abnormalities to a greater degree than is to be found in any random sampling of the population. By implication at least, these authors are doubtful as to the existence of this "alleged syndrome," the only concession made being the correlation of the cranial dysplasia with the female sex. However, these authors saw four cases with obesity and hirsutism, in large-boned, tall, coarse-featured individuals, but since these did not show neurologic manifestations, they were not considered significant. Nevertheless, the comment is made of them that "although defying a strict endocrine classification, one is almost tempted to consider a pituitary factor."

Similarly, Canavan[1] in a study of 230 cases found no consistent correlation with any other pathologic condition. Greig[5] stated unequivocally that intracranial osteophytes give rise to no symptoms whatsoever. At the other end of the clinical spectrum one finds reports of the regular association of the cranial dysplasia with psychoneuroses, mental deficiency, and insanity of all types and degrees. Because of the conflicting views relating to the symptoms accompanying frontal hyperostosis (including the various types of obesity considered), Somogyi and Bak[47] were led to propose a new classification, in an attempt to reconcile the divergent opinions:

1. Stewart-Morel type: Hyperostosis frontalis interna, obesity, and psychiatric disturbances.
2. Morgagni-Henschen type: Hyperostosis frontalis interna, obesity, and virilism.
3. Moore-Carr type: Hyperostosis of the calvarium in varying locations, with or without obesity and with or without psychiatric disturbance.
4. Greig type: Hyperostosis of the calvarium, with secondary symptoms only, or without symptoms entirely.

This classification does not, however, clarify the problem; it merely restates it.

A more satisfying approach begins with the consideration of the pituitary origin of the syndrome and its relationship to the cranial dysplasia. The cranium, for all its apparent stability is constantly undergoing physicochemical change with resorption and deposition of calcium and other salts even after dimensional growth has been completed, so that growth can be said to be still taking place "at a vegetative or maintenance level."[38] Chiewitz and Hevesy[87] showed that bone is continuously taking up atoms which are lost and replaced by others, and they estimate the average time which a phosphorus atom remains in the organism of a normally fed rat is about two months.

Mortimer's exposition of the effects of dyspituitarism on the cranial structure have been described. Suffice it to say that at any time in the ontogenetic development a pituitary disorder may conceivably produce cranial hyperostosis, regardless of age, sex, or associated symptoms. (In this connection, it may be pointed out that the sex incidence of the Morgagni syndrome is explained by Mortimer on the grounds that the female normally shows a relative hypopituitarism as compared with the male.)

With the acknowledged complexity of pituitary function in mind, it can be assumed that under a given set of circumstances involving the time of occurrence of pathologic physiology in the pituitary and the qualitative and quantitative changes which take place, a symptom complex may be produced represented by obesity, adrenogenital symptoms, and possibly some degenerative changes in the brain, all associated with cranial hyperostosis. It is likely that mild forms of cortical atrophy are not uncommon and may account for the high frequency of memory defects, headache, and other neurologic manifestations occurring with a high degree of regularity. The demonstration by M. T. Moore[41] of the similarity between the cortical atrophy of the Morgagni syndrome as seen in the pneumoencephalogram and that seen in other conditions manifesting neuropsychiatric symptoms has been mentioned previously. To this may be added the observation by the writer of memory defects and mental retardation in association with cortical atrophy occurring as a sequela of meningococcic meningitis.[88] It may well be that in the case of the cerebral changes noted in the Morgagni syndrome, there is a relationship between the endocrinopathy and degenerative disease of the brain as suggested by Reider.[57]

From the point of view just elaborated, the finding of frontal hyperostosis by itself is merely an expression of a pituitary dysfunction without the particular altered morphology and disturbed physiology necessary for the production of the specific syndrome, and such instances should not be construed as a "Morgagni syndrome sine symptoms" or the view taken that these cases will eventually develop symptoms. Studies such as that of Tager *et al.* may now assume a proper perspective. It should be emphasized that these observers examined consecutive cases of ambulant patients presenting chronic medical complaints with no attempt at selection. It is not surprising, then, that they discovered 66 cases of cranial hyperostosis (since the incidence of sclerosis of the calvarium, although not to be considered as the incidence of the Morgagni syndrome, is probably higher among the general population than is realized), and that these 66 cases showed no correlation with any specific syndrome. On the other hand, one may justifiably consider that the four cases of that series which manifested obesity and virilism constitute true examples of the syndrome, and the incidence therefore in their total of 492 cases studied might be reported as 0.8 per cent. These authors' report of an incidence of 13.4 per cent of "hyperostosis calvarii interna" is consequently misleading if reference to the specific syndrome associated with the cranial dysplasia is intended. (It should be stressed here that it is also true, in considering the incidence of this condition, that the valuable reports of large series of roentgenograms may represent a false figure since these were retrospect studies of skull x-rays, and it is obvious that these films were taken for the most part by reason of some complaint or condition referable to the central nervous system, so that a higher correlation is to be expected as a result.)

Case reports such as that of Louw[89] also become intelligible and are readily oriented in this broader conception of cranial hyperostosis. It is also illustrative of the concept. Louw reported a case of frontal hyperostosis occurring in Rothmund-Werner's disease, a syndrome characterized by bilateral cataract, scleroderma, marked emaciation, defective physical development, and early grayness of hair. As Nielsen[90] points out, the cataracts in this disease resemble other endocrine cataracts as encountered in acromegaly, diabetes insipidus, diabetes mellitus, etc. Louw considers the findings in this disease, including the frontal hyperostosis, suggestive of pituitary dysfunction, as indeed they are. But the point here is that the cranial dysplasia occurred as the result of a dyspituitarism which evolved along a different pathway from that of the Morgagni syndrome, probably morphologically as well as functionally. It is thus *not* an example of that syndrome occurring in association with Rothmund-Werner's disease as some reviewers might report.

Another example of the misconceptions which have become common in the literature and which gives point to the necessity for a proper approach in an evaluation of the Morgagni syndrome may be cited here. A recent report by Prescott[91] from the Institute of Living, a psychiatric institution, describes hyperostosis frontalis interna in a male patient. The concluding statement is that this case was "reported in great detail as this patient was diagnosed repeatedly during his previous hospitalizations as a case of paranoid schizophrenia," the implication being that the hyperostosis was the pathogenetic factor in the patient's condition, as an example of the Morgagni-Stewart-Morel syndrome. The present writer submits that, on the contrary, the cranial dysplasia was in this instance an incidental finding, and until it shall be proved that dyspituitarism is regularly associated with the psychoses and other mental disease not conditioned by organic changes in the brain, one must agree with Henschen and others that such manifestations are not an integral part of the syndrome. Greig has maintained that the cranial changes occur with no greater frequency among the insane than in the general population, and it is probably true that the apparent high incidence of this change reported from psychiatric institutions is the result of more frequent study of the cranium in mental and nervous disease.

In other words, frontal hyperostosis by itself, shown to occur in persons without other stigmata of the Morgagni syndrome and without neuropsychiatric disorders, may also occur without added clinical significance among the mentally ill. This is not to say, as previously indicated, that certain neuropsychiatric symptoms related to degenerative changes in the brain tissue may not be properly included in the manifestations of the syndrome.

Summary and Conclusions

1. The subject of the symptom complex of hyperostosis of the inner table of the frontal bone of the skull associated with various endocrine, metabolic, and neuropsychiatric disorders is reviewed, and an attempt is made to clarify confusion existing as to the clinical limitations of the syndrome.

2. The etiologic factors are examined, and the dominant role of pituitary dysfunction in the pathogenesis of this condition is demonstrated, as well as the relationship of the syndrome to other dyspituitary states.

3. Evidence that the cranial hyperostosis is determined by pituitary changes is presented, and the fact that such hyperostosis may exist independent of the specific symptom complex is emphasized.

4. The cranial dysplasia, although the most nearly constant feature of the syndrome, is sometimes absent, but the clinical features are sufficiently well defined to allow of recognition in such instances. An illustrative case is reported.

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POSTGRADUATE LECTURES

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The Management of Heart Failure Including Diet, Digitalis, and Diuretics

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SIR William Osler defined treatment as "the art or science of amusing a sick person with frivolous speculation, or temporizing ingeniously, until nature kills or cures." While in many of the chronic ills seen today this same dictate holds, I feel considerable advance has occurred in the management of the treatment of heart failure. No longer do we wait passively for nature to "kill or cure," but rather we utilize diet, digitalis, and diuretics in an attempt to aid the affected person.

In any discussion of the management of heart failure, we should accept the basic fact that heart failure is an inability of the heart to meet the demands of the body. Whether this is a consequence of a backward, forward, or combined physiology is of didactic interest as compared to the significance of congestive phenomena in the pulmonary or systemic circuits or whether the failure is of the high output type. This latter, involving clinical states in which the increased work of the heart is engendered by increased tissue demands, offers much opportunity for successful treatment if the underlying factor is uncovered. With antithyroid drugs, radioactive iodine, x-ray, or surgery the thyrocardiac is immeasurably aided although the associated drugs needed for primary myocardial failure, as will be discussed later, must still be available for the frequently associated concomitant underlying disease. Deficiency states as beriberi and anemia can be specifically treated and the failure corrected. Arteriovenous fistulas and chronic pericardial disease are also examples of this type of failure that can in turn be aided by appropriate surgical measures.

In the same general vein I should also emphasize the need for a careful search and correction of infection and appreciation of normal effects of physiologic states affecting the heart as pregnancy and the functional stimulation of underlying organic pathology. It is not the high output type with which we are primarily concerned today for rather the subject assigned to me would appear to deal more with the congestive failure resulting from the common etiologies of congenital, rheumatic, syphilitic, hypertensive, and arteriosclerotic origin. And yet even in this respect the primary etiology is secondary to the appreciation of existing congestive phenomena because in most instances the management is that of the complication rather than the cause. Oh, true enough, it is that in acute rheumatic fever, active syphilis, and acute myocardial infarction the primary cause demands basic therapy, but I feel that in general our problem for today's discussion is to outline a practical method of treatment for this complication of any of the common etiologies.

In the treatment of heart failure and, for that matter, of any disease, I should like to impress upon you the importance of treating a patient and not a disease. Thus it becomes apparent that any pattern set forth can be used only as a means to approach logically a general subject, and no hard and fast rules can be stated in the treatment of heart failure. Since our present mode of life leaps forward with great strides and since now we are daily being advised by press, radio, and movies concerning 3-D, I too would like to present to the marquees of your memory 3 "D's" in the management of heart failure, namely, diet, digitalis, and diuretics. Since, too, our atomic age brings formulas to the foreground, a simple formula can be offered to aid in this matter:

$$\text{Rest} + \text{3-D}\begin{cases}\text{Diet}\\ \text{Digitalis} + \text{Mechanical Removal of Fluid}\\ \text{Diuretics} \quad -\text{Mental Upset} = \text{Compensation}\end{cases}$$

$$\text{R} + \text{3-D} + \text{MR} - \text{M} = \text{Compensation}$$

Rest is a cardinal form of therapy for any injured or diseased part, and in heart failure it is my belief that this same truth holds. While our recent literature has, to a degree, created some confusion as regards this basic concept, I do not think there is any need for concern. The problem is better considered in the light of the judicious use of rest rather than its abuse by the staid methods of total passiveness previously employed. By judicious use of rest, I refer to a comfortable bed with the back rest at 45 degrees, either by the hospital bed or 8-inch blocks at the head; I refer to the covers over the edge thus avoiding the imprisonment of the legs leading to phlebitis. A commode for excretion, deep breathing, and a cleansing daily skin toilet all serve a judicious place and yet utilize rest. Such procedures can be handled as easily at home as in a hospital. The time of rest is individual and depends upon the residual evidence of congestion, the cardiac reserve, and the intelligence of the patient involved.

In line with physical rest it would be appropriate to mention at this time the methods of value to insure mental rest. Certainly with mental upset physical calm is impossible. While the immediately beneficial effects of the opiates in relieving the acute dyspnea of left ventricular failure are well known, untoward effects can and do occur if these drugs are used too long. While we favor Dilaudid $^{1}/_{20}$ grain for these situations, this drug is utilized only in acute circumstances. For sedative effect, when opiates are not necessary, we use chloral hydrate, $3^{3}/_{4}$ to $7^{1}/_{2}$ grains three times a day, with a 15-grain capsule at bedtime. If this is not tolerated, paraldehyde can be used, and where restlessness complicates with dyspnea, a suppository of aminophylline, 5 grains, and Sodium Pentobarbital, $1^{1}/_{2}$ grains, is inserted at bedtime. A cheerful room, a cheerful nurse, and a cheerful, understanding, and frank physician also go a long way to produce mental ease and confidence.

The manifestations of congestive failure result from the accumulation of fluid in the tissue and tissue spaces, and it is merely a question of the amount of fluid that determines the variable clinical signs and resultant symptoms. It would be logical, therefore, to adopt a program wherein the prevention of this accumulation could be accomplished, its excretion encouraged, or its removal achieved. Toward this end we can further fashion our formula by diet, digitalis, diuretics, and mechanical removal.

Since the fluid in the tissue is due to salt and water, it would be only logical to devise some means of decreasing either or both of these, and skill is needed in such a venture. The Karrell diet, while basically most effective in limiting both water and salt, is deficient in calories, vitamin B, vitamin A, vitamin C, and iron. Thus while it is at times of value in markedly edematous patients, supplemental vitamin is imperative. As a matter of fact, while marked fluid restriction was once an accepted form of therapy, it is now known that this may even be harmful. On the other hand, some have forced excessive amounts of fluid on the basis of diuretic action. This too has been shown to be untenable, and therefore a middle of the road philosophy enters to give fluids as desired. Thus at present the dietary approach is one of low sodium (1 to 4 Gm.), fluids as desired, supplemental vitamin, calorie intake 1,200 to 1,800, depending on the body build and presence of infectious cause.

Of all the drugs used in treating the heart
Where congestive failure is playing a part
I would take digitalis, be it old or new,
And which new form you select is up to you
Because they all do their work in the same way
So long as you digitalize and maintain each day.
If quick action is needed, it can be given by vein
As strophanthus, digitoxin, digoxin, or ouabain.
I think it's important to know its effect
And to appreciate toxicity and thus give it with
respect.

While nausea, vomiting, diarrhea, and heart block
Are toxic factors that must make you take stock.
To forget other things it may cause gives you trouble
Such as diarrhea, fibrillation, yellow vision, and seeing double.
If given correctly and need for it truly exists
There are few cases of failure that can persist.
And the heart rate will slow and the fluid recede
To prove that in failure, for digitalis there's need.

The third "D" refers to the diuretics which at the present time can probably be simplified to mercurials. While other diuretic measures have been tried in the past including caffeine, water, ammonium chloride, urea, and the xanthines, the present success with mercurials has relegated these others to the background. Ammonium chloride, through its action of changing ammonium to urea with the liberation of chloride ions to carry sodium, has a short-acting effect, and at present its greatest value lies in preventing low blood chloride levels and thus aiding those receiving mercurials. However, its prolonged and injudicious use can cause acidosis. The mercurial diuretics depend on inhibiting chloride reabsorption in the tubule, and the increased output of chloride carries off sodium, base, and water. On a basis of daily weight, diuresis, and subjective improvement, the frequency of injection will depend.

Whether subcutaneous Thiomerin, intramuscular Mercuhydrin, or intravenous Mercuzanthin is used is a matter of individual choice. The smallest effective dose used varies from $^1/_2$ to 2 cc., and it has been our custom on the day of good diuresis to allow a normal diet and to supplement with 100 mg. thiamin. Frequent use of mercurials, especially in patients on low-salt diets, can produce complication, the most serious of which is the low-sodium syndrome consisting of confusion, cramps, and shock and for which 5 per cent sodium chloride solution intravenously is indicated. It is more important to prevent the syndrome by avoiding too rigid sodium restriction. It is also important to appreciate the potassium and calcium loss in patients depleted of sodium. Since loss of these ions may cause skeletal muscle weakness or digitalis potentiation, fruit juice may be given to counteract its effect.

We have also had pleasing success with the use of Neohydrin to encourage diuresis. While supplemental injectable Mercuhydrin is also needed, the time element is prolonged, and general well-being of the patient is improved. Other forms of diuretics utilized, and which I shall only briefly mention, are the resins and Diamox. This latter, which is a nonmercurial oral diuretic, is effective by accelerating renal excretion of sodium and water through an enzyme system action. In 250-mg. dosage once daily, our results to this time have not been enlightening. The ion exchange resins are effective as diuretics in encouraging passage of fluids. An ion exchanger is an insoluble material which can remove specific ions from a surrounding solution and liberate an equivalent amount of a different ion into the solution. In most cases resins remove sodium but take up calcium, magnesium, and potassium and liberate hydrogen, ammonium, sulfone, or carboxyl radicals. While the resins may remove the sodium in patients with edema, several difficulties arise with their usage which include (1) unpleasant taste and consistency, (2) gastrointestinal upset, (3) great danger of changes in body electrolytes may occur as with acidosis, low potassium, low calcium, and (4) the rate of removal of salt is low. Thus resins would appear to be useful in some but not many patients with congestive failure and in our experience are limited to cases refractory to mercurial diuretics.

In addition to these methods of therapy, then, we have the mechanical measures suggested. Venesection by tourniquet or direct removal of blood is done at times. By decreasing the venous return, pulmonary congestion may be transiently helped, but since this procedure can alter the output of the left ventricle and the blood volume with the precipitation of shock, its use must be temporized carefully. On a similar physiologic basis, positive pressure respiration may be associated with shock so that caution must be utilized here also. With fluid accumulation in serous cavities, we feel considerable relief is afforded by paracentesis, and on several occasions we have used Southey's tubes effectively.

In summary, therefore, I have attempted to refresh the present thoughts of the treatment of heart failure by utilizing a simple, yet illustrative formula:

$$R + 3\text{-}D + MR - M = \text{Compensation.}$$

Polyvinylpyrrolidone in the Treatment of Traumatic and Hemorrhagic Shock and Severe Burns

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POLYVINYLPYRROLIDONE (PVP-Macrose*) is a polymerized macromolecule with a basic structure of vinylpyrrolidone and is classified chemically as a resin or a plastic. It is synthesized from acetylene, formalin, and ammonia under special conditions of temperature and pressure. The polymerization of vinylpyrrolidone can be controlled to the extent that a polymer with an average molecular weight and oncotic activity in the same general range as that of plasma albumin can be produced. The polymer we have used consists of chains of from 190 to about 720 vinylpyrrolidone molecules, the majority of which are in the molecular weight range from 20,000 to 80,000 with an average of 50,000.

The K value, which is a representation of the viscosity of a solution of standard concentration and is also a function of the molecular weight of the solute, is about 30 for the above polymer.

Polyvinylpyrrolidone in a 2.5 per cent and, later, in 3.5 per cent solutions in physiologic saline was used extensively during World War II in the treatment of shock and burns in German military and civilian casualties. In this early experience which by 1948 amounted to some 40,000 instances,[1] reports were good to excellent, and its use spread to other European countries. This product was known in England as "Plasmosan," in Germany as "Periston" and "Kollidon," and in France as "Subtosan."

Recently in this country investigation of polyvinylpyrrolidone and other plasma volume expanders has been under way as part of our military and civilian defense programs. During the past eighteen months on the surgical services of Harlem, Presbyterian, and Francis Delafield Hospitals, we have used PVP-Macrose in the management of 80 cases of acute trauma, including burns, lacerated wounds, fractures, penetrating wounds of the chest and abdomen, and head injuries. In addition, surgical and obstetric shock encountered in the operating and delivery rooms and in the recovery period was managed wholly or in part with PVP-Macrose in 144 patients in these hospitals. These cases are summarized in Table I.

With the earlier cases in the series, carefully controlled observations of blood pressures, plasma specific gravities, total proteins and albumin-globulin ratios, cephalin flocculations, and in some cases urine outputs and blood volumes were made at frequent intervals. This was done in a series of ten moderate to severe cases of traumatic and hemorrhagic shock and in a series of eight cases of severe burn shock. Details of these data are reported elsewhere.[2,3]

In the first ten traumatic and hemorrhagic shock cases, PVP-Macrose in volumes of from 1,000 to 2,500 cc. was infused within periods of from forty-five minutes to four and a half hours. Prompt and sustained improvement from shock was observed. In two cases in which death occurred, neither was attributable to failure of antishock therapy. In addition to the clinical improvement, significant decreases in hematocrit and whole blood and plasma specific gravities were noted, indicating hemodilution. In four cases, two of which underwent laparotomies for penetrating wounds of the abdomen, adequate support was given by the PVP-Macrose alone. No complications arose, and regeneration of hemoglobin and plasma proteins occurred promptly. Cephalin flocculations were questionably positive in two cases, but both reverted to normal during the hospital stay. No sensitivity reactions were observed.

In the first eight cases of severe burns covering

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* PVP-Macrose, supplied by Schenley Laboratories, Inc., is 3.5 per cent polyvinylpyrrolidone in Ringer's solution.

20 to 75 per cent of body surface, volumes of PVP-Macrose of from 1,000 to 3,000 cc. were given in from one to eight hours as initial therapy. In all cases there was recovery from shock, decrease in hematocrit, improvement of toxicity, and increase in urinary output. In three of the cases and in one case subsequently, there was clearing of gross hemoglobinuria within forty-eight hours. The fall in hematocrit and dilution of the peripheral blood and plasma were followed by secondary rises to approximately their initial levels in six to thirty-six hours, apparently depending to some extent on the severity of the burn. Four cases in this initial group died, but none from early burn shock, hemoconcentration, or toxicity. No significant alteration in blood electrolytes followed infusions of PVP-Macrose in these cases.

The urinary excretion curves, even in patients with initial severe oliguria and hemoglobinuria, showed a rapid early excretion of PVP, later tapering off after the smaller molecules had been excreted. Within twenty-four hours approximately 50 to 70 per cent of the infused material appeared in the urine.

Sharp plasma protein decreases, greater than had been anticipated, occurred in two patients. This was in agreement with other reports suggesting that factors other than simple hemodilution and plasma loss from burned areas may decrease the plasma protein level. Heilmeyer[4] and Weese[5] have presented evidence that in states of protein depletion there appears to be a physiologic mechanism which withdraws plasma albumin from the circulation in the presence of this foreign, osmotically active substance.

One case of questionable reaction was noted in a severely burned child in whom a second infusion of PVP was given on the fifteenth day. Products of tissue necrosis mobilized from the burned areas by the infusion may have caused this reaction which consisted of a febrile episode lasting about six hours.

In one of the four burned patients who died, foamy appearance of the Kupffer cell cytoplasm and bluish inclusion bodies were seen microscopically in the reticuloendothelial elements of liver and spleen. These observations, as well as histologic evidences of tissue storage in other organs, have been reported previously by Bargmann,[6] Barfuss and Eichler,[7] Ammon and Mueller,[8] Schoen,[9] Brass,[10] Fresen and Weese,[11] and Husselmann,[12] although they do not seem to be constant findings not having been observed by Korth and Heinlein[13] and with equivocal findings reported by Riedel and Zipf[14] and Pellerat, Maral, and Murat.[15]

Tissue retention with histologic and functional changes may be related to the amounts of PVP infused. Positive findings generally have occurred in animals and humans receiving much more than the recommended dose of 0.5 to 1.5 Gm. per Kg. The cases reported by Schoen[9] received totals of 8 Gm. per Kg., 3.6 Gm. per Kg., and 0.58 Gm. per Kg., respectively. Husselmann[12] reported 15 cases in which histologic findings were considered significant in 12 cases, and of these, only three had received less than 1.5 Gm. per Kg.

The single case[2] in which we observed histologic evidence of inclusion material had received 5.5 Gm. per Kg. In addition to the question of reticuloendothelial storage, the significance of the phenomena of dye elution or tissue washing[16] and detoxification of bacterial toxins[17] by PVP has yet to be completely clarified. Fresen and Weese[11] report no interference with antibody formation, hemoglobin metabolism, phagocytosis, or other functions attributed to the reticuloendothelial cells, even with high doses of PVP, but Stern[18] has presented some evidence, although inconclusive, that antibody formation in experimental animals is somewhat depressed after large doses of PVP.

The question of tissue retention of PVP is still under study. According to Ravin *et al.*[19] reticuloendothelial storage has been demonstrated to the extent of about 20 per cent of the preparations now in use. Whether this material residing in the tissues causes undesirable effects and what its ultimate disposition may be are still incompletely answered.

The difficulty in demonstrating and assaying minimal and even significant changes in renal and hepatic function are well known. Also, when we add to this the fact that changes in function of these organs may follow trauma, surgical operations, or even anesthesia alone, [20–22] it becomes extremely difficult to attribute noxious effects to infused or retained PVP. In spite of a number of reports of histologic changes indicating deposition and with the radioactive isotope studies corroborating this deposition,[19,23] there has as yet been no demonstration of specific organic or tissue dysfunction associated with stored PVP.

TABLE I.—Summary of Cases Given PVP-Macrose

Type of Case	Number of Cases	Units of PVP	Reaction to PVP	PVP plus Blood or Plasma Used	Results of Therapy	Deaths All Causes	Follow-up Data
I. Surgical cases (177)							
Burn shock (13)	13	43	1 (?)	13	Improved	6	4 patients followed 10 to 12 months: 16 cephalin flocculations and thymol turbidities, 20 total proteins and A/G ratios and 12 nonprotein nitrogens, 20 electrolytes, 16 complete blood counts and urinalyses done on these patients with essentially negative findings. One patient had 3+ cephalin flocculation which reverted to negative one week after PVP. Three patients died with positive cephalin flocculations. All studies were post-PVP.
Hemorrhagic shock (37)							
Lacerated wounds	32	43	0	8	Improved	0	3 patients followed 10 to 12 months: 9 cephalin flocculations and thymol turbidities, 8 complete blood counts, 8 urinalyses, 8 total proteins and A/G ratios performed on these patients. Negative data except for marked anemia in some cases which was promptly corrected. All studies were post-PVP.
Blood donors	4	4	0	0	Improved	0	
Esophageal varices	1	1	0	1	Improved (after blood)		
Surgical shock (97 operated cases)							
Gynecologic	36	52	0	13	Improved	0	29 patients followed 3 days to 14 months. There were 49 complete blood counts, 38 urinalyses, 2 cephalin flocculations, 4 total proteins and A/G ratios and 12 nonprotein nitrogens done pre-PVP; 66 complete blood counts, 38 urinalyses, 9 cephalin flocculations and thymol turbidities, 17 total proteins and A/G ratios and 7 nonprotein nitrogens and 4 electrolytes done in the post-PVP period. Two patients with 2+ cephalin flocculations, 4 and 10 months, respectively, after 500 cc. PVP; one patient received blood, one did not. One patient with 1+ cephalin flocculation preoperatively later had a negative test.
General surgical	25	37	0	21	One patient unimproved in spite of PVP and blood	9	23 patients followed 2 days to 12 months. There were 35 complete blood counts, 33 urinalyses, 5 cephalin flocculations, 2 thymol turbidities, 22 total proteins and A/G ratios, 11 nonprotein nitrogens and 17 electrolytes done pre-PVP; 47 complete blood counts, 32 urinalyses, 14 cephalin flocculations, 16 thymol turbidities, 42 total proteins and A/G ratios, 30 nonprotein nitrogens and 25 electrolyte determinations done in the post-PVP period. Rather marked plasma protein fall in 2 patients during 2 to 3 weeks after receiving 1,500 cc. PVP each during abdominoperineal resections for carcinoma. Another patient with 1 unit thymol turbidity 3 months post-PVP although cephalin flocculation negative.
Orthopedic	15	18	0	13	Improved	0	15 patients followed 4 to 10 months: 20 complete blood counts and 17 urinalyses done pre-PVP; 24 complete blood counts, 11 urinalyses, 4 cephalin flocculations, 4 thymol turbidities, 4 total proteins and A/G ratios done in post-PVP period. Findings essentially negative.
Neurosurgical	8	10	0	8	Improved	0	4 patients followed 4 days to 8 weeks: 4 complete blood counts, 4 urinalyses and 1 nonprotein nitrogen done pre-PVP; 3 complete blood counts, 6 urinalyses, 2 total proteins and A/G ratios and 3 nonprotein nitrogens done in the post-PVP period. Findings essentially negative.
Urologic	10	16	0	10	Improved	0	5 patients followed 4 to 8 weeks: 10 complete blood counts and urinalyses, 4 total proteins and A/G ratios pre-PVP; 10 complete blood counts and urinalyses, 5 nonprotein nitrogens, 8 total proteins and A/G ratios and 2 cephalin flocculations and

TABLE I.—(Continued)

							2 thymol turbidities done in the post-PVP period. Findings essentially negative.
Thoracic	3	5	0	3	Improved	1	3 patients followed 3 to 7 months: 4 complete blood counts, 4 urinalyses, 2 total proteins and A/G ratios, 2 nonprotein nitrogens and 2 electrolytes done pre-PVP; 3 complete blood counts, 4 urinalyses, 1 cephalin flocculation and thymol turbidity, 4 total proteins and A/G ratios, 2 nonprotein nitrogens and 5 electrolytes done in post-PVP period. Findings essentially negative.
Traumatic shock (30) Penetrating wounds of chest and abdomen	11	30	0	10	Improved	2	3 patients followed 12 to 14 months: 6 complete blood counts, 6 urinalyses, 6 cephalin flocculations, 6 thymol turbidities, 6 total proteins and A/G ratios. Findings essentially negative Studies all post-PVP.
Fracture cases	11	28	0	10	Improved	0	1 patient followed 13 months: 3 complete blood counts, 3 urinalyses, 3 cephalin flocculations, 3 total proteins and A/G ratios. Findings essentially negative. Studies all post-PVP.
Neurosurgical	8	12	0	2	Improved	1	1 patient followed 14 months: 3 complete blood counts, 3 urinalyses, 3 cephalin flocculations, 3 total proteins and A/G ratios. Findings essentially negative. Studies all post-PVP.
II. Obstetric Cases (47) Support during normal delivery	22	22	0	2	Improved	0	5 patients followed 7 to 12 months: 5 complete blood counts and urinalyses pre-PVP; 10 complete blood counts and urinalyses, 12 cephalin flocculations, 12 total proteins and A/G ratios done post-PVP. Findings essentially negative.
Postpartum hemorrhage	7	10	0	7	Improved	0	4 patients followed 2 days to 3 weeks: 4 complete blood counts and urinalyses done pre-PVP; 11 complete blood counts, 3 urinalyses, 1 cephalin flocculation and thymol turbidity, 3 total proteins and A/G ratios done post-PVP. Findings essentially negative.
Incomplete abortion	5	8	0	5	Improved	0	4 patients followed 1 day to 2 weeks: 4 complete blood counts and urinalyses pre-PVP; 6 complete blood counts, 2 urinalyses, 1 cephalin flocculation, 1 nonprotein nitrogen and 1 electrolyte done post-PVP. Findings negative.
Ectopic pregnancy	4	5	0	4	One patient not improved	0	1 patient followed 4 months: 1 complete blood count and urinalysis pre-PVP; 1 cephalin flocculation, 1 thymol turbidity, 2 total proteins and A/G ratios, 1 complete blood count and urinalysis, 1 nonprotein nitrogen and 1 electrolyte done post-PVP. Findings negative.
Episiotomy hemorrhage	4	9	0	4	Improved	0	2 patients followed 5 months each: 2 complete blood counts and urinalyses pre-PVP; 3 complete blood counts, 2 urinalyses, 2 cephalin flocculations, 2 thymol turbidities, 2 total proteins and A/G ratios post-PVP. Findings negative.
Cesarean section	3	4	0	2	Improved	1	2 patients followed 4 days and 1 week: 2 complete blood counts and urinalyses done pre-PVP; 2 complete blood counts and 1 urinalysis post-PVP. Findings essentially negative.
Cervical laceration with hemorrhage	2	4	0	2	Improved	0	2 patients followed 7 and 10 days: 2 complete blood counts and 2 urinalyses pre-PVP; 3 complete blood counts, 2 urinalyses post-PVP. Findings negative.
TOTALS	224	361	1 (?)	138 (PVP used without blood or plasma in 86 patients)	3 patients unimproved; 2 of these did not improve after blood was given	20 deaths all adequately explained by pathology	111 patients followed: 140 complete blood counts, 124 urinalyses, 5 cephalin flocculations, 2 thymol turbidities, 32 total proteins and A/G ratios, 36 nonprotein nitrogens and 19 electrolytes done in pre-PVP period; 225 complete blood counts, 158 urinalyses, 84 cephalin flocculations, 67 thymol turbidities, 136 total proteins and A/G ratios, 61 nonprotein nitrogens and 45 electrolytes studies done in the post-PVP period. Significant findings indicated above.

TABLE II.—DEATHS IN PATIENTS RECEIVING PVP

Case	Initials	Sex	Age	Diagnosis	Amounts of PVP, Plasma, and Blood Received (Cc.)			Time of Death After PVP	Principal Causes of Deaths
					PVP	Plasma	Blood		
1	L. A.	M	32	Penetrating stab wound of abdomen with laceration of liver	1,000	...	500	15 hours	Anesthetic death during cyclopropane-curare anesthesia
2	B. B.	F	28	75% burn, 60% third degree, of chest, trunk and extremities	4,000	2,250	3,500	8 days	Pulmonary edema and pneumonia; extensive burn
3	R. B.	F	20	Multiple thrombosis of hepatic veins (Chiari's disease)	1,000	1,625 Gm. of plasma albumin	9,000	4 months	Diffuse peritonitis; multiple thrombosis of hepatic veins
4	M. C.	M	46	Carcinoma of sigmoid colon with local invasion of pericolonic tissues	1,500	...	2,500	18 hours	Hemorrhagic shock due to uncontrollable hemorrhage from wound
5	M. C.	F	7	60% burn, 40% third degree, of face, chest, trunk, and extremities	1,500	250	2,500	31 days	Extensive infected burn; bilateral purulent bronchitis and bronchopneumonia
6	A. G.	F	54	45% burn, 30% third degree, of face, chest, buttocks, and thighs	2,500	500	1,000	11 days	Congestive heart failure; pulmonary edema; bilateral lower lobar pneumonia
7	A. G.	M	80	Carcinoma of the rectum; arteriosclerotic heart disease (two previous infarcts)	1,000	...	3,000	70 minutes	Cardiac failure during perineal phase of abdominoperineal resection for rectal carcinoma
8	J. H.	M	41	Carcinoma of the head of the pancreas with invasion of the liver	1,000	...	2,500	18 hours	Irreversible shock secondary to severe hemorrhage encountered at laparotomy; general debility
9	M. M.	F	37	60% burn, 30% third degree, of face, respiratory tract, chest, trunk, and extremities	3,000	1,000	2,500	13 days	Necrotizing tracheobronchitis and bronchopneumonia
10	R. P.	F	35	Pregnancy, term, postcesarean section; postpartum hemorrhage and uterine atony	1,000	...	1,000	Less than 1 hour	Hemorrhage
11	D. R.	M	70	Basal cell epithelioma of scalp and forehead	1,000	...	...	9 months	Residual basal cell epithelioma with extension to cerebrum
12	J. R.	M	57	Bronchogenic carcinoma, right lung	1,000	...	1,000	10 months	Bronchogenic carcinoma with local extension and metastases
13	A. S.	M	64	Parotid carcinoma	1,000	...	2,500	8 months	Recurrent parotid carcinoma with metastases to neck, skin of back, and base of skull

TABLE II.—(*Continued*)

14	E. S.	M	63	Postsubtotal gastrectomy for carcinoma of stomach; intestinal obstruction	500	...	500	39 days	Right upper lobe pneumonia; recurrent carcinoma of the stomach with obstruction and metastases
15	G. S.	M	43	Ulcerative colitis	1,500	...	2,000	7 days	Pneumonia following total colectomy, proctectomy, and ileostomy
16	E. T.	F	62	Abscess of liver	1,000	...	1,500	5 days	Sepsis; diabetic acidosis
17	L. T.	M	26	Penetrating stab wound of chest with laceration of pericardium	1,000	250	1,000	4 days	Pericarditis; empyema; sepsis
18	C. W.	F	6	60% burn, 45% third degree, of face, neck, chest, trunk, and extremities	2,500	750	3,400	73 days	Bilateral purulent bronchitis and bronchopneumonia; extensive infected burn and severe protein and general nutritional deficiencies
19	R. W.	M	28	Severe basilar and right posterior parietal skull fractures	1,000	...	...	2¼ hours	Asphyxia due to aspiration of blood and mucus
20	Unknown	F	..	30% second and third degree burns of head, face, respiratory tract, chest, and extremities	1,000	750	...	3 hours	Pulmonary edema secondary to severe respiratory tract burn

Comment

Table I summarizes the 224 cases treated and the laboratory data gathered in following up 111 of these cases. Laboratory data, consisting of complete blood counts, urinalyses, total proteins and albumin-globulin ratios, cephalin flocculations and thymol turbidity tests, nonprotein nitrogens, and serum electrolytes, were gathered at intervals while the patients were in the hospital and at the time of scheduled return to the outpatient clinic in an attempt to detect possible untoward effects on liver, kidney, or hematopoietic tissues.

Table II summarizes the 20 cases which died after having received PVP. These cases were reviewed in great detail in order to recognize any untoward effect of PVP which might have contributed to the mortality.

The control of our study is not rigid with regard to the clinical testing of patients pre-PVP nor with regard to the use of blood, plasma, or both in conjunction with PVP. Forty-seven patients had no pre-PVP tests recorded. Blood and plasma were used in conjunction with PVP in 138 of the 224 patients. This lack of rigid control is because many of our cases were emergencies in which time and circumstance did not permit these observations. In the elective cases the use of PVP, as well as blood and plasma, as the indication arose, was left to the discretion of the surgeon and the anesthetist, and the cases were in no way designated beforehand.

In spite of the incomplete control of these factors, we have gathered a sizable body of follow-up data which is essentially negative in character and fails to indicate or even reasonably suggest any untoward effect attributable to infused PVP. Our data are in agreement with the rather well-controlled study of liver function made by Reinhold *et al.*[24] after infusions of PVP, which failed to reveal any significant changes in studies up to six months after infusion. We have also failed to observe the temporary albuminuria after PVP described by Fresen and Weese.[11]

The mortalities reviewed in Table II appear to be amply accounted for by pathology already existing at the time the PVP was given or by pathology developing after the PVP was given. In neither instance does it appear that the clinical courses of the patients were adversely affected by the PVP infusions.

These data corroborate our early experience and indicate that PVP-Macrose, when used alone or with blood and plasma, is an effective adjunct in supportive therapy and in the management of shock in surgical and obstetric cases.

Conclusions

1. An extensive experience with the clinical use of PVP in 224 cases including severe burns and traumatic, obstetric, and surgical shock of all degrees of severity has been presented.

2. The clinical effectiveness of PVP-Macrose as a plasma volume expander has been confirmed.

3. We have found PVP useful in sparing blood and plasma supplies in the operating room and in the recovery period.

4. No definite evidence of toxicity or organic dysfunction related to PVP storage in doses used therapeutically has yet been recognized.

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The World Directory of Medical Schools

One of the important productions of the World Health Organization is its newly published World Directory of Medical Schools. Questionnaires were directed to the institutions themselves and where replies were not forthcoming, information was sought in other available sources. Confession is made that some of the information may be inaccurate or obsolete. Nevertheless, this is the first directory of its kind. More than 500 institutions are listed.

The book is published simultaneously in English and French. The data are arranged alphabetically by countries, and within countries by cities. Where there is more than one school in a city, the schools are arranged in alphabetic order. The information is arranged in 13 columns, covering the name in the national language, the year founded, the administration, the academic year, the conditions for admission, the number of teaching personnel, the total enrollment, including male and female, the number of studies, the degrees obtainable, the annual number of graduates, and the annual tuition fees in local currency.

The W.H.O. is to be congratulated on this masterly achievement. Unfortunately, pages 138 to 158 contain only column headings since the Union of Soviet Socialist Republics did not answer questionnaires and the material was not otherwise obtainable. Apparently the rest of the world cooperated.—*World Medical Association Bulletin, October, 1953*

Parenteral Trypsin in Peripheral Vascular and Thromboembolic Diseases

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RECENTLY interest has been revived in the intravenous and intramuscular use of purified pancreatic enzyme trypsin* in peripheral, vascular, and thromboembolic diseases.[1-12]

Innerfield *et al.*[1] reported its successful use in 78 cases of thrombophlebitis and other conditions. He noted prolongation of clotting time, depression of AC globulin concentration, plasma antithrombin and fibrinogen, as well as prolonged prothrombin levels following massive trypsin doses in animals. Clinically, when smaller doses were used, the coagulation mechanism was intact.

Laufman[13] reported the safe use of intravenous trypsin in 41 cases of thrombophlebitis. Thirty of his cases were acute, and 11 were chronic. In all the acute cases who received intravenous trypsin, clinical improvement and marked reduction in the inflammatory reactions were noted within three days. In the chronic cases of thrombophlebitis Laufman noted diminution of swelling and relief of pain and tenderness when present. No serious constitutional reactions were noted in his series following the use of intravenous trypsin.

Our studies, instituted in April, 1952, were undertaken to evaluate critically the safety to man of intravenous trypsin, as well as its uses in peripheral vascular and thromboembolic diseases. Extreme caution was used in evaluating its antigenicity, and the fibrinolytic and thrombolytic potential. Sensitivity tests were done despite the low protein molecular weight of trypsin at 32,400, which on a theoretic basis would have low antigenic properties.

Intracutaneous tests were performed by Dr. Solomon Slepian allergist on our service, on 72 patients: 41 of these had no personal or family allergic history; 31 had a personal or family history of allergy and were being observed and treated at the allergy clinic. All the 72 patients received three intracutaneous tests, that is, a dilution of 40 units per cc. equal to the 10,000 units in 250-cc. saline infusion. They also received 200 units per cc. intracutaneous test, which is equal to 50,000 units diluted in 250 cc. saline infusion. The third intracutaneous test was a saline control. The skin reactions were interpreted on a 0 to 4 plus basis, according to standard allergy technic. In order to eliminate errors in interpretation, 1 and 2 plus reactions were classified as mild and 3 and 4 plus reactions as severe.

The nonallergic patients showed no severe skin sensitivity in the 10,000-unit dilution, while in the 50,000 unit dilution two patients out of 41 showed severe skin sensitivity. In the 31 allergic patients four showed severe skin sensitivity to the 10,000-unit dilution and 12 to the 50,000-unit dilution. This paved the way to study smaller doses under 50 mg.

Passive transfer tests performed on two nonallergic patients to denote acquired sensitizing antibodies produced by intravenous trypsin infusions were negative in this small series.

From the 72 intracutaneous tests we inferred that by ascending the concentration of trypsin there was an increased incidence of skin sensitivity. This may be due to an irritating skin factor of the trypsin dilution as it is increased in concentration. Although the reactions are slight in the nonallergic patient, in the allergic individual there is a greater antigenic potential. The skin tests cannot be used as criteria as to which patient will have side-reactions from intravenous trypsin. The prothrombin inhibitor test[14] holds promise in that direction.

When trypsin is given intravenously, all patients should receive an antihistamine. The drug is given orally as Benadryl, 50 mg. three times a day, or Chlor-trimeton, 10 mg. three

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* Enzar, the Armour Laboratories brand of highly purified crystalline trypsin for intravenous use, was supplied through the courtesy of Dr. Albert H. Holland, Jr., medical director of the Department of Clinical Investigation, and Dr. C. H. Roth.

Parenzyme in oil, the National Drug Company trypsin for intramuscular use, was supplied through the courtesy of William M. Swain, Director of Clinical Research.

times a day, and parenterally 25 mg. with the infusion. By this procedure reactions have been diminished.

Administration

Based upon our studies, we reduced the initial dosage that Innerfield formerly used from 250,000 Armour units down to 10,000 units diluted in 250 cc. of saline or Ringer solution.

After administering 422 intravenous infusions of trypsin (Enzar), we believe that the preparation, especially for intravenous use, can be given safely to man by the following technic: 10,000 Armour units of crystalline trypsin diluted in 250 cc. of saline or Ringer solution and buffered to pH of blood with 25 cc. of Sorenson's Phosphate Buffer. The infusion is administered at a rate no greater than 15 to 20 drops per minute. The dosage is gradually increased daily, up to 50,000 units (the first day 10,000 units, the second day 20,000 units, the third day 40,000 units, and the fourth day 50,000 units). The volume of the diluent remains the same at 250 cc. Improvement, when noted, usually occurs within forty-eight to ninety-six hours after the first infusion. If no improvement occurs within that time, further infusions are useless. In some cases where improvement was noted after four daily infusions, another course of four infusions gave a smaller increment of clinical improvement.

We have observed that the four important factors which influence the incidence of mild reactions with the use of intravenous trypsin are the dosage, the concentration, the speed of the infusion, and the preliminary and concurrent use of antihistaminics with the buffered infusions.

A subcutaneous needle was used in the intravenous setup so that the rate of infusion could be better controlled at 15 to 20 drops per minute and would not exceed 2 cc. per minute.

Reactions to Intravenous Trypsin

In order to evaluate reactions infusions were stopped with the onset of chills, headache, or intestinal or chest pain. One or more of these reactions, which were mild and responded to routine nursing procedures, occurred in 50 per cent of the patients. No serious reactions such as pulmonary infarcts have been noted. It is believed that these reactions represent a clinical end point, indicating effectiveness of therapy and immediate discontinuance of the infusion. They are not a contraindication to repeating the infusion on the following day so long as clinical improvement is noted. We have noted pain and temporary mild thrombus formation at the site of the infusion in three instances after administering 422 infusions. One investigator has noted a larger incidence. This is probably due to our lower concentration of the enzyme, which never exceeds 200 units per cc. of the diluent.

Based upon the untoward reactions with intravenous trypsin, by this group and other observers, it was deemed advisable not to use intravenous trypsin but to seek an intramuscular trypsin which was free of side-effects.

Clinical Results

In evaluating any therapy in acute thrombophlebitis one must bear in mind that it is a self-limiting disease. Thirty-nine patients with thrombophlebitis were treated with intravenous trypsin. The first eight patients treated were carefully selected from 196 consecutive patients with thrombophlebitis. They were used as controls because they had not responded to the usual conservative therapy, that is, at least one week of bed rest, elevation, local heat or cold, antibiotics, adequate anticoagulants, and paravertebral blocks, or because they had recurrent thrombophlebitis on a nonmalignant basis. The following two case reports are typical of the responses obtained in patients with thrombophlebitis who were given intravenous trypsin.

Case 1.—G. G., a forty-nine-year-old white man with 12 recurrent episodes of thrombophlebitis of the right foot and leg associated with thromboangiitis obliterans, had pain and swelling of the foot and ankle, as well as a palpable dorsal vein with streaking along its course. These symptoms and signs persisted for four weeks, despite anticoagulants, bed rest, elevation, local heat, and paravertebral blocks. Intravenous trypsin was instituted after the anticoagulants had been discontinued and when the prothrombin times were normal.

One infusion of 10,000 Armour units of trypsin diluted in 250 cc. of saline was given at a rate of 20 drops per minute. Within the next twenty-four hours the redness and palpable vein had disappeared, and within forty-eight hours the patient was asymptomatic, and the edema had subsided.

Laboratory data which were of interest in this patient included the change from a normal prothrombin time prior to the infusion to a rise which continued for six days after discontinuation of the infusion (Table I). The total proteins dropped from 6.75 Gm. per cent to 6.0 Gm. per cent with the globulin reduced from 2.75 Gm. per cent to 2.0 Gm. per cent after the infusion. The white blood cell count rose from 6,850 to 7,850 per cu. mm. of blood.

TABLE I.—Effect of One Trypsin Infusion on Prothrombin Time

	Prothrombin Time (Seconds)	Control (Seconds)
Day before infusion	17	17
Days after infusion		
1st	32	17.5
2nd	32	17.5
3rd	28	17
4th	37	17.5
5th	25.5	17
6th	19	17

This case is significant in evaluating the therapeutic effect of intravenous trypsin on recurrent thrombophlebitis since the patient had been refractory to all other therapy. His improvement with the enzyme was immediate and prompt and did not appear to be coincidental. This was not in the usual course of his recurrent thrombophlebitis which in the past slowly resolved after two to four months, with pulmonary infarction a repeated occurrence. This patient served as an excellent control since in the past two years he had had 12 recurrent attacks of thrombophlebitis of which two occurred while on ambulatory adequate anticoagulant therapy for the last twelve months. There has been a recurrence since receiving trypsin three months ago.

Case 2.—H. H., a fifty-year-old woman with rheumatic heart disease and auricular fibrillation, developed an acute left internal saphenous thrombophlebitis extending from the saphenofemoral junction, across the angle of flexion of the knee, to the midleg. It was palpable along its entire course. The thrombophlebitis became progressively worse over a period of two weeks despite adequate anticoagulants, antibiotics, paravertebral blocks, bed rest, elevation, and soaks. The possibility of dislodging a thrombus on flexion of the knee and thus producing pulmonary infarction was entertained.

Anticoagulants were discontinued, and when the prothrombin time became normal, the patient received her first daily trypsin infusion. This was on her tenth day of illness. A total of four daily intravenous infusions were given in ascending dosages from 10,000 to 37,000 Armour units, each trypsin dosage being diluted in 250 cc. of saline and administered at a rate of 20 drops per minute. Within twenty-four hours after onset of therapy, 80 per cent of the palpable thrombus had disappeared, particularly in the dangerous area at the knee joint. After forty-eight hours the redness and streaking along the course of the vein had disappeared as had the pain, tenderness, and Homan's sign. The pertinent laboratory data are included in Table II.

TABLE II.—Effect of Trypsin Infusions on Fibrinogen, Sedimentation Rate, and Blood Proteins

Day	Fibrinogen (Mm.)	Sedimentation Rate (Mm.)	Total Protein (Gm.)	Globulin (Gm.)
1st—control before trypsin	426	44	6.9	2.6
2nd—after first infusion 10,000 units	...	..	6.7	2.4
3rd—after second infusion 10,000 units	...	..	6.7	2.4
4th—after third infusion 20,000 units	318	32	...	...
5th—after fourth infusion 37,000 units	354	15	6.6	2.1
8th	408	16	6.6	...

This patient who was refractory to other treatment showed a direct, immediate, favorable response following intravenous trypsin. Forty-eight hours after onset of therapy and the patient having received but two infusions, there were clinical improvement and marked diminution in the size of the palpable thrombus, as well as in the signs of activity of infection. The drop in fibrinogen and sedimentation rate accompanied the reduction of infection.

Use in Other Diseases

Seventy-nine patients with other peripheral vascular and thromboembolic diseases were treated with intravenous trypsin. This included 42 patients with chronic obliterative peripheral arteriosclerosis with and without gangrene and with and without diabetes, 16 patients with saddle thrombi, 13 with cerebral thrombi, and eight patients with pulmonary infarct.

In the 42 patients with peripheral arteriosclerosis with and without gangrene of the heel or the toes, repeated intravenous infusions of trypsin in ascending dosages from 10,000 to 50,000 Armour units proved to have little or no effect on the course of the disease. In this group were 20 patients who had diabetes. With those who had infected lesions of the toes as paronychia, the infection seemed to subside more promptly with trypsin than without it. No improvement was noted in the peripheral circulation in the diabetic arteriosclerotics.

In those 16 patients with saddle thrombi and in the 13 with cerebral thrombi varying from one day to one month duration, similar negative clinical responses were noted. All eight patients with pulmonary infarction survived.

Comment

Laboratory Data.—Studies conducted on our patients following intravenous trypsin revealed prolongation of prothrombin time and depressions of fibrinogen and total proteins, specifically globulin.

CONTRAINDICATIONS.—It has been stated[14] that liver failure, renal insufficiency, congestive heart failure, and diseases associated with bleeding tendencies should be considered contraindications to the intravenous use of this drug, as well as in those patients receiving anticoagulants.

Intramuscular Trypsin

Recently, intramuscular trypsin has been available in a concentration of 5 mg. per cc. in sesame oil. We used it in ascending dosages from 2 to 6 mg. injected deep in the buttock.

Seventeen patients were treated with a total of 66 intramuscular injections. In six of seven patients with acute thrombophlebitis, the acute symptoms and signs subsided within forty-eight to seventy-two hours. Eight other patients with chronic thrombophlebitis were treated. Three of these patients reported temporary relief of pain; in two others edema was measurably diminished temporarily. Two patients with peripheral arteriosclerosis obliterans were treated with intramuscular trypsin with no effect on the course of the disease.

Six of the 17 patients complained of mild pain and nodule formation. With smaller doses, 2.5 mg., the incidence of pain was less and nodules were not noted. No hemorrhages or sterile abscesses have been noted after 66 injections. None of the local or constitutional reactions that were observed with intravenous trypsin were noted with intramuscular trypsin.

Conclusions

Parenteral trypsin has been used in 422 intravenous infusions and 66 intramuscular injections in 135 patients. In the small doses of 10 to 50 mg. intravenously and 2.5 to 5 mg. intramuscularly, trypsin was found to be effective in cases of acute thrombophlebitis.

Mild temporary reactions have been noted with the intravenous use and mild local pain at the site of injection with the intramuscular use.

Further studies in the thromboembolic diseases are indicated and are to be encouraged with the use of intramuscular trypsin.

ADDENDUM: Since this paper was presented, we have treated 198 patients with parenteral trypsin. In this group, 80 patients with thrombophlebitis have been treated with intramuscular trypsin.

In those cases of acute thrombophlebitis, relief of pain, calf tenderness, and swelling were noted, as well as a decrease of the elevated temperature and sedimentation rate. The results have been uniformly good in 75 of the 80 patients. In many cases, relief was noted within the first twelve hours after treatment was instituted. In acute thrombophlebitis, if improvement was not noted after the first four days of treatment with trypsin alone, the treatment was discontinued and evaluated as unsuccessful. The palpable thrombus was slower to resolve than the acute inflammation. In chronic thrombophlebitis, the results have not been as effective as in the acute cases. The regime of therapy was usually 2.5 mg. of trypsin intramuscularly once or twice daily for one to four days, depending upon the clinical response. In most cases of acute thrombophlebitis, the acute inflammation subsided in a direct time relationship to the first intramuscular injection of trypsin.

There has been a low incidence of pulmonary emboli; in no case have they been fatal. Likewise there has been a low mortality. Postphlebitic syndrome has been rare. Intramuscular trypsin is not a substitute for anticoagulants, as it has no anticoagulant action. It is easy to administer compared to the intravenous route. Intramuscular trypsin has a definite tendency to shorten the course of acute thrombophlebitis.

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Clinical Observations on Migraine and Its Treatment

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DUBOIS-REYMOND, who lived about 1860, believed that migraine was a vascular phenomenon.[1] He was a victim of migraine and one of its most famous investigators. The scientists today who follow his thinking believe that the mechanism involved has been determined. However, to date it is still a symptom complex of unknown etiology.

There is no agreement as to the therapeutic agents involved in treatment. Occasionally too there is disagreement on the actual criteria for true diagnosis. Most of us, however, believe that the migrainous patient's history must include several of these factors: hereditary predisposition, periodic headache, usually intense and throbbing and one-sided against a background of comparative good health, periodic or cyclic abdominal distress with or without headache, nausea or vomiting at height of a migraine attack, visual disorders, change of mood, vertigo, or other rarer vasomotor disorders in the preheadache stage. In some we see personality characteristics which give rise to overconscientiousness. And last, the current criterion, relief by derivatives of ergotamine, established migraine as the culprit.

Having been a clinician for over thirty-seven years, I was not concerned with the "how" of the migraine phenomenon, but having treated upwards of 300 migrainous patients, my concern has been concentrated on the "why" of the attack. Why do people get attacks? And why, although it is generally periodic, does it often come on at irregular intervals? And why does it frequently come with menstruation and usually stop at menopause? And why do children of two or three or four[2] get it as well as "pampered, oversensitive, college-trained wives of well-to-do men?"[3] These questions must be answered before the goal of prevention is reached.

Although my migrainous patients typify a wide variety of cases, in every instance the key to the "why" fits the lock. The patient gets an attack for two reasons: (1) an inherited predisposition, built in and lying in wait for the suitable moment to erupt, and (2) a depletion of energy, from any cause, beyond the body's ability to spring back, which provides the suitable moment.

I call this point, beyond which the body cannot spring back with impunity, the level of energy expenditure. Compare it, if you will, to the "elastic limit" in fatigue of metals. In people, think of it as the point at which the last straw adds danger to the load. The level of energy expenditure is an inherited characteristic. Its potentialities date back to the embryo, dividing us into individuals with optimal, average, and minimal level of energy expenditure. Although the individual differences may be many within each group, the level of energy expenditure remains remarkably constant throughout the life span.

The person with optimal level of energy expenditure owes his good fortune probably to an innate superior body chemistry and an inborn vigor of nervous and circulatory system. He can often surmount all kinds of environmental difficulties and get away with it. He can spend more energy than the rest of us without danger of dropping to his level of energy expenditure. Of such stuff were Michaelangelo, Goethe, and Titian made. Titian, it is said, was painting with a steady hand, until the age of ninety-nine, when the plague stopped him![4] Today we have our own famous optimals who paint, or conduct, or appear unexpectedly in all parts of the world with disregard of chronologic age and, better yet, without fatigue.

This is not to say that a person with an optimal level of energy expenditure is exempt from migraine or migrainous equivalents. A magnificent battleship with an unusual speed and hitting power but strained beyond its overload limit is going to sink as readily as an overloaded rowboat. By the same token an individual with a minimal level of energy expenditure and a family history of migraine need never get an

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attack. Since one attack of migraine, like one earthquake, predisposes to another, the physician who knows the family can set up an advance relationship to prevent that first attack. We are all familiar with the child who runs circles around himself even though he is ready to collapse. These children, if they have a familial tendency and if they are permitted consistently to drop to their levels of energy expenditure, are being groomed for eventual attacks.

Since it is up to the physician to find the weakness in the chain of depletion and to treat that link wherever it occurs, I have found it practicable to classify the causes of depletion to the level of energy expenditure into two categories: (1) unavoidable depletions which would include menstruation, lactation, endocrine disorders, low blood sugar, mental stress, trauma, shock, faulty vision (aniseikonia), allergy, infection, inborn weakness of constitution, and, last but not least, an inborn higher requirement for essential nutrients, what Williams of Texas terms genetotrophic. When we come to the second category, the avoidable factors leading to depletion, there are as many factors and they are as varied as are individual differences themselves. I find the following the most frequent common denominators: disregard of limitation, consistent overwork or overplay, speeding in all activities, poor sleep and rest habits, poor eating habits and poor nutrition, both qualitatively and quantitatively; disregard for individual requirements in the rhythm of work and rest and play and rest, and excesses in sex, smoking, or drinking.

Avoidable or unavoidable, depletion to the level of energy expenditure is a signal for Nature's protective mechanism to step in. The resulting migraine attack, therefore, may be likened to the popping of a safety valve.

It is my belief that the migraine attack restores energy to the body in the same manner that a convulsive attack restores blood sugar to normal level, thus abolishing the very condition which brought on the attack or the convulsion, as the case may be. What the mechanism is which brings about this favorable revolution in body chemistry during an attack of migraine and how it works we do not know. We do know that in the self-righting process an internal loan is taking place. In a convulsion the body draws on the glycogen reserve in the liver.[5] Similarly in wiping out the energy "debt" during a migraine attack the body must draw on its reserves. It is this wiping out of energy "debt" which gives the patient immunity against another immediate attack. The immunity lasts until a new "debt" accumulates and again reaches the level of energy expenditure.

A case in point is that of a thirty-nine-year-old grocer whose mother had been a migraine victim. Six mornings each week he opened his store at 5:30 A.M. He happened to be the type who struggles when he arises but who hates to go to bed until midnight. He managed to get away with his long hours and hard manual work because he was an optimal. He had never dropped to his level of energy expenditure.

Then one day he was stricken with influenza. This sudden additional stress was too much. When he recovered (and recovery, we know, is an elastic term), he went right back to the store and his old routine. Only now he could not sustain the work. There had been a terrific additional drain on his energy reserves, and he was in no position to replace them. What was worse, he had to keep up with his daily expenditure of energy. He had, as Cannon would have said, taken goods out of the stream; he had failed to put the equivalent back.[5] Each day brought him closer to his level of energy expenditure. Then one morning he woke up with his first migraine headache; six weeks later he woke up with another, six weeks after that another, and so on every six weeks until he came for treatment.

Why did his attacks, once started, come every six weeks? Because in his case six weeks was required for his energy to be gradually depleted down to the level of energy expenditure. Once the attack was over, he was able to go right back to his customary insufficient rest and sleep and excessive work without fear of getting a headache for another six weeks. Since people as a rule spend or overspend approximately the same amount of energy week in, week out, he hit his level of energy expenditure in six weeks time. Each time the safety valve popped, and another migraine attack burst forth.

However, there is no gilt-edged guarantee for immunity between attacks. I have in mind the following case.

This young woman had an attack every four weeks with the onset of menstruation. A few years later the headaches came on every three weeks and finally every two weeks. At this time she grew panicky and came for help. She was in her early twenties and an individual with an average level of energy expenditure. She was a bookkeeper, capable and with a great urge to better herself culturally, the so-called migraine personality. An avid reader, she devoured books, not only for culture and pleasure but also as a hobby, reviewing books for several organizations. It seemed natural, therefore, for her family to blame eyestrain for her increasing headaches. When television came along, they insisted that she get "rest" glasses, even though her vision was good.

At my suggestion she had her eyes examined by an ophthalmologist who found them completely normal. He even examined them for possible aniseikonia. He said she did not need rest glasses or any glasses. She did not have localized eye fatigue.

It is well to remember that the visual mechanism does not exist for itself.[6] Fatigue of the eyes cannot be dismissed as a simple matter. For example, Friedman and Lowenstein proved that what might appear to be pupillary exhaustion might stem from psychologic factors.[6] By the same token general fatigue may affect the eyes, just as eye fatigue may affect other parts of the body.[6]

Nonetheless, eyes were responsible for my patient's ever-increasing attacks of migraine. True, she did not need rest glasses, but she did need rest for the eyes that she was overusing more and more as time went on.

Consider, if you will, that 25 per cent of our energy intake goes to the brain[7,8] when the body is at rest. It becomes understandable that overuse of eyes, combined with mental effort, must result in energy depletion. This expenditure is amplified if reading steals time from sleep. In short, by ever-increasing overexpenditure of energy, my patient was depriving herself of the immunity she had had between menstrual cycles.

The female glandular cycle with its periodic buildup, breakdown, rest, and repair is an example of the "wisdom of the body." Despite this fine, self-righting adjustment, however, menstruation is so often a depleting factor as to make the number of migraine sufferers more often female.

Menstrual toxin has not yet been identified. However, Selye tells us that when partially purified extracts were administered to rats, there were adrenal changes. They were similar to those which occur in the last stage of the "general adaptation syndrome of stress," and the local and systemic reactions were such as occur in the menstruating endometrium.[9] This, I know, holds no proof, but it does add weight to our suspicions.

In some women during menstruation there is a decrease in the leukocyte count.[10] This may also happen one to three days before the period. While it is true that only a very small percentage of women suffer symptoms of agranulocytic angina as a concomitant of menstruation, a large percentage do have poor resistance to pustular and other infections.[10] Some, Zondek believes, suffer because they might be allergic to their own glandular secretions.[11] Whatever the speculations, of one thing I feel certain. There is a positive interrelation between depletion of energy and menstruation. When menstruation is the prime reason for the "why" of a migraine attack, it is because menstruation is the prime factor of unavoidable depletion to the level of energy expenditure. When patients are treated to relieve stress of menstruation, their attacks are prevented. And when menstruation ceases in menopause, migraine which has never been treated tends to grow milder and disappear.

An exception was a woman in her menopause who consulted me for migraine attacks which had grown decidedly worse with "change of life." She said, "Why should this be? I'm able to do so much more since I'm not plagued with the excessive bleeding I used to have." She said she was able to do much more, but her feelings regarding fatigue could not be trusted. She and her friends and family mistook her tremendous "drive" for energy. Since she was no longer forced to take it easy one week out of every four, she let that tremendous drive run her right down to her level of energy expenditure.

The investigators who emphasize the migraine personality believe it may be responsible at all age levels from menopause or older on down to early childhood. I have no quarrel with the concept. I do quarrel with overemphasis on personality factors. I do not presume to disentangle the physical and mental but rather to treat them together as they occur in the body.

A fat little boy of nine was brought to me. This child at five years of age had had recurrent attacks of abdominal pain and cyclic vomiting of unknown etiology (I am of the opinion though that he had abdominal migraine). When he was six years old, he began to have headaches, nausea, and vomiting. He was out of school half the time. Specialists consulted believed then that he had allergy of idiopathic origin. At nine his attacks were more severe and more frequent, and I was consulted.

Physical examination was essentially negative except for slightly elevated cholesterol, a basal metabolism slightly below normal, and 30 pounds excess weight. His history disclosed a marked minimal level of energy expenditure and a very definite fatigue pattern.

He could run wild with the rest of his gang, but he folded up without warning. His fatigue was always the same, sudden "foldup." At such times he demanded glass after glass of cola drinks. I suspected a low blood sugar but did not want to put him through the ordeal of a glucose tolerance test at the beginning of his treatments. Interestingly, while his treatments were under way, that craving disappeared.

His history revealed two significant facts: His trouble had started at the age of five when he entered kindergarten. By coincidence that was the time his afternoon nap was discontinued. Second, his diet, like that of many children, was not as carefully taken care of when he reached kindergarten age.

To separate nutritional from other factors would be like trying to separate the function of protoplasm from the energy that makes it up,[12] but let us just look at a single factor in his body's depletion and see its relation to his faulty nutrition. His endocrine system was not functioning at full efficiency, he may have been born with a low level of endocrine activity. Be that as it may, with ideal environmental conditions, it could have functioned at least to its own potential level. The thyroid may have been accelerated by a protein-rich diet.[10,12] Instead it was further hampered by a thiamin deficiency. This in turn resulted in poor burning of the huge amounts of ingested carbohydrate and an additional strain on the thyroid and on his working capital of energy. Finally, this boy's appetite for goitrogenic fruits and vegetables was one more load for his thyroid to bear.[10,13] Mounds of cole slaw were consumed daily, for example.

"Not only do the glands of internal secretion affect the utilization of available nutrients, but they themselves are directly influenced by state of malnutrition."[14] And let's not forget overnutrition is a malnutrition too; nothing "exceeds like excess."

Prevention of migraine would be a relatively simple matter if we had tape recorders to measure total energy input and output. The patient would be able to compute his own ratio for efficient living. True, we have devices and methods for measuring specific energy expended. Man's total energy, however, must remain an unmeasurable criterion as long as life itself remains a mysterious phenomenon.

What concerns us here is the concept of energy in its relation to migraine. That concept represents the day-to-day spending in relation to the individual's level of energy expenditure. The level of energy expenditure is dependent, for the most part, on heredity and fetal environment—Nature. The day-to-day spending relies on Nurture to keep it within estimated bounds. I am using nurture in an exaggerated sense to mean more than "feed," to mean all environmental factors. Let me emphasize that the individual with minimal level of energy expenditure has nothing to fret over as long as he lives within his "estimated" energy means. So few of us reach our potential anyway, whether it be physical or psychic, that reaching it is something to strive for.

But minimal, average, or optimal it is a rare patient who can be trusted to evaluate his own level of energy expenditure. He cannot be trusted any more than can an aviator going to a high altitude be relied upon to know when he is in need of oxygen. By the time he judges himself to be in need, his judgment has already been impaired. This problem was solved by the British air force which instructed all men going to high altitudes to start breathing oxygen from the start.[15] In migraine management, however, since we do not see the patient until he has had an attack we cannot very well tell him to slow down, to coast along, at the very start of his overspending, and his instinct and his "above average" intelligence do not warn him to do so. And that is the very same intelligence which is so often regarded as part of the personality structure of a person with migraine.

It has been my clinical experience that unusual intelligence in its relation to migraine has simply been a vehicle for easy overspending of energy. We cannot prove the energy spent in thinking, but we know that the man who uses more brain than brawn may quit his proverbial desk at five o'clock, but his brain will run on. His problems accompany him home. He does not live within his energy means because he is constantly paying time and a half for mental overtime. True, the brain needs constant exercise, but it does not need exhaustion. It is well to remember that a child's brain too can be overtaxed. Mosso[16] in his famous work on fatigue assured us that a child doing his schoolwork feels in miniature the fatigue a great writer experiences in composing.

Parenthetically, let me say here that treating a migrainous child, getting him to slow down, to unwind himself, without at the same time giving him fears about his health, is not easy. The alert, intelligent child patient so often seems to have what the parents falsely term "excess energy." It is equivalent to the excitation which precedes fatigue in many people and may be likened to the extra bright flicker of an electric bulb before it burns out. This avalanche of sham energy should be stopped before it gains momentum and catapults into depletion.

The adult sufferer with sham energy often balks at mild sedation. He does not want his brain shut down at five o'clock because he constantly has unfinished business running around in his head. He must be shown that fatigue of the brain, although it does not warn in the same sense as fatigue of the muscles does, nevertheless interferes with function. He has to be convinced that creative ideas and solutions do not as a rule appear while the brain is officially at work but do appear on the golf course, in the bath tub, or while watching a motion picture. In short, ideas are not often born of exhaustion.

The factor or factors leading to depletion are not always so easy to spot as a brain which refuses to sign off at five o'clock. But, delving for clues to energy leakage is rewarding.

Take the case of a busy attorney who consulted me about recurrent pain, which I subsequently found was abdominal migraine. This man did a frightful amount of "extracurricular" talking to me while I was trying to get his history. Several so-called unimportant details of his twenty-four hours a day revealed to me that he wore himself out talking—talking, that is, above and beyond the needs of his profession. He had, the history pointed up, an emotional need to overtalk. But it did tire him out, and when he was tired out, his need for talking was amplified. Supportive therapy in a short while broke into the circle by easing the emotional need.

This case was, I am well aware, oversimplified, but I am merely illustrating the value of delving for clues.

A similar case in point was that of a young woman who came to my office with a capacious knitting bag slung over her arm. She had been suffering unspeakable pains of migraine headache. Her complete medical history as well as adjunct history disclosed at first no reason for energy "leakage." While I was talking to her, though, my telephone rang. I stopped to answer it, and she immediately took out her knitting. She worked until I hung up. After I resumed the interview with her, I questioned her about the knitting since there had been no mention of any hand work when we had gone over her leisure hours. She explained that she hadn't mentioned it because it never really took any of her time. She was unusually skillful and she knitted in crowded trains, in theaters, while awaiting her turn shopping, visiting, watching television, and even in bed before dropping off to sleep. She could not estimate the hours per day that she devoted to what she considered "just nothing"—but which I considered a good try at perpetual motion! In her case, energy "leakage" flowed mainly from her own skillful hands.

Delving for clues, listening with what Reik[17] calls the third ear, for the patient's spoken and unspoken difficulties, at the same time studying the external characteristics and the atmosphere which surrounds him, whether it be one of fatigue, vivacity, or pseudovivacity, all are indices that help me evaluate his level of energy expenditure.

Complete physical, neurologic, and laboratory examination, plus ancillary tests if indicated, must be given before I can eliminate all other possibilities and establish a diagnosis of true migraine or migraine equivalent. The patient remains under my supervision for one year. During the first three-month period, I see him three times a week the first month, twice a week the second month, and once a week the third month. At that time generally further attacks have been prevented or mitigated. For listing convenience treatment may be placed in three categories: (1) treatment for removing avoidable or unavoidable causes wherever possible, (2) treatment for increasing energy reserves, and (3) individual supportive therapy.

At each visit during the three-month period I give mild, tonic stimulation by hypodermic injection. I use strychnine cacodylate 0.0005, cacodylic acid 0.005, and sodium glycerophosphate, 0.01. This formula I have found to have specific effect.

The injection is a temporary crutch. It gives the patient a sense of well-being and gives the body cells a chance to repair themselves. For this purpose too I prescribe large amounts of desiccated whole liver capsules up to 18 capsules, 0.5 Gm. each daily. Patients receiving liver therapy offer gratifying evidence of greater resistance to fatigue.

Until better habits are established, I get the patient to slow down by giving him $^1/_4$ grain of phenobarbital before lunch, dinner, and bedtime. This assures him of regular sleep. He will not be depressed because the tonic injections, the liver, and the doses of thyroid will counteract any excessive slowing down. The thyroid in $^1/_2$-grain tablets is given to all migraine patients, except where contraindicated, three times a day.

Why thyroid? In migraine treatment it is one of those remedies that has been alternately dug up and cast aside. My own clinical results with it have been uniformly good. Patients with a depletion of energy seem to have a higher need for it. This would be especially true of the female who seems to require more iodine than the male, particularly at the menstrual period. Weight gain and bloating, frequent complaints during the cycle, are helped by thyroid because of its marked diuretic action.[18,19] Thyroid also has a direct influence on the rate of sugar absorption. When considering low blood sugar, either as a depleting factor or as an aggravating one in the menstrual cycle, this would be important. Thyroid also stimulates the red blood corpuscles and accelerates oxidative processes. A pertinent sidelight on this is the report of one type of migraine successfully treated with oxygen.

The thyroid gland is one link in a long chain of interrelations highly important to migraine therapy. It is no panacea. Like many old remedies not yet fully understood, thyroid extract has the power to be beneficial and the power to be injurious. The old rule still holds: "The physician should be constantly a watchman, and a therapeutist only when necessity arises."[20]

With the use of tonic injections and doses of thyroid extract and liver, I employ all the vitamins and minerals to help increase the energy reserves. I prescribe these from the "watchman's" vantage point in cases where I want a good diet supplemented and from the therapeutist's vantage point where individual requirements are high or where the vitamins and minerals serve a pharmacodynamic purpose. In either case the diet must be brought up to individual good standard first so that the patient will not get the idea that vitamins can replace intelligent eating. Although the injections are temporary crutches, the thyroid and supplements are used for long periods and sometimes throughout life. The thyroid is never used without accompanying vitamins and minerals.

Each visit to my office supplies the patient with the opportunity to air his problems. Even brief interviews can be valuable and can provide time for reassurance and emotional support. The patient begins to understand not only his own limitations in reference to his level of energy expenditure; he learns to appreciate the fact that there are individual differences within each group. What may be relaxation for a creative optimal may be exhausting work for another optimal. This does not imply that the creative optimal is tireless—far from it. But productive lives are often examples of prodigious spending and careful hoarding of energies.

Because it is important for me to know how my migraine patients are spending and hoarding, I give each one a small notebook labeled, "My Twenty-four Hours." For the first few weeks of treatment he or she records as many details as possible of what he or she does the clock round. This serves as an adjunct history; it has also been a boon in enabling me to see dietary indiscretions.

If the patient were left to himself, he would get impatient with his progress. He always thinks of "overdoing" only in the light of recent experience, and he regards as slow improvement anything short of immediate. He often wants to know what it will profit his migraine if he increases his energy reserves. He argues that it is the dropping down to his level of energy expenditure that brings on the attack and that in turn is dependent on the per diem capital. Why does he have to go to the trouble of increasing his reserves?

First of all, he may thank his reserve supply of energy for his ability to "recharge" after an attack. However, the smaller the reserve gets, the more grudging Nature will be in lending that energy for recharging. This is the way of the body. We all know that at the beginning of a long fast, Nature is generous in giving of her reserves. But as time goes on, and no attempt at repayment is made, she becomes more and more frugal with what she lends. In migraine, therefore, the smaller the energy reserve, the more reluctant Nature will be about "recharging" and the more frequent will be the attacks. A large reserve consistently maintained will prevent future attacks after the spell of migraine has been broken, for, while it is the day-to-day expenditure that relates to the level of energy expenditure, a person who habitually stores away a correct proportion of his income for reserve will not be apt to be extravagant in his daily living.

Recently a patient said to me, "Suppose, now that I'm free of attacks, I start to live up to my last penny of energy without worrying about reserves. Will I continue to be free of attacks? And for how long?" I believe he would—until some stress came along.

Apropos of such a situation, a twenty-nine-year-old woman was liberated from migraine by pregnancy which often acts as an "annealing" agent. However, she made no provision for the period of lactation during which her daily expenditure of energy would be vastly increased. After delivery the result was not only a withdrawal of the extra energy which pregnancy had endowed her but a crash landing to her level of energy expenditure and renewed attacks of migraine headache.

We do not know the cause of the annealing effect which pregnancy creates for migraine. We do know that benefits accrue, perhaps from such overlapping factors as a rise in blood sugar levels, from the cessation of menstruation, and from the building up of pituitary hormones. The inevitable relationship of the glands is present, and they put forth their best effort.

Following in the concept of Selye, although pregnancy represents a stress to the organism, it is a stress for which Nature adapts most generously. The Greeks, who seem to have had a word for everything, had one for the expression, "I arouse activity." From it Bayliss and Starling derived the word, "hormone." And today we know that hormones, which "arouse to activity," account for the fact that so many women bloom during pregnancy. With the delivery of the baby Nature's nine months of adapting are over. There is a sudden drop in the hormonal output. Now, the body has the job of "readapting" to its nonpregnant state. The average woman (once more, the hypothetic average) with a little rest manages this change and is capable of taking on the additional strain of lactation. Not so with the migrainous woman!

To say that breast feeding holds many advantages for baby and mother would be the understatement of all times. Today more and more evidence keeps piling up to convince us of that which Nature never intended us to doubt. There used to be a popular belief, however, that Nature protected the baby during pregnancy at the expense of the mother but that during lactation the mother was protected at the expense of the baby. That belief is no longer held, even popularly.

We are aware of the fact that lactation demands even more than does the last half of pregnancy in calories, protein, calcium, iron, vitamin A, thiamin, riboflavin, niacin, and ascorbic acid.[21] Investigators of the National Research Council tell us that the loss of vitamins by lactation may be a precipitating factor in deficiency disease. "Severe gestational polyneuropathy has been observed in patients, who showed only minor symptoms during pregnancy, but rapidly developed the serious condition, the second week postpartum. The drain of lactation was apparently the last straw in the pathogenesis of this severe thiamin deficiency."[22]

In the same publication we are told that the role of supplying iodine to the growing infant through breast milk is supplied even at the expense of the mother's stores.[23]

Unless the energy reserves of the migrainous woman have been built up to an all-time high during pregnancy (or better yet, before conception) and unless, following delivery, arrangements have been made to relieve her of all worry and work and to provide her with a life replete with the best care, the finest diet, an unusual amount of rest and relaxation—unless all this is assured (which is rare), I am of the firm opinion that the migrainous woman should not nurse her child.

This last suggestion for cutting out work does not apply to the migraine patient in general. Over-resting will not result in energy piling up. On the contrary, it would result in a dysfunction of muscles, a slowing down of glands, and an improper operation of circulation. Fatigue products, not energy, would pile up into a stagnant reserve.

The migraine patient must be reminded often that what is important is the fact that into each day must go a custom-tailored rhythm of work and rest and play and rest. He must be reminded too that although a hobby which makes him use a different part of his brain is fine, it is no good when he is already tired. When he is tired beyond the point of easy spring-back, even play must bow to complete rest. He must also be reminded that although physical exercise is a "must" for one who uses his brain a great deal and helps him resist muscular fatigue, it is harmful to indulge in it when the brain is already tired.

The migrainous patient is the very one who is apt to say, "I'll rest—as soon as I get the chance." But it is essential for him to rest when he is tired. Since fatigue and the time for resting do not often coincide, the fatigue must be anticipated. A midday rest is indicated. If this is not possible, he must learn to relax in his chair for a few minutes during the day. And he can further maintain his quota of "estimated" rest by a short nap before the evening meal.

The patient who is always fascinated by the periodicity of his attacks must be taught that there is a periodicity inherent in good health. The very nature of our beings, with its built-in mechanism of delicate equilibrium, calls for a rhythmic way of life.

During the embryo stage the recurrent activity of the nervous system is already established. The muscle action is already contracting, relaxing. The glands already have within them substances which will speed them up, substances which will slow them down. And into the heart, the most powerful muscle of them all, when the embryo is three weeks old, already a beautiful rhythm of beat and rest, beat and rest is formed[24] so that in the average person the rest periods after each contraction amount to fifteen hours a day.

All of life's workings include output yet with holding back of chemical and electrical impulses. Wherever she could, Nature, who in her wisdom does not trust ours, built right into the organism the rhythm of go and stop. Just think of the ocular mechanism which in the course of eight hours reading may be started and stopped about 70,000 times. And yet we manage among other things to strain and overuse our eyes, our hearts, and our energy reserves!

Summary

The "why" of migraine in a person predisposed to it is depletion of energy to the level of energy expenditure. The depletion may be from any cause, unavoidable or avoidable. The level of energy expenditure is an inherited characteristic and is constant throughout the life span. It may be optimal, average, or minimal.

Depletion to the level of energy expenditure may occur in any of three groups when the energy expenditure is consistently greater than the energy income. Regardless of the group and regardless of the cause or causes of depletion, a migraine attack occurs when energy is depleted beyond its individual level of energy expenditure.

Migraine is Nature's protective mechanism. It is a kind of safety valve, and its purpose is to repay energy "debt." The patient feels well when the attack is over because migraine is a "recharging" agent in the same sense that a convulsion is a refueling agent in a hypoglycemic attack.

My treatment is aimed at preventing depletion to the level of energy expenditure by removing or mitigating the reasons for it.

910 Grand Concourse

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Neurology, Psychiatry, Psychoanalysis, and Neuropsychiatry

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SPECIALIZATION is the keynote of modern times. It affects every field of human endeavor, and medicine is no exception. The practice of medicine is now regulated and controlled by specialists. Medical specialization has progressed to the extent that we are often confused as to which category certain diseases belong. For example, in the practice of nervous and mental diseases we have the following major subspecialties: neurology, psychiatry, psychoanalysis, and neuropsychiatry. To these may be added child psychiatry and child neurology. It would be opportune at this time to evaluate the province of each.

Neurology

Neurology is that branch of medical science which deals with the disorders of the nervous system. It encompasses traumatic, inflammatory, neoplastic, vascular, and metabolic disturbances affecting the nervous system. Neuroanatomy, neuropathology, and neurophysiology are the basic fundamental sciences in which the neurologist must receive adequate training. Moreover, the neurologist must receive training in the clinical manifestations of cerebral vascular disorders and of metabolic disturbances affecting the brain and the spinal cord, and he must acquaint himself with the various manifestations of the bacterial and viral infections of the nervous system. The convulsive disorders, migraine and other headaches, the demyelinizing diseases, and the myopathies are among the conditions treated by the neurologist. Since the nervous system infiltrates all tissues of the body, it is imperative for the neurologist to have a thorough knowledge of the neurologic complications of the common medical and surgical diseases.

Pneumoencephalography, electroencephalography, electromyography, and angiography are special technics used by the neurologists. The American Board of Neurology and Psychiatry requires at least three years of postgraduate training in neurology before admitting a candidate to the examination for certification in neurology. It is also required that the candidate pass an examination in basic psychiatry. Despite the fact that many of the diseases formerly treated by the neurologist are now in the province of the general practitioner, the specialty is a definite and distinct one. Neurologists work in close cooperation with neurosurgeons, and not infrequently they have a common resident and intern staff in hospitals. This works to the advantage of the patient.

Neurologists are frequently consulted by attorneys and jurists in reference to litigations resulting from brain injuries.

Psychiatry

Thirty years ago psychiatry was a specialty practiced almost entirely in psychiatric hospitals. Whenever a young man ventured into the private practice of psychiatry, he was admonished by his older colleagues not to pose as a psychiatrist but to be known as a "nerve specialist" for people at that time were reluctant to seek the aid of psychiatrists for mental disturbances. However, advances in therapy, including the introduction of arsenicals and malaria in the treatment of neurosyphilis, the administration of metrazol and electroshock convulsions and the use of insulin in the treatment of the psychiatric disorders, and the education of the public have changed the general attitude towards the entire subject of mental illness. Moreover, psychiatrists have extended their field of activities and have studied personality disorders in their broadest implications. Industry and business began to utilize the services of psychiatrists in the management of personality disorders in their own personnel. Futhermore, high schools and colleges employed the services of psychiatrists for the treatment of their students. The National Committee for

Mental Hygiene made surveys in jails and penitentiaries and established the relationship between mental disorders and delinquency and criminality. Medical schools began to teach psychiatry as one of the major subjects. Child guidance clinics were organized for the purpose of detecting the earliest manifestations of abnormal behavior in children and thus correcting them in the very earliest period of life.

In World War I psychiatric casualties were commonly referred to as "shell-shocked" soldiers. However, it soon became quite apparent that many of these emotionally disturbed soldiers not only did not see active fighting but had not left the shores of our country. Nevertheless, the term tended to remove the stigma attached to psychiatric patients, and it served as an impetus for the study of abnormal behavior under stress of the unusually trying conditions which existed in the war. World War II found many trained psychiatrists ready to assume their responsibility in the treatment of mental disorders occurring in the serving in the various theaters of the war. The effective therapy rendered by the psychiatrists in the first aid stations, as well as in the various psychiatric hospitals, evoked the respect and admiration not only of the medical profession but also of the military authorities and of the population as a whole. Futhermore, psychiatrists working on draft boards and in induction centers disqualified many soldiers who were mentally ill or whose personality makeups were such as to render them unsafe for military duty, thus preventing many psychiatric casualties that might have occurred had these individuals been inducted into the armed services.

In general, it may be said that psychiatry deals with abnormal behavior caused by pathologic or chemical changes in the brain, with affective disorders resulting from emotional disturbances, and with maladjustment to society. The psychiatrist is frequently called as an expert in criminal cases, in drawing of wills, and in solving marital problems. Psychometric studies, personality analyses, electroencephalography, pneumoencephalography, convulsive therapy, and group and individual psychotherapy are some of his special tools. There is ample opportunity for postgraduate study in this field and for certification by the American Board of Neurology and Psychiatry. This Board requires training not only in psychiatry but in neurology as well before it admits a candidate for examination.

Psychoanalysis

Sixty years ago Sigmund Freud began to lay the foundation for what is now called psychoanalysis. He had been trained in neurology and had made notable contributions to this field of medicine. When he entered private practice in Vienna, he began to study functional disorders. At first he utilized hypnosis as a means of therapy. He found that during these hypnotic sessions patients, in recalling and reliving painful experiences, gave way to emotional expression and were relieved from their symptoms. He soon learned that these suppressed emotions were of a tender nature and usually of a sexual character. He found that these instincts could not be fully expressed because of the inhibitions of early training and the prevailing social mores and customs. Later he found that by permitting a patient to speak freely he was able to release these repressed emotional experiences without resorting to hypnosis, and after the patient was prompted to speak freely without interruption, he would soon speak about some phase of his sexual life. Freud then discovered the theory of infantile sexuality.

He concluded that sexuality does not begin with puberty as was the common belief, but that it began very early in life. He found such manifestation when the infant, sucking its fingers, nursing the mother's breast, in defecation, and in urination, obtained a certain pleasurable feeling that could be tied up with sexual feelings. He also learned that infants could get considerable pleasure from other parts of the body; the gratification associated with such practice he called the libido. He observed that at the age of four or five, children could get pleasure by withdrawing the libido from other parts of the body to the genitals.

When these findings were published, there was a violently antagonistic reaction on the part of the profession because the new ideas tended to shatter the existing standards of morality. Nevertheless, Freud continued with his writings and publications. His book *Three Contributions to the Theory of Sex* was among the first to be published. Subsequently, he tackled other problems dealing with unconscious wishes and desires which had to be suppressed because their overt expression would bring the individual in conflict with existing laws. He pointed out that these repressed wishes, desires, and experiences were never lost to the economy of the individual but were stored up in that part of the memory which he called the unconscious.

He formulated a theory of the structure of the human psyche and divided it into three parts: (1) the id, which is applied to the instinctive urges and desires constantly seeking overt expression; (2) the ego, the controlling and integrating part of the psyche which permits expression of these instincts and desires accepted by society and represses those urges prohibited by custom, tradition, and training; (3) the super ego, or the idealized or socialized aspect of the psyche, which is truly the representative of the parents and the parental authority and which may be called the conscience of the individual. He postulated the theory that the neuroses resulted from intrapsychic conflicts existing between the various components of the psyche. He also formulated the theory explaining the causes of depressions and also of paranoid reactions.

Basically Freud postulated a theory that mental illnesses, particularly the neuroses, were the result of emotional conflicts, and to understand the cause of the various neuroses and some of the psychoses it was imperative to bring into the patient's consciousness the emotional conflict, the instinctive forces that tend to find expression in overt acts and the repressing forces which prevent them from doing so, and to find methods of sublimation to enable these expressions to find outlets in activities acceptable both to the person and to the society in which he may live.

Freud's theories were soon accepted by the scientifically oriented psychiatrists. A large number of his followers added to some of his views. Disease process could result for external factors such as trauma, bacteria, metabolic disorders, and chemical disturbances. On the other hand, there is a large number of diseases due to factors arising from within the individual himself, particularly from emotional conflicts. We know that fear, rage, anger, hate, and hostility are emotions that cause considerable variations in respiratory and cardiac activity and make a great demand upon certain glands of internal secretion such as the adrenals, pituitary, and thyroid. The expression of the activity of these glands is mediated through the autonomic nervous system and affect chiefly the gastrointestinal, respiratory, and cardiovascular systems. Chronic emotional conflicts may produce changes in the functional activity of these systems which may lead to changes which are irreversible. It has been shown that some types of hypertension, cardiac enlargement, certain types of asthma, gastric and duodenal ulcers, and even certain types of skin disease may be the result of such chronic emotional conflicts. The implications of the psychoanalytic theory are tremendous. Suffice it to say that at the present time psychoanalysis is being taught in many of the leading colleges in the country. There are many schools and institutes which teach psychoanalysis. A basic knowledge of neurology and a basic training in psychiatry are prerequisite requirements from applicants applying for a psychoanalytic training.

Neuropsychiatry

There is a group of doctors who have had general training in neurology, neuropathology, psychiatry, and psychoanalysis. They have spent many years studying the management of the different forms of abnormal human behavior, be they caused by diseases of the nervous system or affective disturbances due to emotional conflicts, and they also may have had training in basic psychoanalytic theories. They are the ones who are best equipped to diagnose the various forms of abnormal human behavior. They have established neuropsychiatric services in voluntary and municipal hospitals, and they are able to offer treatment to patients suffering from neurologic disorders, convulsive diseases, gross psychotic disturbances, and the psychoneuroses. Generally, they are men who are basically concerned with the human being as a whole and who treat him as a unit entity who is suffering from a particular neurologic or psychiatric disturbance rather than look upon the disease process as the primary center of interest. The neuropsychiatrist truly represents the scientifically trained "nerve specialist" of fifty years ago. The neuropsychiatrist is certified both in neurology and in psychiatry.

Child Psychiatry

Behavior disorders in infancy, childhood, and adolescence have been receiving special attention from pediatricians and psychiatrists and during the past decade have fallen into a distinct subspecialty of psychiatry, child psychiatry. Pediatricians and psychiatrists may have approached from a different angle the behavior disorders of childhood, but they have a common objective, the development of stable emotional reactions in children that should enable them to adjust adequately to reality. Child psychiatry deals with behavior disturbances in children resulting from intellectual retardation or deficiency, emotional disorders, environmental strain and stresses, toxic, inflammatory, traumatic, and neoplastic diseases of the nervous system, and with general maladjustments in the home, in the school, and on the playground. It tends to evaluate the child's innate capacity for adequate adjustment as limited by physical, emotional, and intellectual handicaps or by harmful parental influences. People generally respond very warmly to the needs of children. Therefore, Federal, State, and municipal grants, as well as the resources of private foundations are available to furnish adequate child guidance by subsidizing clinics, research centers, and research projects for the study and the treatment of behavior disorders in children. It is quite obvious that psychiatrists and pediatricians who treat these emotionally disturbed children should have a basic knowledge of psychiatry and pediatrics and an understanding of the influence of emotional disorders in parents upon the development of the emotional life of children. They must be able to meet behavior disturbances not only in children but the parents as well. Special technics such as psychometric scales and projective psychologic tests are special tools employed by child psychiatrists for a child may disclose in his play, drawings, or attitude toward other children what he may fail to reveal by his speech. While child psychiatry is still a young medical discipline, it has attached many people and has been given a very warm reception by all who are interested in children.

Child Neurology

Child neurology is an old discipline but with very few adherents. It deals primarily with the diseases of the nervous system in infancy, childhood, and adolesence. Mental deficiency, the encephalitides, the myopathies, the epilepsies, poliomyelitis, meningitides, and neoplastic and traumatic disorders of the nervous system occurring in childhood comprise the field of child neurology. One of the most popular textbooks on the diseases of the nervous system is limited to those diseases which occur in infancy, childhood, and adolesence. There is considerable doubt whether child neurology should be separated from general neurology and pediatrics.

Psychology

To complete this survey it would be necessary to describe the role of psychologists in the management of mentally sick people. In the treatment of the sick doctors have long employed the services of medical technicians, such as physiotherapists, x-ray technicians, and laboratory technicians. They help doctors in their offices and in hospitals. There are many private clinical laboratories that are conducted by specially trained laboratory technicians who have no medical degrees. However, none of them ever practice medicine, although they may perform therapeutic measures under the supervision and guidance of doctors.

In the treatment of psychiatric patients it is often necessary to perform certain tests, collectively grouped under the heading of psychologic tests, to obtain an evaluation of the intellectual capacity, the emotional maturity, or the personality integration of patients suffering from mental illness. These tests are generally performed by psychologists. There are psychologists on the staffs of most psychiatric hospitals and clinics. They are well educated, and many of them have doctorate degrees in psychology. Clinical psychologists is a term now applied to those psychologists who are actively employed in hospitals or in doctors' offices to perform special psychologic tests. Some of these psychologists have opened private offices. Recently there has been considerable controversy as to the duties and responsibilities, as well as the privileges, of these psychologists because many of them are demanding the right to treat mentally sick people independently. In general, it may be said that the treatment of the sick, including the mentally ill, falls into the province of the responsibility of the medical profession. Any other group of people may work in conjunction with doctors, neurologists, and psychiatrists, but they should not be given the right to treat the sick without medical supervision unless they have a medical degree.

Summary and Conclusions

The impact of specialization in medicine is very well illustrated in the subdivisions of the medical discipline which was previously called nervous and mental disorders. The major subdivisions are discussed and the implications of each analyzed and evaluated. It is quite apparent that at least five years of postgraduate study is required to obtain proficiency in any one of these subdivisions. An understanding of the sphere of responsibility of each subdivision is helpful to appreciate fully the nature and the extent of the medical discipline and specialty formerly known as nervous and mental disorders.

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Hematoma of the Rectus Abdominis Muscle

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Spontaneous hemorrhage into the rectus abdominis muscle is an uncommon clinical entity which merits careful description because of the frequency with which it is mistaken for various major medical and surgical illnesses. It usually presents a picture of abdominal pain, sometimes associated with vomiting, and with the physical signs of peritoneal irritation, abdominal mass, fever, and leukocytosis. Consequently, it is often misdiagnosed as acute appendicitis, twisted ovarian cyst, or other acute intra-abdominal pathology, chiefly because the possibility of rectus muscle hematoma is not kept in mind. Cases of rectus hemorrhage associated with leukemia are rare. We are therefore presenting the report of a recently observed case which was associated with chronic myelogenous leukemia and a review of the major anatomic, etiologic, and clinical features of this entity.

Case Report

The patient, a fifty-nine-year-old white male, was well until thirty-six hours before admission when he began to vomit. Twelve hours later he noticed a painful lump in his right upper abdomen. The pain became more acute on coughing and in the extended position. The vomiting ceased, but the abdominal pain became more severe in the last nine hours prior to admission. He had a bowel movement the day before admission. He was admitted to the Montefiore Hospital on February 26, 1951. Past history revealed a perforated ulcer in 1935 for which an emergency abdominal operation was performed.

On admission he appeared in acute distress with abdominal pain. The temperature was 98.8 F. There was no adenopathy. The lungs were clear to percussion and auscultation. The heart was not enlarged; there were no thrills or murmurs. The ventricular rate equaled the pulse rate which was 118 per minute. The blood pressure was 140/80 mm. of Hg. Examination of the abdomen disclosed an old right upper rectus incision. Just to the right of the incision was a lemon-sized mass in the subcutaneous tissue. It was exquisitely tender and could not be reduced. The remainder of the abdomen was soft and nontender. Normal bowel sounds were present. Rectal examination revealed no masses or tenderness. The stool was brown. No abnormalities of the extremities were noted.

The hemoglobin level on admission was 12.8 Gm. per 100 cc. The white blood count was 37,500 per cu. mm. No differential was performed. No sugar was present in the urine, but 3 plus acetone was found.

A preoperative diagnosis of an incarcerated incisional hernia was made, and an emergency laparotomy was performed. A vertical paramedian incision was made across the old scar. The peritoneal cavity was explored, and the omentum was found adherent to the abdominal wall by adhesions. No defect was found in the anterior abdominal wall. No abnormalities of the gallbladder, liver, or small or large intestine were discovered. An appendectomy was performed. Examination of the abdominal wall showed the mass in the right rectus muscle still present. A 2-inch incision was made over the mass coming down over the anterior rectus sheath; this was incised, and a large hematoma of the rectus muscle was found. The hematoma was evacuated; no active bleeding site was seen. The wound was closed. Microscopic examination of a biopsy of the right rectus muscle disclosed necrosis, acute inflammation, and hematoma of the muscle. The appendix was normal.

The patient had a fever between 100 and 102 F. for the first four days postoperatively. He looked poor, and his abdomen was distended. Vomiting was present but controlled with a Levine tube in his stomach with continuous suction. His hemoglobin was 11.5 Gm. per 100 cc. The white blood count was 35,200 per cu. mm.; the differential revealed 61 per cent neutrophils, 14 per cent stab cells, 13 per cent lymphocytes, 5 per cent eosinophils, and 1 per cent metamyelocytes. On the fifth postoperative day the patient suddenly eviscerated. He was again taken to the operating room where closure of the evisceration was performed. Two days later, he coughed up blood-tinged sputum. Examination revealed no adenopathy or abdominal masses. There were a few high-pitched rhonchi at the left base. The following day portable x-ray revealed a circumscribed triangular shadow at the right base suggestive of a pulmonary infarction.

A blood count on the ninth postoperative day showed a red blood count of 3,300,000 per cu. mm. and a white blood count of 44,200 per cu. cm. The differential disclosed 48 per cent neutrophils, 18 per cent stab cells, 8 per cent lymphocytes, 6 per cent monocytes, and 11 per cent metamyelocytes. The smear was interpreted as compatible with myelogenous leukemia. A bone marrow smear substantiated this diagnosis. The patient showed gradual improvement except for a wound infection. An x-ray on March 13, fifteen days postoperatively, revealed clearing of the infiltration at the right base. The temperature persisted between 100 and 102 F.

He was transferred on March 16 to the Bronx Veterans Hospital, eighteen days after admission to Montefiore Hospital. There, no change was found on examinaton; no adenopathy or enlargement of the liver or spleen was noted. The white blood count varied between 16,400 and 25,000 per cu. mm. Differential smears and bone marrow aspiration were compatible with a chronic myelogenous leukemia. Treatment consisted of transfusions and antibiotic therapy. The wound infection cleared, and he was discharged on April 25, 1951.

He was readmitted to the Bronx Veterans Hospital from September 14 to October 17, 1951, and again from February 7 to March 12, 1952, because of difficulty in swallowing. A peptic esophagitis was discovered by x-ray, esophagoscopy, and biopsy. On symptomatic therapy his symptoms improved, although difficulty in swallowing solid foods persisted. His white blood count varied between 48,000 and 123,000 per cu. mm. The differential counts showed 5 per cent myelocytes, 17 to 25 per cent metamyelocytes, and on the last admission 2 per cent myeloblasts. His hemoglobin has varied between 9.9 and 10.8 Gm. per 100 cc. with 2,700,000 to 4,100,000 per cu. mm. red blood count. On his last admission a few firm nodes were felt in both axillae, and the spleen tip was palpable two fingerbreadths below the costal margin. There has been gradual weight loss and progressive weakness.

The spontaneous hemorrhage into the rectus muscle was not suspected prior to surgery in this patient. The presence of an irreducible mass in the subcutaneous tissue of the abdomen associated with vomiting and pain led to the diagnosis of incarcerated hernia. The previous incision in close proximity to the mass made the suspicion of incarcerated incisional hernia more likely. The white blood count on admission was high (37,500 per cu. mm.); no differential count was performed prior to surgery. On the smear immediately after surgery no abnormal cells were seen, although the total white count remained high. It was not until nine days after admission that immature cells were noted in the peripheral smear. A bone marrow aspiration confirmed the diagnosis of chronic myelogenous leukemia.

At operation no bleeding point was noted in the rectus. The source of the bleeding is not certain. No internal or external trauma could be ascertained from the history. The hematoma of the rectus was the initial presenting sign and symptom of the leukemia. Apparently, it was related to a hemorrhagic tendency. However, no other bleeding tendencies have been noted in over one year of observation after the initial episode. The patient has done fairly well since then. Except for a few small axillary nodes, a palpable spleen tip, and a moderate anemia, his leukemia has run a relatively benign course. His main difficulty to date has been his peptic esophagitis with marked swallowing difficulties.

In a patient with a proved diagnosis of leukemia the sudden appearance of an abdominal mass should lead to a suspicion of a hematoma of the rectus. Where the presenting sign is a sudden painful abdominal mass, a careful differential smear examination may enable the clinician to make a diagnosis of leukemia and may lead him to suspect spontaneous hematoma of the rectus.

Anatomy

The entity of rectus abdominis hemorrhage, although not well known, is not actually rare, several hundred cases having been reported and undoubtedly a great many more having gone unreported or unrecognized. The clinical picture was already known to Hippocrates and Galen, according to Maydl,[1] who published the first comprehensive review of the subject in 1882.

Other major contributions have been made by Wohlgemuth[2] and Teske,[3] both of whom have collected large series of cases.

The definitive anatomic study of the rectus abdominis muscle is a scholarly work by Brödel[4] in 1947, although the first major contribution was made by Leonardo da Vinci over four hundred years ago. Arising from the symphysis and body of the pubis, and inserting by a broad fleshy attachment to the fifth, sixth, and seventh costal cartilages and to the xiphoid process, the rectus muscle is enclosed in a sheath which is formed from the aponeuroses of the other abdominal muscles and whose anterior and posterior layers fuse in the midline to form the linea alba, separating the right and left recti from each other. The sheath is constructed by the division of the internal oblique aponeurosis into anterior lamella (which fuses with the external oblique aponeurosis) and a posterior lamella (which fuses with the aponeurosis of the transversus muscle). Midway between the umbilicus and the symphysis pubis the posterior wall of the sheath ends, leaving a free margin known as the semicircular fold of Douglas. Below this point all three aponeuroses join and pass anterior to the rectus, leaving the muscle with no posterior sheath, and thus separated from peritoneum only by the transversalis fascia in this lower portion (an important factor controlling some of the major clinical features).

The vascular contents of the rectus sheath consist of the superior epigastric branches of the internal mammary vessels (artery and vein), which pass down from above to anastomose with branches of the inferior epigastric vessels. These latter vessels enter the sheath from below, passing anterior to the fold of Douglas. The absence of valves in these veins is an important factor which predisposes to their engorgement during the etiologic situations described below.

Regarding the question of whether the muscular or vascular tissues are primarily involved in rectus hematoma, there is no unanimity. Rupture of the muscle itself is stressed by some observers,[5–7] while rupture of the inferior epigastric arteries is described by others[8,9] and rupture of the veins is reported by still other writers.[10,11] Smith[12] suggests that both muscular and vascular damage probably occurs together in most cases.

Incidence and Etiology

The age distribution for spontaneous rectus hemorrhage is extremely wide, one case being reported at the age of three months and several cases reported as late as the ninth decade of life. The majority of cases are fairly evenly distributed between the ages of thirty and seventy. In general, females outnumber males by a three to one ratio.[3] Among the elderly patients almost all are women (usually multiparous), whereas among the younger ones the relative proportion of men is much higher.

Five major causes of rectus muscle bleeding have been described in the literature, although many of the cases probably represent combinations of etiologic factors. These chief causes are pregnancy, trauma, acute infectious diseases, idiopathic, and hemorrhagic tendency.

Pregnancy.—Spontaneous rectus hemorrhage is often seen with pregnancy.[2,13–16] The majority of cases occur in multiparas,[3] and most occur during the antepartum period, with a predominance of these in the third trimester.[15–18] A few cases have been reported during labor[3] and in the early puerperium.[3,19] The dilatation of the inferior epigastric veins during pregnancy is a predisposing factor, and the marked stretching of the rectus muscles and of the vessels within the rectus sheath plays a major role.

Trauma.—Traumatic etiology of rectus hemorrhage may be divided into internal and external types. Internal is by far the more common and includes, chiefly, cases associated with physical exertion and those associated with cough. A total of 166 cases are reported by three different groups of observers[2,5,20] occurring in healthy young individuals during physical activity (jumping, twisting, lifting, etc.). On the other hand, in acutely ill patients the presence of a severe cough has been considered a major cause of rectus hemorrhage.[13,18,21–23] In addition, Brödel[4] points out that it is not only the traumatic effect of the coughing itself but also the vascular engorgement incident to coughing which may be an important contributing factor. One case is reported of a thirty-six-year-old woman who developed a hematoma of the right rectus muscle in association with cough and five years later at the age of forty-one developed a left rectus hematoma, again associated with coughing.[24] Of less frequent occurrence are those due to external trauma, which include physical violence, accidents, injuries, and such rare causes as abdominal paracentesis.[25] For the sake of completeness, vomiting and convulsions should be included under "internal trauma."

Acute Infectious Diseases.—Zenker described the familiar hyaline changes in muscle in fatal cases of typhoid fever,[24] and this was also described in typhoid cases by Virchow.[27] Other observers have noted degeneration of muscle fibers in cases of pneumonia and influenza.[28-30] In such instances the trauma of coughing is superimposed on the degenerative process which is already underway in the muscles,[22] and to this may be added the increased venous engorgement described by Brödel[4] and previously mentioned in this paper. The latter author also suggested that muscle damage may be furthered by the development of minute thrombi (due to red blood cell agglutination) in the arterial capillaries.[4]

Idiopathic.—Teske[3] classifies more than half of his cases as "idiopathic," but it is significant that most of these occurred in elderly patients. Although there is no history of intercurrent disease, trauma, or exertion in these patients, it is probable that the degenerative vascular and muscular changes which occur in the older age group predispose to rectus hemorrhage so the classification "idiopathic" may not be entirely justified. Furthermore, many of the patients in this elderly group are multiparous women, in whom there has occurred chronic muscular and vascular stretching incident to repeated pregnancy.

Hemorrhagic Tendency.—It is in this group that the case which we have reported above is included. This is not a common etiology. Dlugi[31] reports one case in a leukemic patient, and Lehman[32] observed another. Cases have been reported in the complete absence of ascorbutic acid[33] and more recently in patients on anticoagulant Dicumarol therapy.[34] Malpas[35] reports two cases of rectus bleeding in patients who probably had systemic bleeding tendencies since additional hemorrhagic phenomena occurred in both patients. The etiologic significance of blood dyscrasias has also been noted by Broady.[36]

Clinical Picture

The onset of symptoms in rectus hematoma is usually sudden, although gradual onset has been observed in some cases,[14] and occasionally there is a premonitory sense of soreness which may last as long as several days before the full picture appears.[8] As a rule the patient complains of sudden sharp abdominal pain which may be associated with nausea or vomiting. Examination often reveals thoracic respiration. Fever ranging up to 101 F. is common along with a moderate leukocytosis. Probably the most important physical finding is an abdominal mass, which may range in size from that of a robin's egg to that of a football. Over a pint of blood is evacuated in many cases with occasional cases ranging up to 1 or 2 quarts. If bleeding is rapid, signs of shock may appear.[18] The mass is often thought to be intraperitoneal, thus accounting for many of the misdiagnoses, but if the patient is asked to raise his head against resistance, the mass may frequently be identified as being within the abdominal wall. Ecchymosis in the periumbilical area, suprapubic area, or at the site directly overlying the mass is a late sign, and operative intervention is usually undertaken before the sign appears. If it is noted, it is generally considered to be pathognomonic. Robertson[37] has suggested needle aspiration of the mass as a diagnostic procedure.

If the site of hemorrhage is below the fold of Douglas, the free blood will be separated from peritoneum only by the thin transversalis fascia, thereby giving rise to signs of peritoneal irritation. Thus, marked rigidity and rebound tenderness are often seen. Payne[8] feels that the absence of such signs in all areas except the immediate locality of the mass is an important diagnostic feature, but others have noted the presence of tenderness over a wider area.[38] The relief of pain following novocaine infiltration of the rectus muscle has been reported as a diagnostic maneuver which may help to rule out intra-abdominal pathology.[5]

Because of the absence of a posterior lamella in the lower portion of the rectus sheath, a hematoma in this area may show any of the following features: (1) extension laterally beyond the margin of the rectus sheath, (2) extension medially across the midline, (3) signs of peritoneal irritation, as mentioned above, (4) prominent protrusion of the mass into the abdominal cavity from distention of the peritoneum, or (5) actual rupture of the peritoneum resulting in disappearance of the mass and signs of generalized peritonitis caused by the presence of a large amount of free blood within the peritoneal cavity. These are all important, although uncommon, features of hemorrhage into the lower rectus muscle, which are not seen in cases of upper rectus bleeding.

Roughly one half of all cases occur in the right lower rectus and about one fourth in the left lower rectus, the remaining ones occurring in the upper recti, chiefly the left. The more frequent occurrence of the mass in the lower abdomen increases the chance of mistaking it for a gynecologic or obstetric disorder, and the special frequency of right lower quadrant signs often results in the incorrect diagnosis of acute appendicitis.

The correct diagnosis appears to have been made preoperatively in about 10 to 20 per cent of the cases reported. Acute appendicitis and twisted ovarian cyst account for about one third of the misdiagnoses. Among the less frequent errors are ventral hernia with or without obstruction; ectopic gestation; ruptured uterus; acute salpingitis; mesenteric lymphadenitis; mesenteric artery thrombosis, intestinal obstructions due to volvulus or intussusception; tuberculosis, actinomycosis, or syphilitic gumma of the muscle; fibroma or sarcoma of the muscle, cholecystitis or cholelithiasis; urinary tract lithiasis, and perforated intestinal diverticulum. Recently a case of rectus hemorrhage was misdiagnosed as acute poliomyelitis.[39] Although the evidence suggesting intra-abdominal mass may be very convincing, the relatively rapid enlargement of the mass from day to day, and even from hour to hour, should help in differentiating it from many of the diagnoses mentioned above.

Therapy and Prognosis

Since the vast majority of cases of rectus hematoma are initially diagnosed as acute intra-abdominal conditions, most physicians have not been in a position to decide objectively regarding the treatment of choice, and most cases have been surgically explored. However, in two of the series reported[5,20] a total of 59 patients were all diagnosed and treated without resort to surgery.

Teske,[3] on the other hand, along with other observers[40] feels that surgery is indicated in almost all cases, even when the diagnosis has been established without operation. In cases occurring during pregnancy Rose[17] not only advises surgery but advises cesarean section if the episode occurs at term.

Deaths from rectus bleeding are uncommon, rarely being due to the hemorrhage itself,[18] occasionally attributable to some associated condition,[31,35] and occasionally occurring without adequate explanation even after postmortem examination.[19] By contrast during pregnancy rectus hemorrhage is associated with a high maternal and fetal mortality.[17]

Summary

A case of spontaneous hematoma of the rectus abdominis muscle, misdiagnosed as an incarcerated ventral hernia, in a patient with chronic myelogenous leukemia is reported. The literature on rectus muscle hemorrhage has been reviewed. In any patient with abdominal pain, fever, and leukocytosis, the finding of a tender mass in the abdominal wall should suggest this condition. The rate of missed diagnosis in hematoma of the rectus muscle is high and will remain so unless a high index of suspicion is maintained.

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The Attitude of the Patient Toward Multiple Sclerosis

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DIFFERING opinions have been expressed regarding the value of disclosing to the patient a diagnosis of multiple sclerosis. Recently, a strong statement was made in favor of withholding this information.[1] In an effort to poll the opinions of patients on this question, the National Multiple Sclerosis Society, in the October, 1951, issue of its bulletin, published a questionnaire and requested that its readers answer the following three questions:

1. Do you think that patients with multiple sclerosis should be told of their diagnosis? Why?
2. What is your opinion regarding the advisability of meetings which multiple sclerosis patients attend?
3. Why did you join the National Multiple Sclerosis Society?

This questionnaire was reprinted in January, 1953, in order to stimulate an increase in response. As a result, a total of 327 responses was received for analysis and tabulation. The responses were made available for publication as indicative of the attitudes of this sample of patients regarding the value of knowing their diagnosis.

It should be pointed out that these replies were received from a segment of the population which constitutes a statistically biased sample. Moreover, the deviation of this sample from the norm of the general population results from the fact that a much greater than normal percentage has multiple sclerosis. This deviation is one which can be expected to affect the answer given to the first question. The fact that these respondents, with the exception of a half dozen cases, were patients with multiple sclerosis who were aware of their diagnosis might very well predispose this sample toward the response commonly given.

At the same time this very deviation might be a desideratum in view of the fact that the replies from these respondents inform the questioners of the attitudes of patients. Although it does not without bias represent the general population, this sample does represent the patient population. As such, it can accurately convey information regarding just those persons most involved personally in the decision which is made by the diagnosing physician. Presumably, therefore, this sample represents the segment of the population most qualified to know whether the disclosure of the diagnosis constitutes an advantage or a disadvantage to the patient. These are people to every one of whom such a disclosure occurred. Futhermore, a large percentage of these respondents did not know, for various periods of time up to several years, of the presence of the disease. The diagnosis was not disclosed to them until some time after being made. Therefore, these respondents would know the problems with which patients are confronted, the adjustments required upon learning the name of the illness, and the technics most advantageously used in those adjustments. This being so, the respondents constitute a segment preferable to an unbiased sample of the general population.

Table I shows the results obtained in response to the questionnaire. Of the 327 replies to question 1, regarding the advisability of disclosing the diagnosis to the patient, 290 respondents were in favor of the disclosure. The proportion represented by this number is 89 per cent. The number who favored withholding this information was nine, 3 per cent of the total. Clearly then, an overwhelmingly large majority favor the disclosure. Twenty-seven respondents stated that the advisability of such a disclosure was contingent upon the temperament or the viewpoint of the patient. The decision regarding the propriety of informing the patient was to be made by the physician, who was considered the best judge of the patient's ability to withstand the shock which followed awareness of the diagnosis.

This emotional shock which follows awareness of the illness was specifically mentioned in many of the replies to this question. Those respondents who favored disclosure felt that adult and mature patients (the great majority) would recover from the initial shock and be aided by the knowledge. Most of those who gave qualified

TABLE I.—Frequencies of Several Responses to Questionnaire

	Number
Question 1: Should a patient be told of the diagnosis of multiple sclerosis?	
Yes	290
No	9
Qualified	27
No answer	1
Total	327
Why?	
Better psychologic adjustment	125
Avoid adverse effects of not knowing (worry, fear, etc.)	110
Can help in therapy	36
Avoid "shopping" for diagnosis	27
Other reasons	17
No answer	12
Question 2: What is your opinion regarding the advisability of meetings which multiple sclerosis patients attend?	
Yes	188
No	68
Qualified	44
Cannot say	15
No answer	12
Question 3: Why did you join the National Multiple Sclerosis Society?	
To receive beneficial information	120
To be informed of the progress of research	117
Feel close to it and wish to help	68
Miscellaneous	20
No answer	2

responses regarded this shock as a possibly valid reason for not informing the patient. Of the nine who answered negatively, six stated that the emotional shock to the patient was to be avoided.

As the table shows, 271 of those who answered indicated that the patient would benefit from knowing of his illness. Of these, 125 stated that the knowledge would lead to adjustment, 110 stressed the adverse effects of not knowing, and 36 stated that the knowledge would result in efforts by the patient to retard deterioration and to cooperate in therapeutic efforts. The commonly stated adverse effects of ignorance were worry, fear, and self-suspicion. One respondent had applied for admission to a mental hospital before the diagnosis was disclosed. To these patients, it is commonly stated, it is comforting to know that an organic basis exists for the symptoms.

The fourth most common reason given (27) for informing patients is the avoidance of the useless and fruitless task of seeking knowledge and relief, "shopping" for a diagnosis and cure as the patient put it. This answer, like the three commonly given, stresses the psychologic effect on the patient, both of the symptoms and of ignorance of the diagnosis. Commonly mentioned by the respondents is a "need to know" of the disease responsible for some of the bizarre symptoms noticed by the patients.

In discussing this question many patients stressed the need for tact on the part of the physician in informing the patient of his diagnosis. Many answers pointed out that the patient should be prepared, perhaps through more than one interview, for the reception of the information which might otherwise induce a trauma. Some respondents mention the many things which patients can do to alleviate the effects of the symptoms and point out that these could be stressed by the informing physician.

The second question concerned meetings attended by patients. Attendance was approved by 188 persons, while qualified approval was given by 44 and disapproval by 68. The commonest reasons given for approval were (1) patients could exchange helpful information regarding ways to perform necessary tasks and (2) they could avoid seclusion and its harmful effects. The most common reason given for disapproval was the deleterious effect on the patient of seeing others in worse condition.*

The third question regarded the reasons why respondents joined the National Multiple Sclerosis Society. As the table shows, 237 or 72 per cent gave as their reason the wish to receive help. This total number was almost equally divided between those who wished to keep in touch with the progress of research on multiple sclerosis (120) and those who wished to receive information which would help in solving their common problems (117). Sixty-eight gave as their reason an altruistic wish to help, while a total of 20 gave several other reasons. Prominent among these were (1) the need to increase public awareness of multiple sclerosis and (2) the need to aid in supporting research on the problem.

We believe that the principle of informing a patient of the nature of the illness from which he is suffering is now generally accepted. Only in this way can one expect the patient to cope with and make an adjustment to a reality. Not to follow this principle is to foster a neurotic escape and create the milieu for the inevitable difficulties and confusion which sooner or later characterize neurotic reactions. Some contrary opinions, however, have been expressed. Gallinek[1] reported some personal impressions and cited three cases in which the patient suffered emotional trauma from being informed of the diagnosis of multiple sclerosis and another in which the patient refused to accept the diagnosis. He concluded that "the diagnosis of multiple sclerosis, with its numerous implications, generally should not be revealed to the patient himself." It appears to the author that Gallinek's criticism is directed toward the physician and his manner of informing the patient rather than toward the general principle involved. Certainly the results of the questionnaire responded to by a statistically valid sampling of patients suffering from this illness would indicate this.

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* The question might be raised whether it is not more traumatizing to the patient to see others in better condition, particularly those achieving a remission, but the commonest answer to the question was as given above.

Summary

In reply to a questionnaire asking whether patients diagnosed as having multiple sclerosis should be informed of the fact, 290 of 327 patients so diagnosed replied in the affirmative, while nine were opposed and 27 gave a qualified answer.

Most popular among the reasons given for their answers were (1) better adjustment would follow disclosure and (2) not knowing the basis for the symptoms had adverse effects such as vague worry or fear of neurosis.

Stress was put upon the need for tact in disclosing the diagnosis to the patient and upon the possible utility of preparing the patient for the disclosure.

The majority of respondents were in favor of multiple sclerosis patients attending meetings. Of the total number, 237 were members of the National Multiple Sclerosis Society because of the helpful information which might be received, either from research results or from publications of the Society.

In view of the fact that a very great majority of patients favor the disclosure of the diagnosis of multiple sclerosis to the patient, it is concluded that as a general rule the physician should inform the patient of his disease.

99-34 67TH ROAD

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That Queer Animal: Man

The following paragraphs written by Professor William Dock, Long Island College of Medicine, are reprinted as a review of one of the classics of modern literature:

"Man's perversions from normal mammalian or even simian behavior make him the scandal of the biologic world. He not only walks erect like birds and the anthropoids, but continues to drink milk all his life, to eat eggs, and to make love at all seasons. He uses drugs such as nicotine and caffeine daily, alcohol and cathartics almost as often, and sometimes to great excess. In the past century he has outdone himself with new perversions. He has increased his maximum velocity of movement from 18 miles an hour to 60 and then to 500, the hazard increasing roughly as the cube of the velocity. He has taken to living and working on mountain tops and deserts; he rises to heights where the barometric pressure is one-fifth normal, and dives to depths where it is ten times normal. Unlike all other mammals, man sleeps on his back, and lies recumbent when ill. Until the Florence Nightingale era the sick usually got up several times daily for elimination, if not for meals; but, thanks to nursing progress, thousands of people now lie recumbent, at absolute bed rest for days, weeks, or months. As with all other perversions from biologic normality, this too must be paid for by discomfort, invalidism, and death.

"The recumbent posture is unphysiologic; it is, when long maintained, hazardous to the psyche, the physical well-being, and even the lives of adult patients. Since it is widely used, it claims more lives than all other therapeutic agents put together. It must be thoughtfully applied, promptly discontinued when no longer necessary, and its application must be supervised with meticulous attention to its hazards."

—*Monroe County Medical Society Bulletin, December, 1953*

CLINICOPATHOLOGIC CONFERENCE

ST. JOSEPH'S HOSPITAL, ELMIRA, NEW YORK

Conducted by CHARLES H. KOSMALER, M.D., APRIL 22, 1953

Discussed by JACOB D. GOLDSTEIN, M.D., ROCHESTER, NEW YORK

Case History

The patient was a sixty-two-year-old retired railroad conductor at the time of his first admission here five months before death. The complaint on admission was pain in the left inguinal region.

Present Illness.—Following an attack of coughing several weeks before admission, the patient first noted the appearance of pain and a lump in the left inguinal area. When a diagnosis of inguinal hernia was made, the patient wished the condition corrected immediately since he did not feel well.

Two and a half months before admission, the patient had a markedly swollen, painful right upper jaw. After this had been present for three to four days, and without any penicillin having been administered, three teeth were extracted with an immediate decrease in the swelling. Shortly after this, four left upper teeth were extracted because the dentist said "they should come out." The patient returned to work but a month later was unable to continue because of weakness. He noticed that about 4 P.M. each day he would become chilly.

Past and family histories contributed nothing to the present illness.

Physical Examination.—The patient was a well-developed, well-nourished, white male. Examination was negative except for the left inguinal region where an indirect inguinal hernia, which was readily reducible, was found. The ring was approximately two fingers in diameter. It is noted on the chart that the liver and spleen were not palpable.

Temperature was 100.6 F., pulse 108, respirations 20, and blood pressure 158/80.

The urine showed a trace of albumin with nothing else. The red count was 4,600,000 with 14.5 Gm. of hemoglobin. The white count was 8,000 with polymorphonuclears 70, lymphocytes 26, and monocytes 1. Blood sugar and nonprotein nitrogen were within normal limits. Agglutinations for typhoid and Brucella were negative. Blood culture was negative in ten days. Basal metabolism was plus 35.

The patient remained in the hospital five days showing a daily afternoon rise in temperature to approximately 101 F. Chest x-ray was negative. Operation was postponed, and the patient was discharged for further observation.

Second Admission.—He was readmitted one month later because his fever had continued and his condition had worsened. The patient had lost weight, but he had been voluntarily restricting his diet to lose weight. His weakness had increased. Pallor had become noticeable. He had had no frank chills. Two days before readmission, gastrointestinal series and barium enema had been negative except for "a shadow in left upper quadrant extending 4 to 5 inches beneath the costal margin which suggests an enlarged spleen."

On examination there was evidence of recent loss of weight and noticeable pallor. There was no generalized glandular enlargement. The lungs were clear. The heart was regular, and no definite murmur could be identified. The liver edge was palpated one to two fingerbreadths down; it was firm, nontender, and smooth. The spleen extended to the iliac crest and was greatly enlarged with a notch being identified. It extended almost to the midline. No petechiae were found, and there was no clubbing of the fingers.

The urine again showed a trace of albumin with nothing else. The red count was 3,900,000 with 11.7 Gm. of hemoglobin. The white count was 4,400 with polymorphonuclears 69, stabs 3, lymphocytes 25, monocytes 1, and eosinophils 2.

The sedimentation rate was 51. Wassermann was negative. A series of ten daily blood cultures was done. The fourth blood culture showed a heavy growth of Streptococcus viridans in all media. The organism was very susceptible to penicillin, Terramycin, aureomycin, and Chloromycetin. The other nine blood cultures were negative after ten days. Bone marrow biopsy was within normal limits.

X-ray of the sinuses was negative. The intravenous pyelogram was normal. An enlarged spleen was again visualized.

The patient continued to run a daily spiking temperature about 4 P.M. which never exceeded 101 F. Thymol turbidity and cephalin flocculation tests were negative. Bromsulfalein showed 28 per cent of the dye retained in thirty minutes. Daily observation led to the finding of no petechiae, and it was definitely agreed that there was no cardiac murmur present. No lymph gland enlargement could be found.

For economic reasons the patient wished to be discharged. This was done, and arrangements were made for penicillin therapy at home. For a month and a half he was given 600,000 units of penicillin daily. After ten days the 4 P.M. temperature became normal and remained normal for two weeks. It then rose again to the usual height. The patient was sent for consultation elsewhere.

A gastrointestinal series six days before he was referred showed "irregularity involving the fundus of the stomach." This was repeated six days later by another observer who reported, "The diaphragm is slightly irregular on the left, slightly elevated, and restricted in movement. The proximal third (nearly one half) of the stomach is irregular with apparent multiple filling defects. There is more soft tissue space between the stomach and diaphragm than usual. The spleen is several times larger than normal."

Discussion

DR. GOLDSTEIN: At the medical school, when we have one of these cases, I put down what I think is logical, and then I turn it upside down. That's about what you have to do when the students give you one of these clinicopathologic cases.

I would like to go through this history a little bit and perhaps ask one or two questions. This patient, in summary, was a sixty-two-year old man who developed discomfort after coughing and was found to have a hernia. He decided to have the hernia repaired. But he hadn't been feeling well; one of the reasons he decided to do something about himself was because he wasn't feeling like working. In addition, we have the history that two and one-half months before, he had had swelling of the jaw, and extraction of teeth had been done without the administration of antibiotics. Adding that to the fact that he hadn't been feeling well for some time brings up the possibility that the man had acquired subacute bacterial endocarditis. In the protocol there is a specific note that a murmur was not heard, and there is a specific note that the liver and spleen were not palpable. The chest film is recorded as being negative, and the laboratory work is essentially negative.

Now I would like to look at the chest film, and I would also like to ask the man's weight. What did he weigh? It is said that he tried to lose weight. Does that mean that he was a pretty heavy person? Is it conceivable that he was so fat that one might not have felt the spleen. There's one thing about the chest plate that suggests the possibility that the spleen was enlarged. On the left side the diaphragm is elevated. In view of what we know about the man's subsequent course, this brings up the possibility at least that something exists underneath the left side that pushes it up to the level of the right side, and maybe even a little higher. I wonder, Dr. Burch, if you agree that that's a possibility?

DR. HOBART A. BURCH: We can't be certain of the significance of it, but it's certainly somewhat elevated.

DR. GOLDSTEIN: We'll leave that x-ray for a moment then. It was decided not to operate on this man because he had fever and he didn't feel well. As you see, the question of bacterial endocarditis must have entered the mind of the doctor because he took one blood culture. Then the patient went home and didn't do well for a month. He came back after the month, and he was a changed person; his fever had continued, and he had lost ground. Weakness had developed, pallor had developed, and this man, one month later, had a palpable liver and a palpable spleen. He had some anemia in that his hemoglobin had dropped to about 11 or 12 Gm. It is noted specifically at this point, although he had a big liver and a big spleen, he did not have petechiae, he did not have clubbed fingers, he did

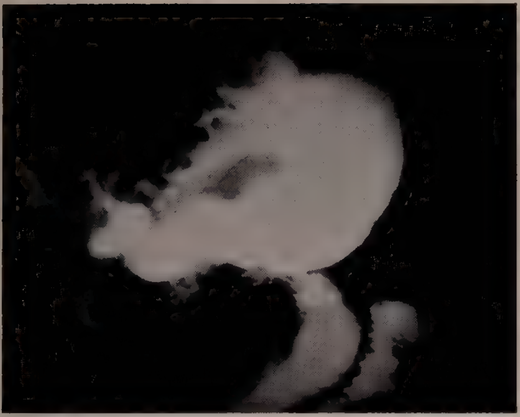

FIG. 1. Irregularity of the cardia and proximal greater curvature region of the stomach.

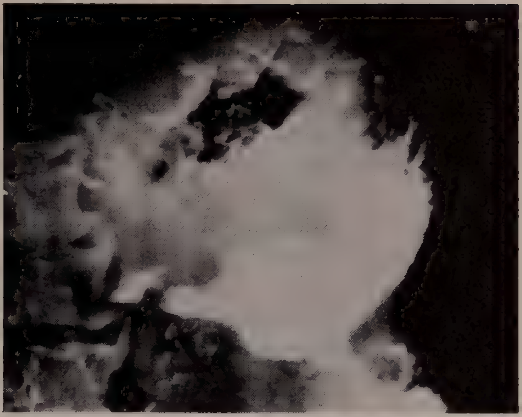

FIG. 2. Repeat gastrointestinal series seven or eight weeks later showing considerable irregularity with filling defects in the cardiac end of the stomach.

not have red cells in his urine, and he did not have evidences of embolization. Despite these things, because of the history of a tooth extraction and the persistence of the fever, a series of blood cultures was taken, and one culture out of ten showed a heavy growth of green streptococci in all media. I assume that this was a pure culture of green streptococci. He was then treated with pencillin for about six weeks. After two weeks of treatment, his temperature dropped for about two weeks and then went up in the face of continued penicillin therapy.

With the history of tooth extraction without antibiotics, followed by a period of not feeling well, and fever for at least five weeks at the time of his second admission, the first and most reasonable diagnosis is that the man had subacute bacterial endocarditis. The discrepancies are the absence of embolization, the absence of petechiae, the absence of major emboli, the absence of hematuria, the lack of evidence of clubbing of the fingers, and the definite note that the patient had no murmur. These are all factors against bacterial endocarditis. Another is the great size of the spleen. This makes one question whether or not this man had bacterial endocarditis. The possibility that he was heavy, that the spleen may have been present even when he was first seen, is a possibility supported by the elevated diaphragm. The findings in the other x-rays which I interpret, rightly or wrongly, as significant, cast further doubt on the question of subacute bacterial endocarditis. May I ask whether he had stools that had blood in them?

DR. CHARLES KOSMALER: No stool examinations were done.

DR. GOLDSTEIN: Let's review the x-rays.

DR. BURCH: The film taken after the barium enema shows enlargement of the spleen extending down to within 1 inch of the iliac crest. A gastrointestinal series was reported as negative. But the films show the stomach is folded on itself a little, and there is irregularity of the cardia and proximal greater curvature region of the stomach with considerable irregularity and narrowing (Fig. 1).

DR. GOLDSTEIN: Is that constriction recorded as transient? The later film doesn't show it.

DR. BURCH: I did not do the examination, and the fluoroscopic report said the stomach appeared normal. But the films all show these irregularities. That was the first examination, a month after his original admission.

I'll just show one film of the intravenous urograms. It shows the location of the left kidney to be a little bit lower than average.

The patient returned for a repeat gastrointestinal series seven or eight weeks after the first series. We see again considerable irregularity with filling defects in the cardiac end of the stomach (Fig. 2). There is considerable irregularity on the greater curvature as it approaches the region of the diaphragm.

That was the last of the films. He was fluoroscoped again, and the report is given in the last paragraph of the protocol.

DR. GOLDSTEIN: These are the findings by x-ray, and Dr. Burch has given you his interpretations. When they were sent to me, they seemed to me to be significant in this case. The significance might be discussed this way. First, in view of the size of the spleen, in view of the patient's course, in view of the absence of certain factors that support subacute bacterial endocarditis, the question arises as to whether this man had a lymphoma. The change in the stomach would be consistent with lymphomatous infiltration, particularly if one did not find blood in the stool, and there was no history of bleeding. Contrasted with carcinoma, this infiltration of the stomach wall with no bleeding is more frequently associated with a lymphoma.

What do we have to support the presence of a lymphoma? Number one is the size of the spleen. Number two is the patient's course. I saw his temperature chart. His temperature went up and down without reference to the administration of penicillin and without reference to the appearance of embolic phenomena. If one took away this one positive blood culture, one would say that the patient had a malignant lymphoma. His fever, the infiltrating process in his stomach, and the size of the spleen would favor it. Now what type of lymphoma could he have? One does see pure Hodgkin's of the spleen. I would say that, on the basis of probability, he is more likely to have a lymphoma other than Hodgkin's. Lymphomas other than the Hodgkin's group also give this undulating type of temperature. At any rate I would say that lymphoma is high up on the list of the diagnoses that one might make in this man.

Now what are the other things that might give this change in the stomach? Wherever one sees the esophagus in the x-rays—I assume that in the fluoroscopy the esophagus was negative or it would have been recorded—wherever one sees it entering the stomach, it looks quite all right. It's possible to see huge varices in this portion of the stomach which might give you defects that one could properly associate with this x-ray picture. That would be an extremely unusual thing, and certainly it would be associated with changes in the esophagus. Such changes are not recorded.

We have a history of his not having had a palpable liver or spleen, so our assumption must be that these were relatively acute in development. Therefore, the possibility of cirrhosis of the liver being responsible for this picture is certainly unlikely. If he had cirrhosis of the liver, then one would have to have another factor to explain the fever.

It seems to me that the changes by x-ray are far in excess of anything that you see in so-called hypertrophic gastritis. In addition, there are changes apparently above the stomach. There is an elevation of the diaphragm. The amount of space between the outline of the stomach and the top of the diaphragm is increased, and the possibility of some tumor tissue occupying this area certainly exists. If this man does not have a lymphoma and if he does not have bacterial endocarditis, what other possibilities exist?

I think one has to think of such things as splenic thrombosis. And in a splenic thrombosis it would have to be an infected thrombus. I've seen one case; the patient had an extremely hectic course associated with the development of splenic enlargement within a period of four to five days. That's my only experience with that sort of thing. The type of illness that that patient showed was entirely different from what has been described here.

I would summarize by saying that granulomatous diseases would not account for this picture. I would feel that the man had first a lymphoma, probably a lymphosarcoma rather than Hodgkin's, if that's not drawing the line too finely. He may have had bacterial endocarditis despite the negative findings. If he doesn't have bacterial endocarditis and doesn't have a lymphoma to account for his fever, then I don't know what he had.

May I answer some questions?

Question: If this man had a lymphoma, how are you going to explain a strongly positive blood culture in that series of tests?

Dr. Goldstein: I would say this. Obviously that is the one factor in the case that takes it out of the class of either acute or chronic diseases which give hepatosplenomegaly. I don't see any way of explaining it except to say that it may not be correct. When you have 11 blood cultures and have one that's positive, especially one that's a pure culture, it's a little bit worrisome. I'll tell you why it bothers me. It bothers me because if you have an organism which is highly susceptible to penicillin and to the rest of the antibiotics, it's more than likely not one of the enterococcus group and more often will grow out early.

Now, of course, we may be dealing with intermittent seeding. When you get intermittent seeding with heavy cultures, this is the way we see it in the lab. Take as an example a man who has a brain abscess and who has jugular pressure put on; you get an overwhelming sepsis and find myriads of pneumococci in the plate. Then you get none after that. And he has had plenty of negative cultures before. You can see seeding in concentrated amounts from such abscesses. I know you can see subacute bacterial endocarditis in which you get only an occasional culture. But the fact that this was so susceptible an organism and grew out in seventy-two hours bothers me. I don't know how to explain it.

QUESTION: What about his abscessed teeth?

DR. GOLDSTEIN: The operation on his abscessed teeth might suggest that an abscess was present. An abscess then, rather than bacterial endocarditis, would be the cause of the seeding. We would suppose that he had one burst of seeding and not necessarily subacute bacterial endocarditis. Any abscess may, under certain circumstances, seed the blood. I'll agree that to seed it heavily in this way is rather curious. And, of course, there's another possibility. That is, that the man has a lymphoma and also has subacute bacterial endocarditis. I don't know.

QUESTION: What is the explanation of terminal fever in lymphoma?

DR. GOLDSTEIN: As a matter of fact, it's not terminal; it may go on for a very long time. As soon as Hodgkin's lymphoma gets out of the quiet stage and gets into the granulomatous phase, you may actually see intermittent periods of this Pal-Ebstein fever for years.

QUESTION: Do you discard the diagnosis of bacterial endocarditis?

DR. GOLDSTEIN: I would be inclined, in view of the size of the spleen, the changes in the stomach, the type of fever, and the absence of embolization, to put subacute bacterial endocarditis on the bottom of the list, when compared to lymphoma. And the other possibilities leave one with little to support them.

QUESTION: Dr. Goldstein, did you ever see subacute bacterial endocarditis occur on normal heart values?

DR. GOLDSTEIN: No. The trouble with that question is how much does it take to make abnormality of a heart valve? A little wrinkle is enough to say that you don't have a smooth surface. I'd say that yes, you can have minimal damage on a valve, and you can have endocarditis. Perhaps it would be more of an acute vegetative endocarditis in a patient who has empyema or something of that sort, rather than subacute bacterial endocarditis.

QUESTION: There are two things that one finds in the literature that I would like you to comment on. One is that there never is subacute bacterial endocarditis without a murmur being present. The second is that a couple of years ago, some one, I don't remember just who, in the *Journal of the American Medical Association* said that unexplained fever and a murmur is subacute bacterial endocarditis and should be treated as such.

DR. GOLDSTEIN: That sounds like Leo Loewe.

As for the first question, it doesn't hold up when someone tells you that you never have subacute bacterial endocarditis without a murmur. You certainly can have bacterial endocarditis without a murmur. Your can have mural endocarditis with vegetations, and the patient will have the picture of bacterial endocarditis. As a matter of fact, the one such case that I know of was an aseptic one. The patient had frank and severe embolization and died, and we never grew the organism, even at autopsy. But she had everything, clubbed fingers, enlarged spleen, etc. I think that you can have it, but we all know that it is not the usual thing.

About the other question, this, I think, is so. Dr. Loewe has a good series of patients with fever and with a murmur and no explanation of the fever, and he has assumed that they had bacterial endocarditis, especially if they showed some evidence of embolization. I think we can boil it down to this: you try to see what antibiotics will do. The modification Loewe makes is this: you should use good doses. He won't use under 2,000,000 units. He may use a larger amount because, by experience, he has found that some of these are enterococci and very difficult to grow out. They are the most resistant types and require large amounts of penicillin, 5,000,000 to 10,000,000 units every day.

I don't see any way of being dogmatic about this problem. This man could have bacterial endocarditis. He had teeth pulled without antibiotics; he got sick; he developed fever, and he had a positive blood culture. And the man who says "pooh, pooh" to this is bound to meet trouble. As a matter of fact, the first doctor who saw him, or who sees a patient like this, should consider him to have subacute bacterial endocarditis regardless of the blood culture. I would consider a man who had two sets of extractions done and who had local swelling and fever and who hadn't felt well for a month or six weeks before the time he went to the doctor—I would consider him an excellent candidate for subacute bacterial endocarditis and treat him as such, even if I didn't get a positive blood culture, regardless of spleen, murmur, or embolization.

Question: In trying to get a positive blood culture, do you prefer to do one a day, or two a day, or what do you prefer?

Dr. Goldstein: We take three a day. I don't know of any rule, but we take three a day. I'll tell you a modification we like to use. We like to take bone marrow cultures. In the last few years, on two occasions that I remember, all the blood cultures were negative, and the bone marrow grew out green streptococcus. We had one typhoid case where we couldn't grow it out in the blood and did grow it out of the marrow. Now this situation in typhoid is a reasonably well-known thing. I would advise you, if you have a patient who's in trouble, to take three cultures a day for three or four days, put them away, and start the treatment. But if I started the treatment, I'd start it with an adequate amount. The first case of subacute bacterial endocarditis that we treated at school, when we had enough penicillin, was a boy, who, at the end of the fourth or fifth week, showed positive cultures in the face of 800,000 units of penicillin a day. We added streptomycin for three weeks and made it 1,200,000 units of penicillin. Then his fever dropped, and we treated him for thirteen weeks altogether. That's a common experience. If you use an average of 1,000,000 units of penicillin a day for subacute bacterial endocarditis, you'll find that, perhaps in the second or third week, a small percentage of them will have a positive culture in the face of your penicillin. And that might very well have been true here if the blood cultures had been followed.

Question: Can you have an intra-auricular septal defect without having a murmur?

Dr. Goldstein: Well, I think so. It all depends on what size the defect is. You know the normal; when you get a little bit more than the normal, you wonder if it's significant, whether it's significant physiologically. I should think if it's of any size, you should hear a little something.

Question: In talking about penicillin, in a patient like this who is having teeth out, what amount of penicillin would you give a man prophylactically; how large a dose?

Dr. Goldstein: I think the accepted practice is to give penicillin either the day before or the day of extraction. I give 600,000 units. I give it the day before, the day of, and a day or two after, depending on how much is done and how foul the mouth is.

I don't know what the dentists think about this, but I know some who agree with it. If you give penicillin after the teeth are taken out, you get a much nicer, cleaner, and a less sore mouth. The patient does much better, so you're killing two birds with one stone. It's much better than putting a little penicillin in locally. I would say it depends on how much you do. As a minimum, I would treat the day of and the day after, for an ordinary tooth extraction. If you are dealing with a foul mouth, prepare it; 600,000 units of a depot penicillin will give an adequate blood level. What you aim for is about what a Staphylococcus would require. You ought to aim for a half unit equivalent in the serum over a period of time. That would cover most staphylococci and most enterococci.

I wonder if we could ask Dr. Burch to comment on the x-rays? I have a few more things I'd like to ask him.

Dr. Burch: The pertinent findings were the enlargement of the spleen and the deformity of the cardiac end of the stomach. My judgment was that there was some intimate involvement of the stomach by a malignancy.

To explain the enlarged spleen and gastric malignancy under the same diagnosis, lymphosarcoma would be a most reasonable possibility. It appeared to me as if the stomach were intimately involved. It wasn't just outside pressure on the stomach.

Dr. Goldstein: Was it intimately involved when he was first x-rayed?

Dr. Burch: From the roentgenologist's report at that time, there was a possibility that the stomach may have been free, although the films suggest an intimacy even at that time (Fig. 1). From the fluoroscopic report there was a possibility that the stomach was being crowded by something close to it.

Dr. Goldstein: If so, then, don't you think it had to have something going on too, other than malignancy, to get that giant type of formation? I saw a note a little while ago in *Gastroenterology*, I think, in which they looked over their stomachs with giant rugal folds. There was a significantly high number of disseminated carcinomatosis which had infiltrated almost like lymphosarcoma. So much so, that the question was brought up as to whether these people ought to have their stomachs removed. Of course,

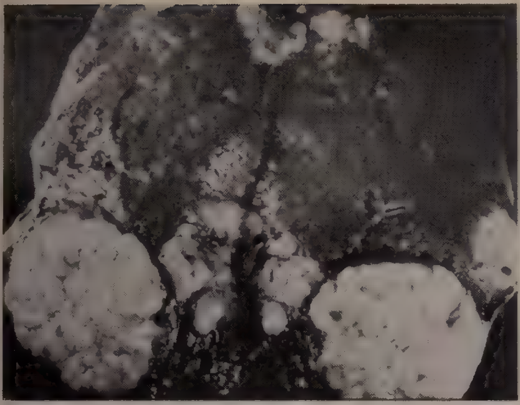

Fig. 3. Part of mass surrounding the hilus of the spleen and the splenic vessels.

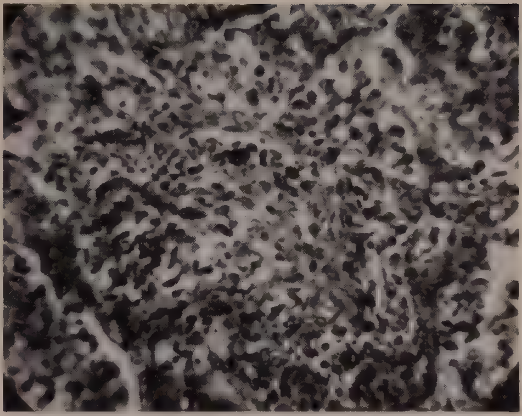

Fig. 4. Section of one of the nodules in the lung showing polymorphous cellular infiltration.

when they saw something like that even with no anemia and with no blood in the stools, the question was whether to operate. The decision was to operate. They took out some that showed only hypertrophic gastritis and some with hypertrophic gastritis with this carcinomatous change. I think it is important, when you see something like these x-ray changes, to take an operative look. Do you agree with that?

Dr. Burch: I would think so. In this case there doesn't seem to be much question but that there was a malignancy involving the wall of the stomach.

Dr. Goldstein: Don't you think it's a little unusual to see such a diffuse infiltrating process throughout the whole of the stomach as this, without having some involvement of the cardiac end of the esophagus?

Dr. Burch: Well, it was largely on the greater curvature.

Dr. Kosmaler: Are there any more questions? As the protocol says, the patient was referred elsewhere. A diagnosis of reticulum cell sarcoma was made. He returned to this city, and about four months later he died.

Pathology Report

Dr. James A. Mitchell: He was a sixty-two-year-old male, 5 feet 8 inches tall, and weighed approximately 150 pounds. There was marked pallor of the skin and mucous membranes. There was marked distention of the abdomen. There was a 1 plus pitting edema of the feet and ankles. There was no external lymphadenopathy noted.

On opening the abdomen and chest, the peritoneal cavity contained about 1,500 cc. of cloudy yellowish fluid. The small bowel was matted together by fresh, grayish, plastic adhesions. The left lung was adherent to the parietal wall and the diaphragm. There were several nodules noted in the left lower lobe varying in size from a pea to a marble. They were well circumscribed and discrete and a dull gray color. The diaphragm on the left was diffusely infiltrated with firm, grayish tumor. The right lower lobe also showed a few nodules similar to those in the left lung. The hilus glands were not remarkable, and only a few small black anthracotic parabronchial nodes were noted.

The heart was normal size. The endocardium was smooth and glistening. There were no vegetations noted on the valves. The myocardium and the coronary arteries were essentially normal.

The liver was approximately normal size and weighed 1,500 Gm. On section it showed a circumscribed nodule in the left lobe 3 cm. in diameter.

The spleen was greatly enlarged and weighed 700 Gm. It was studded with many yellowish-gray nodules, the largest being at the lower pole and measuring 6 cm. in diameter. There was a large tumor mass surrounding the splenic vessels. This mass was adherent to the greater curvature of the stomach, and it infiltrated the stomach wall beginning at a point about 4 cm. above the pylorus. The infiltration extended almost up to the esophagus. This mass also perforated through the splenic flexure of the colon, and there was a perforation of the colon which was the cause of the peritonitis.

The periaortic glands, just below the pancreas, were enlarged and apparently involved in the tumor process.

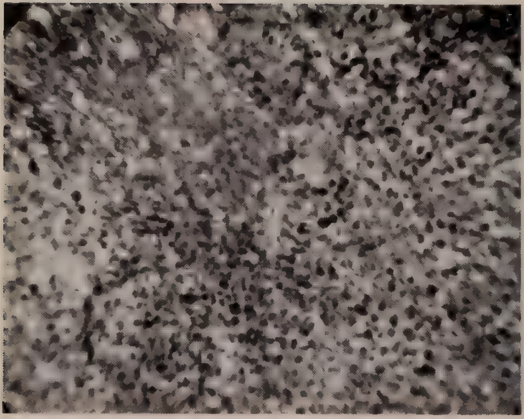

FIG. 5. Section of spleen showing similar cellular infiltration with large areas of necrosis and degeneration.

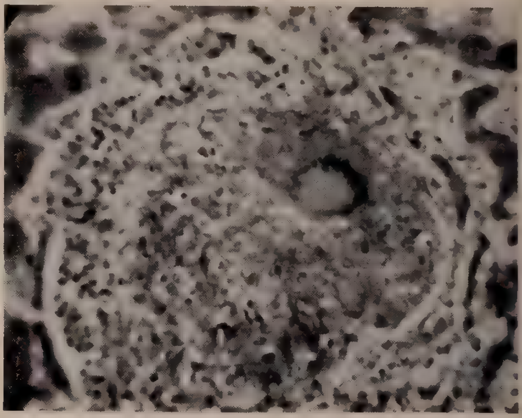

FIG. 6. Typical epithelioid tubercle in liver with a characteristic Langhan's giant cell adjacent to it.

The mesentery of the small bowel also showed many involved glands, and several nodules were present on the serosa of the small bowel. The gastric mucosa was not involved; it infiltrated through the serosa just to the mucosa. The mucosa of the small bowel was not involved. So we thought at the time of autopsy that it was probably lymphosarcoma or reticulum cell sarcoma.

We have a picture of the spleen showing a part of the mass that surrounded the hilus and the splenic vessels (Fig. 3).

Section of one of the nodules in the lung shows a polymorphous cellular infiltration consisting of plasma cells, eosinophils, lymphocytes, reticuloendothelial cells, and an occasional Reed-Sternberg cell (Fig. 4). Undoubtedly, the pathology is one of Hodgkin's granuloma.

Sections of spleen show similar cellular infiltration with large areas of necrosis and degeneration (Fig. 5).

An interesting finding in the liver is the presence of a typical epithelioid tubercle with a characteristic Langhan's giant cell adjacent to it (Fig. 6). This is the only evidence of tuberculosis found in sections of the various organs examined. It is not an unusual incidental finding in cases of Hodgkin's disease. Some clinician, many years ago, made the observation that "tuberculosis follows Hodgkin's disease like a shadow."

The tumor in the stomach shows essentially the same histology as in the spleen and lungs.

The fact that a diagnosis of reticulum cell sarcoma was made on the biopsy of the cervical lymph node is not disturbing since it was probably a very early lesion in the node, and Hodgkin's disease in its early phase in the lymph nodes is often characterized by a proliferation of the reticulum cells before the appearance of the typical Reed cells and plasma cells.

Comment

DR. KOSMALER: I would like to ask Dr. Goldstein for any additional comments. I think it has been said that diagnosis was made elsewhere. I want to remind you that Dr. Mitchell didn't find any superficial lymph nodes at the time of postmortem. But at the time of referral it seems that a left supraclavicular node was found, and it was biopsied. The diagnosis of reticulum cell sarcoma was made from that node. It was extremely fortunate that the node was discovered and biopsied, so far as the diagnosis was concerned.

DR. GOLDSTEIN: Well, what's the lesson from this case? I think the lesson is pretty much the things we discussed before. You go down the river on one single laboratory finding and one factor in history; the man didn't feel well, and he had this work done on his jaw without antibiotics. It was perfectly reasonable to suspect that he had subacute bacterial endocarditis. Nothing supported subacute bacterial endocarditis except that one laboratory procedure. I don't think that one ought necessarily to look at that culture with a jaundiced eye and say the technician coughed in it. This man had a lot of ulcerative process going on in various parts of his body from which he might have leaked something into his blood stream. I don't think that that was necessarily an extraneous blood culture, but I think one should have considered that it was possibly so. Why? The fact that he had such a sizable spleen, and the fact that he had a significantly elevated left diaphragm when first seen, and that he had the type of fever that he had should lead us to suspect the possibility of lymphoma. As a matter of fact, we should have been led to lymphoma even more than carcinoma because the temperature was remitting, was not absolutely constant as it is with carcinoma, for instance, involving the liver.

I told you that generally you take the case and turn it upside down. I don't think you had to turn this upside down, primarily because of the change in the stomach. I feel that that was a significant finding right from the first film. What I emphasized to myself was the size of the spleen in subacute bacterial endocarditis and the relation of that to this man's course. This suggested the possibility of something else, enough to do some looking for a tiny gland, or of taking your time about deciding on a cause for the febrile course and maybe trying x-ray therapy. It's too bad that you don't have the satisfaction of having stools that were negative for blood. Many times it is true that stools are negative, and as described here, the mucosa is not involved. Sometimes instead of this giant change that you have seen, you get just a little bit of lack of pliability of the stomach wall. This represents lymphoma and really is a fooler.

An Untapped Source of Supply

We hear a great deal today about postgraduate education of physicians. But we believe that one of the best sources of postgraduate teaching material—our hospitals—is still virtually untapped.

During a recent morning visit to the Medical Outpatient Department of the Boston City Hospital, we found that only four members of the intern and resident staffs were on hand to care for about 200 patients. No member of the visiting staff was present.

In a recent article ("The Use of Dejerine's Methods in the Treatment of the Common Neurosis by Group Psychotherapy," *Bulletin of the New England Medical Center*, March, 1953, page 5), Dr. Joseph W. Pratt wrote: "Dr. Merrill Moore, visiting neurologist at the Boston City Hospital, states in a recently published paper that there are already hundreds of psychiatric problems on the wards of the Boston City Hospital that are not being adequately cared for." Dr. Moore's observation is merely illustrative of a general problem that exists at this and other hospitals. The number of physicians presently on the visiting staff of BCH is inadequate to provide the best medical care because of the increased volume of inpatients as well as outpatients.

The postgraduate education offered by the district societies within the state, the Massachusetts Medical Society, and the newly constituted Postgraduate Institute under the sponsorship of the State Society consists chiefly of lectures. Thus the physician without a hospital affiliation must struggle along on lectures, literature, and the experience gained from private patients. On the other hand, the most worth-while postgraduate education, as we see it, is derived from treating patients in clinics or at the hospital bedside. Under the present system of staff organization, which provides for relatively long terms of service in hospitals, only a limited number of topnotch physicians are being developed.

It is not good policy merely to make the good doctors better and neglect those of average ability or training. Except for chiefs of services, a far more constructive and far-sighted program would be to reduce the terms of service in hospitals to one or two months, and to appoint a maximum number of physicians to all outpatient and house visiting staffs. This would provide an opportunity for the development of more good doctors, rather than just a few superior men.—*Norfolk Medical News, November, 1953*

CASE REPORT

Febrile Reaction to Acetazoleamide (Diamox)

JULIUS SCHWIMMER, M.D., ABRAHAM I. SCHAFFER, M.D., AND JOSEPH GUIDO, M.D.,
NEW YORK CITY

(*From the Department of Medicine, New York Medical College, Metropolitan Hospital Division*)

ACETAZOLEAMIDE (Diamox, 2-acetylamino-1, 3,4-thiadiazole-5-sulfonamide, compound 6063) appears to be clinically useful as a diuretic in congestive heart failure.[1] It inhibits carbonic anhydrase,[2] which is an enzyme that facilitates the reversible reaction between carbon dioxide and water and carbonic acid. The inhibition of this enzyme results in a diminished supply of hydrogen ions for exchange with sodium in the renal tubules and a decreased formation of hydrochloric acid in the stomach.[3] Several hours after the oral administration of acetazoleamide, there results a diuresis of water, sodium, and potassium, accompanied by an acidosis in the blood.

As yet, we have not seen any report of a clinical toxic manifestation to the drug. Therefore, we are reporting this instance of a febrile reaction.

Case Report

A forty-three-year-old white male was admitted to the Metropolitan Hospital on January 14, 1953, with the chief complaint of dyspnea for one day. Three days previously, he developed fever, dry cough, and substernal pain radiating to the left shoulder and down the left arm only after coughing. On the day of admission the sputum was blood-streaked.

As a child the patient had joint pains and epistaxis. About ten years ago a heart murmur was noted for the first time which prevented him from joining the Army. About five years ago he began to notice dyspnea and substernal pain on effort. He denied ever having received "sulfa" drugs.

On admission he was acutely uncomfortable because of marked dyspnea, and he was slightly cyanotic. He had a nonproductive cough; his skin was hot and dry. His temperature was 102 F., pulse 148, and blood pressure 84/60.

There was a watery discharge from both nostrils and a moderately injected pharynx. The neck veins were distended and exhibited systolic pulsations. There was some dullness and diminished breath sounds at the right base posteriorly and moist rales at both bases. A harsh, systolic murmur was loudest in the second intercostal space to the right of the sternum. (It was diamond-shaped in the stethogram.) There was no thrill. The second sound was not audible in this area and was heard to the left of the sternum only. The liver was palpable three fingers beneath the costal margin and exhibited systolic, expansile pulsations.

Shortly after admission the white blood cell count was 11,500. The urine showed no sugar or albumin. The erythrocyte sedimentation time (Wintrobe) was 30 mm. in one hour. The blood urea nitrogen was 40 mg., creatinine 24 mg., and fasting blood sugar 135 mg. per 100 cc. The roentgenogram of the chest showed accentuation of the left ventricular contour and a moderate increase in the pulmonary markings in both hilar regions, extending peripherally. An electrocardiogram revealed left ventricular preponderance with a QRS duration of 0.11 second. The diagnosis was influenza, rheumatic aortic stenosis, and congestive heart failure with relative tricuspid insufficiency.

Therapy consisted of bed rest, oxygen, digitalis, mercurial injections, and a salt-poor diet. The patient responded favorably and within two weeks was relatively asymptomatic except for peripheral edema which developed several days after admission and some intermittent pain radiating from the fingertips to the right shoulder.

In the afternoon of February 16, 1953, thirty-two days after admission, and one week after the last injection of Mercuhydrin, the patient was given two tablets of acetazoleamide, each containing 0.25 Gm. Within the next four hours, diuresis, headache, and nausea appeared which lasted for about twelve hours. The next day the patient had no symptoms and weighed 7 pounds less.

On February 17 he received two tablets again and experienced headache two hours later.

On February 23, at 9:30 A.M., two tablets of acetazoleamide were given. At about 10:45 A.M. the patient developed a severe headache; at 11:30 A.M. marked dyspnea, severe substernal pain, cough, and fever were experienced. The temperature was 103.6 F., pulse 120, blood pressure 100/70, and respirations 34 per minute. The heart rhythm was regular, and an electrocardiogram showed no appreciable change from the control. A blood culture taken at this time was later reported as showing no growth. Morphine, aminophylline intravenously, and oxygen by mask were administered. The fever subsided in less than twenty-four hours, and the

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The acetazoleamide was supplied by Dr. S. M. Hardy of Lederle Laboratories Division of American Cyanamid Company.

patient was asymptomatic on the following day. Diuresis had occurred during the febrile period with a weight loss of 3 pounds.

On February 27 a half tablet of acetazoleamide equal to 0.125 Gm. was given. Thirty minutes later, chills, fever, and headache appeared. Codeine and aspirin were administered, and the symptoms subsided within a few hours.

From then on until discharge on March 9, 1953, the patient had an uneventful course.

Comment

Because acetazoleamide (Diamox) is a sulfonamide, the following toxic manifestations can be expected: fever, dermatitis, hemolytic anemia, agranulocytosis, hepatitis, and renal tubular damage.[4] Drug fever has the characteristics of an allergic reaction. The drug combines with a protein to form an antigen which in turn gives rise to an allergic state. The allergic state develops within five to ten days; if the drug is ingested at this time, fever appears in one to two hours.

In the present case the first two doses of the drug sensitized the patient, and the third dose one week later provoked the drug fever. The fourth dose was a deliberate test to establish the nature of the reaction, for there was a possibility that the first febrile reaction was caused by a pulmonary embolus. The immediate appearance of fever within two hours after the third dose and one-half hour after the fourth dose is characteristic of the allergic state.

The incidence of drug fever varies with different members of the sulfonamide group. There is good evidence that, for a given drug, it is proportional to the dosage.[5] In the present case 1 Gm. in forty-eight hours was enough to establish a sensitization to the drug. This is a small dose in comparison to the amounts usually used of the other sulfonamides (2 to 10 Gm. daily for many days). Does this indicate that acetazoleamide has a strong antigenicity? Cross-sensitivity between different sulfonamides is frequent and may have been a factor here. Previous sulfonamide medication may have facilitated the development of the allergic state in the present case. However, the patient was positive that he had never received sulfonamides previously.

When drug fever appears, the drug must be stopped because fever may be the forerunner of such serious reactions as hepatitis, dermatitis, hemolytic anemia, and agranulocytosis.[4]

Summary

A febrile reaction to the oral use of acetazoleamide (Diamox, carbonic anhydrase inhibitor, compound 6063) is reported. The reaction had the characteristic of drug fever resulting from sulfonamides.

Addendum: This patient died at Metropolitan Hospital on May 15, 1953. Autopsy performed on the same date confirmed the clinical diagnosis of rheumatic aortic stenosis.

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Dates to Remember . . .

May 10 to 14, 1954
Hotel Statler, New York City
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Medical Society of the State of New York

SPECIAL ARTICLE

The Practice of Industrial Medicine in Relation to the Community

JOHN L. NORRIS, M.D., AND GORDON M. HEMMETT, M.D., ROCHESTER, NEW YORK

(*From the Medical Departments of Eastman Kodak Company and the Hawk-Eye Works*)

THERE are several particulars in which we believe industrial medicine differs from medicine as generally practiced in the community. First of all, we, as industrial doctors and nurses, are dealing, for the most part, with well people, i.e., individuals who are performing their routine duties. Ordinarily people do not have contact with a doctor or nurse unless they are disabled by sickness or injury.

Pre-employment Examinations

Our activities are based on physical examinations. One of the first experiences of an applicant for work is the preplacement medical examination. Many of the applicants are uneasy, to the extent of elevating their blood pressure and accelerating their pulse rate. We try to make the experience as pleasant as possible in order to have proper evaluation. At preplacement physical examination we try to do three things: (1) evaluate physical fitness of the individual and look for contagious diseases and physical handicaps, (2) refer to local doctor for treatment of disease and correction of defects, and (3) proper job placement, which is the most important aspect. The record of the physical status of an applicant also protects the employer against false claims.

In keeping jobs filled a great deal of care must be exercised in selection or job placement. Each job calls for certain qualifications, and each employe is selected with a particular job in view. Job placement in some instances entails tests and consideration for special qualities, such as perfect vision, or above-average manual coordination, or specific degrees of muscular strength. If an individual is not found physically adequate, he is recommended for something less exacting or referred to his doctor for treatment of correctable defect, such as hernia or varicose veins, with the hope that he can later qualify. Improved mechanical devices for handling materials have eliminated some of the previous back-breaking jobs, thus enabling the employment of more substandard individuals. As a result more handicapped individuals are employed.

We try to help all prospective employes to become eligible for some sort of work. Only a very small percentage are rejected outright for such things as a contagious disease or some serious degenerative condition. Over the years we average about 3 per cent rejections.

On the other hand, we not infrequently pass a man for work with the understanding that, within a stated or reasonable period of time, he will see his doctor and have necessary medical attention. This calls for a follow-up examination and enables us to act as the necessary persuader in getting an employe to seek early remedial attention. It is one phase of our work which permits prevention and rehabilitation. In filling lighter jobs priority must be given to older employes with long service who have acquired physical limitations. Second consideration must be given employes injured on the job. So, third consideration goes to applicants for employment who bring disabilities with them.

Health and Job Counseling

I think you can all understand that an employe who is physically fit or properly placed is a better employe; his entire relationship with his job is more satisfactory, and his success on the job is more assured. We like to think of health as not only a state of physical and mental well-being but one of social and job well-being also.

Our knowledge of the jobs and their environment and our acquaintance with supervision are extremely helpful in attempting to answer the questions which employes raise regarding their work, the boss, or the work environment. It may be a question of ventilation or lighting, or work posture, or any one of a dozen different job problems. So often another job looks better, and transfers are requested. Too often requested transfers are unwarranted or impossible. You private doctors, too, hear complaints from these people as they become your patients. It is human to have "gripes" and fears. In industry it is the function of the doctors and nurses to reassure and encourage. The mere opportunity of having a willing listener is in itself a partial cure. The exchange of information between the plant doctor and the family doctor is of utmost importance to all concerned to insure proper treatment based on proper evaluation of complaints.

Treatment of Injuries

As you know, when an employe is injured, he is

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given the free choice of who shall take care of him. If the injured employe does not desire to select an outside physician at the time of the accident and prefers the employer to provide necessary medical treatment, the employe signs a release as required by law. This does not prevent a later change of physician if he so desires.

It is our purpose, and our responsibility, to see that an injured employe receives the best possible medical care. When an employe is injured seriously, it is almost a routine policy to turn the case over to someone who can best treat that condition, whether it be the employe's choice, the family doctor's, or ours. We try to cooperate and have agreement among all those involved. Naturally, we are concerned with his early return to work. It is economically sound that we should do everything necessary to restore him to full work capacity as early as possible. We all recognize the importance to morale of early recovery.

Treatment of On-the-Job Illnesses

Naturally we are in business to make a profit and to turn out a product of the highest quality at the lowest possible price. That means that we are ready to render those services that keep a man on the job as steadily as possible. The biggest item of cost in production of goods is wages; good health increases individual efficiency and earnings. On-the-job illnesses, such as headaches, colds, gastrointestinal upsets, and other discomforting symptoms, are treated here with that in mind. Industrial health might be called "the science of keeping personnel and plants fit for a profit." Creation of employe good will and loyalty is a result of a health service which gives greater continuity of employment. Preventive medicine, rather than therapeutic medicine, is the main theme of an industrial medical program. This, we believe, is justified because if some of the so-called minor complaints of an employe go untreated, the individual relying on home remedies and the drugstore, they may lead to serious illness and a long stay at home.

Vision

Vision is a very important part of job efficiency, and with the aid of one full-time and several part-time ophthalmologists, we offer employes an opportunity for refraction with glasses at a reduced cost. Persuading employes to protect their eyes in this way has become a fine art here on the part of the Safety and Medical Departments. We consider the protection of eyes a requirement of the greatest importance.

Hazards

For many years we have endeavored to watch all jobs for any possible toxicologic or mechanical hazards. Individuals exposed to chemicals are checked periodically to be sure that no harm is being done. Reduced human suffering and reduced occupational disease, giving reduced compensation insurance premiums, result from an industrial medical program.

Visiting Nurses

No discussion of our medical program would be complete without telling you something about our visiting nurses. They call on all employes who are off the job three days or more because of illness. These nurses do no bedside nursing. If part-time bedside nursing service is considered necessary by the family doctor, it is provided through the local Visiting Nurse Association under our (Metropolitan Life Insurance Company) group life insurance plan. Our visiting nurse calls are a friendly visit to the employe to demonstrate our interest in his welfare, to find out how sick he is, whether he is under medical care, how long he may be absent, and whether the company can do anything to facilitate his recovery.

We do not know whether you appreciate how important it is for the foreman or department head to know when he may expect an employe to return. When you are scheduling production on the basis of so many employes, especially when they work in teams or groups, absence makes a big difference. The question that we are asked most often by supervisors is, "When can I expect him or her back?" Often it is difficult to predict, and even with the local physician's help we have to do a lot of judicious guessing to answer the supervisor. The local doctor's cooperation in reporting promptly on sick employes is valued greatly. We think you appreciate that in such matters we are working together for the best interests of the employe. We check employes who are returning to work following a sick leave to see that (1) he is well enough to work, (2) he brings no contagious disease, and (3) sick benefit has been properly executed.

Sickness Allowance

Our employes, when ill, receive a sickness allowance based on their regular rate of pay. It is for this in particulart hat our visiting nurses make their calls periodically so that they may recommend payment of those benefits to which the employe is entitled. This arrangement, which was inaugurated more than thirty years ago and was paid for entirely by the company, was changed on July 1, 1950, to fit the New York State Disability Law. This law gives the employer the right to a closer check on the employe's sick absence.

Areas of Friction Between Plant and Family Doctors

All of us have many times felt that some other individual or group was being unfair or unethical in his or their relations with "our" patients. Sometimes it is the specialist who, after carrying out what we believe to be his real function with the patient whom we have referred, keeps the patient coming to him for some condition which we consider our responsibility. Or the hospital does not allow us to care for our patients in the hospital, and then some member of the staff carries on after discharge. Or the general practitioner gets in too deeply in some situation and "expects us to pull his chestnuts out of the fire."

Industrial medicine comes in for its share of the misunderstandings and criticisms. This share is, we expect, larger than that of any other group since each of the people we see is some other physician's patient and since the patients' short-term economic interests seem to them to be in enticing us to treat them. The understanding, cooperative relationship which we wish to maintain—and we use the word "maintain" advisedly—must be maintained largely in spite of our mutual patients.

Coupled with the fact that we all naturally resent, a little, any other physician's interest in "our" patients are the numerous spots where our advice may differ just enough—or our way of expressing the same things may differ just enough—to seem to be a real conflict and be reported to one or the other of us as such. We shall try to mention briefly some of the areas where it seems to us misunderstandings are most likely to arise.

An employe is absent from work on account of illness and has been seen and treated regularly by his family physician. Recovery seems satisfactory to the attending physician, and the patient is told he may return to work on a certain date. He reports back to the Medical Department and is sent home again. It is natural that your first reaction to this would be resentment against what you might feel was the implied criticism of your work and the feeling that "if Kodak wants to pay another month's sick benefit to this person, it is nothing to me," and "it will be a darn cold day before I'll send anyone else back to work until they're more than ready." We are certain that there is always a good medical reason for returning such a patient home to his doctor. The most likely thing is that the patient's condition has changed between examinations. Often we are told, "I felt all right when I left home this morning, but I feel lousy now." It may be that our closer knowledge of the job situation than yours may lead us to delay longer. We learned of a case just the other day where the attending physician had incurred the resentment of his patient for urging a return to work. The patient reluctantly reported to the Medical Department, told a good story, and was sent home. We fear the physician lost a patient. Kodak may have spent some money unnecessarily on sick benefit.

None of us like to be policemen, but the economics of medicine today forces us all frequently into that position. Insurance and sick benefit schemes are necessary, we all agree, yet we realize that the maintenance of reasonable costs of these plans depends on a minimum of abuse. Political and social implications complicate this picture tremendously. We appreciate your cooperation in getting people back to work as soon as they are able. We appreciate your help in estimating a reasonable period of absence in your reports to us. We are determined never to break confidence with you by using that estimate as a club to get the patient back to work.

There is the patient who comes in, taken acutely ill at work, and gives us the name of one physician as his attending physician. Symptoms suggest coronary problems. The man has a history of furuncles, some of which we have dressed at work. So we do a cardiogram, a blood count, and a blood sugar. We send the reports to the physician whom the patient names, having made necessary arrangements for transportation home. He feels so much better on getting home that his doctor is not called until late the next day, which, in the case I have in mind, was a holiday. The physician to whom the reports had been sent was not available, so another physician, who had treated this individual previously, was called. He came, annoyed at being called on a holiday, was greeted with the news that the patient had been treated at Kodak, was sent home from there, and that laboratory studies had been made. But, of course, no mention was made that another physician's name had been given to us as the attending physician. We were happy that this case was brought to our attention by the physician since it gave us an opportunity to keep a friend. We hope that you will all bring to our attention incidents that you feel we have mishandled.

And there is the case of the person who did not feel like working but did not feel bad enough to call a doctor. He was out a week before the visiting nurse called the first time. She urged him to see a doctor and was told, "I'll be all right by Monday." Another week rolls around, and the nurse calls again. Still he has had no medical attention. Again he is urged to see a physician or report to the Medical Department for confirmation of an illness. Rather than pay a fee, he goes to the Medical Department. An examination reveals little, however; he is given the benefit of the doubt, and sick benefit payments are authorized. The individual is told that in our judgment he will be able to work by Monday. Monday comes around, and he still would rather stay home, so he does. The nurse calls again and tells him that he will receive no further sick benefit unless he is under medical attention. He does not really believe this until he fails to receive his next sick benefit check. Then he gets busy and goes to a doctor to get his sick benefit authorized. The physician asks, "How long have you been sick?" "Three and a half weeks" is the answer. "Who has been taking care of you?" "Kodak Medical." Naturally, you don't like it, and the part of the story that you hear makes us look largely to blame.

Another instance is the cardiac who has been away from work for several weeks, has improved considerably, and a return to work is possible on the basis of your report to us and the visiting nurse's observations. The patient is asked to report to the Medical Department. At the time of this report the visits to the personal physician have become rather infrequent, three weeks or so apart. Progress seems good, but it is felt that another two weeks would be advisable before the return to a limited type of work. He is advised to check with his private physician and report again in two weeks. At the time of his next visit he says, "I didn't think I needed to go back to my doctor. You had examined me." Arrangements are made for a return to a limited type of work the following week, and he is urged to check with his physician and asked, if anything happens over the week end or if the family physician doesn't approve of his return, please to let us know. "Do I need to go back to my doctor for a release to go back to work?" "No, I'm sure he will agree, and if he does, this clearance that I give you now will save another trip here to the Medical Department." A week or so later the family physician asks us what we meant by telling his patients not to come back to him!

Then there is the tense individual who presents us with a note that this man should never be on trick work. We have not time to go into this one in all its ramifications. Frequently, however, a change from his job, to which a man may have been working up for years, may mean gross limitation to his future growth and satisfaction; almost surely it will mean considerable loss of income. This is an industry made up largely of continuous processes; trick work is unavoidable. We wish there were much less of it necessary. Most people make the adjustment happily; some cannot.

Then there was the mother of three children, the oldest eight years of age, who, after she had been out on sick benefit for a month, presented her supervisor (not any of us in the Medical Department) a note from her attending physician, requesting an additional two months leave of absence. This was in June with a pleasant summer approaching, also a period of peak employment in her department. She was divorced, and while she was working, the children were cared for by a neighbor in the country. The mother stayed in an apartment in the city except on week ends. Since being off sick, she had given up her apartment and was taking complete care of the children and their home. There was nothing in the physical examination, chest x-ray, or laboratory studies to indicate illness. Under the circumstances we could not justify any additional sick benefit.

We know that cases like this put you on the spot. It is difficult for you to maintain the friendly cooperative relationship with your patients that is necessary for good results unless you give them what they want. It is our job to be the scapegoats in situations of this sort. We invite your understanding and support.

Summary

In all this we have tried to indicate that we are all working toward the same goal: the good of our mutual patients. We are all busy, and much of the time a telephone call (which may raise a busy signal) seems one thing too many to do. Yet, frequently, such a call or a note will avoid a misunderstanding and help us to discover ways of furthering the health and welfare of those whom we serve. We in industry have no desire to displace the family physician in the affection of his patients. We wish to support you from our position in the present scheme of things, as we trust you will wish to continue to support us.

Skin Grafts Repair Internal Organs

Surgeons have now successfully grown skin from the outside of the body on the inside. The success of this operation promises many new clinical applications of skin grafts, ranging from replacement of blood vessels to repair of bleeding livers.

In experiments on 35 adult dogs by Dr. Charles Horton and other surgeons of the Medical School of Duke University, Division of Plastic Surgery, grafts from the outer skin of the animals were placed on various organs in the abdominal cavity, including the liver, spleen, intestine, and stomach. All of these grafts grew well.

The surgeons are hopeful that the continuation of these experiments will lead the way to the application of grafts intra-abdominally in human surgery. In fact, they have observed such a dramatic effect of skin grafts on bleeding surfaces of the liver that they would now advocate their use for the control of hemorrhage if liver bleeding was otherwise uncontrollable.—*Science Newsletter, December 12, 1953*

HISTORY OF MEDICINE in New York State

Editor
FREDERIC D. ZEMAN, M.D.

EDITOR'S NOTE: In the May 15, 1953, issue of the NEW YORK STATE JOURNAL OF MEDICINE this department made its bow to the medical public. Among the men who expressed interest and pledged cooperation was Dr. Milton Sills Lloyd of New York City. His letter emphasized vividly the need for looking in odd and unusual places for historical records.

> "About ten years ago, I was president of the Richmond County Medical Society. We were setting up a new office with telephone, secretary, and the usual appurtenances. I knew that the Society possessed some very old records of transactions but was unable to find them. I began a search, covering the different places where the Society had assembled over the previous twenty years. I was rewarded by the discovery of the original minute book (dating from 1804) and other records for the Society, covering the first one hundred years, in a pile of rubbish in the basement of a school, waiting to be heaved into the furnace and into oblivion.
>
> At about the same time, another of our members, Dr. Carl Kingsley, dug out of the attic from his family archives a fee schedule agreed upon by physicians practicing on Staten Island in 1802."

Dr. Lloyd's study of these records was presented before the Richmond County Medical Society's annual meeting December 12, 1945, and summarized in the *Bulletin of the Richmond County Medical Society* in February, 1946. The historical value of this communication, as well as the manner in which the information was acquired, cannot be overemphasized. For this reason it has been considered worthy of republication at this time.

The First One Hundred Years of the Richmond County Medical Society

MILTON SILLS LLOYD, M.D., NEW YORK CITY

THE purposes of the Richmond County Medical Society in the beginning were quite different from what they are today. The members referred to their organization most frequently as a corporation. They were among other things authorized by law to issue licenses to properly qualified physicians who wished to open practices in the county. The only permanent committee was the censors, consisting of three members. To them was assigned the task of examining the credentials of the candidates, a duty which they discharged with great seriousness and with unequivocal if sometimes stern justice.

On July 17, 1810, the following entry appears:

> "Resolved that whereas a certain Doctor Smith has taken up residence in this county and commenced business without presenting to this Society any document certificate or voucher. . .that the president be directed to serve his summons to the said Doctor Smith for his personal appearance before this Board to show cause (if any) for this neglect."

On July 20, 1810, Dr. Smith made his appearance and presented "a document signed by the Supreme Judge of the State from which it appeared he had been duly authorized under the law of 1807 entitled 'An act to regulate the practice of Physic and Surgery in this State.' The usual formalities were in this case dispensed with," the minutes continue "and Dr. Smith was unanimously admitted as a member of this Society."

The meetings of October 17 and October 23, 1810, were devoted to the case of a Mr. Morgan, described as "a pupil of a present member of this institution." The second session closes with the following entry: "Mr. Morgan having again presented himself for examination, the censors proceeded and after a minute and particular examination, he was presented by them to the Society and received a license accordingly."

An important historical fact is recorded in the minutes of the meetings of October 17, 1809, when Dr. Halsey petitioned the Society for a letter of recommendation for his son to enter Columbia College and of October 17, 1811, two years later, when the son presented his credentials and was granted a license to practice.

The other side of the story appears in the record of the meetings of November, 1812, and July, 1813. At the first meeting, two candidates, Mr. Fountain and Mr. Hunter, "presented their credentials from the College of Physicians and Surgeons of the City of N. Y." They were allowed to practice, pending admission to the Society. The following entry by the secretary at the second meeting disposes of the case of Mr. Fountain. "Dr. J. Fountain who had exhibited his credentials and offered himself for admission to the Society at the last regular meeting was without a dissenting vote rejected, inas the members consider him unworthy of holding a seat in this corporation." Further, on a motion, the following resolution passed unanimously, "That the said James Fountain has in their opinion forfeited all claims to respect from the members of this society, that they consider him not only unworthy of a seat in this institution but that hereafter no member shall hold any professional intercourse with him or in any case a medical consultation when he is present under the penalty of immediate expulsion." Mr. Hunter must have decided that discretion was the better part of valor, for there is no record that he ever appeared before the Society.

In his annual address of 1858, the then president, Dr. W. C. Anderson, has the following to say of the above incident: "Our worthy predecessors vainly hoped by shutting this fountain to arrest the flow of muddy waters which have since covered the land. Would that their praiseworthy efforts had been more successful." The failure, however, could not be ascribed to the Richmond County Medical Society, for the same speech contains the following passage: "In the year 1844 the laws regulating the practice of physic and surgery were so amended as to throw open the privilege of prescribing for the 'ills that flesh is heir to' to all the hosts of quacks whose name is legion—Thompsonians, Eclectics, Indian doctors, Homeopaths, Clairvoyants, Cronothermatists, Electricians, Animal Magnetizers and Hydropaths, a motley group whose 'Sands of life' had only then commenced to run."

I think it is fair to say that the interests and welfare of the people of this community, so far as medical services are concerned, were more zealously guarded by the Richmond County Medical Society in its early years than they have ever been since that time by any other system of regulation.

Meetings were held quarterly. The annual "contribution" to the Society was fixed at one dollar, and it was further stated in the constitution and bylaws that "a member shall be fined fifty cents for every roll call from which he shall have been absent allowing thirty minutes grace." The enforcement of both these provisions was always a matter of great annoyance. There is no record that the fines were ever collected. In 1875 four members at one time were dropped from the roll of membership "as being in arrears for three years or more." At another time things were so bad that an official agent was appointed to make collections and to be known as the "Collector of the Richmond County Medical Society."

The Society also regulated and standardized the fees for services rendered. There is no all-inclusive schedule to be found, although it was several times taken under advisement. It was ruled, however, in the early part of the Society's existence, that the fee for "services in the capacity of midwife" should be $3.00 when paid immediately and $4.00 when "a charge is made upon the book of the practitioner." The fee for vaccination was $1.50.

This deficiency in the official record, however, is more than compensated by a document of even greater antiquity. It is a fee schedule prepared in 1802 and signed by the physicians then in practice. The Society comes into possession of this by the courtesy of Dr. Carl Kingsley. English denominations are used, in spite of the fact that the Revolutionary War had already passed over twenty years into history.

The secretary of those days had to be a man who could read his own writing and not simply the typewriting of someone else. The records, therefore, exhibit many examples of beautiful

Spencerian penmanship, and some of the pages could be more accurately described as drawn than written.

The first meetings were held in the Court House in "Richmond Town" during the daylight hours. After many years and great increase in population, this place, strangely enough, becomes "Richmond Village."

Relationships within the Society were also regulated with determination and severity. Chapter X, Sections 3 and 4, of the bylaws, provides as follows:

> "Sect. 3: Every member of the Society shall conceive himself bound in honour to respect the feelings of those with whom he may come in medical contact; and where any patient shall express a wish to receive the benefit of other advice than that he has been in the reception of, the Physician so chosen shall refrain from prescribing until the ordinary physician is present unless the patient in positive terms refuses to see him; under the penalty of five dollars.
>
> "Sect. 4: Resolved that no member of this Society shall call in the advice of a foreign Physician without proposing to the patient in the first instance some medical man belonging to this corporation under a fine of fifty dollars."

At the meeting of July 17, 1807, to avoid misunderstanding "with respect to its true intent and meaning," Section 4 was interpreted as follows: "that no foreign physician shall be called in consultation unless the patient interested shall refuse the advice of every member of this corporation."

Later records describe a number of instances where members were brought before the censors for breaches of ethics, malpractice, or offenses to the dignity of the profession and society. Settlements varied from summary expulsion to conciliation.

Nothing was said about the services of the Society as a scientific forum until the annual meeting of July 17, 1810, where the following insertion appears: "Resolved that it shall be expedient for a member annually on the anniversary meeting of this society to deliver an oration on the state of medical science." For the attitude of the Society toward medical science, we must turn again to the words of President Anderson in his speech of August 10, 1858, which is inscribed in full. He has the following to say: "In this respect I may refer to the preparations of extracts and sugar coated pills of the Messrs. Tilden as a more important discovery for the promotion and utility of true practical medicine than the discovery of the microscope and matters of apparently more scientific character."

An interesting sidelight on the state of medical science of one hundred years ago is revealed in the data concerning yellow fever. This disease was epidemic on Staten Island at frequent intervals almost up to the end of the last century. Whole families were wiped out. Doctors succumbed in the care of the afflicted, and people moved back and forward from the Island to the mainland to escape the scourge. Usually, it was laid to pollution of the air or the shore by incoming vessels. Finally, in 1858 the County Society felt itself in duty bound to take action. A committee was appointed to investigate the situation. Their conclusions were that the germs were carried in the clothing of the people who arrived on ships "freighted with yellow fever and by employes of the quarantine stations and hospitals who are allowed to come up on Saturday evenings and to circulate without hindrance among people of this island." The last paragraph reads as follows:

> "The iron scow which has been lying within two hundred feet of the beach for several weeks past, is allowed to burn her refuse, not only within sight, but also within smell of the residents along shore. Surely this gross carelessness has not failed to cooperate with the other circumstances mentioned as being instrumental in the causation of yellow fever. While your committee can never expect the island to be exempt from yellow fever so long as the quarantine occupies its present position, there is certainly an urgent necessity for protesting against these systematic efforts to scatter broadcast over it, the seeds of this terrible disease."

Strangely enough, there is no mention of the destruction of this so-called "pest house" by an angry mob the same year, 1858. Although three important wars were fought in the period covered by the first hundred years, the Society did not experience anything from them worthy of official notice. The only illusion even to the Civil War is an offer by the members to provide medical care for wounded men quartered in the quarantine station at Stapleton.

To the members of the Richmond County Medical Society at the beginning of the nineteenth century, a century and a half ago, honor, dignity, and ethics were the prime concern, far exceeding in importance the application of the art and science of medicine, the simple reason being that in those days there was no medical science. In spite of this, however, many of these men became considerable personages and wielded great influence both with their fellows and with the outer world. I would like to sketch for you two of these characters as portrayed by the minutes.

Dr. D. A. Edgar delivered his annual address of July, 1872, on the subject of ethics. He speaks of his fellow practitioners not as colleagues, or coworkers, but as "brothers." After covering with great detail the behavior pattern which ought to exist between physician and patient and between one physician and another, he reaches the climax in these words: "Would you glory in the downfall of your brother's practice? If you would, medical ethics are not for you." It is not difficult, even at this distance, to picture what manner of man he was. In those days a consultant was not a specialist selected because of particular knowledge in a certain subject. A consultant was often called in for moral support in a difficult situation, both men being handicapped by the ignorance of the times, and so we see him, impressive in dignity with the patient, meticulous in regard to the sensibilities of his professional counterpart. Dr. Edgar's contemporaries apparently appreciated these qualities in him since he served as president of the Society for sixteen consecutive years, a record far outstripping that of any other president. His speech is too long to be quoted here, but I would recommend it for reading.

The stature of the physician in public esteem is best shown in the life and work of Dr. Samuel R. Smith, after whom the Smith Infirmary, now the Staten Island Hospital, was named. Dr. Smith launched his practice in the year 1828, at the age of twenty-eight years. A severe epidemic of a "bilious remittent fever" was prevalent at the time, and Dr. Smith rapidly acquired a large following. After twenty-three years of labor, he died of an unspecified cause at the age of fifty-one. I quote from Dr. Anderson's description of the funeral: "Who that witnessed this funeral can ever forget the scene that there presented itself. The whole population followed the melancholy cortege, and responsive to the eloquent eulogium of the officiating clergyman a wail of woe ascended from the multitude, till it appeared as if some great catastrophy had deprived every parent of a child, every man of a brother." The speaker first disclaimed any pretense at rhetoric and then continued, "It were a pleasing duty had I a limners skill, to portray for your study the qualities whose exercise produced these results, but I must stop at the threshold of this temple as one who, while admiring the beauties of its architecture, feels himself totally inadequate to the task of describing its symmetrical columns, its chaste capitals, with their crowning entablatures." Not a bad effort for a modest amateur!

We can trace, therefore, the current of medical practice in Richmond County for nearly a century and a half. As it flows along, the environmental scene changes from decade to decade, sometimes even from month to month. But, in the midst of it, we can discern the fragile bark of human nature like a lead-lined canoe dragged along in singularly unperturbed equanimity. Frequently, it ships water from the rough and turbid stream, but it never goes down. The crew members bail it out, then, looking forward with tired but hopeful faces, carry on as before. I would like to present one of the common experiences in some detail, because it bears such an important lesson, not only for us, but for the whole world to learn, if it can.

Dr. B. was caring for a child who failed to make satisfactory progress. A consultation was arranged with Dr. F. Exactly what transpired is not recorded, but Dr. F., apparently by an ill-considered statement, left the impression with the family that the case had not been well handled. The child died. Suit was brought by the family against Dr. B. Dr. F. (the consultant) was subpoenaed to testify. Under questioning he stated that the remedy used by Dr. B. was somewhat antiquated and that if his remedy (the consultant's) had been used, the outcome might have been different. Dr. B. preferred charges against Dr. F. in the County Society. A thorough investigation of the case revealed the following three facts:

1. The child died of measles.
2. Dr. B's remedy was "tincture of castor."
3. Dr. F's remedy was chloroform.

"Ridiculous," you say, "to have all this trouble and ill will over a question of like stupidity." Well, only a few days ago, I saw such an argument in process of development over the problem of whether vitamin K or vitamin C is preferable in the control of pulmonary hemorrhage. The lead-lined bark of human nature sails on, unsinkable but still unmanageable, into the strange lands of the future.

In another sense the objects and purposes of the Richmond County Medical Society have been completely reversed since its organization. Then authority and power were conferred upon it by the law. Then, organized medicine, represented by the county societies, was the prime arbiter of medical policy and medical practice. Since then, sickness has become a matter of public concern. When the individual is sick, a part of the state is sick.

The concern of the public in regard to the people's health is a progressive development equal in value to the advances in medical science itself. But organized medicine now finds itself as one of a number of groups contending for control of the distribution of medical services. The other groups are the Federal government, the State government, the county government, the city government, industry, labor, and philanthropy. The outcome of this contest will determine whether the practitioner of the future is to be a free agent or a paid agent. Whenever organized medicine does a good job, its domain will not be invaded; when it fails, ground will inevitably be lost. We can only maintain our position by a constant alertness to and a constant satisfaction of the public need, and this alertness, this satisfaction, can only be achieved when our many committees of today assume and discharge their duties with the same promptness and the same devotion to duty as did the censors of 1806.

Chloral Hydrate: A Résumé

Expressing the opinion that chloral hydrate is one of the most universally useful drugs available to the physician, the author makes a spirited defense of an old drug which he believes has fallen into undeserved neglect. With no absolute contraindications to its use, advantages of chloral hydrate are enumerated as follows: it is inexpensive and readily available; it is safe and nontoxic; in most cases it produces sleep without objectionable side-effects or stimulation; erroneous or deliberate misuse by the patient is difficult; the patient can be aroused if necessary; addiction and tolerance are unimportant, and it is adaptable to various forms and preparations.

To the criticism that it is a gastrointestinal irritant, the writer replies that it can be given in capsule form. Among the more prominent indications, the author suggests (1) psychiatry, (2) surgical premedication in older patients, and (3) head injury cases. In psychiatric patients, the psychologic value of medication, particularly if it has a bitter taste, is often superior to the physiologic effect. It makes the patient feel that something concrete is being done for him and opens the way to his cooperation in psychotherapy. In this field, because of its short duration of action, it is useful in relieving anxiety in subjects receiving electroshock therapy on an outpatient basis. It is also useful in obtaining EEG sleep records.

—*Floy Jack Moore, M.D., West Virginia Medical Journal, October, 1953*

PHYSICIANS' HOME

The files of the Physicians' Home contain many appreciative letters from its guests, who now number 28, throughout the State of New York. They include doctors and doctors' widows. The following letter is from a guest, aged eighty-five, who came to our attention through a county society upstate. The Board of Directors of the Physicians' Home awarded this guest a monthly stipend, and the following letter was sent to him with his first check. His reply is as here noted.

My dear Doctor:

It gives me great pleasure to inform you that the Physicians' Home has accepted you as a guest and is herewith sending you a check, for your personal use, of $150 to be used as you see fit. This is for the month of October. We have postdated your guestship to October first, and hereafter you will receive a monthly check for the same amount within the first week of each month.

I cannot tell you what a happy pleasure it is for the Physicians' Home to be able to extend such a distinguished colleague this token of affection and respect. Your long career has been a distinguished one. We sincerely hope that you will appreciate our pleasure in being able to recognize your career with this token of respect.

Sincerely yours,
(*signed*) Beverly C. Smith, M.D.
President, Physicians' Home

December 10, 1953

Dr. Beverly C. Smith
63 East 84th Street
New York 28, New York

My dear Doctor Smith:

My sincere Christmas greetings to you and to every member of the organization from an old doctor who is unable to help himself and whom you have generously and fraternally accepted in the society.

I have before me your letter of October the 9th last. When I read it, it touched my heart deeply, almost to tears. It has been the most emotional moment of my long professional experience of hard work and continued misfortunes.

You have worded the letter with expressions of fraternal colleagueship. I have no jewel box in which I could save it. I am keeping it by my heart and will treasure it in my memory as long as I will live.

Please accept my best wishes for your health and happiness and my immense feelings of gratefulness for you and the society of which you are the benemeritous president.

My highest consideration and esteem for you, I am

Sincerely yours,
(Name Omitted)

The support of doctors and friends of the Physicians' Home has made it possible for the Home to help our colleagues through the years, and the Board of Directors feels that the above communications are of sufficient interest to pass on to the members of the Medical Society of the State of New York.

BEVERLY C. SMITH, M.D., *President*
Physicians' Home

Woman's Auxiliary

to the MEDICAL SOCIETY OF THE STATE OF NEW YORK

The Convention

MORE than 300 physicians' wives are expected to attend the 1954 Convention of the Woman's Auxiliary to the Medical Society of the State of New York to be held at the Hotel Statler in New York City from May 10 to 14, the same dates as the State Society's Annual Meeting. Delegates from the 46 county auxiliaries will take part in deliberations which will precede the adoption of policies designed to guide the activities of the more than 4,200 Auxiliary members throughout 1954–1955.

Although the Auxiliary does not concern itself with problems directly related to medical and hospital care, its members study every decision of the Society's House of Delegates very closely so that they will be prepared to contribute their services whenever requested for the implementation of policies adopted.

While the doctors are busy with medical problems, the Auxiliary is developing its own program. Outstanding features of each Auxiliary convention are the round table discussions on public relations, legislation, *Today's Health*, Blue Cross and Blue Shield, and program. Special programs are also devoted to methods of making county auxiliary meetings more interesting and attractive. Other programs of State-wide importance include nurse recruitment and scholarships, exhibit at the State Fair, the Health Poster Contest, civil defense, Physicians' Home, National Education Foundation, press and publicity, radio and TV, and health education. Details of special Auxiliary activities such as that in behalf of the Citizens' Health Education Campaign are also presented.

In each of these fields the Auxiliary has but one objective—to assist both the physician and his county society in demonstrating the profession's sustained interest in community affairs despite the heavy demands of a physician's practice. This is accomplished not by substituting but by supplementing the State and county society programs whenever and wherever possible.

A highlight of the 1953 Convention was the tribute to the Woman's Auxiliary made by Dr. Edward T. Wentworth, immediate past-president of the State Society. In his remarks while accepting the award from the American Heritage Foundation, he said, "The Auxiliary really should be the recipient." These words more than repaid each Auxiliary member for her work during the Foundation's "Get out the vote" campaign.

Auxiliary members planning to attend the 1954 Convention are looking forward to hearing discussions and reports on the growth of the Future Nurses Clubs, the instrument the Auxiliary is employing to acquaint hundreds of high school and teen-age girls with the need for nurses and the advantages of nursing as a career.

The 1954 Auxiliary Convention Committee will include 32 subcommittee chairmen and more than 150 members, each of whom extends a personal invitation to every physician's wife in New York State to join them during the day at the business sessions and in the evening for the social events. The complete program of the 1954 Convention will be published in the April 1 issue of the NEW YORK STATE JOURNAL OF MEDICINE.

MRS. COLGATE PHILLIPS, *Chairman*
Convention Committee

Regional Meetings on Veterans Care

More regional conferences on veterans medical care will be held during 1954 under the sponsorship of the AMA's Council on Medical Service through its Committee on Federal Medical Services. These meetings have a fourfold purpose: (1) develop a working liaison with state society committees concerned with veterans' problems, (2) acquaint an increasing number of physicians with AMA policy and the facts regarding veterans care, (3) learn the local situation regarding this policy in various states, and (4) discuss ways of carrying out the instructions of the House of Delegates which adopted a firm stand on veterans medical care at its meeting last June.—*A.M.A. News Notes, January, 1954*

NECROLOGY

Alexandre Bruno, M.D., of New York City, died on September 3, 1953, at the age of sixty-six. Dr. Bruno graduated from Columbia University College of Physicians and Surgeons in 1913 and did postgraduate work at the University of Paris in 1925. He was formerly an attending surgeon and gynecologist at the American Hospital of Paris and held other posts in several French hospitals. From 1918 to 1925 he served as associate director of the Rockefeller Foundation's work in France.

Dr. Bruno was a Fellow of the American College of Surgeons and belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Robert Dietrich Degenhardt, M.D., of Pelham, died on January 30 of a heart attack while on vacation in Sarasota, Florida. He was fifty years old. Dr. Degenhardt graduated from New York University and Bellevue Hospital Medical School in 1927. He was an associate attending surgeon at Fordham Hospital and a member of the Bronx Surgical Society. He also belonged to the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Frederick George Eaton, M.D., of Saratoga, sixty years old, died on January 21 in Saratoga Hospital of a heart ailment. Dr. Eaton was a former coroner of Saratoga County and had practiced medicine in Saratoga Springs for thirty-five years. He graduated from Albany Medical College in 1915 and was a Fellow of the American College of Surgeons. He was senior attending surgeon at Saratoga Hospital and consulting surgeon at Benedict Memorial and Corinth Hospitals. In 1917 Dr. Eaton served as a captain in the U.S. Army Medical Corps overseas. He was a member of the Saratoga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harry B. Feuerstein, M.D., of St. Albans, died on December 1, 1953, at the age of sixty-four. Dr. Feuerstein graduated from New York University and Bellevue Hospital Medical School in 1917 and was an Associate Fellow of the American College of Cardiologists. He served as assistant attending physician at Bellevue Hospital and associate attending physician at University Hospital. He belonged to the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Albert Frey, M.D., of Buffalo, died on January 8 at the age of seventy-four. He graduated from the University of Buffalo School of Medicine in 1902 and was a consulting surgeon at Deaconess Hospital, where he once acted as president of the board. Dr. Frey was a member of the Buffalo Academy of Medicine, the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harrie Van Ness Frink, M.D., of Richfield Springs, died on February 3 at the age of seventy-four. Dr. Frink graduated from the University of Buffalo School of Medicine in 1904. He was an associate attending physician at Faxton Hospital in Utica and had been an Otsego County coroner continuously for the last forty-nine years. He also acted as village, township, and school health officer. In 1949 he became president of the Otsego County Medical Society. He was a member also of the Medical Society of the State of New York and the American Medical Association.

Albert Philip, M.D., of New York City, died on January 26 at the age of sixty-six. Dr. Philip received his medical degree from the University of Budapest in 1911 and was a Diplomate of the American Board of Obstetrics and Gynecology. He was a founder and past president of the American-Hungarian Medical Association. Dr. Philip was a visiting gynecologist at the Woman's House of Detention. He belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Max Rosenberg, M.D., of Long Island City, died on November 16, 1953, at the age of sixty. Dr. Rosenberg received his medical degree from the University of Wurzburg in 1921. He was an assistant attending physician at City Hospital and was a member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Sutherland Eric Simpson, M.D., fifty-five years old, of Watertown, died at his home on January 8 following a cerebral hemorrhage. Dr. Simpson graduated from Harvard University Medical School in 1925 and was a Fellow of the American College of Chest Physicians. He was medical director of Jefferson County Sanitorium and attending physician at Mercy Hospital and the House of the Good Samaritan. He was a past president of the Jefferson County Medical Society and a member of the Medical Society of the State of New York and the American Medical Association.

Solomon Wiener, M.D., seventy-one years old, died in New York City on November 1, 1953. Dr. Wiener graduated from Columbia University College of Physicians and Surgeons in 1904 and interned at Mount Sinai Hospital. He was a Fellow of the American College of Surgeons and a member of the New York Academy of Medicine, the New York Obstetrical Society, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

BOOKS RECEIVED

(*The following books were received during the month of January, 1954*)

Science and Man's Behavior. The Contribution of Phylobiology. By Trigant Burrow, M.D. Including the complete text of: *The Neurosis of Man.* Edited by William E. Galt, Ph.D. Octavo of 564 pages, illustrated. New York, Philosophical Library, 1953. Cloth, $6.00.

The Integration of Behavior. Volume II. The Integrative Process in Dreams. By Thomas M. French, M.D. Octavo of 367 pages, illustrated. Chicago, University of Chicago Press, 1954. Cloth, $6.50.

The Allergic Patient and His World. Including Sources of Allergens. By Florence Eastty Sammis, M.D. With Pollen Charts, Maps and Photographs by Oren C. Durham. Octavo of 156 pages, illustrated. Springfield, Ill., Charles C Thomas, 1953. Cloth, $4.75. (#157 American Lecture Series.)

Doctor at Sea. By Richard Gordon. Octavo of 191 pages. New York, Harcourt, Brace & Co., 1953, 1954. Cloth, $3.00.

The Medical Staff in the Hospital. By Thomas Ritchie Ponton, M.D. Second edition. Revised by Malcolm Thomas MacEachern, M.D. Octavo of 373 pages, illustrated. Chicago, Physician's Record Co., 1953. Cloth, $7.25.

Epilepsy and the Functional Anatomy of the Human Brain. By Wilder Penfield, M.D., and Herbert Jasper, M.D. Chapter 14 by Francis McNaughton, M.D. Octavo of 896 pages, illustrated. Boston, Little, Brown & Co., 1954. Cloth, $16.

Kinsey's Myth of Female Sexuality. The Medical Facts. By Edmund Bergler, M.D., and William S. Kroger, M.D. Octavo of 200 pages. New York, Grune & Stratton, 1954. Cloth, $3.75.

School Health Services. A Report of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association with the cooperation of contributors and consultants. By Charles C. Wilson, M.D. Octavo of 486 pages, illustrated. Washington, National Education Association of the United States and Chicago, American Medical Association, 1953. Cloth, $5.00.

The Medical Clinics of North America. Chicago Number. January, 1954. Octavo. Illustrated. Philadelphia, W. B. Saunders Company, 1954. Published bimonthly (six numbers a year). Cloth, $18 net; Paper, $15 net.

Michael Servetus. A Translation of His Geographical, Medical and Astrological Writings with Introductions and Notes. By Charles Donald O'Malley, Ph.D. Octavo of 208 pages, illustrated. Philadelphia, American Philosophical Society, 1953. Cloth, $3.00. (Vol. #34 of the Memoirs of the American Philosophical Society).

Psychological Factors in the Care of Patients with Multiple Sclerosis. For Use of Physicians. By M. R. Harrower, Ph.D., and Rosalind Herrmann, B.A. Quarto of 32 pages, illustrated. New York, National Multiple Sclerosis Society, 1953.

The Pre-Adolescent Exceptional Child. Proceedings of the 35th Conference of the Child Research Clinic of The Woods Schools. Held in the Rose Garden Room of the Bellevue-Stratford Hotel, Philadelphia, Saturday, May 23, 1953, from two to twelve in the morning and from two to four in the afternoon. Octavo of 66 pages. Langhorne, Pa., The Woods Schools, 1953.

The First 5 Years. Quarto of 62 pages, illustrated. New York, New York University-Bellevue Medical Center, n.d.

Global Epidemiology. A Geography of Disease and Sanitation. By Brig. Gen. James Stevens Simmons, U.S.A. (Ret.), Col. Tom F. Whayne, M.C., U.S.A., Gaylord W. Anderson, M.D., and Harold Maclachlan Horack, M.D. Associate Author, Ruth Alida Thomas, M.P.H., and Collaborators. Volume Three. The Near and Middle East. Quarto of 357 pages, illustrated. Philadelphia, J. B. Lippincott Co., 1954. Cloth, $12.

Acute Pulmonary Edema. By Mark D. Altschule, M.D. Octavo of 68 pages. New York, Grune & Stratton, 1954. Cloth, $3.50. (Modern Medical Monographs #10.)

Feel Fit as a Fiddle After 40. By Don Herold. Sextodecimo of 36 pages, illustrated. Johnstown, N. Y., Charles B. Knox Gelatine Co., n.d. Paper, 25 cents.

The City College, Inauguration of Buell G. Gallagher, the Seventh President, the Great Hall of the College, 139 Street at Convent Avenue, Thursday, February Nineteenth, 1953. Octavo of 63 pages, illustrated. New York, The College of the City of New York, n.d.

Wise Saws & Modern Instances. By Lionel Goitein, M.D. Sextodecimo, n.p. New York, Estelle Press, n.d.

Salt and the Heart. By Edward T. Yorke, M.D. Octavo of 83 pages. Linden, N.J., Drapkin Books, 1953. Cloth, $3.45.

The Psychiatrist, His Training and Development. Report of the 1952 Conference on Psychiatric Education held at Cornell University, Ithaca, New York, June 19–25, 1952. Organized and conducted by the American Psychiatric Association and the Association of American Medical Colleges. John C. Whitehorn, M.D., Chairman, Editorial Board. Octavo of 214 pages, illustrated. Washington, D.C., American Psychiatric Association, 1953. Cloth.

Telepathy. By John V. Kelly. Octavo of 20 pages. Box 1935, Fort Benning, Georgia, John V. Kelly, 1953. Paper, $1.00.

Manual of Psychological Medicine. For Practitioners and Students. By A. F. Tredgold, M.D., and R. F. Tredgold, M.D. Third edition. Octavo of 328 pages London, Baillière, Tindall and Cox (Baltimore, Williams & Wilkins Co.), 1953. Cloth, $7.00.

Medical Society of the State of New York

ANNUAL MEETING

May 10 to 14, 1954

Hotel Statler *New York City*

MEDICAL NEWS

EIGHTH DISTRICT BRANCH CITED FOR ACTIVITY

Unique in the entire State for its active organization, the Eighth District Branch of the Medical Society of the State of New York recently held a winter Advisory Council session. Present for the evening conference were presidents and secretaries from the eight component county medical societies, the central conference committee on workmen's compensation problems and the Planning Committee for Medical Policies, plus Western New York physicians active in the Council of the State Medical Society.

Now in its seventh year, the Advisory Council enjoys a high percentage of attendance and meets three times per year in addition to the annual convening of the Branch. Legislation, Blue Shield problems, and specific subjects introduced by component county medical societies are usually on the agenda. Physicians attending feel that the Advisory Council gatherings offer a good opportunity to maintain liaison with nearby county medical societies, as well as an opportunity to keep abreast of activity in the State Medical Society by means of discussion and question periods.

In the above photograph, taken at the Hotel Statler, Buffalo, Dr. Sydney L. McLouth, Corfu, Branch president, is seated center at the head of the table with Dr. John C. Brady, Buffalo, at his right, and Joseph M. Kerrigan, Buffalo, executive director of the Western New York Medical Plan, at his left. On Mr. Kerrigan's side of the table, from head to foot, are seated: Dr. Guy S. Philbrick, Niagara Falls; Mr. Charles J. Sellers, Sr., Buffalo; Dr. Arden H. Snyder, Holley; Dr. James W. Taft, Little Valley; Dr. William R. Lewis, Niagara Falls; Dr. John C. Kinzly, North Tonawanda; Dr. Benjamin S. Custer, Fredonia; Dr. Laurence C. Older, Cuba; Dr. Donald D. Trantum, Jamestown, and Harold P. Jarvis, Buffalo, executive secretary of the Branch. On Dr. Brady's side of the table, seated from head to foot, are: Dr. Joseph S. Diasio, Oakfield; A. Carl Messinger, New York City, State Medical Society; Dr. Antonio F. Bellanca, Buffalo, president-elect, Erie County Medical Society; Dr. Elmer T. McGroder, Buffalo, first vice-president, Eighth District Branch; Dr. Herbert H. Bauckus, Buffalo; Dr. John W. Karr, Jamestown; Dr. Melvin S. Martin, Warsaw; Charles J. Sellers, Jr., and Joseph J. Guariglia, Buffalo, Counsel to the Branch.

New York Heart Assembly—First Scientific Session—Heart Assembly delegates from all parts of the State will attend the first scientific section at the annual session of the New York Heart Assembly in Syracuse, March 19 and 20. Doctors taking part in the program will be: Dr. Maurice A. Donovan, Schenectady, who will give the assembly presidential report at the opening session on Friday at 10:15 A.M.; Dr. Norman Plummer, medical director, New York Telephone Company, and chairman, Cardiac-In-Industry Committee, New York Heart Association, who will speak on "Cardiac-In-Industry–Programs and Trends," and Mr. Blake Cabot, research investigator, American Heart Association, who will speak on "Telling The Research Story."

At the afternoon session, an assembly group discussion conducted by committee chairmen will be held, as follows: Cardiovascular Clinics," Dr. I. Jay Brightman, Albany; "Rehabilitation and Occupational Guidance," Dr. Rufus B. Crain, Rochester; "Professional and Public Education," Dr. Willard H. Willis, Utica; "Heart Program Development," Dr. Dana A. Weeks, Plattsburg. The reports of the group discussions will be presented at the Saturday morning session.

The Heart Assembly dinner will be held in the ballroom at 7 P.M. Friday and Dr. Donovan will preside. Dr. Howard B. Sprague, Boston, will be the guest speaker.

[Continued on page 710]

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[Continued from page 708]

Saturday, following the group discussion reports, the business session with the nominating committee report and new business will be held at 9 A.M.

The first scientific session of the New York Heart Assembly will begin on Saturday at 10:30 A.M. Dr. Richard H. Lyons, professor of medicine, State University of New York Upstate Medical Center, Syracuse, will preside. "Progress in the Control of Streptococcal Infections," will be presented by Dr. Burtis B. Breese, assistant pediatrician, Strong Memorial Hospital, and instructor in pediatrics, University of Rochester School of Medicine; Dr. George James, assistant commissioner, New York State Health Department, will discuss "Progress of the Heart Research Program of the New York State Health Department," with Dr. John F. Filippone, consulting cardiologist to the center and associate professor of medicine, Albany Medical College, and "Guidance and Counseling of Cardiac Patients" will be presented by Dr. Edward Weiss, Philadelphia, professor of clinical medicine, Temple University School of Medicine.

A panel on hypertension with Dr. Richard T. Beebe, Albany, professor of medicine, Albany Medical College, presiding, will begin at 2:00 P.M. Dr. Robert A. Taylor, Cleveland, staff physician of the Cleveland Clinic and instructor in medicine, University of Indiana School of Medicine, will present "Medical Management"; Dr. George P. Whitelaw, associate of Dr. Reginald H. Smithwick, Smithwick Foundation, Boston, "Surgical Aspects of Hypertension," and Dr. Arthur M. Master, New York City, associate in medicine and cardiology, and chief, Cardiological Laboratory and Clinics, Mount Sinai Hospital, New York City, will talk on "The Range of Normal Blood Pressure and New Definitions of Hypertension."

Comprehensive Course for Pediatricians, General Practitioners, and Health Officers—The Memorial Center for Cancer and Allied Diseases Pediatric Service announces a comprehensive three-day course for pediatricians, general practitioners, and health officers, on April 28, 29, and 30. Current developments and established methods in diagnosis, differential diagnosis, and management of benign and malignant tumors, Hodgkin's disease, leukemia, and reticuloendotheliosis in childhood will be included. The course will contain demonstrations, examinations of children in pediatric, surgical, chemotherapy, radiotherapy, and clinics. Ward rounds and seminars under direction of the staffs of Memorial Hospital and Sloan-Kettering Institute will be held.

For further information, write to: Director, Pediatric Service, Memorial Center, 444 East 68th Street, New York City 21.

Seventh Annual Postgraduate Course—"Diseases of the Chest," the seventh annual postgraduate course sponsored by the Council on Postgraduate Medical Education for the American College of Chest Physicians and the Laennec Society of Philadelphia, will be held at the Bellevue-Stratford Hotel, Philadelphia, Pennsylvania, March 15 to 19, 1954.

Among the speakers will be Dr. Paul A. Bunn, associate professor of medicine, New York State University School of Medicine at Syracuse, who will present a paper on "Fundamental Considerations in the Chemotherapy of Acute Pneumonias."

The twentieth annual meeting of the American College of Chest Physicians will be held in San Francisco, California, at the Fairmont Hotel, June 17 to 20.

New York University Program—The New York University College of Medicine, Department of Radiology, will present "The Practical Clinical Application of Radioisotopes in Medical Diagnosis and Treatment," on March 1 at 8:30 P.M. in the main lecture hall at 477 First Avenue. The program will consist of: "The Use of Radioisotopes in the Study of Blood Volume," Dr. Solomon A. Berson, assistant director, Radioisotope Unit, Veterans Administration Hospital, Bronx; "Radioactive Iodine in the Diagnosis of Thyroid Disorders," Dr. Solomon Silver, associate physician, Mount Sinai Hospital; "Radioactive Phosphorus in Leukemia, Polycythemia Vera and Superficial Skin Lesions and Colloidal Radioactive Phosphorus for Interstitial Use in Cancer," Dr. Bernard Roswit, director of radiotherapy, Veterans Administration Hospital, Bronx, with a discussion by Dr. Nathan Rosenthal, consulting hematologist, Mount Sinai Hospital, and "The Use of Radioactive Gold in Malignant Peritoneal and Pleural Effusions," Dr. Sidney Rubenfeld, professor of gynecology, New York University College of Medicine, with discussion by Dr. Maxwell H. Poppel, professor and chairman, Department of Radiology, New York University College of Medicine.

Arthritis Postgraduate Course—A postgraduate course in arthritis is being held at the University of Buffalo School of Medicine, March 3, 1954. The recent advances in the therapy of arthritis, including evaluation of the newer drugs and the use of physical therapeutic technics, are emphasized. Case presentations form the basis for discussion of the pathogenesis, differential diagnosis, and management of the various types of arthritis. Instruction is in small groups in order to permit practical clinical teaching oriented to the problems commonly met in practice.

The sessions, which will be held at the Buffalo General Hospital in the South Building Lecture Hall, will include: "Action of Antirheumatic Drugs," by Dr. Bernard M. Norcross; "Gout," by Dr. John H. Talbott; "Rheumatoid Arthritis," by Dr. L. Maxwell Lockie; "Rheumatoid Spondylitis," Dr. Harold M. Robins; "Osteoarthritis," Dr. Clyde W. George, and "Collagen Disease," by Dr. Salvatore R. LaTona.

At the arthritis clinic, clinical instruction will be given in small groups, and each physician will have the opportunity to discuss diagnosis and management of individual arthritic patients with his instructor. There will also be a demonstration of the use of physical therapy in arthritis.

The fee for the course is $15, and checks should be

[Continued on page 712]

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(1) Lawrence, E. D., W. J. Surg., Ob. & Gyn., 58, 236-7, 1950.

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[Continued from page 710]

made payable to the University of Buffalo and sent with the registration form to Dr. Milton Terris, assistant dean for postgraduate education, University of Buffalo School of Medicine, 3435 Main Street, Buffalo 14, New York.

Symposium on Problems of Gerontology—The Johns Hopkins University School of Hygiene and Public Health and the National Vitamin Foundation are presenting a symposium on "Problems of Gerontology," on Tuesday, March 2, 1954, at the Biltmore Hotel, New York City. Held in conjunction with the ninth annual meeting of the National Vitamin Foundation, the symposium will start at 9 A.M. in the ballroom for the morning session and 1:30 P.M. for the afternoon session.

Among the doctors presenting papers will be Dr. Henry A. Rafsky, Geriatric Institute and Home and Hospital of the Daughters of Jacob, New York City, who will discuss "Special Nutritional Problems of the Aged." It is requested that all persons attending the symposium register. Proceedings will be published and available through the National Vitamin Foundation, Incorporated, 15 East 58th Street, New York City 22. A registration fee will not be charged.

Meetings—Past

Eastern New York Eye, Ear, Nose and Throat Association

The regular meeting of the Eastern New York Eye, Ear, Nose and Throat Association was held at the Mohawk Club, Schenectady, January 7, 1954. Dr. William Morrison, New York City, discussed "What's New or Nearly New in Otolaryngology."

Geneva Academy of General Practice

Dr. Milton Helpern, Deputy Chief Medical Examiner, New York City, and assistant professor of forensic medicine, New York University College of Medicine, was the guest speaker at a meeting of the Geneva Academy of General Practice on January 18. Dr. Helpern spoke on "The Role of the Medical Examiner in General Practice."

Jefferson County Medical Society

The January meeting of the Jefferson County Medical Society was held at the Black River Valley Club on January 19. Dr. Harold Bonner, director, Rochester Clinic for Alcoholism, spoke on "Alcoholism as a Metabolic and Endocrine Disease."

Chemung County Chapter of the Academy of General Practice

A meeting of the Chemung County Chapter of the Academy of General Practice was held on January 20 at the Mark Twain Hotel in Elmira. Dr. Leon L. Griggs, clinical professor of medicine, State University of New York College of Medicine at Syracuse, spoke on "Common Diseases of the Skin."

Richmond County Medical Society

Dr. Martin M. Fisher, cochief, Vascular Clinic, associate physician in medicine, Kings County Hospital, and consultant in vascular diseases, Seaview Hospital, Staten Island, spoke on "Recent Advances in Peripheral Vascular Disease," at the January 20 meeting of the Richmond County Medical Society.

Suffolk County Medical Society

Dr. Jere W. Lord, Jr., professor of clinical surgery, New York University Post-Graduate Medical School, discussed "Acute Arterial Emergencies" at the meeting of the Suffolk County Medical Society on January 27. The meeting was held at the Central Islip State Hospital.

Nassau Pediatric Society

Dr. Sidney Carter, Neurological Institute, Columbia-Presbyterian Medical Center, spoke on "Management of Convulsive Disorders in Childhood" at the February 8 meeting of the Nassau Pediatric Society.

"Use of ACTH and Adrenal Steroids in Pediatrics" was the subject discussed by Dr. Harold Harrison, associate professor, Johns Hopkins University, and Chief of Pediatrics, Baltimore City Hospital, at the December 14 meeting of the Society.

Schenectady County Medical Society

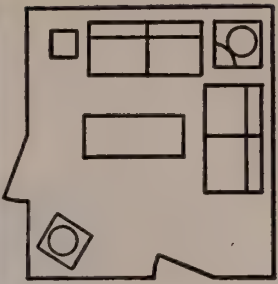
The regular meeting of the Medical Society of the County of Schenectady was held at the Mohawk Golf Club on February 2. Dr. Samuel F. Marshall, senior attending surgeon, Lahey Clinic, Boston, Massachusetts, spoke on "The Indications for Surgery of the Gallbladder and Its Complications."

On January 13, a special meeting of the Society was held at the Sunnyview Auditorium. At this time, Mr. Wever and Mr. Stoddard, representatives of Mutual Benefit Health and Accident Association of Omaha, Nebraska, spoke on the contract which was officially endorsed by the Fourth District Branch of the Medical Society of the State of New York.

The Society of Medical Jurisprudence

"The Determination of Alcoholic Intoxication, with Special Reference to the Drunken Automobile Driver," was discussed by Dr. A. W. Freireich, associate clinical professor of medicine, New York University Post-Graduate Medical School, associate visiting physician, Bellevue Hospital, associate director of medicine and toxicologist, office of chief medical examiner, Nassau County, at the

[Continued on page 714]



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1. Buxton, C. L., and Vann, F. H.: New England J. Med. 236: 536, 1948.
2. Cushney, A. R.: Textbook of Pharmacology and Therapeutics, ed. 10, Philadelphia, Lea & Febiger, 1943, pp. 436-437.

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[Continued from page 712]

February 8 meeting of the Society of Medical Jurisprudence. The meeting was held at the New York Academy of Medicine Building.

Ontario County Medical Society

A meeting of the Ontario County Medical Society was held on February 9 at the Canandaigua Veterans Hospital. Dr. Nolan L. Kaltreider, assistant professor of medicine, Strong Memorial Hospital and University of Rochester Medical School, spoke on "Fibrosis and Emphysema: Causes, Differentiation, Management."

Chemung County Chapter of Academy of General Practice

Dr. Ferdinand J. Schoeneck, professor of obstetrics, State University of New York College of Medicine at Syracuse, presented a paper on "Gynecology in General Practice," to the Chemung County Chapter of the Academy of General Practice on February 17. The meeting was held in Elmira.

Meetings—Future

New York Cancer Society

A symposium on the "Recent Experiences in the Higher Energy Irradiations in the Treatment of Cancer" will be held at the New York Academy of Medicine on Tuesday, March 2, 1954 at 8:30 P.M. Dr. Hugh F. Hare, Los Angeles Tumor Institute, Los Angeles, California, will speak on "Supervoltage Radiation in the Treatment of Cancer"; Dr. James J. Nickson, Memorial Cancer Center, New York City, "Preliminary Observations with 22 MEV Radiation in the Treatment of Cancer," and Dr. Jacob R. Freid, Montefiore Hospital, New York City, "Experiences with Cobalt 60 Beam Teletherapy Unit in the Treatment of Cancer." All physicians and medical students are cordially invited to attend.

Chronic Disease Week

Chronic disease week of the Jewish Sanitarium and Hospital for Chronic Diseases will be held during the week of March 8 to March 12. It will be devoted to a postgraduate course on chronic diseases of the musculoskeletal system. There will be daily teaching clinics, presentations, and panel discussions which will give particular emphasis to recent advances in clinical and laboratory diagnosis, therapy, and rehabilitation.

The opening session will be held on March 8 at 8:30 P.M. in the auditorium of the Freeman Pavilion. At this time, the guest speakers will be Dr. Benjamin Kramer, chief pediatrician, Brooklyn Jewish Hospital, and professor of clinical pediatrics, State University of New York, who will talk on "Problems of Bone Formation and Resorption," and Dr. Edward C. Reifenstein, Jr., director of division of biological and therapeutic research, Schering Corporation who will discuss "Bones and Hormones."

Sectional Meeting of the American College of Surgeons

The sectional meeting of the American College of Surgeons, at which important instructive sessions in general surgery and many surgical specialties will be offered, will be held at the Mount Royal Hotel, Montreal, Quebec, March 31 to April 2.

Among the New York State doctors participating will be: general surgery, Wednesday, March 31—Dr. James M. Winfield, New York City; April 1—Drs. Thomas W. Stevenson, Jr., and Hayes E. Martin, New York City; April 2—Dr. Harold D. Harvey.

Further information on this meeting may be obtained by writing to Dr. H. Prather Saunders, associate director, American College of Surgeons, 40 East Erie Street, Chicago 11, Illinois.

International Academy of Proctology

The sixth annual convention of the International Academy of Proctology will be held in Chicago, Illinois, at the Palmer House, April 8, 9, 10, and 11, 1954. A motion picture seminar of proctologic surgery including office technics will be held on April 11.

Much of the program has been planned to answer the questions of the general practitioner as well as the gastroenterologist and proctologist since they too are confronted with daily proctologic problems.

All physicians interested in proctology are invited to attend the annual meeting. An attendance fee is not required. Programs will be made available by writing to: Executive office of the International Academy of Proctology, 43-55 Kissena Boulevard, Flushing, New York.

American Goiter Association

The 1954 meeting of the American Goiter Association will be held at the Somerset Hotel, Boston, Massachusetts, April 29, 30, and May 1. The program will include papers and discussions dealing with the physiology and diseases of the thyroid gland.

New York State Dietetic Association

The twenty-third annual meeting of the New York State Dietetic Association will be held at the Hotel Ten Eyck, Albany, April 29 and 30, 1954.

Alumni Day

The annual alumni day of the State University College of Medicine at New York City will be held on May 1. There will be a scientific session at Polhemus Clinical Hall in the morning, and luncheon will be served in the nurses' dining room at the Long Island College Hospital. A dinner dance, for the benefit of the research, scholarship, and student loan fund, will be held at night at the Hotel Granada, 268 Ashland Place, Brooklyn, at 7 P.M.

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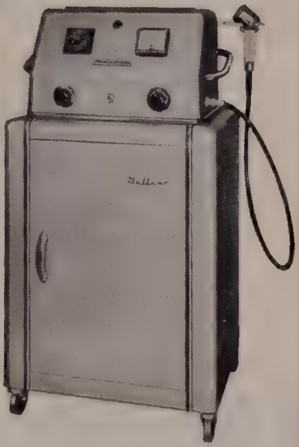

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1. McLester, J. S., and Darby, W. J.: Nutrition and Diet in Health and Disease, ed. 6, Philadelphia, W. B. Saunders Company, 1952, pp. 287-299.

2. Pollack, H., and Halpern, S. L.: Therapeutic Nutrition. Prepared with Collaboration of the Committee on Therapeutic Nutrition, Food and Nutrition Board, National Research Council, Publication 234, 1952, p. 56.

3. Cecil, R. L., and Loeb, R. F.: A Textbook of Medicine, ed. 8, Philadelphia, W. B. Saunders Company, 1951, p. 634.

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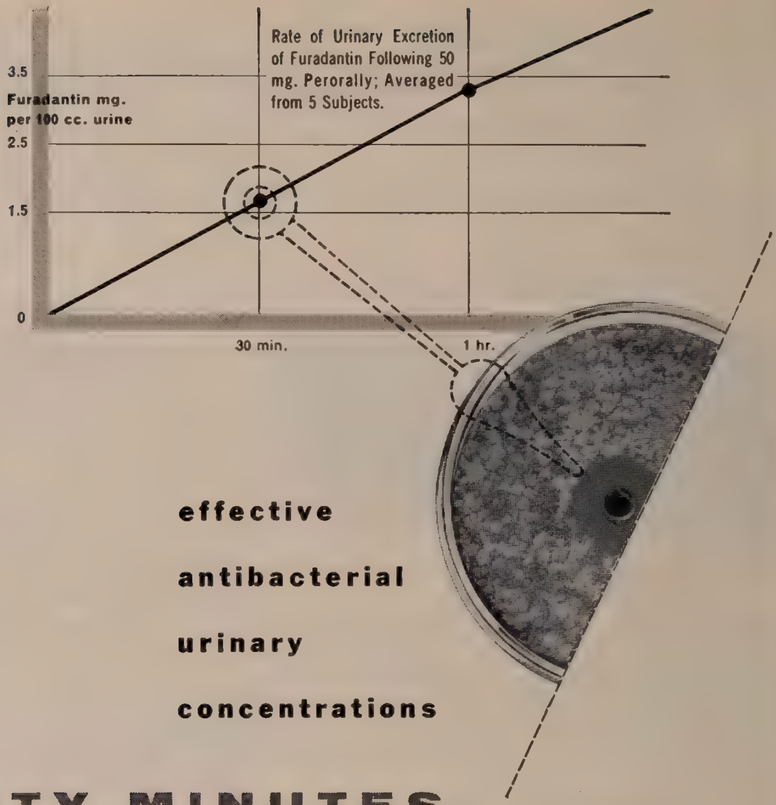

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1. SIMON, S. W.: ANN. ALLERGY 11:218, 1953. 2. KESTEN, B. M.: ANN. ALLERGY 6:408, 1948. 3. LOEW, E. R.: MED. CLIN. N. AM. 34:351, 1950.

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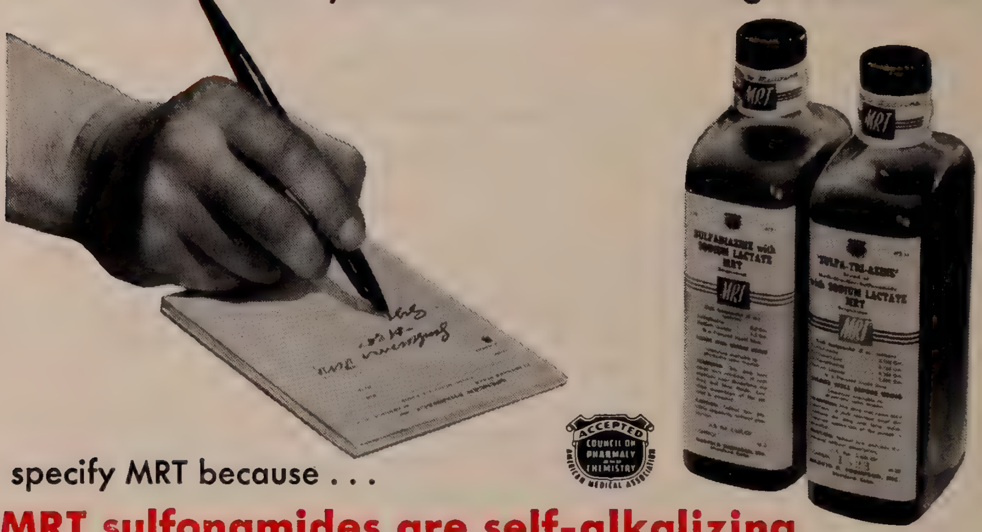
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(1) Lehr, David: Antibiotics & Chemotherapy, 3:71, 1953.

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1. Blotner, H., and Marble, A.: New England J. Med. *245*:567 (Oct. 11) 1951.
2. Steine, L.: GP *8*:45 (July) 1953.

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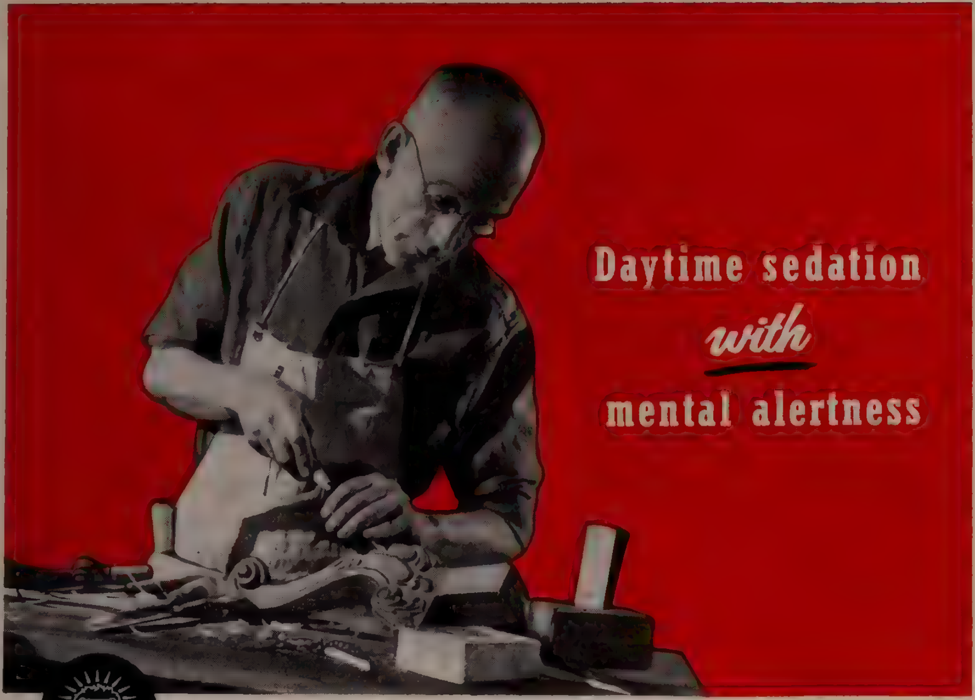

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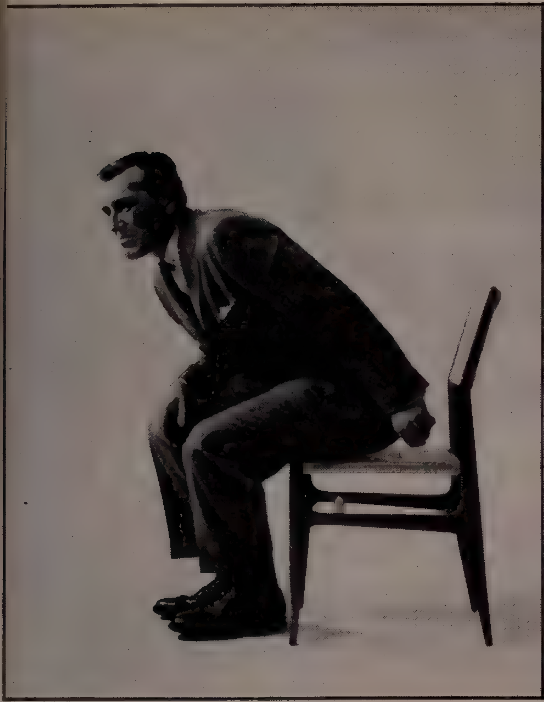

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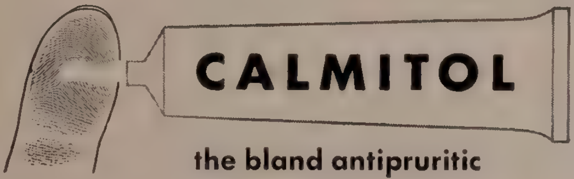

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1. Lubowe, I. I.: New York State J. Med. 50:1743, 1950.

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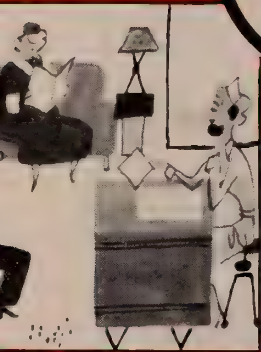

HYPERTENSIVE DISEASE, widespread as it is today, cannot be defined as a discreet entity which responds universally to the administration of a single drug. It is a complex and dynamic disease process for which—in its several stages [1,2,3,4]—no one drug will suffice or prove optimally effective.

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Ease of dosage adjustment makes patient supervision less cumbersome and more secure.

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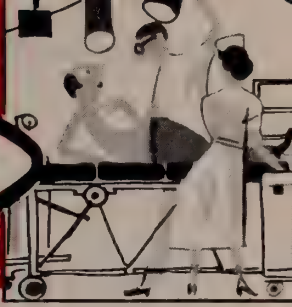

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Rauwiloid produces:

- Dependable, gradual, temperate lowering of blood pressure.
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Apparent synergistic action of the combined drugs results in full hypotensive effects of Veriloid in well tolerated dosage.[6,8]

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When the patient's status warrants risking treatment by ganglionic blockade, addition of Rauwiloid's tranquilizing effect and gentle peristalsis stimulating action reduce erratic response inherent in hexamethonium therapy.[9,10] Symptoms rapidly yield and tachycardia is relieved by mild bradycardic action of Rauwiloid.

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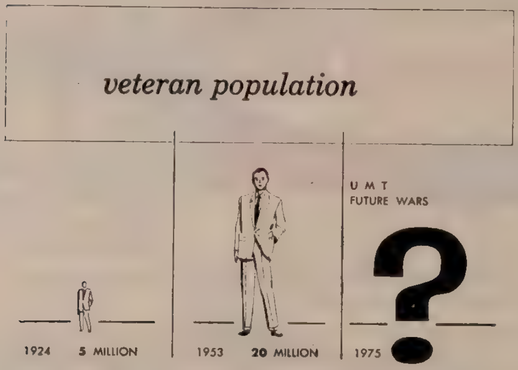
In Viewing the VA Medical Program . . .



The U. S. veteran population now includes about 40% of all adult males. Under existing legislation, the federal government is obliged to provide "free" medical care for many of these veterans, if they request it. The medical profession questions the soundness of providing medical care at federal expense to veterans with non-service-connected disabilities. It is likely that by 1975 the U. S. will truly be a "nation of veterans." If the VA medical program continues to accept responsibility for the care of veterans with service-connected and non-service-connected disabilities alike it is difficult to see how a complete federal health program can be avoided.

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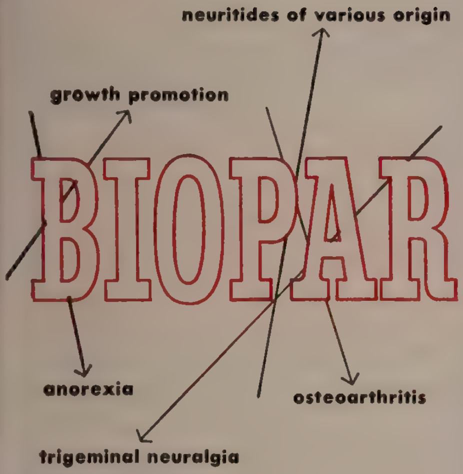
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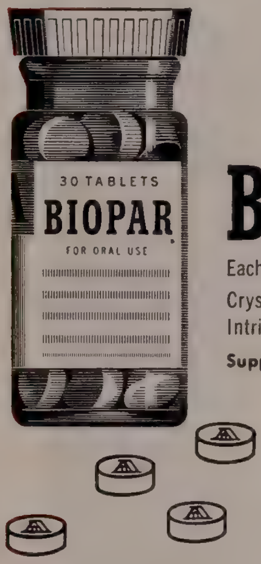
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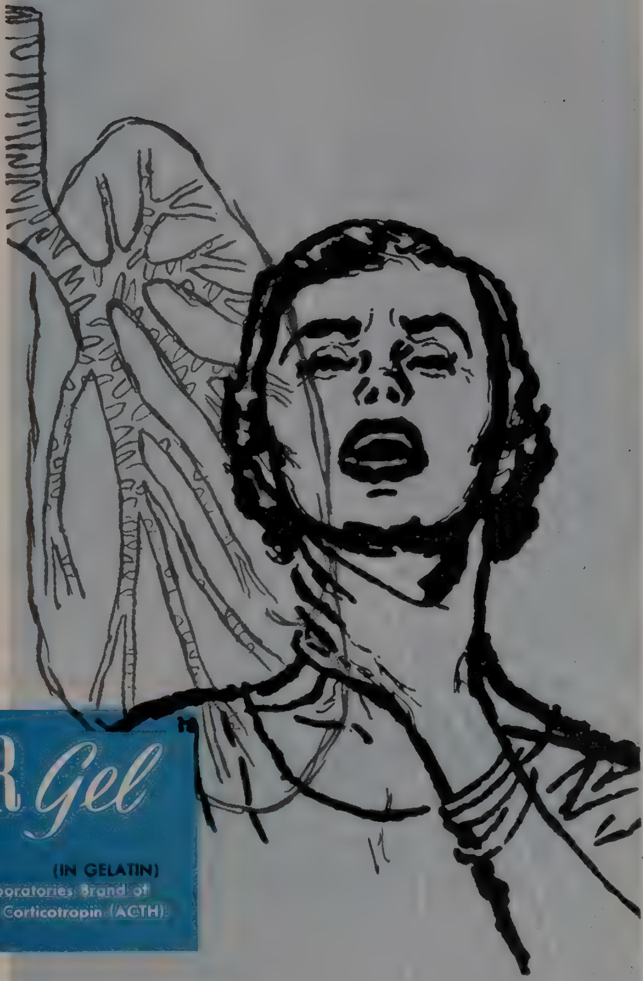

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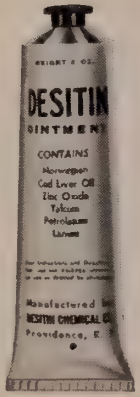

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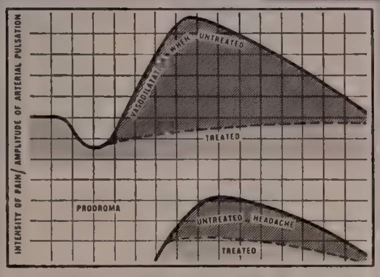

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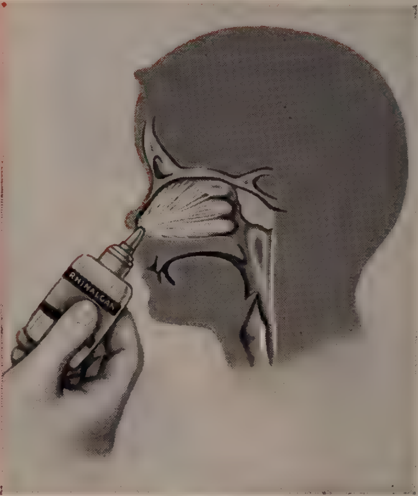

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*Glazebrook, A. J.: Brit. M. J., 2:1328 (Dec. 20) 1952.

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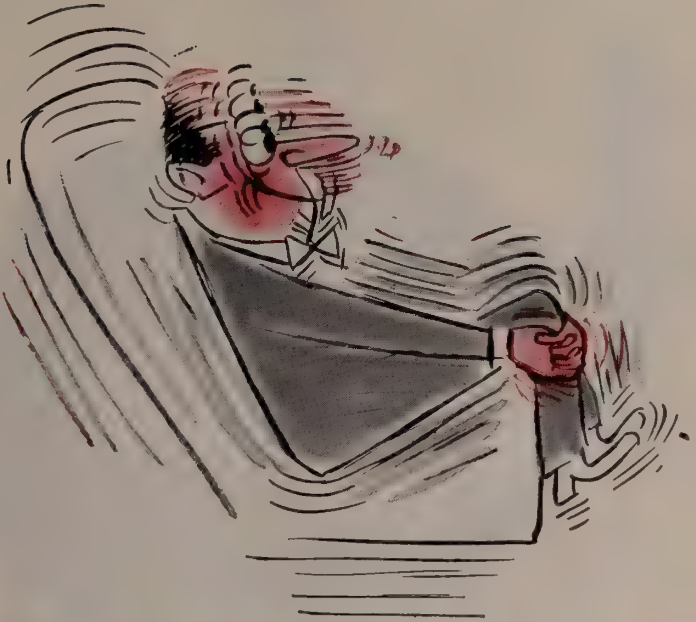

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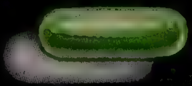

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1. Krantz, J.C. & Carr, C.J.: Pharmacological Principles of Medical Practice, Williams & Wilkins Co., Baltimore, Md., 1951.

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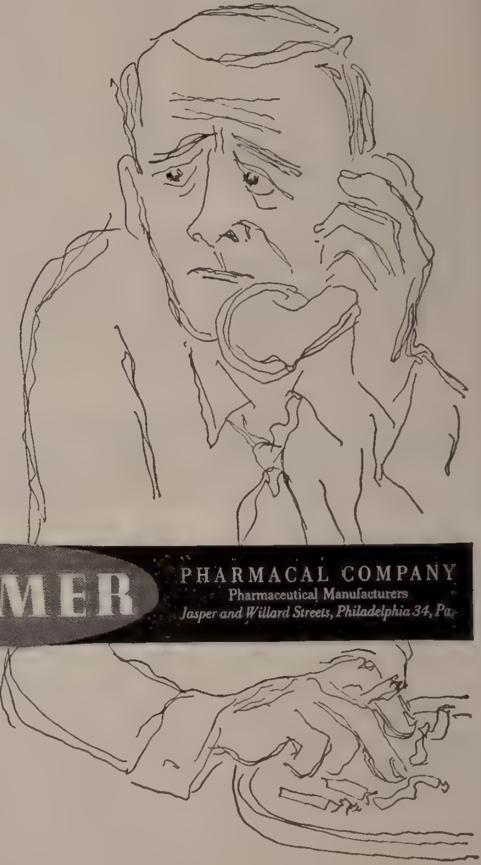

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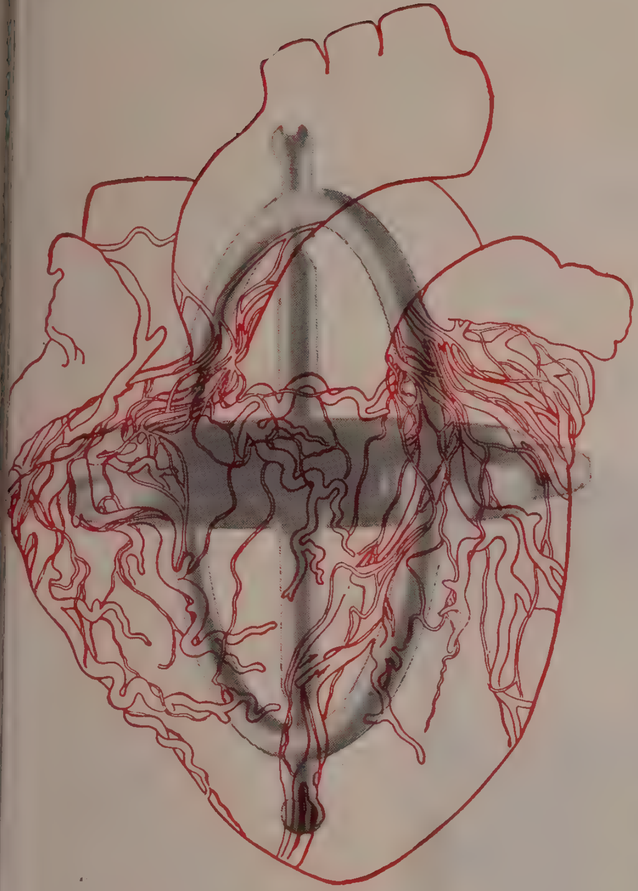

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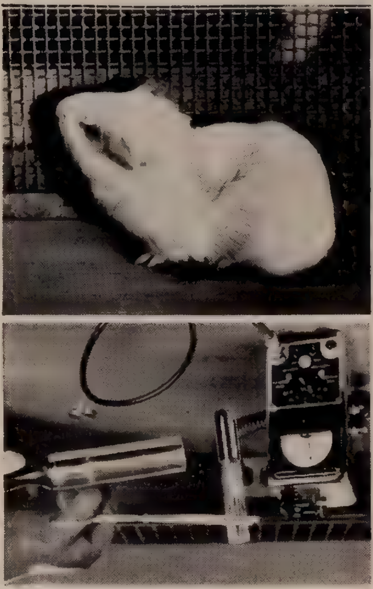

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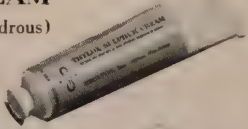

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[1] Report by Industrial Toxicology Laboratories, Phila., Nov., 1953. [2] James, B. M., et al.: to be published.

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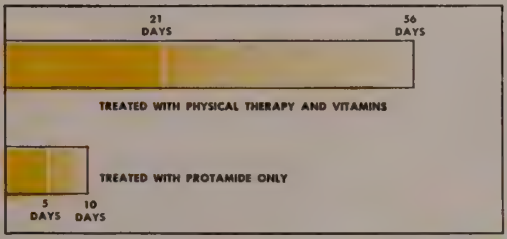

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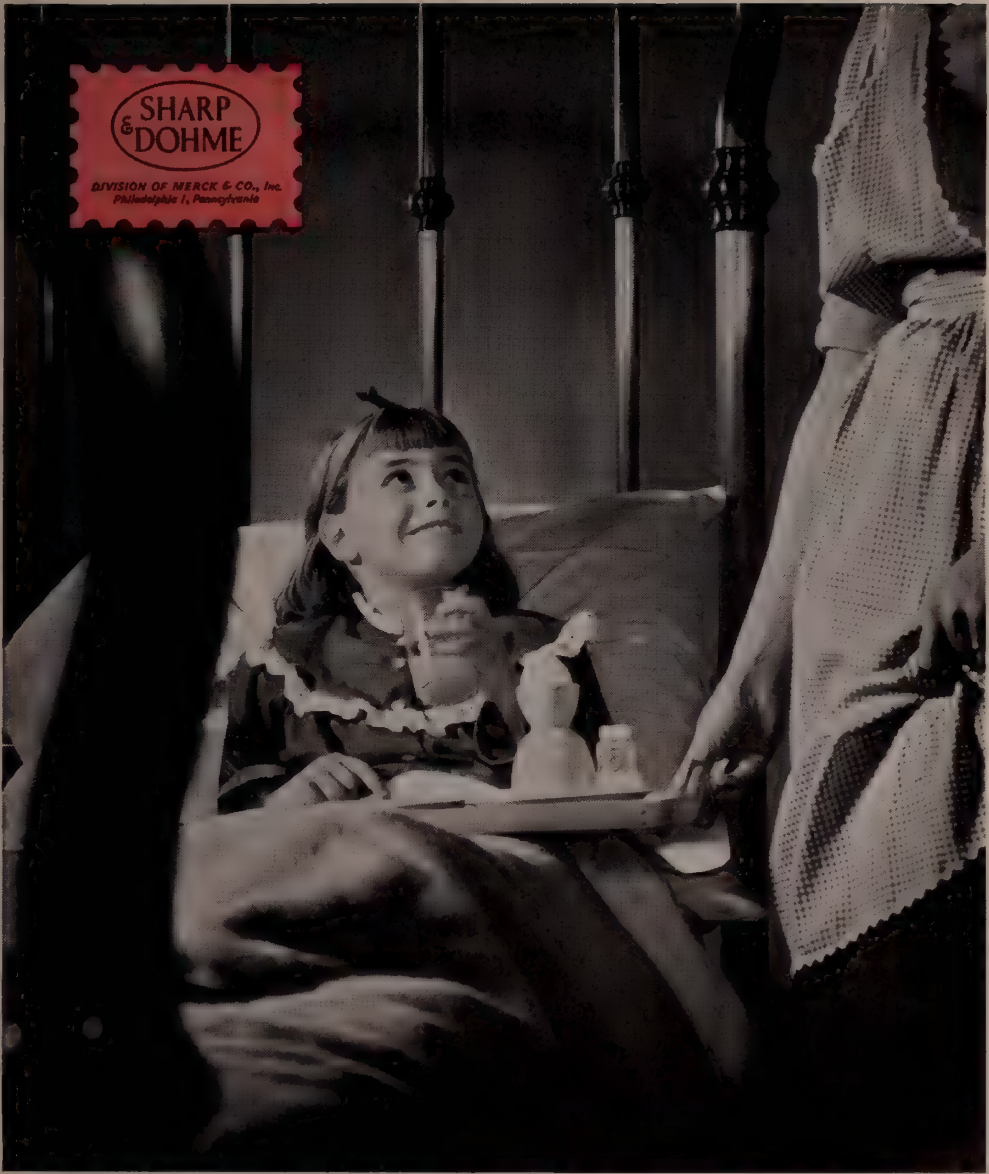

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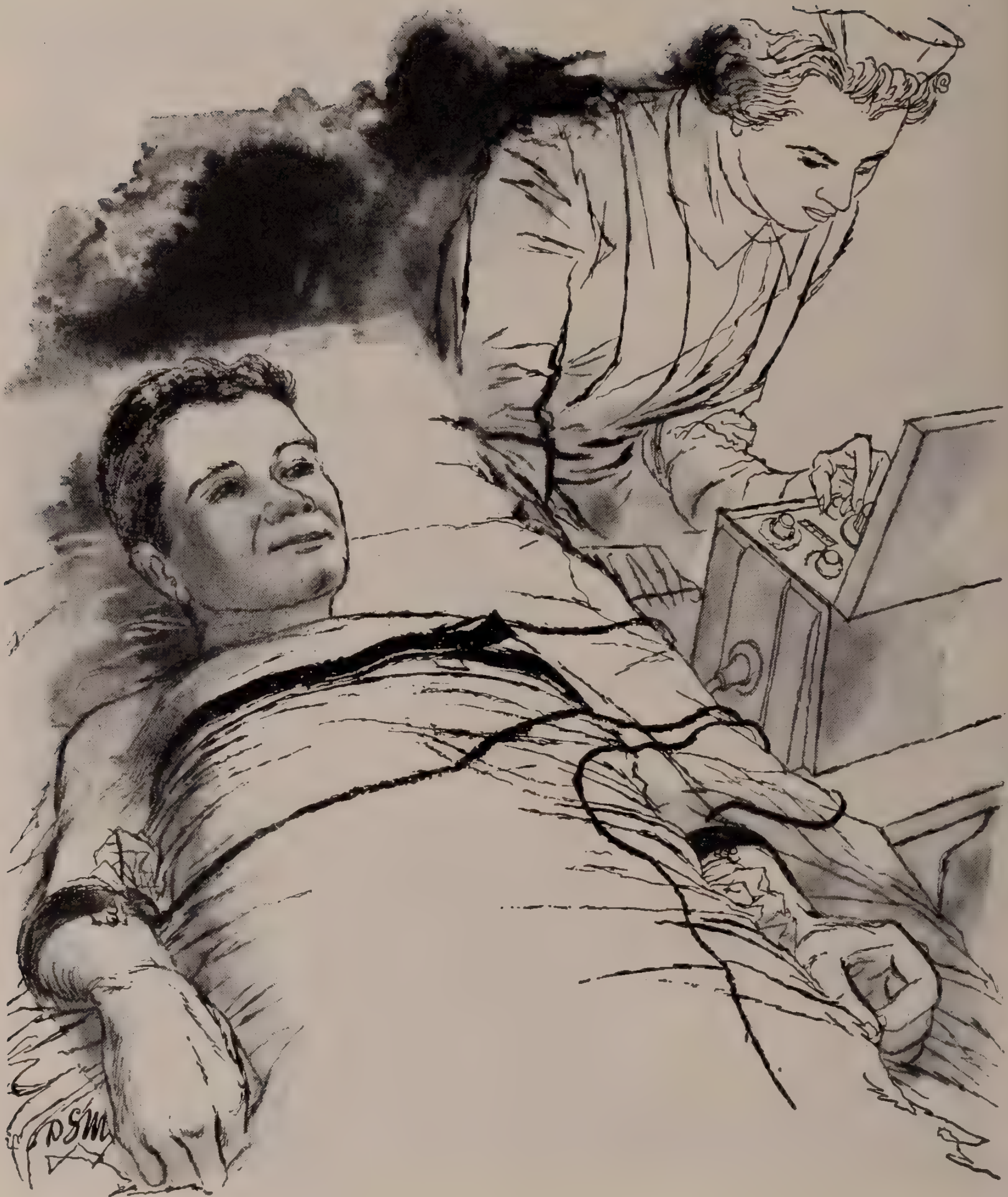

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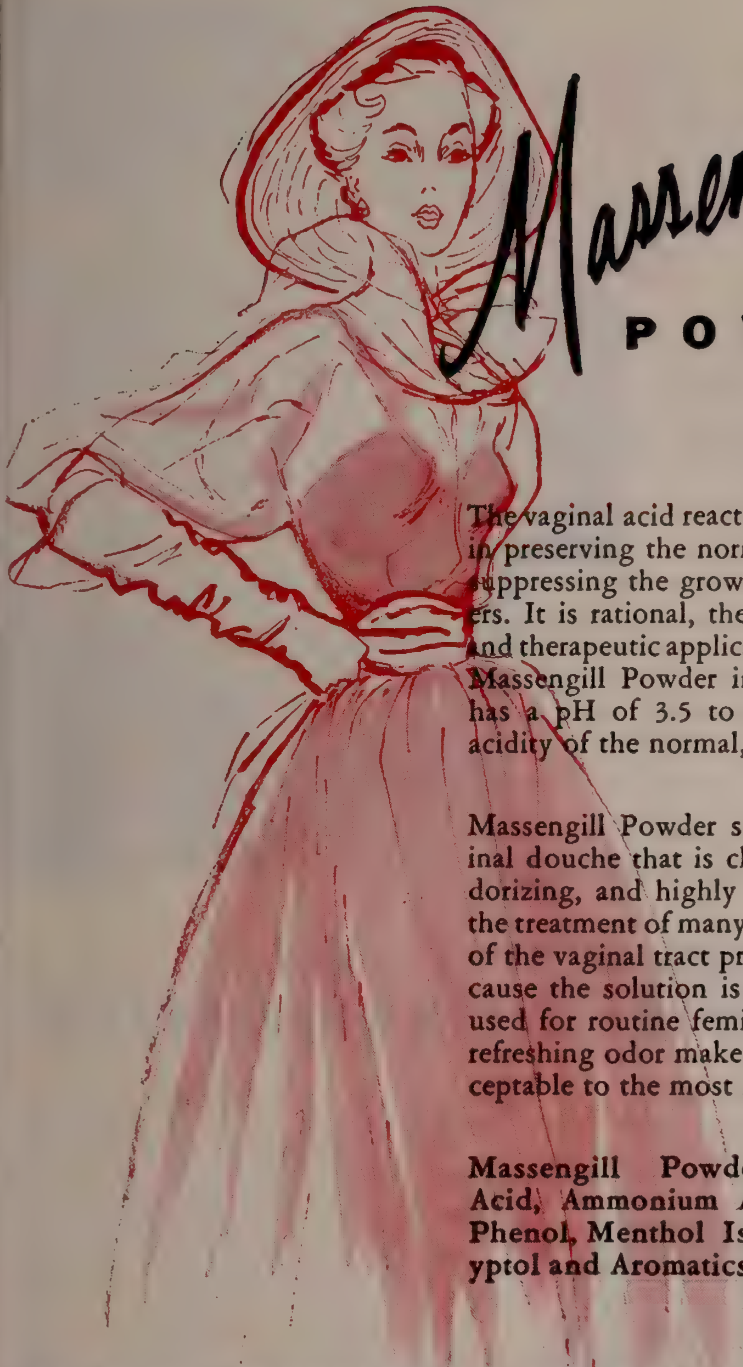

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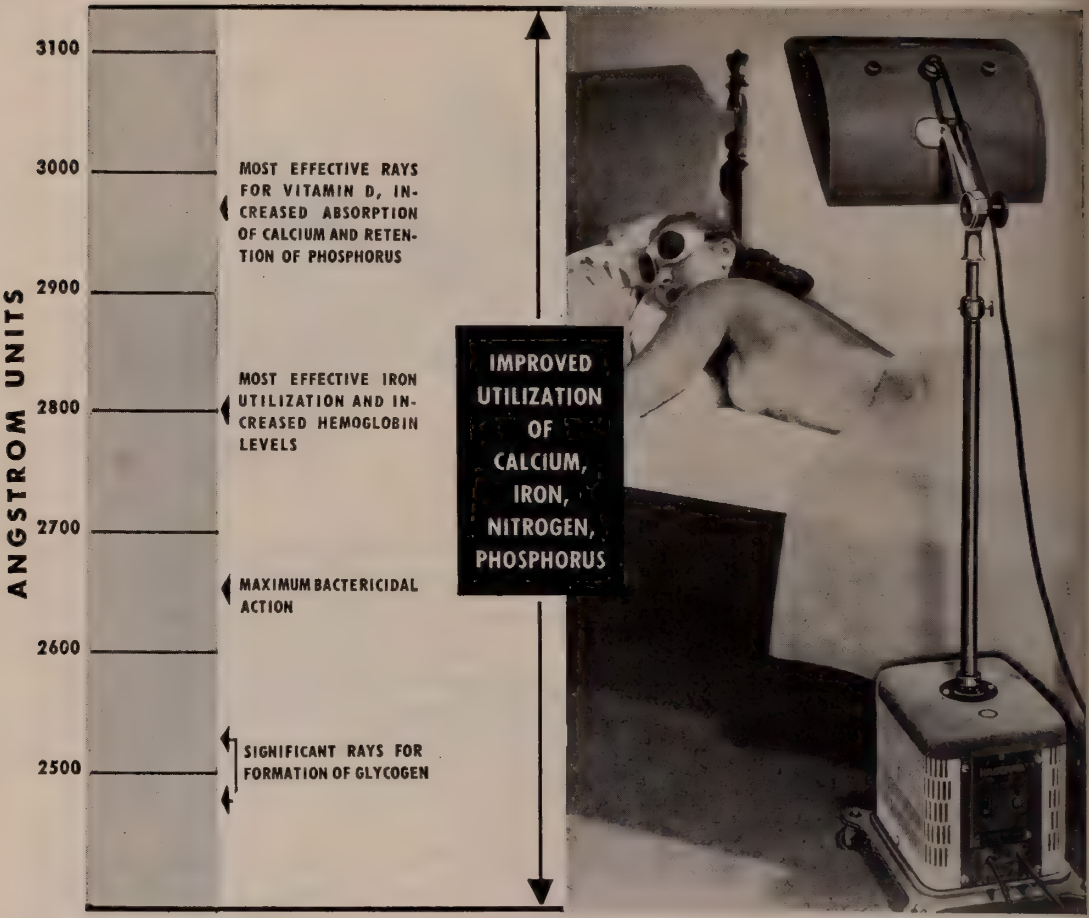

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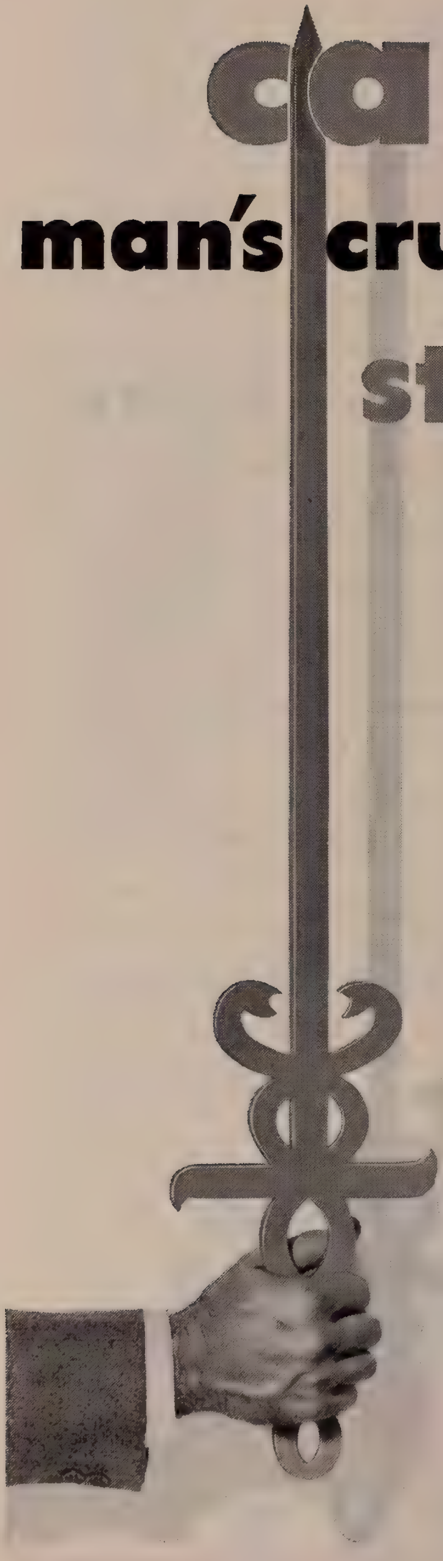

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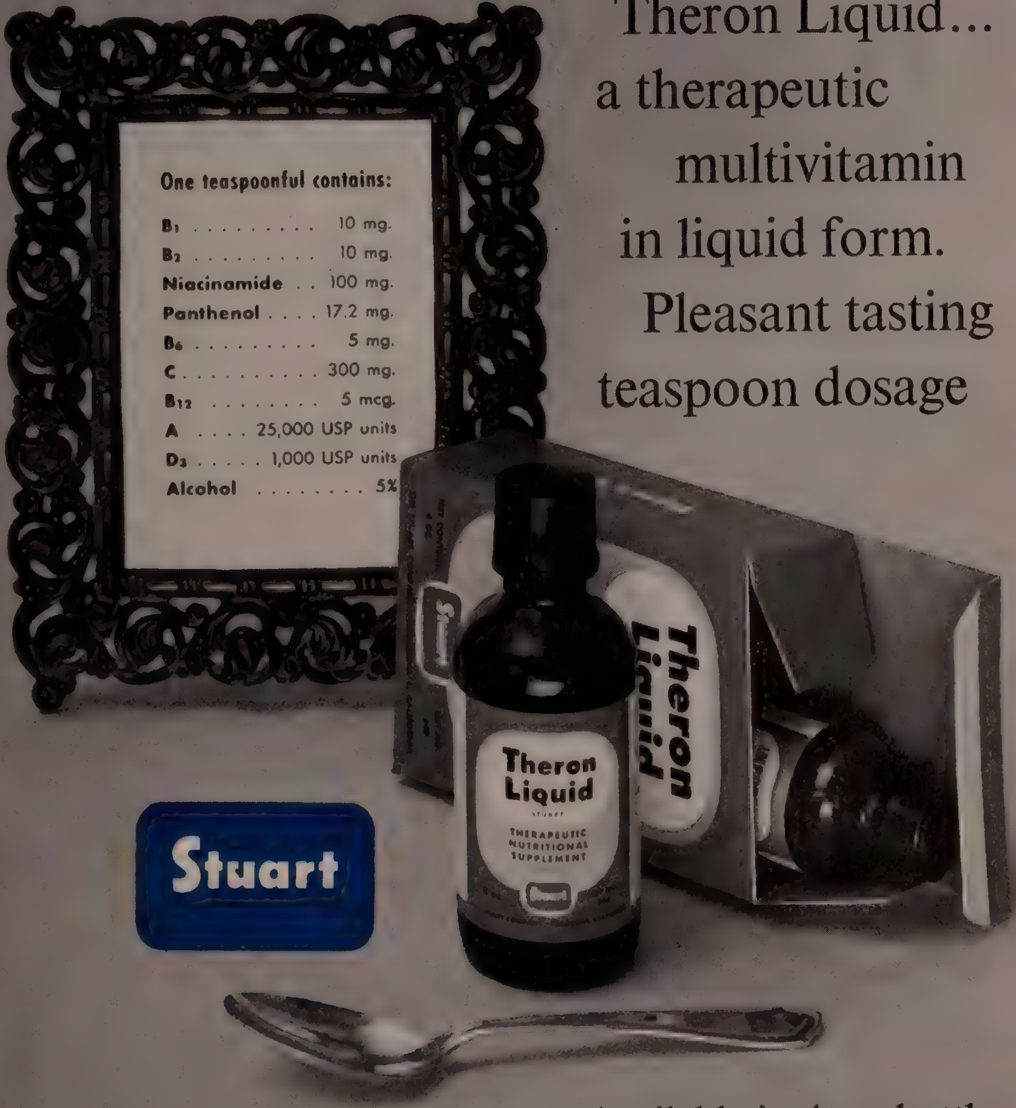
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VOLUME 54 MARCH 15, 1954 NUMBER 6

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EDITORIAL

Medical Education Today

The Journal is privileged to print on page 810 of this issue the fourth Augustus B. Wadsworth Lecture, entitled "Medical Education Today," delivered by Dr. Currier McEwen, dean of New York University College of Medicine.

The article presents a critical analysis of many of the problems, curricular and financial, of modern medical schools and perhaps more importantly what is being done to meet them. Dr. McEwen discusses the necessity for revision of technics in teaching to meet the needs of a postwar world as well as experimental programs in operation in many schools. He remarks on the need for change in subject presentation, particularly in the basic sciences, the need also for "cross-fertilization of ideas" by interschool conferences.

There is masterly discussion of residencies, premedical education, selection of students, the question of alleged discrimination in selection of candidates, and costs of modern medical education, and certain budgetary changes which are needed to cope with them.

We urge our readers to study this article carefully. The problems of our medical schools today are grave. They will be solved but assuredly not by ignoring their existence, by failure to apply to them the resolving force of constructive imagination and that ingenuity which has always been a characteristic of a free and literate people.

No one will read Dr. McEwen's article, honoring the memory of Dr. Wadsworth, without experiencing an elation of the spirit, a sense of high adventure.

Editorial Comment

House Calls. We are indebted to the *Illinois Medical Journal*[1] for an interesting study of the frequency, time distribution, and nature of house calls.

> Doctors Couter, Held, and York of Decatur discovered after making 1,000 house calls that one out of every four visits was unwarranted because the individuals were well enough to go to the office. Three hundred twenty-five of the visits were made between 7 A.M. and noon, 311 from noon to 6 P.M., 206 from 6 to 8 P.M., 111 from 8 P.M. to midnight, and 47 after midnight. Of the latter, 15 required a physician within four hours, and 27 were symptomatic but could have been seen the following morning. One additional patient had to be seen within twelve hours. The remaining four patients did not need physical therapy nor emotional reassurance at that hour.
>
> One hundred thirty-five different diseases were encountered during the 1,000 house calls; 14 of the conditions covered 66.4 per cent of the total calls. The most common clinical entities in order of frequency were influenza, follicular tonsillitis, nasopharyngitis, pneumonia, gastroenteritis, anxiety state, cardiac failure, bronchitis, acute back pain, urinary tract infection, coronary artery disease, cholecystitis, cerebrovascular accident, and bronchial asthma.
>
> This study was undertaken to obtain statistical information on house calls. It demonstrates that there are many opportunities to do research in small communities. The results were interesting and practical. Most of the patients were over sixty-five, "emphasizing the importance of geriatric medicine." It also disclosed the drugs most needed in the doctor's bag. The authors found that the following 16 products were used most frequently: aspirin compounds, penicillin with or without streptomycin, soporifics, barbiturates, meperidine (Demerol) hydrochloride, Triple Sulfas suspension (combination of sulfadiazine, sulfamerazine, sulfamethazine, and alcohol), cough syrup, morphine, aminophylline intravenously, meralluride (Mercuhydrin) sodium, sodium salicylate orally and parenterally, dihydroergotamine and methanesulfonate (D.H.E.45), dimenhydrinate (Dramamine) parenterally, Kaopectate, diphenhydramine (Benadryl) hydrochloride parenterally, and codeine orally.
>
> Fourteen other drugs were included in the bag even though they were used occasionally. They were digitoxin orally and parenterally, camphorated opium tincture, amobarbital (Amytal) sodium parenterally, epinephrine (Adrenalin) in oil, atropine parenterally, quinidine orally, glucose intravenously, methantheline bromide (Banthine) parenterally, pentylenetetrazol (Metrazol), nitroglycerin (glyceryl trinitrate), procaine amide (Pronestyl) hydrochloride intravenously, neostigmine (Prostigmin) parenterally, calcium gluconate parenterally, and methanetheline bromide orally.

While the number of calls is relatively small for statistical purposes, it may be assumed that a somewhat similar pattern would emerge if the study were repeated in various geographic areas. Whether seasonal variations or variations in local population age distribution would change it would need further study. Possibly this will be done. In the meantime we present the data as recorded for what they may be worth as an interesting analysis of a local problem.

---

[1] Illinois M. J. **104**: 333 (Nov.) 1953.

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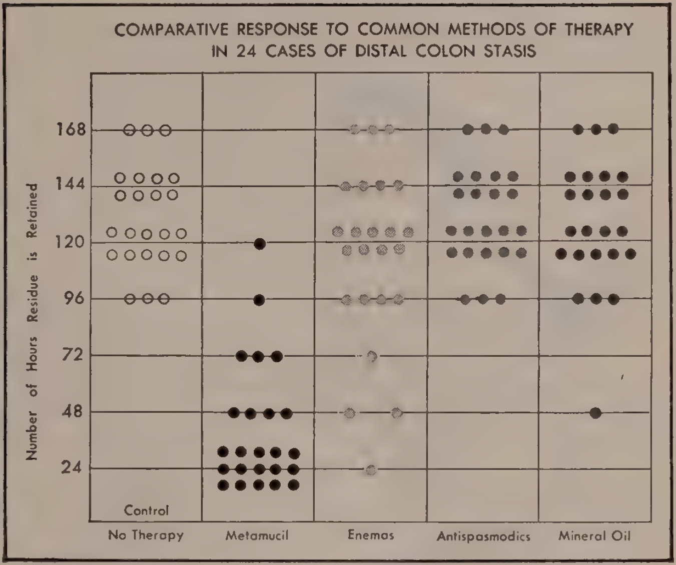
Distal Colon Stasis



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*Barowsky, H.: A Roentgenographic Evaluation of the Common Measures Employed in the Treatment of Colonic Stasis. Rev. Gastroenterol. *19*:154 (Feb.) 1952.

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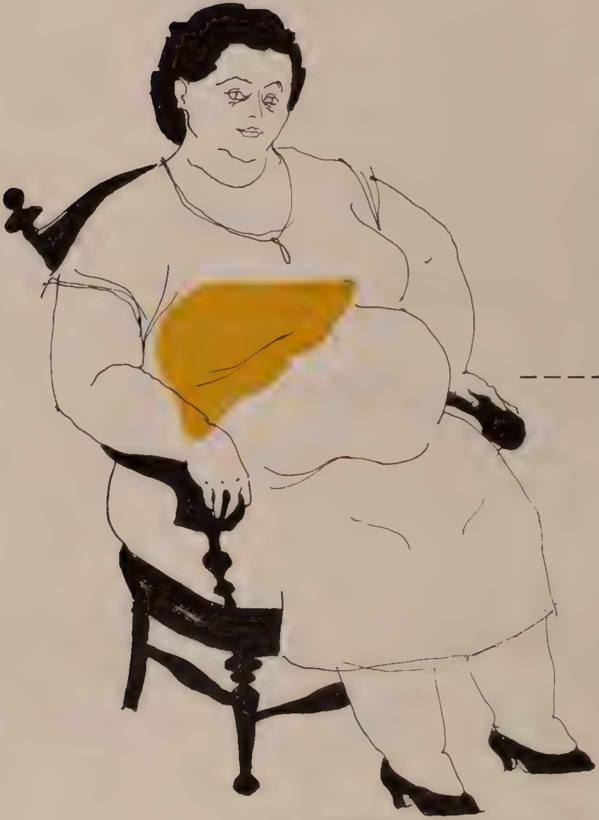

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*Zelman, S.: Arch. Int. Med. *90*:141, 1952.

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Etiology of Lung Cancer: Present Status

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Available evidence points to a number of different possible etiologic factors for lung cancer in man. These include chemicals, radiations, dust or fumes encountered by workers in various occupations, and cigaret smoking. Industries and occupations with evidence of abnormally high lung cancer risks are chromate production; production of illuminating gas (studied in England); mining of uranium ores in Schneeberg, Germany, and Jachymov, Czechoslovakia; nickel refining in South Wales; asbestos manufacturing in England; and metal grinding in England.[1] Recent evidence points also to increased lung cancer among welders and other workers exposed to metal fumes or dust in the United States.[2] Suggestive evidence regarding several other occupations has been reported, and it seems probable that other as yet unknown occupations with high lung cancer risks remain to be discovered.

Evidence for relationship of these occupations to lung cancer consists chiefly of the increased mortality rate from lung cancer observed among workers in these occupations. Exact risks have been estimated for two of these occupations, chromate production (in the United States) and illuminating gas manufacture (in England.)[1] For a few there is also experimental evidence of a carcinogenic agent in the material to which workers are exposed, but in no instance has lung cancer been produced in animals by such material. In the case of the chromate industry, in which lung cancer mortality has been shown to be 14 times that of the United States population among white workers and 80 times among Negro workers, application or injection into animals of various materials to which workers are exposed has thus far failed to produce malignant lung tumors. Nevertheless, there is little or no disagreement as to the existence of a lung cancer etiologic agent in the chromate industry.

A relationship between lung cancer and tobacco smoking has been suspected for many years. Statistical studies, of which the first apparently was that of Müller[3] in 1939, have uniformly shown a higher percentage of cigaret smokers among lung cancer cases than among control groups. In the past few years this relationship has received increasing public notice so that it is today widely debated and discussed in the newspapers, in national magazines, and, no doubt, by the public itself. Many physicians, statisticians, and others engaged in cancer research have expressed themselves in the public press as to the significance of the reported studies on this association. Considerable difference of opinion and of emphasis has thus been elicited. Appraisal of the nature of the evidence regarding tobacco as a possible etiologic factor in lung cancer has thus become of increasing importance, because of the widespread public interest in and concern over the subject, the large financial and tax interests at stake, and, most important, the steadily rising mortality from lung cancer reported each year. It is, therefore, necessary that physicians and public health authorities appraise the situation as it now exists to determine what conclusions may be drawn and what action may be required.

Most studies regarding smoking and lung cancer thus far made—13 are listed in a recent article[4]—have compared the smoking histories of lung cancer patients with those obtained from other persons, usually patients with other diseases in the same hospital. Almost without exception, these studies have found more cigaret smokers among lung cancer patients than among other patients. If these observations are valid, it would mean that lung cancer occurs more frequently among cigaret smokers than among nonsmokers.

Studies reported here were aided by a grant from the National Cancer Institute, U.S. Public Health Service (CS 960), and from the New York State Division, American Cancer Society.

Several objections can be raised to this type of study, and these objections must be carefully weighed to determine what possibilities of error exist in such studies, whether these are sufficient to invalidate the conclusions reached, and what bearing the evidence has on the question of smoking as a cause of lung cancer.

The first question which arises with respect to these studies is whether they prove that a real association exists between smoking and lung cancer. In other words, do the studies prove that persons who smoke cigarets develop lung cancer more frequently than do those who have never or rarely smoked, for this is the meaning of "association" as used with respect to this type of evidence. "Association" does *not* mean, as has been implied by some writers in the press, merely that the rise in lung cancer mortality has accompanied the rise in the use of cigarets. The guilt attributed to cigarets is not based on this latter type of association. The concomitant rise of lung cancer and cigaret consumption would be expected to follow a true association between the two, but by itself cannot be considered as more than suggestive evidence of it. The evidence which is at hand is that cigaret smoking is more frequent and heavier among persons who develop lung cancer than among those who do not.

The fact that many studies by independent investigators in this country and abroad show the same result is accepted by all or most authorities as proof that *some* association exists, i.e., that cigaret smokers do experience a higher incidence of lung cancer than do nonsmokers. It may be of interest, however, to consider why there should be any doubt at all on this point.

Two possible sources of error must be considered, those due to bias in obtaining the history and those due to bias in sampling. Where the smoking history is taken as part of a special investigation, one must consider whether the interviewer, by reason of his own bias or conviction, influences the patient in the answers the latter gives. In at least two studies the element of interviewer bias would seem to have been eliminated if it existed. Doll and Hill considered that they had demonstrated this error did not exist in their study since in 335 patients believed to have bronchial carcinoma at the time of interview, but shown later not to have the disease, "the smoking habits of the wrongly diagnosed group were sharply distinguished from the habits of the correctly diagnosed groups and were statistically indistinguishable from those of all the other patients suffering with other disease."[1] In the Roswell Park Memorial Institute studies,[5,6] begun in 1938, we consider this source of error to have been eliminated, first, because the studies were undertaken in the belief that no association really existed and, second, because of the fact that the smoking histories were not part of a separate interview but were obtained as part of the routine history taken on admission before any diagnosis had been made.

A second possible source of error which has been pointed out is that one could not be certain that the lung cancer cases studied were representative of all lung cancer cases or that the control patients were representative of the general population. However, these two conditions are not necessary for a valid study of the association of two variables. First of all, the cases and controls need not come from the general population but from the same population, i.e., the controls should be persons of the type most likely to enter the study as cases. Second, the cases and controls need be representative only with respect to the factors studied, in this instance smoking history.

The theoretic sampling questions raised above with respect to the case studies may thus be summarized in the following questions:

1. How likely is it that the control and lung cancer cases in the studies reported were drawn from two different populations which differed significantly with respect to smoking and differed always so that the control cases came from a lighter-smoking population than the lung cancer cases?

2. How likely is it that these sampling biases would be more marked for cigaret smokers than for pipe and cigar smokers and more marked for heavy cigaret smokers than for light cigaret smokers?

3. How likely is it that lung cancer cases who smoke are more apt to go to the hospital or that patients with other diseases who smoke are less apt to do so?

4. How likely is it that these sampling biases should occur repeatedly in studies made in different countries and in different sections of the same country?

None of these contingencies seems very likely, and their occurrence to so marked a degree as to show the differences between smokers and non-

TABLE I.—ESTIMATED PREVALENCE RATES[a] OF LUNG CANCER PER 100,000 MALES OF SELECTED AGES AND VARIOUS CIGARET SMOKING HISTORIES[b]

	Number		Estimated Prevalence Rates —Quantity Smoked Daily[c]			Relative Prevalence[d]	
	Lung Cancer	Control	Heavy[e]	All Quantities	None	Heavy	All Quantities
Patients aged 50 to 59 years							
Doll and Hill[2]	276	275	94	42	7	13	6
Wynder and Graham[2]	258	210	117	47	4	27	11
Sadowsky, Gilliam, and Cornfield[2]	198	208	87	44	12	7	4
Breslow, Hoaglin, Rasmussen, and Abrams[2]	213	213	102	46	6	17	7
Roswell Park Memorial Institute	173	657	141	109	15	9	7
Patients aged 60 and 69 years							
Doll and Hill[2]	197	199	137	63	0	..	..
Wynder and Graham[2]	187	160	138	70	5	29	15
Sadowsky, Gilliam, and Cornfield[2]	76	71	44	71	5	9	4
Breslow, Hoaglin, Rasmussen, and Abrams[2]	168	169	433	78	17	25	5
Roswell Park Memorial Institute	197	675	479	280	50	9	5

[a] Estimated according to the method of Cornfield.[8]

[b] All data appearing in this table, except for Roswell Park Memorial Institute figures, are taken from the paper by Breslow *et al.*[2]

[c] Quantity smoked daily, except for the present study, is all forms of smoking expressed as cigarets with pipes and cigars converted to their equivalents in cigarets as follows:
Doll and Hill—1 ounce tobacco = 4 cigarets a day
Wynder and Graham—1 cigar = 5 cigarets; 1 pipeful = 2$^1/_2$ cigarets
Sadowsky, Gilliam, and Cornfield—1 cigar = 10 cigarets; 1 ounce pipe tobacco = 20 cigarets
For the Breslow *et al.* study quantity smoked daily includes only cigaret smoking.

[d] Relative prevalence are the following ratios: heavy = rate among heavy smokers/rate among nonsmokers; all quantities = rate among smokers/rate among nonsmokers.

[e] Heavy smoking is defined as the following number of cigarets or equivalents of cigarets per day: Doll and Hill, 50 or more; Wynder and Graham, 35 or more; Sadowsky, Gilliam, and Cornfield, 41 or more; Breslow *et al.*, 40 or more; present study, 20 or more.

smokers elicited by the various studies is even less likely. Their likelihood is probably least in studies made in hospitals, such as those at Roswell Park Memorial Institute,[5] in which all patients are admitted without charge, and in the British studies of Doll and Hill, made in patients in hospitals coming within the National Health Insurance scheme. Wynder and Cornfield's study[7] made of smoking histories of physicians who died of lung cancer also is not subject to the possible bias of hospitalized cases.

The fact that 13 separate studies have shown the same result is strong presumptive evidence that an association exists between cigaret smoking and lung cancer, i.e., that lung cancer occurs more frequently among cigaret smokers than among nonsmokers. Indeed, one may predict that the "prospective" studies now under way will fully confirm the fact of a substantially increased risk of lung cancer among cigaret smokers. However, they should provide more precise estimates of the magnitude of this risk.

Magnitude of Increased Risk of Lung Cancer Among Cigaret Smokers

Estimates of the extent of increased risk to lung cancer suffered by cigaret smokers vary markedly. Table I, taken in part from the paper by Breslow *et al.*,[2] indicates that in the age groups fifty to fifty-nine and sixty to sixty-nine years, male smokers have lung cancer prevalence rates from four to 15 times as great as among nonsmokers. Among "heavy" smokers, according to varying definitions, the relative prevalence is estimated at seven to 29 times that of nonsmokers.

Table IIA presents estimated rates based on a tabulation of smoking histories of patients admitted to Roswell Park Memorial Institute from 1938 to the present. These data indicate that cigaret smokers have at least six times the risk of lung cancer incurred by nonsmokers. The excess risk among pipe and cigar smokers is much less.

In Table IIIA these data have been recalculated, after adjusting the place of residence, classified into nine population density categories, of the noncancer cases to that of the lung cancer cases. The indicated relative prevalence among smokers is not significantly altered by this adjustment. The relative incidence ratios between smokers and nonsmokers are based on the assumption that the differences in smoking history between lung cancer patients and noncancer

TABLE II

A. ESTIMATED ANNUAL INCIDENCE OF LUNG CANCER PER 100,000 POPULATION AMONG PIPE, CIGAR, AND CIGARET SMOKERS AND NONSMOKERS (MALES)

Age Group (Years)	Annual Incidence				Ratio of Incidence to Nonsmokers Among		
	Nonsmokers	Cigaret Smokers	Pipe Smokers	Cigar Smokers	Cigaret Smokers	Pipe Smokers	Cigar Smokers
35 to 44	1.2	10.2	..[a]	..[a]	8.5	..[a]	..[a]
45 to 54	9.3	64.8	15.0	11.3	7.0	1.6	1.2
55 to 64	28.5	196.2	26.4	50.6	6.9	0.9	1.8
65 to 74	55.1	343.5	76.0	49.8	6.2	1.4	0.9
75 and over	16.9	392.1	71.8	91.4	23.2	4.2	5.4

[a] There were no lung cancer cases among pipe and cigar smokers in this age group.

B. NUMBER OF CASES

Age Group (Years)	Nonsmokers		Pipe[a] Smokers		Cigar[a] Smokers		Cigaret[b] Smokers	
	Lung Cancer	Noncancer	Lung Cancer	Noncancer	Lung Cancer	Noncancer	Lung Cancer	Noncancer
35 to 44	1	51	..	11	..	16	30	181
45 to 54	6	122	3	37	2	34	109	318
55 to 64	16	186	6	75	8	52	182	304
65 to 74	13	168	10	95	5	71	72	151
75 and over	1	86	2	41	2	32	7	26
	37	613	21	259	17	205	400	980

[a] Includes "pure" pipe and cigar smokers only.
[b] Includes cigaret smokers who also smoked pipes and/or cigars.

TABLE III

A. ESTIMATED LUNG CANCER ANNUAL INCIDENCE PER 100,000 POPULATION AMONG MALE CIGARET SMOKERS AND NONSMOKERS

Age Group (Years)	New York State[a]			Ratio of Incidence Smokers / Nonsmokers
	Nonsmokers	Smokers	All Males	
30 to 39	0.8	2.9	2.3	3.6
40 to 49	4.2	25.4	18.2	6.0
50 to 59	14.8	108.9	70.7	7.3
60 to 69	50.3	280.4	125.7	5.6
70 to 79	33.6	435.8	124.5	13.0

[a] Rates based on incidence rates for lung cancer in New York State, exclusive of New York City, for 1949–1951.

B. NUMBER OF CASES

Age (Years)	Nonsmokers		Cigaret Smokers		Other	
	Lung Cancer	Noncancer	Lung Cancer	Noncancer	Lung Cancer	Noncancer
30 to 39	1	38	16	170	1	30
40 to 49	3	86	57	244	3	63
50 to 59	8	156	152	366	13	135
60 to 69	23	206	149	225	25	244
70 to 79	4	150	25	72	10	180
	39	636	399	1,077	52	652

patients reflect similar differences between lung cancer patients and the population from which they come. Since there is no reason to believe that the smoking habit per se influences admission to the hospital, these ratios probably approximate true differences in the relative risk of developing lung cancer. These data (Table IVC) indicate that among males aged thirty years and over who are light smokers (less than five cigarets a day) the lung cancer risk is about doubled, in smokers of five to 19 cigarets a day, the risk is about six times as great, and in those smoking 20 or more cigarets, approximately ten times as great as in nonsmokers.

In Table V is presented a further analysis of the smoking history of male lung cancer patients at Roswell Park Memorial Institute, compared with patients admitted with a presumptive diagnosis of lung cancer but whose symptoms upon final diagnosis were not due to the presence of lung cancer or any lung tumor. This is a severe test of the difference as to smoking history between lung cancer and other patients since smoking per se is

TABLE IV

A. Estimated[a] Annual Lung Cancer Incidence per 100,000 Among Males, Cigaret Smokers and Nonsmokers, by Average Amount Smoked Daily (New York State[b])

Age (Years)	Daily Cigarets Smoked: Less than 5	Daily Cigarets Smoked: 5 to 19	Daily Cigarets Smoked: 20 or more	Nonsmokers	All Smokers
30 to 39	4.8	1.7	3.4	0.8	2.9
40 to 49	8.0	13.8	34.7	4.2	25.4
50 to 59	33.2	86.3	141.4	14.8	108.9
60 to 69	59.1	212.5	479.0	50.3	280.4
70 to 79	82.2	475.6	606.4	33.6	435.8
30 to 79[c]	26.3	92.7	162.6	15.0	180.6

[a] For the method of calculating incidence rates, see Cornfield.[8]

[b] Based on reported lung cancer incidence for New York State (exclusive of New York City) for 1949–1951.

[c] Adjusted to population, males aged 30 to 79 years, New York State, exclusive of New York City, 1950 census.

B. Per Cent Distribution[a] of Cigaret Smokers by Daily Number of Cigarets Smoked[b]

Age (Years)	Daily Number of Cigarets: Less than 5: Non-cancer	Less than 5: Lung Cancer	5 to 19: Non-cancer	5 to 19: Lung Cancer	20 or More: Non-cancer	20 or More: Lung Cancer	Nonsmokers: Non-cancer	Nonsmokers: Lung Cancer
30 to 39	2.74	5.56	23.19	16.67	46.04	66.67	15.63	5.56
40 to 49	3.59	1.59	23.00	57.14	37.34	71.43	20.69	4.76
50 to 59	6.33	2.99	20.65	53.89	29.55	59.28	22.41	4.62
60 to 69	5.39	2.56	15.81	38.97	12.10	46.15	29.09	11.68
70 to 79	4.21	2.78	6.54	30.56	6.84	33.34	37.58	10.26

[a] Adjusted to place of residence of the lung cancer group.

[b] Pipe and cigar smokers not shown in this table.

C. Comparison of Estimated Relative Incidence of Lung Cancer Among Cigaret Smokers and Nonsmokers

Age (Years)	Daily Cigarets Smoked: Less than 5	Daily Cigarets Smoked: 5 to 19	Daily Cigarets Smoked: 20 or More	All Quantities
30 to 39	6.0	2.1	4.4	3.6
40 to 49	1.9	3.3	8.5	6.0
50 to 59	2.2	5.8	8.5	7.3
60 to 69	1.2	4.2	8.9	5.6
70 to 79	2.4	14.1	18.0	13.0
30 to 79[a]	1.8	6.2	10.8	7.2

[a] Relative incidence (smokers/nonsmokers) obtained after adjusting all rates to the male population, New York State, exclusive of New York City, 1950 census.

TABLE V.—Cigaret Smokers Among Patients with Lung Cancer and with Other Diseases of the Lung (Nontumors) in Males (Roswell Park Memorial Institute)

Age (Years)	Lung Cancer: Cases[a]	Lung Cancer: Cigaret Smokers: Number	Lung Cancer: Cigaret Smokers: Per Cent	Lung Nontumors[b]: Cases	Lung Nontumors[b]: Cigaret Smokers: Number	Lung Nontumors[b]: Cigaret Smokers: Per Cent	Indicated Relative Incidence Smokers to All Others[c]
35 to 44	31	30	96.8	17	11	64.7	16.5
45 to 54	120	109	90.8	37	28	75.7	3.5
55 to 64	218	182	83.5	46	26	56.5	3.9
65 to 74	110	72	65.5	17	4	23.5	6.2
75 and over	14	7	50.0	1	0	0	. . .
	493	400		118	69		

[a] Includes 18 cases with history of combination pipe and cigar smoking, not tabulated in Table IIB.

[b] Includes chronic bronchitis, bronchiectasis, emphysema, and other diagnoses.

[c] Comparison here is between cigaret smokers and "all others" including nonsmokers and pipe and cigar smokers.

known to cause in some individuals chronic inflammation of the trachea and bronchial tree.

The differences in per cent cigaret smokers between the two groups is statistically significant, and the indicated relative prevalence, from these data, of lung cancer among smokers compared to nonsmokers is still considerable (approximately five times as great).

Because the routine method of obtaining smoking histories is known to understate the prevalence of smokers, there is reason to believe that these estimates of relative risk are too low rather than too high. These data confirm those of previous reports from Roswell Park Memorial Institute[5,6] and by many other investigators that the lung cancer risk among moderate and heavy cigaret smokers is several times that of nonsmokers.

Etiologic Significance

The fact that cigaret smokers suffer an appreciably increased risk of lung cancer does not of course amount to proof that this increased risk is caused by cigaret smoking. It could also be due to the fact that cigaret smoking was in turn associated with some other factor or factors which were carcinogenic or that cigaret smoking enhanced the effect of other carcinogenic factors. Possible factors of this kind which have been suggested are atmospheric pollution by industrial wastes, engine exhaust fumes, dust from tarred roads, and occupational exposure to carcinogenic dusts or fumes or radiations. The air of some industrial cities is known to contain benzpyrene and arsenic, and mortality rates from lung cancer are higher in cities than in rural areas in this country, in England, and in Denmark. However, this would fail to explain the marked excess incidence of lung cancer among males in cities as well as in rural areas. The extensive British studies of Doll and Hill[9,10] also showed the same excess risk among smokers when attention was confined to residents of London. Doll[10] has recently reported that the lung cancer incidence among nonsmokers in England was about the same in London as in rural areas and in females as compared to males. These findings suggest that the difference in lung cancer incidence between the sexes and between rural and urban dwellers may be due to differences in the prevalence of cigaret smokers in these groups, either alone or in combination with other factors. It has not been established that exposure to air pollution, to engine exhaust fumes, or to dust from tarred roads is significantly higher among lung cancer cases than among the population from which they come.

Lung cancer cases known to arise in occupations which involve increased risk to lung cancer at present account for only a relatively small percentage of the total cases. Admittedly, there may be many more such cases than are recorded and more such occupations than are now known. Two studies correlating smoking history and occupation in lung cancer cases have been reported. In 1,357 male lung cancer cases and 1,357 matched controls, Doll[1] found an important excess in the cancer group in only one occupation, the production of illuminating gas: "The cancer group containined 23 such men, the control group 14." Although this difference was not significant, it corroborated other evidence (gathered also by Doll) that gas workers have an excess risk to lung cancer. Breslow[2] in a study of the smoking and occupational histories of 518 lung cancer cases and 518 controls found 77 lung cancer cases (about 15 per cent) "had an exposure of more than five years to suspect occupations." In one of these, welders and sheet metal workers doing welding, part of the excess risk was attributable to the high proportion of smokers, and a significant portion could not be so explained. Unless occupational hazards causing lung cancer are many times more prevalent than any existing evidence indicates, they could not possibly explain more than a minor fraction of the observed increase in lung cancer or the excess risk among smokers.

This conclusion has been further tested by a study of the occupational histories and smoking histories of male lung cancer patients and other male cancer patients at Roswell Park Memorial Institute. In this study (to be reported more fully in a subsequent publication) 137 male lung cancer cases and 396 control cases were matched for age and place of residence and adjusted for occupation. The excess of cigaret smokers among the lung cancer cases remained after the factors of age, residence, and occupation were equalized (Table VI).

Interpretation of the etiologic significance of the smoking-lung cancer association rests on several types of evidence. First, it conforms with what is known about other carcinogenic agents. Tobacco smoke is known to be an irritant and to come into contact with the bronchial mucosa. All or most known carcinogens may be classed as irritants, although the reverse is not true, and direct contact is one of the most frequent modes of effective application of carcino-

TABLE VI.—Estimated Relative Risk of Lung Cancer by Smoking Categories and Occupation (Males)

	Smoking Categories (Per Cent)								
			Cigarets by Daily Units and Duration						
			Less than 20 per Day		20 or More per Day			Total Cases	
	Non-smokers	Other than Cigarets	Under 40 Years	40 Years or More	Under 40 Years	40 Years or More	Total Cigaret Smokers	Number	Per Cent
Unadjusted for occupation									
Lung cancer	5.11	8.03	13.87	10.95	27.01	35.03	86.86	137	100.0
Control (other cancer)	24.24	28.28	10.61	9.85	13.89	13.13	47.48	396	100.0
Lung cancer incidence among cigaret smokers compared to nonsmokers	1.00	1.33	6.24	5.29	9.24	12.71	8.71	...	...
Control cases adjusted to occupational distribution of lung cancer cases	23.02	27.81	11.87	9.38	14.18	13.74	49.17	...	100.0
Lung cancer incidence among cigaret smokers compared to nonsmokers, adjusted for occupation	1.00	1.32	5.32	5.32	8.64	11.59	8.05	...	...

gens. Second, it rests on the failure to demonstrate other known causes of lung cancer among smokers, as compared with nonsmokers, to explain the excess risk among the former. Third, and more indirectly, it rests on the conformance of the etiologic hypothesis with the known epidemiologic facts. These require that the suspected etiologic agent be one known to have increased markedly in prevalence within the past thirty years, as has cigaret smoking, and to have affected males more extensively than females. The production of skin cancer in mice by tar obtained from cigaret smoke, reported by Wynder, Graham, and Croninger,[4] adds further support to the belief that cigaret smoke may be a truly etiologic factor in lung cancer.

All of the available evidence thus indicates that cigaret smoking is one of the contributing causative factors in the production of lung cancer. It does not indicate that it is the sole causative factor or even that it is operative in the absence of other factors, such as susceptibility and, perhaps, other as yet undiscovered etiologic factors.

Perhaps the fairest statement of the case at present is that there is a strong presumption that cigaret smoking is an important etiologic factor in lung cancer. It has been estimated previously[6] that in males cigaret smoking may account for from 50 to 75 per cent of lung cancer on the assumption that other etiologic factors are equal in smokers and nonsmokers. Recently, Doll[11] has estimated that in England, "about one in five of the lung cancer deaths in persons aged twenty-five to seventy-four in 1950 were attributable to causes other than smoking," or about 80 per cent to smoking.

Anticipated Results of Further Research

Total population studies, whether "retrospective" or "prospective," should serve to furnish more precise estimates of the magnitude of the excess risk associated with smoking of various types and durations. Such studies cannot be expected per se to furnish more information than we now have regarding the *etiologic* significance of smoking unless accompanied by a concomitant study of all other known or suspected etiologic factors for lung cancer among smokers and nonsmokers. Experimental studies now aimed at production of cancer in lung tissue by application of the components of tobacco smoke, if successful, may add to our confidence in the etiologic nature of the smoking-lung cancer relation.

Further study is also indicated of the reasons for the much smaller increased lung cancer risk found among cigar and pipe smokers. Possibly, some sensitivity test may be devised to distinguish between the majority of smokers who may smoke with relative impunity and the minority who will develop lung cancer. The identification of and removal from tobacco of the presumed carcinogenic agent, without removal of the tobacco, is a hopeful possibility.

Public Health Implications

Lung cancer is a rapidly increasing cause of death in this country. In New York State it now exceeds tuberculosis in number of deaths among males.

Between 1931–1933 and 1948–1950, age-adjusted lung cancer mortality increased among males in New York State by 385 per cent, among

TABLE VII.—AGE-ADJUSTED[a] MORTALITY FROM LUNG CANCER AND ALL OTHER SITES OF CANCER IN NEW YORK STATE[b] (DEATHS PER 100,000 LIVING)

	Lung Cancer	Cancer Other Sites
Males		
1931–1933	4.7	110.3
1948–1950	22.8	112.7
Females		
1931–1933	2.5	151.2
1948–1950	4.2	128.8
Per cent change		
Males	+385	+2
Females	+68	−15

[a] Adjusted to 1940 population, New York State.
[b] Exclusive of New York City.

TABLE VIII.—PER CENT PROBABILITY OF DEVELOPING LUNG CANCER AND CANCER OF OTHER SITES FROM BIRTH ON (1942–1944 AND 1949–1951)

Site	1942–1944	1949–1951	1949–1951 (Adjusted[a])
Male			
All sites	15.43	20.17	18.56
Lung	0.91	2.01	1.87
Female			
All sites	19.37	23.27	21.40
Lung	0.22	0.34	0.31

[a] Obtained by holding 1942–1944 mortality rates from all causes constant and applying 1949–1951 reported cancer incidence rates.

females by 68 per cent (Table VII). Since cancer is a reportable disease in New York State, it is possible to calculate the probability of developing cancer of various sites throughout the life span. For lung cancer, within the short period between 1942–1944 and 1949–1951, this probability has more than doubled for males (Table VIII). At present rates of incidence, 2 per cent of males may be expected to develop lung cancer. If the present rate of increase continues, this figure may double again within the next fifteen years.

Lung cancer is a public health problem rapidly mounting in importance. Public health authorities as well as private medical practitioners must take cognizance of the available facts regarding its occurrence and etiology. The following approaches to the problem are indicated:

1. *Case-finding:* Since early diagnosis and treatment offer the only hope of cure in lung cancer, early case-finding should be intensified. Special attention should be given to the following groups: (*a*) males aged forty and over, (*b*) cigaret smokers, (*c*) persons exposed to known occupational hazards. The application of the community chest x-ray program, so extensively developed in this State, to the finding of lung cancer has already begun. Further refinement and adaptation of this program to the diagnostic problems of lung cancer are needed.

2. *Public education:* The public looks to the medical profession and to public health authorities for information regarding health matters and for an appraisal of existing evidence regarding health hazards. What shall be our reply to questions regarding the relation between cigaret smoking and lung cancer? The existing evidence justifies the following statements: (*a*) Lung cancer occurs more frequently among cigaret smokers, and particularly among heavy smokers, than among nonsmokers. We do not know exactly how much more frequently it occurs, but the evidence we have indicates that the excess risk is appreciable. (*b*) In the absence of evidence to the contrary, the most reasonable assumption is that this increased risk is due to the effect of cigaret smoking, either alone or in conjunction with other factors. (*c*) Persons who are concerned about lung cancer cannot be assured that cigaret smoking will not increase their chances of developing the disease. (*d*) Cigaret smokers, particularly those past forty years of age, would be well advised to have chest x-rays taken at least once a year.

3. *Research:* Further research into causes, improved treatment, and methods of control of cancer is a public health responsibility. In New York State this has long been recognized. The expanded Roswell Park Memorial Institute at Buffalo[12] and the Bureau of Cancer Control of the New York State Department of Health are devoting considerable attention to investigation of the relation of tobacco to lung, larynx, lip, oral, and other types of cancer. Investigation is proceeding along the following two main lines: (*a*) investigation of the carcinogenic properties of tobacco smoke components and (*b*) epidemiologic investigation of the characteristics of persons who develop lung cancer and of smokers compared to nonsmokers in an effort to uncover all pertinent associated factors.

Summary

1. The existing evidence regarding the etiology of lung cancer points to the existence of multiple etiologic factors, including occupational hazards and cigaret smoking.

2. Known occupational hazards do not account for more than a relatively small proportion of lung cancer cases.

3. The evidence regarding excess risk of lung cancer attributable to cigaret smoking indicates that it is several times that among nonsmokers

and may account for a major part of the incidence of lung cancer, particularly among males.

4. The evidence for excess risk of lung cancer among smokers persists when comparison is made between lung cancer patients and patients with other conditions affecting the lung and bronchi and when the influence of residence and of occupation is equalized in lung cancer and control groups.

5. The available evidence is sufficient to justify public health action in the direction of case-finding and public health education to the effect that cigaret smoking must be presumed to play an important role in the production of lung cancer.

6. Intensive further research in all aspects of the problem is urgently indicated. Further studies may be expected to provide more precise data on the magnitude of the excess risk to lung cancer among smokers. Additional evidence regarding etiology may be forthcoming from the results of experimental studies but may rest in the final analysis on the study of other possible etiologic factors found in smokers but not in nonsmokers. At present no such differences are known to explain the excess risk among the former. The weight of the evidence therefore indicates that the relationship between cigaret smoking and lung cancer is causal and not merely an "association."

7. In less than a decade the chance of developing lung cancer at some time during life has more than doubled among males in New York State. Two per cent of all males may be expected to develop lung cancer at present rates of incidence. Since a majority of adult males are cigaret smokers and most of those over forty have smoked for many years, a good deal of the smoking effect probably has already been exerted on these. Hence, no appreciable decrease in rates may be expected in the next decade, even if everyone forthwith gave up smoking. Public health efforts hence must concentrate on early case-finding and on research.

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NOTE: Two charts and an additional table will be included in the author's reprints.

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Hedulin (Phenindione), A New Anticoagulant

A Comparison of the Anticoagulant Action of Hedulin and Combinations of Hedulin and Dicumarol

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IN RECENT years investigators have been searching for an "ideal" anticoagulant, that is, an oral preparation with a rapid onset of effect on the prothrombin mechanism, with a short duration of action that would permit easy control, and a rapid return of the prothrombin time to normal upon cessation of administration. Studies at this institution with phenindione (phenylindandione—Hedulin) have suggested that this agent has certain properties which meet these requirements more readily than bishydroxycoumarin (Dicumarol) and its derivatives.

The therapeutic and prophylactic value of anticoagulants has been established by numerous investigators[1-14] in cardiovascular disease. Anticoagulants have been recommended[15] without dispute in poor risk patients with coronary thrombosis with the following complications: shock, congestive heart failure or auricular fibrillation, heart block, repeated myocardial infarction, intractable pain, and gallop rhythm.

The effectiveness of vitamin K_1 emulsion and vitamin K_1 oxide in counteracting hypoprothrombinemia induced by oral anticoagulants has widened the scope of their use. These preparations[16-28] restore the prothrombin time to safe levels within four to eight hours. These drugs increase the margin of safety and diminish the fear of hemorrhage.

In 1944 orally administered indandione derivatives were first observed[29] to prolong prothrombin time in animals. In 1947 phenylindandione (phenindione) was reported[30] as the most effective of the various indandione derivatives as a prothrombopenic agent, acting more rapidly than Dicumarol. It was observed[31-33] that phenindione had little toxic action. In 1947 phenindione was used[34] clinically as an effective anticoagulant causing a more rapid fall in prothrombin concentration and a more rapid recovery as compared with Dicumarol. In 1950 it was found[35] that phenindione was more uniform and less prolonged in action than Dicumarol and had little cumulative effect with no complications noted.

Blaustein[36] demonstrated clinically the rise of prothrombin time to therapeutic levels within eighteen to twenty-four hours, return of prothrombin time to normal within twenty-four to forty-eight hours after withdrawal of the drug, wide safety factor, little or no cumulative effect, and relatively low toxicity with no indication of interference with liver function. Other reports have confirmed the clinical value of phenindione in well over 500 cases.[37-43]

Blaustein[42] indicated the effectiveness of a dosage procedure which provides an initial dose of 200 to 300 mg. and a maintenance dose of 50 to 100 mg., dosages being divided half in the morning and half at bedtime. He stated that individuals weighing over 150 pounds should be given an initial dose of 300 mg. and those under 150 pounds 200 mg.

This investigation was started at the suggestion of Blaustein to evaluate the anticoagulant effectiveness of quick-acting Hedulin* in comparison with a combination of the slower and longer acting Dicumarol with Hedulin. The combination was based on the theoretic similarity to that of quick-acting intravenous heparin with oral Dicumarol, which has been regarded as standard anticoagulant therapy in many institutions. We wished to ascertain whether a heparin-like action could be obtained with the combination and also

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* Hedulin used in this study was supplied in uncoated, scored tablets (50 mg. each) through the courtesy of the Walker Laboratories, Inc., Mt. Vernon, New York.

TABLE I.—Effects on Prothrombin Time in 24 Hours (500-Mg. Induction Dose)

	Pretreatment		Induction			Remarks	
Diagnosis	Prothrombin Time (Seconds)	Control (Seconds)	Dose Hedulin (Mg.)	24-Hour Prothrombin Time (Seconds)	24-Hour Control (Seconds)	Therapeutic Level over 22 Seconds in 24 Hours	Hemorrhage
Coronary thrombosis	15.0	13.6	500	26.0	13.4	Yes	None
Coronary thrombosis	17.5	15.4	500	25.0	14.0	Yes	None
Coronary thrombosis	17.6	15.6	500	27.1	16.6	Yes	None
Pulmonary infarct	14.2	13.7	500	26.4	15.0	Yes	None
Coronary thrombosis	14.5	15.6	500	25.5	15.6	Yes	None
Auricular fibrillation; saddle embolus	13.6	14.5	500	24.0	15.0	Yes	None
Coronary thrombosis	14.2	14.9	500	23.7	12.6	Yes	None
Coronary thrombosis	14.4	14.8	500	25.5	13.9	Yes	None
Coronary thrombosis; shock	14.0	14.1	500	...	...	Expired in shock in 6 hours	None
Coronary thrombosis; shock	14.8	13.7	500	24.0	15.8	Yes	None
Coronary thrombosis; shock	13.8	13.5	500	26.4	15.5	Yes	None
Coronary thrombosis	17.1	15.2	500	38.7	14.0	Yes	None
Pulmonary infarct	16.0	13.7	500	24.5	16.5	Yes	None

whether Hedulin alone for quicker induction and maintenance had any advantages over the combined therapy.

Combinations used as tablets were (1) 200 mg. phenindione and 100 mg. Dicumarol for initial dosages and (2) 50 mg. phenindione and 25 mg. Dicumarol for maintenance dosages. We considered, as the basis of this work, the following important desirable characteristics of any anticoagulant: safety, ease of control, and predictability of action.

In a group of 69 patients studied there were 48 with coronary thrombosis, five with pulmonary infarcts, five with thrombophlebitis, four with auricular fibrillation who had peripheral arterial emboli, two with coronary insufficiency in status anginosis where anticoagulants were used to avoid impending coronary occlusion, one with popliteal artery thrombosis (acute), one with thromboangiitis obliterans, one with recurrent thrombophlebitis, one with rheumatic heart disease with auricular fibrillation, and one with congestive heart failure.

To rule out liver disease, preliminary control prothrombin time, cephalin flocculation test, and total blood proteins were determined in all patients. The urine was checked for red blood cells to denote any bleeding from the kidney before treatment and reported at least once weekly thereafter. A careful history was noted to rule out bleeding from the gastrointestinal tract or any other bleeding tendency.

Prothrombin times were performed by the Link-Shapiro modification of the Quick method. In most institutions therapeutic prothrombin levels are considered within the range of 10 to 30 per cent of normal. When this is converted into prothrombin time, it is equivalent to nineteen to forty seconds with a control of thirteen to seventeen seconds. Marple and Wright[44] regard therapeutic prothrombin times of thirty to fifty seconds (10 to 20 per cent of normal prothrombin levels) as the object of anticoagulant maintenance.

In our study we considered the therapeutic level of induction to have been reached only when the prothrombin time rose to between twenty-two to forty-five seconds. The maintenance level was kept between twenty-two and forty-five seconds. Our strict adherence to minimal induction level of twenty-two seconds was based on our previous experience with oral anticoagulants other than Hedulin. We had noted that thromboembolic complications could occur at levels below twenty-two seconds. Obviously, if anticoagulants are to be given at all, they should be given to produce adequate therapeutic levels.

Dosages

The dosages suggested by Blaustein *et al.*,[42] 200 to 300 mg. initially and 50 to 100 mg. for maintenance, substantially similar to those used clinically by others,[35,40,41] are effective in the great majority of all cases requiring anticoagulant therapy. Some cases, however, may need higher dosages while occasionally some will not respond at all to any oral anticoagulant.

In our work in hospitalized cases we used higher dosages, 400 to 500 mg. as the initial induction dose and 100 to 150 mg. daily thereafter for maintenance, all dosages being divided half in the morning and half at bedtime. Our purpose was to determine, first, whether or not a heparin-like

TABLE II.—EFFECTS ON PROTHROMBIN TIME IN 24 AND 48 HOURS (400-MG. INDUCTION DOSE)

	Pretreatment		Induction			2nd Day			Remarks	
Diagnosis	Prothrombin Time (Seconds)	Control (Seconds)	Dose Hedulin (Mg.)	24-Hour Prothrombin Time (Seconds)	24-Hour Control (Seconds)	Dose Hedulin (Mg.)	48-Hour Prothrombin Time (Seconds)	48-Hour Control (Seconds)	Therapeutic Levels over 22 Seconds in 48 Hours	Hemorrhage
Coronary thrombosis	13.6	14.2	400	17.4	14.0	0	24.3	17.0	Yes	None
Coronary thrombosis	14.2	14.0	400	15.1	13.2	0	22.8	15.5	Yes	None
Coronary thrombosis	12.5	14.0	400	18.2	13.6	0	26.0	13.2	Yes	None
Phlebitis	12.7	14.0	400	19.0	16.0	100	19.0	17.0	No	None
Coronary thrombosis	15.0	14.2	400	32.0	12.0	100	28.0	13.5	Yes	None
Coronary thrombosis	15.2	14.3	400	20.5	13.8	200	21.2	13.9	No	None
Coronary insufficiency	18.1	16.0	400	25.0	16.0	200	23.0	14.8	Yes	None
Coronary insufficiency	14.3	13.8	400	21.5	14.0	200	25.2	14.8	Yes	None
Phlebitis recurrence	14.6	14.2	400	18.0	14.1	0	24.0	16.4	Yes	None
Coronary thrombosis	13.7	14.2	400	19.4	14.0	0	23.9	14.5	Yes	None
Coronary thrombosis	18.0	15.6	400	20.2	12.1	150	20.5	11.0	No	None
Coronary thrombosis	13.2	14.1	400	16.4	15.6	0	23.4	15.0	Yes	None
Coronary thrombosis	12.7	11.0	400	20.0	13.7	200	21.5	13.5	No	None
Coronary thrombosis	15.0	15.7	400	15.6	15.2	200	20.5	12.1	No	None
Coronary thrombosis	18.0	15.8	400	16.8	13.2	300	28.0	16.0	Yes	None
Coronary thrombosis; shock	15.4	13.2	400	24.3	14.7	...	...	...	Expired in shock in 24 hours	
Coronary thrombosis; shock	15.6	13.2	400	...	...	...	...	...	Expired in shock in 6 hours	
Coronary thrombosis	13.4	13.6	400	20.2	13.7	200	20.5	14.5	No	None
Coronary thrombosis	14.2	13.5	400	15.8	14.9	100	24.6	14.9	Yes	None
Coronary thrombosis	18.0	14.4	400	18.8	14.4	100	20.2	14.9	No	None
Coronary thrombosis	14.0	13.0	400	22.8	14.7	100	35.0	14.5	Yes	None
Coronary thrombosis	15.6	14.0	400	20.2	14.6	150	27.0	14.4	Yes	None
Coronary thrombosis	12.5	14.0	400	18.6	12.8	100	24.5	14.1	Yes	None

effect could be produced and, second, whether these higher dosages would give rise to hemorrhage.

Hedulin in 36 Patients

Induction.—When the initial induction dosage was 500 mg., therapeutic prothrombin time levels of at least twenty-two seconds were reached by 12 of 13 patients with coronary thrombosis within twenty-four hours (Table I). The other patient died with cardiogenic shock six hours after admission.

Of 23 patients with coronary thrombosis who received an initial induction dose of 400 mg., four had prothrombin time levels of at least twenty-two seconds in twenty-four hours; 14 had prothrombin time levels of twenty-two seconds in forty-eight hours, and 21 had prothrombin time levels of twenty-two seconds within seventy-two hours (Table II).

Maintenance. — Therapeutic prothrombin time levels of twenty-two to forty-five seconds were maintained by 30 of the surviving 33 patients on a daily maintenance dose of 100 to 150 mg. For two patients a maintenance dose of 150 to 200 mg. was given, while for one patient 50 to 100 mg. sufficed.

Comment.—It is clear that on the initial induction dose of 500 mg. of Hedulin there was definite predictability of therapeutic prothrombin levels within twenty-four hours. Once therapeutic levels were established, the patients could be maintained at those levels on a daily maintenance dose of 100 to 150 mg. These higher induction and maintenance doses did not give rise to hemorrhage in any of the cases studied. No heparin-like effect was observed in any of the cases.

Hedulin and Dicumarol in 25 Patients

Induction.—These cases may be summarized as follows. Eleven patients were induced with 400 mg. Hedulin and 200 mg. Dicumarol. None reached therapeutic levels in twenty-four hours, two reached therapeutic levels in forty-eight hours.

Ten patients were induced with 200 mg. Hedulin and 100 mg. Dicumarol. Three had therapeutic levels in twenty-four hours and five in forty-eight hours.

Two patients induced with 50 mg. Hedulin and 25 mg. Dicumarol did not reach therapeutic levels in twenty-four or forty-eight hours.

Two patients induced with 500 mg. Hedulin alone reached therapeutic levels in twenty-four hours and then were maintained on combined therapy.

Maintenance.—All 25 patients were maintained on the combination of 100 mg. Hedulin and 50 mg. Dicumarol daily.

Comment.—The lack of predictability and observance of cumulative effects, as with Dicumarol alone, rendered the combination impractical for induction and maintenance. Two patients in this group bled, one with a nosebleed and the other with hemoptysis. In one of these patients, following the use of 100 mg. of vitamin K_1 intramuscularly, there was a drop in prothrombin time levels in four hours; in the other with 1 Gm. of Vitamin K_1 orally, the prothrombin time dropped from ninety seconds to twenty-four seconds in four hours. The nosebleeds and the hemoptysis in both patients stopped promptly.

It was felt that the combination of the slower-acting Dicumarol and the faster-acting Hedulin was unsafe, impractical, and not applicable for general use in anticoagulant therapy.

Resistance to Hedulin

We were particularly anxious in this study to overcome occasional resistance to anticoagulant therapy. Having in reserve vitamin K_1 and vitamin K_1 oxide, which could control hypoprothrombinemia if needed, we used larger anticoagulant dosage without fear on our part, knowing that if hemorrhage did occur, it could be easily controlled within four to six hours. We noted that we had a smaller number of resistant cases than previously. Only two of 23 patients resisted reaching therapeutic levels with 400-mg. induction dosages and 100 to 150-mg. average daily maintenance dosage. None of the 12 patients who received 500 mg. as induction dosage resisted achievement of therapeutic levels.

Our observations indicate that there is no specific resistance to Hedulin. There is rather in a small percentage of patients a general resistance to anticoagulant therapy. In some cases this resistance may be overcome when larger doses are given.

Rate of Recovery After Cessation of Therapy

In all patients receiving Hedulin alone the prothrombin time usually returned to normal within twenty-four to forty-eight hours. Thus, no cumulative action was noted in this group. In contrast, with Dicumarol therapeutic prothrombin time levels are usually not reached until forty-eight to seventy-two hours after induction. Furthermore, there is a tendency for the prothrombin time to rise after cessation of therapy. This makes for cumulation.

The rapid recovery to normal prothrombin time, after Hedulin therapy is discontinued, is particularly helpful to those patients who require surgery while on anticoagulants. This was demonstrated in two instances. One patient had an acute arterial occlusion, which eventually required amputation. Hedulin was discontinued, and in twenty-four hours the prothrombin time was normal. The operation was performed with no abnormal bleeding or oozing.

The other patient had thrombophlebitis and a pulmonary infarct. He required an emergency ligation of the saphenous vein. He received 100 mg. of vitamin K_1 intramuscularly, and in four hours his prothrombin time was normal. The operation was performed without incident of bleeding.

It is preferable not to use vitamin K_1 or K_1 oxide if possible, since it returns the patient to a thrombogenic prothrombin time level, for which he originally received anticoagulant treatment, and may make him refractory to further anticoagulant therapy for several days. In most cases the mere omission of a scheduled day's dose will result in the return of the prothrombin time to a safe range, a measure of the controllability and safety of Hedulin.

Side-Effects

No toxic manifestations were observed. An orange color usually appears in the urine within six hours after the initial dose of Hedulin. This is the color of a phenindione derivative in alkaline solution. In our early series the urine was checked three times a week. No renal findings were noted.

Effects of Vitamin K_1 and K_1 Oxide

Vitamin K_1 was used successfully in two patients with hemorrhage following the use of Hedulin-Dicumarol combination. No hemorrhage occurred with the use of Hedulin alone. Blaustein noted in his series of 400 patients that in the few cases when hemorrhage did occur with Hedulin, it was of a mild nature, and the prothrombin time returned to normal in four to six hours after administration of vitamin K_1 oxide.

Ambulatory Therapy

Because of the relative safety of Hedulin it is particularly suitable for ambulatory anticoagulant therapy. Induction doses of 250 to 300 mg. of Hedulin were administered to eight patients in the hospital. Thereafter they were maintained on an ambulatory basis with 75 to 125 mg. daily. This produced safe therapeutic prothrombin time levels of at least twenty-two seconds. It was found quite satisfactory to determine prothrombin time on these patients once a week or every second week.

Conclusion

1. In the 36 patients treated with Hedulin alone there has been noted a high percentage of therapeutic prothrombin levels to be reached within twenty-four hours after the induction dosage of 500 mg. and in forty-eight hours after an induction dose of 400 mg.

2. After adequate induction levels were reached, 88 per cent of the patients were maintained on an average daily dose of 100 to 150 mg.

3. These high dosages did not give rise to hemorrhage where Hedulin was used alone.

4. With the 25 patients receiving combined therapy, there was not the same control, predictability, and safety noted with Hedulin alone.

5. Some hemorrhage did occur on combined therapy.

6. A heparin-like effect (therapeutic prothrombin levels in a few hours) was not produced either by the high dosages of Hedulin alone or by the combination.

7. Hedulin is best administered alone, not in combination with Dicumarol.

8. It is felt that Hedulin is a valuable addition to the anticoagulant armamentarium in order to attain safely a quick twenty-four-hour induction of hypoprothrombinemia. The maintenance of safer and predictable therapeutic levels lends itself to more widespread practical use for ambulatory treatment where prothrombin times need only be taken once a week or every other week after therapeutic levels have been established. This is further enhanced by its lack of cumulative effect and the availability of vitamins K_1 and K_1 oxide as proved and easily available antagonists. An additional advantage is the return of prothrom-

bin time to normal within twenty-four to forty-eight hours after discontinuance of Hedulin therapy.

Additional studies on a larger series of cases are being continued to evaluate further the ultimate position of Hedulin as an advantageous oral anticoagulant.

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MD's Never Stop Studying

In these busy times the average practicing physician still manages to devote the equivalent of 83.3 eight-hour days a year to keeping abreast of current developments in the field of medicine. This striking figure is one of many brought out in a preliminary report by the AMA's Council on Medical Education and Hospitals on its recent survey of postgraduate medical education.

Other highlights of the preliminary report: Some form—though varied—of organized postgraduate medical course is being offered in every state in the country. . . . Ninety per cent of these postgraduate courses are offered in the larger cities. . . . Chief reasons noted for not taking postgraduate courses is lack of someone to care for patients while the doctor is away and the multiplicity of medical society and hospital staff meetings. . . . More than 93 per cent of the responding physicians felt that the maximum amount of time they could be away from practice was under fifteen days. . . . It cost the average physician surveyed in this study approximately $350 per year to attend postgraduate courses alone, without including the other four forms mentioned above.—*A.M.A. News, January, 1954*

Arteriosclerotic Diseases of the Retina

K. ELIZABETH PIERCE OLMSTED, M.D., BUFFALO, NEW YORK

The anatomic characteristics of the retinal tree are of extreme significance in arteriosclerosis. The central artery is similar to arteries of the same size in other organs. The wall is approximately one fourth as thick as the diameter of the lumen. The intima consists of an endothelial layer lying on the internal elastic lamella with possibly a few collagenous fibers intervening. There is a well-developed internal elastic lamella and a continuous muscular coat characteristic of a true artery. A marked alteration occurs as the central artery passes through the lamina cribrosa. The internal elastic lamella thins out rapidly and disappears after the first or second bifurcation. The muscular coat also thins abruptly but remains a continuous sheet slightly farther along the vessel than the elastic lamella but not farther than 1 disk diameter. It then separates into isolated muscle fibers. The remainder of the vessel is arteriolar in nature. This is the whole visible arterial tree except for the major vessels at the disk and 1 disk diameter distance adjacent. The retinal capillaries are surrounded by a basement membrane which lies outside of the endothelium. Dr. Friedenwald[1–3] has demonstrated that the basement membrane of the arterioles, capillaries, and venules is continuous with the internal elastic lamella. A similar membrane has been found in the capillaries of the kidneys, but it is not yet certain whether the capillaries of all organs possess this feature.

The retinal veins are thin walled, having only a thin layer of adventitia over the basement membrane. At the arteriovenous crossings the adventitia envelops both vessels so that the wall between their two lumina is a common structure. This is a determining factor in pathologic processes which develop in atherosclerosis and malignant hypertension.

Arteriosclerosis is a general term which includes several types of degenerative arterial disease, some types occurring only in large arteries, some only in arterioles and some throughout the arterial system. Bell[4] differentiated six types of arteriosclerosis:

1. Regenerative thickening of the intima occurs in atrophic organs where there is a decreased demand for blood flow. This is an involutionary measure which can involve any size blood vessel. In the eye it is found in retinal or optic atrophy.

2. Elastic thickening of the intima occurs normally throughout life until in advanced years it has increased two or three layers. In severe hypertension thickening may progress to ten to twelve layers. In the eye this may occur in the central artery but is not seen ophthalmoscopically.

3. Senile ectasia is a disease of senility limited to the aorta and large arteries.

4. Medial calcification (Monckeberg's sclerosis) is an age change in the large arteries of the extremities. It can be associated with atherosclerosis but is a distinct process not found in the eye.

5. Intimal atherosclerosis is a plaquelike enlargement of the intima affecting true arteries. The etiology is unknown but considered to be of age and hereditary origin. The central artery and early portion of the branches are involved in the eye.

6. Arteriolar sclerosis is a disease of the arterioles considered to be a result of hypertension. The entire retinal arterial tree is involved.

Of these six entities intimal atherosclerosis and arteriolar sclerosis are the commoner forms of arteriosclerosis found in the retina. Elastic intimal thickening which may involve these vessels has no ophthalmoscopic sign, and regeneration of the intima or "endarteritis" occurs secondarily to atrophic diseases. The other two groups are not present. It is important to distinguish between atherosclerosis and arteriolar sclerosis because of their different nature and significance. This is very difficult and frequently impossible to do, yet the ophthalmologist is often asked for a diagnosis of the "eyegrounds" without benefit of a history or physical findings. On the other hand, if the ophthalmologist is provided with the clinical history, he may be of real assistance to the family physician in establishing a diagnosis.

Presented at the Annual Meeting of the Women's Medical Society of New York State, Buffalo, Scientific Meeting, May 4, 1953.

Atherosclerosis

Atherosclerosis is a systemic disease, the primary manifestation of which is found in the arterial walls. It has been shown to be a disturbance in lipid metabolism. Recently it has been suggested[1] that the size and physical state of the lipid molecule may be of greater importance than the serum level of cholesterol. Lipid infiltrates are also found in nonvascular tissues such as the arcus of the cornea and deposits in the sclera which lead to the conclusion that primary lesions of atherosclerosis are not limited to the atheromatous plaques in the arteries.

The characteristic arterial lesion is the atheroma. This begins as a circumscribed accumulation of fat-laden cells clustered together between the internal elastic lamella and the endothelium of the artery wall. These may be wandering cells or may be derived from proliferation of endothelial cells. As the atheroma grows, it may occlude the lumen, or it may ulcerate and produce thrombi. After a time the subendothelial fatty plaques in the smaller vessels are replaced by fibrous tissue which is thinner, and the lumen tends to reform. Complete healing may take place. In large lesions calcification of the atheroma is frequent.

Atheromatous plaques may occur anywhere in the body, but the intensity varies from one portion to another so that the arteries of the brain or eye may be extensively involved with little or no change elsewhere. In no two cases is the pattern identical, although certain points of predilection are fairly well established. The points of predilection in the aorta surround the origins of the intercostal arteries. The points of predilection in the retinal artery are found as the artery pierces the dural sheath and passes in the nerve to the cribriform lamella. Plaques are less frequent in the remainder of the arterial tree but are found even in the arteriolar portions. In small retinal arteries fibrotic changes may reach sufficient thickness to be visible as irregular whitish sheaths around the blood column. Lesions may also occur in the retinal veins where there is a common wall with the artery. Occlusion, either arterial or venous, is characteristic.

The ophthalmoscopic diagnosis is difficult because the main lesions occur in the retinal artery behind the cribriform lamella. The signs of sclerosis here are still disputed but are suggested by a narrow, straight arterial tree which branches at acute angles and by increased number of branches at the disk border due to contraction and shortening of the artery. The small peripheral lesions may be viewed. The wall of the vessel remains invisible, but the lesion produces a local constriction of the blood column. Similar constrictions may be produced by spasm. It is only when an opaque spot in the vessel wall is seen associated with a local constriction in caliber that the diagnosis of atheroma can be established. When this type of retinal lesion is widely developed, white streaks may be seen along the blood column. Then the differential diagnosis with hyaline degeneration of arteriolar sclerosis may be difficult. The fact that the two types may be present simultaneously adds to the confusion. Atherosclerosis frequently leads to vascular accidents. A pale area of necrosis occurs along the distribution of the artery, and the blood column is attenuated. If the central artery is occluded, a cherry-red spot develops in the macula surrounded by extensive pale coagulation necrosis and marked attenuation of the arteries. In the eye venous occlusion may also occur as a result of atheromatous obstruction of the lumen resulting in extensive hemorrhage over the retinal area involved.

Recognition of atherosclerosis has become an urgent practical consideration since the ophthalmoscopic findings are used as a guide in the selection of cases for sympathectomy.

Arteriolar Sclerosis

Arteriolar sclerosis and malignant hypertension or the hypertensive arteriolosclerotic process is an entirely different disease from atherosclerosis. Recent investigations have established that the disease depends on a humoral factor liberated by the ischemic kidney. The primary effect of such a factor is the production of increased arterial tone, and the organic changes in the small arteries and arterioles are secondary to the purely functional disturbance. Whether these organic changes are attributable to the direct effects of humoral factors or due to local tissue anoxemia caused by arteriolar spasm is not clear. A local contribution to the pathogenetic mechanism seems essential, however, for the vascular changes are especially prominent in the kidney, brain, and retina and inconspicuous in skeletal muscle, whereas the whole arterial tree participates uniformly in functional increase in tone.

In the early stages of the disease the vascular resistance is fully compensated for by a rise of blood pressure, and no change in caliber of the vessels can be seen. As the essential hypertension progresses, the hyaline arteriosclerotic process can be observed in its pure form. The characteristic lesion is a subendothelial hyaline deposit in the muscle fibers of the terminal arterioles and hyaline deposits on the endothelium of the capillaries. These hyaline masses spread and fuse until they form a collar around the arterioles. This causes a tortuosity of the vessel. As the process continues, the entire wall may become involved. The thickening of the vessel walls can first be seen as an increased brightness and width of the arterial light streak with irregularity of the lumen. As the whole vessel wall becomes involved, it takes on the appearance of copper wire. Further signs of thickening of the walls are the separations of the arterial and venous blood columns at their crossings. This is manifest by compression of a vein by an artery or the deflection of a vein as it passes over an artery. In severe forms of the disease the hyaline subendothelial infiltrate is accompanied by necrosis of the endothelium, converting the arteriole into a structureless cord, seen as silver-wire arteries.

In malignant hypertension the relationship between the vascular disease and the tissue damage is fairly direct. The retinopathy usually occurs late in the disease, but it can appear before any clinical evidence of renal involvement. The term albuminuric retinitis is inaccurate, therefore, for the retinal pathology is not caused by renal insufficiency. In fulminating cases, as toxemias of pregnancy, the retinopathy can develop before any organic changes are visible in the blood vessels so that the term arteriosclerotic retinopathy is also inaccurate. It is best to refer to it as the retinopathy of malignant hypertension. As the malignant phase of the disease is approached, hemorrhages and cotton wool spots appear. The small scattered hemorrhages arise from capillary diapedesis and appear flame shaped if occurring in the superficial nerve fiber layer or petechial if in the deeper layers. One of the most characteristic ophthalmologic features is the presence of fluffy white spots, erroneously referred to as the cotton-wool exudates. Dr. Friedenwald has shown that these lesions occur at the site supplied by a terminal arteriole and correspond to the focal necrosis from the occlusion of the arteriole. The individual hemorrhages and cotton-wool spots commonly develop in crops and may disappear in a few weeks. In full-blown cases serious outflow into the retina causes edema of the posterior pole and the optic disk. At the nerve head a papillitis occurs. In the macular region the outer fiber layer has a loose structure which runs radially from the fovea. Fluid accumulation here forms a spokelike radiation and the macular star effect. The fluid then leaks into the subretinal space and causes retinal detachments. The edema formation is commonly regarded as the transition from the benign to the malignant phase of the disease, although spontaneous remissions may still occur.

Differential Diagnosis

It is known that patients with atherosclerosis can develop a hypertensive renal involvement and arteriolar hyaline degeneration and enter into a malignant phase of the disease similar to essential hypertension. These two diseases consequently possess many external similarities. To what extent can they be differentiated from one another?

Age distribution assists in the differential diagnosis. Most patients with atherosclerotic hypertension are over sixty, and few are under fifty years of age. On the other hand, most patients have the onset of essential hypertension under the age of fifty with well-developed signs of arteriolar hyaline changes before age sixty. Thus, the patient with onset of hypertension below forty and over sixty years presents no serious problem in diagnosis. This leaves an important fraction of people between forty and sixty for whom the diagnosis needs to be made.

Let us first analyze the findings in the unconfused groups. In patients over sixty with a fixed hypertension, the retinal vessels are almost always narrow and straight and branch at acute angles. The relation between the degree of arterial narrowing and the degree of hypertension is so close that it can be estimated ophthalmoscopically. The retinal arteries are barely narrowed with systolic pressure of 160 and are reduced to half the diameter of the veins for pressure of 200. In patients under forty years with essential hypertension the retinal arteries are generally of normal caliber and tortuosity. Segmental constrictions may be seen, usually involving isolated branches. If hyalinization has developed, the blood column may be narrowed, but the vessel remains tortuous.

The differential diagnosis for the forty- to sixty-year age group progresses. The diagnostic feature of essential hypertension is the vascular evidence of hyaline thickening. The presumptive evidence is hypertension with retinal arteries of normal caliber and tortuosity or a blood pressure much higher than the degree of retinal arterial narrowing. The diagnostic feature for atherosclerotic hypertension is the observance of atheromatous plaques, and the presumptive observations are as follows: the degree of narrowing of the retinal arteries is proportional to the hypertension, the arterial tree is straightened, and vascular accidents may have occurred.

The progress of the atherosclerotic group is slower, and frequently the malignant phase never develops since the patient dies of a cerebral or cardiac accident. However, the disease may progress to a malignant phase, and hyaline arteriolar sclerosis may secondarily complicate the picture.

Summary

Obviously, for the sake of clarity I have tended to oversimplify a basically complex situation. For example, I have been more didactic than practical in the section on atheromatous sclerosis. I do hope, however, that I have clearly emphasized the difficulties of ocular diagnosis and the importance of the cooperation between the ophthalmologist and the family physician.

568 Lafayette Avenue

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Discussion

Anna St. C. Laing, M.D., *New York City.*—Dr. Olmsted has spoken of the two main types of arteriosclerosis as seen in the retina, atherosclerosis and arteriolar sclerosis.

The atheroma appears at certain sites of predilection in the retinal artery behind the cribriform plate. Atherosclerosis has frequent vascular accidents. The author has shown you a picture of what happens when the atheroma blocks the central artery. It can block a smaller vessel and cause a loss of vision in the area supplied by that artery. If a patient comes with an occlusion of the central artery, he has only one chance that his vision may be saved, that is, if the thrombosis is small enough to move on to a smaller artery. The same process might occur in a vein.

In arteriolar sclerosis the change in the arterial wall is due to a resistance to a prolonged increase in blood pressure.

To the many mechanisms for the controlling blood pressure recently a humoral factor has been established. A substance generated in the kidney cells acts directly on the arterial wall causing contraction and increased tone. It is the wear and tear on the walls of the contracted vessels which leads to a thinning of the wall and hyaline degeneration in turn leading to tortuosity of the vessel and the appearance of segments. The process of repair is fibrotic thickening of the vessel. There is some indentation at arteriovenous crossings and increased light reflex in the fairly early stages. As the process continues, the vein is completely hidden behind the artery. Vessels assume a copper wire appearance, then silver wire. Papilledema, hemorrhage, and cotton-wool patches are the terminal stage.

The lesson to be learned from this is that the fundus of the eye is a valuable contributing factor in diagnosing atherosclerosis and arteriolar sclerosis. But the point must not be forgotten: the ophthalmologist alone cannot make the diagnosis without the aid of the internist and sufficient laboratory data.

"Space Helmet" Aid to Young Surgical Patients

Navy doctors have perfected a "space helmet" for children to wear on flights into anesthesia. The helmet has been developed at the Bethesda, Maryland, Naval Medical Center to take the fear out of being put to sleep on an operating table. It has a built-in tube for administering anesthetics.

—*Associated Press, January 14, 1953*

Endocrine Aspects of Amenorrhea

GERTRUDE FELSHIN, M.D., NEW YORK CITY

(*From the Endocrinological Clinic of the Gynecological Service of Mount Sinai Hospital*)

AMENORRHEA is the absence of menstruation between puberty and menopause. It is a symptom and not a disease; therefore, it is important to determine the etiologic factors that produce this symptom. This entails a series of examinations in order to find the underlying cause so as to treat these patients properly. In treating amenorrhea it should be our aim to restore the normal series of events which occur in a normal menstrual cycle, and in thus restoring the normal cycle we achieve the requisites for fertility.

Menstruation can be defined as bleeding from a secretory or progestational endometrium. In order to produce the secretory endometrium a sequence of hormonal activities is necessary. The pituitary gland, situated at the base of the sella turcica, is divided into an anterior, a posterior, and an intermediary lobe. It is the anterior lobe that produces a hormone which stimulates a maturating primordial follicle of the ovary to develop into a graafian follicle. Another anterior pituitary hormone, the luteinizing factor, stimulates the ruptured follicle to develop into a corpus luteum. The graafian follicle contains a hormone known as estrin. This hormone acts on the endometrium to develop into the proliferative phase of the endometrium. The corpus luteum, through its hormone, progestin, stimulates the proliferative endometrium to develop into the secretory phase.

If the ovum is not fertilized, regressional changes occur in the corpus luteum, and there is a drop in the estrin and progestin levels. Their influence on the endometrium is rapidly diminished causing a shedding of the prepared endometrium. Uterine bleeding can be considered as menstruation only if all the changes in the endometrium have occurred. If an ovum is fertilized and nested, the corpus luteum persists, and its hormonal influence continues for the further development of a gestational endometrium.

Amenorrhea may be divided into primary amenorrhea when a patient has never menstruated and secondary amenorrhea in patients who have menstruated before. Primary amenorrhea may be due to:

1. Malformations: (*a*) imperforate hymen—the patient menstruates into the uterus and vagina producing hematometra and hematocolpos; (*b*) atresia of the vagina—if incomplete, it may be due to some inflammatory condition that occurred in childhood. If complete, it is usually associated with anomalies of the uterus.
2. General systemic diseases, such as anemia, parasitic infestations, tuberculosis, malnutrition.
3. Endocrine dysfunction.

Secondary amenorrhea may be due to:

1. Physiologic causes such as pregnancy, lactation, and menopause. These are the most common causes of amenorrhea.
2. General systemic conditions, such as tuberculosis, obesity, malnutrition, parasitic infestations, and anemias. These amenorrheas may be caused by decreased function of the endocrine glands. Amenorrhea may occur in acute and chronic diseases.
3. Environmental changes: The latter are believed to be due to hypothalamic influence.
4. Psychologic disturbances.
5. Local diseases, such as tuberculosis of the endometrium, postpartum endometritis, or radical curettage may result in temporary or permanent amenorrhea.
6. Secondary effects from exposure to x-ray may cause amenorrhea.
7. Masculinizing tumors of the ovary such as luteomas and arrhenoblastomas.
8. Pituitary tumors and diseases.
9. Hyperplasia and tumors of the adrenal cortex.

Amenorrhea may primarily be due to a disturbed function of one or more of the endocrine glands. In the search for the endocrine etiology of amenorrhea, we should have a careful history and a complete physical examination in addition to various laboratory aids. The laboratory tests that are important are the following:

1. When the basal metabolic rate is abnor-

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mal, this may give an important lead to proper treatment. The normal for children is higher than adults. During adolescence the normal basal metabolic rate is plus 10 to 15 per cent.

2. Serum cholesterol determination may be of value if other diseases such as nephrosis, obstructive jaundice, and diabetes mellitus are excluded. The cholesterol content of the blood serum is usually increased in hypofunction of the thyroid gland. In estimating the cholesterol content in a given case, the wide range of normals must be taken into account. Blood serum cholesterol determination can be of great help in cases of masked hypothyroidism. The response to a test thyroid treatment is a fall in the cholesterol content of the blood serum. The cholesterol content will rise again after the thyroid medication is discontinued. This rise is usually greater than the cholesterol value before the thyroid test medication.

3. Determination of protein-bound iodine.

4. In children and adolescents x-ray determination of the ossification centers; this may be a clue to diminished thyroid activity.

5. Sugar tolerance test is utilized in cases of amenorrhea where pituitary pathology is suspected. There is usually an increase in sugar tolerance in pituitary hypofunction.

6. X-ray studies of the sella turcica and examination of the visual fields and eye fundi may give evidence of the presence of a tumor in the pituitary gland.

7. Vaginal smear studies (Papanicolaou) may help to determine the etiology of amenorrhea and the effect of treatment.

8. Endometrial biopsy gives a histologic picture of the functional state of the endometrium. In amenorrhea with persistent atrophic endometrium, ovarian deficiency may be assumed, although from biopsy findings one cannot conclude whether this is a primary ovarian or pituitary hypofunction. A persistent hypoplastic endometrium indicates a lack of ovulation.

9. Blood and urine hormone studies: The anterior pituitary, the ovarian follicle, and corpus luteum hormones can be demonstrated by biologic and chemical assay methods in the blood and urine. The ovarian hormone, estrin, can be identified and measured in the blood and urine by methods developed in the Laboratories of the Mount Sinai Hospital by Drs. Frank, Goldberger, and Felshin. The corpus luteum hormone, progestin, can be assayed in the urine by the chemical method of Browne and Venning. This shows the presence of excretory product known as pregnandiol. These assay methods have been of help to us in properly evaluating the endocrine etiology of some types of amenorrhea. A marked decrease of estrogen with corresponding decrease of the gonadotropic hormone points to a primary pituitary deficiency; estrogen decrease accompanied by an excessive gonadotropic hormone excretion is seen in primary hypofunction. It may be mentioned that the latter findings are typical of the menopause. Androgens, while present in small amounts normally, are increased in hyperplasia and tumors of the adrenal cortex and in masculinizing tumors of the ovary.

10. Studies of 17-ketosteroids should be made when adrenal disease or tumors are suspected. They are high in tumors and in hyperplasia of the adrenal cortex.

The above-mentioned tests are essential in evaluating the endocrine etiology of amenorrhea.

In the treatment of amenorrhea the glands to be considered are the thyroid, the ovaries, the anterior pituitary, and the adrenals. The thyroid disturbances are the most amenable to treatment. Amenorrhea may be seen in hypo- or hyperthyroidism. The thyroid gland is functionally associated with ovarian activity. According to Hamblen the thyroid influence on the ovary is mediated by changes in oxygen metabolism. In hyperthyroidism radioactive iodine is now used. In amenorrhea associated with hypothyroidism thyroid in adequate doses is given.

The administration of estrogens may merely produce bleeding, but this is not a menstruation because it is not the result of ovulation.

The well-defined clinical syndromes associated with the pituitary type of amenorrhea are (1) Frohlich's syndrome or adiposogenital dystrophy which occasionally is confused with dietary obesity, (2) acromegaly and gigantism due to eosinophilic adenoma of the anterior pituitary gland, and (3) Cushing's syndrome, found in basophilic adenoma of the pituitary or in tumors or in hyperfunction of the adrenal cortex. Recently small doses of cortisone have been used in hyperplasia of the adrenal cortex to supress the ACTH secretion.

In conclusion, we can say that in amenorrhea of endocrine origin every effort should be made to determine the etiologic factors responsible. A thorough physical, psychologic, and laboratory evaluation is essential. Only then can a rational treatment be instituted.

888 Park Avenue

Discussion

Lois J. Plummer, M.D., *Buffalo.*—Dr. Felshin has presented a comprehensive review of the problem of amenorrhea. As a pediatrician, I shall direct my comments toward the adolescent age group.

The first question that might arise is when we should become concerned about a girl's failure to menstruate. The average age of menarche in this country is thirteen to fifteen years, the normal limits being ten to seventeen years. The menarche is most closely correlated with bone age so that when in doubt, it might be well to get a radiologic interpretation of the bone age.

Other factors must be taken into consideration, including the genetic influence which may be elicited from family history of endocrine diseases as well as age of onset of menstrual periods in the mother and other female relatives. The tall, muscular girl is apt to menstruate later. Climate also seems to have an influence, menarche being later in the warmer climates. Temporary amenorrhea often occurs in the summer. Preceding illness and emotional adjustment are other very important factors. Much information of direct bearing on the diagnosis can be obtained by a careful history.

In the physical examination one should look for the presence of systemic disease, the type of body build, and presence of secondary sex characteristics. Fundoscopic examination, visual field determination, and skull x-ray are useful in ruling out pituitary diseases. Pelvic and rectal examination will help to exclude developmental anomalies, pregnancy (and this must not be forgotten even in the adolescent), and tumor.

The rarer entities have been enumerated by Dr. Felshin. Most frequently we have to distinguish between pituitary and ovarian disturbances. One of the most helpful tests is the gonadotropic assay. The follicle stimulating hormone or FSH is high in ovarian deficiency and diminished in pituitary or hypothalamic lesions. In the young girl the urinary sediment can be used in place of the vaginal smear to look for estrogen effect on the epithelium.

As an aid to the diagnosis of thyroid disorders, I believe that the most valuable single procedure, where available, is the determination of the protein-bound or butyl-extractable iodine in the blood serum. If the basal metabolic rate is used, one should not rely on a single determination but, rather, repeated, carefully done measurements.

In conclusion, I should like to emphasize the importance of making an accurate diagnosis through careful history, physical examination, and laboratory studies where indicated. The indiscriminate use of hormones in therapy is certainly to be deplored and can do irremediable harm.

Newspaper Editor Advices Physicians

Mr. Edward Lindsay, writing in the *Illinois Medical Journal*, considers the problem of the doctor and the press from the point of view of a reputable and experienced newspaper editor.

"During the dark days of medico-press relationship, which existed throughout most of my life, our newspapers have often been guilty of, to say the least, undignified behavior in getting stories they felt they had to print," Mr. Lindsay admits.

"However, it is possible for the medical profession to have a good press and for newspapers to have prompt and reliable medical news, including interesting, but sound, feature stories on new drugs and new treatments. This must begin by the realization among the doctors themselves that they must have a favorable public opinion in a democracy in order to have a favorable climate in which to practice medicine."

The editor concludes with a few suggestions for improving medical-press relations. "A committee from any local medical society can lay the groundwork for good public relations with the newspapers by getting the top editorial management of the local press in for an evening or two of soul-searching discussion. . . .

"A little frank discussion, based on specific situations, will be the beginning of mutual understanding. In East St. Louis and Decatur, Illinois, such understandings have been written into a formal code that has been accepted by the doctors, hospitals, and the press."

—*Illinois Medical Journal, January, 1954*

The Thiersch Operation for Rectal Prolapse and Anal Incontinence

ROBERT TURELL, M.D., F.A.C.S., NEW YORK CITY

ALEXANDER Pope once said, "Be not the first by whom the new is tried, nor yet the last to lay the old aside." The latter applies very aptly to the forgotten Thiersch operation which was first proposed in 1891 for the treatment of rectal prolapse.[1]

Prolapse of the rectum has been defined as "a complete or incomplete protrusion of one or more of the layers of the rectum associated with or without protrusion of the anus."[2] Procidentia is a massive rectal prolapse involving all layers of the bowel wall and is regarded by practically all authors as a sliding hernia of the anterior rectal wall through the anal outlet. The prolapsing mass consists of a double intestinal tube, one situated within the other with pelvic peritoneum between the two tubes. The pelvic peritoneum may protrude anteriorly and laterally but never posteriorly and at times may contain loops of small intestine (Miles). In procidentia extreme atony of the anal sphincter and levator ani muscles may exist which eventuates in pronounced relaxation and patulosity of the anal orifice. Massive rectal prolapse has been recalcitrant to many forms of surgical intervention, as is suggested by the number of innovations and technics that have been proposed and abandoned, which implies a state of profound therapeutic dissatisfaction.[3]

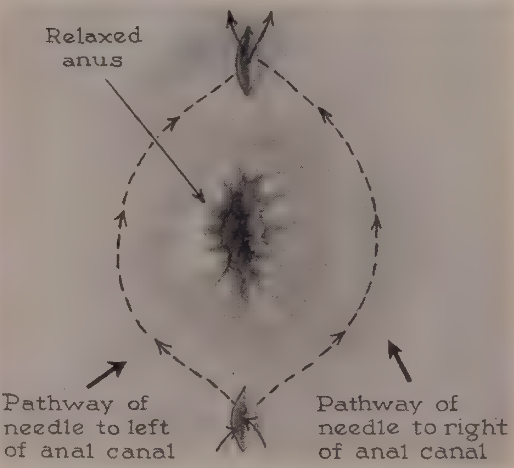
Relaxed anus
Pathway of needle to left of anal canal
Pathway of needle to right of anal canal

FIG. 2. Projected pathways of the needles.

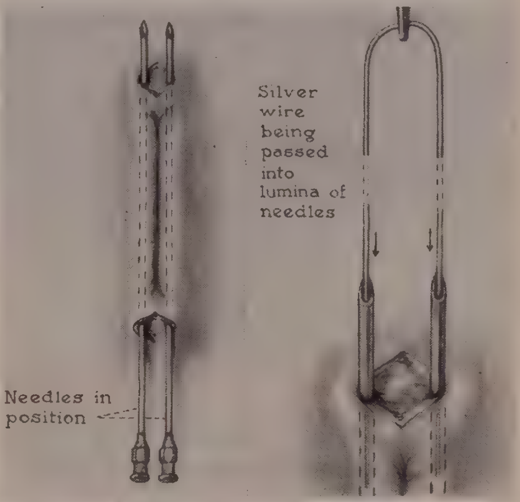

FIG. 3. Actual position of needles (*left*). The introduction of malleable silver wire into the lumen of each needle (*right*).

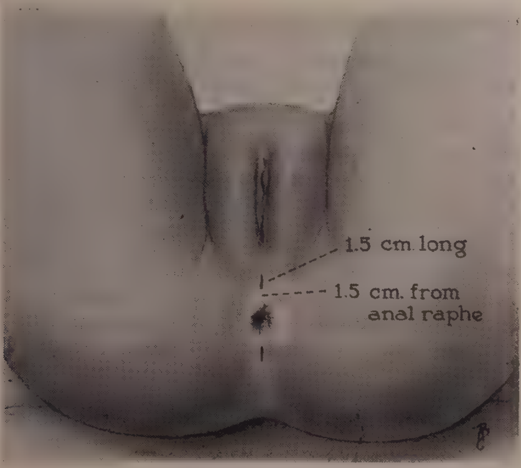

FIG. 1. Position of patient and incisions.

Anal incontinence which as a rule follows either obstetric procedures or operations performed on the anorectum, notably an incompetent fistulectomy, has also posed serious therapeutic problems. Almost equally difficult of therapeutic solution is the patulous anus with

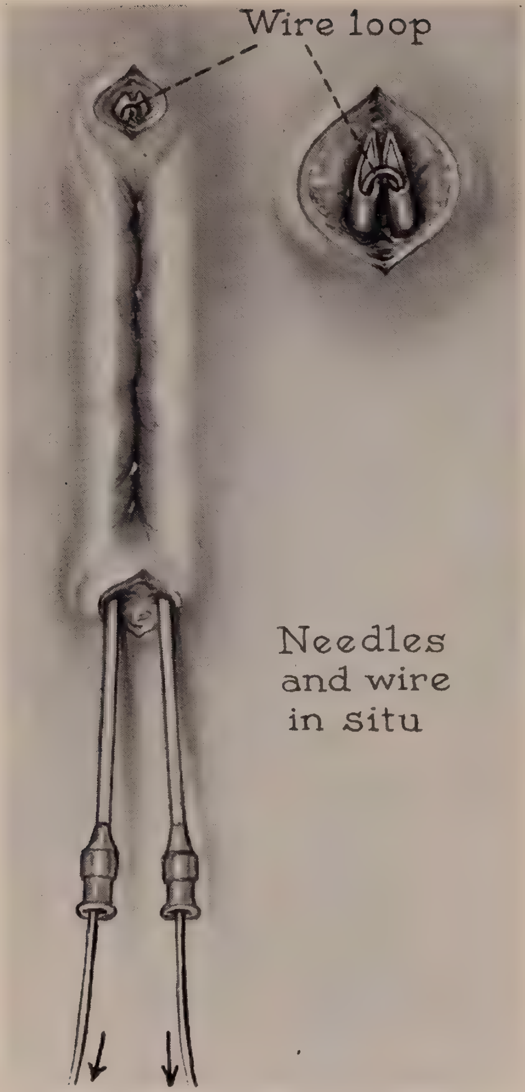

Fig. 4. Needles and wire in proper position.

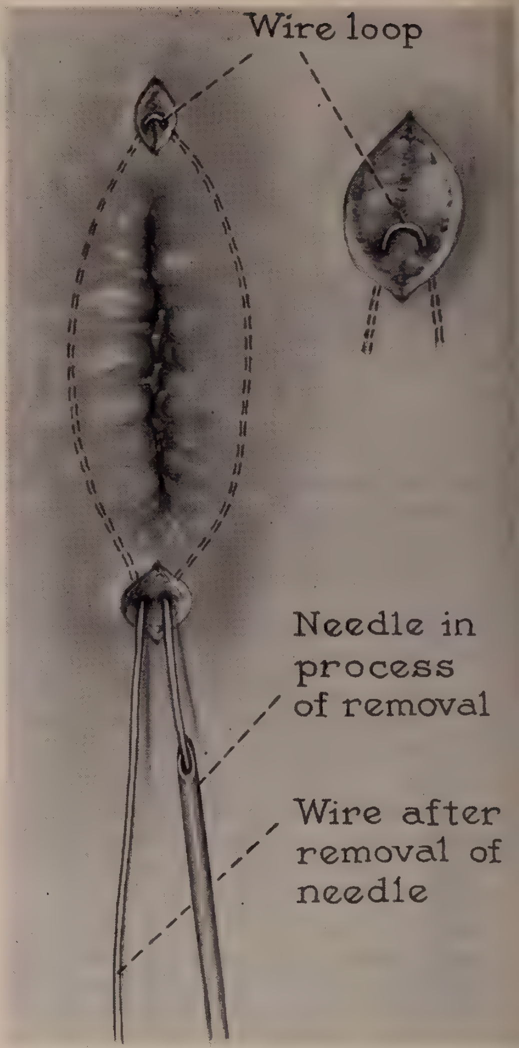

Fig. 5. Silver wire in situ.

varying degrees of prolapse of rectal mucous membrane accompanying pronounced atony of the anal sphincter muscle of undetermined origin, a condition observed in older patients, usually women who have born many children.

In recent years Gabriel[4] has revived interest in the Thiersch operation which he has employed primarily for anal incontinence. More recently Dodd[5] has modified the original Thiersch technic which is herewith reproduced (Figs. 1 to 7).*

Technic

The preoperative preparation employed consisted of a nonresidue diet, daily cleansing of the colon, and the oral administration of Terramycin (oxytetracycline) in a dosage of 250 mg. every six hours for three to five days. The operative area is prepared by washing with soap and water and the topical application of an antiseptic solution.

Under inhalation or inhalation-intravenous anesthesia with the patient in the lithotomy position, a small incision (1.5 cm. long) is made anteriorly and posteriorly about 1.5 cm. from the anal verge (Fig. 1). Large-bore needles are inserted, one at a time, into the posterior wound deeply subcutaneously, hugging the anal sphinc-

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* The author has also prepared a motion picture of this operation which has been approved by the Committee on Motion Pictures of the American College of Surgeons.

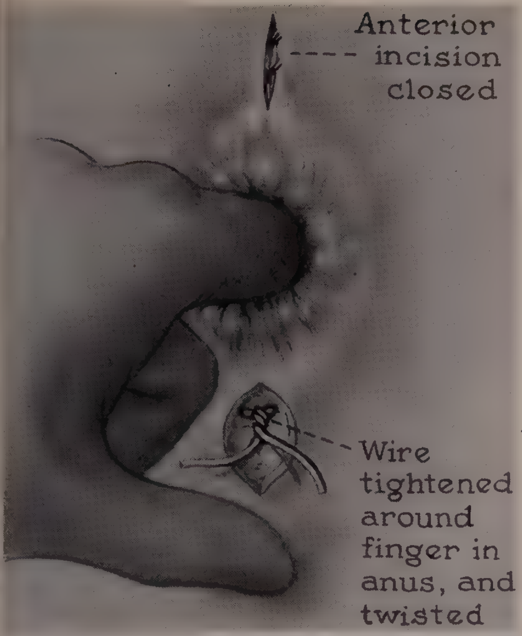

FIG. 6. Insertion of assistant's index finger past proximal joint.

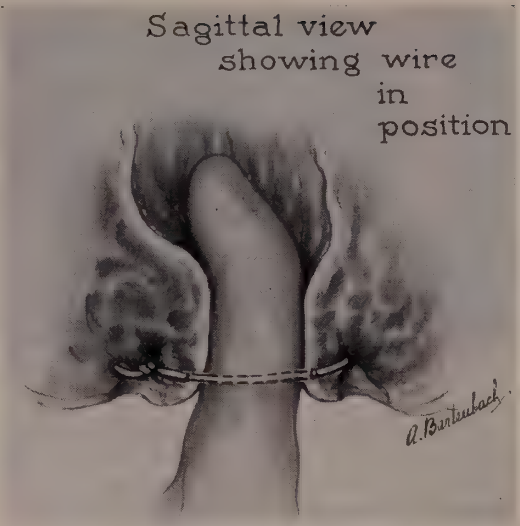

FIG. 7. Sagittal section of Fig. 6.

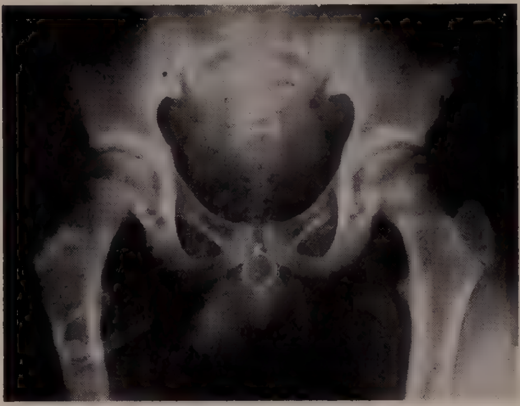

FIG. 8. Roentgenogram showing silver wire. Six weeks after operation.

ter musculature about 1.5 cm. away from the anal orifice, and are advanced anteriorly until the needle points protrude from the anterior wound (without inserting a guiding finger into the anal canal) (Figs. 2 and 3). The limbs of a U-shaped, soft, malleable silver wire, number 19 to 20, grasped at its summit with an anatomic forceps, are passed simultaneously into the lumina of both needles until they protrude posteriorly (Fig. 4). The needles are then withdrawn from the wounds through the posterior incision leaving the silver wire in the desired place (Fig. 5). The index finger of one of the assistants is then introduced into the anal canal past the proximal joint, and the wire ends are tightened around the finger and twisted several times (Figs. 6 and 7). The finger is removed, and the excess of the wire is amputated at the twisted stump which is buried in the soft tissues so as not to irritate the skin. Both wounds are closed with subcuticular, interrupted, number 3-zero plain catgut sutures, and the wound is covered with a small pad of collodion-soaked gauze.

Postoperatively, oral Terramycin in the preoperative dosage or parenteral penicillin (300,000 to 600,000 units) with streptomycin (0.5 to 1 Gm.) is continued for several days. A regular hospital diet is given. Digital rectal examination is made every two to three days for the early detection of fecal accumulation which may require enemas.

Case Reports

CASE 1.—A twelve-year-old, mentally deficient, boy was seen in the office on January 25, 1952, because of rectal protrusion observed by his mother and/or nurse following each act of defecation which necessitated manual replacement. He could not continue at a school for mentally deficient children and was sent home for medical care. I saw the prolapse on one occasion some thirty minutes after defecation. It appeared to be about 7 cm. (3 inches) long and was made up of all layers of the gut. The anal canal was moderately relaxed. Because of the size of the prolapse and the mental status of the patient, a Thiersch operation was performed under inhalation anesthesia on February 11, 1952, using

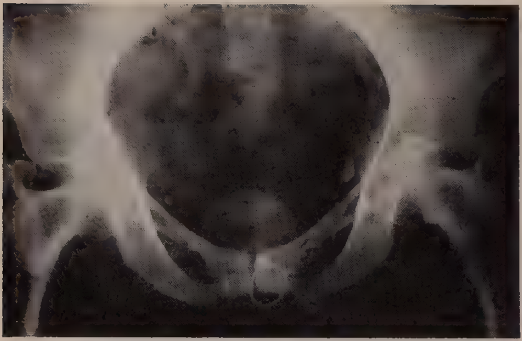

FIG. 9. Roentgenogram showing intact wire eighteen months after operation.

number 19 soft, malleable silver wire (Fig. 8). The postoperative course was uneventful except for the occurrence of fecal impactions necessitating enemas. After a wait of about six weeks following operation (March 25), the silver wire was removed without recurrence of the prolapse to date.

In this instance it was arbitrarily decided that a period of approximately six weeks should be sufficient time for the rectum to become solidly adherent to its surrounding supportive structures. This also proved to be right in two additional cases that had failed to respond to conservative therapeutic measures. Thus, Thiersch's original hopes are definitely realized in the case of juvenile patients, although recurrence of prolapse in adults is said to take place following removal of the silver wire.[5] This operation was also successfully employed by Tordoir[6] in the Netherlands during World War II for rectal prolapse in juvenile patients who lived on near-starvation diets. The average age of his 41 patients was two and one-half years.

CASE 2.—A sixty-five-year-old woman with procidentia failed to respond to two De Lorme operations. On August 22, 1951, a Thiersch operation was carried out under inhalation anesthesia. To date this patient has remained prolapse-free; she has had spontaneous bowel movements practically daily. A roentgenogram taken on April 12, 1953 (twenty-one months postoperatively) shows an intact wire ring (Fig. 9).

Since submission of this paper for publication the wire broke and was removed on October 29, 1953 (Fig. 10). There has been no recurrence of prolapse to date (February 18, 1954).

The results in this instance justified the employment of the Thiersch procedure as the recurrence of the prolapse appeared to be due largely to marked atonicity of the anal sphincter and levator ani muscles. Berkowitz[7] has recently reported on the good results of the Thiersch operation performed under infiltration anesthesia as a palliative procedure for the control of procidentia in elderly and debilitated patients; his patients have required enemas. I prefer inhalation or intravenous to infiltration anesthesia in order to avoid local sepsis which may occasionally follow the use of infiltration anesthesia.[4] In adults I propose to leave the wire "as long as the symptoms are relieved and no untoward incident develops."[4] The results in this case suggest that this operation may be an effective supplement to an abdominal or perineal operation for procidentia in which the anal sphincter and levator ani muscle remain atonic. At this writing such a patient is in the process of preparation for this operation.

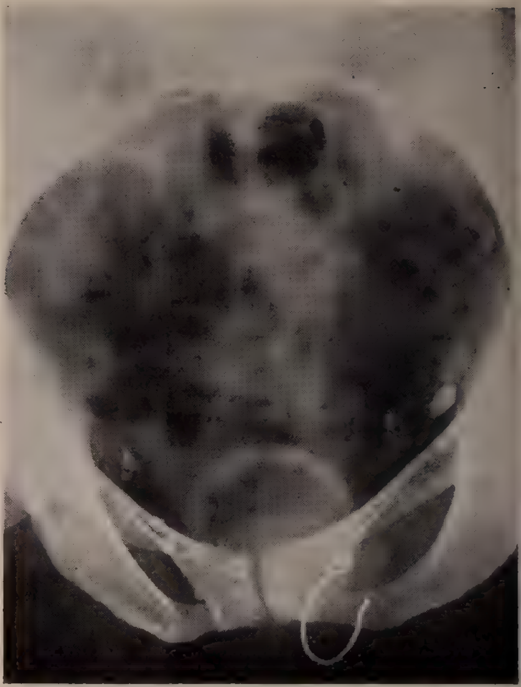

FIG. 10. Broken wire which was removed on October 29, 1953, with no recurrence of prolapse to date.

CASE 3.—A fifty-six-year-old woman was seen on May 7, 1953, because of continuous anal discomfort and incontinence of gas and soft stool that followed a fistulectomy performed (elsewhere) some three years earlier. Examination revealed a moist perianal dermatitis and a gaping and deformed anal canal. Following the performance of the Thiersch operation the dermatitis has disappeared, and she has had anal control but requires infrequent enemas.

In this instance it is too early to offer personal

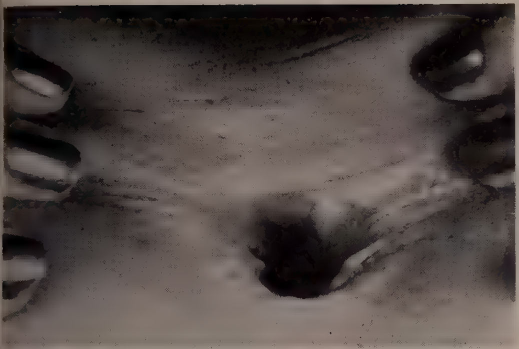

FIG. 11. Showing extreme anal patulosity with intermittent incontinence of undetermined origin to be treated by the Thiersch operation.

comment, but the results appear promising and thus far have paralleled those reported by Gabriel in his treatment of anal incontinence caused by relaxed anal sphincter musculature (Fig. 11).

Summary

The Dodd modification of the Thiersch operation is an effective palliative procedure for the control and correction of anal incontinence and massive rectal prolapse in elderly patients. This operation, as a temporary procedure, appears to be effective for rectal prolapse in juvenile patients who fail to respond to conservative measures by affording freedom from prolapse and sufficient time for the solid adherence of the rectum to its surrounding supportive structures. The illustrated technic is simple of execution and is well tolerated by juvenile and senile patients.

25 East 83rd Street

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Dates to Remember . . .

May 10 to 14, 1954
Hotel Statler, New York City
Annual Meeting
Medical Society of the State of New York

Skin Testing for Allergenicity of Parenteral Trypsin

SOLOMON SLEPIAN, M.D., BROOKLYN, NEW YORK

(*From the Medical and Peripheral Vascular Service of the Kings County Division of Kings County Hospital and the Allergy Clinic of Brooklyn Eye and Ear Hospital*)

THE recent popularity of crystalline trypsin in treating peripheral vascular disease, necrotic ulcers, and in certain bronchopulmonary conditions, as a local agent as well as intravenously and as an aerosol, tends to focus attention on the still unsettled question of the allergenicity of this biologic product.

The producers of crystalline trypsin* state in their package literature that signs of sensitization or antigenicity have not been observed, but they advise the use of an antihistamine before administration to prevent a histamine-like effect.

That trypsin liberates histamine in various tissues has been demonstrated by Rocha e Silva[1] and others.[2] They also pointed out the similarity between the pharmacodynamic action of intravenously injected trypsin and the action produced by injecting antigen in sensitized animals. It was felt that trypsin owed its toxicity in great part to histamine release in the tissues.

The reactions in animal anaphylaxis and in human hypersensitiveness are based on an antigen-antibody reaction. Although skin sensitizing antibodies are produced in only small amounts in animals, fundamentally animal anaphylaxis and human hypersensitiveness are the same.

TABLE I.—INTRACUTANEOUS TESTS WITH TRYPSIN

Dilution	Number of Patients	Skin Reactions None	1 plus	2 plus	3 plus
Nonallergic Patients					
40 units in 1 cc. or 10,000 units trypsin in 250 cc. of saline	48	27	18	2	1
200 units of trypsin in 1 cc. or 50,000 units of trypsin in 250 cc. of saline	48	14	20	12	2
1,000 units of trypsin in 1 cc. or 250,000 units of trypsin in 250 cc. of saline	12	2	1	4	5
Control, normal saline	48	43	5	0	0
Allergic Patients					
40 units in 1 cc. or 10,000 units trypsin in 250 cc. of saline	36	4	20	8	4
200 units of trypsin in 1 cc. or 50,000 units of trypsin in 250 cc. of saline	36	0	9	15	12
1,000 units of trypsin in 1 cc. or 250,000 units of trypsin in 250 cc. of saline	5	0	0	2	3
Control, normal saline	36	18	17	1	0

In constitutional reactions following intravenous trypsin, antibodies have not been demonstrated. The trypsin reactions are similar to those produced by certain venoms when injected in animals. The venoms also liberate histamine and produce reactions resembling anaphylaxis, but in these reactions, as with trypsin, antibodies do not seem to play a role. Venoms are complex substances, and it is believed that the reactions produced by them are due to the presence of a proteolytic enzyme similar in its properties to pancreatic trypsin. On the basis of the similarities between the reactions produced by trypsin, venoms, and antigen, one of the theories explaining the reaction in anaphylaxis and human hypersensitiveness is that enzymatic action might be a mediating factor.

That histamine alone is not responsible for the toxicity of parenteral trypsin was pointed out by experiments with Benadryl.[3] It was shown that this antihistamine which is antagonistic to either injected or liberated histamine did not modify the lethal action of trypsin in the guinea pig or dog. It was concluded that the hypothesis which bases the toxicity of trypsin only on histamine release requires reconsideration.

Fisher and Wilensky[4] treated peripheral vascular and thromboembolic diseases in Kings County Hospital with small parenteral doses of

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* Tryptar, Armour Laboratories.

TABLE II.—PASSIVE TRANSFER TESTS

	Reactions in Sensitized Sites				Reactions in Control Sites			
	40 Units	200 Units	1,000 Units	Normal Saline	40 Units	200 Units	1,000 Units	Normal Saline
Patient C								
Subject 1	1 plus	2 plus	3 plus	1 plus	1 plus	2 plus	3 plus	1 plus
Subject 2	Negative	1 plus	2 plus	Negative	Negative	1 plus	2 plus	Negative
Subject 3	1 plus	2 plus	3 plus	Negative	1 plus	2 plus	3 plus	Negative
Patient F								
Subject 1	Negative	2 plus	2 plus	Negative	Negative	2 plus	2 plus	Negative
Subject 2	1 plus	1 plus	2 plus	Negative	1 plus	2 plus	3 plus	1 plus
Subject 3	1 plus	2 plus	3 plus	Negative	Negative	Negative	2 plus	Negative

crystalline trypsin in saline and found that about 50 per cent of the patients developed manifestations of a constitutional reaction in the form of either chills, headache, or intestinal or chest pain. The concentration used did not exceed 200 units per cc. of solution and was much smaller than those used by others. The possibility of using a skin test with trypsin to predict such reactions was considered. On the basis of our present knowledge of the mechanism of allergic reactions, skin testing as a guide in this instance should be of questionable value since skin-sensitizing antibodies have not been demonstrated following injection of trypsin in animals or humans.

Skin tests were performed on 84 patients in whom trypsin therapy was not contemplated. These were divided into two groups. One group was selected from the female medical ward and consisted of 48 patients with various diseases who gave no personal or family history of allergy. The other group consisted of 36 ambulatory male and female patients, all of whom gave a personal history of allergy and were being treated in the allergy clinic of the Brooklyn Eye and Ear Hospital. They were tested intradermally with crystalline trypsin diluted in normal saline in the strengths used for treatment of peripheral vascular and thromboembolic diseases with the exception of a few in whom stronger solutions were used (Table I). The reactions were read 1 to 4 plus depending on size of wheal and extent of erythema.

In analyzing the results it is apparent that the nonallergic patients show less tendency to react to the intracutaneous injection of trypsin, and the stronger the solution, the greater the reaction. There is no clear-cut difference between the two groups since all the patients tested showed a reaction to a greater or lesser degree. The skin test, therefore, cannot be used as a guide to predict constitutional reactions with trypsin given intravenously.

The local skin reaction at the site of the intradermal injection is not due to an antigen-antibody reaction. That histamine release is entirely responsible for the local reaction has not been definitely proved. The localization of trypan blue at the site of the trypsin skin test, when followed by a trypan blue injection intravenously, indicates the presence of histamine at that site. Substances other than histamine have been shown to give a positive trypan blue test as well.[5] This is not a specific test for histamine release, therefore, since other substances may be present locally as well as histamine to account partially for the reaction. The intracutaneous trypsin reaction appears to be a nonspecific one, trypsin acting as an irritant.

Passive transfer tests were performed with the serum of two patients who had previously received intravenous trypsin. They both were female diabetics under insulin control who had ulcerations of the foot and impending gangrene due to vascular occlusion. The ulcers were treated for various periods with local application of crystalline trypsin, and each was given one or two courses intravenously as follows: The first day 10,000 units of crystalline trypsin were given in 250 cc. of saline, the second and third day 20,000 units, and the fourth day 50,000 units.

Patient C began to have a constitutional reaction during her fourth infusion while receiving 50,000 units in 250 cc. of saline. The infusion was stopped, and there were no serious untoward effects. Patient F began to have a reaction while receiving an infusion of 10,000 units in 250 cc. of saline. This was her second course, which was one week after receiving four infusions with no side-reactions.

Blood from these patients was taken about one week later and properly processed for passive transfer tests. The serum from each patient was used on three separate subjects, selected from the wards, who had no history of allergy. The results are tabulated in Table II. It can be seen that the skin reactions in the sites prepared with serum are the same as the control sites, with the exception of the instance with patient F serum in subject 3. Since the other tests were uniformly at variance with this, it should be disregarded. From these findings it is concluded that there were no skin-sensitizing antibodies transferred to the skin of the tested subjects.

Summary

Skin testing with solutions of crystalline trypsin are of no value in predicting constitutional reactions when trypsin is given intravenously. The constitutional reactions do not appear to be due to an antigen-antibody reaction since passive transfer tests did not reveal the presence of skin-sensitizing antibody in patients who received crystalline trypsin intravenously and in whom ample time was allowed for antibody formation before the tests were made.

824 Linden Boulevard

The cooperation of Drs. Martin M. Fisher, Nathan D. Wilensky, and William R. Griffith is gratefully acknowledged for obtaining the clinical materials and of Drs. Arthur Fankhauser and Victor Ginsberg for permitting this report.

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Case of Multiple Episodes of Heart Stoppage Reported

An unusual case of successful restoration of heart function on four separate occasions within a ten-day period following long periods of circulatory cessation was reported in the February 13 *Journal of the American Medical Association*. The patient, however, succumbed to a fifth stoppage.

The patient, a sixty-eight-year-old woman, was admitted to the hospital of the University of Pennsylvania for surgery. On the fourth day following surgery she suffered her first instance of cardiac arrest. Four minutes after her heart ceased beating, an intern struck her sharply on the chest over the heart. There was an immediate resumption of respiration and pulse, according to the article. Five days after the initial cardiac arrest episode, the patient suffered a second attack. A blow on the chest over the heart by a nurse proved ineffectual. Artificial respiration and oxygen by inhalation were instituted. Five minutes after the attack, an intern again struck the patient on the chest with his fist, and once more her pulse and respiration were restored.

The third attack of heart stoppage occurred three days later. Several blows on the chest failed to restore the heart's function. Nasal administration of oxygen and mouth-to-mouth respiration were employed. Ten minutes later the patient's chest was surgically opened and the heart massaged. Oxygen, stimulants, blood, and electric shocks were necessary to restore heart function. The fourth attack occurred the next day, and again the patient's chest was opened and the heart massaged. Heart function was restored without the use of drugs or electrical stimulation.

The patient died during the fifth attack four days later.

Surgical opening of the chest and massage of the heart have been generally advocated as the form of resuscitative therapy to be used in cases of cardiac arrest, the article pointed out, adding: "This case history clearly shows that this form of treatment is not only life-saving but may be carried out successfully twice in the same person. Although recently it has received relatively little attention in the literature, it has been known that under such circumstances a strong blow struck on the chest may restore an effective circulation to a person with so-called cardiac arrest. In this patient the need for thoracotomy was obviated on two occasions by a simple blow on the chest.

"The speed and ease with which the precordium may be struck certainly justifies the trial of this procedure in many cases of cardiac arrest before cardiac massage is undertaken. It is seldom that patients in whom cardiac arrest occurs on the hospital wards survive, as precious time is usually lost before circulation can be restored. It is of interest that this patient had three separate episodes of arrest longer than four minutes duration (the usually accepted upper limits for effective restoration) with full return of consciousness, and significant permanent damage to the nervous system did not appear to have occurred after the first two occasions."

CLINICOPATHOLOGIC CONFERENCE

STATE UNIVERSITY OF NEW YORK COLLEGE OF MEDICINE AT NEW YORK CITY
AND THE MEDICAL AND PATHOLOGY SERVICES, UNIVERSITY DIVISION,
KINGS COUNTY HOSPITAL, BROOKLYN, NEW YORK

Conducted by PERRIN H. LONG, M.D.

APRIL 23, 1953

Case History

Mr. F. C., a fifty-nine-year-old, white, Italian coal and ice delivery man, entered Kings County Hospital for the first time on January 2, 1953, with chief complaint of shortness of breath for one year.

Present Illness.—The patient was apparently in good health until two years before admission when he noted the gradual onset of exertional dyspnea and paroxysmal nocturnal dyspnea.

One year before admission the patient experienced persistent ankle edema. He went to his family physician who digitalized him and then placed him on maintenance doses of digitoxin, a low-salt diet, and Mercuhydrin, 2 cc. intramuscularly two to three times a week. The patient had no previous history of rheumatic fever or joint pains; his diet had been adequate; he had no preference for hot or cold weather or symptoms of thyroid disease. The patient had never had any chest pains or a "heart attack." He denied hypertension and palpitations. The patient claimed he had been unusually weak for the past eight weeks, and his doctor recommended hospitalization.

The past history, family history, and social history were noncontributory.

The system review revealed that for the past thirty years the patient had had a chronic cough, occasionally productive of blood-tinged sputum. He had been a heavy smoker. He denied night sweats or contact with tuberculosis.

Physical Examination.—Temperature was 99.4 F., pulse 105 and regular, respirations 24, and blood pressure 116/80. The patient was lying flat in bed and appeared rather lethargic; nailbeds and lips were slightly cyanotic.

The skin showed no rashes or petechiae and had normal texture and consistency. There were no palpable lymph nodes.

The head showed no external symmetry. Pupils were round, regular, and equal and reacted to light and accommodation. Extraocular movements were normal. The fundi showed slight arteriovenous nicking; disks and vessels were normal. The canals and drums of the ears were normal; there was no obstruction or discharge in the nose. No inflammation of the mouth was present; the tongue was normal, protruded in the midline, and was normal in consistency. The thyroid was not palpable; slight distention of the neck veins was present. There were no masses or nodes in the axillae.

The chest showed increased anteroposterior diameter. There were numerous rhonchi and wheezes throughout both lungs.

The apex impulse of the heart was easily seen and felt in the sixth interspace in the anterior axillary line. There was a high-pitched systolic murmur at the apex with a protodiastolic gallop, audible even when the patient sat up. No rubs or thrills were noted.

The abdomen was soft, and the liver was felt. There was 3 plus pitting edema of both ankles but no clubbing of the extremities. The genitalia were normal, and rectal examination elicited no masses. The prostate was slightly enlarged, soft, and symmetric.

Cranial nerves were intact, reflexes were physiologic, and vibration sense was intact. Pinprick was felt equally well on both sides.

Laboratory Examinations.—Hemoglobin was 15.3 Gm. and white blood cells 9,500. Sedimentation rate was 10 mm. in one hour. Differential count gave the following results: red cells were normocytic and normochromic; platelets were adequate; no atypical cells were seen; polymorphonuclears 96, lymphocytes 3, monocytes 1.

Urine was clear yellow, acid, negative for albumin, sugar, acetone, and bile. Specific gravity was 1.020, and microscopic examination was negative.

Circulation time, arm to tongue, with Decholin was fifty-five, thirty-five, and fifty-three seconds. Venous pressure in the antecubital vein was 137, 140, and 150 mm. of water. Blood chemistry revealed the following: urea 27, sugar 78, cholesterol 160, sodium 328, Wassermann negative, total protein 6.0, albumin-globulin ratio 3.4:2.6.

Twelve acid-fast smears were negative, one was positive. Tuberculin skin test was negative in dilutions of 1:10,000 and 1:1,000.

Posteroanterior x-rays of the chest and cardioesophagram were reported "no recent pulmonary pathology; huge water bottle-shaped heart." Intravenous pyelogram was negative. Slit kymograph showed "movements of the heart borders were somewhat diminished."

Fluoroscopy was reported as follows: "Marked cardiomegaly involving all chambers, mainly the left ventricle. Cardiac pulsations were somewhat diminished. Cardiophrenic angles appeared sharp."

Electrocardiogram was reported "PR 0.22 second, low voltage in peripheral leads; R complex in leads I, II, aVF, V_6; depressed ST segments in I, II, III, aVF, and V_5, V_6. Tracing suggests a semivertical heart with clockwise rotation, incomplete left bundle branch block, and left ventricular hypertrophy."

Ballistocardiogram on January 15 showed "notched J wave and low voltage with a relatively large prosystolic wave." On January 20 the voltage was increased, and there were marked respiratory variation and short K waves and prosystolic wave which in the lateral ballistocardiogram was the largest complex. The phonocardiogram showed systolic murmur and a presystolic gallop at apex.

Radioactive iodine uptake was 21 per cent; basal metabolic rate was plus 30. Biopsy of the tongue showed leukoplakic glossitis. Congo red test showed 83 per cent retention of dye in serum in one-hour specimen.

Course in Hospital.—The patient remained afebrile. He was maintained on 0.2 mg. of digitoxin per day (trial with 0.3 and 0.4 mg. showed no improvement); Mercuhydrin, 2 cc. intramuscularly three times per week; thiamin 15 mg. per day orally; and a low-sodium diet. These measures did not alter the patient's course; he still had 3 plus ankle edema, an enlarged liver, and persistent dyspnea.

On February 2, 1953, a pericardial tap was attempted in the sixth interspace in the midclavicular line. No pericardial fluid was obtained, but a few cubic centimeters of bright red blood were withdrawn (hemoglobin 14 Gm., clotting time two minutes).

On February 4, 1953, the patient suddenly became unresponsive. His extremities were cold; blood pressure was 90/60; the heart sounds were audible and unchanged, and the radial pulse was weak and thready. There were scattered basilar rales in the lung. The patient was placed in an oxygen tent where he died quietly.

Discussion

Dr. Perrin Long: The clinicopathologic conference will deal with the case record of Mr. F. C., fifty-nine years of age. The discussion will be begun by Professor John McMichael, and following that discussion we will ask for questions before the pathologic material is presented.

Professor McMichael.

Prof. John McMichael: Fairly soon in this discussion I should like to put up the x-ray of the chest because the size of the heart is a very striking feature. When I first read the case history through, I thought, "This isn't too difficult," and then when I saw the heart size, my confidence was shattered. As you think about the problem, you should keep in mind this enormous heart filling about half of the whole chest apparently, dilated in all directions and with quite normal-sized vessels at the base.

Having got that mental picture, we can proceed now to consider the history, and we will come to the more expert opinions later on.

The patient was fifty-nine. There is nothing in his occupation which is relevant to the problem, and he apparently gave a clear story that he had been short of breath for one year. He had been in good health until two years before admission and after that there was the gradual onset of exertional dyspnea and paroxysmal nocturnal dyspnea. Now if ordinary spasmodic asthma is excluded, that paroxysmal nocturnal dyspnea is clear evidence of some form of left ventricular strain. A year before admission he had mild experience of ankle edema and went to his doctor who digitalized him, and then he got maintenance doses of digitoxin and the usual low-salt-Mercuhydrin regimen. I take it that some improvement took place at that time because he did not seek any further help.

He had no previous history of rheumatic fever. The diet had been adequate, no preference for hot or cold weather, so that thyroid disease seemed unlikely as a cause of heart failure. He had never had any chest pains or any type of heart attack, so that ischemic heart disease or myocardial infarction is unlikely from the history as given. There was no story of hypertension that the patient was aware of and no story of palpitations. He had been unusually weak for the last eight weeks, and his doctor recommended hospitalization. For the past thirty years he had had a chronic cough. The chronic cough, of course, could have been associated with the development of emphysema and some form of right heart strain, but this never produces a heart such as we have seen in the x-ray. The cough was occasionally productive with blood-tinged sputum. If this was a recent development, it was probably related to pulmonary congestion. He had been a heavy smoker.

Physical examination showed temperature normal, pulse a little rapid, respirations a little up, perhaps 24, and a normal blood pressure, 116/80. The absence of hypertension eliminates the first prop that we had hoped for.

The patient was lying flat in bed, which is rather unusual for a patient in left ventricular failure. He appeared rather lethargic. Nailbeds and lips were cyanotic; skin showed nothing of note. Lymph glands were nonpalpable. Head revealed no external asymmetry. Eyes were normal. The fundi had slight venous nicking at the points where arteries cross them but no other evidence of previous hypertension or arterial disease. Now this is often valuable evidence if it is noted as definite or obvious. When recorded as slight, you can use it or not as you like, according to your fancy. Slight distention of the neck veins indicates some venous congestion. Axillae showed no glands. There was an increased anteroposterior diameter of the chest with numerous rhonchi and wheezes throughout both lungs compatible with the history he gave of chronic cough, but we are still very doubtful as to whether this large heart could ever be accounted for on the basis of a chronic bronchitis and emphysema. The apex impulse was easily seen and felt low down in the sixth interspace in the anterior axillary line. One is surprised it is not even further out than that with a heart of that size.

However, it was a very large heart with the apex easily felt. There was a high-pitched systolic murmur at the apex with a protodiastolic gallop rhythm. There is a rather complicated phonocardiogram with too many sounds on it for me to interpret. But the main thing was a definite gallop with a systolic murmur; probably a reduplicated second sound was present too. There were no rubs or thrills.

The liver was three fingerbreadths down, presumably congested. The extremities showed 3 plus pitting edema of both ankles. There was no other significant abnormality in the rest of the story. Hemoglobin was normal. The sedimentation rate was 10, also normal, and the blood count revealed nothing of significance. The urine also contained no albumin; specific gravity of 1.020 indicates pretty good kidney function. So far the problem then centers around the heart with nothing found outside to help us very much.

Circulation time was grossly prolonged. That is again definitely indicative of left heart failure because the prolongation of the circulation time is due to delay in passage of blood through a large interthoracic lake, partly in the big heart and partly in the lung vascular bed. We take it that the story really had begun in the left heart rather than the right from the history of paroxysmal nocturnal dyspnea; the prolonged circulation time fits in with that. The pressure in the antecubital vein was moderately raised. Blood urea nitrogen, 27, is just slightly above the normal, which is the sort of figure you get in a mild degree of cardiac failure. Wassermann was negative and protein in blood in good order.

Acid-fast smears were negative. Then we have already seen the chest x-ray which reports a huge water bottle-shaped heart. I wonder if the radiologist would care to make any further comment on the chest x-rays at this moment.

Dr. Harold Schwinger: I would say the term "water bottle heart" is a confusing one and makes one think of a pericardial effusion. I don't think this is necessarily so. This is just a huge heart which may be either grossly dilated or may perhaps represent a pericardial effusion, just in a single projection. I don't like that term "water bottle heart." I say a greatly dilated or greatly enlarged outline.

Prof. McMichael: Do the oblique views show anything of importance?

Dr. Schwinger: They show nothing more except the heart is greatly enlarged in all diameters.

Prof. McMichael: No recent pulmonary pathology was obvious in the x-rays. I think we might have just one more look to see the lung fields because they are unusually clear for a patient in any ordinary form of cardiac failure. You usually find in a patient with left heart failure that the lung fields tend to show a good deal of root congestion and perhaps small pleural effusions and a good deal of fogging at the bases. A clear picture like this is really rather exceptional. So again that rather adds to the mystery than gives us anything more definite to build up our final diagnosis.

Intravenous pyelogram was negative. Slit kymogram was done, and the movement of the heart borders was diminished somewhat. I don't think really that slit kymograms help us very much in the differentiation of pericardial effusions and cardiac enlargement. An ordinary small heart ejecting from both sides of the heart a total of 200 cc. at each beat will diminish considerably in size at each beat. A great big heart ejecting a couple of hundred cubic centimeters will have very little movement of its borders, so that a great big heart usually has very grossly diminished apparent pulsations.

The electrocardiogram shows low voltage in the limb leads and R complex in leads I, II, aVF, and V_6 and depressed ST segments. The tracing suggests a semivertical heart with clockwise rotation and incomplete bundle branch block. The precordial leads show signs of left ventricular hypertrophy. In V_5 you have very typical left ventricular pattern with depressed ST segment and inverted T and rather prolonged activation time from the beginning of the QRS to the top of the R wave. So again everything points there to gross left ventricular enlargement. The ballistocardiogram showed a notched J wave. I don't know if Dr. Dock would care to give us a comment.

Dr. William Dock: He does not show evidence of a big stroke volume, and he does show the big waves in diastole which go with the gallop, which is already audible. This simply confirms the fact that this was a man with rapid filling of the ventricle, and the ventricle apparently emptied rather inefficiently.

Prof. McMichael: The phonocardiogram showed the systolic murmur and gallop rhythm and also a reduplicated second sound. A radioactive iodine uptake was done which was normal. Basal metabolic rate of plus 30 in a patient who is overbreathing a little bit in cardiac failure is not unusual. Biopsy of the tongue showed leukoplakic glossitis. There was no evidence of amyloid disease. I don't know if there is any further comment from the pathologist on this leukoplakic glossitis. Was that a definite diagnosis of leukoplakia, or would we prefer to put no emphasis on it?

Dr. Henry Siegel: I do not like the term, leukoplakia, to be used in a pathologic diagnosis. It means a white patch. In this instance the lesion was not malignant.

Prof. McMichael: Right. Since there is no clinical diagnosis of leukoplakia, we will ignore that suggestion. Congo red test showed that 83 per cent of the dye was retained in one-hour specimen so there is no evidence of leakage of Congo red into amyloid tissue. In the hospital he remained afebrile, had digitoxin, Mercuhydrin, thiamin, and low-sodium diet. These did not alter the patient's course. He still had 3 plus ankle edema and continued to be very ill.

On February 2 a pericardial tap was attempted, and no pericardial fluid was obtained, although a few cubic centimeters of bright red blood were withdrawn. So there was no fluid in the pericardium. Did the needle actually touch the heart; did it wobble on movement?

Dr. Martin Metz: Dr. Strober can answer that.

Dr. Murray Strober: The needle actually touched the myocardium. It was our impression it punctured the left ventricle, and the blood specimen taken was from the left ventricle.

Prof. McMichael: Good gracious!

On February 4 he suddenly became unresponsive. His extremities were cold. The blood pressure was 90/60. The heart sounds were audible and unchanged. The radial pulse was weak and thready. There were scattered bilateral basilar rales in the lungs. The patient was put in an oxygen tent where he died quietly.

Well, we have a very large heart, with a large left ventricle, and a great deal of evidence that the left ventricle was primarily involved, although in the later stages he was able to lie flat and was not orthopneic. With regard to pericarditis or pericardial effusion, we have the clinical facts that the venous pressure was not enormously raised.

There was no mention of a pulsus paradoxus or any other signs of pericardial tamponade. The apex was easily palpable, and we had the final test of a needle going into the pericardium where no fluid was found. There was no electrocardiographic evidence of pericarditis either and no friction. There was thus no pericardial effusion.

These relatively clear lungs are puzzling for left ventricular failure, and there is no doubt at the end he had right ventricular failure as well. Perhaps when he got a balanced degree of failure, his lungs may have cleared. Sometimes, when a patient develops right heart failure, the lungs can become relatively clear. So we take it that he had a very large heart, both right and left sides involved. What was the cause of this cardiomegaly? This was an enormous and outsized heart. You usually see the biggest hearts in young subjects with aortic valve disease. They are the people who develop really large cor bovinum. This man was older. He was fifty-nine, and there was no evidence at all of aortic valve disease, nor of any other significant valvular disease. Any noises or murmurs he had could readily be accounted for by cardiac dilatation.

Another common cause of obscure heart failure at this age is, of course, ischemic heart disease resulting from coronary occlusion. Sometimes coronary occlusion can take place in a gradual and insidious way with little "miliary" occlusions throughout the myocardium. This produces a form of heart failure and is not an uncommon cause of sudden death. However, you cannot really suggest the diagnosis of coronary disease unless the patient has had some story of angina and or other episodic attacks. So we are rather doubtful about this diagnosis. I have never seen a heart over about 550 Gm. or thereabouts from ischemic heart disease. Ischemic heart disease, since it destroys a certain amount of muscle, limits the amount of hypertrophy that can take place, and the very big hearts as a rule do not occur in ischemic heart disease.

Every now and again you get a patient with a very big heart, and the suggestion is made that he has had pre-existing hypertension which started up the process of dilatation and failure, the latter causing revision of blood pressure to normal. Well, that is not really a satisfactory explanation of some of these big hearts because if the blood pressure comes down to normal, the heart failure ought to recover. Old hypertension is, therefore, a very unlikely explanation.

Emphysema I have already ruled out because the condition began as left heart failure. The heart is far too big, and no form of pulmonary heart disease or right heart failure is acceptable.

Then you come to the rather rare causes of heart failure like Fieder's carditis. There is a form of obscure inflammation of the heart.

There is another condition which is common in African natives, causing about 20 to 25 per cent of heart disease in Central Africa. That is fibroplastic endocarditis with obscure cardiac enlargement of a progressive variety, unresponsive to treatment. Sometimes that is associated with eosinophilia, but nothing of that sort was present here.

Well, it is a very interesting problem, and I shall be very interested to see the solution. Now I have to put a label on it. I would think that it is just possible that the pathologist may be as hard pressed to name this condition as I am. He may find a very big heart with no very clear etiology. I think on the whole that is what he is going to find. I think I will just call this an idiopathic cardiac hypertrophy and leave it at that.

Dr. Long: Thank you, Professor McMichael! Are there any questions or comment?

Dr. Fogarty: Dr. McMichael, would you consider an intraventricular septal defect here at all? Is there any indication from the protocol that this might be an intraventricular septal defect?

Prof. McMichael: There is no suggestion of any murmur or thrill in the situation to suggest intraventricular septal defect. There is no particular mention of any reversal of a shunt, and something else should have been noted before the age of fifty-nine. No, I would not think that this is a congenital heart. The strain has been primarily left ventricular at the beginning.

Dr. S. August: In the absence of any Broadbent sign but in the presence of a possible tuberculosis report, would you consider anything like adhesive pericarditis?

Prof. McMichael: Adhesive pericarditis in nearly all cases is associated with a small or normal-sized heart. When you get heart failure in the presence of a heart which is not enlarged, then you certainly can consider an adhesive tuberculous pericarditis. But I don't think adhesive pericarditis is a very acceptable cause of gross cardiac enlargement.

I think that there are rare instances that occur following rheumatic disease in children but where there probably has been some element of myocarditis, which should have been present at an earlier age than in this man.

Dr. Dock: We have no other information—on how he ate, was he a married man eating at home with his family or what?

Dr. Strober: Living at home, and the history we got from him and his wife is that he always ate an adequate diet.

Dr. Dock: Until he was put on the salt-free regimen?

Dr. Strober: Yes.

Dr. Long: Am I to infer by that that a salt-free regimen is inadequate diet?

Dr. Ira J. Gelb: I would like to ask you whether you considered cardiac malignancy, although it is rather doubtful.

Prof. McMichael: Malignant disease affecting the heart nearly always is of an invasive type coming in from the lungs and spreading into the pericardium. It often produces a pericardial effusion as it invades the myocardium. You get changes rather like those of a myocardial infarct in the electrocardiogram. I don't see that it could cause this type of picture unless it was just growing in a solid thick mass in the pericardium, and that I have never seen.

Dr. Francis P. Bilello: I would like to ask if there is a possibility of an old mediastinitis, fixation of the heart, of the structures of the chest wall, hypertrophy, and dilatation in that manner.

Prof. McMichael: The old mediastinopericarditis said to cause cardiac enlargement?

Dr. Bilello: Yes, sir.

Prof. McMichael: I think that would have been more obvious in all sorts of other ways. I don't think this is either constrictive pericarditis or a pericardial effusion.

Dr. Long: Dr. Battaglia.

Dr. Biagio Battaglia: The Congo red test is unreliable in the primary type of amyloid disease, isn't it? But you eliminate it on the basis of the Congo red test here.

Prof. McMichael: We certainly have a negative Congo red, and we have a negative tongue and skin biopsy. These odd types of amyloidosis are most often associated with multiple myeloma. I would never diagnose cardiac amyloid disease unless I had something else to go on. If he had a bit of albuminuria or something of that sort, I might have given it some consideration, but a suggestion of primary amyloid disease in the heart would almost certainly be wrong.

Dr. Schwinger: From the radiologic point of view I would like to raise the question of a possible rheumatic valvular process with perhaps the mitral and aortic valves involved, the tricuspid also. This man shows a marked left ventricular enlargement. He also shows evidence of left atrial enlargement and a suggestion of enlargement of the left auricular appendages as well, besides the right heart enlargement. I wonder how slight were the few murmurs the man had. To be sure he does not have a multiple rheumatic valvular process.

Prof. McMichael: I think he would have had some sign of it. First of all, I don't think he could get a huge left ventricle without left aortic incompetence. The pulse pressure was perfectly normal, and there were no murmurs. I don't see how all signs could disappear. Sometimes when people go into heart failure, the heart contracts so weakly that the systolic murmurs, say at the aortic area, can become inaudible. Calcareous aortic stenosis sometimes is very difficult from that point of view. In fact, that is one of the common errors in diagnosis. You can easily miss calcareous aortic stenosis. I certainly don't think he had evidence of any other valvular disease, certainly none on this protocol. A tricuspid incompetence is usually associated with fairly gross signs of systolic pulsation in the neck veins or in the liver.

No, I think not. I think that perhaps a fairly silent calcareous aortic stenosis might just possibly enter the picture because we know that calcareous aortic stenosis is one of the conditions which can readily be overlooked in the later stages.

Dr. John J. Kelly, Jr.: Do you think that this patient's heart status could be secondary to some primary lung condition, marked emphysema or something of that type?

Prof. McMichael: I have already argued that question. Although he had a chronic cough with sputum and a deep chest in an anteroposterior direction and maybe he had emphysema, the emphysema was not an etiologic factor in this sort of heart failure. The left ventricle was so predominantly involved on all evidence—clinical, electrocardiographic, right from the beginning. No, I would exclude all forms of pulmonary heart failure.

Dr. Long: If there are no more questions, we will ask Dr. Siegel to present the pathologic findings.

Pathologic Report

Dr. Henry Siegel: Dr. Smith will present the autopsy findings.

Dr. J. Smith: The significant autopsy findings included a 2 plus pitting edema of the pretibial area and a 1 plus pitting edema of the sacrum. About 300 cc. of thin, clear, straw-colored liquid were present in the peritoneal cavity. The liver was slightly enlarged and weighed 2,000 Gm. Both pleural cavities were obliterated by dense fibrous adhesions. The left lung weighed 350 Gm., the right 400 Gm. The tissue was uniformly subcrepitant, and the cut section was purple red and exuded a small amount of frothy white liquid. The bronchial mucosa was thickened and a succulent grayish pink.

The heart weighed 850 Gm. and was uniformly hypertrophied and dilated. There were 300 cc. of thin, light brown liquid in the pericardial sac. On the anterior surface of the left ventricle, 2 cm. above the apex, there was a 5 by 5-mm. ecchymotic area. The trabeculae camae were flattened. The papillary muscles were hypertrophied. The left ventricle measured up to 18 mm. in thickness, the right ventricle up to 5 mm. One portion of the wall of the left ventricle, an area measuring 5 by 5 cm., was thin and measured 6 to 9 mm. in thickness. Only a few areas of red muscle could be distinguished in this grayish-white fibrous tissue, and the subtended endocardium was thickened, smooth, and grayish white. The lumen of the right coronary artery was occluded for a distance of 1 cm. by a dense, grayish-white, calcified tissue beginning at a point 2 cm. from its origin. The walls of the remainder of the coronary arteries were slightly thickened and contained an occasional soft, yellow plaque.

Dr. Siegel: Prof. McMichael stated that the largest heart that he has seen associated with ischemic heart disease was 550 Gm. Previous to the present case I have examined such hearts which weighed up to 650 Gm. In a recent publication summarizing the experience at the Mayo Clinic the authors described one heart that weighed 750 Gm. The heart in the case under discussion was even larger.

Sections of the right coronary artery showed it to be completely occluded in some areas by calcified material, fibrous tissue, and some hemosiderin-laden macrophages and in other areas by atheromatous material. The muscular coat had been almost completely replaced by fibrous tissue, a not uncommon finding in coronary artery disease.

A trichrome-stained section of the thinned area of the posterior wall of the left ventricle showed fibrous tissue. There was extensive fibrosis involving principally the inner half of the myocardium. Stains for amyloid, both the typical and atypical varieties, and for glycogen were negative.

Section of the arterior wall of the left ventricle illustrated the severe interstitial fibrosis and the marked hypertrophy of the myocardial fibers.

Section of the lung revealed a slight partial atelectasis and the thickened and partially fibrosed bronchial walls infiltrated with lymphocytes. The lumina were filled with polymorphonuclear leukocytes, desquamated cells, and mucous. Thickened alveolar septa and the heart failure cells associated with chronic passive congestion were seen on another section of the lung.

Section of the liver illustrated the classic picture of a severe, chronic passive congestion. There was no cirrhosis present.

Section of the kidney illustrated clearly the vacuolar degenerative change present in the terminal portions of the proximal convoluted tubules in the columns of Bertini. These vacuoles contained neither fat nor glycogen.

The final anatomic diagnoses include marked cardiac hypertrophy and dilatation, organized thrombus of right coronary, healed myocardial infarction of posterior wall of left ventricle, diffuse interstitial fibrosis of myocardium, coronary arteriosclerosis, chronic passive congestion of lungs and liver, parenchymatous degeneration of kidney, pericardial effusion, ascites, and edema of lower extremities.

The cause of death was coronary arteriosclerosis and thrombosis, myocardial fibrosis, and hypertrophy.

Previous to the present case the largest heart that I saw associated with coronary artery disease weighed 650 Gm. In the recent literature mention is made of a heart that weighed 750 Gm. The heart in the case now under discussion weighed 850 Gm.

Dr. Dock: Was the circumflex branch of the left coronary wide open?

Dr. Siegel: Patent. The wall was thickened. There were a few plaques.

Dr. Dock: Narrow but patent?

Dr. Siegel: Slightly reduced but patent. One point of interest is the site and size of the infarction of the left ventricle associated with the occluded right coronary artery and the patent left coronary artery.

This might lead one to infer that this heart represents one with a right coronary artery preponderance.

Summary

Dr. Long: Professor McMichael, would you like to close?

Prof. McMichael: This has been a very interesting lesson, and it is, as Dr. Siegel has been very kind in saying, an exceptional heart which I also thought clinically. Besides the infarcted area there was this other condition that we sometimes call miliary fibrosis scattered through the myocardium. But it was the size of the heart that really baffled me completely. I had never seen anything resulting from a myocardial ischemia get up to that size. Therefore, I thought that we were going to see something rare, as in fact I think we did. I don't think the 300 cc. of fluid represents a pericarditis.

Dr. Siegel: No.

Dr. Strober: I would like to make one point about the pericardial tap; Dr. Dock and the rest of the house staff who had seen the patient were quite sure that he did not have pericardial effusion. He had a visible, easily palpable apex. The ballistocardiograms and the electrocardiograms did not suggest pericardial effusion. However, we thought we had exhausted our studies with the man. He was losing ground clinically. We had given a trial on 0.3 and 0.4 digitoxin without any improvement. He was becoming progressively more lethargic, and the house staff jointly felt the man's only possible chance of survival was if he had a pericardial effusion. That is why we attempted it.

Prof. McMichael: I sympathize with you very much!

Dr. Long: Thank you very much, Professor McMichael and Dr. Siegel.

When Doctors Get Sick

Admitting he is a desperately ill man, the sick doctor staggers to bed bringing with him every medical and surgical textbook he can lay hands on. Once comfortable on the pillows he can see the problems of diagnosis more clearly. . . . He takes his pulse, inspects his tongue in his wife's hand mirror, and carries out a careful search of his entire body surface for spots. Finally he settles for malignant endocarditis, a diagnosis that, in his finals, would have had him thrown out of the examination room.

Doctors require different dosages from the general public. The patient is frightened enough to take the dose as prescribed, but in the profession, pills are generally taken in doses of *one handful now and then*, medicine administered as *a large swig pretty frequently*, and ointments are *rubbed on vigorously until alarmed by condition of the skin*.

The doctor's wife, who has recognized for some days that he is suffering from flu, suggests she summon one of his colleagues. But doctors, like animals, prefer to be ill alone. He refuses to see anyone, and when she insists on telephoning a rival practitioner the consultation is usually embarrassing and unhelpful:

"What's the matter with you, Bill?" asks the visiting doctor.

"Well, I think I've got polyarteritis nodosa or possibly methemglobinemia."

"Go on!"

"Yes. What symptoms should I have?"

"Oh, sort of pain in the limbs and so on."

"That's it exactly!"

"Well, I hope you get better."

"Yes, so do I. Kind of you to drop in like this. Goodbye."

And doctors recover in a different way from ordinary people. A layman is told to stay in bed for an extra week and take a fortnight at the seaside, but a doctor, after taking his temperature every half hour for a day or so, suddenly discovers he is completely cured.

He at once gets up and puts on his clothes, and either goes downstairs and takes the evening surgery or makes for the garden to catch up with his digging.

As most doctors will admit, they can't afford to be ill: they're not enrolled in a health insurance plan.

—*Richard Gordon, adapted from Punch*

CASE REPORTS

Auricular Fibrillation After Electric Shock with Complete Recovery

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(From St. Joseph's Hospital, Far Rockaway, New York)

DEATH from electric shock is due either to cardiac failure or to respiratory failure. The cardiac failure has been attributed to ventricular fibrillation when the current passes in sufficient density through the heart.[1] However, auricular fibrillation was observed in previously healthy persons by several investigators[2-5] following electric shock. Those who recover from electric shock may suffer various after-effects such as persistent muscular pains, fatigue, headache, and nervous irritability. However, these are usually not permanent.[6]

The case to be presented demonstrates several of the latter effects of electric shock with recovery.

Case Report

J. I., white male, age fifty-two, was admitted to St. Joseph's Hospital on October 12, 1950, at 9:45 A.M. via the emergency room. He had a history of electric shock while at work when he picked up an electric wire (AC current, 220 volts, 120 amperes). He fell to the floor, holding on to the wire for several minutes until the current was turned off.

The past history was essentially negative. The patient had come to the United States eighteen months ago. He enjoyed good health and had received no medical care prior to admission to the hospital. Family history was negative; the patient had a wife and five children, all alive and well.

Examination revealed a white male of fifty-two years, conscious and complaining of rapid heart beat and some precordial distress. Blood pressure was 140/90. Apical heart rate was rapid, 132 per minute; radial rate was irregular, 96 to 100 per minute (pulse deficit 32). Lungs were clear, abdomen negative, extremities showed no edema. There were second degree burns of the middle phalanx of the right middle finger. Impression was auricular fibrillation following electric shock and second degree burns of right middle finger.

Electrocardiogram on October 12 showed auricular fibrillation (Fig. 1). Complete blood count and urinalysis were negative. The patient was rapidly digitalized by administration of digitoxin. The following day the patient was feeling better and no longer fibrillating. Blood pressure was 150/80, and apical and radial rate were regular at 80 per minute.

On October 14 the patient was feeling well except for generalized pains, especially in the lower right back. Heart sounds were regular and 72 per minute, radial rate 72 per minute. Abdomen was negative, lungs clear, and blood pressure 140/80. Digitoxin was discontinued. Electrocardiogram was normal on October 16, and heart was regular at 72 per minute (Fig. 2).

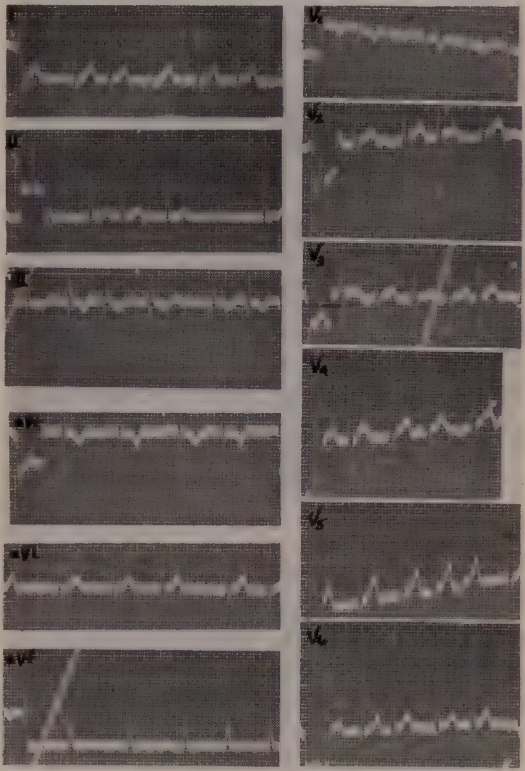

FIG. 1. Electrocardiogram taken on October 12 showing auricular fibrillation postelectric shock.

Two-meter film on October 17 showed normal heart and lungs. General condition was unchanged, but patient complained of muscular pains and aches in lower right back and thigh. Orthopedic consultation was held on October 21 because of persistent pains. Orthopedic report was traumatic myositis of right gluteus maximus (postelectric shock), and physiotherapy was advised.

On October 22 there were no complaints except for pain in the right lower back and gluteal region on motion. Blood pressure was 140/80; heart sounds

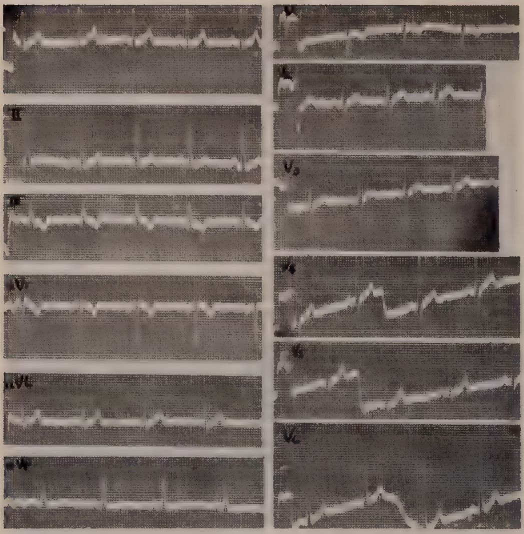

FIG. 2. Normal electrocardiogram on October 16.

regular, apical and radial rate 60 per minute. The patient was advised to continue physiotherapy and was discharged on October 23.

Final diagnoses were as follows: (1) paroxysmal auricular fibrillation following electric shock, (2) traumatic myositis right gluteus maximus, and (3) second degree burns right middle finger.

Comment

The usual reaction of the heart to electric current is reported as being ventricular fibrillation which is often fatal. This patient developed an attack of auricular fibrillation following electric shock. When we first examined this patient, we were unable to determine whether he had a normal heart prior to the electric shock. However, the return to normal sinus rhythm the following day with absence of evidence of cardiac damage, normal heart size on 2-meter film, normal electrocardiogram, and persistence of normal sinus rhythm would indicate a previously normal heart with fibrillation (postelectric shock) being paroxysmal in nature. As has been reported by previous investigators,[7] the damage was temporary, disappearing with the patient's gradual recovery from the immediate effects of the trauma. The muscular pain persisted for some time before subsiding. As has been noted by McConnell,[6] there are usually no permanent cardiac effects in those recovering from electric shock.

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Medical Society of the State of New York

ANNUAL MEETING

May 10 to 14, 1954

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Congenital Scalp Defect

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CONGENITAL defects of the skin are rare anomalies and mostly occur on the scalp. At least 134 cases have been recorded since Campbell's report in 1826.

Most often single or multiple pinhead to coin-sized defects of the scalp are seen. They lie over the parietal bones and are irregularly oval in shape with punched-out margins in a healing stage. Microscopically the picture is one of retarded growth of squamous epithelium, smooth muscle, and fat with the presence of well-developed connective tissue.

The cause has been variously ascribed to Simonart's bands between skin and amnion causing tension and avulsion, to trauma, or to familial arrest in development.[1] The prognosis is good when a small area is affected and other anomalies are not present.

Treatment consists of prevention of infection and stimulation of granulation tissue. Surgical measures must be taken when defects overlay the suture lines or show marked vascularity beneath because of the danger of meningeal infection and hemorrhage.

It is also of importance to recognize this congenital defect in order to prevent litigation for trauma caused by forceps.[2]

The following case is presented and added to the literature to call attention again to the condition.

Case Report

A woman, para 1, gravida 2, Rh positive, blood type AB, was delivered of a 7$^1/_2$-pound white male by outlet forceps following a normal full-term pregnancy. Physical examination was negative except for two coin-sized defects of the scalp over the parietal region. The lesions were treated with saline irrigations, and healing occurred in thirty days (Fig. 1). Follow-up of eighteen months shows a normal infant (Fig. 2). The scalp is completely healed although hair is still absent.

Summary

A case of congenital defect of the scalp is presented, and the importance of recognizing the character of the lesion is noted.

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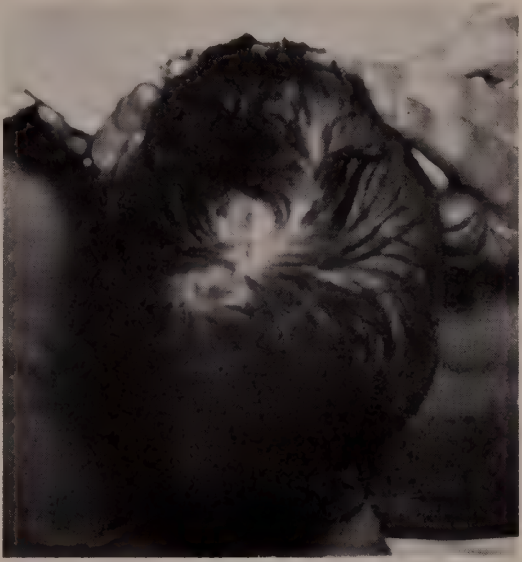

FIG. 1. Epithelization of ulcers six weeks after birth.

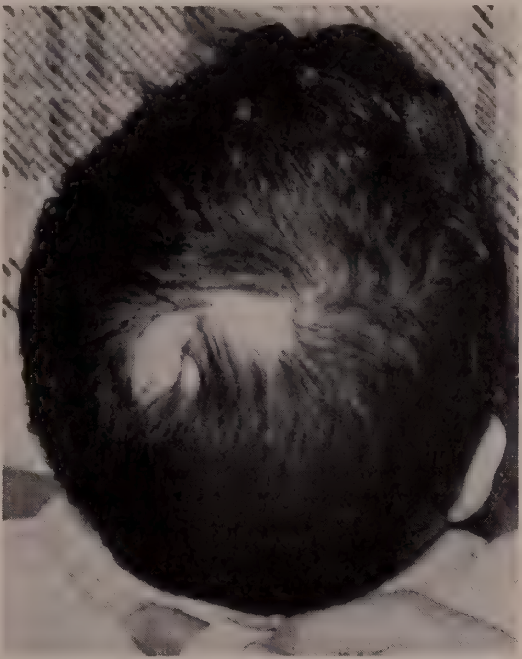

FIG. 2. Complete healing at one year. Two areas of alopecia remain.

SPECIAL ARTICLES

Medical Education Today

CURRIER McEWEN, M.D., NEW YORK CITY

(*Dean, New York University College of Medicine*)

THE opportunity to address you would be an honor under any circumstances; to do so under the auspices of the Augustus B. Wadsworth Lectureship makes it a double privilege and pleasure. I first met Dr. Wadsworth when I was a very junior member of the staff of the Hospital of the Rockefeller Institute. It must have been about 1929 when he had already been the inspired director of the Division of Laboratories and Research of the New York State Department of Health for fifteen years. He had been visiting Dr. Rufus Cole at the Hospital that day and dropped in for tea, which was served in the late afternoon each day in the lounge of the staff quarters. I presume he was there half an hour at the most, yet in that time he made an indelible impression on every one of us who met him. We were a pretty sophisticated group of embryo scientists, sensitive to the pose and patronizing air of some of the visitors to those teas, and the obvious simplicity and intellectual integrity which characterized Dr. Wadsworth attracted us at once. He and Dr. Cole chatted informally about some of their common research interests and the work of the State Laboratories, and we listened in admiration. Through the years after that, as I met him at meetings and at the Century Club in New York, my respect and affection for him grew, as was inevitable with anyone who was lucky enough to know him. At the beginning of this talk, therefore, I must acknowledge my thanks to you for allowing me to join with you in paying tribute to him.

It is a recognition of Dr. Wadsworth's broad interests in medicine that each of the lectures in this series, although they have covered a wide range of topics, has been in a field which has been influenced by him. This evening's lecture is no exception, for it would be impossible to think of Dr. Wadsworth's contribution to the development of public health laboratories without taking into serious account his appreciation of the relationship which such laboratories should have to research and medical education. There once was a time when medical schools, hospitals, research institutes, and public health departments had entirely separate functions to perform, but that time is long past. Today each of these institutions has as common purposes the advancement of knowledge through teaching and research, the control of disease, and the enhancement of health. The accent on one or another of these purposes varies in each of the types of institution, but the difference is one of emphasis only. A public health laboratory today, for example, which is carrying out purely routine procedures is not only failing to meet all its responsibilities and to rise to all its opportunities but also is in grave danger of intellectual atrophy and failure in even its primary function. As Dr. Wadsworth emphasized, "Even in the smallest laboratory, the work should, from the start, conform to recognized standards and should include research. Nothing is more fatal to the success of any scientific laboratory than that the workers settle down to routine work alone."[1]

Dr. Wadsworth emphasized also the advantages that come to the public health laboratory from participation in medical teaching, the stimulus that comes from contact with students and with academic colleagues, the sense of satisfaction it gives to any scientist worth his salt. It is self-evident that important advantages accrue also to the medical school through the addition of experts to the faculty and through the availability of facilities and skills required for special studies. It is fitting, therefore, that we devote some time this evening to a review of some of the modern developments and trends in medical education.

Full-time System

The developments in medical education which reached their peak in the past few years were just beginning when Dr. Wadsworth started his work here in Albany in 1914. Those developments were the natural outcome of the growth of the basic sciences and of technical advances, particularly in the German universities and clinics, and of the gradual spread of the full-time system of medical faculty appointments across this country. The result was an acceleration of the growth of knowledge with the ever-increasing need to add new subject matter to the curriculum and, occasionally, even new de-

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partments. From sheer necessity some of the older material was weeded out, but the net effect was a steadily progressive overcrowding of the curriculum and an increasing preoccupation with technical development. Since the end of World War II the advance of scientific knowledge has been still more rapid, and faculty groups in one medical school after another have begun to study their curricula.

Study of the curriculum has been a perennial preoccupation since medical education began, but what is happening in our medical schools today is a movement of major educational significance, as important perhaps in its way as that which began at Johns Hopkins forty-three years ago. The aim in all of these faculty self-analyses is to see how the great mass of knowledge can be presented to the student through many different departments without having it become departmentalized in his mind—that is to say, without having him lose the point that it is all part of medicine as a whole and without having him miss the concept of the patient as an individual like himself, beset by all manner of social, economic, and personal stresses in addition to the more particularly medical ones. Thus far there has been agreement that departmental organization should remain, but everywhere it is realized that differences between subject matter of most departments are less sharp than they used to be; that biochemistry, physiology, and pharmacology, for example, are concerned with similar principles and phenomena; and that even the differences between the basic sciences and the clinical departments are far less apparent than they were a few years ago. It has become clear that individual departments do not have vested rights in a set number of teaching hours nor in the teaching of a particular subject but that schedules and teaching programs are the joint responsibility of all departments and that they must be changed to meet changing conditions. In the face of the rapidly expanding knowledge, the curriculum must be surveyed constantly to break down artificial departmental barriers and to cut out the less significant material to make room for more vital developments.

Perhaps most important of all, it has become increasingly clear that the student learns best by working things out for himself. The modern application of the clinical clerkship is based on that principle, and now one sees its further extension in the critical studies being made by basic science departments of their laboratory exercises. Think of the laboratory work most of us did as students and which is still being done in many departments today. Our laboratory manual not only told us what to do step by step, but often even told us just what the results should be. Could anything be less well designed to encourage in our students the kind of thinking we want them to do? Especially in that most dynamic of subjects, biochemistry, one suspects that some of the laboratory exercises are no longer appropriate and that they are continued partly because of inertia and partly because the student laboratories are not designed or equipped for the types of experiments that would make the subject more vital and interesting to the students of today.

Changes in Curriculum

Possibly World War II was the stimulus that started or, at least, accented the discussions and educational experiments that are so widespread today. Certainly it played an important role in our own medical school, where the faculty—while I was away, I must add—began a series of studies of what changes should be made in the curriculum to meet the needs of a postwar world. Out of these discussions came a publication in 1945 entitled, "The Mission of a Medical School," which is, I believe, one of the most important documents on medical education since Abraham Flexner's report in 1910.

In this statement of their faith, the faculty emphasized that, "The undergraduate curriculum must be basically reconstructed in order to attain, first, unity, and second, flexibility." They went on to declare that, "The recovery of unity involves, first of all, the recognition of the fundamental purpose of undergraduate medical education. This is to promote the attainment of knowledge through personal inquiry, to encourage capacity for logical thought, and to acquire proficiency in methods through individual experience. The acquisition of the tools with which to learn to think and to work must be given precedence over a futile effort to attain immediately all necessary knowledge. A man cannot think without facts, but he cannot think with facts alone." As a step beyond this mere enunciation of purpose toward the attainment of a unified approach, the statement declared that, "it is necessary to consider the fundamentals of medicine conceived by the faculty as a whole, its parts distributed afterwards to the particular scientific departments apparently best fitted to present that material. Teachers from different fields of medicine should participate together and the total picture of disease be presented in all its phases. An ultimate organization is envisaged in which large segments of the curriculum will be under the supervision of interdepartmental committees, the whole finally integrated by a group representing the entire faculty."

Our faculty was convinced that the curriculum needed revision and that the revision must be based on principles which the evolution of society and of medicine itself has made mandatory. They pointed out that, "The increased use of technical methods requires that the physician be more thoroughly trained in the application of the chemical, physical, and biological sciences. The growing social responsibilities of medicine create the need for instruction in the social causes of disease. The changing nature of illness must result in an emphasis upon a different group of diseases. This must be accomplished without increasing the total time or cost of medical training." As an answer, the faculty offered a program of practical steps to be taken which included the introduction of biophysics, the reorientation of anatomy to make it human biology, greater emphasis on psychiatry and on psychosomatic, industrial, and social factors in medicine, development of what was in 1945 the new field of rehabilitation, the crossing of departmental lines in teaching, and the expansion of graduate and postgraduate medical education. During the eight years since the program was begun, some of the objectives have been fully achieved, and progress has been made in all.

Experimental Program

I have gone into this detail in outlining changes in the school in which I work for the obvious reason that I know them best, but since "The Mission of a Medical School" was published, experimental programs have been started at a number of medical schools; indeed, the school at which no changes of the sort have been made would be the exception. These changes have been aimed particularly at achieving two of the purposes I have referred to: the integration of teaching between departments and the development of the concept of the patient in teaching rather than the disease. Actual experiments have varied from the introduction of minor changes in course content or new, interdepartmental lecture courses to fundamental changes in the whole structure of subject presentation such as that in progress at Western Reserve University. In the latter school, teaching of a given subject, such as the musculoskeletal system, for example, is done by a team of instructors from several basic science and clinical departments approaching the subject together. Even the construction of student laboratories has been fundamentally changed so that each student has his own working unit consisting of laboratory bench and desk, and the departments come to his "laboratory" instead of the student going to theirs.

During the past few years the Association of American Medical Colleges has played an increasingly important part in encouraging such curricular studies and experiments. Two years ago the Association assisted in a national conference on the teaching of psychiatry and last year in one on preventive medicine. The success of these efforts has been so great that now the Association has undertaken a ten-year program of teaching institutes on a variety of subjects which will be held each year during the week prior to the Association's annual meeting. At the one completed a few weeks ago the subject was "Biochemistry, Physiology, and Pharmacology." One or two representatives were present from each of the nation's medical schools, and the six days devoted to the institute provided the time essential for thorough discussion on an informal basis. The benefit from this sort of free exchange and cross-fertilization of ideas simply cannot be measured, but the enthusiasm of the participants left no doubt of the success of the meetings, and plans are going forward for next year's institute on "Pathology, Microbiology, Immunology, and Genetics." Again I must say, however, that perhaps the most significant aspect of these meetings is the fact that they are being held at all. They, like the experimental programs at the individual schools, are symptomatic of the ferment in the faculties and of the widespread determination to make changes where they are needed.

Certainly, the experiments which I have mentioned have been fostered also by the recently completed survey of medical education in the United States made jointly by the Association of American Medical Colleges and the Council on Medical Education and Hospitals of the American Medical Association, under the direction of Dr. John Dietrick. One of the important observations of the report deals with the size of the teaching burden of medical schools. It is pointed out that, for far too long, we have tended to think in terms of the number of medical students in computing a school's teaching responsibilities. In actual fact, however, the average medical faculty is responsible also for the advanced education of a large number of interns and residents, devotes considerable time to the continuing education of practicing physicians, and helps in teaching nurses. In addition, the medical faculties of our country carry the major responsibility for research in the field of health and disease as well as a very large share of responsibility for advances in the basic sciences. To this must be added the contributions our faculties make in the care of the sick. Finally, and especially since 1941, these already overburdened teachers have accepted the added responsibility of guiding the Federal agencies in a myriad of activities related to research and public welfare.

Residencies

Still another effect of the great growth of technical knowledge has been on that part of medical education which follows graduation from medical school. The clinical specialist has more and more to learn, yet less and less of those technical details essential to him can be included in the four years of the undergraduate medical course. The solution has been the residency programs which have become such an important part of modern medical education. Through the residencies the education of specialists has been greatly strengthened, but the period of training has also been extended an additional three to five more years. Meanwhile, the development of clinical clerkships for third- and fourth-year medical students has provided much of what formerly was included in the internship. Indeed, on the university medical services the intern has tended to have his activities encroached on by the clinical clerk from below and by the assistant resident from above. Because of these changed conditions, thought is being given in a number of medical schools to the possibility of combining the fourth-year clerkship and the intern year. If any saving of time is to come from such a plan, the Boards which determine the number of years of hospital experience required for qualification as a specialist would have to modify their requirements, but even without that particular advantage, the plan has merit from the standpoints of better organization of "teaching hospital" services and of better distribution of interns throughout the hospitals of a given community.

Premedical Education

In my brief reference to the survey of medical education made by Dr. John Dietrick and his committee, I touched on only one of its many observations. The report, which has just been published under the title "Medical Schools in the U. S. at Mid-Century,"[2] is so comprehensive that I cannot attempt to discuss it further at this time, but I must tell you about a byproduct which came from it and which may prove even more valuable than the parent report itself.

Soon after Dr. Dietrick's survey had been started, it became apparent that there was great need for a comparable study of premedical education, and a subcommittee under the chairmanship of Dr. Aura Severinghaus, Associate Dean of the College of Physicians and Surgeons of Columbia University, was appointed to look into it. They were lucky enough to persuade Dr. Harry Carman, who had recently retired as Dean of Columbia College, and Dean William E. Cadbury, Jr. of Haverford College[3] to direct this study, which has gone forward with great imagination and success. This committee report also has appeared in book form, and I heartily recommend it to you. Like the Dietrick report it is far too comprehensive for me to attempt to review it, but it is bound to have a great effect on premedical education and on collegiate education in general.

Indeed, one of the points the authors emphasize is that the segregation of the student who hopes to study medicine in a circumscribed "premedical course" is one of the major faults to be corrected. Certainly we can expect that as a result of this study there will be a better understanding on the part of both premedical advisers and faculties in the colleges, and admissions committees and faculties in the medical schools of the problems and the needs of each other.

Admission to Medical Schools

I would like to turn now from the more academic trends and achievements in medical education with which we have been concerned thus far and discuss some of the practical problems. One of these is the enormously difficult task of selecting the students who are to study medicine. First, let us consider the quantitative problem. Many people, I am sure, have obtained a very erroneous idea about this because of the published figures of the number of students who apply to a given school. At the school from which I come, for example, there is a place for only one out of every 15 candidates who apply. This does not mean, however, that only one of every 15 candidates is accepted into the study of medicine. The explanation of this apparent discrepancy lies, of course, in the fact that each candidate applies to a number of schools. If these multiple applications are taken into account it is found that last year 7,703 out of 14,651 successfully gained admission to medical school, giving a ratio of better than one to two. Furthermore, when one realizes that many of that 14,651 had very mediocre qualifications and that some did not even meet minimal standards, it is apparent that the number of candidates is not too high but, on the contrary, is reaching a seriously low figure. The reasons for this falling off of applicants, which has progressed steadily since 1949, probably are many and complex, but some are clear. Of first importance is the general decrease in the number of men and women of medical student age resulting from the fall in birth rate of the depression era. During World War II the birth rate rose sharply again, but this change will not be felt by the medical schools for a number of years. Other causes of the decline in the number of medical applicants are the increased cost of becoming a physician and the growing attractiveness of opportunities in other professional fields such as engineering and the physical sciences. A fourth cause is the exaggerated impression of the difficulty of gaining admission, which surely has discouraged some able students from applying. This error is particularly unfortunate at a time when the number of outstanding candidates is getting critically low throughout the nation as a whole.

A second admissions problem, of which one hears much, is that of discrimination against certain candidates for reasons of race or religion or other similar factors. This is a delicate subject to discuss publicly because much heat has been generated around it—more heat than light, unfortunately—but I shall do so, and I am in a favorable position for such a discussion because even the most bitter reports of unfair discrimination in the selection of medical students have explicitly excluded New York University from the charge. It is my honest opinion that discrimination in the sense in which these

TABLE I.—COSTS OF MEDICAL EDUCATION*

	Publicly Supported Schools	Privately Supported Schools
Tuition and fees		
1941	1.9	5.2
1948	2.7	7.1
Gifts		
1941	1.1	3.2
1948	1.0	4.1
Endowment		
1941	0.2	4.7
1948	0.1	5.5
State support		
1941	3.0	...
1948	11.4	...
University support		
1941	...	0.9
1948	...	8.4

* All figures given in millions of dollars.

aggrieved reports use it plays very little role in the selection of medical students in this country. Students of medicine cannot be selected on the basis of academic grades alone. Important as academic ability is, character, emotional stability, ability to guide and help other people, and intellectual curiosity are no less, or even more, important. I believe that these are the factors which admissions committees take into account and that the reports of discrimination based on racial or other such reasons are usually completely erroneous and, at the worst, are greatly exaggerated. If the time should come when students of medicine are selected solely on the basis of grades, medicine and the public will suffer. The IBM machine can be substituted for the admissions committee only when a test is devised which will accurately judge the intangibles which it is so necessary for the physician, and the medical student, to have. Great efforts have gone into the development of such tests, but we are as far from a solution as ever, and there is little prospect of early success.

Costs of Medical Education

Another, and most serious, problem of medical education is that of financial support. There are many ways to present this problem, but for our purposes it is particularly useful to consider what has happened to the income from various sources in recent years in the publicly and privately supported medical schools. In Table I are shown figures which have been derived from data obtained by the United States Public Health Service in the careful study of this problem reported by that agency in 1951.* These data summarize in millions of dollars the income received by a large sample of publicly supported and privately supported medical schools in 1941 and 1948 from various sources. It is readily seen that there has been comparatively small increase in income from student fees, gifts, and endowment during that eight-year period to offset the great increase in operating costs. In the case of the publicly supported schools the necessary funds were made available in the amount of more than 11 million dollars by the respective state legislatures. The privately supported medical schools, however, have no such sources to turn to and have had to fall back on their parent universities. As is shown in the last column, the universities have come to the aid of their medical schools as best they could, but in order to do so they have had to curtail support urgently needed by their other professional and nonprofessional schools.

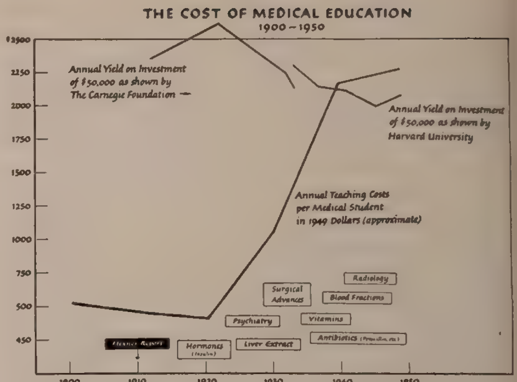

FIG. 1

The story is illustrated in another way in Fig. 1, prepared from data compiled by the National Fund for Medical Education. It will be seen that the cost to the medical schools of educating each medical student for one year has risen from about $500 in 1910 to more than $2,000 in 1950. During that same period, however, the annual yield of an investment of $50,000 of endowment has fallen from about $3,000 to $2,000 or less. A large part of the increase in the cost of educating a medical student is explained by the general rise in the cost of living. In addition, however, medical education has contributed to its own rising costs through the scientific advances it has made possible. This, of course, is progress of a type we must strive to continue, for it is these advances which have enabled modern medicine to make the contributions it has to the health and prosperity of our country. The lower part of Fig. 1 illustrates some of these blessings to mankind, but it must be remembered that each one in turn adds something new in subject matter, personnel, and equipment which must become part of medical education and hence adds something also to educational costs. Scientific advances in medicine during the past forty years have come at a rate never approached before. It is no coincidence that this period has witnessed also an unprecedented rise in the cost of medical education. If these great discoveries and advances are to continue in man's struggle against disease and ill health, funds must first be found to keep medical education always advancing. This is a responsibility which the public owes to itself, for the people of our country are the ones who will gain or lose as medical education rises or falls.

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* Surgeon General's Committee on Medical School Grants and Finances: Part II, Financial Status and Needs of Medical Schools, U.S. Public Health Service Publication Number 54, Washington, D.C., U.S. Government Printing Office, 1951.

Budgetary Changes Needed

Whereas the need is clear, the means of providing the additional funds are far less easily stated. However, certain possibilities may be mentioned. In the first place it is only just that the medical school's budgets should be relieved of part at least of the burden they now carry for the care of patients. It has been estimated[2] that the faculty members of the nation's medical schools provided free care to the sick last year valued at at least 100 million dollars. This is a sum far larger than the annual amount which the schools are seeking. Clearly, therefore, if part of these services were to be paid for by the community instead of being charged against the medical school budgets, the latter could be greatly spared. Second, and in a similar way, some schools are actually contributing to the support of hospitals in which they teach not only through the services of faculty members but also through the salaries of technical and clerical personnel and through funds for supplies and equipment. Surely the hospitals served should absorb these costs.

A third expense unjustifiably placed on the medical schools is related to research. Funds for the actual conduct of the research itself are provided by various foundations and governmental agencies, and small sums are provided also to reimburse the schools for expenses incidental to the work. This is a gain because such reimbursements were almost entirely lacking up to World War II. The fact must be faced, however, that a realistic solution has not been reached, because the sums provided by most donor agencies today cover not more than one fourth of the costs of the medical schools if, in these costs, are included such reasonable items as charges for cleaning, upkeep, utilization of space, and amortization of the cost of laboratory construction. The medical schools, as well as the public, benefit enormously from the research grants they receive, but the serious financial situation the schools are in today would be greatly eased if the donor agencies would include in their grants an item large enough to cover the full costs of the research.

Thus far in this discussion of the financial plight of medical education I have considered possible means of relieving the schools of certain expenses they now bear. The other solution, of course, is to obtain greater income. Let us examine possible ways in which this might be done. One obvious way is by increasing tuition fees. Yet already this has been done to a point where able students of limited means are very hard pressed, and further increases would make our system of medical education in the privately supported universities no longer democratically open to all who have the required capabilities.[4] The other means is to obtain additional gifts and grants. But here one meets a curious phenomenon of our times for, whereas funds for worthwhile medical research are currently quite readily available, it is extremely difficult to obtain support for the basic medical programs which make such research possible. Dr. George P. Berry, Dean of the Harvard Medical School, has likened the medical schools in this situation to a railroad train. Thirty years ago, the educational train was running with a good head of steam and a few extra cars in the form of research projects could be added without strain to the locomotive. Today, however, the locomotive is very nearly stalled, and no additional cars can be added unless there is more coal for the basic educational budgets. In this situation the efforts of the National Fund for Medical Education and the American Medical Education Foundation are heartening, and one hopes that American industrial leaders, physicians, and other citizens will contribute to these foundations, and directly to the schools, generously enough to solve the problem. Thus far, however, the support, while enormously helpful, has been only a small fraction of that needed.

The other possible sources of new funds are local, state, and Federal governments. Increased appropriations by the states have, indeed, been the answer to the problem in the case of the state medical schools. The state-supported schools play a most important role in American medical education. Most thoughtful people will agree, however, that the privately supported schools are no less important in our American system of medical education and that even the standards of the state medical schools will suffer if the privately supported ones should disappear or lose their independence. Hence, subsidies by local, state, or Federal governments can be a solution to the problem only if they are so given that neither now nor in the future could they be a threat to the independence of action of the medical schools and their parent universities. The need is so urgent and the state of the nation's health so deeply involved that the best statesmanship in government and in medicine should be mobilized for a solution to the dilemma.

Conclusion

Finally let me say a word about the opportunities here in Albany. Certainly the capital city of this Empire State should be satisfied with nothing less than the best in medicine and in medical education. I suspect that Dean Wiggers and the faculty of the Albany Medical College need support and financial aid in developing their program—certainly they are in a most unique situation if they do not—and it was a particular pleasure for me to meet some of the community leaders on the board of trustees who are helping the cause of the Medical College and of the Albany Hospital. Several months ago I had the opportunity to spend a number of hours visiting the new Veterans Administration Hospital here, and I know therefore with what mutual benefit that institution and the medical school are cooperating. Most unique of all is the laboratory building in which we are meeting. I can imagine how proud of it Dr. Wadsworth would be and especially of the men and women who serve in it and throughout the various parts of the Division of Laboratories. The quality of the diagnostic and research work done follows the ideal he set for it. That ideal will be advanced also by an ever-growing participation in medical education.

Editor's Note: For those interested in pursuing this question further, we append a few references to the recent literature:

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Major Surgery In Elderly Patients Relatively Safe

Major surgical operations can be carried out in patients over seventy years of age with reasonably low risks. Therefore, adequate surgical care should be made available to older persons not merely to save life but also to relieve discomfort and disability, according to Drs. John D. Stewart and Guy S. Alfano, Buffalo, New York.

They based their conclusions on two studies of persons over the age of seventy years who underwent surgical procedures. One study consisted of 204 general surgical patients who underwent 290 major operations, and the other 43 patients who had major abdominal surgery.

The average age for the series of 204 patients who underwent general surgical procedures was 76.8 years, the oldest being ninety-four. The over-all mortality rate was 13 per cent (39 patients). However, the doctors pointed out, 21 of the 39 deaths probably had little relation to the surgical operation since 17 of the 39 had advanced cancer. If these deaths were excluded, the mortality rate was approximately eight per cent, they added. Respiratory and heart and blood vessel complications were most commonly noted in the fatal cases.

There were no complications following 190 operations in the larger group, the doctors stated. When complications occurred, the commonest were those affecting the respiratory system, the surgical wound, and the heart and blood vessels.

In considering the problems of preoperative and postoperative care of the elderly, "one is impressed with point that they differ only in degrees as compared with the surgical care of younger patients," the doctors stated. The margin of safety is less, and sharper attention to details is necessary. Expert nursing care is a potent factor in recovery. They added that the daily routine of the elderly surgical patient should be upset as little as possible, and that he should be returned to his normal environment and activities as soon as practicable.

The doctors are associated with the department of surgery of the University of Buffalo Medical School and the F. J. Meyer Memorial Hospital.

Outpatient Medical Care for Veterans

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THE close of World War II brought to the Department of Medicine and Surgery of the Veterans Administration a tremendously increased responsibility. Approximately 16 million honorably discharged service men and women, which now includes those engaged in the Korean conflict, were added to the four million veterans of other wars who might receive treatment and rehabilitation for injuries and illnesses caused by service with the Armed Forces. Of this number, almost five million were to become eligible for outpatient medical and dental care. This group, comprising roughly 25 per cent of all veterans, is entitled to outpatient service if they have filed a claim and if their disabilities have been adjudicated by the Veterans Administration as service connected. Included are former officers and enlisted personnel, both male and female. In addition, the Veterans Administration furnishes adjunct treatment for any condition which aggravates the existing service-connected disability.

To implement this service the Veterans Administration has established outpatient medical clinics in the various regional offices. There may or may not be subsidiary offices, called VA Offices, in the regional area, depending upon the size and population of the respective areas. The outpatient medical clinics are prepared to conduct (1) a comprehensive program for the treatment of those disabilities adjudicated as resulting from military service and (2) examinations designed to evaluate the degree of disability resulting from military service for claims and other purposes, known as compensation examinations.

Although administratively important to the Veterans Administration, the conduct of examinations is of secondary importance to the veteran since he is primarily concerned with the restoration of his normal function and maximum rehabilitation.

In seeking medical service many veterans nurture the impression that "roadblocks" obstruct their purposes. Expressions such as the "runaround" are commonly heard. On occasion this may be unavoidable when a government bureau, which, bound by regulations, perforce must comply with necessary control measures in order to protect the interests of the government. Unfortunately, this results in a lack of confidence on the part of the average veteran in the type of medical care which follows, because to him it is apparently hidden in a maze of "red tape." The veteran often carries over into civilian life a psychologic handicap largely produced by the necessary regimentation of military life and discipline. This results in a "sales resistance" to medical care at the hands of any government agency. It is even more pronounced when the veteran-patient develops the impression that some physicians called upon to treat him "behave as if they were still in uniform." Readjustment to civilian psychology is indicated on the part of both doctor and patient so that a rapport may be established between them. The veteran's main reason for attendance at the Veterans Administration clinics is for relief from troublesome symptoms. It is our duty to treat these symptoms definitively rather than to confuse and delay the veteran with eligibility determinations and countless administrative checks, once his original right to treatment has been established.

It is our firm belief that there can be no "assembly line" medical care producing "mass medicine." Each patient presents an individual problem. The physician must not make the mistake of focusing all his attention on an area of organic pathology at the expense of the surrounding personality. The basic concept of furnishing medical care "second to none," as announced by the Chief Medical Director of the Veterans Administration, is coupled inextricably with the traditional doctor-patient relationship. The transference of this ideal to the practice of medicine by a government agency would aid materially in its realization.

Organization

The regional office clinic, which renders outpatient treatment to veterans for all service-connected disabilities and for all conditions for Spanish-American War veterans, also conducts examinations to determine the need for hospitalization, examinations for compensation, pension, and insurance rating purposes, and examinations at specified fees for allied nationals, other government agencies, and of employes to determine whether they are physically qualified to continue in employment. Each regional office clinic is headed by a chief medical officer with an assistant chief medical officer, a chief of professional section, and a chief of administrative section (Fig. 1). The chief medical officer is administratively responsible to the manager of the regional office and professionally, through the appropriate area medical director, to the chief medical director of the Department of Medicine and Surgery of the

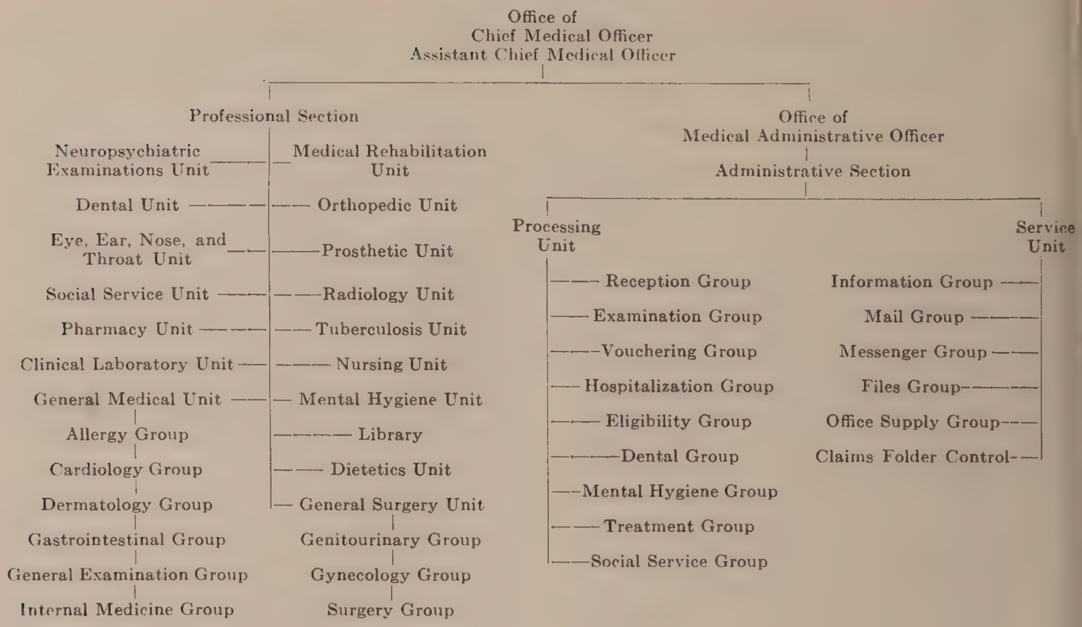
Office of
Chief Medical Officer
Assistant Chief Medical Officer
Professional Section
Neuropsychiatric Examinations Unit
Dental Unit
Eye, Ear, Nose, and Throat Unit
Social Service Unit
Pharmacy Unit
Clinical Laboratory Unit
General Medical Unit
Allergy Group
Cardiology Group
Dermatology Group
Gastrointestinal Group
General Examination Group
Internal Medicine Group
Medical Rehabilitation Unit
Orthopedic Unit
Prosthetic Unit
Radiology Unit
Tuberculosis Unit
Nursing Unit
Mental Hygiene Unit
Library
Dietetics Unit
General Surgery Unit
Genitourinary Group
Gynecology Group
Surgery Group
Office of
Medical Administrative Officer
Administrative Section
Processing Unit
Reception Group
Examination Group
Vouchering Group
Hospitalization Group
Eligibility Group
Dental Group
Mental Hygiene Group
Treatment Group
Social Service Group
Service Unit
Information Group
Mail Group
Messenger Group
Files Group
Office Supply Group
Claims Folder Control

FIG. 1. Organization of the Veterans Administration regional office.

Veterans Administration. The chief of professional section supervises all medical and dental professional and technical activities, while the chief of administrative section likewise supervises all administrative and clerical activities, including personnel activities and records, requisitions and supplies, the training of new, nonprofessional personnel, and many other activities.

A physician is in charge of the Health and Emergency Treatment Program. This includes the tuberculosis case-finding survey, the blood typing and Rh factor determination of all employes for civil defense, and complete blood count of all employes exposed to radiation.

The size and activities of the regional office clinics vary greatly, depending upon the veteran population served, the proximity of the major portion of this population, the availability of adequate professional personnel, consultants, and attending physicians of a high type, and of a medical school.

To a great extent the real limit of growth and expansion of the regional medical service rests with management, but it is also controlled to some degree by public relations. By management is meant the chief medical officer and his main assistants, with the cooperation of the other division chiefs of the regional office and, above all, the loyal support and wholehearted backing of the manager and the assistant manager.

Public relations encompasses the harmonious liaison with the local county, state, medical, dental, and pharmaceutical associations, also the affiliation with nearby medical and dental schools, and the ability to attract outstanding consultants and lecturers in the various specialties of medicine and dentistry.

As an example of what can be done on an outpatient basis, one might consider the Mayo Clinic. It is a well-known but little recognized fact that the Mayo Clinic owns no hospital facilities and that patients while visiting the Clinic live in hotels or rooming houses. Only those who are seriously ill or who require surgery are admitted to a local hospital, such as St. Mary's, which is operated by the Catholic Church and not by Mayo's.

Operation

The Brooklyn Regional Office Medical Clinic, which serves a veteran population of approximately 400,000, is built upon a framework of full-time general practitioners who examine, screen, and refer cases requiring their services to a number of staff specialists. These specialists, all of whom serve part-time except for the chiefs of the various services, function in this clinic as an attending staff comparable to that of any large outpatient service of the average voluntary hospital. The service rendered in the clinic corresponds closely to that furnished in the office of a private physician or dentist or by a highly qualified group.

The Regional Office Clinic is divided into two sections:

The Professional Section which is further divided into:

1. The Medical Service, which includes General Medicine, Internal Medicine, Cardiology, Tubercu-

losis, Gastrointestinal, Peripheral Vascular, Allergy, Dermatology, and Rheumatology Units.

2. The Surgical Service, which includes General Surgery, Orthopedics, Ophthalmology, Otolaryngology, Gynecology, Urology, Physical Medicine Rehabilitation, Surgical Peripheral Vascular, and Prosthetic Units.

3. The Psychiatric and Neurological Services, which include (*a*) the Neuropsychiatric Examination and Hospitalization Unit, which conducts the supervision and inspection of contract neuropsychiatric hospitals and provides diagnostic services in the field of psychiatry and neurology for pension and hospitalization purposes; (*b*) the Mental Hygiene Clinic, which provides the highest level of skilled psychiatric services and psychotherapy, and conducts the residency training program, the psychology intern training program, and the training of student social workers; (*c*) the Neurological Group, which assumes responsibility for the professional care of neurologic cases, which includes electroencephalography in its diagnostic setup.

4. The Dental Unit includes the Office of the Chief Dental Officer, the Dental Clinic, Dental Laboratory, and an Authorization Unit, which approves referrals of certain cases to participating dentists. All types of dental examinations and dental treatment include operative, prosthetic, and oral surgery cases. The Dental Service has five consultants who participate in the Consultant Dental Program.

The Administrative Section, the second section of a Regional Office Medical Division, is divided into the Service Unit and the Processing Unit. Each of these units is broken down into numerous groups of varying size.

Appointment System

To insure the best possible doctor-patient relationship the Brooklyn Regional Office Clinic operates entirely on an appointment system. The objectives of such an appointment system are as follows:

1. To render more efficient medical service by limiting the number of individuals accepted for care at any one time. This minimizes to a certain extent overcrowding and confusion and so provides for an even flow and disposition of the professional workload.

2. To eliminate unwarranted delays and waiting periods on the part of the veterans.

3. To utilize to its utmost the physical capabilities of the Clinic.

The physician continuously treats the same patient, thereby furnishing an opportunity for individualized follow-up care. In this sense he assumes the role of the family physician. Each physician carries a case load and, as a result, is able to conserve his and the patient's time. This results in allocation of a definite period of time for new and old patients in order to receive a more thorough examination and consideration of the patient's condition. Revisits and other necessary consultations are arranged for when the specific doctor is present at the Clinic. To accomplish the correct diagnosis and treatment all necessary diagnostic adjuncts are available. Planning for future needs can be most advantageously undertaken and projected under this system. Public relations with veterans, service organizations, and the medical profession are greatly improved.

It should be noted here that the initiation of an appointment system required reorientation of the veteran through an education program. An extensive publicity campaign utilizing press, radio, and service organizations assisted materially in acquainting the veteran and the public as a whole with the fact that medical service cannot be furnished on a "catch-as-catch-can" basis nor in an "over-the-counter" manner. It was also necessary to explain that several visits might be required to establish sound diagnostic and therapeutic procedures. Each patient admitted to the Clinic becomes the responsibility of the chief of the service in whose domain his condition belongs, no matter where the patient may go or how he may be treated, whether in the Clinic or by a fee-basis physician. The management of the patient is entirely in the hands of his respective specialist. The administrative services of the Clinic are ancillary and subordinate to the professional chiefs of services. Clerks do not make the determinations as to whether treatment is indicated, or whether a patient is admissible for adjunct treatment, or whether hospitalization is needed for a medical emergency. All these factors are determined by the professional staff.

There are many significant problems encountered in administering an appointment system. These include problems in regard to the patients themselves. In a large clinic such as this with approximately 500 appointments a day, with an adequate medical staff in attendance, approximately 13 per cent of the patients will break their appointments, and a certain percentage of the patients will be late. The possibility of resorting to disciplinary measures is complicated by the seriousness of the patient's physical condition and by his eligibility for treatment. In addition to these routine problems, there will be a certain number of walk-in patients with no appointments but who are eligible for treatment. There are also problems in regard to the physicians of the Clinic. In a Clinic of this type, in which so many part-time physicians are assigned, there is always a certain percentage who will be absent because of emergency needs of their practice and a certain percentage who will be late. This, of course, interferes with the appointment system in that patients will not be seen at the proper time, and delays will occur.

In the absence of a physician his colleagues may be asked to see his patients, thus handicapping one of the main purposes of the appointment system.

The initial clinical investigation includes a complete history and physical examination, regardless of initial complaint or service-connected diagnosis, with routine laboratory work consisting of urine, serology, hemoglobin, and complete blood count and smear, plus photoroentgen x-ray of the chest. There is available to the examining physician the case folder of the veteran containing all records of medical treatment while in the military service. This establishes a medical continuity which materially assists the physician in an intelligent handling of the patient and leads to a more complete understanding of both the organic elements and their concomitant psychosomatic features. Each specialist is responsible for (1) confirmation of a diagnosis previously established in military service, (2) treatment, whether in the Clinic or authorized to a fee-basis physician, (3) follow-up of a case which is not under active treatment for evaluation from time to time, and (4) such ancillary services as may be indicated in each case. These include social service with assistance in family problems, home visits by a private general practitioner, or visiting nursing service nurse on a fee basis, and dietetic management by the Nutrition Clinic.

The chief of each service reviews reports rendered by the fee-basis physicians in the light of the patient's clinical picture. This affords him an opportunity to evaluate and estimate the medical service rendered to the veteran by the private physician.

Problems are quickly resolved on a strictly professional basis between both physicians, usually through the medium of the telephone or by correspondence. Such an interchange of ideas between two qualified physicians concerning a patient whose management and responsibility they mutually share makes for an improved doctor-patient and doctor-doctor relationship. This tends to remove any vestige of administrative control in the treatment and management of these patients. It is our firm belief that a veteran who is being treated, either by a private physician on a fee basis or a staff physician regularly on duty in the Veterans Administration Clinic, receives the same high quality of medical care he would receive at the hands of his privately selected physician, except that under government responsibility he can expect and does receive a quantity and quality of medical care uninfluenced by his economic level in society. In this manner the clinic renders a complete medical service to the veteran, comparable to a group clinic, which is not only prepared to make diagnoses but to conduct active treatment, management, and follow-up care for this special group.

Contract Facilities

The utilization of contract facilities and fee-basis participating physicians under State medical care plans in this Clinic is governed by the general term "hardship." Such cases fall within the following four categories:

1. Physical inability to come to the Clinic, e.g., a decompensated heart or any emergency.

2. Economic difficulty, since the Clinic functions only between 9 A.M. and 5 P.M. five days weekly. This includes veterans who cannot afford to discontinue work even for a short period of time. After investigation he is referred to outside sources for necessary treatment. It should be noted here that cases referred to outside agencies for treatment are periodically followed up and screened to determine present status and future management. This enables the Veterans Administration to keep informed about the clinical picture and affords a continuity of service which might not exist otherwise. It also affords the fee-basis physician an opportunity for such consultative services as may be required.

3. Should the Clinic facilities become overloaded as a result of a sudden influx of new admissions which might detract from the quality of the service, the excess load is referred to physicians on a fee basis. As the load diminishes, these cases at the termination of such treatment are recalled to the Clinic and placed under staff responsibility. All fee-basis cases are recalled, depending on the individual condition, every three to six months for reevaluation examination so that the clinical picture can be evaluated in conjunction with the fee-basis physician.

4. There are occasionally cases with which even a well-equipped and staffed clinic is not prepared to cope. These include unusual or rare diseases requiring a type of treatment not available locally or, as may be remotely possible, unavailable in any Veterans Administration facility. Such cases may be referred to an appropriate treatment center on a fee basis.

Research Projects

The staff is encouraged to prepare papers for publication and to participate in local, State, and national medical and dental association meetings. Participation is on an active basis for VA purposes by presentation of a paper, or exhibit, or participation in formal or panel discussion. Since this Clinic opened, 23 applications for consideration of research projects have been submitted, of which 15 were approved.

Since February, 1948, 19 members of the Department of Medicine and Surgery of this station have attended courses of various types. Members of the staff are encouraged to affiliate with teaching institutions and medical schools.

Lecture Program

The Medical Clinic of this Regional Office currently supports a training program which includes lectures by well-known authorities on various subjects of interest to the Department of Medicine and Surgery. Authority has been granted to contract with individuals to lecture and/or demonstrate in relation to professional matters. Such individuals provide an incentive for station personnel to keep abreast of current and new medical practices and methods. These lecturers are contacted as far in advance as possible for participation in this program. Invitations are extended to local groups and societies to attend these sessions. This provides not only excellent public relations but also imparts to non-VA professional members of the local community the knowledge of the VA efforts in its continuous effort to strive for excellent medical care. Lectures are scheduled for Friday afternoons from 3:30 P.M. to 5 P.M. This includes a one-hour lecture followed by a short question period. All doctors on duty at the Clinic and not occupied with patients are encouraged to attend the conference and participate in the discussion. No appointments are made during this period so that interested physicians and others may attend. During the period from September 21 through January, 1952, approximately 20 individuals delivered lectures on various subjects of interest to the Department of Medicine and Surgery at this station. The lecture program is integrated into the professional program so as to maintain continuity of the training and education program.

Consultants

Only those physicians who are pre-eminent in their respective fields are considered as consultants. Physicians and dentists with different backgrounds and experience are appointed in order to give the staff a variety of points of view. These consultants support the medical service and teaching program in addition to their availability for diagnostic purposes. They assist immeasurably in coordinating the training activity of this installation and make a desirable contribution in connection with the development and management of the training program. These consultants are oriented in VA structure, and they in turn give the VA the instruction and guidance which they can so ably offer our medical program.

Library

A medical reference and circulating library, equipped with approximately 200 recent editions in the various fields of medicine and allied subjects and steadily growing, is available to the entire staff. Approximately 90 periodicals are on the subscription list. Each member of the staff has free access to the library at all times.

Hospital Visits

Hospital visits on the part of the staff to neighboring institutions, both Veterans Administration and voluntary, are freely encouraged. Official leave to attend conferences and meetings of various medical groups, either locally or in convention at other points, is similarly permitted.

Conclusions

The basic structure and operation of the Brooklyn Regional Office Medical Clinic has been presented to indicate the present-day concept of "medical care second to none" offered by the Veterans Administration to eligible veterans. The role of the Clinic in its relationship to veterans, service organizations, and the professional and lay community within its jurisdiction has been portrayed to illustrate a method whereby the truly ideal doctor-patient relationship can be maintained within the structure of a government agency.

The authors wish to express their appreciation to Mr. John Miner for secretarial assistance.

Action on "White Coat Commercials"

Some time ago the A.M.A. Public Relations Department embarked on a campaign to eliminate the "white coat commercials" on television programs, and so far its efforts are getting good results, judging from the following item which appeared in one of the popular broadcasting magazines:

"Advertising agencies received letters last week from Thomas B. McFadden, director, NBC Spot Sales, asking them to identify TV commercials delivered by persons wearing doctors', dentists', or nurses' garb as 'dramatizations.'

"The letter explained the request is in accord with instructions from the NARTB Television Code Review Board, stemming from a complaint made by the American Medical Association.

"George Frey, vice-president and sales director, NBC Television Network, has sent a similar letter to agencies placing business on that network."—*American Medical Association, November 30, 1953*

History of the New York State Department of Mental Hygiene

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PSYCHIATRY was nonexistent in New York until 1792 when a mentally ill patient was hospitalized for the first time in the newly opened New York Hospital. Insane people were cared for in the same manner that custodial supervision was provided for the poor and indigent. Early in the nineteenth century, Thomas Eddy, a New York City Quaker, caused reforms in the State's Penal Code, and in 1805 he helped establish a free school in the city, the first step toward the State public school system. Meanwhile, he had heard of the work in Europe by Pinel and Tuke, particularly in the matter of caring for the mentally ill. Mr. Eddy outlined a plan for establishing a separate hospital for mental patients and in 1821 had the gratification of presiding at the opening of Bloomingdale Asylum, the first mental hospital in the State to be operated on therapeutic principles. It received State aid for many years.

In 1818, spurred on by public sentiment, the Governor addressed the State Legislature and instructed the Secretary of State to survey the problem of the poor. The population was 1,372,812, of whom there were approximately 22,000 requiring poor relief, and of these 446 were recorded as insane persons. A report to the Governor indicated that many towns and villages had no almshouses, and the poor were disposed of by farming them out as contract laborers or by auctioning them off to persons who would keep them at the lowest cost to the town. The mentally ill also appeared on the auction block. By 1824 it was recommended that the counties be made centers of the poor relief system and that indigent mentally ill should not be confined in prisons or jails or kept at hard labor but might be maintained in county almshouses or sent to Bloomingdale Asylum, the expenses being chargeable to the county.

By 1835 only four of the 56 counties then in existence had failed to establish their own almshouses. It is a matter of history that the degrading conditions in these institutions for the poor, including lack of any sort of medical attention, poor and insufficient food, cruelty, etc., led to public indignation which culminated in a voluntary petition signed by 28 physicians, which was presented to the Legislature of 1836. Ultimately, this led to the establishment of the Utica Asylum, which was opened in 1843 and to which, by law, counties were required to send their acute cases. A decade later the New York State Custodial Asylum for Idiots was opened at Syracuse.

Meanwhile, Miss Dorothea Lynde Dix in 1844 had begun her historical survey of poorhouses, asylums, and institutions, and she ultimately reported her findings to the State Legislature. The obvious answer was more State institutions for the mentally ill, and although several counties now opened their own asylums for the insane, the problem was anything but solved. Finally, in 1856 Dr. Sylvester D. Willard, secretary of the New York State Medical Society, at the request of the Legislature undertook to survey the entire situation. His painstaking and detailed work consumed nine years, and in the almshouses he found "Great want of provision for the common necessities of physical health... The inmates were unwashed, many unclothed and slept on straw which was unchanged for days, denied even the fresh air of heaven," and he went on to describe the dank and dark quarters which lacked facilities for ventilation. As a physician, he claimed that the mentally ill became progressively worse when institutionalized. He concluded his report with an impassioned plea for the establishment of another State institution, which led to the construction and opening in 1869 of the Willard State Hospital on the east shore of Lake Seneca, in what was originally the first building for Cornell University. Counties were required by law to send the chronic insane to Willard and the acute cases to Utica.

It now became apparent that supervision of the mentally ill should be a function of the State rather than the independent county, and in 1859 the Medical Society of the State of New York resolved that, "It is expedient to establish . . .a Commission of Lunacy." By 1866, as an aftermath of the Civil War, the problem of poor relief was intensified by the increase of minor dependents from 8,000 in 1861 to more than 26,000 in 1866. In 1867 the Legislature, at the Governor's recommendation, established the Board of State Examiners of Public Charities, which was later renamed the State Board of Charities. This body was charged with the duty of inspecting all public charity institutions regularly, these including State and county almshouses for the mentally ill and, of course, almshouses where the insane were still housed in most of the counties.

Loopholes in the law enabled counties to have their own institutions for the mentally ill certified as suitable so that they did not need to send their cases to Willard, and the situation was worsened rather than improved. In 1872 the State Charities Aid Association was formed as a private organization whose members visited institutions, bringing what comfort and solace they could to the poor. Inevitably, these visiting committees noted abuses and took action to have them corrected. At first they concentrated on the condition of children in almshouses, but after legislation was enacted removing children from such institutions, the committees turned their attention to the mentally ill, working closely with the State Board of Charities.

Finally, in 1873 the position of State Commissioner in Lunacy was created. This officer was authorized to examine into and report to the Board "conditions of the insane and idiotic in this State, and the management and conduct of the asylums and other institutions for their custody." Dr. John Ordonaux, the first Commissioner, was a Doctor of Laws as well as of Medicine and hence was more than able to lay the foundation for the State's jurisprudence relating to the civil and criminal status of the insane. Within a year the law was changed at his request, altering admission procedures for mentally ill to asylums so that no patient could be admitted without the certification of at least two physicians as to his condition and that a patient presented for admittance should be represented by an appointed guardian.

Between 1870 and 1880 the State had constructed and opened the Hudson River, Middletown, and Buffalo Asylums for acute cases, the Binghamton Asylum for the chronically mentally ill, and the Newark Asylum for mental defectives. Public anger was mounting at the conditions existing in county asylums which continued to be allowed to exist. By 1890 these institutions were abolished, and the State finally assumed full responsibility for the mentally ill and defective. There was now created a three-member State Commission in Lunacy, and the office of Commissioner in Lunacy was abolished. The Commission was made responsible for the inspection of institutions for the mentally ill, enforcement of remedial measures, and the preparation of reports on the care of the mentally ill in other states and countries. This led to steps to secure a better type of attendant, improved care and treatment, better diets, a decrease in the use of mechanical restraint, and the extension of occupational activities. More far reaching, perhaps, was the abolition of the distinction between acute and chronic patients, the further segregation of mental defectives and epileptics, additional facilities for the mentally ill, revision of what is now the Mental Hygiene Law, and the encouragement of scientific investigation in the infant specialty of psychiatry.

Beginning in 1883 personnel were appointed by Civil Service regulation. Now there were night service on continued treatment wards, training schools for attendants, and patients were allowed more liberty, which meant leaving many doors of convalescent wards unlocked and the granting of ground privileges. The first woman physician was appointed at Middletown Asylum, later at other institutions, and finally the law was amended to read that, "there must be at least one woman physician on the staff of each institution."

The first New York State Commission in Lunacy, consisting of Drs. Carlos F. McDonald, Goodwin Brown, and Henry A. Reeves, was appointed May 15, 1889, and this body, later known as the State Hospital Commission, continued to function until 1929 when the first Commissioner of Mental Hygiene, Dr. Frederick W. Parsons, was appointed. On April 15, 1890, the Governor finally signed a bill, passed by the Legislature, which removed the mentally ill from county institutions and placed them in hospitals maintained by the State. Likewise, asylums were thereafter to be known as hospitals. Counties that were excepted were New York, Kings, and Monroe, whose facilities were regarded as adequate and have continued as observation wards, which are integral parts of city institutions. By New York taking over larger county institutions this brought hospitals to the State which ultimately became the Manhattan, Central Islip, and Rochester State Hospitals.

The first drive toward centralization of supervision occurred early in the 1890's when an attempt was made to set up a standard dietary, exclusive of special diets. For this purpose Dr. Austin Flint, professor of physiology, Bellevue Hospital Medical College, was enlisted, and his initial attempts were experimentally tried in 1893. Shortly before the turn of the century, on the recommendation of the Commission, the Legislature approved the employment of medical interns, and voluntary admissions also came into being. At the same time research was centering on the physiologic aspects of psychiatry, and this was the subject pursued when the Pathological Institute, later named the Psychiatric Institute, was founded in 1895 for the benefit of all the State hospitals. In January, 1896, the first issue of *The State Hospitals' Bulletin*, forerunner of *The Psychiatric Quarterly*, was published for the purpose of disseminating information on mental illness to the medical profession.

In time dentists, ophthalmologists, and later other specialties were added to the hospital staffs, and the teaching of medical students was also organized in the State hospital system. Schools of nursing were commenced, and shortly after this departments of recreation and occupational therapy were established at each institution.

By 1900 the Commission had established an excellent system of statistics, which with time has served to be the model in psychiatry for the country, if not the world. Also a reimbursement system was established; the State hospitals adopted a uniform system of accounting, and central purchasing was organized. Shortly after the turn of the century, medical and patients' libraries had been started, and in 1901 institutions were visited, for the first time, by a Governor. This was Benjamin B. Odell. In 1903 the total number of patients was 24,187 in hospitals, with a total certified capacity of 21,500, and it was estimated that by 1905 there would be an additional deficiency of more than 2,000 beds. In the same year the Legislature made possible emergency commitment procedures.

In the first decade of this century social service was established at the Manhattan State Hospital and, rapidly proving its worth, was soon found at every institution.

In 1910 the State Department of Agriculture began to advise the State Hospital Commission on farming matters, particularly as it applied to our rural institutions. Similarly, construction, like other public building, was supervised through the State Department of Architecture, and in 1911 the Commission added an Inspector of Buildings and an Inspector of Supplies to its staff. About the same time legal matters were relegated to the Attorney General. In 1912 the name of the Commission in Lunacy was changed to the State Hospital Commission.

It soon became apparent that statistics was an important yardstick, and in 1907 a committee, headed by Dr. Richard H. Hutchings, called for a new classification and readjustment of statistical tables. Based on the original work of the Great Kraepelin, Dr. Adolf Meyer prepared a new classification system, while Horatio M. Pollock, Ph.D., in 1912 took over the task of revising mental hygiene statistics, devising a system which later served as the model for similar records on a national basis.

In 1915 an exhibit prepared by the Bureau of Statistics in cooperation with the State hospitals and the Psychiatric Institute won a Grand Prize, the highest award, at the Panama-Pacific Exhibition in San Francisco. It consisted of statistical and scientific charts on the causes and prevention of mental illness, a relief model of a State hospital, photographs and lantern slides of various kinds of therapy, and samples of products made by patients.

In 1913 outpatient clinics were started in each hospital district, which called for close cooperation between psychiatrists and social workers. Several periods of economic depressions between 1900 and 1917, followed by waves of economy in State government, explained why no institutions had been built since 1898. Therefore, in 1917 the Legislature established a State Hospital Development Commission which studied the available facilities and what would be required in the field of mental hygiene for the next ten years. Before the Commission could report to the Legislature, World War I had commenced. However, in 1919 when the Commission finally reported, it was obvious that priority must be given to the relief of congestion. Work was started on the construction of new buildings under an appropriation of more than two million dollars by the 1920 legislature. In 1923 the State was shocked by a disastrous fire at one of the hospitals. Governor Alfred E. Smith rushed a message to the legislature proposing a bond issue of more than 50 million dollars to provide safer and more adequate accommodations for patients in State institutions. Meanwhile, postwar "reconstruction" was being undertaken in other divisions. Schools of nursing increased their terms from two to three years, training courses for attendants were re-established, and occupational therapy was expanded until a director for this division was appointed in 1922.

In 1925 Charles Evans Hughes was elected chairman of a reorganization committee, part of whose work was the creation of the Department of Mental Hygiene, effective January 1, 1927, which replaced the State Hospital Commission and saw the appointment of Dr. Frederick W. Parsons.

In 1927 a major reorganization resulted in 18 major departments taking over the functions of some 180 former commissions and bureaus. Thus, schools for mental defectives and Craig Colony for epileptics were joined to the Department of Mental Hygiene. In the order named, "*custody, care, treatment*" were the standards that gauged future progress in the twentieth century.

In time, therefore, recognition of the fact that many mental illnesses spring from childhood conflicts stimulated the expansion of child guidance by the addition of many new clinics and clinic teams of psychiatrists, social workers, psychologists, and clerk-stenographers. So, too, was the outpatient clinic idea formulated in 1911, culminating in 1953 with the creation of the After-care Clinic Program in New York City.

The Department has always pioneered in research and new forms of therapy, which include the treatment of general paresis by the use of malaria therapy (1924), insulin shock therapy (1928), Metrazol shock therapy (1937), and electric shock therapy (1940). Today, every institution has immediate access to the latest modes of psychosurgery, while biochemotherapy came into its own in the field of endocrinology and its association with mental illness (1945 at Creedmoor State Hospital). During the past two years various research centers have been set up, particularly at Rockland and Manhattan State Hospitals. Meanwhile, the ever-increasing number of admissions and the need for and lack of sufficient psychiatrists resulted in the commencement of group therapy at most of the institutions, and for a number of years the department has been conducting its own resident-training programs at the Psychiatric Institute in New York and the Syracuse Psychopathic hospital in Syracuse. New York State was a pioneer in the colony system and also in formulating an intensive program of family care.

The building program authorized by the 50 million-dollar bond issue of 1923 witnessed the construction of many new institutions, including the Pilgrim State Hospital, the largest institution in the world, so that by 1949, with the opening of the Willowbrook State School, the New York State Department of Mental Hygiene operated 27 institutions. After World War II another intensive building program witnessed the additional construction of almost two dozen buildings at 13 institutions to provide 9,500 additional beds. At the present writing a bond issue is being proposed on a long-range scale to erect more institutions and estimated to total about 300 million dollars.

In 1948 a Food Service Training School was opened at Hudson River State Hospital, and during the past five years more than 400 employes have completed specialized training. In the laboratory operated in conjunction with the school formulas for institutional use were developed and tested, and a file of some 200 recipes was compiled and made available to the institutions.

The Department now maintains separate divisions covering such items as engineering, law, personnel, nursing services, nutrition services, occupational therapy, psychology, recreational therapy, public relations, statistics, psychiatric social work, business administration, inspection, after-care clinics, and prevention. The Department of Mental Hygiene is also closely and intimately concerned with the Mental Health Commission, psychiatric service to the various prisons and reformatories in the Department of Correction, the Retirement Board for State hospital officers and employes, the Board of Psychiatric Examiners, and there are standing committees whose functions cover the above-mentioned topics in addition to many more concerned with clinical and administrative psychiatry.

During the quarter of a century since the organization of the Department of Mental Hygiene, there have been four commissioners: Dr. Frederick W. Parsons, until October, 1937; Dr. William J. Tiffany until April, 1943; Dr. Frederick MacCurdy until April, 1950, and since that time the present Commissioner, Dr. Newton Bigelow. There are approximately 120,000 patients currently on the books, of whom there are about 105,000 in the institutions, 900 in colonies, 2,000 in family care, and 12,000 in convalescent care. The Department employs more than one third of all State government employes and accounts for one third of the annual State operating budget.

Although 51 per cent of all patients admitted last year were discharged before the expiration of the year, the patient population is increasing at the rate of approximately 3,000 per annum, or, to put it another way, the increase is sufficient to warrant the addition of one institution per year. More and more admissions are in the advanced age bracket, and to paraphrase the great Leahy, "Medical science is making it possible for man to live longer to suffer more complications."

Clinical investigation and research by the Department of Mental Hygiene is leaving no stone unturned, and every possible channel into the cause of mental illness and the possible means of therapy are being scrutinized. The attitude of a century ago, i.e., custodial care, has given way to the more enlightened one of prevention. While there may be deficiencies, it can be justifiably asserted that the Department of Mental Hygiene of the State of New York is one of the most forward-looking and progressive psychiatric units in the world.

Ethics Among Doctors

Speaking during a symposium held by the Medical Society of the District of Columbia, Dr. Zigmond Lebensohn, an associate professor of psychiatry at Georgetown University School of Medicine, outlined some rules for doctors dealing with other doctors.

"What is it that you owe other doctors? The primary debt is twofold: first, a debt of respect for them as fellow-workers; second, a debt of respect for the relationship which they have established with their patients."

He recommends specifically that doctors refrain from making disparaging remarks about other members of the profession to a patient, thus undermining the confidence the patient may have in the entire medical field.

"Most specialties have been oversold but undertaught. All doctors are teachers; the very word 'doctor' means teacher. It is the present-day responsibility of the specialist to teach his colleague with every case he shares."

In handling the dissatisfied patient, Dr. Lebensohn advises caution. "It is easy for Doctor No. 2 to sit in judgment as the patient recites in gory detail all the mistakes made by Doctor No. 1. But is all this really helping the patient? Or is it merely contributing to the smugness of Doctor No. 2? And, more to the point, isn't it also contributing to our rising malpractice rate?"

The psychiatrist concludes with a plea for common courtesy in all dealings with fellow physicians. "The criticism may be made that my remarks are too philosophical and too much concerned with ethics. My reply is that this is the greatest trouble with medicine today. Not enough attention is being paid to ethics in daily practice. Medicine is at a dangerous crossroads. Public confidence in the family doctor is waning. Frank cynicism is replacing the once familiar attitude of respect and adulation. Malpractice rates are soaring. Why all this? The complete answer is difficult to give. But one of the most important reasons is our failure to live fully to our code of professional ethics—a failure to give to other doctors what we owe them—call it respect, common courtesy, or ethical conduct."—*Medical Annals of the District of Columbia, January, 1954*

Conference of Public Relations Chairmen of County Medical Societies

Medical Society of the State of New York

FLOYD S. WINSLOW, M.D., *Chairman*
Council Committee on Public Relations

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DR. FLOYD S. WINSLOW, *Chairman:* We are very glad to have present here today physicians who have given up their work to participate in this public relations conference. And I am glad to see the executive secretaries present. It shows their interest in the work of the State Society, and we hope that they will be encouraged as they participate. We were to have a representative of the Woman's Auxiliary here, but she was unable to come. And then we have representatives from the press. Thanks to Dr. Redway, editor of the NEW YORK STATE JOURNAL OF MEDICINE, who operates the recording system, the remarks are to be recorded today. Informality is the key of this meeting, and its success depends upon the free participation of the various men who are here.

The first speaker on our program is a man whom I am very pleased to introduce to you. He is the president of the Medical Society of the State of New York, Dr. Andrew Eggston.

DR. EGGSTON: I think it's a very good anticipation of the future to see so many of you people here who are going to carry on public relations this year. We will certainly lean on you very heavily. If you do as good a job as you did last year, I don't think many bad things will befall medicine in this State. Furthermore, some of the things that have been said about the medical profession will be clarified, and the public will not be thinking that the medical profession is always out for its own self for economic reasons as we have heard lately through the press and through some of the labor unions. I think the message that you people will carry back through newsletters and all your publications and speeches can improve our relationship with the public.

We cannot just carry on and think we're somebody. We have to blow our own horn, or somebody will stuff it with cotton or leaves or something else. I believe it's very important that in addressing the public in various meeting places and clubs to tell them the truth about medicine. We don't have to brag about the services we give to the people. All we have to do is tell the truth and let the people know the truth to correct some of the falsehoods that they hear in various and sundry places. I know you're going to do that, and I for one will appreciate everything you do.

I wish I could say so to each one of you individually, shake your hand, and wish you Godspeed to do the very best that you can within your power for medicine in this State. I know you have many speakers on the program, and there is no need for me to say anything more than that I welcome, I greet you. I wish you the best of luck in creating a very constructive program and in having a uniformity of action in your public relations in this State for this coming year.

DR. WINSLOW: In the field of journalism it is a well-known fact that health is news, and in the field of medicine it is known that health is good promotion. One of the latest developments in the field of medicine is the conducting of health forums. I think a couple of counties in Florida claim credit for establishing the first one. There have been forums in our State for some time, especially in Erie County where successful forums have been held for some years. Today we are favored by having a man from Clinton County who has recently helped to conduct a very successful health forum. And so I present to you Dr. Siegel from Plattsburg. His subject is "Making Public Relations Progress Through Medical Forums." Dr. Siegel.

Medical Forums

DR. EDWARD SIEGEL, Plattsburg: Well, gentlemen, we're confronted with a long program. I'm not going to make a detailed speech. Everything I'm going to say is written before you in black and white in the pink pamphlet. If I'm dogmatic in having written this up, it's because I cannot stress too much the importance of details if you are about to embark upon a medical forum. Believe me, when you decide to do it and you finally get down to find all the things that have to be done, there are a million things, and they all have to be done properly, or else you're going to end up with a very difficult situation.

In the first place it's obvious you must select your topic. In the second place you must pick the men who will participate and find an agreeable date as to time and place. Although we've only run one forum, we believe that you should use as many local men as you possibly can or men who, although they may not be local, are ones whom your community knows, whether they be consultants from other areas or whatever. We spoke upon polio in our forum, and we broke it down into each man speaking for five minutes. At the back of the pink pamphlet you'll notice the question sheet which is self-explanatory and which we passed out.

If you're a moderator in a forum, it's very essential that it go very smoothly and that time doesn't drag. In regard to questions, you'll have to sort them while one man is speaking and hand them out. You just can't take one at a time because there are many. If there are duplicates, they must be discarded and just the pertinent questions asked. As moderator, I think you're allowed to omit certain questions if you find that they're facetious or someone's trying to be smart.

The following suggestions are very important. Pick the date well in advance and start the publicity. You should have placards advertising the date. Put them in your offices or in the shops downtown and various places where people will see them. We started by cooperating with the local press, and they were 100 per cent in favor of the forum. We had no trouble with them at all. They gave the forum, as you see, two editorials. They ran publicity from time to time, and our associations with the press produced the utmost in cooperation for which we're very grateful.

Another thing is to have the names of your doctors printed on big white cards in front of each of them so that the people know who's talking.

An important point is to make sure that your public address system is working. You'd be surprised what can happen. It may break down when the fellows up there are talking, and no one hears what's going on.

Mimeograph your question sheets and arrange for their distribution by messengers. We used the nurses from the local training school, and they looked very nice in their white uniforms. Everyone was glad to see them. Make sure that the press and radio are notified, and have a reporter to cover the proceedings.

Start on time. We met fifteen minutes before the program went on. We walked on the stage at exactly the stroke of eight, waited until those who were standing sat down, and then we started the program.

The speakers should be well versed in their topics. Don't underestimate the intelligence of your audience. When you have an open forum of this type, you're not only speaking to lay people, but you're also speaking to some highly educated persons. For example, if you don't know the answer to a question, say so. One of the questions on polio was, "When was the virus first discovered?" or rather, "How long have we known about viruses?" No one on the stage knew about it, so we admitted we didn't know the exact answer. Some college professor stood up and said that he knew the answer, and it was very interesting. In other words, if you don't know something, say so. Don't try to polish the apple.

People who turn out for these forums are genuinely interested or they wouldn't be there. Their enthusiasm will be transmitted to you, believe it or not. You'd be surprised at the interest among the doctors. They went there with an idea that the forum was another one of those things we're trying to put across, but after they were there awhile, they were very much stimulated.

In conclusion, we in Clinton County feel that the forum is one of the most stimulating and satisfying programs that can be put on because it's one aspect of public relations in which you're not trying to sell anybody anything from the point of view of a radio broadcast, a speech, or a newspaper article. The doctors are right there, and the people are participating. Believe me we feel that the forum has paid off!

DR. WINSLOW: The subject is open for discussion. Somebody speak up. Anybody have any questions, or criticisms? Go ahead, doctor.

DR. EVERET WOOD, Auburn: I'd like to make a few remarks on the system that we have in Auburn, which is similar to this. It isn't exactly the same. The local radio station has a program that they call "Citizen on the Spot." On frequent occasions they have had some of the doctors on this program in which they discussed various phases of medical work and community work in general. The one in which I participated had to do with the eye bank and how it was formed. It's along the same line the speaker has just talked about and apparently has gone over very well.

DR. WINSLOW: Thank you, doctor. Other discussion? We'd like to have some criticism and questions about it. Yes?

MR. FREDERICK W. MIEBACH, Public Relations Director: I know that some of the boys here are being a little bit reticent about telling what their own plans are, but out in Chicago a couple of weeks ago a lot of us were very much enthralled with what's being done in this field, and I know that there are at least three places in the State where plans are in progress to put this program into effect. I wish that Mr. Boyden Roseberry and Mr. Harold Howell would tell us a little bit about how this program is being brought close to home. Won't you do that?

MR. BOYDEN ROSEBERRY, Westchester: The type of forum that was described in Chicago about which we got so enthusiastic is quite different from the one just described. It's a forum where you have cosponsorship of the press. The press is just as much interested in it as a public service as the medical society. As a matter of fact, probably a little more so because apparently it is very effective in building up circulation.

It started out in St. Petersburg, Florida, as you know. I talked to Dr. Worth Gable of St. Petersburg, and he said it really happened when he wanted to start refresher courses for the older nurses who had been married and settled down and weren't active any more. What happened was, when it was announced, the auditorium was packed with people from the park benches in St. Petersburg who sit around and don't have much to do. When the press saw the response from the general public, instead of being a refresher course for nurses it became a public forum for the people.

In this type of forum the press handles all the technical end, all the publicity, gives full-page announcements and advertisements with the pictures of the doctors, and offers the public an opportunity to select topics and to send in questions. The entire forum is rehearsed in full two nights before. No questions are asked from the floor. In this way they avoid problems and questions on medical economics. Many of the questions sent in cannot be used, but the forum is operated in such a way that the public feels their questions are being answered. It's up to the panel to develop questions that will answer as many of the questions sent in as possible. All questions are submitted as coming from a member of the community: Mrs. J.J. of such and such a town wants to know so and so.

The speaker has fifteen minutes, and he must speak in simple nontechnical language. One hour of questions follows. By having a rehearsal you don't have one member of the panel who takes ten minutes to answer a question. They limit answers to three minutes.

In Atlanta the *Journal* hired a theater that seated 2,200. The meeting was on emotional problems. People started filling the theater at six o'clock for an 8:15 meeting, and by eight o'clock they had to call the Fire and Police Departments to disperse the crowd from the street. The doctors said they probably caused more emotional problems than they solved that evening, but at least the press was sold on the forum as a medium not only for health education but from their point of view of building their circulation. The paper gave it tremendous space, and the editor said it's not just the people that have nothing else to do who attend. All were amazed at the number of mink coats.

Mr. Harold Howell, Oneida, Herkimer, and Madison: I don't believe I can add much to that because Mr. Roseberry sounds as though he's been peeking through the notes I have in my office on the Chicago meeting. I did jot down four questions I'd like to ask Dr. Siegel. One is, because everywhere else that we know of there has been a co-sponsor, was there a reason why you had no co-sponsor? Second, it would be interesting to know the attendance at your one meeting. Third, because the national pattern is to have meetings, usually weekly all on the same night of the week, was there a reason why you had only one meeting? Fourth, was there a reason why you had no rehearsal?

Dr. Siegel: Well, as far as the sponsorship is concerned, we went to the newspaper to ask them to sponsor it. Their reaction was that they'd give us all the cooperation and publicity we wanted, but they felt they didn't want to enter into anything elaborate. Not that we lacked any cooperation on their part, but they felt that primarily the doctors were going to run it and they wanted us to assume full responsibility for it. As far as the attendance is concerned, we ran our forum on a hot night in the middle of August, and we had around 150 or 175 people there. That may sound like a small number of people, but it's large for our community. We're a small community. To get people to turn out for anything is almost impossible.

In regard to the number of meetings we planned four for the year. The next one will be on heart trouble, not heart disease, and it's going to be presented in November. Probably the reason we didn't have any rehearsal was that there weren't any prepared questions. The members of the panel felt that when you have your questions prepared ahead of time, although it's easier on the doctor, it's still not a fair method. If any question was immaterial, on medical economics, for example, we wouldn't answer it. I hope that answers your questions.

Dr. Winslow: Does that answer it adequately, Mr. Howell?

Mr. Howell: Right.

Dr. Winslow: Any questions? If not, I think we'll close that subject and take up item number two. One of the difficult problems always before a medical public relations group is the relationship with the press. In recognition of this fact, the last House of Delegates of the State Society recommended the formation of a code of cooperation between the press and the Medical Society. It's difficult to reach a common ground between the press and medicine because what seems important to medicine sometimes does not seem to be important to the press, and the converse of that is also true. We are very fortunate today in having with us the representative of one of the smaller county societies, Dr. Buscicchi, and he will speak on "Rockland County Under the Public Relations Microscope." Dr. Buscicchi.

Rockland County

Dr. Emile J. Buscicchi, Congers: The Rockland County Medical Society has always been interested in medical public relations, but it was not until the postwar period that we really began to go into it in a systematic and a serious way. As you know, Rockland County is a small county as counties go. We have about 114 members in our society.

Because of the nature of our county, divided as we are into five townships with two general hospitals, one located in the eastern and the other in the western end of the county, we experience some difficulty in keeping both segments of the medical profession (those doctors that attend one hospital and those that attend the other hospital) interested in the society programs and sufficiently informed so as to present a united front on matters of public interest. Upon my appointment as public relations chairman, I discovered that although we had a public relations program, it lacked continuity and was without a central bureau of information.

Our secretary, of course, has always been most cooperative, but since not too many of the problems the public are interested in were discussed at the society meetings, he was sometimes a little stymied in trying to answer the public inquiries.

Accordingly, one of the first things we did was to schedule, arrange, and conduct regular monthly meetings of the public relations committee. This committee at the moment has five members, and probably three or four show up regularly at the meetings. The county, therefore, is pretty well represented in all its sections. At these meetings we discuss suggestions from the A.M.A., the State Society, and our own local problems. We decide what action we think the society should take and recommend this course of action to members of the society at their meeting.

Incidentally, our public relations meetings are two or three days before the society meeting so that we can have a report and a recommendation for the regular society meeting. Being a busy practitioner, I soon found out that I didn't have the time necessary to keep the newspapers informed of our activities so I made it a condition that Mr. Vilardi, who has been with us for some time, be retained as our press representative.

In Rockland, like all other counties, we have some who are for and some who are against, but the process of conditioning the general membership to accept and become part of an active public relations program has been very satisfying and on the whole successful. Thus far, through the joint efforts of our president, Dr. Theis, our membership, our public relations committee, Mr. Vilardi, and our friendly newspapers, the society has undertaken many public relations projects in the past two years. Among these is the establishment of an information bureau with our own medical society telephone located in the office of the secretary. This service is available to the general public from 9 to 5 each day. A mediation committee was set up and properly publicized, and in the past year and a half I think has been called upon to act but once. We also have established a speaker's bureau. A list of speakers is in the hands of the secretary, and we have speakers on all subjects available to all civic, fraternal, and other organizations that are interested in having a speaker on hand. We have established a weekly health column, through the efforts of Mr. Vilardi and with the cooperation of our newspaper, which we call "Dr. Rockland Discusses." These columns are written by recognized specialists in the different fields, properly gone over and approved by others and published weekly in our local newspaper. We have organized an annual press luncheon where we meet the editors of the various weekly and daily papers and discuss problems of mutual interest to both.

We have had several health forums in the past two years. These have been cosponsored by the organizations that have been active and interested in the particular subject that we discussed. I speak especially about cancer, diabetes, and tuberculosis. Interestingly enough we had an open forum this year on a most interesting topic, the rights of patients. This, of course, is a very ticklish subject, but it was well and ably handled by our medical society representative.

We have an annual Rockland County Health Day where the annual health services are discussed. People are brought up to date on what is available, what is being done, what they can have, and what the medical society is doing about it. These are all well publicized in our local newspaper.

We have established an area emergency service. It has become impractical for the society to establish a general emergency service for which the medical society is responsible. We organized our service in areas making each doctor individually responsible for the emergency call service.

The Rockland County doctors are very active in service and fraternal clubs and serve on several of the local town and village boards. Through these men we learn what the public is thinking.

I'd like to refer now to Mr. Baker, the editor of Rockland County's daily newpaper, the *Rockland Journal-News,* who a few years ago put out what I think is one of the greatest medical public relations and press public relations material that I have ever seen. It was a special issue of the *Journal-News* commemorating the fifty years of medical practice in Rockland County in which the birth of medicine in Rockland County up to the present time was reviewed. This was really a tremendous thing.

Dr. Winslow: The next speaker is Mr. Dolph Vilardi, Rockland County's Press Representative, and his subject is, "How A Small County Medical Society's Press Representative Functions." Mr. Vilardi.

The Press Representative

Mr. Dolph Vilardi, Suffern: I'm supposed to talk on how a press representative functions, and that, of course, as all of you know without being told, is a very small portion of the public relations program. So regardless of what I may have to say, this is only going to be a small portion of any conference which takes in public relations as a whole. In our case press representation is rather important. We are a small county. We have no local radio station, and our communication and transportation problems are not what they might be in other types of communities. Therefore, our means of informing people as to what we are doing is carried on mainly through our local press. By the same token we do have problems with the press because we have four weekly newspapers and one daily newspaper, and any of you who has handled any press relations at all knows that that immediately constitutes a problem. The newspapers that are published every day forget about news which is twenty-four hours old. It's not news, and that has been one of our big problems with doctors who feel that anything that they do is news regardless of how much later it is brought to the public's attention.

We have had considerable difficulty in educating our medical society, but we have come a long way in stressing to the society as a whole the importance of rapid news releases. But, of course, if we indulge in the luxury of rapid news releases for the benefit of the local press and the news value thereof, we immediately hurt the feelings of our weekly newspapers who, of course, feel that they are being "beat" on the news. We have adopted what seems to be a fairly successful compromise in that respect. What we have done is that anything which is in the realm of accident or urgent news—if one of our doctors dies, or something of that sort—is immediately released to the daily local papers. Other things such as a report from our local man at this conference would be the basis of a release on our Wednesday release date so that our weekly papers which come out on Thursday may get the benefit.

The main function of a press representative in a small community is that he should serve as a readily available contact man between the society and the papers. Obviously, doctors, as Dr. Buscicchi said before, found that it was impossible to maintain a practice and at the same time be readily available at all times. And when we say all times, we mean all times. I am available to any press inquiry at any time of the day or night, and I do the best that I can to supply the information they want. In other words, a press man for a small county society is a leg man. He's a man who gets the information for the press. If he doesn't have it, he tries to get it. He tries, however, to have at hand as much information as he can.

In this respect, of course, again we ran into some difficulty because sometimes information which was required had not been established as a matter of policy by the local society. Those of you who have had experience with this type of thing realize that there are many medical societies that do not have established policies on all subjects which are of interest to the public. We have tried to develop and we have been, to a large extent, successful in developing an established policy on as many things as possible. Those decisions are available for the press representative so that when a question arises from the press, he can give an answer without saying, "Well, I'll call you back." Then he has to call two or three hospitals to try to locate the man who might be in a position to answer authoritatively.

In order to be of the greatest service to his county society a press representative must have more than just a nodding acquaintance with the members of the press in his community. He must know them well. He must know their position. He must realize that they have a job to do in their own way, and he must realize that he can't tread on their toes any more than he wants them to tread on his toes.

There are doctors who come to me and say, "I don't like the way such and such appeared in the paper yesterday." If the newspaper uses some of the things you want it to use, you do not have a right to dictate the way the materials are to be used. The newspaper editor is a king in his own domain. I think the sooner we realize that his business is to publish news and that he determines what is news, then the sooner we will learn to present messages that can be used to our advantage and in the way we intend them to be used.

We find that contrary to what is in the minds of most conservative people, we can give pretty nearly any information to our newspaper editors and that their integrity is of the highest type. We don't hesitate to say almost anything to the newspaper editors and, of course, always the truth. Their judgment has been of the very best. There are many times when they inform us on the advisability of releasing certain types of information. They don't need any censoring.

If we give them all the information, and I mean all, then discuss with them the advisability of what is to be done, we get from them what we can consider extremely good cooperation. We find also that we can give them service. I mean the press representatives can serve the paper by acting as a sort of part-time reporter for the newspaper. In some communities doctors call up the press and tell them to have a reporter there. Well, that's fine for New York City and wherever Dr. Siegel comes from, but we know that if we did that, in many cases it would have to be the editor himself. Certainly this is true in the case of our weeklies, and the editor may have other things to do. So we find that instead of asking the editors to send a reporter, we do the reporting for them.

Obviously a doctor who is acting as public relations chairman as well as his own press representative just couldn't possibly do that. So the press representative in that case serves a very important function.

We find that by giving this service to our editors and to our press they in turn are getting into the habit of calling us for confirmation of medical news which may come to their ears and that they call us on things which possibly might not be so good for us. I recall only a year or two ago when one of the chiropractic hospitals out somewhere in the midwest sent a large tabloid-type circular to our county advising the people that they could treat and cure pretty nearly any condition known to man. Mr. Baker saw it before I did. He called me and said, "I'm going to drop this in the mail and ask for your comments." I looked it over with our Public Relations Committee. We told him what we thought of it, and Mr. Baker actually wrote an editorial denouncing the evils of chiropractic medicine, as they call it, and things of that sort.

We are able to contact our press and get pretty nearly any message across that we want without the necessity of using paid advertising, which most of the members in our society seem to abhor, and at the same time we have gotten out of the habit of calling the editor and saying, "Will you put in an announcement about this?" Papers don't put in announcements. They carry news. I want to emphasize that very strongly.

We feel that through the establishment of our weekly health column, which Dr. Buscicchi mentioned briefly, we have put one over on our patients. We are doing two things in our column, giving a public service and discussing ailments of current interest. For example, comes the measles season, we talk about measles. At the same time the pages of the column, because it is a byline type, are open to us for some sort of editorial comment. So that if the time comes, and occasionally it does, we can put in a little bit about our activities, and we can editorialize, something which you can't do in a straight news story. For example, when we had the last Rockland County Medical Society outing, we informed the public that the society had gone to the expense of having a special telephone extension out on the picnic grounds so that the doctors could answer the telephone and take care of their patients. They weren't just out there having a good time forgetting about all their patients. We pointed out that seven or eight doctors had to leave. That in itself might not constitute a news story, but we can get it before the public through our column.

Dr. Winslow: A newspaper editor is a man that has my constant admiration and stimulates my wonderment from time to time because I can understand how a doctor works, but how an editor, the man who writes editorials, can work is beyond my comprehension. They're so powerful in their field in publishing opinions, in wielding public opinion, and framing up what people think about. To me they're just wonderful. So it is with a great deal of pleasure and with much appreciation for his coming here that I introduce to you Mr. Baker. He is the editor of the *Journal-News* at Nyack, and his subject is "How to Help Your Editor Report Medical News." Mr. Baker.

The Editor

Mr. Norman Baker, Nyack: I think there are two kinds of people that don't like corpses. One of them is doctors, and one of them is newspapermen. With doctors I imagine they feel that a corpse means that somewhere along the line someone made an error of judgment, but with an editor a corpse is a story that is three days old. It doesn't smell good at all to the newspaper after three days. That is one of the important things in the newspaper business on the daily level. I know on the weekly level it's a different story. There are certain things we on daily papers have to have the next day. If a man dies Thursday, I certainly don't intend to wait until the next Thursday to put it in the paper. Time is one of the important elements in any newspaper problem.

We're extremely fortunate in Rockland County to have a medical society and a medical society representative like Dolph Vilardi. I had a perfect example of it only this week, and that illustrates, I think, the timeliness of news. It brought me down here with something that is very fresh and illustrates graphically how a medical society and a medical society press representative, public relations representative, or whatever you want to call him, can work.

About three weeks ago there was a proposition before the Suffern Village Board asking for a well-baby clinic in the community and asking the village to support it. It so happens that one of the doctors in Suffern is also a member of the village board, a village trustee, and he hopped on it with both feet. It's been hopped on back and forth for several days since then, and they said "Do we need it, or don't we need it?" The village board hadn't asked the medical society.

I think it was on Tuesday night the Medical Society of the County of Rockland met and said that if it was determined that there is a need to establish a well-baby clinic in Suffern, the medical society would be quite willing to offer an opinion on whether it was good or bad. Until they obtained this information the society didn't want any part of it. That was Tuesday night. Wednesday morning, Mr. Vilardi was on the telephone with the text of the resolution passed by the Medical Society the previous night, and it made an excellent first-page story in the first column of the paper because it was something that everybody in the community was interested in. If they had waited for three or four or five days, it would have begun to smell.

I don't have any particular problem. I'll have people coming into the office, or I'll have them calling up on the telephone and saying, "My baby had a bad case of something last night. I couldn't get a doctor. I called six, seven, eight, nine, ten doctors—they wouldn't come." I know that as an individual there's some reason why the doctor couldn't come. I don't know what it was, but I can call Dolph and say, "Hey, I got a squawk in here this morning. What's the answer to it?" And the answer is usually a good reason why that call wasn't answered; the baby wasn't sick enough, or there wasn't any need for a doctor going out at that time of night. If I took the squawk without checking, if I had to call five different doctors to find out what the answer was, three of them would be in the operating room, one more would be having office hours, and the other one would be on vacation, and all I'd have would be the squawk. And then if I ran the squawk, all the doctors in the county would be down jumping on my neck. Simply because I didn't find out. There's always two sides to the story, and I feel that I have to get those sides. I can get one of them when your medical society is represented.

We have hospital problems. If a patient is brought to the Good Samaritan Hospital as the result of a bad accident, I never have to worry about finding out what happened. Mr. Vilardi, who is a technician there, can always tell me whether it's a broken leg or a broken neck or abrasions, contusions, and all the other things, and he gives them to me in those words which people understand. He doesn't give me the ten-dollar words that are common to your profession and which I can't use.

I remember that the publication to which Mr. Vilardi referred came from Colorado. I think they cured everything from sprue to syphilis by pushing noses or something or other, and it made me mad because I knew it couldn't be done. There again was something that was helpful because I sent for Mr. Vilardi, and that same day I had the answer. The doctors aren't afraid to speak up in court, speak up in open meetings, and it's very helpful. We can use any number of things as news for the benefit of doctors. If someone has an accident and the doctor says that the injured person is the supervisor of the town of Orangetown or the town of Warren or the town of something else, that man is a public figure. And the newspaper's interested in getting that bit of news and whether the man is badly hurt or not. It's a very simple matter to give us those things. We like things that are fresh, that have happened recently, and that we can take care of right on the button.

You'll find that the average newspaperman has as high a code of ethics as any doctor or any lawyer. We have bums in the profession. You have bums in your profession. We want to get rid of them, and you want to get rid of them. But on the average, you'll find that newspapermen will play cards, play poker, as well as anybody else. I know some good doctors who are also good crapshooters. And they're good doctors too. And we have, as I say, bad apples. We get rid of them as best we can.

Several things I think have been good publicity on the part of the medical society. For instance, your doctors who have been in the profession for fifty years always make good stories. Personally, I don't like and I won't use stories about two-headed babies. I don't think that's news. It's rather repulsive to my way of thinking.

I think you'll find that the average newspaperman is inclined to be friendly to the medical profession rather than to be critical of it. I don't know any newspapermen that go out of their way to beat doctors over the head with a typewriter. I know I never have, but perhaps there are some who do. And I think you'll find that by giving the newspaper help as Mr. Vilardi does, you'll be helping yourselves, and you will be more appreciated by the public than perhaps you are.

I feel that the relationship we have with the Rockland County Medical Society has been excellent all the way through and that it has been improved with Mr. Vilardi. I remember a luncheon we had. I went over there hot-headed because I couldn't find out names of polio patients, and after I had been there a little while, I understood that perhaps there was a reason why I shouldn't. I didn't feel nearly so bad about it because Dr. Degen, of Middletown, who is health officer up there gave us a good explanation. If you can help the newspaper by giving it odds and ends of information and if they ask questions, answer the questions and don't take the usual professional stand not to say a word, I think you'll find that you'll get along and have a lot more fun, and you won't be quite so critical of us. You'll find that, after all, most newspapermen don't have horns and wear tails.

Dr. Winslow: Mr. Baker, I would like to say that you've touched on a situation that is very thoroughly in the mind of the medical men, and that is the discipline of a profession. It's a matter of membership. How in the world are you going to discipline a profession? We find it very difficult in our profession just as you do. So there is a common ground between the editorial and medical fields.

This subject is open for discussion now. Dr. Horn.

Dr. Leonard Horn, Rochester: I come from Monroe County, the city of Rochester, New York. (In background—"Office hours, please.") I'm glad that remark was made because one of the biggest bugaboos about cooperating with newspapers and newspaper editors is just that type of remark. Whenever your name happens to be quoted as a comment to some thought or idea, a half dozen or more doctors will approach the unfortunate individual and say to him, "Where were your office hours? Everything else was in there."

I believe that one of the things we have to do is to promote better relations among our own profession regarding cooperation with the press. We ourselves don't understand how far we can go. I just picked up our *Principles of Professional Conduct*, and under Chapter 1, Section 4, Advertising, I find that it says here, "Among unethical practices are included the not always obvious devices of furnishing or inspiring newspaper or magazine comments concerning cases in which the physician or group or institution has been or is concerned." I believe this section is one of the reasons why editors have so much difficulty in obtaining quotable comments.

Recently, back home, I met with the managing editors of our two leading newspapers, and it was a pleasure indeed today to listen to Mr. Baker because every comment that he made was more than amply supported by the two managing editors of our newspapers. One of their first criticisms was the fact that doctors refuse to be quoted, and they felt that names make news. There ought to be some system whereby the county society would set up a panel, or whatever you wish to have, whereby if a certain medical subject came through on an associated press wire, the newspaper could contact one or a number of individuals for their comments on that subject. Editors do not feel qualified to pass on something medical and believe that physicians whose names could be quoted should pass on that subject. Another criticism they made was the lack of cooperation between the professions, that is, the medical profession and occasionally the newspaper which, just like everybody else, makes a flub. Quite frequently some doctors call up the newspaper and ridicule the newspaper, the reporter, or the editor.

A third point that was emphasized was that reporters do not take kindly to the doctors' desire to edit their story—to see an article before it goes to press. I think they feel that that is a little bit too much censorship as far as they are concerned. They would like us to trust in their good judgment as to what and how much they are going to print.

Dr. Winslow: Any further discussion? Dr. Wood.

Dr. Wood: I'd like to ask the panel one or two things. First of all, what is their policy on letters to the paper? We have found in Cayuga County that sometimes we've gotten into serious trouble because of letters to the paper which had been written by individuals in the city and in the county. Also I'd like to mention a recent incident. A little while ago in Auburn we had a serious accident, and through our press relations I suggested to our editor that he report it in a little different way. I asked him to point out not only what had happened to the individuals involved in the accident but what had happened to the many individuals who were involved in taking care of them. They were very gracious in handling the subject and ran through the whole system of what had happened after the people were injured and brought to the hospital. I think that was a very helpful thing to the profession and to the hospital.

Dr. Winslow: Any further discussion? Doctor.

Dr. Harold T. Golden, Herkimer: We are a small county in population also. We're very interested in what Rockland County has done. I know I'd like to initiate the same procedure in our county, but there are a few questions I'd like to ask relative to it. First of all, we have two daily newspapers in our county and several weeklies. I wonder what type of man you get to handle these releases? I see you have a technician from the hospital. Is it a good idea to hire a part-time reporter, in other words, someone who is very familiar with reporting, to handle releases?

Another thing I'd like to know is what something like this costs. We only have 55 members in our society and have to prorate everything.

Another question is, what kind of releases do you give out? Are they bad releases as well as good releases? Does the paper go along and print the story that we had back home of the doctor who was just indicted by the income tax department for $160,000 back taxes? Or do you just tell them about the good things we do? I think it would be an excellent idea to publicize further our emergency medical service. We all have one I'm sure, but time after time, the police call me or some doctor and say, "There's someone here who can't get a doctor." The answer is very obvious. They should call the emergency medical service, and they could get a doctor.

What about those accident cases where Johnny Jones has a possible concussion of the brain, and a possible this, and a possible that? It's always possible until you find out just what it is, and by then the news is beginning to smell. Do you give the doctors' names on these things? You certainly give the patients' names. How are these releases made? Are they written releases from the representative, or are they just a conversation with the editor or the reporters?

Dr. Winslow: Any other comment?

Mr. Baker: On that question of seeing a release before it's published, if I give a story to one of my reporters and I have confidence in the reporter's ability to translate into newspaper English the technical phrases that a doctor may use, I feel that while I might send the article to the doctor from whom it came, he'd send it back to me and say, "Gee, that's wonderful," without any changes at all. I've had it happen. If I didn't have confidence in the reporter, then I would send it to the man from whom it came, but you'll find that it's a question of knowing who handles the story on the part of the editor. I don't think there's any necessity for checking over after it has been written because a good reporter or a good writer will follow what's told to him.

On letters to the editor, if the writer goes overboard, and I know the writer is wrong, I don't use the letter because there's no sense in using it. Somebody writes in and says that Dr. Jones is a jerk. If I know Dr. Jones and I know he isn't a jerk, I don't use the letter. It's a question of taste. If he is a jerk, I let the letter go.

I get letters from the State hospital quite regularly. They're all of a pattern, and I don't use any of them because they always say that doctors don't know what they're doing, but I have an idea that they do. So it's a question of editorial knowledge of the community.

On the question of using a doctor's name in connection with an accident story, normally we wouldn't use a doctor's name except to say that Dr. Newburgh or Dr. Buscicchi attended the accident patient at the scene. We wouldn't say that Dr. Buscicchi said he had a broken leg, broken neck, broken back, and was pretty well banged up. We just simply say he treated him. We wouldn't go beyond that, and I don't think newspapers do generally.

I think it's an excellent idea to follow through on what happens to the victims in accidents after they have been taken to the hospital. Usually the doctor's name is secured from old police records or something like that. We just state that they were taken to the office of Dr. So-and-So for treatment, but we don't go into too great detail. We certainly don't tag it on to the doctor saying that So-and-So had a broken leg because the doctor can't usually tell until there is an x-ray taken, and after that, of course, why it's something else again.

Dr. Winslow: Mr. Vilardi.

Mr. Vilardi: I think there are a couple of questions that weren't answered by Mr. Baker. One thing we have established is a policy with regard to names of doctors, something which has worked out pretty well. All the members in the Society do not agree with this policy, but we find that most of them do.

In the first place when a doctor is at an accident, whether he likes it or not he's part of the story—the "who, what, when, where" part. He's "who." He was there, and there isn't anything he can do about it whether he likes his name to be mentioned or not. If you leave out who was there, you might just as well leave out when it happened or what happened. It's just part of the story. So in the accident cases there isn't any argument or comment about that.

In other cases we never give doctors' names. We let the newspaper editor find out for himself, but our policy on doctors is that we feel that there's nothing wrong with a doctor's name being in the newspaper, any more than it is wrong for anybody else's, as long as you don't mention the doctor in connection with the treatment of a specific condition or a specific type of case. In other words, if you said that this man had a broken leg and, therefore, he was taken to Dr. Jones, you'd be implying that Dr. Jones cures broken legs. He may be better than somebody else or something like that. That might constitute implied advertising, but if you said the man was at the accident and Dr. Jones treated him, we see nothing wrong with that. As a matter of fact there isn't anything we can do about it so we just let it go, and I don't think anybody is particularly hurt by it.

With regard to what constitutes good or bad releases, we don't go out of our way to call up the editor and tell him that somebody is having income tax trouble. On the other hand, we know from experience that newspaper editors have ways of getting news that sometimes are often way beyond our understanding. So if he does call you up and says, "I do know that Dr. So-and-So is in such-and-such a condition," and you know anything about it, my advice is you'd better tell him all you know about it and be friendly enough with him so that he's going to use his judgment. I think in most cases he will. If the truth is bad, you might as well tell the truth because if you don't get the truth out, eventually somebody will make up something that's worse and I think you're better off with the truth.

As far as the "no doctor available" thing is concerned, I endeavor to trace them down. I've conducted two or three minor surveys, and inevitably the patient did not call more than one or two doctors. If he did call more than one or two doctors, he probably got one but didn't like that particular one, so when he called the tenth, he finally told him that he hadn't been able to get anybody, but the truth of the matter was that he got one or two that he didn't like. We find that if you can publicize that sort of thing, you will lead to a greater understanding of the problems that are encountered.

Concerning how we give out our releases, whether they should be written or verbal, in the cases of the weekly, they are almost 100 per cent written. The reason for that is we have more time, and second those papers usually have less of a staff. Some of them consist of an editor and a bookkeeper. In the cases of the dailies we have to use the telephone in a large number of cases because of time.

Dr. Winslow: While we have heard some of the problems of small counties, it seems that large counties have problems peculiar to them. Dr. Henry I. Fineberg will now discuss "What Public Relations Chairmen Can Do to Build Better Press Relations for a Large County Medical Society." Dr. Fineberg.

Press Relations for a Large County Society

Dr. Henry I. Fineberg, Queens: The subject assigned to me this afternoon is one that I think can best be covered by just relating what we have done in Queens County, although I must admit that Rockland in a sense has stolen our thunder because our story is very similar to theirs.

We are a large county. We have a population of 1,650,000 people, and our medical society has between 1,800 and 1,900 members. We have not always had a good press. Some years back when I first came to Queens, we were not only being lambasted by the newspapers, but because of a misunderstanding, we were having rocks thrown at us by the police. It wasn't safe for a doctor to go out in the community with an M.D. license plate.

It all came to a climax one day when one of our patients in one of our large municipal hospitals committed suicide. That afternoon there was a big headline in the *Long Island Press* and in the *North Star Journal*, which by the way has a circulation of around 250,000, that "Patient Jumps Out of Fourth Floor of a Hospital—Doctors Hide the Facts." Most of you know that that can't be true because every case of that sort must be reported to the police and to the medical examiner.

So I thought it was about time that I should go down to the newspaper and have a talk with the editor. I can tell you that I went down to 168th Street with fear in my heart. I think it's the best trip I ever took because I learned that editors are really people with hearts. It was toward the end of the day, the paper had gone to press, and we sat down and had quite a talk about doctors in general and the county medical society. From that day on we have established the practice of meeting at least once a week or every ten days.

The editors go out of their way to be nice to our county society. I sometimes go in there during the day when they're working on the paper. I've really learned how a paper operates. I sit down and have a sandwich with the editor and a cup of coffee. If it's past business hours, we sometimes have a drink. And we've invited the editors to our county society meetings.

In 1949 the president of our society felt that we needed a little bit more than just a haphazard arrangement, and it was suggested that we have a press representative. I was told to contact the editor of our newspaper and talk to him about it. He recommended one of his assistant editors to act as our press relations man on a part-time basis. That was a fine arrangement. This man not only came to our meetings, but he also appeared at our public relations conferences and committee meetings. He always had a photographer with him at our monthly meetings. We had quite a splurge in the papers about our meetings and photographs of the prominent men who were asked to address us.

As a result of that liaison we were able to have certain editorials and feature articles printed. They were concerned, for example, with socialized medicine, the mediation committee, and the emergency medical service of the doctors. As you know, in New York City, we're having a controversy at the present time about one of our insurance plans and the free choice of doctor. The editors went along with us and printed an editorial about the free choice of physician and that they were in favor of it.

Here's another human interest story. I received a call from the editor one day. He said, "You know, tomorrow is going to be Memorial Day, and we have just found the grave of the first president of the medical society, Dr. Daniel Manema, who was a surgeon in the Revolutionary Army." He had been elected to our medical society in 1806, and the editor asked if I wouldn't bring the president of our medical society to the cemetery to place a wreath on the grave. This was made one of the feature stories with a picture which people liked very much and which put the doctor on the human side of civilization. It made people feel that after all he's a human being. He even goes to the cemetery to put a wreath on an old colleague's grave.

We've come down to the stage now where the editor will call us on matters about which there's some controversy. If there's a release from a science service, he'll ask our opinion about it. If there's any question about a UP or AP release, he'll call us up. That doesn't mean he'll always take our opinion, but he'll talk to us about it, and if it's anything relating to policy of the A.M.A. or our county society, I always refer him to the president of our society.

About a year and a half ago, the editor called me up and said, "You know we'd like to have a weekly column." This is in line with what Rockland County talked about. He said, "How would you like to write a weekly column for the paper on Sundays? Call it anything you like." So I appeared before the Comitia Minora and the Public Relations Committee and obtained permission to write this column, and now we have a column every Sunday morning in our paper. It's called the "Doctor's Column." We discuss everything. For example, a short time ago I had a letter from a man who complained about the doctors, the American Medical Association, and their attitude toward the veteran. He was under the impression that we were against the veteran receiving any sort of medical care, and that was the impression the people had in his neighborhood. So I wrote an article about the attitude of the doctor and the American Medical Association toward the veteran. The fact was that we weren't against the veteran receiving medical care from the government provided that the disability or the disorder was service incurred or service aggravated, but the people had the wrong impression.

A short time ago, in keeping with Dr. Siegel's program, the editor sent me a release from one of the syndicates about forums, and he asked that we conduct a forum under the joint sponsorship of the *Long Island Press*, *North Star Journal*, and the Medical Society of the County of Queens, which we're going to do.

Also the editor came to us with the idea that, "Well, you're going to celebrate your 150th anniversary in 1956. We'd like to celebrate that with you. We'd like some feature articles about the formation of your society, what has happened to it during the one hundred and fifty years, and how has it progressed." So you can see that our relationship has been a very wholesome one.

I think what you have to do, gentlemen, is not write letters or call the editor. You've got to go down and see him in person. Talk to him, and you'll find out he's a very nice person and that he's willing to cooperate with you in every way. We've had problems about releases to the paper, about mentioning of names, about patients, but we go along with the editors and we've arrived at the point where we can trust them. We know that they won't print anything that's detrimental to the medical profession, within reason. As a matter of fact, they haven't in the last five or six years. They put us in a very good light, and they're always willing to work along with us.

I was just reading some parts of this bulletin of the American Society of Newspaper Editors, and there's an article here by an editor in New Orleans. The newspapermen have been worried about doctors, and the doctors have been worried about the newsmen too. Some of you may remember the speech that Mr. Seltzer of the *Cleveland Press* made before the A.M.A. some years ago in which he felt that we should come down out of our ivory tower and be part of the human race and part of the common man and cooperate with the press and they'd be willing to cooperate with us. This gentleman writes in the same vein, and he ends up his article by saying, "It is too much to expect that the doctor-press cooperation will become even nearly perfect. Their codes cannot be reconciled in all respects, but they will keep on trying to work together. Both know it is a necessity." That's what we've been trying to do in Queens County. As I said before, the story is similar to the one that we've heard from Rockland.

DR. WINSLOW: This subject is open for discussion. Yes, Dr. Bernstein.

DR. BENJAMIN M. BERNSTEIN, Kings: Our relationship with the press is to us the most important thing that we can talk about. It's so much easier in Rockland County with a small group of doctors, a small population, with one or two newspapers who can be very friendly, socially as well as otherwise. But when it comes to a city like New York and a county like Kings County, it's a different problem altogether. We've called some of these press men down and we've talked to them, but we don't get very far with them.

We had a meeting Thursday afternoon of our Bulletin Committee, and I said that what we had to do was sell Kings County in its better aspects to the country. And we, gentlemen, have to sell medicine to the laymen. That's the big problem, and press relations is the most important factor.

DR. WINSLOW: Any further discussion? Mr. Potter.

MR. ROBERT D. POTTER, New York County: I'd like to bring the discussion, if I may, to some fundamental problems the doctor in the back of the room read from the code of ethics. I think that each county in its problem of press and public relations will find that how its own board of censors interprets that code will influence their press relations. Dr. Anderton, I'm sure, will bear me out, that New York County has had the reputation for many years of being very, I won't say reactionary, but very conservative in the use of physician's names in newspapers. The Board of Censors, because of the huge population of New York City, have been most reluctant to go along, and I think you all should recall that following the paragraph which the doctor read about so-called self-advertising, there is another paragraph immediately following which says that the profession does have the obligation to give news to the public, to the newspapers, to the press, and radio.

There are some off-the-record meetings going on at this moment that have been in progress since last February under the auspices of the Josiah Macy Foundation. They are calling together leading physicians concerned with public and press relations, and at the moment the organization known as the National Association of Science Writers, made up of the leading medical and science reporters of the nation. They are going over all these problems step by step, and their deliberations, I think, will be of great help to the State Society in establishing a proper code of press cooperation. This group has broken down this problem into three types of stories, and if you analyze what people have said here, you will see that there are three types. One of them is the spot news story, the accident, where the paper or the radio want to get some names. At least at the present stage of thinking this discussion group is willing to concede that the papers have a right to those names, and they feel that the various county societies should inform their membership that is a right of reporters, if it's news, and that the physicians in the staff room shouldn't kid their friend and say, "Look Joe, what are your office hours."

The second type of story that comes out is the scientific story, the medical problem, the story that breaks somewhere else in the country, and the local press wants to have local comment on it. There it's probably desirable for the society to appoint a group of spokesmen who are permitted to talk on that without risking censure.

Third, you have the policy type of story where the officers of your society are permitted to and should speak on policy. So you have, in general, three types of stories. If you can get around the code of ethics or liberalize it and have it interpreted by your board of censors with an open-minded spirit, then you can do a lot, and I'm hopeful we're changing somewhat in New York County.

Now, although boards of censors, and you all realize it, can't pass blanket rules on every case and like to handle cases individually, there are certain broad aspects which can be decided within the board of censors. I don't sit on the board of censors, naturally, in New York, but I can see how their interpretations are working out. One of them is that a physician who is mentioned in the press should be mentioned with only one hospital or teaching affiliation. Another one is that he shouldn't discuss his own cases. In other words, he shouldn't pose as an expert on, let us say, arthritis. The accident case is the exception. If he is the attending physician, he will have to be named, but a man shouldn't court self-aggrandizement by telling, "I did this and I did that."

"Heartbreak" Cases

Dr. Winslow: The next topic is a discussion of the so-called heartbreak cases presented on TV, radio, and in the press. Dr. Tyner of the Wayne County Medical Society will open that discussion. His subject is "From the Medical Profession's Viewpoint." Dr. Tyner.

Dr. James Tyner, Newark: Well, gentlemen, we might first of all begin by discussing what heartbreak cases are. They're a daily occurrence on radio, TV, and in the press. They usually involve an expensive operation or proposed medical care, the cost of which is beyond the power to pay of the person involved. He publicizes his appeal through the radio, TV, or in the press, and the need is met through the outpourings of charity, of groups and organizations, sometimes by individuals, the radio station, the TV station, or the program itself. In brief, then, the medically injured person is publicizing an appeal for help.

The public is especially responsive to appeals for help in cases involving children. They are dramatic, and they have appeal, and the public loves a sob story. The implication, of course, has to be one of extreme need, dire emergency, even death or lifelong suffering. The public, of course, responds generously. Organizations swing into action, and the need is met. Everyone feels just a little better because he's helped his fellow man.

But with all that medicine is the scapegoat. The public is being conditioned against that mercenary ogre, the modern doctor. Therein lies the rub, as we see it, because investigation of these cases will oftentimes show that these patients didn't consult with their doctor, they didn't consult with medical or medically allied organizations, they didn't request help from hospital authorities. In fact, they didn't give the medical profession a chance to help. Rather, we might say that they instead chose to glamorize their plight and to bask in the searchlight of publicity while they were on the stage for just a brief moment.

Just where can a heartbreak case go for help, then? It is true that medical and surgical and hospital insurance do help to avoid these cases, but many are far beyond that. They are overwhelming, and the need may be far beyond these ordinary facilities. They are catastrophic in nature, one may say. There's catastrophic insurance, but that's unlikely to be carried by these people. The deductions are too high, and the cost is too great. Catastrophic insurance, however, must be pushed because after all it does cover the 75 per cent item of medical care, which is hospital care. Medicine itself is only 25 per cent. We might remember, too, that if socialized medicine were here, we wouldn't have any catastrophic illness. We'd have illness, but there wouldn't be any financial catastrophe.

If a heartbreak case sat down with his physician, I think he could help him out. He might even give him his services at no cost or at a greatly reduced fee. In any case he could direct him to free clinics and hospitals where doctors are already giving their services gratis. He might send him to the welfare department. It might be well for us to remember as doctors that the social welfare law of the State of New York provides that the welfare department has to furnish care, medical and hospital, for anyone who is unable to obtain this care for himself.

A consultation with the welfare department will show this patient that the officials are kindly and understanding. An appeal is met with sympathy and with privacy. The department is not a usurer. It won't strip a patient's financial bones. It may ask for a little repayment, or it may adjust his budget. It's not, however, going to take away his TV set or his needed automobile or attach his home. Actually, a heartbreak case is just as embarrassing to the welfare department as it is to the county medical society because it means that neither is functioning in its public relations job.

The physicians and social workers might tell the heartbreak case about the work that medically allied organizations do. There are many of them. There's the American Heart Association, the National TB Association, the polio fund, various State TB and mental health clinics, Alcoholics Anonymous, and the Red Cross. We could name them by the dozen. You know them in your county far better than I do. All of these organizations were built up for the purpose of helping the sick, indigent or not.

With all these available, it might be wondered why does a heartbreak case ever become publicized? If we can forget the desire of certain people for a little glamor and a little publicity, the charitable view for us to take is that these people, and the public in general, do not have the information about the good things that doctors, hospitals, and medically allied organizations are giving the public every day. That is a public relations' job, and the public must be told these things.

To be basic, the remedy really begins with the family doctor. He's the one who has the most contact with the patient. He must know his patients, and he must realize when the financial situation is getting out of hand. He must lead his patients through the maze of modern hospital and medical care. His rapport must be close enough so that when the patient is running low on funds, he will know it, and treatment will not be disrupted because of lack of funds. The physician knows the ropes; the patient doesn't, and the basic responsibility is the doctor's. Beyond that the patient should know that regardless of any ability to pay or any consideration for any condition, he need only ask to receive medical and hospital care.

On the county level the Alameda County Medical Association in California in 1946, seven years ago, as you well know, enhanced its public relations no end when it announced, in substance, that "We guarantee the services of physician and surgeon to everyone in the community who needs them, and if his services will work a hardship, we will see that his fee is tailored to fit." In December, 1952, the House of Delegates of the American Medical Association did the same thing, and they urged that all county societies adopt programs assuring medical care to every citizen in the community and that these programs be publicized.

In New York State we all know there is no need for TV or radio or newspaper exploitation of heartbreak cases. We know, too, that the county medical societies, the State Welfare Department and medically allied organizations will give every deserving case help. These groups are helping people every day, and it just remains for the public to be told. In an issue of *Medical Economics* in 1952 (April, I think it was), it was noted that doctors are already giving 12 per cent of their time to charity and that this amount of time has increased 15 per cent in the last three years. It amounts to about $3,000 per year per physician. That's not peanuts.

The county society public relations chairman should not wait until a heartbreak case is at hand before he acts. At intervals through appropriate press releases he should let the public know that the physicians realize their responsibilities and that they are ready to do the very best they can for the public. The people should be told that doctors are willing to share in their patient's economic misfortunes and that they will give their services whether or not they are paid. There should be a release also occasionally listing the organizations, societies, and groups, which are able to help these cases, as we have already partially outlined.

Once a heartbreak case is at hand, the public relations chairman should investigate it. He should send out a release, pointing out the willingness of doctors to help in this particular case and at all times. The release should also give credit to other people who are presently helping to solve the heartbreak case.

In conclusion physicians are already giving services to thousands of heartbreak cases in the course of their everyday duties. It remains for public relations to publicize these facts to prevent the very few cases that are dramatized from damaging the good name of American medicine.

Dr. Winslow: Our group is very greatly honored today by the presence of Mr. Edward H. Bronson, director of the Television Code Affairs of the National Association of Radio and Television Broadcasters, who will discuss this "From the Broadcasting Industry's Viewpoint." Mr. Bronson.

Mr. Edward H. Bronson, Director of the Television Code Affairs of the National Association of Radio and Television Broadcasters: I think that in connection with this subject it would be much more appropriate if I were to explain to you the television code itself, which is the industry's guide and is very definitely concerned about some of the problems that Dr. Tyner has mentioned to you. It should be pointed out that a great deal of cooperation on the part of the television industry is being worked out with the different medical groups. We have been working very closely with the American Medical Association, for example. And, it is true, at the local level, I am sure, that the radio station or television station manager is more than anxious to have your opinion and to work with you. One example I think of is the case in Louisville where they had a cancer operation televised, and the patient was brought back after two or three weeks and interviewed as to the success of that operation.

You will find that a great many of the heartbreak cases on TV are very carefully checked before they are put on. In fact, I talked with one of the networks this morning on that subject and was assured beyond question that each case was very carefully checked. You also will find that a great many of these cases are definitely worthy and that there is perhaps a great need for some kind of support and help.

It might be more appropriate if I asked you to ask me some questions on this subject. I would just like to stop at this point and see what might be on your minds in regard to television.

Dr. Winslow: All right. Any questions? Dr. Boland.

Dr. W. T. Boland, Elmira: I just want to ask one question. Mr. Bronson says that these cases are checked. I am quite sure that's true and that each case that goes on the radio or TV is worthy, but does the radio or TV check the facilities in the communities from which the patient comes to see whether he cannot receive the aid there without going on as a heartbreak case?

Mr. Bronson: I think that each one of these cases actually makes the appeal itself to go on, and I don't feel that there is any attempt on the part of television or radio to mislead in the feeling that proper medical care is not available. I am very certain that any radio or TV station would check that point.

Dr. Winslow: All right, doctor. Down here please.

Dr. Jacob Sirkin, Newark, Wayne County: The Commissioner of Welfare of New York, Mr. McCarthy, made a scathing attack on a sob story giveaway program before the Northeastern Regional Conference of the American Public Welfare Association, a professional association of welfare workers and agencies, and he called these people beggars, a return to the outmoded concept of street corner tin-cup begging. I think he's right.

I do think that with support from the Welfare people, as Dr. Tyner pointed out, and the support of other thinking people we could sit down with the broadcasting people and work up something that would be suitable to them and not derogatory to us.

Dr. Winslow: Mr. Bronson, would you close your remarks please?

Mr. Bronson: I might suggest that the Medical Society make these suggestions known to the industry. We at NARTB certainly welcome your comments. Where there is a problem, let me say, we will get right to work on it with the television station or the network.

Dr. Winslow: Thank you very much for appearing here and speaking to us. Now we have quite a list of speakers to go. The next subject on our program is "How Public Relations Chairmen Can Implement the Legislative Program." Throughout the past few years the Public Relations Committee and the Committee on Legislation have worked very closely together. We have a new legislation chairman just coming into office this year. He is Dr. James Greenough, and he will address us on this subject. Dr. Greenough.

Implementing the Legislative Program

Dr. James Greenough, Oneonta: I am very grateful for the opportunity to speak to this group on legislative matters because I feel that your group is the one which will make or break the legislative program. It is evident that to be successful any legislative program of the State Society requires major assistance from the public relations personnel, both at the State and the local level. Annually the Council receives directives from the House of Delegates to introduce or to oppose certain bills in the State Legislature. The Council refers these mandates to its Legislation Committee for implementation. It is the duty of this committee to study these directives, to try to ascertain probable results if success is achieved in following these directives, and to plan the best method of procedure to obtain the desired results.

We should bear in mind at all times the effect upon the public of any legislation which the Society approves or opposes. It is our duty to seek to improve medical care at all times in matters concerning the public's health. Thus the problem of the Legislation Committee is to prepare a legislative program which as far as possible carries out the desires of the Medical Society as expressed by the House of Delegates and at the same time assures a high standard of medical care for the public.

To further this program the Legislation Committee presents to the members of the Legislature its arguments for or against any proposed legislation. Not only is this done through the Legislative Bureau in Albany but also locally through county legislation committees. In the past information has been provided to the county legislation chairmen by the Legislative Bureau bulletin, by letters, and by means of the Annual Meeting of County Chairmen in Albany during the legislative session. The latter means of communication has been abolished this year by the House of Delegates as it was thought that the expense was not justified.

This year the Legislation Committee has added two activities which it is hoped will integrate local personnel in the State Society Committee's program to a greater degree. The executive officer has prepared a looseleaf file containing pertinent information showing how legislation is enacted, how the relationship between legislators and the medical profession may be improved, and ways and means for aiding the legislation program locally. These files are being distributed to the county legislation chairmen.

Also the executive officer, the chairman of the State Society's Legislation Committee, and one or more members of that Committee have met informally with small groups of county legislation chairmen and discussed at length the legislative program, explaining the reasons for certain decisions in regard to the program and encouraging suggestions and comments from each local chairman. To date these meetings appear to have aroused a great deal of local interest. The State Society Committee feels that much closer liaison with the county committees has been established. So far, I have described in some detail the manner in which legislation committees are working.

Now I will try to show where we need help from public relations. Legislators will listen to and be influenced by well-prepared arguments on legislative matters. They, however, naturally represent their constituents. They'll be much more receptive to the activity of the legislation branch of the State Society if their constituents, both in and out of the medical profession, back up our argument.

Public relations committees, both State-wide and county-wide, can arouse public interest to promote the legislative program. If your legislation committees work out the best program that they can, then at both the State and the county level see that the legislators realize that the public is back of the program.

We want to be able to call upon you to help us put across a worth-while program with the public. I appeal to all you public relations chairmen to cooperate closely with your legislation chairmen when they want assistance.

Dr. Winslow: Any questions or suggestions?

Dr. Bernstein: Kings County has for a number of years held annual meetings for the legislators in the county, both from the Assembly and the State Senate, at which we don't harangue them with a lot of arguments but informally discuss the questions with them that come up. We have found that to be a very successful way of informing them and letting them know where we stand.

Dr. Winslow: Any further discussion? Then the next subject to be taken up is "Making New Members Active Members of County Medical Societies." The introductory remarks are by Dr. Reid R. Heffner, New Rochelle. He's a member of the Council Committee on Public Relations. Dr. Heffner.

Making New Members Active

Dr. Reid R. Heffner, New Rochelle: I think all of us recognize the fact that we cannot make every member of the county society an active member, active in the sense that the new member regularly attends meetings and takes part in the various functions of the society. Some physicians are not interested in organizational work, whether it is the county society, a civic organization, or any other group. Fortunately, this does not apply to the majority of physicians throughout the State, and not infrequently the blame for disinterest of some members can be laid at the doorstep of the county society.

In order to obtain hospital privileges the new member must be a member of his county society. A member in name and regular payment of dues is all that is basically required for one to enjoy all of the privileges the county society affords. The member is not obligated to attend meetings or do anything except pay his dues once a year and practice ethical medicine. There is no stipulation in our constitution and bylaws which requires members to attend meetings. It is, therefore, incumbent upon the county society to plan its activities to attract its members; give them value received for time and effort, and the new as well as the old members will feel that it is worth their while to be active. In this connection our best appeal to the membership is through high-grade scientific sessions and other first-rate educational activities. This should be the prime objective of all medical societies.

Recently I reviewed the new booklet, "How to Make New Members Active Members of a County Society," published by the State Society's Public and Professional Relations Bureau. This booklet contains some excellent suggestions on how to receive the new member and make him feel that he is a part of the society from the time he is inducted. For the past several years we in Westchester County have practiced many of the principles outlined in Mr. Miebach's booklet, and I would like to tell you briefly how we receive the new member.

On the evening the candidate is to be elected to membership he is invited to a dinner where he has an opportunity to meet the members of the Comitia Minora, as well as other members of the Society who may be present. Needless to say, refreshments are served before the dinner. At the general meeting all members for election have seats reserved and sit in a body in the front row. The president of the Society introduces each new member; asks him to come forward; reads a brief outline giving his place and date of birth, educational background, including internship and residency; announces his type of practice and where he is located. The president then welcomes the new member into the Society and presents him with a history of the Society, of which Dr Redway is the editor.

This procedure takes but a few minutes, and I am confident that it gives the new member at least some feeling that the county society is pleased to accept him as a member and encourages him to return to subsequent meetings.

Although many new members would like to be appointed to a committee immediately, we do not believe this is in the best interest of a society, particularly a large society. The younger members are much better prepared for committee work after they have become acquainted with the various functions of the organization.

For this reason I would personally question the propriety of sending a letter to each new member asking him to specify some committee on which he would like to serve, as suggested in the new booklet, "How to Make New Members Active Members of a County Medical Society." If this were done in Westchester, I am sure we would have more applicants than available places, thereby causing disappointment and resentment on the part of many new members.

As stated previously, good scientific meetings are the best appeal to the members of any medical organization. In Westchester we usually have an attendance of 200 to 250, sometimes 300, at the monthly meetings. A few years ago when less emphasis was placed on program planning and educational activities the attendance was much smaller.

Last, and I think this is important, the business sessions preceding scientific meetings should be short. In our Society, except at the annual meeting which requires the installation of officers, the business sessions do not require more than fifteen or twenty minutes. It is well to remember, "Few souls are saved after the first half-hour."

Dr. Winslow: Is there anything further to come before the meeting? If not, in closing, I wish to extend my gratitude on behalf of the State Society to all our own members who have given up their time to come down here today and benefit us by their talks, and Mr. Bronson, Mr. Baker, and Mr. Vilardi, the executive secretaries, and all the other nonmedical men who have been kind enough to exchange ideas with them. And I would like to ask this committee to continue to bear in their minds the desirability of trying to solve our problems. We're working on them steadily and assure you that our bureau is open and responsive to any suggestion at any time. Thank you very much.

The Doctor in CIVIL DEFENSE

Medical Defense Committee of the Medical Society of the State of New York and the Office of Medical Defense, New York State Department of Health

J. G. FRED HISS, M.D., SYRACUSE, NEW YORK, *Editor*

The Medical Message

Lives may depend on the message you are about to write—this warning is at the top of the Medical Message Form which will be used in aid stations and hospitals after an atomic attack. Since physicians and other station officers will usually originate messages, it is necessary for them to know how a message should be prepared. Communications will be essential to an effective medical service in a disaster.

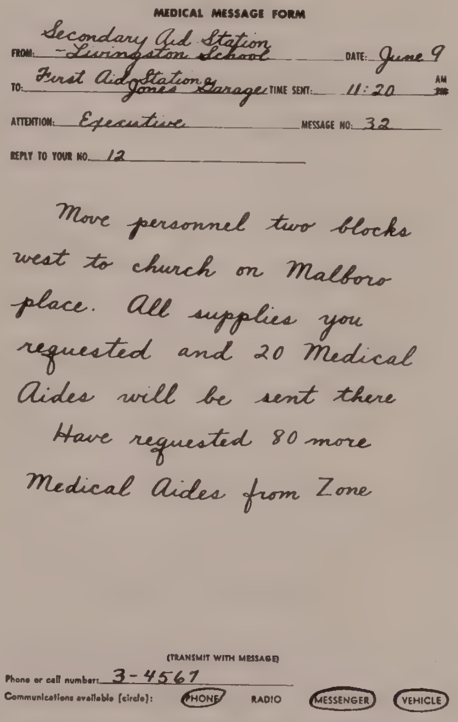
All messages must be written out before being sent by radio, telephone, or messenger. Messages received by telephone or radio must also be written out. Experiments in conditions simulating attack have shown that oral messages are time-consuming, tie up communications facilities, and are inaccurate because there are no records.

After attack, Zone Medical Control Room and City Control Center will depend on information from field installations in order to evaluate the situation in the disaster area and make the best use of available medical forces. Physicians preparing messages should be exact, use figures even if they are approximations, and give definite locations. All essential information should be included, but vague terms and unnecessary detail should be avoided. Abbreviations may be misinterpreted; therefore, all words should be written out.

Time will be of primary importance after attack, and following these general rules will save minutes each time the message is handled from the time it is prepared. Minutes saved will mean lives saved.

Sending the Medical Message

All messages must go through a Message Chief who is usually the Messenger Leader. Vehicle drivers and messengers are the main means of communication for aid stations and hospitals. When telephone lines and radio channels are unavailable or congested, considerable numbers of messages can be carried more rapidly by vehicle drivers on their regular trips.



MEDICAL MESSAGE FORM

FROM: Secondary Aid Station – Livingston School DATE: June 9

TO: First Aid Station, Jones Garage TIME SENT: 11:20 AM ~~PM~~

ATTENTION: Executive MESSAGE NO: 32

REPLY TO YOUR NO. 12

Move personnel two blocks west to church on Malboro place. All supplies you requested and 20 Medical Aides will be sent there Have requested 80 more Medical Aides from Zone

(TRANSMIT WITH MESSAGE)

Phone or call number: 3-4567

Communications available (circle): [✓ PHONE] RADIO [✓ MESSENGER] [✓ VEHICLE]

Fig. 1. Sample medical message.

Messengers should be used for urgent messages for distances up to a mile if no vehicle will be available soon.

Normal communications channels are as follows:

1. First Aid Stations rearward to Secondary Aid Stations
2. Secondary Aid Stations
   - (*a*) Forward to First Aid Stations
   - (*b*) Rearward to Zone Headquarters
3. Hospitals and Holding Stations to Zone Headquarters.

Using the Medical Message Form

The writer of the message will tear out a carbon sheet at the back of the book, place it between two message forms, and fill in the form as follows (Fig. 1):

1. *From:* Name and location of the installation from which message is sent.
2. *Date:* Month and day.
3. *To:* Name of the installation and location to which the message is being sent.
4. *Attention:* Title of the section or staff member in the installation to which message is directed, e.g., Medical Officer, Supply, Executive. Do not use names.
5. *Reply to Your No.—:* If you are answering a message, enter the incoming message number in this place. Be sure to use the *message* number and no other number.
6. After completing the message, tear out both copies, fasten together, and send both to the Message Chief for numbering and dispatch.

The Message Chief will enter the *Time Sent*, enter a serial number on each message, decide which of the available means of communication to use, indicate at the bottom of the message form the means of communication available for reply, and keep a file of carbon copies, in order to match replies and avoid duplication of requests.

Medical Message Forms are included in the supplies stockpiled for use in a disaster and also in the supplies used for practice during training demonstrations. Physicians taking part in such demonstrations can practice using the form and be ready for an emergency when a message may mean the difference between life and death for many people.

Vomiting in Children May Be Sign of Emotional Disorder

Vomiting may be the first and only indication of an emotional disorder in an infant or child, in the opinion of Dr. Paul C. Laybourne, Jr., of Kansas City, Kansas.

"It is obvious in such cases that direct treatment of the baby or child is unnecessary. Psychological vomiting is easily diagnosed by the simple expedient of hospitalizing them. Almost universally the vomiting stops with the removal of the baby from the disturbing environment of the home. This observation helps in making a differential diagnosis between organic and psychologic disease.

"Any psychotherapy is directed toward the parents and not the child. If a successful resolution of the parents' problem is impossible, the child should be placed in a warm friendly environment, so that it need no longer react to the emotional stresses of those who care for him. Children up to the age of about five years who have emotional vomiting will respond satisfactorily to simple environmental manipulation.

"The vomiting often makes its appearance following a traumatic experience to the child, such as an operation or infectious illness. In these cases it would appear at first glance that the operation or illness was the 'cause' of the vomiting. The operation or infectious illness is only the trigger mechanism setting off the reaction which has been building up for many months or years previously. The basic difficulty is to be found again in the parent-child relationship, and the ultimate cure is brought about by correcting the basic difficulties in the parent-child relationship."

Dr. Laybourne stressed that vomiting in adolescents and adults also may be a common symptom of an emotional disturbance.

—*American Journal of Diseases of Children, January, 1954*

CORRESPONDENCE

Clarification of the "Loyalty Oath"

To the Editor:

The writer of this letter wishes to bring to your attention, and to the attention of every member of our Society, a matter of great importance to every physician in the State. Contained in the "Proceedings of the House of Delegates" of the 1953 annual meeting of the Medical Society of the State of New York is the recommendation that the New York State Department of Education be requested to have a "loyalty oath" signed by all physicians upon applying or reregistering for a license to practice medicine. It is interesting to note that the House of Delegates passed this recommendation only after the Planning Committee of the State Society reported that a "loyalty oath" as a requirement for membership in our State Society would pose certain problems. They specifically pointed out[1] "...that the validity and enforceability of the resolution [for a 'loyalty oath'] are matters of serious doubts and that any attempt at enforcement would, in all probability, lead to judicial proceedings attacking the validity."

Since 1950 the New York State Medical Society has had under consideration various resolutions attempting to impose a "loyalty oath" on physicians as a prerequisite for membership in the State and county medical societies. During these lengthy considerations there has emerged a definition of the content and scope of such an "oath." In 1952 at the annual meeting of the State Medical Society a resolution was approved by the House of Delegates "to the effect that a loyalty oath be taken and 'that it be worded that any person, before admission to the Medical Society of the State of New York, must be given an oath of allegiance to uphold the Constitution of the United States before he can be a member, and that any physician who is now a member of this Society should be required to give such an oath within a year of its adoption.' "[2] In 1953 in the reported proceedings of the annual meeting, in answer to a question, raised by Dr. Joseph A. Geis, councillor, as to what the "loyalty oath" is and to whom is it sworn, the following answer was given: "...We pledge allegiance to the Flag and to the Republic for which it stands, and so on." On the basis of this definition, the resolution dealing with the "loyalty oath" was accepted by the House of Delegates.

Yet when our State Medical Society officials conveyed the intent of the resolution to the Department of Education, they forwarded a request that a "loyalty oath" be imposed upon physicians applying or reregistering for a license to practice medicine. Nowhere within the content of their letter was the definition of a "loyalty oath" included as it was developed by the lengthy considerations of the committees and the House of Delegates of the State Medical Society. Thus, by an error of omission many new facets of this extremely complex and vital subject have been introduced without prior consideration and authorization from the membership.

It must be clearly understood by all that an oath of allegiance and a "loyalty oath" have different implications in the current American political scene. As we have seen it develop, the "loyalty oath" has become part of the armamentarium of government and government agencies to enforce political and social conformity. We all have taken an oath of allegiance to our flag and country and would do so again if the occasion arose. But such an oath is vastly different from a "loyalty oath" with all of its sinister potentialities for the political domination of medicine. By requesting such action for a "loyalty oath," our medical society officials have invited the most overt type of interference and regimentation by government into the practice of medicine.

Up until now every physician receiving a medical license knew that, barring some aberration that made him unfit to practice medicine, his license was a permanent one. If the recommendation of the House of Delegates as presented by our State Medical Society officials is implemented by the Department of Education, no physician can realistically feel secure of his license from one year to the next. For once licensure is made contingent upon such considerations as political opinion, affiliation, and personal association, all of which are incorporated in either the letter or spirit of current "loyalty oaths," no physician can ever feel free from the threat of malicious gossip, unwarranted investigations, and loss of license. That physicians, who represent one of the freest and most independent groups in our nation, should deliberately apply to a governmental agency for curtailment of their freedom is contrary to all the avowed efforts of representatives of organized medicine and the American Medical Association to keep the profession free from governmental interference.

This unfortunate and ill-advised discrepancy between the action taken by the House of Delegates and the officials of the Medical Society of the State of New York serves to highlight the inherent danger of *all* "loyalty oaths." A matter of this magnitude merits the serious consideration of our State Society and its membership.

LAWRENCE J. ROOSE, M.D.

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[1] NEW YORK STATE J. MED. **17, Part II**: 78 (Sept. 1) 1953.
[2] *Ibid.* **17, Part II**: 100 (Sept. 1) 1952.

Comment by Dr. Anderton

To the Editor:

Thank you for letting me see Dr. Lawrence J. Roose's letter to you of December 1, 1953.

I am sorry Dr. Roose considers me guilty of "error of omission," by not defining loyalty oath when I wrote Dr. Lewis A. Wilson, New York State Commissioner of Education, regarding the May 5, 1953, action of the House of Delegates of the Medical Society of the State of New York, regarding a recommendation that all physicians, licensed in New York State, be required to sign a loyalty oath.

This lack of definition was recently drawn to the attention of Dr. Andrew A. Eggston, president of the Medical Society of the State of New York. As a result, on January 7, 1954, I wrote Commissioner Wilson that one of the members of the State Society "feels that I should have explained to you that the House of Delegates of the Medical Society of the State of New York, on May 13, 1952, expressed its feeling that 'loyalty oath' means 'an oath of allegiance to uphold the Constitution of the United States.' "

I am exceedingly sorry to have displeased Dr. Roose. It is my earnest endeavor conscientiously to perform my duties as secretary and general manager. I would be glad to discuss the matter with him, if he so desires.

W. P. ANDERTON, M.D.
Secretary and General Manager

Medical Society of the State of New York
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Trichlorethylene for Analgesia and Anesthesia?

To the Editor:

In a recent paper, read before the Annual Meeting of the Medical Society of the State of New York and published in this JOURNAL,[1] Searles discussed and recommended the clinical use of trichlorethylene for analgesia and anesthesia. He also mentioned that during the past few years the popularity of this agent had considerably increased in this country and concluded that "its potent analgesic properties and lack of inflammability and explosive properties may outweigh the disadvantages of disturbances in cardiac rhythm." Among the latter the author mentioned bradycardia, extrasystoles, pulsus bigeminus, and various other manifestations of vagal overactivity. Otherwise, however, he noted that "the drug toxicity of trichlorethylene is low if the proper concentration is administered . . . it is pleasant to inhale," and briefly referring to a case of subacute yellow atrophy of the liver reported by Browning in 1937[2] as an industrial poisoning, Searles stated: "However, other authors have been unable to demonstrate any hepatoxicity." This last statement is probably quite correct because trichlorethylene is not a hepatotoxic but *primarily a neurotoxic agent*, and its potential dangers do not derive so much from its effects on liver and circulatory functions as from its potent and often deleterious action on the nervous system.

Wurth,[3] in a dissertation published as early as 1909, described the toxic effects of trichlorethylene and concluded on the basis of numerous laboratory experiments on rabbits and cats that "sometimes very small doses from 2 to 5 mg. per 1,000 cc. . . . may cause death." In a monograph by Stueber, in 1931 a total of 284 cases of trichlorethylene poisoning were analyzed in great detail; of these cases 202 were acute and 82 chronic. There were 26 fatalities. In the majority of the cases the findings were retrobulbar neuritis, atrophy of the optic nerve, degenerative changes of the fifth nerve, cerebral lesions with increased tendency to apoplectic insults, manual tremor, etc. In other (chronic) cases mental symptoms such as restlessness, mental agitation, increased irritability, and permanent character changes similar to those observed in alcoholism prevailed. Also addiction to trichlorethylene inhalation has been observed in a certain number of cases. Searles' remark, "it is pleasant to inhale," is quite correct. Workers who handle trichlorethylene daily in their occupational activities begin to like the fruity, ethereal odor of the drug so much that in the words of one of these men—"*it attracts me like a magnet.*"

In 1933 when the Surgical University Clinic in Vienna recommended the use of trichlorethylene as a disinfectant, I published[5] several more cases I had observed of serious poisoning by the agent in which also severe nervous symptoms like retrobulbar neuritis, atrophy of the optic nerve, and tendency to addiction predominated. On the basis of these and other reports, industrial poisonings caused by the occupational inhalation of trichlorethylene were made legally reportable and compensable occupational diseases in Germany in the early 1930's.

It is true that the great majority of all these toxic effects have been observed as industrial poisonings in workmen who handle trichlorethylene as a useful degreasing and cleaning agent in their occupational work. But it is equally true that the surgeon, the anesthetist, and the laboratory technician who begin to handle the material in their daily work in the hospital are as little immune to its toxic action as the industrial worker in the chemical plant. The use of certain safety measures which are today customary in modern industry (hermetically closed containers for the material, etc.) can minimize the dangers in many cases but cannot fully eliminate them, because they are mainly insidious and imperceptible. As to the alleged low toxicity "if the proper concentration" is used, I am equally doubtful. Perhaps this is correct as far as the patient to whom the agent is administered once or twice in a lifetime is concerned, but what about the surgeon and the anesthetist who according to the recommendations would work with it daily, weekly, perhaps over months and years? Here it is the *frequent inhalation of small amounts*, i. e., the imperceptible action of the drug which makes its use so dangerous, especially over longer periods of time, in conditions of increased volatility, etc.

Some of the reported industrial poisonings were observed in workmen who handled the material only for a few days. In one case reported by me[5] the man had worked with trichlorethylene for less than three months, only two or three hours daily, and when I examined him, he was suffering from a severe atrophy of the optic nerve with partial blindness, headaches, and insomnia and was in a state of constant mental agitation.

Ten cases of acute industrial poisoning were more recently reported by Cotter,[6] and this author, after mentioning that the compound "has in the past been regarded as being relatively innocuous," then stresses the severe manifestations of acute intoxication observed by him in men who inhaled trichlorethylene over several days. He describes these manifestations as "symptoms indicative of acute intoxication of the central nervous system" and specifically enumerates dizziness, nausea, vomiting, mental agitation, and coma. He also observed diarrhea, abdominal cramps, headaches, and pain in the lower part of the back among his patients and found that these symptoms persisted for many weeks.

Finally, a word about the recommended use of trichlorethylene for analgesia. "There are several inhalers on the market which are well-adapted for the self-administration of trichlorethylene," Searles stated.[1] What such *self-administration* would ultimately mean, in view of the proved neurotoxicity and the ever-present danger of addiction, can be easily deduced from our above data.

WILLIAM G. NIEDERLAND, M.D.

18 East 81st Street
New York 28, New York

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[1] Searles, P. W.: NEW YORK STATE J. MED. 53: 1956 (Sept. 1) 1953.

[2] Browning, E.: Industrial Health Research, Report 80, London, 1937.

[3] Wurth, C.: Medical Dissertation, University of Würzburg, Germany, 1909.

[4] Stueber, K.: Arch. Gewerbepathology, Berlin, Springer, 1931.

[5] Niederland, W. G.: Chirurg 6: 112 (1933).

[6] Cotter, L. H.: Arch. Indust. Hyg. & Occup. Med. 1: 319 (1950).

"*No doctor is a good doctor who has never been sick himself.*"—CONFUCIUS

MINUTES OF THE COUNCIL

The following is a summary of the Minutes of the January, 1954, meeting of the Council of the Medical Society of the State of New York.

The Council met January 14, 1954, from 9:30 A.M. to 12:35 P.M. at the Manhattan Club, Madison Square, New York City. Dr. Andrew A. Eggston, president, presided.

Secretary's Report

Executive Committee.—Dr. Anderton reported the following communications were considered at the Executive Committee meeting on January 13, 1954:

1. A request from the Department of Education to send two nominees for a vacancy on its Medical Grievance Committee. This gentleman preferably should come from the neighborhood of Rochester in order to give proper representation to the State as a whole. Six names were suggested as possible nominees.

It *was voted* that the secretary be empowered to nominate any two of these gentlemen to the Board of Regents.

2. The State Education Department also asked for two nominations for one vacancy on the Nurse Advisory Council. With Dr. Eggston's approval, Dr. Joseph B. Loder of Rochester and Dr. Leonard Schiff of Plattsburg were asked if they would be willing to be nominated. They both kindly consented. Dr. Anderton moved that these two gentlemen be nominated to the Board of Regents.

It *was so voted.*

3. Dr. Anderton stated: "Your Secretary has had considerable correspondence with Mr. C. J. Stetler, secretary of the Committee on Legislation of the American Medical Association, and reports that that body is holding a regional meeting in New York City on February 13 from 10 A.M. until 4 P.M. at the Hotel Roosevelt. There are invited representatives from Maine, Vermont, Massachusetts, New Hampshire, Rhode Island, Ohio, Pennsylvania, West Virginia, New York, Delaware, Connecticut, Maryland, New Jersey, and Virginia. One hundred thirty-four men have been invited, of whom there is a good representation from New York State. The invitations went from the American Medical Association. They include the members of our own Legislation Committee. It is expected that our committee will be having a meeting, probably the day before in New York (our Legislation Committee). It is, therefore, recommended that the Council approve of these gentlemen staying over an extra day in order to go the American Medical Association meeting. I so move."

Approval *was voted.*

4. A letter from Mr. H. F. Wanvig, secretary of the Malpractice Insurance and Defense Board, dated December 31, 1953. As directed by the Malpractice Insurance and Defense Board at its meeting on November 11, Mr. Wanvig asked that the name of Mr. James M. Arnold be submitted to the Council with the request that he be appointed Assistant Indemnity Representative of the Society with authority to act for Mr. Wanvig in his absence.

After discussion approval *was voted.*

5. "Dr. Gordon M. Hemmett, secretary of the Medical Society of the County of Monroe, has sent the following resolution to the State Society, dated December 15:

> "WHEREAS, Dwight Anderson had served the medical profession in many ways during his active career and had continued to do so in his retirement; and
> "WHEREAS, he was an official employe of the Medical Society of the State of New York from 1933 to 1950 in the capacity, first as director of public relations, and subsequently as executive secretary and public relations director; and
> "WHEREAS, his work as a consultant in medical jurisprudence, public relations, and his interest in the study of alcoholism had greatly benefited the medical profession and public; and
> "WHEREAS, he was recognized as a publisher of note about health matters; therefore be it
> "*Resolved*, that his death in Miami, Florida, on December 13, 1953, be noted on the records of this Society with regret; that a copy of this resolution be forwarded to his widow, Marie Lee Warner Anderson; and to the Medical Society of the State of New York; and that it be published in *The Bulletin* of the Medical Society of the County of Monroe.

"There is a further report in regard to Mr. Anderson's demise in the secretary's report to the Council, sir."

6. Communication from the Dr. E. C. Hazard Hospital and Training School for Nurses, Long Branch, New Jersey. That hospital is instituting an International Medical and Surgical Hall of Fame as a tribute to the doctors who served in World War II particularly. As a result they request that any photographs of famous physicians and surgeons or other material of an informative nature for their Hall of Fame be sent to them by this Society.

The Executive Committee recommended that a reply be sent praising the new Hall of Fame, saying we have nothing at present that we can send them, but we will be very glad to bear the enterprise in mind.

The recommendation *was adopted*.

7. Dr. Anderton also read the following letter:

January 6, 1954

To: The Presidents and Secretaries of the Component County Medical Societies

Gentlemen:

The Moreland Act Commission, which is investigating the costs of workmen's compensation coverage in New York State, has commenced informal inquiries among our county medical societies. We bespeak complete cooperation, should your society be approached. We would also appreciate your notifying Dr. Anderton of dates and places of meetings which you may arrange with representatives of Moreland Act Commissioner Archie O. Dawson. We hope that you will invite him and Dr. David J. Kaliski, director of our Workmen's Compensation Bureau, to attend.

Yours sincerely,
ANDREW A. EGGSTON, M.D., *President*
W. P. ANDERTON, M.D., *Secretary*
Medical Society of the State of New York

Dues Remission.—Upon recommendation of the Executive Committee, the Council *voted* to remit 1954 annual state dues of one member and 1953 dues of 19 members because of illness; 1954 dues of 17 members and 1953 dues of 12 members because of service with the armed forces; and 1953 dues of two members and 1949, 1950, 1951, and 1952 dues of one member for reasons of financial hardship. It was also voted to request remission of American Medical Association dues of three members for 1952, 29 members for 1953, and 12 members for 1954.

General.—Thanks to your recommendation, the Board of Trustees has arranged for Dr. John H. Iselin, Jr., to be assistant to the secretary. Dr. Iselin commenced January 4, 1954.

Your secretary has activated the matters voted at your last meeting.

It is a pleasure to notify you that the Board of Regents of the State Education Department has reappointed Drs. Edwin A. Griffin and Frank E. Mallon, of Kings, as members of the Medical Grievance Committee, and has appointed Dr. Donald A. Covalt, of New York, to be a member of the State Board of Medical Examiners.

Annual reports of committees are requested by the NEW YORK STATE JOURNAL OF MEDICINE by February 1. Since your secretary ought to peruse each one before that date, he will welcome them as early as you like.

Since your last meeting, I have attended a meeting of committees and boards of the State Education Department, at the Hotel Biltmore, December 11, 1953; the annual meeting of the Medical Society of the County of Monroe, December 15; a hearing of the New York State Legislative Committee on Problems of the Aging, at 80 Centre Street, New York City, December 17; Blood Banks Association Budget Committee, December 23; Blood Banks Association Clearing House Committee, January 7, 1954.

It is my plan also to attend the meetings of the Blood Banks Association Clearing House Committee, January 12, and on January 13, Blood Banks Association Board of Directors and your Planning Committee for Medical Policies, Publication Committee, Office Administration and Policies Committee, and Executive Committee.

It is with regret that I must notify you that Mr. Dwight Anderson, for many years director of public relations and later executive secretary of our Society, died at Miami, Florida, December 13, 1953. Your secretary called upon his widow at the Hotel Statler, December 17, and attended his funeral, at Center Moriches, with Mr. Thomas E. Alexander, the next day. Dr. Laurance D. Redway, Mr. Frederick W. Miebach, Mr. George P. Farrell, Mr. James M. Kelly, and Miss Gretchen Wunsch also were present. An appropriate floral piece was sent to the funeral in the name of the Medical Society of the State of New York.

On January 1, the JOURNAL appeared with a new style cover and table of contents on its front, as well as new typography, real improvements helpful to the reader.

On January 11 your secretary attended the National Foot and Shoe Conference at the Hotel Waldorf-Astoria.

On January 6, with Dr. David J. Kaliski, he attended a conference at the Kings County Medical Society which was held by Mr. Mathias Spiegel, an assistant to the Moreland Act Commissioner, Mr. Archie Dawson. As a result, a letter, copy of which appears as item 7 of your Executive Committee's report, was sent to the presidents and secretaries of the component county medical societies.

The secretary wishes to reiterate his thanks for the appointment of Dr. Iselin to be assistant to the secretary, and perhaps, at the end of the secretary's report, Dr. Dorman could tell us something about him.

Dr. Dorman stated: "I have known John Harry Iselin since we were classmates in college. Immediately after college Harry got married and went into banking for a few years, then into medical school about four or five years after I was there. He interned at Roosevelt Hospital, and he was in private practice until he entered the army. When he came back, he was in the industrial medical field working with the Chase Bank for a while and also with Consolidated Edison.

"Harry is a very conscientious man. He is as straight as a die. If there is any criticism of him, it is that he is too meticulous and goes into things in too great detail. He makes a study of what he is doing, and he has a very conscientious approach to whatever he undertakes.

"I have always liked him personally, and I think he is going to be able to do a very good job for the State Society.

"If there are any particular, specific questions, I would be glad to answer them if I can. I have known him for almost twenty-nine years."

After discussion it *was voted* to approve Dr. Iselin's appointment as assistant to Dr. Anderton. It *was voted* to approve the secretary's report.

The Treasurer's report was adopted.

Reports of Committees

Blood Banks.—Dr. J. Stanley Kenney, president of the Blood Banks Association of New York State, Inc., reported:

"Mr. Chairman and members of the Council, the Blood Banks Commission has not held any meetings. Dr. Mellen is chairman of that commission, and he has not felt that it was necessary to convene.

"The Blood Banks Association and its various committees have been a beehive of activity during the past five or six weeks. Particularly is this true of the Committee on Clearinghouse, the Committee on the Blood Assurance Program, and the Committee on Membership. All of this activity culminated in a meeting of the Board of Directors yesterday. I think that we are now on the threshold of the most important time in our existence.

"Up to the moment, we have received 81 applications for institutional membership, 76 of which have been accepted. That is a considerable proportion of the total number in the State.

"The individual membership drive depends on education. We appeared before all of the district branch meetings and tried to deliver this message, and on January 4 a letter went to 1,200-odd selected names, directing attention to the importance of individual membership. We have received over 85 membership enrollments with checks. Individual membership is a very important source of obtaining the interest of doctors throughout the State. Therefore, I want to appeal again to every one of you to familiarize yourself with what we are trying to accomplish and to be an ambassador in acquainting other men with the situation so that we can secure the enrollment we should have. To this end we are appointing a Speakers' Committee because requests are now coming in for individuals to appear before a county society or a hospital staff or before a lay group, to explain the purposes of the Blood Banks Association.

"We have reached agreements after long committee debates on the standards and forms which this Association will require. All of these have been approved by the Board of Directors and have been referred to legal counsel for review. Also, I would be very remiss, gentlemen, if I did not tell you of the invaluable work and assistance that has been given to these subcommittees by special representatives in our Society. Particularly I would like to commend the work of Mr. Alexander, whose advice on accounting and financial matters has been invaluable, and Mr. George Farrell, who worked overtime to draw up the necessary insurance forms.

"I want also again to tell Dr. Winslow and Mr. Miebach and the members of the Public Relations Department of the invaluable assistance and direction we are getting from Mr. Messinger. I do not know how we could have functioned in the past month except for the indefatigable efforts of that gentleman and our new typist and secretary, Miss Fleischman.

"We have been able to obtain from Ciba Pharmaceutical Products, by the effort of Mr. Messinger, a grant of $5,300, which will be used for preparing and mailing a brochure which will go to all physicians throughout the State to describe our purposes and aims and how this organization will function.

"When we appeared in Sullivan County last September and outlined our program to a group of hospital administrators, Dr. Golembe, who arranged the meeting, was the only member of the medical profession of Sullivan County that was present. He since then has enrolled, as individual members, the entire membership of the Medical Society of the County of Sullivan. They have the entire county society enrolled—the first one!

"As you all know, we are distributing on a monthly basis a news release (indicating), which every one of you should receive. It gives a great deal of information as to what is going on.

"We decided in the meeting of directors yesterday that the blood exchange program would be activated as soon as we received agreements from 20 banks. We can start our clearing house on that basis. All our committees have been appointed, and the local committees in Genesee County for the development of a pilot project, which we hope to get under way in about two weeks. That is a large undertaking, involving both research and education, and as a result we anticipate a pattern for forwarding the blood assurance program.

"I talked during the American Medical Association convention in St. Louis with Dr. Larson and with Dr. Wormser. Dr. Larson is chairman of the Commission on Blood Banks of the American Medical Association.

"I would like to say that, as I see it after the months I have been working in the program, the success will depend on what is done at the community level. We can direct here, but the success of the program must be developed community-wise. I appeal again to every one of you to realize that it is a doctors' job and not purely a public relations job."

The report *was accepted* with thanks.

Constitution and Bylaws.—The Council *voted* approval of the new bylaws of the Seventh District Branch and of changes in the bylaws of the Medical Society of the County of Erie and the Medical Society of the County of Kings.

Economics.—Dr. Renato J. Azzari, chairman, presented the following report of the Bureau of Medical Care Insurance, George P. Farrell, director:

"At the request of Dr. Masterson, your director, on Thursday, December 17, 1953, attended a luncheon of the New York State Chamber of Commerce. Mr. Ellsworth S. Grant, vice-president of the Allen Manufacturing Company, Hartford, Connecticut, spoke on an industrial medical program which is now functioning in the Hartford, Connecticut, area, known as 'The Hartford Plan.' "

It *was voted* to approve the report.

Ethics.—Dr. Thurman B. Givan, chairman, stated:

"Mr. President, one matter was referred to us last time in regard to finding out from the American College of Surgeons whether they would change their attitude in regard to Blue Shield's division of fees when two or more doctors are involved on a case. Two letters have been received by Dr. Anderton. I have read them both to my committee. We are awaiting final action of the Board of Regents of the American College of Surgeons before we can give our final report."

It *was voted* that the report of the Committee be accepted.

Hospital and Professional Relations.—Dr. Harold F. Brown, chairman, stated:

"We have no report, although I would inform the Council that this afternoon Dr. Greenough and I expect to meet Dr. Louis Bauer to map out plans for effectuating what we talked about last month."

Legislation.—Dr. Eggston introduced Dr. Arthur W. Pense, Deputy Commissioner of the New York State Department of Mental Hygiene, who spoke on the mental health program that the department is contemplating, for which a bill has been introduced into the Legislature. Copies of the bill were distributed.

After discussion it *was voted* that this bill be referred to the subcommittee on Mental Hygiene with instructions to report to Dr. Greenough within a week.

Dr. Greenough stated: "I would like to thank the Council for permitting me to bring Dr. Pense here to talk to you.

"The chairman of the committee has received requests from the Dental Society of the State of New York and the Podiatry Society of New York State for conferences in regard to pending legislation.

"In answering the Dental Society, it was stated we would be glad to discuss legislative matters and cooperate as far as possible, but that it was the opinion of the Council that we should have no formal agreement, as decided last spring, since there might be a divergence of policy on some matters. An appointment has been made with the president of the Podiatry Society.

"A letter from Alleyn Beamish offering assistance in publicizing the Society's legislative program is submitted for your consideration. It appears that there are adequate facilities in our Albany office and in our Public Relations Committee, and there should be no reason for employing further assistance.

"Yesterday your chairman talked with Assemblyman Mailler concerning our legislative program. He was very cooperative. He is particularly interested in a bill similar to the one planned by the Medical Society to amend the autopsy law.

"Since the last meeting of the Council a letter has been sent to all county chairmen reviewing the progress of the Legislation Committee. That was asked by Dr. d'Angelo and was planned anyway. I think I should have sent it to members of the Council, and I omitted it. If you wish the letter, I would be glad to send it to you."

Dr. Harold B. Smith, executive officer, stated: "I have no remarks other than that our bills are all drafted. Mr. Beasley has that under control, and presumably all of the bills, with the exception of the one relating to psychiatry, will possibly be introduced this coming week."

It *was voted* to accept the report.

Nursing Education.—Dr. Joseph A. Geis, chairman, reported:

"I have had forwarded to me a letter from Congressman Bolton of Ohio which was mailed to Dr. Wentworth. It says:

My dear Friend:

Do you feel as I do that a serious situation presently exists due to lack of adequate nursing service for the American people, and that many problems must be solved if we are to find out the most practical steps to relieve the situation?

To find out the facts and receive recommendations as to how best to deal with them, I am sending a questionnaire to you and to a number of other authoritative leaders.

In framing the questions, I have attempted to develop them around two problems which it appears to me are of major concern: (1) problems of nurse education to make available an adequate number of highly skilled administrators, teachers, and those needed to provide good bedside care of the sick, both registered and practical nurses; (2) determination of the proper division of responsibility and integration of effort between private organizations and local, state, or Federal government to support an adequate training program.

I do hope that you will let me have as frank and complete answers as possible to these questions, since on the basis of the replies it is my intention to formulate legislation to help the situation if the responses indicate the desirability thereof.

As you may know, I introduced a bill in Congress last January which was frankly an emergency measure to alleviate the immediate situation. However, the Bureau of the Budget indicated that on the basis of its study it would seem preferable to fashion a long-term approach, although there is no surety in the climate of public opinion today that this will be done. With this point of view I am, of course, in full accord.

In order that any approach may have the advantage of the most up-to-date thinking of leaders in the field, I am counting upon your cooperation.

Anticipating hearing from you in the near future, I am

Faithfully yours,
FRANCES P. BOLTON

"In my answer I indicated that the shortage of nurses was in all categories: the administrator, supervisor, teacher, and especially the bedside nurse.

"As to the supply of funds, I specified that we believed Federal funds should not be used unless they were expended by local power with no Federal strings attached; that I thought the nursing education matter, the same as all other educational matters, was a state proposition rather than Federal.

"I move the adoption of this portion of the report."

It *was voted* to adopt this portion of the report.

"During the latter part of December, I received from Dr. Anderton a letter from the American Medical Association, the American Hospital Association, and the American Nursing Association, together with the National League for nursing, in regard to the establishment of a State Commission for the Improvement of the Care of the Patient. Nothing was done on this, awaiting this meeting of the Council."

It *was voted* to adopt the report.

Office Administration and Policies.—Dr. John J. Masterson, chairman, stated that at the meeting of the committee on January 13, 1954, it was voted to approve, for a six-months trial period, operation of the mail room with four instead of five employes at an annual saving of $2,700; marked improvement in punctuality on the part of the office staff was noted; the office manager was instructed to obtain further details of a plan for group life and group accidental death and dismemberment insurance to be offered by the Equitable Life Assurance Society; and it was decided to request recommendation by the Council of an appropriation of $250 to purchase office furniture for Dr. Iselin.

The report *was adopted.*

Publication.—Dr. Masterson, chairman, reported: "The Publication Committee held a meeting on January 13, 1954.

"The editor's monthly report was accepted. In it he reported on the following:

"1. Status of the Mulford matter: Dr. Mulford complained that the JOURNAL published only part of his very long article on the history of medicine last year in the JOURNAL. After discussion it was the sense of the meeting that the editor write to Dr. Mulford stating his regrets and offering to set the complete article in type and give the author a quantity of reprints.

"2. To pursue negotiations with the nine medical schools in the State to ascertain whether each would be willing to assume responsibility for the text material for a single issue of the JOURNAL. The editor was authorized to do so.

"3. It was the sense of the meeting that a special issue of the JOURNAL be devoted to gynecology and obstetrics.

"4. Correspondence with Dr. Lawrence J. Roose having to do with the loyalty oath: Dr. Roose requested that his letter be published in the JOURNAL. It was moved, seconded, and passed to publish this letter, as well as an answer by Dr. Anderton.

"5. The request that we waive publication in the JOURNAL of Dr. Boyd's article to be presented at the next annual meeting. It was moved, seconded, and passed to release his paper to this author.

"It was reported that we had received copy for an advertisement from Dr. Henry Weintraub, offering electrocardiographic interpretations. The advertisement was disapproved by the editor on the basis that it was not in conformity with the code of ethics. Dr. Weintraub noted that the same type of advertisement appeared in the December 12, 1953, issue of the *Journal of the American Medical Association.* It was the sense of the meeting that we make inquiries of Dr. Weintraub's own county board of censors regarding the ethics.

"There was general discussion regarding the publication of address changes and telephone numbers in the JOURNAL. It was the sense of the meeting that the business manager report at the next meeting concerning the number of address changes and telephone numbers and the work involved in this proposed publishing. Mr. Alexander reported that the number of address changes is very large, but we thought it would be a service to the members if, say, once a month we had a special section of the JOURNAL devoted to these changes.

"Dr. Leo Bobrow requested that certain material, not in the biographic list in the *Directory,* which had been received by us after the closing date for receipt of copy, be published in the JOURNAL. It was the sense of the meeting that the request be denied, the Committee believing that if we do it for one physician, we would have to do it for all.

"The business manager's report was accepted.

"After discussion regarding verification of 1955 *Directory* material, it was noted that hospital appointments, all claims to diplomas of the National Board of Medical Examiners, and examining boards in each specialty would be verified. This would include licentiate boards.

"It was reported that the New York Academy of Medicine had received a discount of 33$^1/_3$ per cent on the purchase of 14 copies of the 1951 *Directory* and had requested a discount on the purchase of 1953 copies. It was the sense of the meeting that a 20 per cent discount be allowed.

"It was moved, seconded, and passed to sell as waste paper all but five copies of the JOURNAL, after five years from date of publication. We have on hand with the printer many copies of the JOURNAL, for which we pay storage at the rate of $6 per square foot."

It *was voted* to approve the report.

Planning Committee for Medical Policies.—Dr. Anderton stated:

"Dr. Di Natale sent his apologies for not being here. He asked me to make a progress report. His committee has had two meetings. They are planning a third in the near future. It is proposed by his committee to undertake a study and report on the committees of this State Society. He requests that the Council approve of such a study."

It *was so voted.*

Public Health and Education.—Dr. Theodore J. Curphey, chairman, presented the following report:

Subcommittee on Physical Medicine and Rehabilitation (December 2, 1953).—The New York Medical College had expressed the desire to establish a course in physiotherapy but felt that it could not do so under the present interpretation by the State Education Department of the law, which states that to be accredited a school must have a curriculum of four years postsecondary school education. It does not state specifically that the student must acquire this training in one place, but such is the contention of the State authorities. Ithaca College is the only accredited school in the State at present. The committee felt that the transfer credit system should apply in the State of New York and recommended that the whole problem of the shortage of physiotherapists and lack of teaching facilities be taken up with the Commissioners of Education and Health for prompt action. (Dr. Weeden, chairman of our Subcommittee, reports that he brought up this question at a subsequent meeting of the Subcommittee on Rehabilitation of the Interdepartmental Health Council [State]. It was agreed to take up the matter with the Interdepartmental Health Council.)

The subcommittee also recommended that the Council request the State Health Department to approve the introduction of legislation permitting physiotherapists ("rehabilitation aids") from other states to be employed in this State for six months prior to their taking the State examination for licensure.

As the result of a letter from Dr. Donald A. Covalt, representing Dr. Howard Rusk and others in the field, the subcommittee recommended that the Workmen's Compensation Committee of the State Society consider the matter of a fee schedule for specialists in physical medicine and rehabilitation in consultation with the Subcommittee on Physical Medicine and Rehabilitation.

There was discussion of whether or not the State Legislature should set up rehabilitation units throughout the State similar to the tuberculosis hospitals. It was suggested that before any decision is reached by the Joint Legislative Committee the Subcommittee offer to define the areas of need for facilities in New York State. It was pointed out that Dr. Brightman of the State Department of Social Welfare was conducting such a survey, and it was decided to offer the services of the subcommittee to him. Dr. Weeden was to recommend to the Joint Legislative Committee that Dr. Brightman be made available to help them evaluate the State-wide facilities.

Subcommittee on Heart Disease (*December 9, 1953*).—Discussion centered principally around the problem of employment of the cardiac in industry: the young person applying for his first job and the man who has had a heart attack and is seeking a new position. Part of the reluctance of the employer to place these people is due to the Workmen's Compensation rulings which make these conditions compensable, the extent of which the employer cannot foresee.

It was recommended that at the annual meeting of the Medical Society a program be presented devoted to the problems here discussed in connection with the employment of cardiacs.

It was pointed out that the greatest weakness in the Workmen's Compensation Law was its failure to provide for referees who are physicians trained in interpreting the medical evidence. It was recommended that a resolution be prepared and introduced to the House of Delegates recommending a study of heart disease problems relative to workmen's compensation.

Dr. Hiss, chairman of the Council on Rheumatic Fever and Congenital Heart Disease of the American Heart Association, said he would like to recommend that standards for diagnostic clinics be established for small rural counties and that the county medical societies participate actively to keep medical policies and medical treatment in their hands and assist in an educational program in prevention of primary attacks of rheumatic fever.

It was decided that a letter should be written to the county societies calling attention to the existence of the New York Heart Assembly and recommending that local medical societies work with chapters of the Heart Association; the Communication should also express the interest of the Subcommittee in the problem of prophylaxis and suggest that if medical societies have not already done so, they approach the local heart group to see if the problems can be worked out in a joint community effort.

Joint Meeting with State Department of Health (*December 18, 1953*).— Present at the meeting were Dr. Aaron, your chairman, and Dr. Herbert Berger of Richmond County Medical Society and from the Health Department Drs. Hilleboe, Ingraham, Larimore, and Korns.

There was discussion of the resolution submitted by Richmond County to the House of Delegates in May, 1953, concerning treatment of narcotic addicts. Dr. Berger, author of the resolution, reviewed the history of legislation on narcotics, pointing out that it originated with a Revenue Act. Violators have been dealt with punitively, and not as the psychopaths they are, requiring medical and psychiatric attention. Although they readily agreed the problem was very serious and that there was no solution to date, the Health Department representatives expressed strong doubt as to the value and feasibility of the clinic approach favored by Dr. Berger for the curing of addicts. However, Commissioner Hilleboe stated his willingness to set up an experimental center with ancillary aids of psychotherapy, etc., provided the Commissioner of Mental Hygiene agreed the method was worth investigating.

It was therefore decided to take up the matter with representatives of the Department of Mental Hygiene, with Dr. Berger present. If the approach seems reasonable, a further meeting will be requested, with the addition of the Subcommittee on Mental Hygiene and perhaps Dr. Henry B. Richardson of Cornell University Medical College. Dr. Larimore is to consult with Mr. Ernest Gruenberg, director of the Mental Health Commission, to arrange the preliminary meeting.

Dr. Korns explained that the new vaccine for poliomyelitis with which experimentation will take place on approximately 10,000 children in the South is a later development by Dr. Jonas Salk than the one criticized in the press recently. New safety measures have been introduced, and no vaccine will be used by the New York State Department of Health which has not been approved by the Division of Laboratories and Research. It was agreed that when a decision is reached by the Health Department to institute a program of polio prevention by means of the vaccine, the program will be discussed at a further joint meeting. Following approval by the Council the Medical Society will publicize the experiment in the NEW YORK STATE JOURNAL OF MEDICINE and the *Newsletter*. The county medical societies and individual physicians will be urged to cooperate with the Health Department in the project.

The resolution from the Medical Society of the County of New York was discussed requesting endorsement by the State Society of a program of free x-rays for tuberculosis upon routine admission to hospitals in New York City. Throughout the State, other than the metropolitan area, the State Health Department has obtained the planning of such x-rays by most hospitals. Dr. Ingraham explained that payment is made direct from the State Treasury to the hospital, at the rate of $1.00 per x-ray for hospitals with fewer than 4,000 admissions per year and 50¢ for hospitals with over 4,000 admissions. In the latter category of hospital the State Health Department installs equipment "on permanent loan." The Department has not attempted to introduce such a program in New York City due to the home rule attitude of city officials. It was recommended that the Medical Society of the State of New York endorse the resolution from the Medical Society of the County of New York relative to the taking of x-rays upon routine admission to hospitals in the metropolitan area.

Dr. Korns said that the problem of rabies control still exists in 24 counties of the State, owing to the abundance of wildlife. A vaccine is being tried out on humans which is processed from chicken embryos; also a horse serum for postbite treatment. He emphasized that there was need for publicizing the fact that, contrary to common belief, there is no law requiring the use of fuming nitric acid, and that a 20 per cent soap solution or Zephiran is more effective. This will be brought to the attention of Dr. Redway, editor of the JOURNAL.

Postgraduate Education.—Postgraduate education was arranged for the following in January: Onondaga, January 5; Jefferson (Syracuse program) January 7; Jefferson (regular meeting), January 19; Geneva Academy of Medicine, January 18; Chemung Academy of General Practice, January 20; Utica Academy of Medicine, January 21; St. Lawrence (Syracuse program), January 21; Broome County and Academy of General Practice, January 24; Binghamton City Hospital (Broome), January 25.

After discussion the report as a whole *was adopted*.

Dr. Curphey continued: "There are just two other items. I should like to ask you, sir, to accept first Dr. Harry Smith's resignation from the Ad Hoc Committee that was established some months ago to study jointly with the State Health Department the laboratory laws in the State. Dr. Smith desires to be relieved of that assignment, and I would suggest, sir, that you consider appointing in his place Dr. Maurice N. Richter, of the New York University College of Medicine. I think he is associate professor of pathology there. Dr. Richter has signified his willingness to accept the appointment if you approve him.

"I move that Dr. Smith's resignation be accepted and that Dr. Richter be appointed to this committee in his place."

The Council *voted* approval.

"The last item is a recommendation that you accept the resignation from the General Practice Subcommittee of Dr. Norman C. Lyster. He submitted this to the Society recently, Mr. President. I recommend that you accept his resignation."

It *was voted* to accept the resignation.

It *was voted* that the report as a whole be accepted.

Public Relations.—Dr. Floyd S. Winslow, chairman, presented the following report:

"During the past month much time has been spent by the Committee and the Public and Professional Relations Bureau on getting the new series of 12 pamphlets on medical economic subjects on the press. Prior to the date of publication deadline the field men made trips to the county societies in their respective areas to obtain definite orders. In many instances they spoke at society meetings and explained the series, answering questions. As a result, 27 county societies have given written orders for a total of 1,044,000 leaflets. This represents an increase of nine societies. In addition, six county societies have indicated that they may forward orders to be filled from the first printing. Already there are indications that the series will attract attention to the State Society. Requests have been received for copies from the American Medical Association and other medical organizations. The advance publicity given to the series in the *Newsletter* was responsible for these requests.

"The Bureau continued to work with Dr. John McClintock, chairman of the subcommittee to draw up a guide for cooperation with the representatives of radio, television, newspapers, and press photographers. Responses from a number of key people, to whom a draft of such a guide was sent, indicate a willingness to cooperate in a formulation satisfactory to all. The subcommittee intends to hold a meeting of interested parties as soon as preliminary steps have been completed.

"Assistance was given to writers and others preparing articles and news releases on subjects of interest to the medical profession. Included was a free-lance writer who was doing research work for an article on the scope of New York State's medical postgraduate program, scheduled for publication in *Look* magazine.

"Requests were filled for information about our Citizens' Health Education Campaign against the licensure of chiropractors from other parts of this country and Canada.

"The Conference of County Medical Society Public Relations Chairmen, held last fall in New York City, continued to make news when interest was shown by publications in the so-called 'heartbreak cases.' Among those reporting Dr. James D. Tyner's talk were the *Journal of the Kentucky State Medical Association*, *Medical Economics*, and newspapers.

"The Bureau also assisted the Woman's Auxiliary. Of particular note were conferences regarding the Health Poster Contest and the Nurse Recruitment Program. Reports on both of these for publication in the NEW YORK STATE JOURNAL OF MEDICINE have been prepared through cooperation of the Auxiliary, the JOURNAL editorial staff, and the Bureau. In addition, plans for coordinating the Auxiliary's and the State Society's legislative activities were discussed.

"In the field of radio, a survey is being conducted to determine if station managers throughout the State have access to the latest information concerning new American Medical Association transcriptions. Both the county society public relations chairmen and the Auxiliary public relations chairmen were urged to bring recent American Medical Association radio recordings to the attention of station managers.

"New releases covering postgraduate lectures in the following counties were mailed: Chautauqua, Ontario, Schoharie, and Suffolk."

Dr. Winslow continued: "There is only one thing outside of the report that needs our attention. This meeting that has been referred to is a meeting of the Public Relations Committee with representatives of radio, press, and television. It is set for February 12. There is some expense, so we are asking the Council to recommend to the Board of Trustees $250 for this luncheon when we entertain the representatives of press, radio, and television. I move that the Council recommend to the Board of Trustees that they appropriate $250 for this conference."

It *was voted* to approve.

It *was voted* to adopt the report.

Veterans Administration, Liaison with.—Dr. Herbert H. Bauckus, chairman, reported as follows:

"Reporting for the Veterans' Plan, there has not been much change. I have reported to you before that we have two main difficulties. One is cutting down the number of authorizations in cases where they are really needed. We have been able to handle that pretty well.

"The other is the refusal to give authorization unless hardship can be invoked. We have not been able to do anything about that. I might say that that had its beginning in the early criticism of the plan by Dr. Hawley followed by Dr. Magnuson and the general desire on the part of the Veterans Administration to take from the home-town plan all of the medical care it possibly could.

"In the rural areas on home calls for illness, we do about the same amount of work that we have been doing the last couple of years.

"Reporting for the Liaison Committee, I note in the minutes of the Council of November it was voted that the State Society cooperate with the American Medical Association in the effort to have the Federal law changed regarding care of nonservice-connected disabilities in U.S. Veterans Administration cases. At that time we asked for the aid of the Public Relations Committee, and we asked for some general thought about what we might best do in New York State. The American Medical Association still expects the county and State societies to take an active part in this program.

"I would like to call to your attention the Rehabilitation Memorandum issued by the National Rehabilitation Commission of the American Legion. This was in November, 1953, shortly before our meeting in St. Louis, and they have material which came to me from someone who copied it from Veterans Administration sources. Among other things they list the names of the delegates to the American Medical Association, members of the House of Delegates Clinical Meeting 1953, so if you ever want to run for dog catcher, maybe you ought to think about it.

"Then I would like to emphasize one or two points more from the American Legion. There is in this booklet, 'The Medical Profession's Stand on V.A. Medical Care,' an item that should be better understood by the profession. It relates to compensation and pensions:

> 'Veterans with service-connected disabilities resulting from either war-time or peace-time service may qualify for monthly compensation payments from the Veterans Administration. War-time rates paid also to veterans disabled from the start of the Korean conflict range from $15.75 to $172.50. Additional statutory awards are also payable to veterans with certain serious disabilities. Peace-time rates are 80 per cent of the war-time scale.'

"That refers to the service-connected disability. If the veteran has that, he is entitled to compensation in addition to whatever hospitalization and medical care the veteran may receive.

"The question of pensions comes under another head. Pensions are awarded to war veterans who are permanently and totally disabled by illness or injury of nonservice origin and whose annual income does not exceed $1,400 if single or $2,700 if married or with a minor child. Rates are $63 a month increased to $75 after ten years or when the veteran reaches age sixty-five.

"The degree of disability decreases as the veteran ages, until at age sixty-five he needs only a 10 per cent disability to qualify for a pension; so the nonservice case is eligible for pension and the service-connected case is eligible for compensation.

"In the past few years we have had a fine analysis and series of reports from the Washington Office of the American Medical Association. I have called your attention to that at various times and asked that you keep up to date with these reports. There is a Special Report No. 14, December 11, 1953. I hope everyone has perused it. The question that is of importance now in relation to the proposal to have the Federal government underwrite some of the insurance, nonprofit and commercial, is one that indicates participation of the Federal government. I never know where it has happened that money has been provided unless strings are attached, and it seems to me as the government takes over some of this insurance it will dovetail into what is happening in regard to the increase of the nonservice-connected case.

"The important item I want to emphasize is presumption. We are talking about tuberculosis and saying that temporarily we cannot take care of it, but eventually it should be taken care of under civilian systems. That is for the nonservice case. However, tuberculosis now has been declared a presumptive service-connected disability if it occurs within three years after discharge from duty. It has been changed from one, to two, and now three years. We won't get very far in attempting to take over tuberculosis, and it seems to me that is a difficult task if we want to absorb it or say later we are going to take care of tuberculosis in civilian institutions. I, myself, don't believe this will ever take place.

"In part, the same presumption has to do with psychoses, but that is limited to two years: one year in complete care and an additional year of hospitalization.

"Speaking again of the nonservice case which has been presumed to be service-connected, there have been additions to the law. In 1951 Congress extended the presumptive period for active psychosis, which had been one year for full medical benefits, to a two-year conclusive presumption for hospitalization only.

"In 1953 Congress again amended Public Law 748 to extend the three-year period for pulmonary tuberculosis to include all types of active tuberculosis.

"The following diseases enumerated in Public Law 748 are to be regarded as presumed service-connected, if manifest within a year after separation: Chronic diseases—anemia, primary; arteriosclerosis; arthritis; bronchiectasis; calculi of the kidney, bladder, or gallbladder; cardiovascular-renal disease including hypertension, myocarditis, Buerger's disease, and Raynaud's disease; cirrhosis of the liver; coccidioidomycosis; diabetes mellitus; endocarditis; endocrinopathies; epilepsies; Hodgkin's disease; leukemia; nephritis; osteitis deformans; osteomalacia; organic diseases of the nervous system, including tumors of the brain, cord, or peripheral nerves; encephalitis 'lethargies' residuals; scleroderma; tuberculosis, active; tumors, malignant; ulcers, peptic (gastric or duodenal); and such other chronic diseases 'as the Administrator of Veterans' Affairs may add to the list.' In addition we have quite a few tropical diseases.

"I point this out as an illustration that we should have some thought that many of these additions that we are objecting to now have to do with presumption, and if there is too much difficulty for the real case of hardship, having no funds, to get into the hospital, it may be suggested that more and more of these diseases be declared presumptive.

"I have to report to the House of Delegates by the first of February. I would like to report something besides the action of a few months ago. Relating to the approval of the American Medical Association program, what would you like us to do further about it? Should our Liaison Committee meet a few times? As you recall, we have had a meeting with the Public Relations Committee. I have had no instruction from anyone in the last month about this.

"In the last month I received another packet, such as you all have had from the A. M. A. but other than that things seem to be at a standstill. What do you want this committee to do?

It *was voted* that the report be received.

Workmen's Compensation.—Dr. Gerald D. Dorman, chairman, presented the following report:

In December the secretary of the Medical Society of the State of New York received a request from Dr. Jacob L. Lochner, Jr., assistant medical director of the Workmen's Compensation Board, for names of qualified ophthalmologists to examine workmen's compensation claimants in Albany, Binghamton, Buffalo, Rochester, and Syracuse. This request was transferred to the county societies in the areas indicated.

The chairman of the Workmen's Compensation Board, Miss Mary Donlon, announced the appointment of Dr. Emanuel Schwartz of 295 New York Avenue, Brooklyn, New York, as a member of the Medical Practice Committee, *vice* Dr. Joseph Raphael, retired.

A request was sent to the secretary of the Workmen's Compensation Board to place on the calendar of the Advisory Committee to the Chairman of the Workmen's Compensation Board, the following matters:

1. Attending physicians should receive copies of medical specialist reports where a patient is referred on the recommendation of the State medical director to an impartial specialist for examination and opinion. The report is not sent to the patient's attending physician, as it should be since it always contains information essential, not only to the processing of the claim but to the treatment of the claimant.

2. The reports of ordinary medical examiners should also be sent to the attending physician. At present a copy is sent to the claimant with instructions to present it to his attending physician.

3. The practice of the Medical Practice Committee is to send bills to doctors for a fee of $2.00 if disputed medical bills were placed on the calendar for consideration by the Medical Practice Committee. Even where the physician did not appear to press his claim and where no award was made to the physician, the fee is charged. In such instances physicians have protested the right of the Medical Practice Committee to collect a fee. Furthermore, we have pointed out to the secretary of the Workmen's Compensation Board that there is no provision in the Workmen's Compensation Law to enforce payment of such fee or to punish a physician for failure to pay.

The December, 1953, issue of *Hospital Forum* contained an item referring to proposed legislation on workmen's compensation to be introduced by the New York State Hospital Association:

> "(6) Upon failure of the employer or the insurance carrier to submit an arbitration agreement to the physician or hospital within thirty days after notification to the chairman and such physician and hospital, in writing, of the objections to the charges, such physician or hospital may enforce the claim in an action at law. After the submission to the arbitration committee of an agreement, the committee shall schedule a hearing to be held before it within ninety days. The committee, for the purpose of such hearing, shall have authority to determine all disputed questions of fact relevant to a decision as to the liability of the employer or carrier

for the payment of the aforesaid charges. Such committee, in its discretion, may award interest at the rate of 6 per cent on the amount awarded, such interest to commence six months after the date of the rendition of the physician's or hospital's bill to the employer or carrier by such physician or hospital."

We feel the above is of doubtful constitutionality and gives too much responsibility to the arbitrations.

A further amendment to Section 13 of the Workmen's Compensation Law provides that "the filing of a notice of injury or death, as herein provided, giving the nature and cause of the injury, shall be deemed a waiver as to the parties in interest, of the provisions of Section 352 and 354 on the Civil Practice Act, with respect to diagnosis and treatment." This amendment is aimed at aiding in the administration of the Workmen's Compensation Law and assisting in the early payment of compensation to injured workers as well as facilitating the payment of hospital bills.

Dr. Dorman supplemented his report as follows: "I would like to add that the Moreland Act investigation is going forward. The Moreland Act investigation of the high cost of workmen's compensation has been about the over-all cost of workmen's compensation in this State compared to some other states. It does not refer specifically to medical problems and medical fees. One of the things that has been played up in some of the hearings is the low percentage of money that goes to the injured workman, and in yesterday's papers Governor Dewey suggested that, perhaps, the compensation to the workman could be increased from $3.00 to $5.00 a week depending upon the category.

"Mr. Spiegel, an attorney investigator for the commission, has been in touch with Dr. Kaliski, and the State Society has expressed its desire to cooperate in any way that we can."

It *was voted* to adopt the report as a whole.

New Business

Committee for the Employment of Executive Personnel.—Dr. Eggston stated: "There is one other point. There has been confusion—not confusion necessarily, but probably a lack of formula—in the employment of certain people for the Society. In Chapter IV of the Bylaws, Section 1 (a), the last sentence says, 'The Council shall have power and authority to employ, discharge, and arrange duties, and with the approval of the Board of Trustees, fix compensation of and for any employe whom it may find necessary for conducting the affairs of the Society.' That has been more or less I think left to chance, and in discussing it with Dr. Anderton and some of the others it was thought advisable that the president should appoint a Council committee to serve for that purpose."

After discussion it *was voted* that a special committee on employment of an assistant to the secretary and an industrial medicine executive be appointed and that it consist of Dr. Reuling, chairman, Dr. Masterson, Dr. Cunniffe, and the chairmen of such committees as are involved.

Committee to Confer with Mr. Newsome Re Loyalty Oath and Unprofessional Conduct Provision of the Education Law.—Dr. Anderton stated: "As a result of the action of the House of Delegates, the secretary, as he reported to the Council, wrote to the Commissioner of Education last June to the effect that the House of Delegates had recommended that all physicians in New York State be required to take a loyalty oath, and the implementation was that any man applying for licensure should take such an oath, and each other man should take such an oath when he reregistered.

"That letter was acknowledged. As a result, Mr. Killough, I am told, has undertaken to approach other professions. It is not only the medical profession that the Department of Education has to deal with. Mr. Newsome, Assistant Commissioner, has requested a conference because they have had replies of great variety from the other professions. A few are enthusiastic, some are noncommittal, and others have not had any enthusiasm. The Department is also aware of considerable opposition to the whole subject of loyalty oaths among a fair number of our own profession, to wit, the Temporary Committee of One Thousand Physicians Opposed to Loyalty Oaths, of which Dr. Haven Emerson is the temporary secretary. Mr. Newsome has asked for a conference in regard to the loyalty oath, and he also has asked to confer with three members of the Society in regard to the implementation of the new cause for discipline, so-called unprofessional conduct."

In line with the above, the president requested the privilege of appointing a committee to confer with Mr. Newsome. He designated, in addition to Mr. Martin, Dr. James Greenough, Dr. Thurman B. Givan, Dr. Anderton, and himself.

The Council *voted* approval.

Medical Care—Federal Reinsurance.—Dr. Kenney stated: "I want to raise a question for my own information. Most of you read that American Medical Association letter a few days ago listing the hearings before the Wolverton Committee on this Reinsurance Bill. What I am asking is, do you think we could have prepared by the subcommittee of the Economics Committee, Dr. Wertz's committee, some information for those of us who will presumably attend the legislative meeting of the American Medical Association on February 13 so we would have solid opinions of the Blue Shield group in our State about this particular legislation."

Mr. Farrell *was designated* to obtain more information for the next meeting of the Council.

Representatives to Annual Meeting of the Medical Society of New Jersey.—The president stated he had an invitation to attend the meeting in Atlantic City next May and wished to appoint Dr. Reuling and Dr. Anderton to go also.

Approval *was voted.*

FILM REVIEWS

The films reviewed below can be obtained by writing to the Film Library Supervisor, Office of Public Health Education, New York State Department of Health, 18 Dove Street, Albany 6, New York. This Film Library is a joint project of the Medical Society of the State of New York and the New York State Department of Health. A catalog of all films available will be sent to those interested upon request.

Poliomyelitis Diagnosis and Management. Type of film and classification: instructional; medicine—infectious diseases, neurology, preventive medicine. Black and white, sound, 16 mm., 2,200 feet, 55 minutes. Produced by Crown Film Unit Production, Great Britain, 1948. Distribution: Purchasable from British Information Service, 30 Rockefeller Plaza, New York City, $112.50.

This is a complete and excellent presentation of the disease poliomyelitis and one which effectively teaches the diagnostic, therapeutic, social, emotional, and rehabilitative aspects of the disease. It carries the story from epidemiology through the family physician, the home setting, the consultant and hospital staff, to the social worker and ultimately the vocational counselor, with final placement of the rehabilitated patient in a satisfactory occupation. There is a great deal of teaching content in this film.

Audience: Professional groups, including practitioners, medical students, interns, residents, physical therapists in training, medical-social workers, and nurses.

The Epidemiology of Murine Typhus. Type of film and classification: instructional, orientational; tropical medicine. Black and white, sound, 16 mm., 665 feet, 18 minutes. Produced by Communicable Disease Center, U.S. Public Health Service, Atlanta, Georgia, 1948. Distribution: On loan from Communicable Disease Center, U.S. Public Health Center, 605 Volunteer Building, Atlanta, Georgia.

An adequate, direct presentation of the epidemiologic pattern of rat, flea, and man in murine endemic typhus fever emphasizes case-finding by the physician and the role of the health officer as epidemiologist.

Audience: Medical students, workers in public health, students of public health, certain lay audiences, and general practitioners.

Observations on Hepatitis. Classification: communicable diseases. Black and white, sound, 30 minutes. Written by Joseph Stokes, Jr., M.D., Philadelphia, 1946. Sponsored and produced by Mead Johnson and Co., Evansville, Indiana.

In this film the author is seen as he discusses, with the aid of many charts, a carefully controlled study of an epidemic of infectious hepatitis, which occurred in a children's camp, and subsequent experiments on volunteers. Although this presentation has the weaknesses of the lecturer type of film, the subject is ably and conclusively conveyed with the exception of the hurried discussion of hepatitis without jaundice and the experimental use of gamma globulin.

Audience: Senior medical students, interns, and physicians in general.

The Medical Motion Picture—Its Development and Present Application. Color, sound, 30 minutes. Produced by Audio Productions, Inc., New York City, 1947. Sponsored by the American Medical Association.

The first two thirds of this film is an attempt to survey the historical development of medical films, approached here mainly in terms of advances of camera technics and film emulsions. The film excerpts are interesting although somewhat casually selected. The first twenty years of medical films are omitted, the examples limited to the United States, and some of the applications shown were actually introduced much earlier than the film appears to indicate. The last third of the film, designed to advocate the use of a professional production organization, touches on the planning and production of a medical film and then shows a brief film on the diagnosis and treatment of a case of thyroid cancer.

Audience: General medical audiences.

Peptic Ulcer. Classification: internal medicine. Color, sound, 40 minutes. Sponsored and produced by Wyeth, Inc., Philadelphia, 1942, under the technical supervision of Department of Gastroenterology, Lahey Clinic, Boston.

This film is an almost encylopedic presentation of peptic ulcer including incidence, etiology, anatomy, physiology, pathology, diagnosis, medical and surgical treatment, and complications. The importance of the history, laboratory studies, and x-ray in diagnosis are effectively demonstrated, although many aspects are just touched upon, as is inevitable in a film which tries to cover a large subject in a short time. The film is up to date, with the exception of the mention of sulfanilamide powder in surgical treatment.

Audience: Medical students (clinical years), interns, nurses, laboratory technicians, and physicians in general.

High Speed Motion Pictures of the Human Vocal Cords. Type of film and classification: research; medicine—laryngology, physiology. Black and white, silent, 16 mm., 750 feet, 31 minutes. Sponsored and produced by Bell Telephone Laboratories, 1948. Distribution: Committee on Medical Motion Pictures, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

This film is an interesting and unique research report film on the actions of the normal vocal cords, as studied with the high speed camera and the stroboscopic beam. Its length, detail, and lack of visual analysis give it a limited teaching value.

Audience: Laryngologists and physiologists only, in its present state. Physicians, medical students, voice students, and others will receive a valuable stimulus, although understanding will not necessarily follow.

The Fenestration Operation for Otosclerosis. Type of film: report. Color, silent, 16 mm., 1,000 feet, 42 minutes. Written and produced by Mervin LaRuse, Indiana; photographed by Paul Holinger, M.D. Distribution: Available on loan from Audio-Visual Education Department, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, Illinois, or from the author, 55 East Washington Street, Chicago, Illinois.

Anatomy of the external, middle, and inner ears is presented. This film shows the beginnings of otosclerosis and indications for the operation, preoperative preparation of the patient, fenestration operation, and postoperative patient.

Audience: The film is clear throughout, even for students. This is a surgical report film for specialists. It was the obvious intent of producer and scientists to make a student teaching film. It is a specialist film for otologists.

Heart Beat Mechanisms in Health and Disease. Classification: cardiology. Black and white, silent, 255 minutes (total running time). Sponsored by the Committee on Scientific Research, American Medical Association; Scientific Adviser, Clayton Lundy, M.D.

A series of instructional films demonstrates by animated drawings, titles, and legends the mechanics of heart action and the associated changes in the electrocardiographic tracings in health and in some diseases. Because of the complexity of subject matter and the comprehensive way in which it is handled, it would be confusing to anyone to see any of the disease demonstrations until the demonstration of the normal heart has been seen and absorbed.

General Appraisal of Entire Series: Due to recent advances in our knowledge and understanding of the electrocardiogram much of the material relating to the electrocardiogram is not presently acceptable and should not be shown to an audience which is not skilled in modern electrocardiography. Some basic concepts of propagation of the impulses have changed since this film was produced. The attempt to cover all of cardiology in one series of films leads to such a concentration of material as to make parts of it suitable only for a brief review by men already skilled in the field.

There are nine parts to this film as follows:

Part I—Mechanism of the Normal Heart Beat (15 minutes).

Part II—Arrhythmias (10 minutes).

Part III—Paroxysmal Tachycardia (10 minutes).

Part IV—Auricular Fibrillation (6 minutes).

Part V—(*a*) Heart Block (13 minutes); (*b*) Bundle Block (19 minutes).

Part VI—Electrocardiogram in Arteriosclerotic Heart Disease (45 minutes): (*a*) Coronary Thrombosis; (*b*) Electrocardiogram in Coronary Chronic Disease.

Part VII—(*a*) Electrocardiogram in Rheumatic Heart Disease (15 minutes); (*b*) Normal Heart Sounds and Systolic Murmur (15 minutes); (*c*) Diastolic Murmur (15 minutes), (*d*) Combined Mitral Stenosis and Aortic Regurgitation (15 minutes).

Part VIII—Digitalis Effects (15 minutes).

Part IX—(*a*) The Normal Electrical Axis (15 minutes); (*b*) Deviation of the Electrical Axis to the Left (15 minutes); (*c*) Right Axis Deviation (11 minutes).

Physical Diagnosis. Classification: physical diagnosis. Color, silent, 258 minutes (total running time). Written by Gordon B. Myers, M.D., Fred J. Margolis, M.D., and Muir Clapper, M.D., Wayne University College of Medicine, Detroit, Michigan, 1936–1942 (approximate).

Reel 1—Abnormalities in Gait (17 minutes). *Reel 2*—Other Types of Involuntary Movement (14 minutes). *Reel 3*—Abnormalities in Color and General Diseases with Skin Manifestations (19 minutes). *Reels 4, 5*—Endocrine Diseases with Characteristic Physiognomy (31 minutes). *Reels 6, 7, 8*—Head and Face (54 minutes). *Reel 9*—Neck (15 minutes). *Reels 10, 11*—Chest (26 minutes). *Reel 12*—Displacement of the Apical Impulse (13 minutes). *Reels 13, 14*—Abdomen, Back, and Perineum (31 minutes). *Reel 15*—Extremities (38 minutes).

This is an imposing collection of "advanced and unusual cases with physical signs demonstrable by inspection." Actually, the presentation of the frequently fascinating material is rather a demonstration of clinical signs than one of cases. Although the

[Continued on page 859]

THE MONTH IN WASHINGTON

Some parts of the Eisenhower administration's broad health program are making good progress on Capitol Hill, while others are virtually standing still or bogged down in the technical complications that are always a threat to new legislation. Well ahead of the other proposals, and possibly destined for enactment, are bills to broaden the scope of the Hill-Burton hospital construction law and to liberalize income tax deductions for medical expenses.

The House Interstate and Foreign Commerce Committee, under chairmanship of Representative Charles Wolverton (R., N.J.), wound up its long fact-finding study of voluntary health insurance plans and immediately started hearings on the Hill-Burton changes. The purpose is to amend the Hill-Burton law so that it can be used to disburse Federal grants to states for construction of health facilities that do not qualify as "hospitals." The administration is anxious to stimulate the building of more nursing homes, hospitals for the chronically ill, diagnostic or treatment centers, and rehabilitation facilities.

An initial appropriation of two million dollars would be authorized for surveys and planning and 60 million dollars annually for three years of construction. Per capita income as well as population would be used to determine a state's share, as under the present Hill-Burton program.

At the House hearing, crowded into two days, the construction program was endorsed at least in principle by every witness except the representative of the American Association of Nursing Homes. Because the program is limited to nonprofit sponsors, members of this group could not receive grants. Their spokesman said long-term loans through the Small Business Administration would help solve their problem.

American Medical Association recommended passage of the bill but urged that facilities for the chronically ill and the handicapped be "part of or near a conventional hospital" and that facilities of all types be open to the entire community without discrimination, as in the present Hill-Burton law. (It is likely hearings also will be held on this legislation in the Senate.)

The House Ways and Means Committee, meanwhile, was giving its approval to a new income tax provision that would allow the deduction of medical expenses if they exceed 3 per cent of adjusted gross income, rather than 5 per cent under present law. The present maximum limitation would be doubled and the deduction of travel expenses allowed where travel is prescribed by a physician. These changes —a long-time A.M.A. goal—are embodied in the omnibus tax readjustment bill.

President Eisenhower's proposal for Federal reinsurance of voluntary health plans has not been able to follow the steady course on which it first appeared to be embarked. At the House hearings none of the spokesmen for the large organizations in the health fields—A.M.A., Blue Cross and Blue Shield, American Hospital Association—was willing to endorse the plan. Like the A.M.A. spokesmen, most of them wanted first to examine the actual administration bill, which at that time had not been introduced. From the Blue Cross, however, came a suggestion that the idea be tried out experimentally. Spokesmen for national labor organizations expressed mixed reactions, with some maintaining that reinsurance was a poor substitute for what they believe the country really needs, national compulsory health insurance.

The administration's health budget for the next fiscal year, starting next July 1, calls for a slight over-all reduction. The regular Hill-Burton program, currently operating on 65 million dollars, would get 50 million dollars (any appropriation to start the proposed expanded construction would be in addition). Relatively sharp reductions would be made in funds for venereal, tuberculosis, and communicable disease control, in line with the policy of shifting this responsibility to the states. The various research institutes would receive about what they are now spending.

One of the few new items is for 7.8 million dollars, estimated as necessary for the extra cost of enlarging the Federal program of vocational rehabilitation. Legislation authorizing the expansion is awaiting Congressional action. The administration hopes gradually to increase the number of persons rehabilitated annually from the current 60,000 to 200,000. While the program is being stepped up, one of its goals would be to induce states to increase their spending until eventually their appropriations match the Federal. Like most of the President's health program, the rehabilitation effort has the support of the A.M.A.

Conferences between A.M.A. officials and administration leaders are continuing. Latest sessions were

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Prepared by the Washington Office of the American Medical Association, Washington, D.C.

with Secretary Hobby, concerning her department's legislative plans; with VA Administrator H. V. Higley, on treatment of nonservice-connected cases; and with Admiral Arthur W. Radford, chairman of the Joint Chiefs of Staff, Dr. Frank Berry, Assistant Defense Secretary for health and medical matters, and Dr. Howard A. Rusk, chairman of the Health Resources Advisory Committee, on medical care for military dependents. Representing the A.M.A. at one or more of the meetings were Drs. Walter B. Martin, David B. Allman, Gunnar Gundersen, Louis Orr, James C. Sargent, W. L. Crawford, George F. Lull, Ernest B. Howard, and Frank E. Wilson.

Film Reviews

[Continued from page 857]

majority of this material involves some kind of movement, a considerable proportion is purely static, such as dermatosis, tumors, etc. Identification and orientation are at times easy, at times difficult. Only the reels on motor and endocrine disorders show syndromes. The others illustrate only one sign, or sometimes several correlated signs, for each patient. The signs of up to 25 patients are reproduced in some of the reels. In 12 reels the signs are arranged rather unsystematically, not according to pathology, but according to body regions. This and the often brief presentation, in conjunction with the not always easy interpretation, may necessitate repeated screenings of portions of the films for purposes of study.

Audience: Medical students, general practitioners, internists, pathologists, surgeons, and other specialists, according to content of the reels.

Feeling of Hostility. Classification: psychiatry. Black and white, sound, 27 minutes (31 minutes with trailer). Sponsored by the Mental Health Division, Department of National Health and Welfare of Canada. Produced by National Film Board of Canada, 1948. Technical Advisers: Medical Staffs, Allan Memorial Institute of Psychiatry, McGill University, and Royal Victoria Hospital, Montreal.

A dramatic case history emphasizes the importance of hostility in molding the character and shaping the life experiences of a girl from early childhood to adulthood. The scope of the film as a study in mental mechanisms is impaired by its narrow emphasis on the problem of hostility, and its validity as a scientific study of hostility is undermined by the lack of agreement between the rich and complex visual material presented and the superficial interpretations of the running commentary.

Audience: Patients in group therapy, students of psychology, psychiatry, and social work, professional workers in the field of child guidance. Not recommended for parent groups.

Condition Improved. Classification: rehabilitation—occupational therapy. Black and white, sound, 31 minutes. Produced by National Film Board of Canada for Department of Veterans' Affairs and Department of National Health and Welfare, Ottawa, 1946.

The film effectively surveys modern methods of occupational therapy employed in conjunction with physiotherapy and physical rehabilitation. The application of these methods is illustrated in permanently disabled patients, industrial accident victims, and children suffering from orthopedic and cardiac conditions. The last section of the films shows the role of occupational therapy in the management of psychoneuroses, as well as the collaboration between therapists and psychiatrists.

Audience: Medical students, nurses, general postgraduate medical audiences, specialists in physical medicine, psychiatrists, physical and occupational therapists, social workers.

Obstetrical Maneuvers on the Ayers Manikin. Classification: obstetrics. Color, sound, 24 minutes. Written by Horace E. Ayers, M.D., and John G. Mussio, M.D. Produced by Clay-Adams Company, Inc., New York City, 1943. Photographed by Nat Campus.

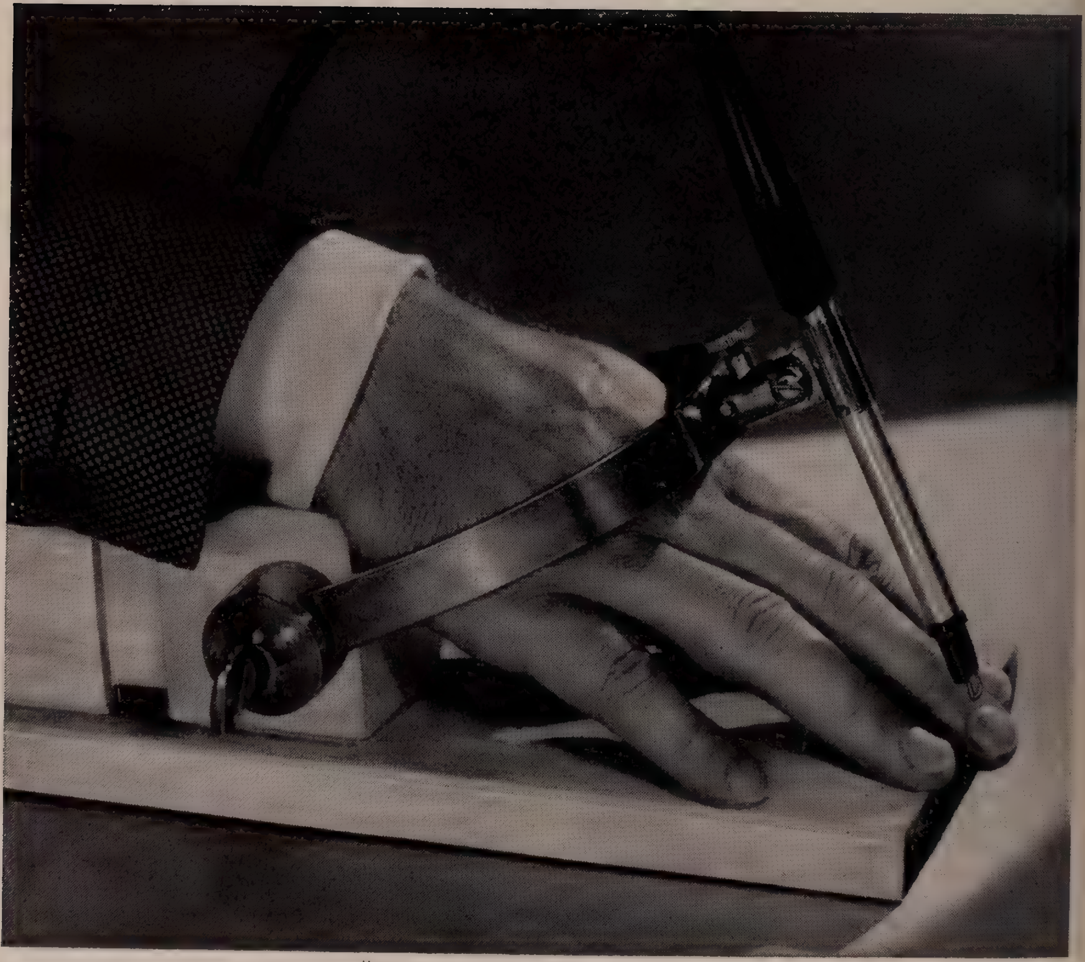
This film uses the Ayers manikin to demonstrate the mechanism of labor and the use of various types of forceps. Although the film contains much stimulating and instructional material, essential information is omitted, such as the indications and prerequisites for the various types of forceps. The inclusion of a group of students who are seen being instructed is a good feature of the film, but it is partly overdone. The structure of the film is good, its progress smooth, and interest is maintained throughout.

Audience: Particularly good for fourth-year medical students, interns, residents, and general practitioners. Expert guidance is necessary, however, for explanation.

Physiological test compares

Kent's

Micronite Filter



"KENT" AND "MICRONITE" ARE REGISTERED TRADEMARKS OF P. LORILLARD COMPANY

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To compare the efficiency of various filters as they affect physiological responses in the cigarette smoker, drop in surface skin temperature at the last phalanx was measured.

Using well-established procedures, the subject smoked conventional filter cigarettes and the new KENT with the exclusive Micronite Filter.

For every other filter cigarette tested, the drop in temperature averaged over 6 degrees. For KENT, with the exclusive Micronite Filter, there was no appreciable drop.

These findings confirm the results of other scientific measurements that show these facts: 1) KENT's Micronite Filter takes out *far more* nicotine and tars than any other filter cigarette, *old or new*. 2) Ordinary cotton, cellulose or crepe paper filters remove a small but ineffective amount of nicotine and tars.

Thus KENT, with the first filter that really works, gives the one smoker out of every three who is susceptible to nicotine and tars the protection he needs . . . while offering the satisfaction he expects of fine tobacco.

For these reasons, smokers have made the new KENT the most popular new brand of cigarette to be introduced in the last 20 years.

If you have yet to try the new KENT, may we suggest you do so soon?

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TWENTY
KENT
CIGARETTES
WITH THE MICRONITE FILTER
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NECROLOGY

Maurice C. Ashley, M.D., ninety years old, of Poughkeepsie, died on September 1, 1953. Dr. Ashley received his medical degree from the Philadelphia Medical and Surgical University, Philadelphia, in 1892. He was a member of the American Psychiatric Association, the Dutchess County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Frank M. Bacher, M.D., of Oceanside, Long Island, died on September 2, 1953, at the age of sixty-three. Dr. Bacher received his medical degree from the University of Breslau in 1915. He was a member of the Nassau County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Siegmund Brandenstein, M.D., of New York City, died on January 19 at the age of seventy-four. He received his medical degree from Freiburg University in 1904, and served as a clinical assistant at Sydenham Hospital. Dr. Brandenstein was a member of the Rudolf Virchow Society, named for the nineteenth century German pathologist. He also belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

George J. Bryan, M.D., of Fayetteville, died on January 28 after a long illness. He was eighty-two years old and the oldest physician in Fayetteville. He graduated from Syracuse University College of Medicine in 1898 and did further postgraduate work in Leipzig and Vienna. Dr. Bryan was an honorary attending physician at the Crouse-Irving Hospital. He had served as health officer of the town of Manlius and village of Fayetteville. Dr. Bryan belonged to the Onondaga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Sophocles D. Dadakis, M.D., who lived in Harrison following his retirement from a New York City practice, died at the age of seventy-eight on February 12. Dr. Dadakis received his medical degree from the University of Athens in 1899. He had practiced in New York City from 1913 until five months before his death. During World War I he served as a member of the Foreign Language Bureau.

Jacob Daley, M.D., of New York City, collapsed and died on February 18 following a performance as an amateur magician at the Art Directors Club. He was fifty-seven years old. A native of Russia, Dr. Daley graduated from Fordham University School of Medicine in 1920. He was a Diplomate of the American Board of Otolaryngology and a founder and former president of the American Otolaryngologic Society for Plastic Surgery. He also belonged to the American Academy of Ophthalmology and Otolaryngology. Dr. Daley was an associate attending physician in otolaryngology at French Hospital, and chief of otorhinolaryngology and plastic surgery at the French Hospital Outpatient Department. He belonged to the New York County Medical Society and the Medical Society of the State of New York.

Nathan Feldman, M.D., of Brooklyn, died on February 5 at the age of sixty. Dr. Feldman graduated from the University of Buffalo School of Medicine in 1927. He was clinical assistant attending physician in dermatology at Beth-El Hospital in the Outpatient Department. Dr. Feldman belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Morris B. Fried, M.D., of Brooklyn, died on September 3, 1953, at the age of sixty-seven. Dr. Fried received his medical degree from Eclectic Medical College in Cincinnati, Ohio, in 1922.

Roy Durell Grimmer, M.D., of Hempstead, died on February 6 while visiting his son in California. He was seventy-one years old. Dr. Grimmer received his medical degree from McGill University in 1905. He was a Fellow of the American College of Physicians, an associate attending physician at Long Island Hospital, and a consultant in obstetrics at the Meadowbrook and Nassau Hospitals. Dr. Grimmer was the physician for Hempstead High School for twenty-five years and was also physician and a member of the board of trustees of Hofstra College.

He belonged to the Nassau County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Julius Hauser, M.D., of Buffalo, died in the latter part of January at the age of seventy-nine. Dr. Hauser received his medical degree from the University of Vienna in 1898. He was a member of the American Association for Mental Deficiency and the Mohawk Valley Neuropsychiatric Society. He had been an attending psychiatrist at Syracuse Psychopathic Hospital.

Dr. Hauser belonged to the Onondaga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

[Continued on page 864]

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[Continued from page 862]

Carl William Lange, M.D., of Albany, died on October 26, 1953, at the age of seventy. Dr. Lange received his medical degree from the University of Strassburg, Germany, in 1905. He had been retired for several years.

Walter D. Ludlum, Sr., M.D., of St. Albans, died on December 10, 1953, at the age of seventy-eight. Dr. Ludlum graduated from New York University School of Medicine in 1898, and interned at Methodist Hospital. He was a Licentiate of the American Board of Pediatrics, a member of both the American Academy of Pediatrics and the Brooklyn Academy of Pediatrics.

Dr. Ludlum had been partially retired for several years but continued to serve as a consultant at the Kings County, Methodist, and Caledonian Hospitals.

He belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Leon Lockett Luria, M.D., fifty-seven years old, of New York City and Rego Park, died on February 12. Dr. Luria held both a medical and a legal degree. He graduated from Long Island College Hospital School of Medicine in 1921 and was also a graduate of St. Johns College School of Law. He was a member of the American Board of Legal Law.

Dr. Luria belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Martin Erich Mayer, M.D., fifty-eight years old, of Queens, died on October 26, 1953. Dr. Mayer received his medical degree from the University of Frankfort-on-Main in 1921. He was senior attending clinical assistant in the Outpatient Department of Mount Sinai Hospital.

Dr. Mayer belonged to the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Stanley Wilson Pallister, M.D., of Bearsville, died on January 6 at the age of seventy-eight. He graduated from New York Homeopathic Medical College in 1898 and interned at Cumberland Hospital. Dr. Pallister was a Fellow of the American College of Surgeons but had been completely retired since 1947 and held no other memberships at the time of his death.

Arthur Palmer, M.D., of New York City, died of a heart attack on February 18 at the age of sixty-four. Dr. Palmer graduated from Cornell University Medical College in 1915 and interned at Bellevue Hospital. He was a Diplomate of the American Board of Otolaryngology, a Diplomate of the American Board of Plastic Surgeons, and a Fellow of the American College of Surgeons. He was a member of the American Academy of Ophthamologists and Otolaryngologists; the American Laryngological, Rhinological and Otological Society; the American Society of Plastic and Reconstructive Surgery, and the New York Academy of Medicine.

Dr. Palmer was a consultant in laryngology at the New York Infirmary for Women and Children, a consultant in otolaryngology at Mather Memorial Hospital, and an attending physician in otolaryngology at New York Hospital.

He also held membership in the Association of Military Surgeons, the Harvey Society, and the American Association for the Advancement of Science. Dr. Palmer belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Leo M. Powell, M.D., of New York City, died on November 10, 1953, at the age of seventy. He was graduated from New York Homeopathic Medical College in 1915 and served as an attending physician at the Department of Health Social Hygiene Clinic.

Audley V. Quick, M.D., of Yonkers, died on February 13 at the age of seventy-six. Dr. Quick graduated from the New York Homeopathic Medical College in 1902. He was a member of the New York Academy of Medicine. Before breaking his hip in 1952, Dr. Quick had been an assistant attending physician at Flower and Fifth Avenue Hospitals.

He was a member of the Homeopathic Medical Society of Westchester County.

Benjamin Stoloff, M.D., of Brooklyn, died on February 8 at his home at the age of sixty-nine. Dr. Stoloff graduated from Long Island College Hospital School of Medicine in 1906. He was a Licentiate of the American Board of Pediatrics, senior attending pediatrician at Brooklyn Women's Hospital, and senior attending pediatrician at Beth-El Hospital.

Dr. Stoloff belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Emanuel M. Wachtel, M.D., of New York City, died on February 11 of a heart ailment at the Algonquin Hotel. Dr. Wachtel was forty-one years old. He graduated from New York University College of Medicine in 1936 and interned at Mount Sinai Hospital. He was an attending physician at Kings County Hospital at the time of his death. Dr. Wachtel was vice president and medical director of William Douglas McAdams, Inc., a medical advertising agency.

He belonged to the New York Pathological Society, the Kings County Medical Society, and the Medical Society of the State of New York.

Leland Orlo White, M.D., of Sharon Springs, died on February 7 at the age of seventy-eight. Dr. White graduated from Albany Medical College in 1901. He served as Schoharie County coroner, school health officer, and village health officer. Dr. White was a member of the Schoharie County Medical Society and the Medical Society of the State of New York.

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MEDICAL NEWS

Oneida County Medical Society—The officers for the current year of the Oneida County Medical Society are: president—Dr. John S. Fitzgerald, Utica; vice-president—Dr. Frank H. Valone, Rome; secretary—Dr. Leonard V. Marrone, Utica; assistant secretary—Dr. M. R. Smith, Utica; treasurer—Dr. Harold H. Katzman, Utica, and librarian—Dr. John B. Delong, Rome. The new censors for the year are: Drs. Frank Graniero, T. Douglas Kendrick, B. Victor di Iorio, and Paul Girard, Utica, and Henry N. Reid, Rome. Delegate to the House of Delegates of the Medical Society of the State of New York is Dr. Harold L. Pender, and Dr. Fitzgerald is the alternate delegate.

The election of the officers was held on January 19 at the Twin Ponds Golf Club in New York Mills.

Rochester Health Forum—The first Rochester Health Forum was held on February 4 at the Chamber of Commerce. The meeting was made possible through the cooperation of the physicians of Rochester represented by the Rochester Academy of Medicine and the Monroe County Medical Society, with the Monroe County Chapter of the National Foundation of Infantile Paralysis and the Committee on Health and Safety of the Rochester Chamber of Commerce.

The medical moderator was Dr. Henry Crawford, a past chairman of the Monroe County Chapter of the National Foundation of Infantile Paralysis. Dr. Theodore B. Steinhausen, secretary, Public Meetings Committee of the Rochester Academy of Medicine, introduced the speakers.

Dr. Edward H. Townsend, Jr., a practicing pediatrician in Rochester, discussed the aspects of poliomyelitis as they face the physician in the early phases of the disease, and Dr. Louis Goldstein, orthopedic surgeon, who is affiliated with the Strong Memorial Hospital and is especially interested in the problems of poliomyelitis and its complications, discussed the broader aspects of physical rehabilitation of the polio patient, not only hotpacks but also various operations which may be necessary.

It was requested that all questions be submitted before the program in writing to avoid duplication and these were answered at the question period.

National Foundation for Infantile Paralysis—The approval of research and professional education projects totaling $1,873,484 has been announced by the National Foundation for Infantile Paralysis. The Mount Sinai Hospital, New York City, received $74,194 for investigation dealing with virus research under the direction of Dr. Gregory Shwartzman, director, Department of Microbiology; $21,617 for a project seeking improved methods of treatment under the direction of Dr. Horace L. Hodes, director, Department of Pediatrics; New York University College of Medicine, $25,066.80, for improved methods of treatment to be carried out under the direction of Dr. Howard A. Rusk, professor of physical medicine and rehabilitation; $191,466, under the direction of Dr. Stockton Kimball, dean, University of Buffalo School of Medicine, for a project seeking improvements in methods of treatment, and $80,878 to Cornell University Medical College, under the direction of Dr. Joseph C. Hinsey, director, New York Hospital-Cornell Medical Center, for the project on seeking improvement of methods of treatment.

Lorenz Foundation Awards Grant—The Lorenz Foundation of Buffalo and New York City has awarded a $10,000 grant to the American Heart Association. The primary aim of the Foundation is to conduct research on the relationship of bodily rest and posture to physical and mental health and diseases. In addition to the research program for the study of heart diseases and relaxation, extensive work will be done on clinical studies on arthritis and rheumatism in relation to relaxation, rest, and posture.

Dr. William L. Colze, editor-in-chief, *The International Bulletin,* is the director of medical research of the Lorenz Foundation.

Clinical Society—The Clinical Society of the New York Polyclinic Medical School and Hospital celebrated the fiftieth anniversary of its founding on February 20 at the Waldorf-Astoria Hotel. Dr. Orrin Sage Wightman, one of the founders of the Society, was the guest of honor.

Pediatric Refresher Courses—Under the sponsorship of the Medical Society of the State of New York and the Bureau of Maternal and Child Health, New York State Department of Health, intensive refresher courses in pediatrics are being offered at the University of Buffalo School of Medicine May 17 through May 29, and June 7 through June 19. Designed especially to meet the needs of general practitioners, the courses will review the principles and recent developments in diagnosis and treatment of pediatric disorders and the care of the well child.

Lectures, informal discussions, and ward rounds will be conducted daily. Physicians attending will participate in the daily admission conferences at which all children admitted to the Buffalo Children's Hospital on the previous day are discussed in some detail before laboratory and x-ray studies are available.

[Continued on page 868]

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[Continued from page 866]

Registration fee is $5.00. Tuition for each physician enrolled in the course is paid by the State Department of Health, as well as a stipend provided to physicians conducting child health conferences or public health clinics or employed as school physicians by Boards of Education or Departments of Health.

American Board of Obstetrics and Gynecology—Part II, the next scheduled examinations, oral and pathologic, for all candidates will be held at the Edgewater Beach Hotel, Chicago, Illinois, May 10 to May 17, 1954. Formal notice of the exact time of each candidate's examination will be sent to him several weeks in advance of the examination.

The directors of the American Board of Obstetrics and Gynecology wish to express their thanks to the following New York doctors for their help in proctoring the written examinations on February 5, 1954: Drs. John J. Gamble, Albany; Milton A. Carvalho, Binghamton; Benjamin I. Gilson, Brooklyn; Louis A. Trippe, Buffalo; John G. Hill, Jackson Heights; Theodore Neustaeder, New York City; John F. Rogers, Poughkeepsie; Fred J. Fumia, Rochester, and Albert W. Van Ness, Syracuse.

American Medical Education Foundation—Contributors from New York State to the American Medical Education Foundation during the month of January were: *Albany*—Drs. Kenneth M. Archibald, Earl Levitt, Robert W. Raymond, and Albert Vander Veer II; *Bainbridge*—Drs. Ben L. Dodge and Roger I. Williams; *Brooklyn*—Drs. Ralph Blumberg and Gladys M. Muller; *Bronx*—Drs. William Acampora, M. H. Alexander, A. A. Buscemi, F. E. Chick, M. Daniel, Louise M. Dithridge, C. L. Engelsher, J. V. Gazzola, M. J. Goodfriend, William J. Grote, Jr., F. G. Guggenbuhl, I. I. Koslin, M. Leff, Jack Levine, S. Levine, S. Lieberman, H. R. Marcus, H. L. Margulies, Alfred E. Marra, D. A. Martoccio, G. E. Miliani, A. Miseo, Milton Reisch, M. I. Salomon, and Louis A. Schultz.

Also: *Buffalo*—Drs. Paul A. Kennedy and James H. Lewis; *Edmeston*—Dr. Howard T. Langworthy; *Far Rockaway*—Dr. Roy M. Seideman; *Flushing*—Drs. M. Schochet and M. E. Sullivan; *Garden City*—Dr. Ben F. Dennis; *Great Neck*—Dr. Leonard J. Bloome; *Groton*—Dr. Hans Seligman; *Hudson*—Dr. Joseph Bellamy; *Jamaica*—Dr. Frances Lewis; *Kingston*—Dr. Herbert Derman; *Middletown*—Dr. Anthony J. Morreale; *Monroe*—Dr. Harry Hoffman; *Mt. Kisco*—Dr. Robert A. Fox; *New Berlin*—Dr. William P. Elliott; *Newburgh*—Dr. William S. Montgomery.

Also: *New York City*—Drs. Albert H. Aldridge, Walter P. Anderton, David N. Barrows, Edward J. Bassen, Simon A. Beisler, Alice R. Bernheim, Harold Brandaleone, Goodwin M. Breinin, Robert E. Brennan, Myron I. Buchman, U. M. Cennerazzo, Ralph Colp, Nelson W. Cornell, Joseph E. Corr, M. P. Cowett, Vito W. Dilluvio, J. E. Drew, L. Fessler, W. G. Frey, Jr., Joseph Goldstone, Jetti Katz, Samuel R. Lehrman, James R. Lisa, Louis M. Mascitelli, Malvin Proctor, Calbert T. Seebert, Hamlin A. Starks, Charles A. Turtz, and James Wallace; *Patchogue*—Dr. S. S. Glass; *Plattsburg*—Dr. Eric D. Pearson; *Port Jervis*—Dr. George E. Kenny; *Rochester*—Drs. Sidney Feyder, Lynn Rumbold, and John D. White; *Rome*—Drs. F. H. Valone and Rudolph E. Vandeveer; *Salem*—Dr. Gerald P. Fincke; *Snyder*—Dr. Joseph T. Roberts; *Troy*—Dr. H. A. Boswell, and *Voorheesville*—Dr. Gilbert Dalldorf.

Congress on Medical Education and Licensure—The fiftieth annual congress on Medical Education and Licensure was held at the Palmer House in Chicago during February. Among the New York State doctors taking part in the meeting were: Dr. Willard C. Rappleye, dean, Columbia University College of Physicians and Surgeons; Dr. H. G. Weiskotten, chairman, Council on Medical Education and Hospitals, American Medical Association, Skaneateles; Dr. Louis H. Bauer, president, American Medical Education Foundation, Hempstead; Dr. Frode Jense, assistant dean, New York University Postgraduate School of Medicine; Dr. Franklin Amos, director, Professional Education, New York State Department of Health, and Dr. Stiles D. Ezell, secretary, New York Board of Medical Examiners.

Research Grants—Research gifts totaling $25,000 have been received recently by New York University-Bellevue Medical Center. Dr. Charles F. Wilkinson, Jr., professor and chairman of the Department of Medicine, was awarded $20,000 by the Lillia Babbitt Hyde Foundation to cover studies of sitosterol and its effect on the blood cholesterol and atherosclerosis and a further preliminary study of nitrogen metabolism, and Dr. L. Emmett Holt, Jr., professor and chairman of the Department of Pediatrics, received $5,000 from the Gerber Baby Foods Fund for studies in infant nutrition.

Examination for Medical Officers—A competitive examination for appointment of medical officers to the regular corps of the United States Public Health Service will be held June 1, 2, and 3, 1954. Examinations will be held in as centrally located place as possible to the homes of the candidates. Applications must be received no later than April 30, 1954.

Appointments will be made in the grades of assistant surgeon and senior assistant surgeon. Consideration will be given to the officer's preference, ability, and experience in making assignments, but all officers are subject to change of station and assignment as necessitated by the needs of the Service. Appointments are permanent in nature and provide opportunities to qualified physicians for a life career in clinical medicine, research, and public health. Applicants who successfully complete this examination may ordinarily expect appointment as soon as they become eligible.

Requirements for both grades are: United States citizenship, at least twenty-one years of age, and graduation from a recognized school of medicine. Applicants for assistant surgeon must have at least seven years of collegiate and professional training

[Continued on page 870]

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[Continued from page 868]

and appropriate experience, and the senior assistant surgeon, ten years.

Application forms and additional information may be obtained by writing to the Chief, Division of Personnel, Public Health Service, Department of Health, Education, and Welfare, Washington 25, D.C. Completed application forms must be received in the Division of Personnel no later than April 30.

Residencies in Psychiatry—The Veterans Administration Hospital, Lyons, New Jersey, has available residencies in psychiatry for a one- to three-year period which are fully accredited by the American Board of Psychiatry and Neurology. The training program consists of lectures, conferences, and seminars under the direction of the Department of Psychiatry, New York Medical College, and offers intensive training intramurally and through rotation in special hospitals and clinics in the adjacent area. There is, in addition, a series of extensive guest lectures as well as an annual institute at the hospital. Training may begin at any time.

Hill-Burton Grants—The status of all Hill-Burton grants in the State of New York for the period ending January 31, 1954 is: Completed and in operation, 64 projects at a total cost of $53,759,422, including Federal contribution of $16,574,420, and supplying 3,328 additional beds; under construction, 10 projects at a total cost of $40,912,554, including Federal contribution of $5,830,692, and designed to supply 948 additional beds; and approved but not yet under construction, eight projects at a total cost of $15,826,690, including $3,674,099, Federal contribution and designed to supply 949 additional beds.

Grants-in-Aid—The surgeon general of the Public Health Service, United States Department of Health, Education, and Welfare, Leonard A. Scheele, announced in February that new support of the expanding search for chemical agents effective in the treatment of cancer was being given through grants-in-aid to scientists in universities and medical centers for research projects.

Administered by the National Cancer Institute, the New York institutions benefiting by the grants are Columbia University College of Physicians and Surgeons for "Clinical and Laboratory Investigation in Cancer Chemotherapy," by Dr. Alfred Gellhorn, $141,255, and Sloan-Kettering Institute for Cancer Research, New York City, for "Expansion of Cancer Chemotherapy with Special Reference to Lymphomas and Leukemia," by Dr. C. P. Rhoads, $200,000.

Applications for research grants-in-aid are recommended to the Surgeon General for approval by the National Advisory Cancer Council, composed of six professional and six lay members from outside the government.

Blood Banks Association of New York State—A special meeting of the Genesee County Medical Society was held on February 1 at the Genesee Memorial Hospital, Batavia. Dr. Theodore J. Curphey, Forest Hills, director of the Blood Banks Association, was the speaker.

The Society, chosen to initiate the first Blood Assurance Program of the new Blood Banks Association of New York State, was presented with an outline of the project by Dr. Curphey. Dr. George S. Young, president, Genesee County Medical Society, explained that the special meeting was the first step in a broad program of public education concerning the use of blood.

The Genesee Memorial Hospital and St. Jerome Hospital blood banks in Batavia are institutional members of the nonprofit Blood Banks Association of New York State. Dr. Joseph Tannenberg is the director of Genesee Memorial Hospital Blood Bank and Dr. David Johnson of St. Jerome Hospital Blood Bank. The Association will begin a clearing house in March for the exchange of blood among its more than 80 blood banks.

Meetings—Past

Albany County Medical Society

Dr. Samuel F. Marshall, Surgical Department, Lahey Clinic, Boston, Massachusetts, discussed "Recent Advances in the Treatment of Thyroid" at the January meeting of the Albany County Medical Society.

Pan American Medical Association

Members of the Pan American Medical Association were participants in a medical goodwill mission which took them to six Latin American countries for a series of medical meetings and goodwill conferences in January.

Among the New York doctors taking part in the lectures and symposiums held during the cruise were: Drs. Harold Altman, Janet S. Baldwin, Morton I. Berson, Hylan A. Bickerman, Louis F. Bishop, Jr., Siegfried Block, Murray L. Brandt, Albert A. Cinelli, Joseph J. Eller, Joseph Epstein, Laurence Farmer, Martin J. Healy, Jr., Joseph H. Hodas, Anthony J. Lanza, Irwin J. Lubowe, Herbert C. Maier, Juan Negrin, Jr., Abraham Oppenheim, Gerald H. Pratt, Henry T. Randall, Henry A. Rafsky, George W. Slaughter, Will Cook Spain, Alfred Steiner, and Esther Tuttle.

The meetings were marked by a two-way exchange of the latest developments of clinical and laboratory research.

Mohawk Valley Gynecological and Obstetrical Society

"Sterility" was the subject of the paper presented

[Continued on page 872]

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[Continued from page 870]

by Dr. Ferdinand J. Schoeneck, professor of obstetrics, State University of New York College of Medicine at Syracuse, at the January 26 meeting of the Mohawk Valley Gynecological and Obstetrical Society.

Dr. Henry Joachim Lectures on the Application of Fundamental Sciences in Medicine

The sixteenth in the series of Dr. Henry Joachim Lectures on the Application of Fundamental Sciences in Medicine was given by Dr. Abraham White, associate dean, Albert Einstein College of Medicine, Yeshiva University, on February 22. Dr. White spoke on "Aspects of Pituitary-Adrenal Cortical Physiology."

American Hearing Aid Association

The annual meeting of the American Hearing Aid Association was held on February 9 at the Hotel Lexington, New York City. At this time, Dr. Lester L. Coleman, associate attending surgeon, Manhattan Eye and Ear Hospital, and otologist, City Hospital, New York City, and Dr. Edmund Prince Fowler, consultant otolaryngologist at Manhattan Eye and Ear Hospital and the National Hospital for Speech Disorders, offered to serve as medical consultants to the Public Information Center of the American Hearing Aid Association.

Ontario County Medical Society

"The Management of Pulmonary Emphysema" was the topic of Dr. Nolan L. Kaltreider's talk to the members of the Ontario County Medical Society on February 9 in Canandaigua. Dr. Kaltreider is assistant professor of medicine at the Rochester University School of Medicine and Dentistry.

Tompkins County Medical Society

Dr. Paul A. Bunn, associate professor of medicine, State University of New York College of Medicine at Syracuse, addressed the Tompkins County Medical Society on "The Use and Abuse of Antibiotics" on February 15 at a meeting which was held on the Cornell University campus in Statler Hall.

Jefferson County Medical Society

A symposium on "Pain, Causes and Treatment" was held at the regular monthly meeting of the Jefferson County Medical Society on February 16. Members of the panel were: Drs. John M. Rice, Thomas Hamilton, William Cosgrove, Bennie Mecklin, W. Bruce Carter, and Charles A. Prudhon.

Research Society of the State University College of Medicine

The sixth regular monthly meeting of the Research Society of the State University College of Medicine at New York City was held on February 17. The papers presented were: "Observations of Splanchnic Blood Flow and Metabolism," by Dr. J. Leonard Brandt, instructor in medicine; "Locus of Action of Procaine in Isolated Perfused Spinal Cord of the Frog," by Drs. Merel H. Harmel, professor and chairman of the Department of Anesthesiology, and J. Laurence Malcolm, St. Mary's Hospital Medical School, London, visiting professor of physiology for 1952 to 1953 session; "Pathophysiologic Basis of the Symptomatology of Subdural Hematoma," by Drs. E. Jefferson Browder, professor and chairman of the Department of Neurology and Neurosurgery, and A. W. Cook, instructor of neurology and neurosurgery; and "Observations on the Peripheral Resistance During Total Body Perfusion," by Dr. Karl E. Karlson, assistant professor of the Department of Surgery.

Kings County Radiological Society

Dr. Coleman B. Rabin, assistant clinical professor of medicine, Columbia University, and associate radiologist, Mt. Sinai Hospital, discussed "Chest Manifestations of General Diseases" at a meeting of the Kings County Radiological Society on February 22.

Teaching Day

A Teaching Day was held at the Wilson Memorial Hospital in Johnson City for the Broome County Medical Society and the Broome County Chapter of the Academy of General Practice on February 24. Speakers were Dr. Frederick H. Shillito, instructor in medicine, Columbia University College of Physicians and Surgeons; Dr. George M. Raus, professor of physicial medicine and rehabilitation, State University of New York College of Medicine at Syracuse; Dr. Emil Granet, lecturer in graduate medicine, Columbia University College of Physicians and Surgeons, and Dr. A. H. Aaron, clinical professor of medicine, Buffalo University School of Medicine.

Isidore W. Held Lecture

The sixth Isidore W. Held Lecture was presented on March 8 in the auditorium of the Beth Israel Hospital. Dr. Abraham Cantarow, professor of biochemistry, Jefferson Medical College of Philadelphia, spoke on "Certain Host-Tumor Interrelations in Experimental Cancer."

Meetings—Future

Sullivan County Medical Society

A meeting of the Sullivan County Medical Society will be held at the Liberty Maimonides Hospital, Liberty, on March 17. At this time, Dr. Frank J. Borelli, professor of radiology, New York Medical College, will discuss "Radioactive Isotopes and Application in Medicine." Dr. Sidney W. Gross, clinical professor of neurosurgery, New York Medical College, presented a paper on "Recent Advances in Neurological Surgery" at the February 24 meeting which was held at the Monticello Hospital, Monticello.

[Continued on page 874]

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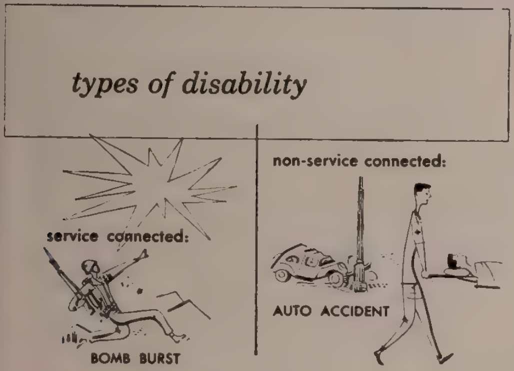

The medical profession fully endorses and supports the medical program of the Veterans Administration through which veterans receive medical care and hospitalization without cost for illnesses or injuries incurred as a result of military service (left). It is felt, however, that the federal government should not assume the responsibility for the medical care of veterans whose disabilities are incurred in civilian life and which have no relationship to their military service.

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[Continued rom page 872]

American Academy of General Practice

The sixth annual meeting of the American Academy of General Practice will be held in Cleveland, March 22 to 25. Among those speaking at the meeting will be: Dr. E. J. McCormick, president, American Medical Association; Drs. Roscoe L. Pullen, Joseph Hughes, Howard A. Rusk, George Crile, Jr., Donald M. Glover, George H. Curtis, Clarence S. Livingood, C. Stuart Welch, (Lt. Col.) Eddy Palmer, Seymour Gray, Sol Katz, Edgar Davis, (Col.) Carl Tempel, Robert M. Meyers, Robert L. Falkner, Allan C. Barnes, Richard W. TeLinde, Theodore J. C. vonStorch, Edmund P. Fowler, Jr., Louis G. Moench, Sydney P. Schwartz, Sir Alexander Fleming, Paul A. Bunn, Edward H. Kass, Vernon Knight, Mark H. Lepper, Thomas F. Frawley, Robert Stecher, and William S. Middleton, and John C. Krantz, Jr., Ph.D.

The scientific exhibit section, as in recent years, will be closely integrated with the formal lecture program. The president's reception will take the place of the annual banquet, and arrangements have been made to entertain the wives of the doctors who are attending the meeting.

Reservations for hotels should be made by writing to: A.A.G.P., 511 Terminal Tower, Cleveland 13, Ohio.

Pediatric Section Meeting

The pediatric section of the Medical Society of the County of Kings and the Academy of Medicine of Brooklyn will meet on March 22 in the Society's auditorium. Dr. Stewart H. Clifford, assistant clinical professor of pediatrics, Harvard Medical School, and visiting pediatrician, Boston Lying-in Hospital, and chief of premature service, Children's Medical Center of Boston, will present a paper on "Postmaturity with Placental Dysplasia."

Central New York Surgical Society

A meeting of the Central New York Surgical Society will be held in the Hotel Syracuse, Syracuse, at 4 P.M., March 25. Dr. Lawrence K. Pickett, clinical assistant professor of pediatric surgery, State University of New York, Upstate Medical Center, Syracuse, will talk on "Pre- and Postoperative Care in Pediatric Surgical Patients"; Dr. C. Eugene Erway, Elmira, "Duodenal Atresia in a Newborn Infant"; Dr. James Mithoefer, Mary Imogene Bassett Hospital, Cooperstown, "Factors Influencing the Choice of Treatment of Megacolon in Childhood"; Dr. Murray McG. Gardner, Watertown, "Congenital Hypertrophic Pyloric Stenosis," and "Cavernous Hemangiomata in the Infant," will be presented by Dr. Nils Nordstrom, Jr., Binghamton. A general discussion, to be opened by Dr. Lawrence K. Pickett, will follow.

Fourth Annual Postgraduate Education Program

The fourth annual postgraduate education program, sponsored by the staff of the E. J. Barber Hospital, began on February 26 in Lyons at the Hotel Wayne. Arranged as postgraduate education by the Council Committee on Public Health and Education of the Medical Society of the State of New York with the assistance of the members of the faculty of the University of Buffalo School of Medicine, the program is being held every Friday through April 2 and is open to the members of the Wayne County Medical Society as well as physicians from the neighboring counties.

American Congress of Physical Medicine and Rehabilitation

The American Congress of Physical Medicine and Rehabilitation, Eastern Section, in conjunction with the New England Society of Physical Medicine, the Section on Physical Medicine of the Kings County Medical Society, the New Jersey Society of Physical Medicine, the New York Society of Physical Medicine, and the Pennsylvania Academy of Physical Medicine and Rehabilitation will hold its spring session on April 10 in Newark, New Jersey.

The morning session will start at 10 A.M. at the Veterans Administration Hospital, Tremont Avenue and South Centre Street, East Orange; the afternoon session at 2 P.M., at the Academy of Medicine of New Jersey, 91 Lincoln Park, Newark, and the dinner and evening session at the Essex House Hotel, Newark.

During the afternoon session, Dr. Henry Milch, attending orthopedic surgeon, Hospital for Joint Diseases, New York City, and consulting orthopedic surgeon, Liberty Hospital, will discuss "Orthopedic Management of the Coxarthroses," in the symposium on "Disabilities of the Hip Joint," and "Stability Factors in Rehabilitation of the Hip," will be presented by Dr. Allen S. Russek, assistant professor of physical medicine and rehabilitation, New York University College of Medicine. Dr. Otto Eisert, chief, physical medicine and rehabilitation, Veterans Administration Hospital, Brooklyn, will open the discussion following the symposium.

Chairman of the program is Dr. Hans J. Behrend, 470 West End Avenue, New York 24. Physicians, other professional personnel, and their guests are welcome. Inquiries should be addressed to Dr. Herman L. Rudolph, Section Secretary, 400 North Fifth Street, Reading, Pennsylvania.

The thirty-second annual session of the American Congress of Physical Medicine and Rehabilitation will be held in Washington, D.C., September 6 to 11, at the Hotel Statler.

Jewish Sanitarium and Hospital for Chronic Diseases

The gynecologic service of the Jewish Sanitarium and Hospital for Chronic Diseases will present Dr. F. Bayard Carter, professor of gynecology and obstetrics, Duke University School of Medicine, on April 15, 1954, at the auditorium, Freeman Pavilion. Dr. Carter will speak on "Recent Advances in Operative Gynecology," and the lecture will start at 8:30 P.M.

[Continued on page 876]

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[Continued from page 874]

Problems of Aging

Six lectures on "Problems of Aging" will be given by Dr. Martin Gumpert, New York City, at the Kessler Institute, beginning April 15. The lectures will begin at 7:30 P.M. and last until 9 P.M. Open to the public, they are designed primarily for a lay audience although much of interest will be found in them for the professional worker. Enrollment for the course should be made with Miss Joyce M. Collins, registrar, Kessler Institute for Rehabilitation, West Orange, New Jersey.

New York Medical College

"The Role of Exercise in Medical Practice" will be the subject of an all-day conference at New York Medical College, Flower and Fifth Avenue Hospitals on Friday, April 16. Sponsored by the Department of Physical Medicine and Rehabilitation, the conference will convene at 9:30 A.M. for the morning sessions at which three speakers will discuss: "The Physiology of Exercise," "Coordination of Muscle Action," and "Exercise Training in Health and Disease."

Following luncheon, four panel discussions will be held. The subjects to be covered are: "Role of Exercise in Muscular and Neurological Diseases," "Role of Exercise in Cardiovascular Diseases," "Role of Exercise in Joint and Orthopedic Diseases," and "Physical Performance of Handicapped in Industry."

Physicians interested in attending are requested to contact Dr. Jerome S. Tobis, professor and director, Department of Physical Medicine and Rehabilitation, New York Medical College, Flower and Fifth Avenue Hospitals, Fifth Avenue and 106th Street, New York City.

New York Eye and Ear Infirmary Scientific Program

The Alumni Association of the New York Eye and Ear Infirmary will hold its spring scientific program April 19 and 20 at the Academy of Medicine, New York City. The sessions will start at 9 A.M. and 2 P.M. each day.

Conference on Cancer Cytology

The third annual seminar and conference on Cancer Cytology conducted by the Cancer Institute, Miami, Florida, will be held April 21 to 24. The conference will bring together several leading authorities on cancer from this country and abroad, and the last day will be devoted to a special session for medical practitioners who will visit the Cancer Institute to see demonstrations on the taking and preparation of cytodiagnostic tests for cancer of the uterus, breast, prostate, lung, and stomach. The latest advances in cancer diagnosis using new cytologic methods and blood testing procedures will be presented. Dr. Joseph S. Stewart is the chairman.

Anesthesiology Lectures

A series of lectures on "Modern Scientific Method and Modern Statistics with Special Application to Anesthesiology" will be presented by Dr. Philip H. Sechzer, director, Anesthesiology, Fordham and Seton Hospitals, New York City, and consultant, U. S. Public Health Service, Staten Island, March 25, April 22, and May 20 at 1:30 P.M. in ward 9, auditorium, Fordham Hospital.

International Group of Doctors in Alcoholics Anonymous

The fifth annual meeting of International Group of Doctors in Alcoholics Anonymous will be held at the Mayflower Hotel, Akron, Ohio, May 14, 15, and 16, 1954. For further information and reservations addressed to: Doctors, Mayflower Hotel, Akron, Ohio.

American Geriatrics Society

The American Geriatrics Society will hold its eleventh annual meeting in June at the Fairmont Hotel, San Francisco, California. The scientific sessions will begin the afternoon of June 17 and continue through the morning of June 19. All scientific sessions will be held in the Nob Hill Room of the Hotel, and the annual dinner is scheduled to be held in the Gold Room on June 18.

The meeting will be open to all members of the American Geriatrics Society and to physicians and other scientists who are interested in the field of geriatrics, and will have a program which will cover many aspects of geriatric medicine, and several panel discussions.

Hotel reservations should be made through the San Francisco Convention and Visitors Bureau, 200 Civic Auditorium, San Francisco 2, California. Members should make reservations immediately, stating time of arrival and departure. Dr. Laurance W. Kinsell, Highland Alameda County Hospital, 2701 Fourteenth Avenue, Oakland 6, California, is in charge of local arrangements for the meeting.

International Poliomyelitis Conference

The third International Poliomyelitis Conference will be held September 6 to 10, 1954, at the University of Rome, Orthopedic Clinic, Rome, Italy. Sponsored jointly by the University of Rome, the High Commissionary of Hygiene and Health, the National Council of Research, the National Foundation for Maternity and Child Care, and the National Foundation for Infantile Paralysis, Professor Luigi Spollverini, medical director, Institute for Poliomyelitis, Ariccia, Italy, Mr. L. Ragoczy, official of the Danish National Association for Infantile Paralysis, Copenhagen, Denmark, and Mr. Basil O'Connor, United States of America, will serve as honorary presidents of the Conference, and Professor Carlo Marino Zuco, director, Orthopedic Clinic of the University of Rome, general chairman.

Arrangements have been completed in the Orthopedic Clinic at the University of Rome for simultaneous interpretation of all the proceedings in French, Italian, German, Spanish, and English. Requests for hotel accommodations and other Conference information are available from the Secretariate of the Third International Poliomyelitis Conference, 6 via Lucullo, Rome, Italy. Cable address: Inpolio, Rome.

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1. Segal, M.S., et al.: Advances in the Physiology and Treatment of Bronchial Asthma, Quart. Rev. Allergy & Applied Immunology 6:399 (December) 1952.

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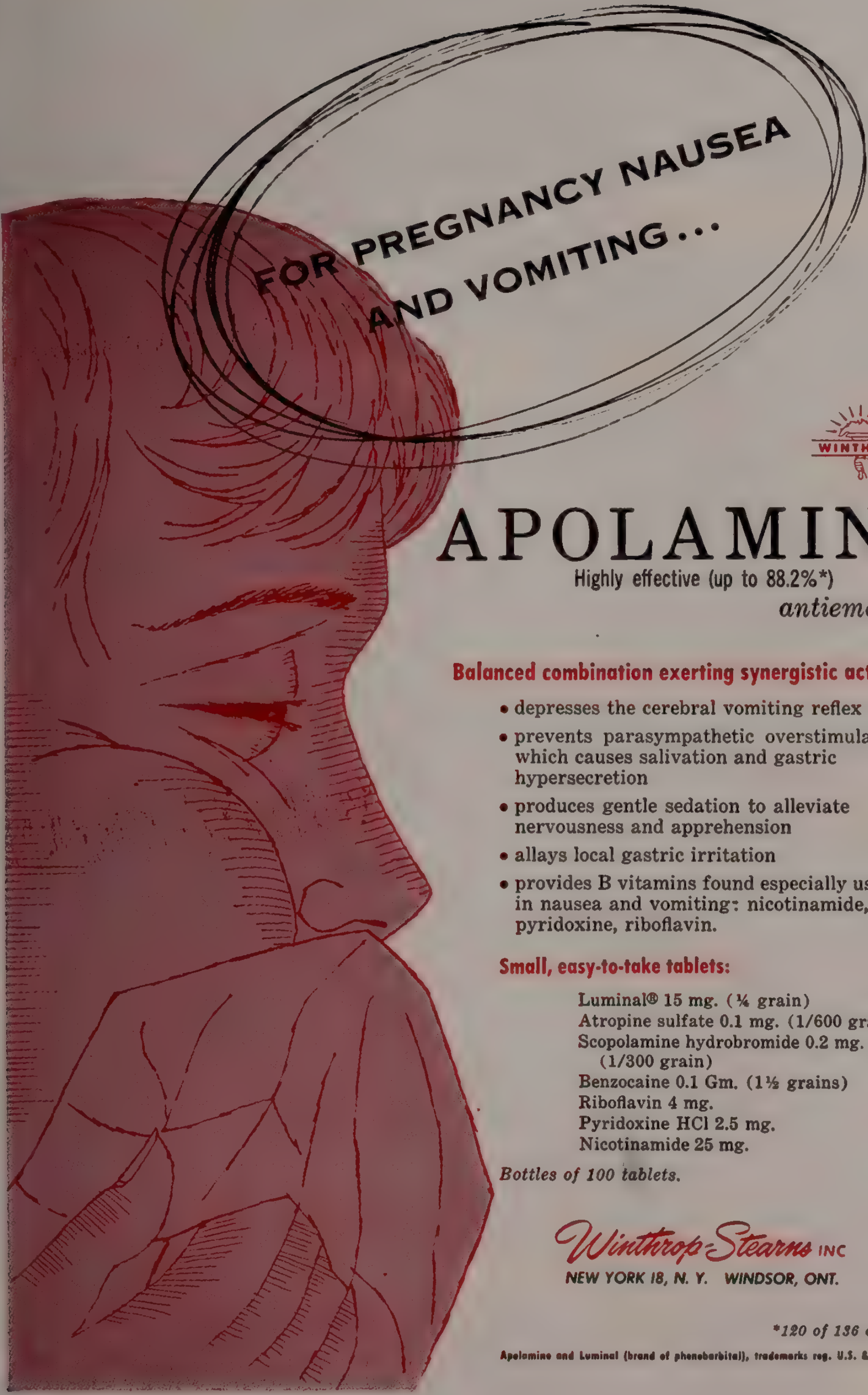

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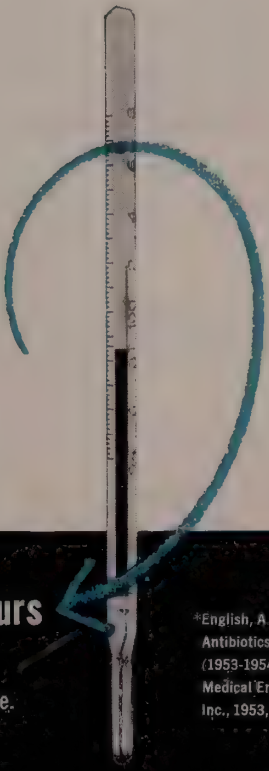

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*English, A. R., et al.: Antibiotics Annual (1953-1954), New York, Medical Encyclopedia, Inc., 1953, p. 70.

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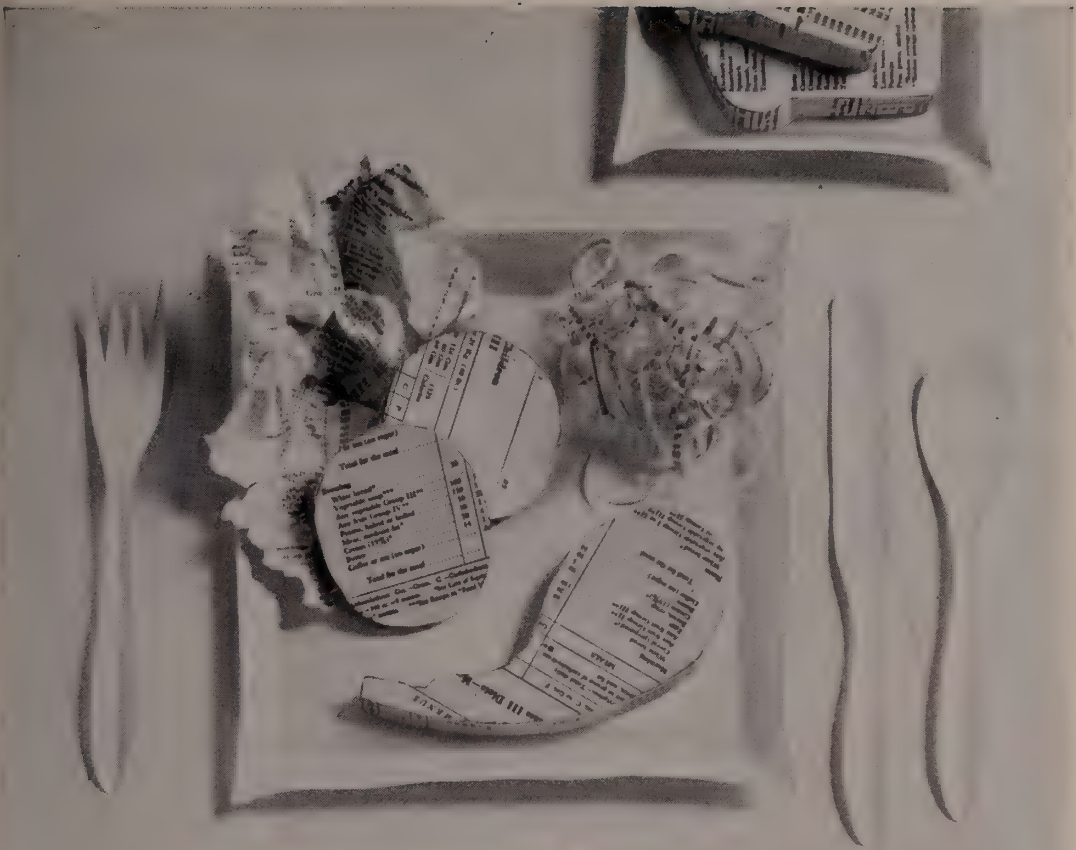

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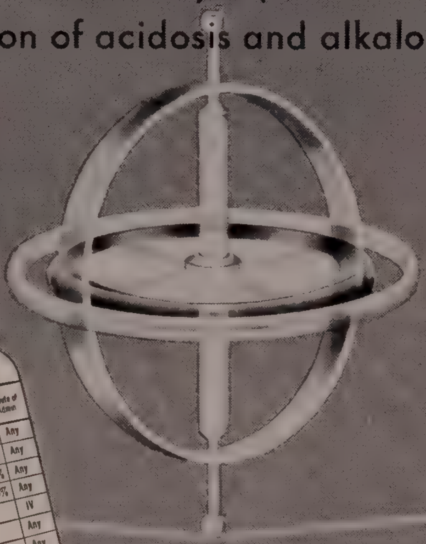

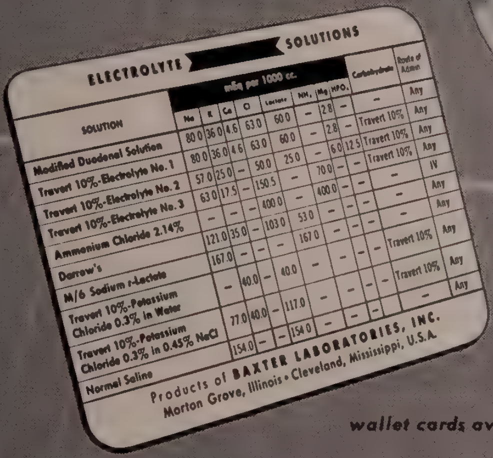

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Modified Duodenal Solution	80.0	36.0	4.6	63.0	60.0	—	2.8	—	—	Any
Travert 10%-Electrolyte No. 1	80.0	36.0	4.6	63.0	60.0	—	2.8	—	Travert 10%	Any
Travert 10%-Electrolyte No. 2	57.0	25.0	—	50.0	25.0	—	6.0	12.5	Travert 10%	Any
Travert 10%-Electrolyte No. 3	63.0	17.5	—	150.5	—	70.0	—	—	Travert 10%	Any
Ammonium Chloride 2.14%	—	—	—	400.0	—	400.0	—	—	—	IV
Darrow's	121.0	35.0	—	103.0	53.0	—	—	—	—	Any
M/6 Sodium r-Lactate	167.0	—	—	—	167.0	—	—	—	—	Any
Travert 10%-Potassium Chloride 0.3% in Water	—	40.0	—	40.0	—	—	—	—	Travert 10%	Any
Travert 10%-Potassium Chloride 0.3% in 0.45% NaCl	77.0	40.0	—	117.0	—	—	—	—	Travert 10%	Any
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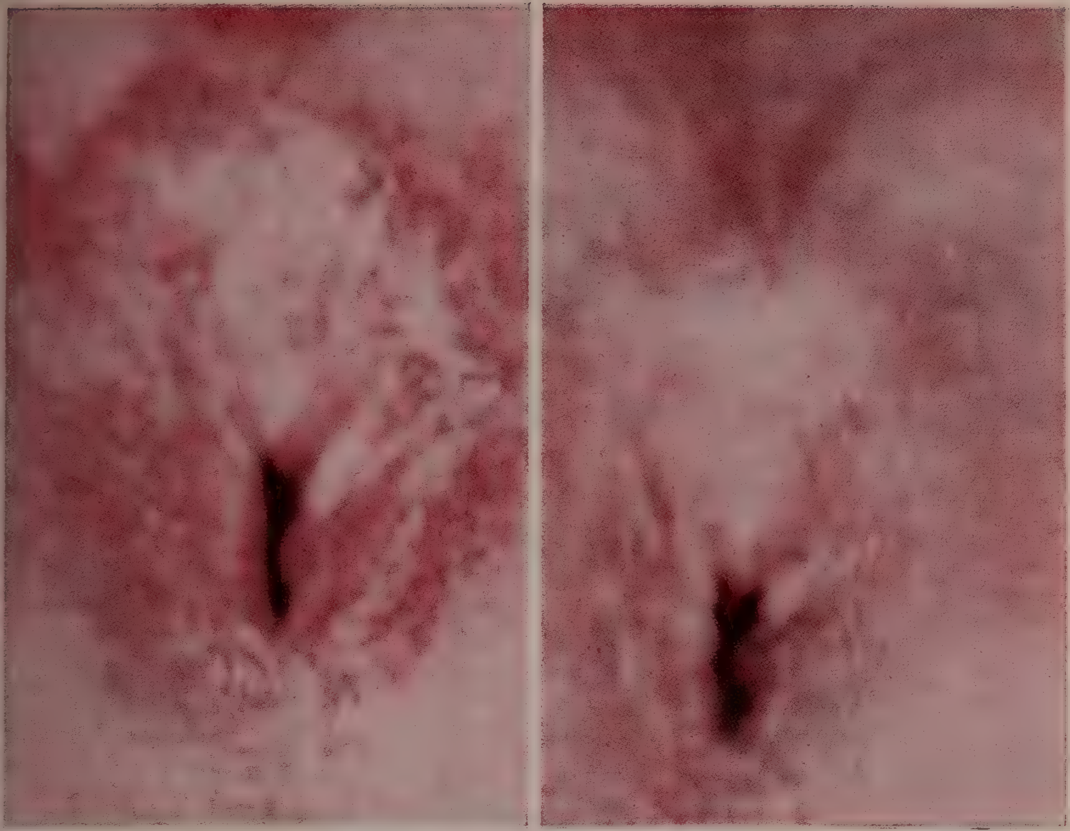

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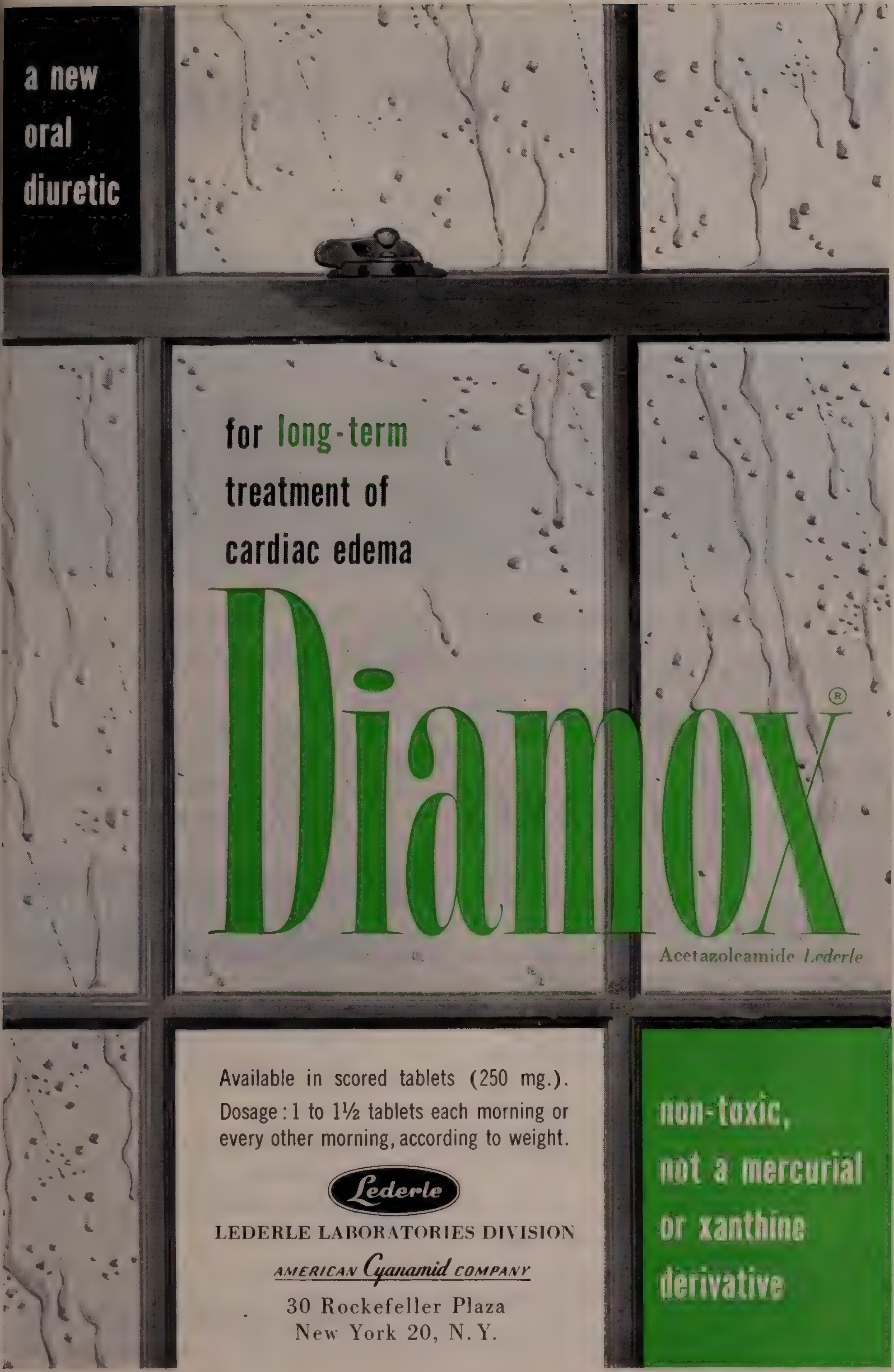

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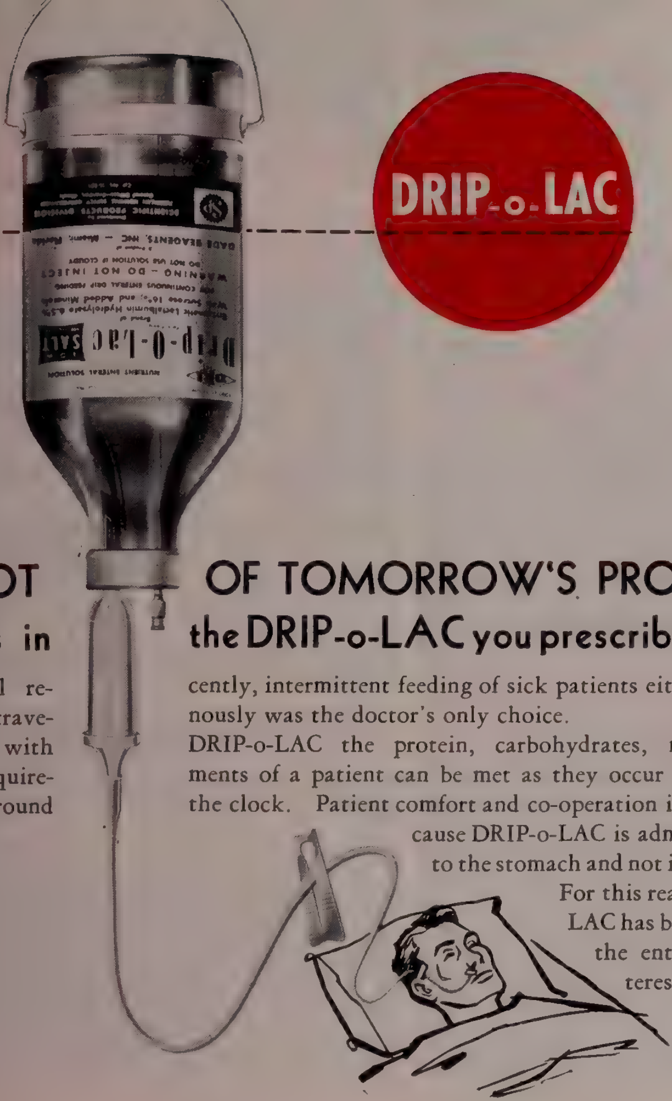

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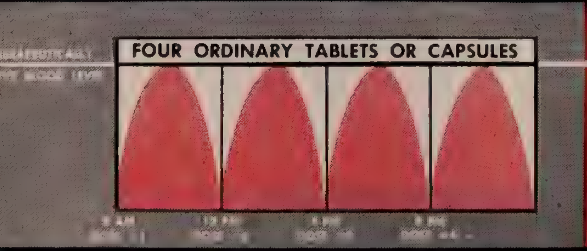

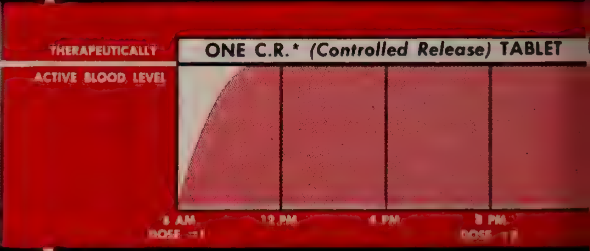

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Phenobarbital	¾ gr.

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*T.M. Registration Applied For.

HERE ARE THE FACTS . . .

• CONTROLLED UNIFORM RELEASE

C.R. Tablets provide for a pre-determined release of their active drugs, achieving the maintenance of a desired therapeutic blood level for a period of 10 to 12 hours. Manufactured under a new process, C.R. Tablets are composed of tiny granules of varying sizes which are compressed into one tablet. It is the precise combination in a C.R. Tablet of these various size granules, each encasing a portion of the active drug, which provides for a uniform, controlled release of the medication for absorption in the bloodstream over an 8 to 10 hour period.

• ABSORPTION

Releasing the medication at a uniform rate, C.R. Tablets permit a steady absorption of the active agent into the bloodstream, resulting in maintenance of an even therapeutic level. Conventionally prepared tablet or capsule dosage forms, including those which are enteric-coated, result in a significant degree of peaks and valleys in blood level concentrations. Administration of C.R. Tablets successfully overcomes the uneven absorption levels inherent in other dosage forms.

• ELIMINATION

An important aspect of the controlled release principle is that with the uniform release of the medication achieved by the administration of C.R. Tablets, the elimination of the active agent is maintained at a reduced rate. Peak concentrations of toxic residue are less likely to occur as with other dosage forms where blood levels fluctuate widely. This becomes particularly beneficial — as in cases of hepatic impairment — where the organs of elimination must struggle to rid the body of peak loads of toxic residue.

• DOSAGE

The single administration of one or more C.R. Tablets, in the morning and/or night, provides the desired therapeutically active blood level for 10 to 12 hours. This new, convenient concept in orally taken medications, made possible by C.R. Tablets, assures greater patient cooperation and presages the obsolescence of the t.i.d. and q.i.d. administration techniques in a variety of such drugs. With C. R. Tablets, a new concept in chemo-therapy which assures a constant therapeutically active blood level, it is possible that quantitive reductions in the medications may become desirable.

Literature and samples on request.

INTERMEDICO CORPORATION
Manufacturing Pharmaceutical Chemists
FLORAL PARK, NEW YORK

to forestall

resistance

Biosulfa*

in everyday practice

PENICILLIN
still the antibiotic of first choice for common infections . . .

REINFORCED BY

TRIPLE SULFONAMIDES
to increase antibacterial range and reduce resistance . . .

Three strengths:
125M, 250M, 500M

Each tablet contains:
Penicillin G Potassium, Crystalline 125,000 (or 250,000 or 500,000) units
Sulfadiazine . . . . . 0.167 Gm.
Sulfamerazine . . . . 0.167 Gm.
Sulfamethazine . . . . 0.167 Gm.

Supplied:
Scored tablets in bottles of 50. Biosulfa 125M also available in bottles of 500.

*TRADEMARK, REG. U. S. PAT. OFF.

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THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN

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to combat
resistance
Erythrosulfa*

in refractory or relapsing cases

ERYTHROMYCIN
the antibiotic of choice
against resistant
Gram-positive cocci . . .

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TRIPLE SULFONAMIDES
to cover Gram-negative bacteria
and to potentiate
the erythromycin . . .

Each tablet contains:
Erythromycin . . . . . . 100 mg.
Sulfadiazine . . . . . 0.083 Gm.
Sulfamerazine . . . . 0.083 Gm.
Sulfamethazine . . . . 0.083 Gm.

Supplied:
Protection-coated tablets
in bottles of 50 and 500.

*TRADEMARK

Upjohn

THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN

condition	*incidence of liver dysfunction*	*incidence of blood lipid abnormalities*	*suggested therapy*
obesity	frequent + + +	frequent + +	Methischol plus balanced low calorie diet.
diabetes	frequent + + + +	frequent + + +	Methischol as adjunct to diet. Insulin as necessary.
atherosclerosis	frequent + + +	frequent + + + +	Methischol and high protein, low fat diet.
coronary disease	frequent + + +	frequent + + + +	Methischol as adjunct to high protein, low fat diet and specific therapy.
alcoholism	frequent + + +	frequent + +	Methischol plus high protein diet.

methischol

the complete lipotropic therapy

...because it provides vitamin B12 and liver fractions in addition to choline, methionine and inositol.

...helps normalize liver function, increase phospholipid turnover, reduce fatty deposits, and stimulate regeneration of new liver cells...

...helps reduce elevated cholesterol levels and chylomicron ratios towards the normal, and aids in achieving normal fat metabolism.

now—higher B12

the suggested daily therapeutic dose of 9 capsules or 3 tablespoonfuls of Methischol provides:

Choline Dihydrogen Citrate*	2.5 Gm.
dl, Methionine	1.0 Gm.
Inositol	0.75 Gm.
Vitamin B12	18 mcg.
Liver Concentrate and Desiccated Liver**	0.78 Gm.

*Present in syrup as 1.15 Gm. Choline Chloride
**Present in syrup as 1.2 Gm. Liver Concentrate

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SOMNOS®

CAPSULES AND ELIXIR CHLORAL HYDRATE

For deep, natural sleep without drug hangover, prescribe SOMNOS. This well-tolerated sedative and hypnotic is not a barbiturate but *chloral hydrate*—"one of the safest of all sedatives."[1] Within an hour of taking it, your patient will fall into a deep, quiet and natural sleep. She will generally awaken refreshed, free from after effects and "hangover."[2]

SOMNOS is also very valuable for the functional insomnia of the elderly. "Toxic effects on cardiovascular and respiratory systems...have not occurred."[3]

Quick Information: SOMNOS Capsules are supplied in two dosage strengths: 0.25 Gm. (3¾ gr.) and 0.5 Gm. (7½ gr.) of chloral hydrate. Highly palatable SOMNOS Elixir readily mixes with milk or water; in pint Spasaver® and gallon bottles, 1.6 Gm. (25 gr.) of chloral hydrate per fl. oz.

REFERENCES: 1. Mod. Med. 19:59, Dec. 15, 1951. 2. The Pharmacological Basis of Therapeutics, New York, The Macmillan Company, 1941, p. 178. 3. An Integrated Practice of Medicine, Philadelphia, The W. B. Saunders Company, 1950, Vol. V, p. 4518.

CONTROLLED... SENSIBLE DIETING

with

Am Plus®

curb appetite	To reduce voluntary food intake, every AM PLUS capsule provides 5 mg. of dextro-amphetamine sulfate

while maintaining

sound nutrition	The balanced AM PLUS formula assures adequate vitamin-mineral supply, essential in any weight control program

each capsule of Am Plus **contains:**

DEXTRO-AMPHETAMINE SULFATE	5 mg.	Cobalt	0.1 mg.
Vitamin A	5,000 U.S.P. Units	Copper	1 mg.
Vitamin D	400 U.S.P. Units	Iodine	0.15 mg.
Thiamine Hydrochloride	2 mg.	Iron	3.33 mg.
Riboflavin	2 mg.	Manganese	0.33 mg.
Pyridoxine Hydrochloride	0.5 mg.	Molybdenum	0.2 mg.
Niacinamide	20 mg.	Magnesium	2 mg.
Ascorbic Acid	37.5 mg.	Phosphorus	187 mg.
Calcium Pantothenate	3 mg.	Potassium	1.7 mg.
Calcium	242 mg.	Zinc	0.4 mg.

ROERIG Rx J. B. ROERIG AND COMPANY, *Chicago 11, Illinois*

*notable improvement reported** in

90%

of patients with

arthritis and bursitis

Gentamin

tablets

recent studies* cite rapid relief from pain, swelling and fever—**with complete freedom from side effects**

Each Gentamin tablet contains:

Sodium Gentisate	2½ gr. (160 mg.)
Salicylamide	2½ gr. (160 mg.)

Bottles of 100 Tablets

Rely on Gentamin Tablets for safer, faster, more effective relief from the distress of rheumatic and arthritic disorders. Well tolerated, even when given over long periods of time, complementary gentisate and salicylate rapidly allay pain, spasm, fever and swelling . . . to permit greater range and ease of motion . . . Also highly efficacious for relief of bursitis, neuralgias, myalgias and neuritis.

samples and literature* yours for the asking.

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Over 37 years of service to the medical profession.

LORZINEX®

A VAGINAL CLEANSING AGENT

that is different!
that is efficient!

LORZINEX solutions cleanse at the *acid pH of 4* (normal to the vagina) and efficiently disperse mucus debris[1]. Inclusion of a zinc salt in the formula promotes astringency. Lactose (a good nutrient for Doederlein bacilli) is added to further establish the physiological flora.

Contains: The newly discovered trichomonacidal synthetic wetting agent —*Sodium Lauryl Sulfate.*

For: EFFICIENT CLEANSING at Acid pH
- DISPERSION OF MUCUS DEBRIS
- TRICHOMONACIDAL ACTION
- ANTIFUNGAL ACTION
- ASTRINGENCY

LORZINEX is recommended (before administration of therapeutic agents) as an aid in—

MONILIASIS OF THE VAGINA
VAGINAL TRICHOMONIASIS

Highly Effective . . .
Unusually Economical

(1) Lawrence, E. D., W. J. Surg., Ob. & Gyn., 58, 236-7, 1950.

Samples and literature sent on request

Pharmaceutical Division
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W&T

PL-4

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With the modern facilities at The Saratoga Spa, your patient with a coronary condition, digestive disorder, arthritis and allied ailments or hypertension, receives benefit from the treatment with naturally carbonated mineral waters.

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The
SARATOGA
SPA

Listed by the Committee on American Health Resorts of the American Medical Association

SEE SPA BOOTH 103
Hotel Statler, New York City
May 10–14

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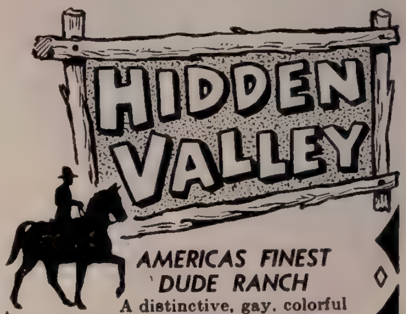

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. . . for a satisfactory preparation in the management of hypercholesteremia

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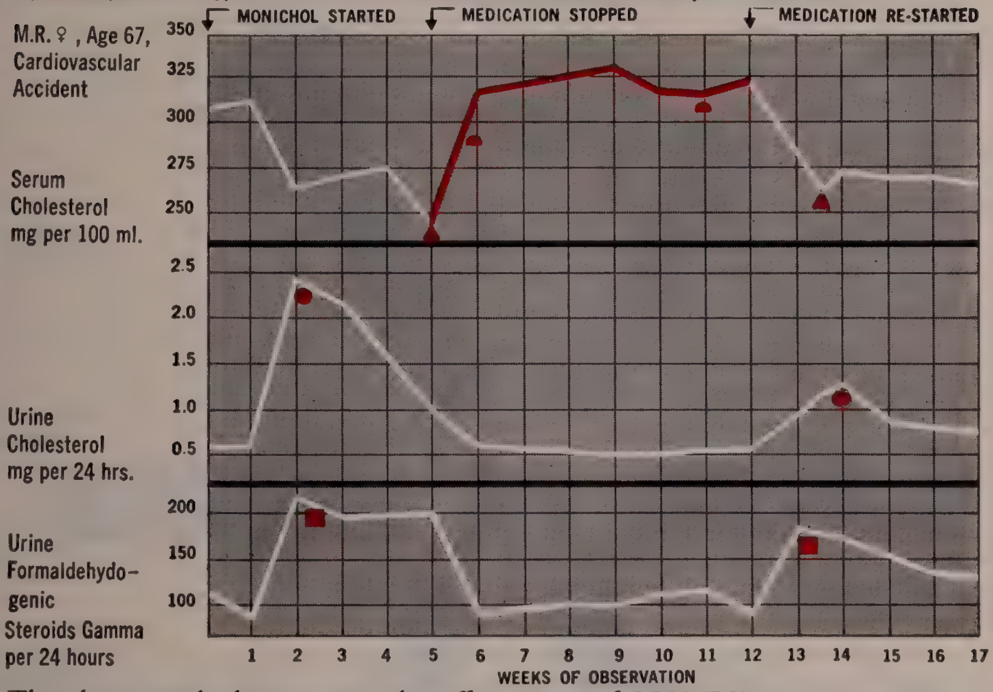
IVC®

Typical Response of a Hypercholesteremic Patient to 20 cc. of MONICHOL* Daily in Divided Doses**



The above graph demonstrates the effectiveness of MONICHOL in enhancing the stability of the serum lipid emulsion by: ▲ normalizing elevated serum cholesterol levels, ● changing the character of the excess serum cholesterol to facilitate urinary excretion, and ■ making the excess serum cholesterol more readily available for utilization by the adrenal cortex in steroid synthesis.**

The sense of well-being experienced by patients on MONICHOL is attributed by the investigators** to better utilization of excess serum cholesterol by the adrenal cortex. MONICHOL is entirely non-toxic.

The red portion of the graph shows that uninterrupted daily intake of MONICHOL is essential, because hypercholesteremia is probably due to an inborn error of metabolism.

Indications: For the therapeutic and prophylactic management of hypercholesteremia so frequently associated with cardiovascular disease and diabetes.

Formula: Each teaspoonful (5 cc.) contains:	
Polysorbate 80	500 mg.
Choline Dihydrogen Citrate	500 mg.
Inositol	250 mg.

Minimum Dosage: Two teaspoonsful twice daily after meals.

Supplied: Bottles of 12 oz.

Literature on request

**Sherber, D. A., and Levites, M. M.: Hypercholesteremia. Effect on Cholesterol Metabolism of a Polysorbate 80-Choline-Inositol Complex (MONICHOL) J.A.M.A. 152:682 (June 20) 1953.

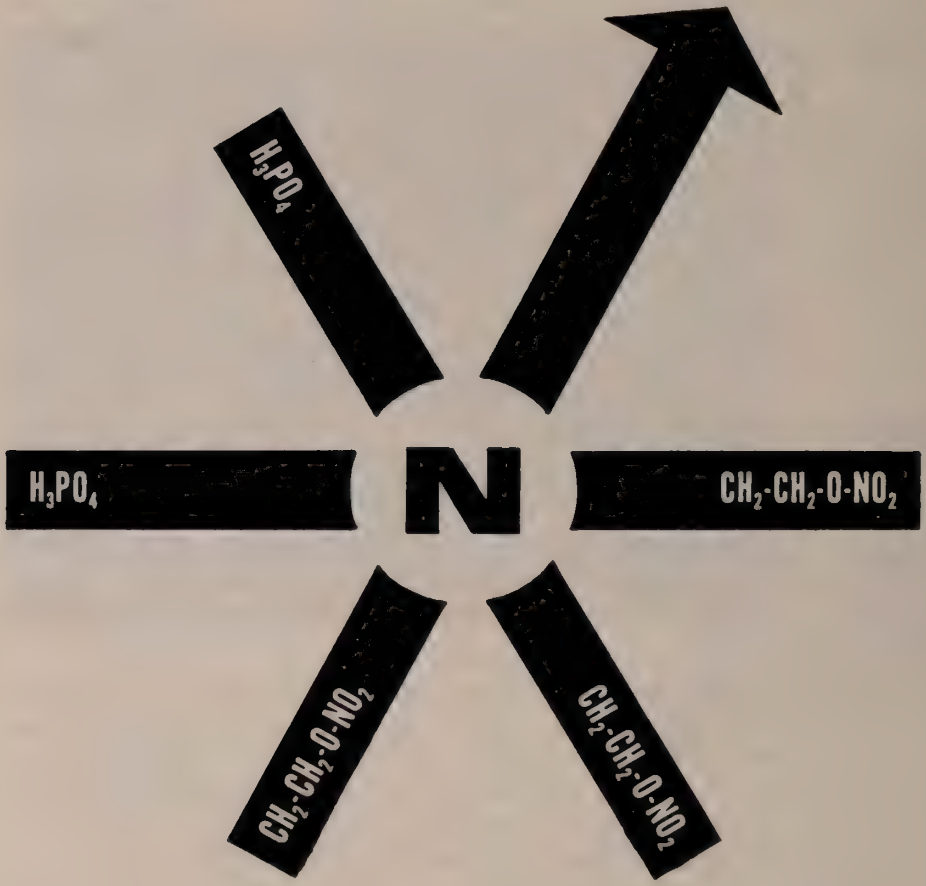
*Trademark

Monichol normalizes cholesterol metabolism

IVES-CAMERON COMPANY, INC., 22 East 40th Street, New York 16, N. Y.

See the chemical difference

in this unique, amino nitrate



H_3PO_4
H_3PO_4
N
$CH_2\text{-}CH_2\text{-}O\text{-}NO_2$
$CH_2\text{-}CH_2\text{-}O\text{-}NO_2$
$CH_2\text{-}CH_2\text{-}O\text{-}NO_2$

METAMINE® is chemically unique, because its three nitrate groups are nitrogen (amino)-linked, rather than carbon-linked. And METAMINE has the smallest effective dose (2 mg.) of any long-acting cardiac nitrate for prevention of angina pectoris—with correspondingly few side effects.

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...and the clinical difference!

for prevention of angina pectoris

Fewer attacks of angina pectoris, less severe attacks, or no further attacks are the benefits your patients may expect of routine preventive therapy with METAMINE tablets.[1] Milligram for milligram, METAMINE appears most efficient of all the new, long-acting coronary vasodilators.[2] Even during prolonged treatment, side effects are mild and infrequent. Resistance and methemoglobinemia have not been reported, nor is blood pressure altered.

The beneficial actions of METAMINE appear to affect the entire circulation,[3] reducing the cardiac work-load and oxygen requirement to permit a life of useful activity for the anginal patient.

Dosage to prevent angina pectoris: 1 tablet (2 mg.) after each meal, and 1 to 2 tablets (2 to 4 mg.) at bedtime. Full preventive effect is usually attained after the third day.

METAMINE is supplied in bottles of 50 and 500 tablets.

Metamine®

Triethanolamine trinitrate biphosphate, Leeming, tablets 2 mg.

A LEEMING 1ST

REFERENCES:

1. *Palmer, J.H., and Ramsey, C.G.: Canadian M.A.J., 65:16, July, 1951; P. Dailheu-Geoffroy: La Clinique, 46:27, May 1951.*
2. *Melville, K.I., and Lu, F.C.: Canadian M.A.J., 65:11, 1951.*
3. *Pfeiffer, H.: Klin. Wochenschr., 28:304, 1950.*

WHY AREN'T WE GETTING DOCTOR BROWN OUT OF BED SO MUCH LATELY?
THAT'S EASY. NOW THAT HE'S PRESCRIBING **PHENERGAN EXPECTORANT** FOR KIDDIES' COUGHS, EVERYONE IS SLEEPING BETTER.

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WITH OR WITHOUT CODEINE
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for the obese patient . . .

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genuine Obedrin obtainable only on prescription

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tablets are monogramed for your assurance of quality

Obedrin

Semoxydrine HCl (Methamphetamine HCl)	5 mg.
Pentobarbital	20 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	0.5 mg.
Riboflavin	1 mg.
Niacin	5 mg.

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in oral penicillin therapy
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ESKACILLIN* *line for*

- *greater solubility*
- *rapid absorption*
- *higher blood levels*

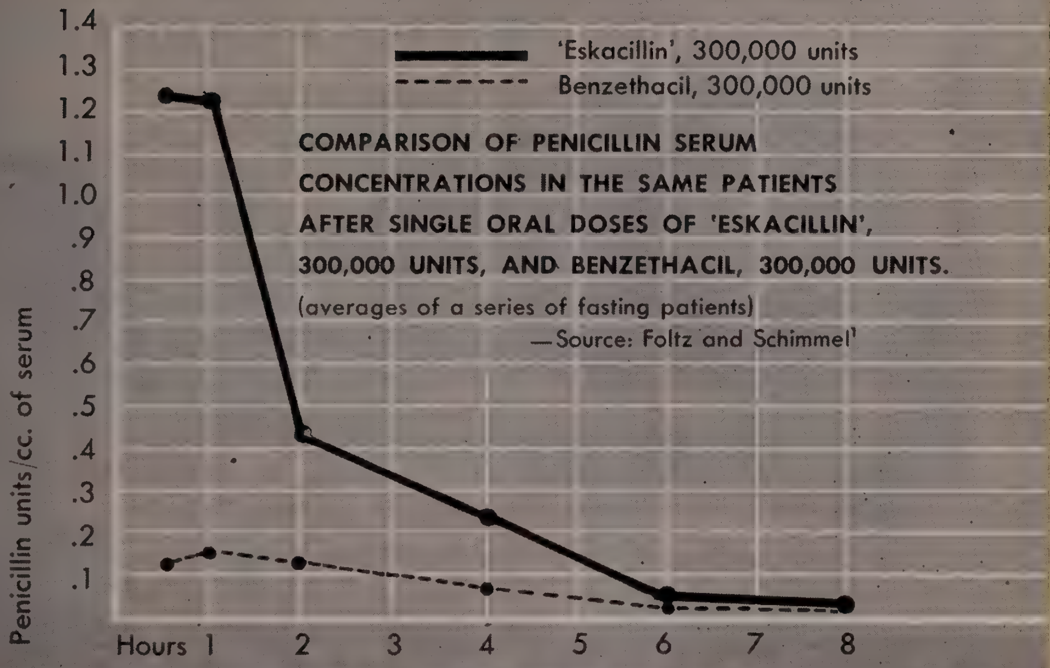
Because they are readily soluble in gastric juice, the 'Eskacillins' are more readily absorbed than benzethacil and the other highly insoluble oral penicillin salts. Consequently, the 'Eskacillins' produce far higher peak blood levels.

These high serum concentrations diminish only gradually. According to Foltz and Schimmel,[1] therapeutic levels often persist for as long as 12 hours. In a recent study of 308 infants and children with various infections, Huang and High[2] found the 'Eskacillins' *fully effective when given at 12-hour intervals.*

1. Foltz, E.L., and Schimmel, N.H.: Comparison of Orally Administered Penicillins, Antibiotics & Chemotherapy *3*:593 (June) 1953.
2. Huang, N.N., and High, R.H.: Effectiveness of Penicillin Administered Orally at Intervals of Twelve Hours, J. Pediat. *42*:532 (May) 1953.

Smith, Kline & French Laboratories, Philadelphia

*T.M. Reg. U.S. Pat. Off.



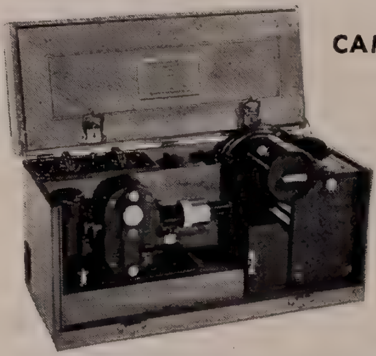
COMPARISON OF PENICILLIN SERUM CONCENTRATIONS IN THE SAME PATIENTS AFTER SINGLE ORAL DOSES OF 'ESKACILLIN', 300,000 UNITS, AND BENZETHACIL, 300,000 UNITS.

(averages of a series of fasting patients)

—Source: Foltz and Schimmel[1]

the 'Eskacillins'	*per 5 cc. teaspoonful*
'Eskacillin 50'	50,000 units potassium penicillin G
'Eskacillin 100'	100,000 units potassium penicillin G
'Eskacillin 250'	250,000 units procaine penicillin G
'Eskacillin 500'	500,000 units procaine penicillin G
'Eskacillin 100-Sulfas'	100,000 units potassium penicillin G plus a total of 0.5 Gm. (0.167 Gm. each) of three sulfonamides (sulfadiazine, sulfamerazine, sulfamethazine)
'Eskacillin 250-Sulfas'	250,000 units procaine penicillin G plus a total of 0.5 Gm. (0.167 Gm. each) of three sulfonamides (sulfadiazine, sulfamerazine, sulfamethazine)

CAMBRIDGE ELECTROCARDIOGRAPHS



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PORTABLE MODEL

CAMBRIDGE
"SIMPLI-SCRIBE"
DIRECT WRITER

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Doctor, you are cordially invited to visit the Cambridge Booths, No. 123 and 124, to see our complete line of Cardiac Diagnostic Instruments. The exhibit will include the well known Cambridge "Simpli-Scribe" direct-writing portable Electrocardiograph, the Cambridge Standard String Galvanometer Electrocardiograph; both in the Simpli-Trol Portable and the Mobile Model Electrocardiograph-Stethograph with Pulse Recorder. Also exhibited will be several other important Cambridge instruments, including—Operating Room Cardioscope, Educational Cardioscope, Multi-Channel Direct-Writing Recorder, Electrokymograph, Plethysmograph and pH Meter.

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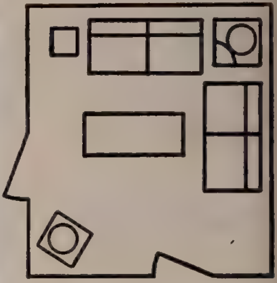

Whether you're furnishing a new office or "toning-up" your present one, take advantage of our complete Decorators' Service..

Doctor—does your office need a check-up?

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It is just one of those curious quirks of human nature, Doctor, but we can't escape it. The truth is, the first impression your office decor makes is of you. You will find it more satisfactory—and *less* expensive—to let our skilled authorities in office planning prescribe the right desk, chairs, or other equipment for your office, whether your needs are large or small.*

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THE INCREASING number of patients with functional complaints seen in everyday practice no longer constitutes the therapeutic problem of former days. No longer need the physician be concerned with the side actions which heretofore so frequently vitiated the desirable actions of amphetamine in adequate dosage.

Why court insomnia, jitteriness, tremor?

Rauwidrine solves this problem. It combines in one tablet, 5 mg. of amphetamine sulfate with the cardiac-calming, tranquilizing, mildly sedative action of Rauwiloid® (1 mg.).

The advantages of this combination are apparent. The mood-elevating influence of the amphetamine component is fully retained and augmented by that of Rauwiloid. But the cardiac pounding due to amphetamine is obviated by the cardiac-calming engendered by Rauwiloid; the jitteriness, irritability, and insomnia so often disturbing when amphetamine alone is used, are held in abeyance by the tranquilizing, mildly sedative influence of Rauwiloid, and without the use of barbiturates.

Since Rauwiloid does not significantly lower the blood pressure in normotensives, it is eminently suited for use in this combination. In hypertensive patients or those with other cardiovascular disease Rauwidrine should be used with caution.

For obesity, too!

In weight reduction management Rauwidrine proves advantageous because the appetite-suppressing effect of the contained amphetamine can be maintained for long periods, without fear that amphetamine will become intolerable for the patient.

DOSAGE: ***For mood elevation,*** one to two tablets, each before breakfast and lunch. Dosage should be individualized, and as much as 6 tablets per day (in 3 doses) may be given if needed.
For obesity, one to two tablets 30 to 60 minutes before each meal.

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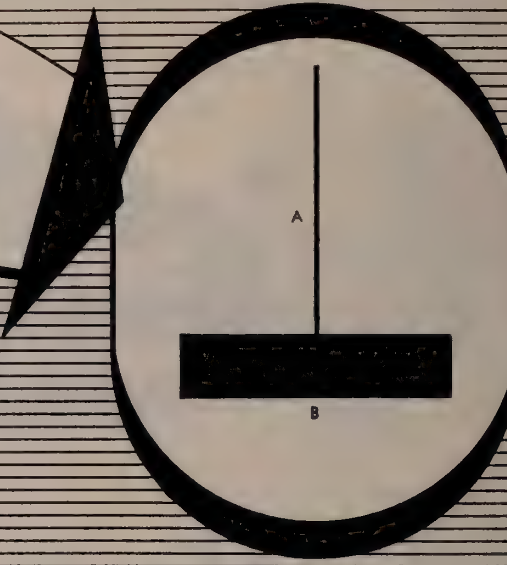

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In bottles of 100, 250 and 500

". . . the proper object of nutritional therapy is the treatment of the whole organism with reasonably balanced preparations and not simply a pharmacological attack upon the liver with massive doses of a single substance." The Technic of Nutritional Therapy, M. S. Biskind, M. D., Amer. J. Dig. Dis. Vol. 20, No. 3, Mar. 1953.

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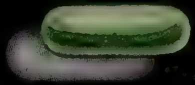

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"...because of its absence of after-effects."

Malone, H. J.; Klimkiewicz, G. R., and Gribetz, H. J.: A Study of the Hypnotic Effect of Dormison in Children, J. Pediat. 41:153, 1952.

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May, P. R.A., and Ebaugh, F. G.: Use of Hypnotics in Aging and Senile Patients: A Clinical Study of Dormison, J.A.M.A. 152:801, 1953.

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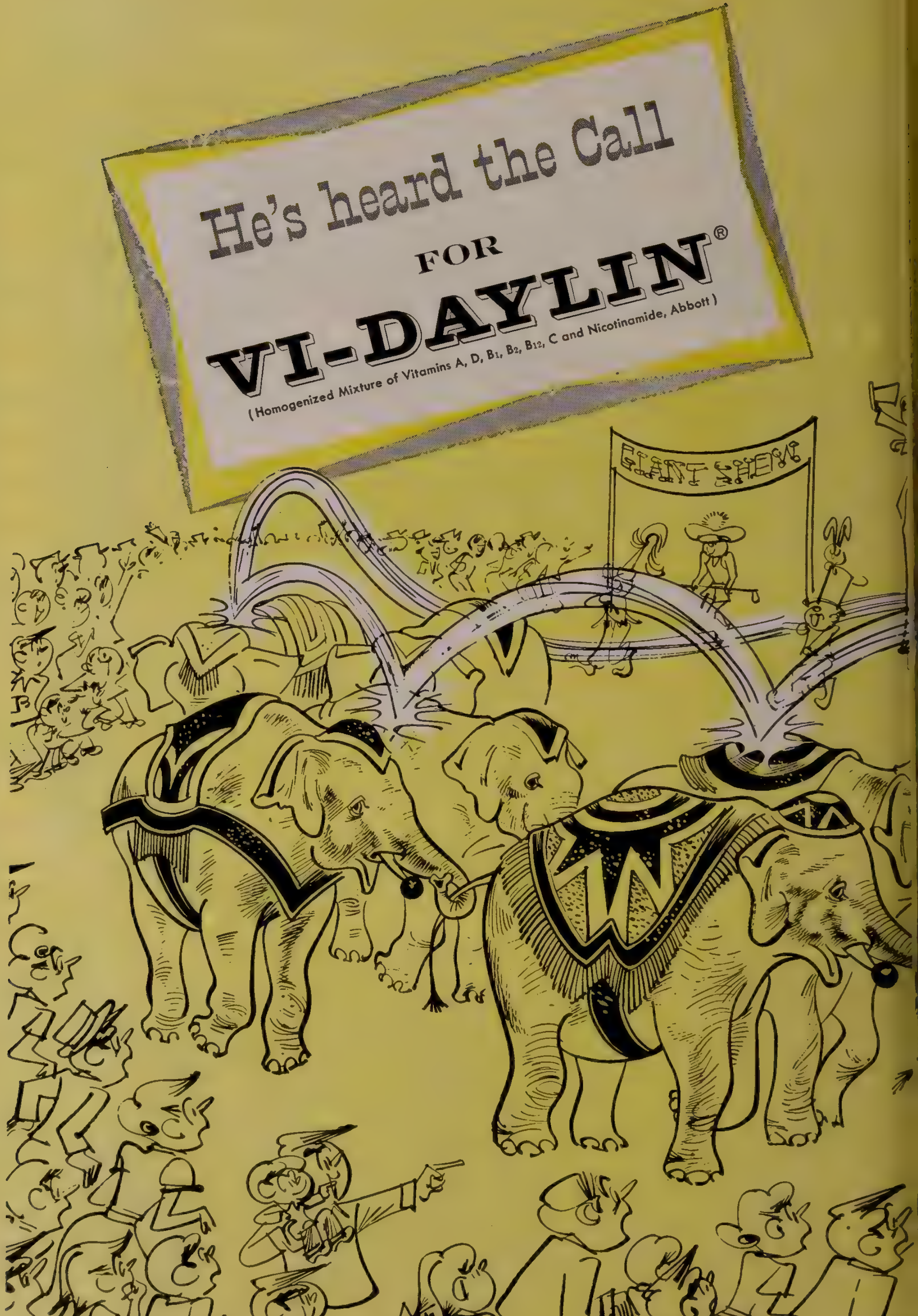
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TO YOU, Vi-Daylin is a potent liquid multivitamin with *seven* important vitamins packed into each spoonful.

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Vitamin A	3000 U.S.P. units
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Vitamin B_{12} Activity (by microbiological assay)	3 mcg.
Ascorbic Acid	40 mg.
Nicotinamide	10 mg.

For every patient who presents such obvious menopausal symptoms as **hot flushes,** there will be another with symptoms equally distressing but not so clearly defined; **arthralgia** as well as insomnia, headache, easy fatigability, are good examples. Frequently these symptoms are due to declining ovarian function but are not so recognized because they may occur long before, or even years after, menstruation ceases. In such cases, the patient should have the **benefit** of estrogen therapy. **"Premarin"** (complete natural equine estrogen-complex) not only produces prompt symptomatic relief but also imparts a gratifying and distinctive **"sense of well-being."** Has no odor . . . imparts no odor. "Premarin"® is supplied in tablet and liquid form. estrogenic substances (water-soluble), also known as conjugated estrogens (equine)

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In rheumatoid arthritis, hydrocortisone produces rapid and effective relief of joint pain, tenderness, and swelling; and markedly increases joint mobility.[1,2]

When administered in recommended dosage to properly selected patients under careful supervision, unwanted physiologic effects are "fewer and less pronounced."[2]

supplied: scored tablets — 10 mg. of hydrocortisone (free alcohol) in bottles of 25 and 100; 20 mg. of hydrocortisone (free alcohol) in bottles of 20 and 100

references: 1. Boland, E. W.: California Med. 77:1 (July) 1952.
2. Boland, E. W.: M. Clin. North America (in press)

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Common Denominator?

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Ray-Formosil

BUFFERED FORMIC ACID AND
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now found to be a potent

ALARM AGENT

"Alarm Agent"

Recent studies by Nodine[1] reveal that Ray-Formosil parallels ACTH and Cortisone as an "alarm agent" in its effect on circulating eosinophils. Intramuscular injections of the usual therapeutic dose of Ray-Formosil (2 cc.) produced an average drop of 67% in both normals and arthritic patients.

Hypothesis:

Eosinopenia characteristically follows administration of compounds established as effective anti-arthritic agents (including gold and salicylates, in addition to ACTH and Cortisone) Ray-Formosil also causes eosinopenia. Such action may be a common denominator of agents which affect adrenal cortex activity.

Safe, Effective:

An estimated 3½ million injections of Ray-Formosil have been given during the past 20 years without a single report of toxic reactions. An analysis of nearly 4000 recent case histories from the files of 36 clinicians revealed that 85% were effectively relieved of pain, swelling and joint inflammation.

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Only 30c a treatment ampul, Ray-Formosil therapy is inexpensive—an additional and important advantage to both the physician and the patient.

Dosage:

2 cc. injected intramuscularly *in the region of the affected parts* at 2-to-5-day intervals for several weeks, then 2 cc. once weekly.

Supplied in 2-cc. ampuls in boxes of 25 ($9.00), 50 ($16.50), and 100 ($30.00).

Available through your usual source of pharmaceuticals or direct from the manufacturer.

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[1] Personal communication

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Gives "remarkable increase in strength, vigor"[1]...

REDISOL®

CRYSTALLINE VITAMIN B_{12}

In "pernicious anemia or tropical sprue in relapse," not even blood transfusions give the "remarkable increase in strength, vigor and appetite,"[1] induced by vitamin B_{12}.

REDISOL—vitamin B_{12}—has hemopoeitic activity of liver[2]; improves neurologic symptoms; no evidence of toxicity.[2] Valuable in trigeminal neuralgia to relieve pain.

Quick Information: *Tablets,* 25 and 50 *mcg.; Injectable,* 30, 100 and 1000 *mcg.* per cc.; *Elixir,* 5 *mcg.* per 5 cc.

References: 1. J.A.M.A. 153:185, 1953: 2. N.N.R. 1953, p. 486.

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especially for staphylococcus, streptococcus, and pneumococcus infections

DOSAGE FORMS:

Tablets 'Ilotycin,' 100 and 200 mg. Average dose: 200 mg. every four to six hours.

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100 mg. of 'Ilotycin' (as the ethyl carbonate) per teaspoonful (5 cc.)

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VOLUME 54 APRIL 1, 1954 NUMBER 7

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EDITORIAL

The Annual Meeting, 1954

On May 10, 1954, the 148th Annual Meeting of the Medical Society of the State of New York will convene at the Hotel Statler, New York City. It is hoped that registration will exceed that of previous years, in view of the trend since 1946 when younger members of the profession began to attend in greater numbers.

In this convention issue of the Journal will be found as many of the annual reports of the officers and committees of the Society as could be prepared by the time of going to press; others will follow in the April 15 issue. Since these reports concern the activities of the Society during the past year, it is hoped that they will be carefully studied by the membership as they appear. There is no other way by which the members can learn of the vast subject matter covered by the work of the committeemen and officers and what was done for the advancement of scientific medicine, medical education, and medical practice in the State.

Our good friends, the technical exhibitors, whose generous cooperation assists in making possible the display of the most recent scientific apparatus, books, pharmaceuticals, and biologicals, will be present in the greatest numbers since the close of the war. You will find their exhibits listed in this issue for your information.

Postgraduate lectures on the mornings of

Tuesday and Wednesday, May 11 and 12, include a highly interesting symposium on geriatrics.

On Monday evening, May 10, at 8 P.M., there will be held a round table discussion on bronchogenic carcinoma, and on Friday, May 14 at 9 A.M. there will be a panel discussion on hand injuries conducted by the Section on Industrial Medicine and Surgery.

The Session on the History of Medicine, open to the public, will be held on Thursday, May 13, at 9 A.M. in Parlor A, Ballroom Floor. It will consist of a symposium on medicine in Colonial New York with discussion of European influences on medicine in Colonial New York, medical correspondence in seventeenth-century New York, medical correspondence in eighteenth-century New York, and the use of tar water; also the rise of medicine in New York City before the Revolution.

The A. Walter Suiter Lecture in General Sessions will be delivered this year by invitation by Dr. William Dameshek, Boston, Massachusetts, clinical professor of medicine, Tufts College Medical School, and director, Blood Research Laboratory, New England Center Hospital.

A new feature of the meeting this time will be the Session on Legal Medicine to be held on Friday, May 14, at 9 A.M. Management and prevention of narcotic addiction, instruction of students in medicolegal problems, and expert testimony in administration of the Workmen's Compensation Law will be featured; also roentgen ray examination in medicolegal autopsies.

The banquet of the Society will be held Wednesday evening, May 12, at which time the President's Medal and Citation will be awarded to Dr. Andrew A. Eggston of Mount Vernon. Dr. Louis H. Bauer, past-president of the Medical Society of the State of New York and of the American Medical Association, will act as toastmaster, and Mr. Arthur H. Motley will make the principal address, discussing the present problems of prime interest and importance to the medical profession particularly with reference to press and public relations.

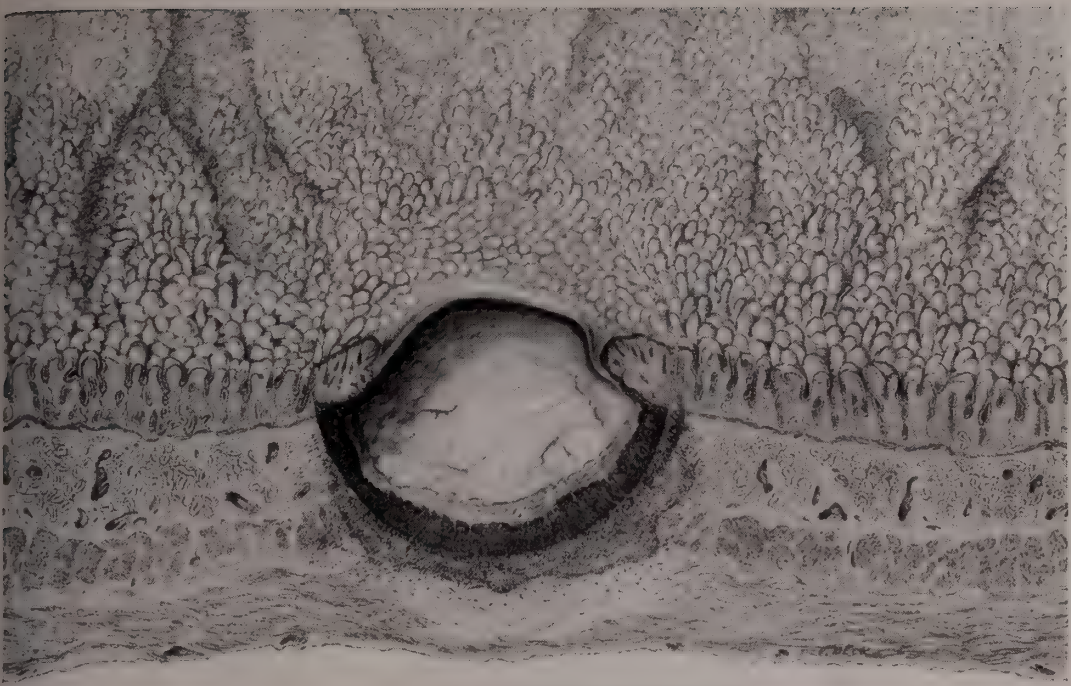
All members are urged to study carefully the annual reports in this issue. They record the activity of your committees since the last Annual Convention and represent the progress of the Society in all of its departments. It is an opportunity for all to acquaint themselves with the steadily growing functions and the expanding fields of activity of the second largest medical society in the nation.

The commercial exhibits will be numerous and varied. It is through the generous support of the technical exhibitors that a considerable part of the Annual Convention expense is defrayed. They have interesting and useful products to bring to your attention. Will you not pay them a visit? See what is new and what has been improved.

We hope that attendance records will be topped this year. Let everyone come who can. And since hotel space is somewhat limited, do not fail to make your room reservations early.

Don't Forget - - -

Make your hotel reservations for the annual convention. For your convenience—a reservation blank is on page 960.



Cross section of active duodenal ulcer.

Dramatic Remission of Ulcer Pain

Pain of ulcer is associated with hypermotility; the pain is relieved when abnormal motility is controlled by Pro-Banthine.®

"In studying[1] the mechanism of ulcer pain, it is obvious that there are at least two factors which must be considered: namely, hydrochloric acid and motility.

". . . our studies indicate that ulcer pain in the uncomplicated case is invariably associated with abnormal motility. . . .

"Prompt relief of ulcer pain by ganglionic blocking agents . . . coincided exactly with cessation of abnormal motility and relaxation of the stomach."

Pro-Banthine (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is a new, improved, well tolerated anticholinergic agent which consistently reduces hypermotility of the stomach and intestinal tract. In peptic ulcer therapy[2] Pro-Banthine has brought about dramatic remissions, based on roentgenologic evidence. Concurrently there is a reduction of pain or, in many instances, the pain and discomfort disappear early in the program of therapy.

One of the typical cases cited by the authors[2] is that of a male patient who refused surgery despite the presence of a huge crater in the duodenal bulb.

"This ulcer crater was unusually large, yet on 30 mg. doses of Pro-Banthine [q.i.d.] his symptoms were relieved in 48 hours and a most dramatic diminution in the size of the crater was evident within 12 days."

Pro-Banthine is proving equally effective in the relief of hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm. G. D. Searle & Co., Research in the Service of Medicine.

---

[1] Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.

[2] Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

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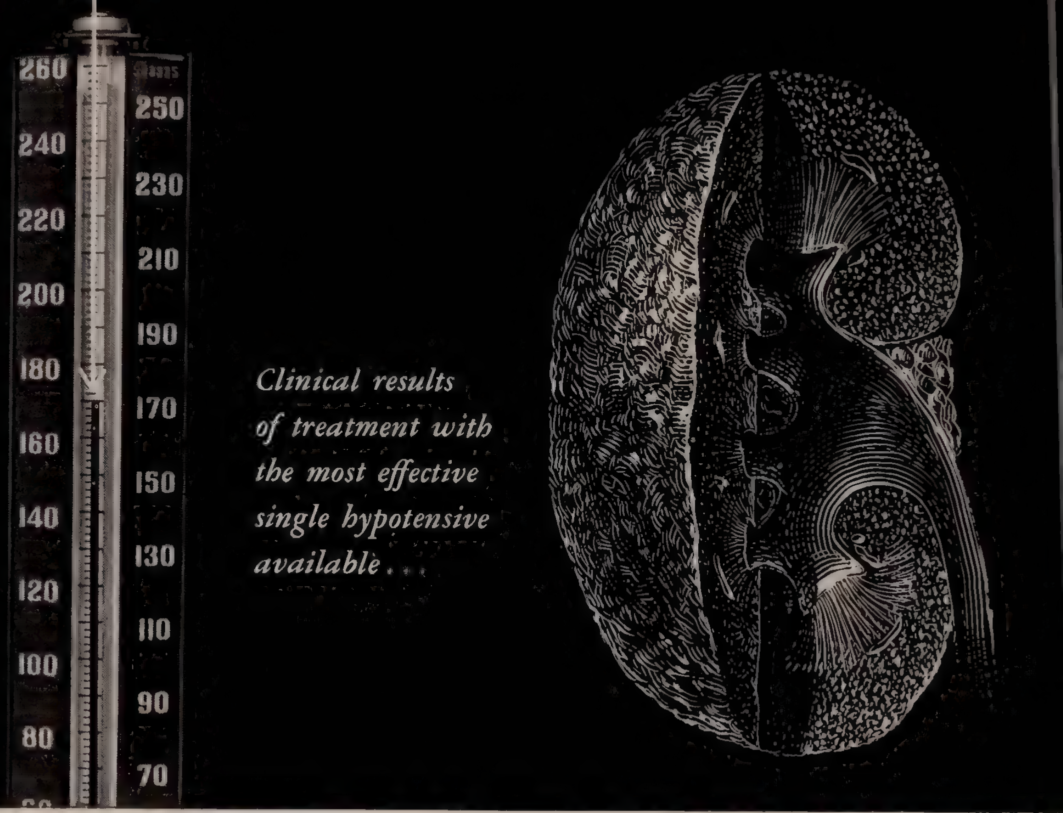

Clinical results of treatment with the most effective single hypotensive available . . .

Improvement in 55 to 62% of patients with hypertensive kidney disease[1]

Together with significant reductions in elevated blood pressure in 80 per cent of hypertensives,[1,2] Methium therapy may produce an appreciable improvement in the associated renal symptoms when actual uremia is not present. Albuminuria and hematuria present in 48 of the 120 hexamethonium-treated patients followed by Moyer's group, improved definitely in 28 cases.[1] In addition, progressive renal failure did not continue so long as the blood pressure was controlled.

With continued management, up to or beyond a year, blood pressure may be reduced and stabilized, and cardinal symptoms arrested or reversed, without any increase in dosage.[1]

As blood pressure is reduced, and even without reduction, hypertension symptoms have regressed. Retinopathy may disappear, headache, cardiac failure and kidney function may improve.

Methium, a potent autonomic ganglionic blocking agent, reduces blood pressure by interrupting nerve impulses responsible for vasoconstriction. Because of its potency, careful use is required. Pretreatment patient-evaluation should be thorough. Special care is needed in impaired renal function, coronary disease and existing or threatened cerebral vascular accidents.

1. Moyer, J. H.; Miller, S. I., and Ford, R. V.: J.A.M.A. *152*:1121 (July 18) 1953.
2. Moyer, J. H.; Snyder, H. B.; Johnson, I.; Mills, L. C., and Miller, S. I.: Am. J. M. Sc. *225*:379 (April) 1953.

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1954 ANNUAL CONVENTION

Medical Society of the State of New York

May 10 to 14—Hotel Statler, New York City

House of Delegates

The regular annual meeting of the House of Delegates of the Medical Society of the State of New York will be called to order at 10 A.M. on Monday, May 10, 1954, in the Penn Top, 18th floor of the Hotel Statler, New York City.

In accordance with Chapter II, Section 3 of the Bylaws, the House will assemble according to the following schedule:

Monday, May 10, 1954, 10 A.M.
Tuesday, May 11, 1954, 9 A.M. and 2 P.M.
Wednesday, May 12, 1954, 9 A.M.

At the last adjourned session (9 A.M., Wednesday, May 12) the election of officers, councillors, trustees, and delegates to the American Medical Association will occur in accordance with Chapter III, Section 1 of the Bylaws.

FREDERIC W. HOLCOMB, M.D., *Speaker*
W. P. ANDERTON, M.D., *Secretary*

Annual Meeting

The Annual Meeting of the Medical Society of the State of New York will be held on Wednesday, May 12, at 7 P.M. in the Penn Top, 18th floor, Hotel Statler, New York City.

ANDREW A. EGGSTON, M.D., *President*
W. P. ANDERTON, M.D., *Secretary*

Registration

Registration for delegates will be held in the foyer of the Penn Top, 18th floor of the Hotel Statler, on Monday, May 10, after 9 A.M.; for members and guests on the mezzanine, on Tuesday, Wednesday, and Thursday, May 11, 12, and 13, from 9 A.M. to 6 P.M., and on Friday, May 14, from 9 A.M. to 4 P.M.

Exhibits

Scientific Exhibits will be located on the ballroom floor, the ballroom balcony, and the mezzanine, Tuesday, May 11, to Friday, May 14.

Technical Exhibits will be located on the ballroom floor and the mezzanine, Tuesday, May 11, to Friday, May 14.

Scientific Motion Pictures will be shown in the Boston Room, mezzanine, Tuesday, May 11, to Friday, May 14.

Scientific Program

General Sessions—Every afternoon, Monday through Friday, May 10 to 14, 2 P.M.

Section and Session Meetings—Thursday and Friday mornings, May 13 and 14, 9 A.M.

Postgraduate Lectures—Tuesday and Wednesday mornings, May 11 and 12, 9 A.M.

Round-Table Discussion—Monday evening, May 10, 8 P.M.

The Annual Banquet

The Annual Banquet will be held in the Penn Top, Wednesday, May 12, at 7 P.M., guest speakers to be announced.

Tickets will be available at the registration desk, mezzanine floor.

The Woman's Auxiliary

See page 958 for program.

SCIENTIFIC PROGRAM

Alfred P. Ingegno, M.D., *Chairman*, Brooklyn

Julius E. Stolfi, M.D., *Associate Chairman for General Sessions*, Brooklyn

Bernard J. Pisani, M.D., *Associate Chairman for Postgraduate Lectures*, New York City

William Dock, M.D., *Associate Chairman for Round Table Discussion*, Brooklyn

and

Chairmen of Sections and Sessions

GENERAL SESSIONS

Alfred P. Ingegno, M.D., *Chairman*

Julius E. Stolfi, M.D., *Associate Chairman*

The presentations at these Sessions will consist of half-hour lectures, without discussion. The meetings will start promptly at the hour specified. Members and guests are requested to be in their seats at least five minutes in advance of the meeting time.

Monday, May 10—2 P.M.

Keystone Room, Ballroom Balcony

1. **Marriage Counseling as a Medical Responsibility**
   Irving J. Sands, M.D., Brooklyn, Attending Neurologist, Columbia-Presbyterian Medical Center; Consulting Neuropsychiatrist, Brooklyn State Hospital

2. **Abnormal Involuntary Movements**
   Abraham M. Rabiner, M.D., Brooklyn, Clinical Professor of Neurology, State University of New York College of Medicine at New York City; Director of Neurology, Kings County Hospital

One-Hour Recess To Visit Exhibits

3. **Newer Procedures in the Prevention of Poliomyelitis**
   Robert F. Korns, M.D., Albany, Lecturer in Public Health, Albany Medical College, Union University; Director, Communicable Disease Bureau, New York State Department of Health

4. **The Ocular Fundus in Relation to General Body Disease**
   Arthur J. Bedell, M.D., Albany, Emeritus Professor of Ophthalmology, Albany Medical College, Union University

Tuesday, May 11—2 P.M.

Keystone Room, Ballroom Balcony

1. **Practical Method for Rehabilitation of Insulin Function in Diabetes**
   George E. Anderson, M.D., Brooklyn, Clinical Professor of Medicine, State University of New York College of Medicine at New York City; Chief of Metabolism, Brooklyn Hospital

2. **Indications for Diagnostic Laparotomy in Obscure Chronic Abdominal Disease**
   Felix Wroblewski, M.D., New York City, Instructor in Medicine, Cornell University Medical College; Assistant Attending Physician, Memorial Center for Cancer and Allied Diseases
   John S. LaDue, M.D., New York City, Assistant Professor of Clinical Medicine

Cornell University Medical College; Associate Attending Physician, Memorial Center for Cancer and Allied Diseases
George T. Pack, M.D., New York City, Attending Surgeon, Memorial Center for Cancer and Allied Diseases

One-Hour Recess To Visit Exhibits

3. **The Hypometabolic State: A Clinical Entity**
Bernard A. Watson, M.D., Clifton Springs, Director, Division of Medicine, and Superintendent, Clifton Springs Sanitarium and Clinic

4. **Treatment of Exophthalmic Goiter**
Samuel F. Haines, M.D., Rochester, Minnesota, Chief, Medical Section on Goiter, Mayo Clinic—By invitation

Wednesday, May 12—2 P.M.

Keystone Room, Ballroom Balcony

1. **The Diagnosis and Treatment of Uremia**
Robert S. Hotchkiss, M.D., New York City, Professor and Chairman, Department of Urology, New York University Post-Graduate Medical School

2. **The A. Walter Suiter Lecture—Hypersplenism**
William Dameshek, M.D., Boston, Massachusetts, Clinical Professor of Medicine, Tufts College Medical School; Senior Physician and Hematologist, New England Center Hospital—By invitation

One-Hour Recess To Visit Exhibits

3. **The Treatment of Bleeding Esophageal Varices**
Arthur H. Blakemore, M.D., New York City, Associate Professor of Clinical Surgery, College of Physicians and Surgeons of Columbia University; Associate Attending Surgeon, Presbyterian Hospital

4. **What Every Physician Should Know About Fluid Balance**
Henry T. Randall, M.D., New York City, Professor of Surgery, Cornell University Medical College; Clinical Director and Chief of Surgical Services, Memorial Center for Cancer and Allied Diseases

Thursday, May 13—2 P.M.

Keystone Room, Ballroom Balcony

1. **The Therapeutic Role of Radioactive Isotopes: A Current Evaluation**
Bernard Roswit, M.D., Bronx, Chief, Radiotherapy Section, and Director, Radioisotope Unit, Veterans Administration Hospital

2. **Present Status of Chemotherapy in Cancer**
Cornelius P. Rhoads, M.D., New York City, Professor of Pathology, Cornell University Medical College; Director, Memorial Center for Cancer and Allied Diseases

One-Hour Recess To Visit Exhibits

3. **Evaluation of the Operative Risk in Patients with Heart Disease**
Benjamin Etsten, M.D., Boston, Massachusetts, Professor of Surgery (Anesthesia), Tufts College Medical School; Director of Anesthesia, Pratt Diagnostic Clinic, New England Center Hospital—By invitation

4. **Complications of Therapy with Antimicrobial Drugs**
Ralph Tompsett, M.D., New York City, Associate Professor of Clinical Medicine, Cornell University Medical College; Associate Attending Physician, New York Hospital

Friday, May 14—2 P.M.

Skytop, 18th Floor

1. **Fungous Infections of the Skin and Its Appendages**
Douglas P. Torre, M.D., New York City, Instructor in Medicine (Dermatology), Cornell University Medical College

2. **Silent Chest Lesions Discovered by Chance X-ray**
Aaron David Chaves, M.D., New York City, Assistant Professor of Clinical Medicine, Cornell University Medical College; Supervisor of Clinics, New York City Department of Health

One-Hour Recess To Visit Exhibits

3. **The Home Management of Tuberculosis with Newer Drug Therapy**
Donald R. McKay, M.D., Buffalo, Associate Clinical Professor of Medicine, University of Buffalo School of Medicine; Chief Attending Physician, Tuberculosis Service, Edward J. Meyer Memorial Hospital

4. **An Original Approach to Prophylaxis of Recurring Urinary Calculi**
Harrison C. Harlin, M.D., Brooklyn, Clinical Instructor in Urology, State University of New York College of Medicine at New York City

SECTIONS

All papers read before the Society by members become the property of the Society. The original copy of each paper shall be left with the Secretary of the Section or Session.

Discussants should have their remarks typed and should hand them to the Secretary.

Time limits: Twenty minutes for each paper, five minutes for individual discussion.

Section and Session meetings shall begin promptly at the hour specified.

Executive Session—The first order of business, election of officers. "*To participate in the election of any Section, a member must be registered with such Section and must have recorded his name and address in the Section registry.*"—Bylaws, Chapter XII, Section 3.

Section on Anesthesiology

Chairman.. ....**Lewis H. Wright**, M.D., New York City
Vice-Chairman.................................. ....**J. Gerard Converse**, M.D., Albany
Secretary.......**Irving M. Pallin**, M.D., Brooklyn

Friday, May 14—9 A.M.
West Room, Ballroom Floor

1. **Nisentil: Clinical Evaluation of Usefulness in Acute and Chronic Pain**
   Carl Gottschalk, M.D., New York City, Research Fellow, Bellevue Hospital
   Louis R. Orkin, M.D., New York City, Assistant Professor of Anesthesiology, New York University Post-Graduate Medical School
   E. A. Rovenstine, M.D., New York City, Professor and Chairman, Department of Anesthesiology, New York University Post-Graduate Medical School
   Discussion.—Edgar H. Bachrach, M.D., Scarsdale

2. **Experience with the Carlen's Endobronchial Catheter for Thoracic Surgical Anesthesia**
   Burton B. Butman, M.D., New York City, Instructor in Anesthesiology, New York Medical College, Flower and Fifth Avenue Hospitals
   Discussion.—Sylvan N. Surks, M.D., Floral Park, Assistant Professor of Anesthesiology, State University of New York College of Medicine at New York City; Chief, Department of Anesthesiology, Long Island Jewish Hospital

3. **Physiologic Problems in the Nonrebreathing Technic: A Proposed New Device**
   Bernard Raymond Fink, M.D., Great Neck, Instructor in Anesthesiology, College of Physicians and Surgeons of Columbia University; Assistant Anesthesiologist, Presbyterian Hospital
   Discussion.—Charles M. Landmesser, M.D., Albany, Associate Professor of Anesthesiology, Albany Medical College, Union University; Attending Anesthesiologist, Albany Hospital

4. **Practical Aspects of Electrocardiography During Anesthesia and Surgery**
   Edwin Emma, M.D., New York City, Associate Anesthetist, Beth Israel Hospital
   Jerome Schack, M.D., New York City
   Solomon G. Hershey, M.D., New York City
   Discussion.—Philip A. Lief, M.D., New York City, Associate Clinical Professor of Anesthesiology, College of Physicians and Surgeons of Columbia University; Associate Attending Anesthesiologist, Mount Sinai Hospital

5. **Anesthetic Problems in Mitral Commissurotomies**
   Edith R. Kepes, M.D., Bronx, Chief, Anesthesiology Department, Montefiore Hospital
   Bernard R. Margolius, M.D., Bronx
   Sigmund Nagel, M.D., Bronx
   Discussion.—E. Dean Babbage, M.D., Buffalo, Chairman, Department of Anesthesiology, Millard Fillmore Hospital; Chief, Department of Anesthesiology, E. J. Meyer Memorial Hospital

6. **Myocardial Insufficiency During Operation: Recognition and Treatment with Acetylstrophanthidin**
   Barnett A. Greene, M.D., Brooklyn, Clinical Assistant Professor of Anesthesiology, State University of New York College of Medicine at New York City; Attending Anesthesiologist, Adelphi Hospital

Samuel Berkowitz, M.D., Brooklyn

Discussion.—Duncan A. Holaday, M.D., New York City, Director of Research, Anesthesiology Service, Presbyterian Hospital

Section on Chest Diseases

Chairman......Charles Edward Hamilton, M.D., Brooklyn
Secretary........Clyde W. George, M.D., Buffalo

Friday, May 14—9 A.M.
Keystone Room, Ballroom Balcony

1. **Mediastinal Pathology Discovered by Chance X-ray of the Chest**
   Ida Levine, M.D., Brooklyn, Associate Attending Physician, Chest Division, Kings County Hospital
   Henry Greenfield, M.D., Brooklyn, Attending Radiologist, Chest Division, Kings County Hospital
   Discussion.—John Arthur Evans, M.D., New York City, Professor of Radiology, Cornell University Medical College; Chief of Radiology Department, New York Hospital

2. **Therapy for Systemic Fungous Infections**
   David T. Smith, M.D., Raleigh, North Carolina, Professor of Bacteriology, Duke University Medical School—By invitation
   Discussion.—Rhoda W. Benham, Ph.D., New York City, Associate Professor, Department of Dermatology, College of Physicians and Surgeons of Columbia University—By invitation

3. **Restoration of Vascular Continuity by Homologous Grafts**
   Jere W. Lord, Jr., M.D., New York City, Professor of Clinical Surgery, New York University Post-Graduate Medical School; Visiting Surgeon, Bellevue Hospital, Fourth Division
   Discussion.—Arthur H. Blakemore, M.D., New York City, Associate Professor of Clinical Surgery, College of Physicians and Surgeons of Columbia University; Assistant Attending Surgeon, Presbyterian Hospital

4. PANEL DISCUSSION—**Present Views on the Therapy of Pulmonary Tuberculosis**
   Moderator: Charles Edward Hamilton, M.D., Brooklyn, Director, Chest Service, Kings County Hospital

   Routine Institutional Aspect of Care
   Frederick Beck, M.D., Raybrook, Director, Raybrook State Tuberculosis Hospital

   Chemotherapeutic Aspect of Care
   Nicholas D'Esopo, M.D., West Haven, Connecticut, Chief, Tuberculosis Service, Veterans Administration Hospital—By invitation

   Collapse Therapy Aspect of Care
   Jacob Rogoff, M.D., Brooklyn, Associate Attending Physician, Chest Service, Kings County Hospital

   Surgical Aspect of Care
   Edward S. Welles, M.D., Saranac Lake

Section on Dermatology and Syphilology

Chairman......Anthony C. Cipollaro, M.D., New York City
Vice-Chairman......John G. Copeland, M.D., Albany
Secretary.....Joseph J. Hallett, M.D., Rochester

Friday, May 14—9 A.M.
Penn Top North, 18th Floor

1. **Werner's Syndrome**
   Andrew B. Kallos, M.D., New York City, Instructor, Department of Dermatology and Syphilology, New York Polyclinic Medical School and Hospital
   John P. Ruppe, Jr., M.D., New York City, Instructor, Department of Dermatology and Syphilology, New York Polyclinic Medical School and Hospital
   Discussion.—Joseph J. Russo, M.D., Albany, Attending Dermatologist, St. Peter's and Memorial Hospitals

2. **Allergic Eczema**
   Beatrice M. Kesten, M.D., New York City, Assistant Professor of Clinical Dermatology, College of Physicians and Surgeons of Columbia University
   Discussion.—Marcus B. Einhorn, M.D., Albany, Attending Dermatologist, Memorial Hospital

3. **Lowered Resistance to Infections Following Therapy with Cortisone and Corticotropin**
   John W. Dougherty, M.D., New York City, Instructor in Medicine (Dermatology), Cornell University Medical College
   Milton Reisch, M.D., New York City, Assistant Physician, New York Hospital Outpatient Department
   George M. Lewis, M.D., New York City, Professor of Clinical Medicine (Dermatology), Cornell University Medical College
   Discussion.—Maurice J. Costello, M.D., New York City, Associate Professor of Clinical Dermatology and Syphilology, New York University Post-Graduate Medical School

4. **Acrodermatitis Enteropathica Successfully Treated with Diodoquin**
   David Bloom, M.D., New York City, Associate Professor of Clinical Dermatology and Syphilology, New York University Post-Graduate Medical School
   Nathan Sobel, M.D., New York City, Associate Professor of Clinical Dermatol-

ogy and Syphilology, New York University Post-Graduate Medical School
Discussion.—Joseph L. Cirincione, M.D., Schenectady, Attending Dermatologist, Ellis Hospital

5. **Trichomycosis Axillaris**
JOHN L. CRISSEY, M.D., Buffalo, Associate Professor of Dermatology and Syphilology, University of Buffalo School of Medicine
PHILIP MURRAY, M.D., Buffalo, Resident, Edward J. Meyer Memorial Hospital—By invitation
Discussion.—Royal M. Montgomery, M.D., New York City, Attending Dermatologist, Roosevelt Hospital

6. **Spinal Fluid Evaluations in Treated Neurosyphilis**
NORBERT G. RAUSCH, M.D., Buffalo, Assistant Professor of Dermatology and Syphilology, University of Buffalo School of Medicine
Discussion.—Rudolph Ruedemann, Jr., M.D., Albany, Associate Professor of Dermatology and Syphilology, Albany Medical College, Union University

Section on Gastroenterology and Proctology

Chairman........LESTER S. KNAPP, M.D., Buffalo
Vice-Chairman..................................
......CHARLES A. FLOOD, M.D., New York City
Secretary.........WILLIAM F. LIPP, M.D., Buffalo

Friday, May 14—9 A.M.

Skytop, 18th Floor

1. **Factors Influencing End Results of Surgery in Peptic Ulcer**
ELMER MILCH, M.D., Buffalo, Assistant Clinical Professor of Surgery, University of Buffalo School of Medicine; Attending Surgeon, Buffalo General Hospital
Discussion.—Ralph Colp, M.D., New York City, Professor of Clinical Surgery, College of Physicians and Surgeons of Columbia University; Attending Surgeon, Mount Sinai Hospital

2. SYMPOSIUM—**Rectocolonic Disorders**
Moderator: A. W. MARTIN MARINO, M.D., Brooklyn, Clinical Associate Professor of Surgery, State University of New York College of Medicine at New York City; Consulting Proctologist, Wyckoff Heights and Kingston Avenue Hospitals

Hemorrhoids
SIDNEY D. WESTON, M.D., Brooklyn, Proctologist, Jewish Sanitarium and Hospital for Chronic Diseases; Consulting Proctologist, Rockaway Beach Hospital

Fistula
STUART T. ROSS, M.D., Hempstead, Attending Proctologist, Nassau and Mercy Hospitals; Surgeon in Proctology, Meadowbrook Hospital

Ulcerative Colitis
J. EDWIN ALFORD, M.D., Buffalo, Attending Proctologist, Buffalo General and Children's Hospitals

Carcinoma
MICHAEL R. DEDDISH, M.D., New York City, Consulting Surgeon, St. Joseph's Hospital, Yonkers; Associate Surgeon, Memorial Center for Cancer and Allied Diseases and St. Clare's Hospital

Question Period

Section on General Practice

Chairman.......FLOYD C. BRATT, M.D., Rochester
Vice-Chairman..................................
.........SEYMOUR FISKE, M.D., New York City
Secretary....GARRA L. LESTER, M.D., Chautauqua

Thursday, May 13—9 A.M.

Keystone Room, Ballroom Balcony

1. **Recent Review of the Advances in Gastroenterology**
A. H. AARON, M.D., Buffalo, Clinical Professor of Medicine, University of Buffalo School of Medicine
Question Period

2. **The Clinical Approach to the Diagnosis of Heart Disease**
ELLIOT HOCHSTEIN, M.D., New York City, Associate Professor of Clinical Medicine, Cornell University Medical College
Question Period

3. **The Doctor and the Laboratory**
PERRIN H. LONG, M.D., New York City, Professor and Chairman, Department of Medicine, State University of New York College of Medicine at New York City
Question Period

4. **Pancreatitis**
GEORGE CRILE, JR., M.D., Cleveland, Ohio, Cleveland Clinic—By invitation
Question Period

Section on Industrial Medicine and Surgery

Chairman.......................................
..........C. DOUGLAS SAWYER, M.D., Brooklyn
Vice-Chairman..................................
...........JAMES H. STERNER, M.D., Rochester
Secretary...HARRY E. TEBROCK, M.D., Douglaston

Friday, May 14—9 A.M.
Parlor A, Ballroom Floor

PANEL DISCUSSION—**Hand Injuries: Primary Care**

Moderator: C. Douglas Sawyer, M.D., Brooklyn

Introductory Remarks
Robert H. Kennedy, M.D., New York City, Director, Surgery, Beekman-Downtown Hospital; Surgeon, Bellevue and University Hospitals

The Relation of Anatomy to Primary Injuries
Ernest W. Lampe, M.D., New York City, Surgeon, Bellevue Hospital; Assistant Surgeon, New York Hospital

The Early Management of Nerve and Tendon Injuries
J. William Littler, M.D., New York City, Assistant Surgeon, Roosevelt Hospital; Assistant Attending Plastic Surgeon, Presbyterian Hospital

Crash Injuries and Associated Fractures
William T. Medl, M.D., New York City, Associate Surgeon, Goldwater Memorial and Beekman-Downtown Hospitals; Assistant Surgeon, St. Luke's Hospital Outpatient Department

Section on Medicine

Chairman.......Arthur E. Lamb, M.D., Brooklyn
Vice-Chairman....Edward D. Cook, M.D., Buffalo
Secretary.............E. J. Murphy, M.D., Bronx

Friday, May 14—9 A.M.
Penn Top South, 18th Floor

1. **Hypopituitarism**
George F. Koepf, M.D., Buffalo, Associate in Medicine and Physiology, University of Buffalo School of Medicine; Director, Metabolic Clinic, Buffalo General Hospital
Discussion.—Thomas F. Frawley, M.D., Albany, Associate Professor of Medicine, Albany Medical College, Union University. Thomas H. McGavack, M.D., New York City, Professor of Clinical Medicine, New York Medical College, Flower and Fifth Avenue Hospitals

2. **The Treatment of Rheumatic Fever with Large Doses of Cortisone**
Irving G. Kroop, M.D., Brooklyn, Associate in Cardiology and Acting Chief of Cardiac Clinic, Jewish Sanitorium and Hospital for Chronic Diseases; Assistant in Cardiology, Jewish Hospital of Brooklyn
Discussion.—Walter T. Zimdahl, M.D., Buffalo, Instructor in Medicine, University of Buffalo School of Medicine. Eugene J. Lippschutz, M.D., Buffalo, Assistant Clinical Professor of Medicine, University of Buffalo School of Medicine

3. **The Chemotherapy of Leukemia**
David A. Karnofsky, M.D., New York City, Associate Attending Physician, Chemotherapy Service, Memorial Center for Cancer and Allied Diseases
Discussion.—L. Edgar Hummel, M.D., Buffalo, Assistant Professor of Medicine, University of Buffalo School of Medicine. Louis Weisfuse, M.D., Brooklyn, Clinical Instructor in Medicine, State University of New York College of Medicine at New York City; Associate Physician, Brooklyn Hospital

4. **Combined Antibiotic-Cortisone Therapy in Infectious Asthma**
Walter Finke, M.D., Rochester, Physician in Charge, Chest Clinic, Genesee Hospital
Discussion.—Carl E. Arbesman, M.D., Buffalo, Associate in Medicine, Instructor in Bacteriology and Immunology, University of Buffalo School of Medicine. Leonard Wolin, M.D., Buffalo, Clinical Assistant in Medicine, Buffalo General Hospital

Section on Neurology and Psychiatry

Chairman...........Irving Hyman, M.D., Buffalo
Secretary.....Howard Freedman, M.D., Brooklyn

Friday, May 14—9 A.M.
Washington Room, Mezzanine

1. **Spontaneous Occlusion of the Internal Carotid Artery in the Neck**
Sidney W. Gross, M.D., New York City

2. **The Effect of Life Problems and Cerebral Pathology on the Mental Health of Aging Persons**
Howard W. Potter, M.D., Brooklyn
Gerald V. Freiman, M.D., Kew Gardens

3. **An Evaluation of Rorschach Test Patterns in Patients with Headache Symptoms**
Arnold P. Friedman, M.D., New York City
Max Cooper, Ph.D., Bronx—By invitation

4. **Modern Management of Brain Abscesses**
Albert Cook, M.D., Brooklyn
William Druckmiller, M.D., Commander, United States Navy Medical Corps—By invitation
Howard Freedman, M.D., Brooklyn

5. **Facial Paralysis**
Harold R. Merwarth, M.D., Brooklyn

Section on Obstetrics and Gynecology

Chairman....Eugene R. Duggan, M.D., Rochester

Vice-Chairman...J. Edward Hall, M.D., Brooklyn
Secretary........Curtis J. Lund, M.D., Rochester

Thursday, May 13—9 A.M.
Penn Top South, 18th Floor

1. **The Prevention and Management of Premature Labor**
   Elmer E. Kramer, M.D., New York City, Assistant Professor of Clinical Obstetrics and Gynecology, Cornell University Medical College
   Discussion.—William M. Jackson, M.D., Rochester, Instructor in Obstetrics and Gynecology, University of Rochester School of Medicine and Dentistry

2. **Induction and Acceleration of Labor**
   Martin L. Stone, M.D., New York City, Assistant Professor of Obstetrics and Gynecology, New York Medical College, Flower and Fifth Avenue Hospitals
   Discussion.—Graham G. Hawks, M.D., New York City, Assistant Attending Obstetrician, New York Polyclinic Hospital

3. **Clinical Microscopy of the Cervix**
   Edwin M. Robertson, M.D., Kingston, Ontario, Canada, Professor of Obstetrics and Gynecology, Queens University, Faculty of Medicine—By invitation

4. **Ascites in Gynecology**
   Arthur J. Wallingford, M.D., Albany, Professor of Gynecology, Albany Medical College, Union University
   Discussion.—John G. Masterson, M.D., Brooklyn, Assistant Professor of Obstetrics and Gynecology, State University of New York College of Medicine at New York City

Section on Ophthalmology and Otolaryngology

Chairman..Franklin R. Webster, M.D., Syracuse
Secretary.......Benjamin M. Volk, M.D., Albany

Friday, May 14—9 A.M.
Headquarters Room, 18th Floor

OTOLARYNGOLOGY

9 a.m. to 11 a.m.

1. **Congenital Disorders of the Larynx**
   Daniel C. Baker, Jr., M.D., New York City, Associate Otolaryngologist, Presbyterian Hospital; Otolaryngologist, St. Elizabeth's Hospital
   Discussion.—Stanley L. Edmunds, M.D., Glens Falls, Otorhinolaryngologist, Glens Falls Hospital; Consultant, Eye, Ear, Nose, and Throat, Ludington, Ticonderoga, and Westmount Hospitals

2. **The Surgical Treatment of Carcinoma of the Cervical Esophagus**
   George A. Sisson, M.D., Syracuse, Assistant Otolaryngologist, General Hospital of Syracuse, Syracuse Memorial Hospital
   Discussion.—Ernst A. Kopp, M.D., Albany, Chief, Eye, Ear, Nose, and Throat, Veterans Administration Hospital

3. **Carcinoma of the Nasopharynx**
   Walter L. Mattick, M.D., Buffalo, Principal, Head and Neck Surgery, Roswell Park Memorial Institute
   Frank C. Marchetta, M.D., Buffalo, Roswell Park Memorial Institute
   Discussion.—Theodore J. Kantor, M.D., Utica, Otolaryngologist, St. Elizabeth, St. Luke's Memorial, and Oneida County Hospitals

OPHTHALMOLOGY

11 a.m. to 1 p.m.

4. **Chronic Simple Glaucoma: Results of the Mechanistic Approach**
   Peter C. Kronfeld, M.D., Chicago, Illinois, Professor of Ophthalmology, University of Illinois School of Medicine; Ophthalmic Surgeon, St. Francis Hospital, Evanston, Illinois—By invitation
   Discussion.—James I. Farrell, M.D., Utica, Ophthalmologist, Faxton and Oneida County Hospitals; Consulting Ophthalmologist, Utica State Hospital

5. **The Pathology of Glaucoma**
   Brittain Ford Payne, M.D., New York City, Clinical Professor of Ophthalmology, New York University Post-Graduate Medical School; Executive Surgeon, New York Eye and Ear Infirmary
   Discussion.—Joseph A. C. Wadsworth, M.D , New York City, Associate in Ophthalmology, College of Physicians and Surgeons of Columbia University; Assistant Attending Ophthalmologist, Vanderbilt Clinic

6. **The Management of Open Angle Glaucoma**
   Willis S. Knighton, M.D., New York City, Honorary Ophthalmic Surgeon, New York Eye and Ear Infirmary; Ophthalmic Surgeon, Presbyterian Hospital
   Discussion.—Everet H. Wood, M.D., Auburn, Clinical Instructor in Ophthalmology, State University of New York at Syracuse College of Medicine; Chief Ophthalmologist, Mercy and City Hospitals

Section on Orthopedic Surgery

Chairman....................................
Frederick Lee Liebolt, M.D., New York City

Secretary.................................... ....William E. Gazeley, M.D., Schenectady

Thursday, May 13—9 A.M.
West Room, Ballroom Floor

1. **Diagnosis and Treatment of Traumatic Lateral Ankle Instability**
   Barnard Kleiger, M.D., New York City, Associate Orthopedic Surgeon, Hospital for Joint Diseases, Brooklyn Veterans Administration Hospital
   Discussion.—Victor Mayer, M.D., New York City, Fellow in Physical Medicine and Rehabilitation, New York University College of Medicine; Assistant Orthopedic Surgeon, Hospital for Special Surgery

2. **Bone Changes in Children with Lesions of the Spinal Cord or Roots**
   Constantine L. Jeannopoulos, M.D., New York City, Instructor in Orthopedic Surgery, New York University Post-Graduate Medical School; Assistant Attending Orthopedic Surgeon, University Hospital
   Discussion.—John C. McCauley, Jr., M.D., New York City, Associate Professor of Orthopedic Surgery, New York University Post-Graduate Medical School; Attending Orthopedic Surgeon, University Hospital

3. **Determination of the Circulation of the Femoral Head by the Use of Radioactive Phosphorus (P_{32})**
   Harold Boyd, M.D., Memphis, Tennessee, Associate Professor of Orthopedic Surgery, University of Tennessee College of Medicine; John Gaston, Baptist Memorial, Methodist, and St. Joseph's Hospitals—By invitation

4. **End Results in 200 Lumbosacral Fusions for Structural Derangements Exclusive of Ruptured Disks**
   Everett C. Bragg, M.D., New York City, Assistant Professor of Orthopedic Surgery, College of Physicians and Surgeons of Columbia University; Associate Orthopedic Surgeon, Presbyterian Hospital
   Discussion.—Alan DeForest Smith, M.D., New York City, Professor of Orthopedic Surgery, College of Physicians and Surgeons of Columbia University; Director of Orthopedic Surgery, Presbyterian Hospital

5. **Surgical Stress Studies in Operations Upon Bones and Joints**
   James A. Nicholas, M.D., New York City, Orthopedic Surgeon, New York Hospital and Hospital for Special Surgery
   Philip D. Wilson, Sr., M.D., New York City, Clinical Professor of Orthopedic Surgery, Cornell University Medical College; Surgeon in Chief, Hospital for Special Surgery
   Charles J. Umberger, Ph.D., New York City, Lecturer in Forensic Medicine, New York University Post-Graduate Medical School; Biochemist, Hospital for Special Surgery—By invitation
   Discussion.—Harrison L. McLaughlin, M.D., New York City, Professor of Clinical Orthopedic Surgery, College of Physicians and Surgeons of Columbia University; Orthopedic Surgeon, Presbyterian Hospital

6. **Fibular Atrophy in Nonunion of the Tibia**
   Andrew Schildhaus, M.D., Flushing, Instructor in Orthopedic Surgery, Cornell University Medical College; Brooklyn Veterans Administration Hospital
   Discussion.—Frederick R. Thompson, M.D., New York City, Clinical Professor of Orthopedic Surgery, New York Polyclinic Medical School and Hospital; Associate Orthopedic Surgeon, St. Luke's Hospital

Section on Pathology and Clinical Pathology

Chairman...........Samuel Sanes, M.D., Buffalo
Vice-Chairman.................................. ....Milton Helpern, M.D., New York City
Secretary........M. J. Fein, M.D., New York City

Thursday, May 13—9 A.M.
Penn Top North, 18th Floor

1. **Atheromatous Internal Carotid Arteries Pressing on Optic Nerves**
   S. Bornstein, M.D., Montrose, Chief, Laboratory Service, Veterans Administration Hospital
   Discussion.—George A. Jervis, M.D., Thiells, Director of Laboratories, Letchworth Village

2. **The Pathology of Experimental Frostbite**
   Ancel Blaustein, M.D., New York City, Chief of Hematology, Gouverneur Hospital
   Discussion.—Kurt Lange, M.D., New York City, Research Associate in Pediatrics (Assistant Professor), New York Medical College, Flower and Fifth Avenue Hospitals

3. **A Review of Recent Experimental Findings in Mouse Leukemia and Their Possible Implications for Human Pathology**
   Ludwik Gross, M.D., Bronx, Chief of Cancer Research, Veterans Administration Hospital; Research Associate, Memorial Center for Cancer and Allied Diseases
   Discussion.—David A. Karnofsky, M.D., New York City, Associate Professor of Medicine, Cornell University Medical College; Associate Attending Physician, Chemotherapy Service, Memorial Center for Cancer and Allied Diseases

4. **Isotopes in Pathology**
   Patrick J. Fitzgerald, M.D., Brooklyn, Professor and Chairman, Department of Pathology, State University of New York College of Medicine at New York City
   Discussion.—Jack Gross, M.D., Brooklyn, Assistant Professor, Department of Anatomy, State University of New York College of Medicine at New York City

5. **Newer Blood Groups in Clinical Medicine**
   Alexander S. Wiener, M.D., Brooklyn, Serologist, Office of the Chief Medical Examiner, City of New York; Immunohematologist, Adelphi and Jewish Hospital of Brooklyn
   Discussion.—Lester J. Unger, M.D., New York City, Director of Blood Bank, New York University-Bellevue Medical Center

Section on Pediatrics

Chairman.. ....Harold W. Dargeon, M.D., New York City
Vice-Chairman................................ ....Frederick W. Bush, M.D., Rochester
Secretary.. ....Alfred J. Vignec, M.D., New York City

Friday, May 14—9 A.M.
East Room, Ballroom Floor

1. **Chemotherapy in Certain Forms of Juvenile Tuberculosis**
   David M. Bosworth, M.D., New York City, Director of Orthopedic Service, St. Luke's and Sea View Hospitals
   Discussion.—Rosa Lee Nemir, M.D., Brooklyn, Professor of Pediatrics, New York University Post-Graduate Medical School; Attending Physician, University Hospital

2. **Prophylaxis and Treatment of Measles, Diphtheria, and Poliomyelitis**
   Samuel Karelitz, M.D., New York City, Chief of Pediatrics, Long Island Jewish Hospital; Associate Pediatrician, Mount Sinai Hospital
   Discussion.—Morris Greenberg, M.D., New York City, Director, Bureau of Preventable Diseases, New York City Department of Health; Assistant Professor of Epidemiology, College of Physicians and Surgeons of Columbia University

Five-Minute "Alert"—Methods for Detecting Auditory Defects in the Young
Edmund Prince Fowler, Sr., M.D., New York City, Consulting Otologist, Manhattan Eye, Ear and Throat Hospital; Director of Research and Clinics, New York League for the Hard of Hearing

3. **The Management of Hand-Schüller-Christian and Related Syndromes**
   Alan Mermann, M.D., New York City, Clinical Assistant, Pediatric Service, Memorial Center for Cancer and Allied Diseases
   Discussion.—Maurice N. Richter, M.D., New York City, Attending Pathologist and Director of Department of Pathology, University Hospital

4. **The Treatment of the Leukemias of Childhood**
   Joseph H. Burchenal, M.D., New York City, Attending Physician and Chief of Chemotherapy Service, Memorial Center for Cancer and Allied Diseases
   Discussion.—David Clement, M.D., New Haven, Connecticut, Yale University School of Medicine—By invitation

Section on Preventive Medicine and Public Health

Chairman....Berwyn F. Mattison, M.D., Buffalo
Vice-Chairman.. ......Joseph H. Kinnaman, M.D., Garden City
Secretary.. .William C. Spring, Jr., M.D., New York City

Friday, May 14—9 A.M.
Keystone Foyer, Ballroom Balcony

1. **Epidemiology of Lung Cancer**
   Morton L. Levin, M.D., Albany, Assistant Commissioner for Medical Services, New York State Department of Health
   Paul R. Gerhardt, M.D., Albany, Director, Bureau of Cancer Control, New York State Department of Health
   Vincent H. Handy, M.D., Albany, Assistant Director, Bureau of Cancer Control, New York State Department of Health

2. **The Safety of Water Fluoridation**
   Edward R. Schlesinger, M.D., Albany, Associate Director, Division of Medical Services, New York State Department of Health

3. **The Newburgh-Kingston Caries Fluorine Study: VI—Pediatric Aspects, Current Status**
   David E. Overton, M.D., Newburgh, Associate Physician, Pediatric Research, New York State Department of Health

4. **A Premature Infant Transport Program**
   Jean Pakter, M.D., New York City, Public Health Physician, New York City Department of Health

Section on Radiology

Chairman.. ......Harold W. Jacox, M.D., New York City

Vice-Chairman ....
.........THOMAS N. SICKELS, M.D., Watertown
Secretary..
.........JOHN A. EVANS, M.D., New York City

Thursday, May 13—9 A.M.
Headquarters Room, 18th Floor

1. **Treatment of Hyperthyroidism with Radioactive Iodine**
   SOLOMON RINKOFF, M.D., Bronx, Chief, Thyroid Clinic, Assistant Physician, Isotope Division, Bronx Hospital
   ISADORE ROSSMAN, M.D., Bronx
   JACOB R. FREID, M.D., Bronx
   MAXWELL SPRING, M.D., Bronx

2. **Variations in Roentgen Appearance of the Thoracic Spine on Routine Lateral Projections of the Chest**
   LEWIS R. LAWRENCE, M.D., Bronx, Assistant Chief, Radiology Service, Veterans Administration Hospital
   JOSEPH STEIN, M.D., Bronx, Chief, Radiology Service, Veterans Administration Hospital

3. **Roentgen Therapy of Advanced Carcinoma of the Female Genitalia with the Use of a Grid**
   HIRSCH MARKS, M.D., New York City, Chief, Radiotherapy Division, Welfare Island Dispensary; Consultant, Radiotherapy, Fordham Hospital

4. **Functional Restoration of the Shoulder by Deep X-ray Therapy in Bursitis**
   LOUIS J. GELBER, M.D., Rockville Centre

5. **Problems of Gastrointestinal X-ray Diagnosis Peculiar to Infants and Children**
   JOHN F. HOLT, M.D., Ann Arbor, Michigan, Professor of Radiology, University of Michigan Hospital—By invitation

Section on Surgery

Chairman..
...EDWARD J. DONOVAN, M.D., New York City
Secretary.............JOHN BURKE, M.D., Buffalo

Thursday, May 13—9 A.M.
Skytop, 18th Floor

1. **Chairman's Address—Congenital Polyposis of the Colon and Rectum**
   EDWARD J. DONOVAN, M.D., New York City, Associate Professor of Surgery, College of Physicians and Surgeons of Columbia University; Attending Surgeon, St. Luke's and Presbyterian Hospitals

2. **Is Total Gastrectomy Justified in Carcinoma of the Stomach?**
   RALPH COLP, M.D., New York City, Professor of Clinical Surgery, College of Physicians and Surgeons of Columbia University; Attending Surgeon, Mount Sinai Hospital
   EDWARD E. JEMERIN, M.D., New York City
   Discussion.—Glenn H. Leak, M.D., Buffalo, Cancer Coordinator, University of Buffalo School of Medicine

3. **Sympathectomy for Peripheral Vascular Disease of the Extremities**
   GERALD H. PRATT, M.D., New York City, Associate Clinical Professor of Surgery, New York University College of Medicine; Attending Surgeon, St. Clare's and St. Vincent's Hospitals
   Discussion.—Kenneth C. Olson, M.D., Buffalo, Surgeon, Veterans Administration Hospital

Section on Urology

Chairman........JOHN S. FITZGERALD, M.D., Utica
Vice-Chairman.......................................
...THOMAS A. MORRISSEY, M.D., New York City
Secretary....OSCAR J. OBERKIRCHER, M.D., Buffalo

Thursday, May 13—9 A.M.
Washington Room, Mezzanine

1. **Rhabdomyosarcoma of the Bladder**
   EDGAR A. SLOTKIN, M.D., Buffalo, Assistant Clinical Professor of Urology, University of Buffalo School of Medicine; Urologist, Edward J. Meyer Memorial and Children's Hospitals

2. **Feminization in an Adult Male with Adrenal Cortical Carcinoma**
   WILLIAM J. STAUBITZ, M.D., Buffalo, Clinical Assistant in Urology, Children's Hospital; Principal Urologist, Roswell Park Memorial Institute
   OSCAR J. OBERKIRCHER, M.D., Buffalo, Chief Urologist, Buffalo General and Children's Hospital; Consulting Chief Urologist, Mercy Hospital
   MELBOURNE H. LENT, M.D., Buffalo, Clinical Assistant Urologist, Buffalo General Hospital; Associate Urologist, Roswell Park Memorial Institute
   GROSVENOR W. BISSELL, M.D., Buffalo

3. **Experience with Simple Total Cystectomy for Carcinoma of the Bladder**
   JAMES L. GREEN, M.D., New York City
   WILLET F. WHITMORE, JR., M.D., New York City, Attending Surgeon, Memorial Center for Cancer and Allied Diseases
   Discussion.—Perry B. Hudson, M.D., New York City, Assistant Professor of Urology, College of Physicians and Surgeons of Columbia University; Assistant Urologist, Presbyterian and Delafield Hospitals

4. **Acute Renal Trauma in Boxers**
   RICHARD D. AMELAR, M.D., New York City, Resident in Urology, French Hospital—By invitation
   CYRIL SOLOMON, M.D., New York City, Assistant Physician and Pathologist, French Hospital
   Discussion.—Vincent A. Nardiello, M.D., New York City, Physician-in-Chief to the Boxing Commission of the State of New York

5. **Cryptorchism**
   LLOYD G. LEWIS, M.D., Washington, D.C., Professor of Urology, Georgetown University, School of Medicine—By invitation
   Discussion.—John K. Lattimer, M.D., New York City, Associate Professor of Urology, College of Physicians and Surgeons of Columbia University; Associate Urologist, Presbyterian Hospital

6. **Nephrostomy with Partial Marsupialization of the Kidney**
   HERBERT R. KENYON, M.D., New York City, Associate Clinical Professor of Urology, New York University Post-Graduate Medical School
   Discussion.—George W. Slaughter, M.D., New York City, Associate Clinical Professor of Urology, New York University Post-Graduate Medical School

SESSIONS

Session on History of Medicine

Chairman.....................................
....JEROME P. WEBSTER, M.D., New York City
Secretary.......JOHN R. PAINE, M.D., Buffalo

Thursday, May 13—9 A.M.
Parlor A—Ballroom Floor

Open to Public

SYMPOSIUM—**Medicine in Colonial New York**

Introduction—European Influences on Medicine in Colonial New York
JEROME P. WEBSTER, M.D., New York City, Professor of Clinical Surgery, College of Physicians and Surgeons of Columbia University; Attending Surgeon, Presbyterian Hospital

1. **Medical Correspondence in Seventeenth Century New York**
   JEAN A. CURRAN, M.D., Brooklyn, Dean, State University of New York College of Medicine at New York City; Consulting Physician, Brooklyn Hospital
   Discussion.—Russell L. Cecil, M.D., New York City, Consulting Physician, New York Hospital; Visiting Physician, Bellevue Hospital

2. **Medical Correspondence in Eighteenth Century New York**
   LAURENCE FARMER, M.D., New York City, Instructor of Medicine, Cornell University Medical College; Associate Physican, Bellevue and Lenox Hill Hospitals
   Discussion.—Gertrude L. Annan, New York City, Associate Librarian, New York Academy of Medicine—By invitation

3. **Cadwallader Colden and the Use of Tar Water**
   SAUL JARCHO, M.D., New York City, Associate Physician, Mount Sinai Hospital
   Discussion.—Frederic D. Zeman, M.D., New York City, Editor, Department of Medical History, NEW YORK STATE JOURNAL OF MEDICINE

4. **The Rise of Medicine in New York City Before the Revolution**
   CLAUDE E. HEATON, M.D., New York City, Associate Professor of Obstetrics and Gynecology, New York University College of Medicine; Attending Surgeon, Obstetrics and Gynecology, French Hospital
   Discussion.—Edward F. Hartung, M.D., New York City, Associate Clinical Professor of Medicine, New York University Post-Graduate Medical School; Associate Physician, University Hospital

Session on Legal Medicine

Chairman.....................................
....GEORGE H. HYSLOP, M.D., New York City
Secretary.....................................
....NIELS C. KLENDSHOJ, M.D., Buffalo

Friday, May 14—9 A.M.
Parlor C, Ballroom Floor

1. **A Physician's Blueprint for the Management and Prevention of Narcotic Addiction**
   HUBERT S. HOWE, M.D., New York City, Former Clinical Professor of Neurology, College of Physicians and Surgeons of Columbia University
   Discussion.—Robert B. McGraw, M.D., New York City, Clinical Professor of Psychiatry,

College of Physicians and Surgeons of Columbia University; Chief, Department of Psychiatry, Vanderbilt Clinic. Lawson G. Lowrey, M.D., New York City, Associate Clinical Professor of Psychiatry, College of Physicians and Surgeons of Columbia University; Associate Psychiatrist, Vanderbilt Clinic

2. **Instruction of Students in Regard to Medicolegal Problems**
   H. Houston Merritt, M.D., New York City, Professor of Neurology, College of Physicians and Surgeons of Columbia University; Director of Neurological Institute
   Discussion.—Samuel Brock, M.D., New York City, Professor of Neurology, New York University College of Medicine; Attending Neuropsychiatrist, Bellevue Hospital. Milton C. Helpern, M.D., New York City, Deputy Chief Medical Examiner, City of New York; Associate Professor of Forensic Medicine, New York University Post-Graduate Medical School

3. **Expert Testimony in Workmen's Compensation Cases**
   Niels C. Klendshoj, M.D., Buffalo, Chief Biochemist and Assistant Physician, Buffalo General Hospital
   Discussion.—Irvin Balensweig, M.D., New York City, Assistant Clinical Professor of Orthopedic Surgery, Cornell University Medical College; Attending Surgeon, Orthopedics, New York Hospital. Byron Stookey, M.D., New York City, Consultant in Neurological Surgery, Presbyterian Hospital

4. **The Physician's Role in Compensation Claims Made Under the Second Injury Law and in Reopening of Closed Compensation Claims**
   Willis M. Weeden, M.D., New York City, Professor of Clinical Surgery, New York Medical College, Flower and Fifth Avenue Hospitals; Medical Director, New York State Workmen's Compensation Board
   Discussion.—Henry H. Kessler, M.D., West Orange, New Jersey, Medical Director, Kessler Institute for Rehabilitation—By invitation. Herman Cowan, M.D., New York City, Medical Department, Aetna Casualty and Surety

5. **Roentgen Ray Examination in Medicolegal Autopsies**
   Samuel Sanes, M.D., Buffalo, Associate Professor of Pathology, University of Buffalo School of Medicine; Director of Pathology, Edward J. Meyer Memorial Hospital
   Edward G. Eschner, M.D., Buffalo, Director of Roentgenology, Edward J. Meyer Memorial Hospital
   Discussion.—Jesse Donald Stark, M.D., New York City, Associate Clinical Professor of Radiology, New York University Post-Graduate Medical School; Chief Roentgenologist, Gouverneur Hospital. C. Zent Garber, M.D., New York City, Associate Professor of Pathology, College of Physicians and Surgeons of Columbia University

Session on Physical Medicine

Chairman. . . . .
. . A. David Gurewitsch, M.D., New York City
Secretary. . Henry V. Morelewicz, M.D., Buffalo

Thursday, May 13—9 A.M.
East Room, Ballroom Floor

1. **Psychiatric Factors in Low Back Pain**
   Joseph D. Sullivan, M.D., New York City, Director, Mental Hygiene Clinic and Social Adjustment Service, Institute for Crippled and Disabled
   Discussion.—Morton Hoberman, M.D., New York City, Assistant Attending Physician, Physical Medicine and Rehabilitation, Presbyterian Hospital

2. **Muscular Exercise in the Treatment of Bronchial Asthma: Technic and Physiologic Basis**
   Karl Schutz, M.D., Mount McGregor, Senior Physician, New York State Veterans Camp
   Discussion.—Gustav J. Beck, M.D., New York City, Assistant Professor of Medicine, College of Physicians and Surgeons of Columbia University

3. **Referred Pain from Skeletal Muscle**
   Janet G. Travell, M.D., New York City, Associate Professor of Clinical Pharmacology, Cornell University Medical College; Physician to Outpatients, Department of Medicine, New York Hospital
   Discussion.—Hans Kraus, M.D., New York City, Associate Professor of Physical Medicine and Rehabilitation, New York University College of Medicine. Joseph A. E. Syracuse, M.D., Buffalo, Chief of Physical Therapy, Columbus Hospital; Consulting Psychiatrist, Veterans Administration Hospital

4. **Muscle Extensibility: Diagnosis and Treatment**
   Milton G. Schmitt, M.D., Chicago, Illinois, Associate Professor of Physical Medicine, Loyola University School of Medicine; Medical Director, Chicago Clinic of Physical Medicine—By invitation
   Discussion.—Allen S. Russek, M.D., New York City, Associate Professor of Physical Medicine and Rehabilitation, New York University College of Medicine

Session on Public Relations

Chairman.....John D. Naples, M.D., Buffalo
Secretary.....Henry I. Fineberg, M.D., Jamaica

Thursday, May 13—9 A.M.

Parlor C, Ballroom Floor

1. **The Press Looks at the Medical Profession's Public Relations Program**
   Alton L. Blakeslee, New York City, Science Writer, Associated Press—By invitation
2. **Codes of Cooperation: Their Role in Improving Public Relations**
   John C. McClintock, M.D., Albany, Chairman, Subcommittee on Codes of Cooperation, Council Committee on Public Relations
3. **Focusing the Community Spotlight on the County Medical Society**
   Joseph Diasio, M.D., Oakfield, Past-President, Genesee County Medical Society
4. PANEL DISCUSSION—**Making the Best Use of Radio and TV to Improve Public Relations**
   Henry I. Fineberg, M.D., *Moderator*, Queens, Council Committee on Public Relations
   Lester L. Coleman, M.D., New York City, Producer, TV Programs for the Medical Society of the County of New York
   Stephen K. Leech, Syracuse, Executive Secretary, Onondaga County Medical Society—By invitation
   Question Period

POSTGRADUATE LECTURES

Bernard J. Pisani, M.D., *Associate Chairman*, New York City

Tuesday, May 11—9 A.M.

West Room, Ballroom Floor

SYMPOSIUM—**Practical Problems in the Care of the Aged**

9:00 **Introductory Remarks**
Theodore J. Curphey, M.D., Garden City, Chairman, Council Committee on Public Health and Education, Medical Society of the State of New York

9:05 **The Clinical Picture of Arteriosclerosis and Its Management**
J. Murray Steele, M.D., New York City, Professor of Medicine, New York University College of Medicine; Director, Research Service, Goldwater Memorial Hospital—By invitation

9:15 **The Responsibility of the Community**
Raymond R. Houston, Commissioner, State of New York Department of Social Welfare—By invitation

9:30 **Surgical Indications and Surgical Management**
Condict W. Cutler, Jr., M.D., New York City, Director of Surgery, Goldwater Memorial Hospital; Consulting Surgeon, Rockland State Hospital, Orangeburg

9:45 **Psychiatric Problems**
Alvin Irving Goldfarb, M.D., New York City, Assistant Psychoanalyst, Psychoanalytic Institute for Research and Training, Columbia University; Chief Neuropsychiatrist, Hospital and Home for Aged and Infirm Hebrews

10:00 *Intermission to Visit Exhibits*

10:45 **The Present Status of Surgical Therapy in Portal Hypertension**
Louis M. Rousselot, M.D., New York City, Professor, Clinical Surgery, New York University College of Medicine; Director, Department of Surgery, St. Vincent's Hospital

11:00 **How a Virus Laboratory Can Help You**
Harry M. Rose, M.D., New York City, John E. Borne Professor of Medical and Surgical Research, College of Physicians and Surgeons of Columbia University; Attending Bacteriologist, Presbyterian Hospital

11:15 **Postgraduate Training in the Veterans Administration**
George M. Lyon, M.D., Washington, D.C., Assistant Chief Medical Director, Research and Education, Department of Medicine and Surgery, Veterans Administration—By invitation

11:30 *Question Period*

Wednesday, May 12—9 A.M.

West Room, Ballroom Floor

9:00 **Place and Purpose of Recovery and Postanesthesia Units**
Vincent J. Collins, M.D., New York City, Director, Department of Anesthesiology, St. Vincent's Hospital

9:15 **Fetal Anoxia and Resuscitation**
Robert S. Millen, M.D., Glen Cove, Director, Department of Obstetrics and Gynecology, North Country Community Hospital

9:30 **Present Trends in Treatment of Breast Cancer with Combined Surgery and X-ray**
Sidney Rubenfeld, M.D., New York City, Professor, Clinical Radiology, New York University Post-Graduate Medical School; Director, Department of Radiation Therapy, Bellevue Hospital

9:45 **Hodgkin's Disease**
Antonio Rottino, M.D., New York City, Director, Department of Laboratories and Pathology, and Director, Hodgkin's Disease Research Foundation, St. Vincent's Hospital

10:00 *Intermission to Visit Exhibits*

10:45 **Preschool Detection of Deafness by Doctors and Parents**
Edmund Prince Fowler, Sr., M.D., New York City, Consultant Otologist, Manhattan Eye, Ear, Nose and Throat Hospital; Chairman, Central Bureau of Research, American Otological Society

11:00 **Problems in Adoption**
Alfred J. Vignec, M.D., New York City, Clinical Professor of Pediatrics, New York University College of Medicine; Medical Director, New York Foundling Hospital

11:15 **Current Trends in Postgraduate Education**
James E. McCormack, M.D., New York City, Associate Dean and Assistant Professor of Medicine, College of Physicians and Surgeons of Columbia University; Chairman, Committee on Continuation Education of Association of American Medical Colleges

11:30 *Question Period*

ROUND TABLE DISCUSSION

William Dock, M.D., *Associate Chairman*, Brooklyn

Monday Evening, May 10—8 P.M.

Skytop, 18th Floor

Treatment of Bronchogenic Carcinoma: Surgery, X-ray, Chemotherapy

An attempt will be made to define the criteria for "curative" resectability of bronchogenic carcinoma. The choice of palliative measures for the management of this disease will be evaluated, keeping in mind the fact that the radiotherapist at present is allowed to treat only nonresectable disease.

The end results of primary and palliative surgical treatment will be compared with conventional voltage and supervoltage x-ray and chemotherapy, and their relative merits and indications will be assessed.

Discussants

Edgar Mayer, M.D., *Moderator*, New York City, Clinical Professor of Industrial Medicine, New York University Post-Graduate Medical School

George H. Humphreys, II, M.D., New York City, Valentine Mott Professor of Surgery, College of Physicians and Surgeons of Columbia University

Maurice Lenz, M.D., New York City, Professor of Clinical Radiology, College of Physicians and Surgeons of Columbia University; Radiotherapist, Francis Delafield Hospital

J. Maxwell Chamberlain, M.D., New York City, Attending Thoracic Surgeon, Roosevelt Hospital

James J. Nickson, M.D., New York City, Attending Radiotherapist, Memorial Center for Cancer and Allied Diseases

David A. Karnofsky, M.D., New York City, Associate Professor of Medicine, Cornell University Medical College; Associate Attending Physician, Chemotherapy Service, Memorial Center for Cancer and Allied Diseases

Question Period

BLOOD BANKS ASSOCIATION OF NEW YORK STATE

Scientific Session

Thursday, May 13—9 A.M.

Keystone Foyer, Ballroom Balcony

Call to Order
J. Stanley Kenney, M.D., New York City
President, Blood Banks Association of New York State

Announcements—Opening of Scientific Session
Jacob Geiger, M.D., New York City
Chairman, Committee on Scientific Program, Blood Banks Association of New York State

1. **Treatment of Hemolytic Disease in the Newborn with Cortisone**
   Oscar B. Hunter, Jr., M.D., Washington, D.C.
   Director, Oscar B. Hunter Memorial Laboratory
   Discussion
   Alexander S. Wiener, M.D., Brooklyn
   Immunohematologist, Jewish Hospital of Brooklyn

2. **Use and Abuse of Blood Transfusion**
   Theodore Robertson, M.D., Locust Valley
   Director of Blood Bank, North Country Community Hospital, Glen Cove
   Discussion
   Lester J. Unger, M.D., New York City
   Director of Blood Bank, New York University-Bellevue Medical Center

3. **The Problem of Homologous Serum Hepatitis**
   Roderick Murray, M.D., Bethesda, Maryland
   Laboratory of Biologics Control, National Microbiological Institute
   Discussion
   Jacob Geiger, M.D., New York City
   Chief of Blood Bank, Lenox Hill Hospital; Executive Director, Blood Transfusion Association

4. **Hemophilia and Its Treatment**
   Richard E. Rosenfield, M.D., New York City
   Research Assistant in Medicine, Mount Sinai Hospital
   Discussion
   Peter Vogel, M.D., New York City
   Director of Blood Bank, Mount Sinai Hospital

5. **Hypofibrinogenemia and Postpartum Hemorrhage**
   Arthur Sawitsky, M.D., Jamaica
   Associate Visiting Physician, Queens General Hospital
   Discussion
   Aaron Kellner, M.D., New York City
   Director of Central Laboratory, New York Hospital

6. **Question Period**

An opportunity for visits to large blood banks in Greater New York will be afforded to all blood bank directors and technologists attending the meeting from May 10 to 14.

SCIENTIFIC EXHIBITS

Hotel Statler, New York City, May 11 to 14, 1954

WILLIAM L. WATSON, M.D., *Chairman*, New York City
BEVERLY C. SMITH, M.D., *Co-Chairman*, New York City
J. G. FRED HISS, M.D., Syracuse
JOHN J. CLEMMER, M.D., Albany
MAURICE J. COSTELLO, M.D., New York City
HAROLD B. DAVIDSON, M.D., New York City
SHIRLEY C. FISK, M.D., New York City
RAMSAY SPILLMAN, M.D., New York City
ERNEST WITEBSKY, M.D., Buffalo

Georgian Room, Ballroom Floor

Booths 201 Through 238

Results Obtained Following Endoscopic Prostatectomy

Frank Coleman Hamm, M.D.
Brooklyn Hospital
Kings County Hospital
Brooklyn

Controversy continues in certain quarters as to the merits of endoscopic prostatectomy (transurethral resection). Personal experience with over 800 operations in a fifteen-year period is reviewed. The indications, contraindications, and end results will be summarized. There is a low incidence of mortality (about 0.5 per cent) and morbidity and a short period of hospitalization. Variations in prostatic pathology and important points in technic will be shown. (*Booth 201*)

A Lymphatic Function Test

Thomas W. Stevenson, M.D.
David M. Ju, M.D. (*By invitation*)
Columbia-Presbyterian Medical Center
New York City

Studies of the normal lymphatics and a technic for measuring the lymphatic flow will be depicted. Lymphatic function tests are largely applicable to cases of lymphadema. (*Booth 202*)

Recent Advances in the Treatment of Lung Cancer

William L. Watson, M.D.
David A. Karnofsky, M.D.
John L. Pool, M.D.
William G. Cahan, M.D.
Raymond K. J. Luomanen, M.D.
Alexander J. Conte, M.D.
Sam H. Seal, M.D. (*By invitation*)
Memorial Center for Cancer and Allied Diseases
New York City

The most recent surgical, radiation, therapeutic, and chemotherapeutic methods of treating lung cancer will be shown. Their interdependence will be demonstrated. (*Booth 203*)

Lung Cancer

New York State Department of Health
Albany

The exhibit will deal with the research aspects of lung cancer. It will portray the rise in incidence of this disease, especially among males, enumerate some of the suspected reasons for this rise, point out some of the research problems involved in determining the true causes of the rise, and indicate what the State Health Department's program is for the control of this problem. (*Booth 204*)

Club Soda Technic in Roentgen Diagnosis of the Esophagus, Stomach, and Small Bowel

Arthur J. Bendick, M.D.
Beth Israel Hospital
Mount Sinai Hospital
New York City

Films show the value of combining club soda with the mucosal barium technic. Its greatest values have been (1) to determine the exact location of junction of esophagus and stomach, differentiating between ampulla of the esophagus and small gastric hernias; (2) to demonstrate small tumor masses which are often obscured later by the barium; (3) to determine the exact location of ulcers about the pylorus, duodenal or prepyloric areas, and (4) to permit accurate demonstration of postbulbar duodenal ulcers. This technic allows direct visualization of the pancreatic region and the third portion of duodenum through the distended translucent stomach. (*Booth 205*)

Clinical Ballistocardiography: Acute Myocardial Infarction and Essential Hypertension

Harry Mandelbaum, M.D.
Robert A. Mandelbaum, M.D.
Jewish Hospital of Brooklyn
Jewish Sanitarium and Hospital for Chronic Diseases
Brooklyn

After recovery from acute myocardial infarction, 100 patients have been studied at regular intervals for two years by serial ballistocardiograms. Improvement in the ballistocardiogram to a grade II pattern or better or the continuance of a grade III or IV pattern constitutes a basis for judging functional recovery and prognosis. In the hypertensive patient the ballistocardiogram is a reliable objective guide in evaluating cardiac function. The value of the exercise test in hypertensives is illustrated. The mechanics of the normal ballistocardiogram will be shown by means of heart diagrams. (*Booths 206 and 207*)

X-ray Therapy of Incurable Cancer by Positional Rotation Through a Grid

Hirsch Marks, M.D.
Welfare Island Dispensary
Fordham Hospital
New York City

Carcinoma of extrinsic larynx, with metastases involving entire neck and thyroid and necessitating performance of tracheotomy passing through and surrounded by malignant neoplasia, was treated with roentgen therapy through a lead-rubber grid by positional rotation. Treatment resulted in total lysis of the malignant process. Complete restoration of normal function in a patient not amenable to conventional treatment is significant. The enhanced effect on the tumor manifested itself by a rapid resolution of the malignant growth in its deep-seated layers, the skin having been affected least. This method proved effective in recurrent Krukenberg tumor and carcinomas of thyroid, breast, uterus, lung, and esophagus. (*Booth 208*)

Operation Safety: A Safety Educational Program

National Safety Council
Chicago Illinois

The role of an individual or organization in mobilizing a community for traffic safety will be depicted. A year-round program of public education for traffic safety can be developed in any community with the help of Operation Safety—a complete traffic safety program issued in monthly kit form. Leaflets, posters, radio scripts, news releases, and other materials from kits will be displayed, and suggestions for using them effectively. (*Booth 209*)

Testing the Drinking Driver

Committee on Medicolegal Problems, American Medical Association
Committee on Chemical Tests for Intoxication, National Safety Council
Chicago, Illinois

Three-dimensional figures will portray (1) progressive degrees of intoxication, (2) amount of alcohol required to produce different stages of drunkeness, and (3) the corresponding anatomic portions of the brain that are anesthetized by the ingestion of alcohol. Lifelike, actual size reproductions of the brain are colored to show those portions of the brain which are affected in different stages of intoxication. The percentage of blood alcohol for each of the stages of intoxication is also shown. The seven different devices and methods for testing the drinking driver will be exhibited. (*Booths 210 and 211*)

Comparative Anatomic and Radiographic Studies of the Big Toe with Emphasis on the Articular Surfaces of the Metatarsophalangeal Joint

Charles J. Sutro, M.D.
Hospital for Joint Diseases
New York City

Correlative radiographic and anatomic studies were made of the metatarsophalangeal regions of the big toe. Special emphasis was placed on the variations of the macroscopic and microscopic appearance of the articular surfaces of the metatarsophalangeal articulation and of the contiguous sesamoid bones in the various age groups. The aberrations caused by local deformities, such as hallux valgus or hallux rigidus, on the local articular surfaces were correlated with the roentgenograms of the part. The so-called exostosis on the medial aspect of the first metatarsal bone, usually observed in hallux valgus, is discussed. (*Booth 212*)

The Shoulder-Hand Syndrome: Clinical Features and Treatment with Sympathetic Block, Corticotropin, and Cortisone

Otto Steinbrocker, M.D.
H. Harold Friedman, M.D. (*By invitation*)
Lyon Lapin, M.D. (*By invitation*)
David Neustadt, M.D. (*By invitation*)
Samuel J. Bosch, M.D. (*By invitation*)
Lenox Hill Hospital
New York City

This presentation will consist of tabulation of the background, classification, and etiologies of the condition, as accumulated by the authors, to bring out the clinical features and physiologic characteristics of the symptom complex. It will include a summary of current therapy with a comparison of the authors' results with sympathetic block, corticotropin, and cortisone. The clinical signs, injection technic, and results will be illustrated by color photography. (*Booth 213*)

The Painful Foot Relieved Easily

Joseph C. Tedesco, M.D.
Melford D. Diedrick (*By invitation*)
Millard Fillmore Hospital
Buffalo

Too many painful conditions of the foot are neglected by the medical profession, primarily because they are not understood. In most cases it is possible to relieve the pain completely without surgery, without hurting the patient either physically or financially, and without prolonged treatment. (*Booth 214*)

Painless Labor and Delivery

Burton B. Butman, M.D.
Donald Edmond Brace, M.D.
Peter Carbone, M.D. (*By invitation*)
Flower and Fifth Avenue Hospitals
New York City

The technic developed by Dr. Cleland to relieve pain during labor and delivery will be presented. There will be a mannequin illustrating the anatomy and descriptive literature of the technic. This exhibit will illustrate the first wide-scale use of a safe, physiologic, and almost ideal method for labor and delivery in a series of about 500 cases. (*Booth 215*)

Inhalation Anesthesia for Cardiac Catheterization in Children

Edith R. Kepes, M.D.
Martin W. Livingston, M.D.
Doris Escher, M.D.
Montefiore Hospital
Bronx

Because of our dissatisfaction with basal anesthesia, administered rectally or intravenously, in the management of children undergoing cardiac catheterization, an inhalation technic was utilized. Subsequent to open-drop ether, the child is intubated. With a nonrebreathing valve he is then maintained on a constant nitrous oxide-oxygen ratio, usually 70 to 30 per cent. Inhalation of gaseous anesthetic agents necessitates that hemoglobin oxygen saturations be obtained, not with the Van Slyke method but with an oximeter (a photoelectric device which gives immediate readings). Among the advantages we have noted with this management were an unvarying "steady state," an assured airway, and prompt recovery following completion of the procedure. (*Booth 216*)

Changing Concepts of Tracheotomy: The Anesthetist's Role

Harold F. Bishop, M.D.
Martin W. Livingston, M.D.
Burton Rubin, M.D. (*By invitation*)
Simon R. Batungbakal, M.D. (*By invitation*)
Grasslands Hospital
Valhalla

A perusal of medical literature during the past seven years indicates that tracheotomy is on the increase in both medical and surgical patients. Indications for this procedure are broadening. Concepts regarding it are changing. Technic of intubation and anesthetic management of tracheotomy will be portrayed, as well as the postoperative management of the tracheotomized patient. Ten-year statistics on tracheotomy at Grasslands Hospital will appear in poster form. Important historical aspects will be mentioned. (*Booth 217*)

Lymphosarcoma in Childhood

Harold W. Dargeon, M.D.
Memorial Center for Cancer and Allied Diseases
New York City

Lymphosarcoma in childhood is erroneously considered always to have a hopeless prognosis. Certain features concerning the clinical course of 27 lymphosarcomas in children at Memorial Center and five cases who are surviving and well, five to nineteen years from the onset of their diseases, are illustrated. (*Booth 218*)

Moles and Melanomas

Jeff Davis, M.D.
George T. Pack, M.D.
Memorial Center for Cancer and Allied Diseases
New York City

Pertinent and little-known interesting facts about moles and melanomas will be presented with their differential diagnosis by means of diagrams, charts, and color photographs. Indications for removal of nevi and choice of surgical procedures employed in the treatment of both primary and metastatic melanomas will be given, as will statistics and end results of treatment in 1,225 cases of malignant melanoma. (*Booth 219*)

A Cardiac Emergency Kit

Jacob J. Silverman, M.D.
Thomas J. Quigley, M.D.
Staten Island Hospital
Max Werner, M.D.
St. Vincent's Hospital
Staten Island

Acute heart conditions are extremely common in general practice. Recovery from an acute cardiac emergency often depends upon the speed with which effective therapy is begun. Any unnecessary delay may be fatal. Despite the brilliant advances in cardiac therapy in recent years many lifesaving drugs are not readily available. To facilitate the handling of cardiac emergencies, a specially constructed kit, containing a supply of essential cardiac drugs and equipment, has been designed. The kit is always on hand, is easily transportable, and, therefore, can be used throughout the hospital. The exhibit describes the kit, lists the contents, and outlines the advantages accruing from the establishment of such a kit in a hospital. (*Booths 220 and 221*)

Evaluation of Coronary Vasodilator Drugs

Henry I. Russek, M.D.
Burton L. Zohman, M.D.
U.S. Public Health Service Hospital
Staten Island

Human bioassay of 14 drugs commonly employed in the treatment of coronary disease, as reflected in the response to the Master two-step test, is shown. These agents were tested in 52 patients who showed constant control records from day to day following the performance of measured exercise. The drugs evaluated were nitroglycerine, papaverine, ethyl alcohol, Peritrate, aminophylline, Roniacol, khellin, octyl nitrite, Priscoline, TEAC, Paveril, heparin, Dicumarol, and morphine. Only nitroglycerine, papaverine, and Peritrate were found capable of influencing exercise tolerance favorably. (*Booth 222*)

The Fibrinogen Concentration in Acute Myocardial Infarction: Comparison of the Clot Density Determination of Fibrinogen with the Erythrocyte Sedimentation Rate

Samuel Losner, M.D.
Bruno W. Volk, M.D.
Jewish Sanitarium and Hospital for Chronic Diseases

Nathan D. Wilensky, M.D.
Kings County Hospital
Brooklyn

The plasma fibrinogen concentration, as determined serially by the clot density method, closely mirrors the severity of a myocardial infarction. In the early phase of the disease the fibrinogen concentration, as studied in 50 consecutive cases, mirrored the severity of the clinical condition, while the sedimentation rate frequently was normal or low, particularly in the presence of hemoconcentration. During convalescence the sedimentation rate frequently remained elevated long after the fibrinogen concentration had returned to normal.

Patients with a maximum fibrinogen level exceeding 800 mg. per cent had a mortality rate of 42 per cent, whereas those with a lesser concentration had only a mortality of 9.7 per cent. The fibrinogen concentration may be utilized as a criterion for the institution of anticoagulant therapy. When the administration of hypoprothrombinemic agents, Dicumarol, etc., is controlled with the photoelectric determination of prothrombin time, the clot density determination of fibrinogen is obtained without additional laboratory procedures. (*Booth 223*)

Supra- and Infradiaphragmatic Diseases of the Chest

Emil A. Naclerio, M.D.
Aubre de L. Maynard, M.D.
John W. V. Cordice, Jr., M.D.
Harlem Hospital
New York City

Diseases and injuries in the immediate supra- and infradiaphragmatic regions and those traversing the diaphragm frequently present serious problems in diagnosis and management. During the past three years on an active thoracic surgical service of a large municipal hospital, experience with these patients has led to the development of certain methods of approach.

The purposes of this exhibit are (1) to discuss the salient anatomic and physiologic relationships of the diaphragm and the juxtadiaphragmatic thoracic and abdominal regions, (2) to enumerate diagnostic procedures helpful in differential diagnosis, (3) to present pertinent data and comments on 12 representative patients, and (4) to suggest certain routines of management which we have found of value. (*Booth 224*)

Isoniazid (Nydrazid) in the Treatment of Cutaneous Tuberculosis, Leprosy, and Miscellaneous Diseases

Frank E. Cormia, M.D.
Maurice J. Costello, M.D.
Leslie P. Barker, M.D.
Carl T. Nelson, M.D.
Edward W. Wilson, M.D. (*By invitation*)
Jean A. Cramer, M.D. (*By invitation*)
New York City

Isoniazid (Nydrazid) has been used in 49 patients with different types of cutaneous tuberculosis, leprosy, sarcoidosis, lupus erythematosus, dermatitis herpetiformis, and miscellaneous diseases. The results of treatment will be presented by charts, photographs, and photomicrographs. Isoniazid has been of greatest value in the treatment of frank skin tuberculosis, such as lupus vulgaris and scrofuloderma, of occasional benefit in the tuberculid group, and of value in lepromatous leprosy. It had little effect in the other diseases treated. This work was done at Bellevue, New York, Presbyterian, and St. Luke's Hospitals. (*Booth 225*)

Pulmonary Mycoses

Ray Brook State Tuberculosis Hospital
Ray Brook

Photographic illustrations demonstrate the isolation and identification of pathogenic fungi found in sputum and depict the cultural and microscopic characteristics of the organisms and lesions. Radiographs of patients and cultures of pathogenic and nonpathogenic fungi will also be shown. (*Booth 226*)

Recurrent Intestinal Obstruction: A New Method of Treatment

Victor P. Satinsky, M.D. (*By invitation*)
Samuel D. Kron, M.D. (*By invitation*)
Albert Einstein Medical Center
Philadelphia, Pennsylvania

A new method for the treatment of recurrent intestinal obstruction will be presented. Included will be rationale, advantages, indications, technic, illustrative cases, and results. Recurrence of obstruction is prevented by controlling adhesions, which fix the intestine in an "orderly arrangement." This is accomplished by a nonsuture technic. The bowel is pleated along a semirigid, wide-bored, multiperforated tube, held tautly by two fixation points. The method has been found successful in a variety of cases and offers distinct advantages over suture plication. (*Booth 227*)

What is Traffic Safety?

Jacob Kulowski, M.D. (*By invitation*)
St. Joseph, Missouri

The human ingredients in traffic accidents cannot be denied or minimized, but they can be exaggerated to the exclusion of inhuman ingredients. This phase of the problem has received little attention because it is much easier to blame the driver than it is to grapple with the complexities of human and automotive engineering. These facets have reached levels of laboratory, clinical, and field studies. It remains to acquaint doctors with these facts and to make them realize that traffic accidents present a vast problem in public health. Now the doctor will take a more active part in the prevention of these accidents. He will give financial support to crash injury projects, in order that a point of integration may be reached among doctors, engineers, drivers, pedestrians, and manufacturers, so that the carnage on our highways will be eliminated. (*Booths 228 and 229*)

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Trigger Mechanisms in Abdominal Disturbances

Jacob Melnick, M.D.
Coney Island Hospital
Unity Hospital
Brooklyn

The trigger mechanism is a consistent factor in the signs and symptoms of abdominal disturbances. Illustrations and charts of the location of the various trigger areas and their zones of referred signs and symptoms are presented. A specific method of treatment of the trigger area is described and illustrated. The results of such treatment in more than 100 patients with longstanding, intractable symptoms are presented. The importance of considering the trigger mechanism in the diagnosis of abdominal disturbances is outlined. (*Booth 230*)

Newer Biochemical and Physical Aspects of the Eighty to One Hundred Six-Year-Old Patient

Harold B. Eiber, M.D.
A. Allen Goldbloom, M.D.
Linn J. Boyd, M.D.
Otto Deutschberger, M.D.
New York Medical College, Flower and
Fifth Avenue Hospitals
Bird S. Coler Hospital
New York City

Hitherto unpublished data on 75 patients, aged eighty to one hundred six years, at the Bird S. Coler Hospital, are presented. Patients were hospitalized for chronic rather than acute medical illness. Those patients without histories of diabetes or coronary, metabolic, or endocrine disease were studied. Analytic ultracentrifuge lipoprotein fractions (Sf 0-400), lipid partitions, electrocardiograms, x-rays, and gross histologic autopsy material were correlated. Interrelationships between lipoproteins and serum lipid partitions are presented. Comparisons with younger groups demonstrate a reversal of certain biochemical and physical processes after individuals pass a "threshold," which is probably the sixty to seventy-year age group. (*Booth 231*)

Graduate Instruction in Histopathology of the Eye

Brittain F. Payne, M.D.
Bernard Roberts, M.D.
New York Eye and Ear Infirmary
New York University Post-Graduate Medical School
Edgar B. Burchell, D.Sc.
New York Eye and Ear Infirmary
Marvin Gillman, M.D.
New York University Post-Graduate Medical School
New York City

An exhibit of finished drawings of normal and pathologic sections of eyes by graduate students in ophthalmology. Other illustrations will show student progress in the course. Actual specimens will be used to demonstrate various diseases. The constant use of the *Atlas and Textbook of Ophthalmic Pathology* will be emphasized by display. (*Booth 232*)

Correlation of Diastolic Pressure and Hypertensive Fundus

Henry Minsky, M.D.
Mount Sinai Hospital
New York City

In 100 cases objectively studied a correlation coefficient of 0.87 was found between the general diastolic pressure and the sum of numerical values assigned to fundus signs (weighted signs). Focal narrowings of arterioles alert the observer to more readily missed uniform arteriolar narrowings. It was possible to estimate diastolic pressure from the retinal picture in a majority of cases by adding the sum of weighted signs to 85 mm. Hg. Where estimate was higher than sphygmomanometer reading, coronary or cardiac disease was present; where estimated pressure was lower, psychogenic factors were suspected. (*Booth 233*)

Treatment of Peripheral Arterial Disease by Arterial Infusion of Histamine

Isidor Mufson, M.D.
Presbyterian Hospital
Hospital for Joint Diseases
New York City

Treatment of the peripheral arterial obliterative diseases by the arterial infusion of histamine will be described. When complications are present, the same basic treatment is utilized plus antibiotics for infection. The technic, results, and physiologic basis for success of treatment will be shown. (*Booth 234*)

Fructose in Diabetic Emergencies

Henry Dolger, M.D.
John Bookman, M.D.
Sherman Kupfer, M.D. (*By invitation*)
Julius Carr, Ph.D. (*By invitation*)
Mount Sinai Hospital
New York City

Since fructose can be used intravenously by the diabetic without the need for insulin, the results of fructose administration in 10 per cent solution are presented in cases of diabetic acidosis and ketosis and such medical and surgical emergencies as acute coronary thrombosis, pre- and postoperative preparation for surgery, and any condition where the diabetic may need parenteral carbohydrate. The advantage of fructose over the usual glucose treatment is illustrated in a parallel series, indicating the more rapid utilization of fructose, its over-all economy in decreased urinary loss, and its unique quality of preventing or inhibiting ketosis without provoking hyperglycemia. (*Booth 235*)

Sickle Cell Anemia: A Clinical and Laboratory Study of 43 Cases

Emanuel Appelbaum, M.D.
Eugene Cahan, M.D.
John E. Moseley, M.D.
Gladys M. Williams, M.D. (*By invitation*)
Sydenham Hospital
New York City

A clinical and laboratory study of 43 cases of sickle cell anemia at Sydenham Hospital will be presented. All of the cases are Negro. The ages ranged from six months to thirty-nine years. There was nearly an equal sex distribution. The dominant symptomatology consisted of pains in the extremities, joints, and abdomen; dyspnea, vomiting, coughing, and epistaxis; fainting and weakness, and fever. One case had gross hematuria resulting from infarction of the right kidney. The main physical signs were fever; extremity, joint, and abdominal tenderness; jaundice; cardiac enlargement and murmurs, and pallor. The outstanding laboratory findings were the reduced hemoglobin and red blood cells with reticulocytosis, erythroblastosis, polychromatophobia, anisocytosis, and poikilocytosis. The white blood cell count was only abnormal in the presence of intercurrent infection. Roentgenologic skeletal changes due to hyperplasia of the erythroblastic elements and to thromboses with aseptic necroses were the cardinal findings. (*Booth 236*)

Unusual Parasitology in New York City

Maxwell J. Fein, M.D.
Paul Milanese (*By invitation*)
Louis E. Wagshol, M.S. (*By invitation*)
Veterans Administration Hospital
New York City

Microscope slides and drawings will show the vegetative stages of parasites of medical significance not usually found in New York City. Included will be slides and drawings of nematodes, such as microfilaria; trematodes, such as Schistosoma; liver and lung flukes; cestodes, such as Echinococcus, Diphyllobothrium latum, etc.; protozoa, such as Endamoeba histolytica, E. coli, Iodamoeba butschlii, Endolimax nana, Dientamoeba frigilis, and Balantidium coli. (*Booth 237*)

Exhibit of Society for Study of Blood

Leon N. Sussman, M.D.
Society for Study of Blood
New York City

The educational objects of the Society for Study of Blood are demonstrated. (*Booth 238*)

Promoting Better Relations Between the Doctors and the Public

Public and Professional Relations Bureau
Medical Society of the State of New York
New York City

This exhibit visualizes, by means of pictures and other illustrations, the Bureau's positive activities, which are being promoted to stimulate and help county medical societies as well as individual physicians in developing better relations between the medical profession and the people of New York State.

Voluntary Prepaid Blue Shield Medical Care Plans

Bureau of Medical Care Insurance

Medical Society of the State of New York
New York City

Two graphic exhibits illustrate the growth in membership and benefits paid to members for the period 1940 to 1953. Descriptive material of seven plans in New York State and the Eighth Annual Progress Report of the plans' activities regarding membership, earned premium income, utilization, claims, administrative costs, surplus, etc., will be presented.

Mezzanine

The New Journal

New York State Journal of Medicine
Medical Society of the State of New York
New York City

Official publication of the Medical Society of the State of New York, the New York State Journal of Medicine will present at its exhibit a display of the new cover and art work, the new typography and layout, and the new features now being introduced. Each member is invited to visit the Journal booth to receive a souvenir notebook for his use during the Annual Convention. A member of the Journal staff will be present to answer your questions and to discuss any suggestions you may offer for the continued improvement of your medical journal.

Ballroom Balcony

Booths 301 through 336

Arthropods of Dermatologic Interest

Orlando Canizares, M.D.
Harry Shatin, M.D. (*By invitation*)
Veterans Administration Hospital
Bronx

The knowledge of parasitology is important to physicians. In this exhibit the arthropods of dermatologic interest, especially Insecta and Arachnida, are presented and classified as to their family, genus, and species. Popular and scientific names are given. Representative illustrations of the various species will be shown. Diseases of dermatologic interest produced or transmitted by these arthropods will be indicated. (*Booth 301*)

Roswell Park Memorial Institute

George E. Moore, M.D.
Paul Zuckerman, B.S. (*By invitation*)
Buffalo

The expansion of facilities of the Roswell Park Memorial Institute, the New York State institute for the study of malignant diseases, is illustrated. Included are the recently completed patients' and administrative buildings, the existing research structures, and research buildings now under construction. A scale model of the patients' and research buildings is centered against a background of photomurals representing some of the clinical and research activities in progress at this Institute. Members of the staff will be present to explain the Institute policies of patient admission, treatment, and investigation. (*Booth 302*)

Chemotherapy of Renal Tuberculosis

John K. Lattimer, M.D.
Louis L. Spivack, M.D.
Francis J. Lovelock, M.D.
Veterans Administration Hospital
Bronx

Four hundred fifty-eight cases of genitourinary tuberculosis have been treated with streptomycin, PAS, isoniazid, or combinations thereof during the past seven years at the Research Unit for Genito-Urinary Tuberculosis.

The results with recent combined chemotherapeutic regimens have been very encouraging in this lethal disease. The operation of partial nephrectomy for tuberculosis is now practical. (*Booth 303*)

Dermatoses and Malignant Internal Tumors

Helen Ollendorff Curth, M.D.
College of Physicians and Surgeons of Columbia University
New York City

The association with internal adenocarcinoma makes acanthosis nigricans a valuable cancer clue. Knowledge of the association of other dermatoses with internal neoplasm may likewise be of help to tumor diagnosis. Such dermatoses are pruritus, urticaria, dermatomyositis, dermatitis herpetiformis, acquired ichthyosis, herpes zoster, erythema multiforme, erythema gyratum repens, pachydermoperiostosis, unilateral epidermal nevus (questionably), and cutaneous changes seen in association with intestinal polyposis. The type of internal tumor occurring in the various associations and the character of the relationship between the dermatosis and the tumor will be discussed. (*Booth 304*)

Papilledema: A Clinical and Pathologic Survey

Edwin Billet, M.D.
M. Harry Cohen, M.D.
Karl Rubner, M.D. (*By invitation*)
Montefiore Hospital
Bronx

A graphic comprehensive survey of papilledema will be presented. Correlation among fundoscopic appearance of the optic nerve head, blind spot measurements, and histologic sections of nerve and retina will be demonstrated. Etiology, pathogenesis, and differential diagnosis from a variety of ocular conditions will be portrayed. The material has been collected and classified from the neurologic and ophthalmologic services of Montefiore Hospital. (*Booth 305*)

Function of the Serratus Anterior: A Clinical Study of Chest Surgical Patients

Jacob Goldberg, M.D.
Harry B. Doppelt, B.S. (*By invitation*)
Veterans Administration Hospital
Castle Point

The exhibit is a pictorial abstract with comments of a published clinical study of tuberculous chest surgical patients in whom the function of the serratus anterior muscle was impaired. The types of surgery involved were thoracoplasty and partial scapulectomy. The study indicates that the serratus anterior is one of the more important muscles of the body. Without its function the shoulder girdle suffers greater disability than in the paralysis of any other single muscle. The exhibit contains some clinical material which has heretofore been little studied. (*Booth 306*)

Blindness in Preschool Children

Franklin M. Foote, M.D.
National Society for the Prevention of Blindness
New York City

Based on an analysis of diagnostic data on over 2,800 blind children under seven years of age, this exhibit will show the relative importance of various causes of blindness, and trends by causes, for 1950 compared with 1943. Retrolental fibroplasia in this age group now accounts for about 47 per cent of all blindness. (*Booth 307*)

Retrolental Fibroplasia in New York State

Commission for the Blind
New York State Department of Social Welfare
New York City

Statistical charts will give pertinent data on retrolental fibroplasia, based on ophthalmologic examination of known cases in New York State. (*Booth 308*)

Congenital Anomalies in the Rat Produced by Excessive Intake of Vitamin A During Pregnancy

Sidney Q. Cohlan, M.D.
New York University-Bellevue Medical Center
Beth Israel Hospital
New York City

The excessive intake of vitamin A during pregnancy in the rat is shown to reduce productivity and to exert a marked and reproducible teratogenic effect on litters that do reach term. The developmental abnormalities produced include exencephaly, cleft palate, spina bifida, eye malformations, and shortening of the mandible and maxilla. A total of 210 vitamin A-fed pregnant rats produced 148 offspring of which 77 exhibited gross congenital malformations, an anomaly rate of 52 per cent. One hundred controls produced 831 apparently normal offspring. The minimum dose necessary to produce deleterious developmental effects is 25,000 international units of aqueous vitamin A. The critical gestational period of administration is the seventh to the tenth day. (*Booth 309*)

Pitfalls in Tuboplastic Surgery Using Polyethylene

Abner I. Weisman, M.D.
Mortimer S. Weinstein, M.D.
New York Medical College, Metropolitan Hospital
New York City

Technics, important minor details of surgery, and pitfalls in technic using polyethylene tubing material will be illustrated. It is urged that polyethylene tubal implants be reserved for those with adequate experience in its use. (*Booth 310*)

Nephrotomography

John A. Evans, M.D.
James C. Monteith, M.D.
William Dubilier, Jr., M.D. (*By invitation*)
New York Hospital
New York City

Nephrotomography is a combination of rapid intravenous nephrography and body section radiography. It provides precise delineation of functioning renal parenchyma and has been found to be of considerable value in the differentiation of cysts from neoplasms. (*Booth 311*)

Pulmonary Complications of ACTH and Cortisone: Roentgen Observations

Israel Steinberg, M.D.
John A. Evans, M.D.
N. Finby, M.D. (*By invitation*)
New York Hospital
New York City

The pulmonary complications of ACTH and cortisone therapy may be classified as follows: (1) tuberculosis, miliary and pulmonary, (2) pulmonary congestions, (3) pulmonary infarction, and (4) pneumonitis of unknown etiology. Some of the significant biologic effects of these agents and the mechanisms of their production of pulmonary complications will be reviewed. (*Booth 312*)

Control of Post-thoracotomy Pain Chemical Hemostasis

Elgie K. Johnson, M.D.
Joseph L. Mangiardi, M.D.
St. John's Episcopal Hospital
Brooklyn

The mechanism of pain production, the prevention and control of pain, and the postoperative management of patients will be shown.

The vascularity of a thoracic incision and the various types of hemostasis, including our method of chemical hemostasis, will also be shown. (*Booth 313*)

The "Protein Profile" in Multiple Sclerosis

Bruno W. Volk, M.D.
Abraham M. Rabiner, M.D.
Abraham Saifer, M.S., Ch.E. (*By invitation*)
Irwin Oreskes, B.S. (*By invitation*)
Jewish Sanitarium and Hospital for Chronic Diseases
Brooklyn

In a study of the electrophoretic protein fractions in serum of 46 patients with typical multiple sclerosis, 87 per cent showed characteristic changes. Thirty-two (70 per cent) had a significantly decreased albumin and albumin-globulin ratio and increased alpha$_2$ and beta globulin fractions while the gamma globulins were slightly elevated or normal. Eight cases (17 per cent) demonstrated most but not all of these findings. In the cerebrospinal fluid 35 (78 per cent) showed an increase in the gamma globulin value, the gamma globulin to total protein ratio, or both. Repeat studies on 14 cases over a period of two to three years showed insignificant fluctuation of the "protein profile." (*Booth 314*)

Intramuscular Trypsin in Thromboembolic Disorders

Irving Innerfield, M.D.
Alfred Angrist, M.D.
Alfred W. Schwarz, M.D.
Jewish Memorial Hospital
New York City

Parenzyme in oil, a highly purified, nonirritating trypsin in oil preparation, has been used for 136 patients with acute thromboembolic disturbances. Excellent results were obtained in acute thrombophlebitis and pulmonary embolism of recent origin. In the thrombophlebitis series, comprising 94 patients, there was no mortality, and there was only one instance of pulmonary embolus which promptly cleared up on continual enzyme therapy. Indications, contraindications, and laboratory methods will be described. (*Booth 315*)

Prognostic Factors in Hodgkin's Disease

John A. Finkbeiner, M.D.
Lloyd F. Craver, M.D.
Memorial Center for Cancer and Allied Diseases
New York City

Two groups of patients with proved Hodgkin's disease are compared for clinically detectable features to assist in determining prognosis. One group died of Hodgkin's disease within six months of the first symptom; the second group survived more than ten years following substantiated tissue diagnosis. Age, sex, race, pathologic diagnosis, extent of disease, physical findings, hemoglobin, white blood count, eosinophils, and monocytic-lymphocytic ratio failed to give any clue to prognosis. (*Booth 316*)

When the Coagulation Time Is Prolonged

Martin C. Rosenthal, M.D.
Daniel Stats, M.D.
Stanley L. Lee, M.D.
Solomon Estren, M.D.
Frank Bassen, M.D.
Louis R. Wasserman, M.D.
Mount Sinai Hospital
New York City

Starting with the observation of a prolonged coagulation time, a detailed schema is presented, leading to the exact localization of the clotting defect. At each step critical tests and their interpretation are presented, all calculated to arrive at the ultimate diagnosis. The outstanding features of those clinical entities associated with a prolonged coagulation time are depicted leading to a true clinicopathologic synthesis of the available knowledge in these disorders. (*Booth 317*)

Pregnancy Wastage

Jules B. Aaron, M.D.
William Levine, M.D.
Leo Gitman, M.D.
Beth-El Hospital
Brooklyn

The results in a preconceptional survey of 56 couples with a history of habitual abortion, prematurity, stillbirths, and neonatal deaths are presented, including results from history, physical examination, sociologic study, genetic survey, endocrine assay, and genitourinary survey, with prostate and semen analysis in the male. In the female there are, in addition, the results of hysterograms and endometrial biopsies, with particular reference to glycogen excretion of the endometrial gland cells. (*Booth 318*)

Phase Microscopic and Electronmicroscopic Study of Human Spermatozoa

Meyer D. Schnall, M.D.
Mount Sinai Hospital
New York City

The basic principles of phase microscopy and electronmicroscopy and how they have added to our knowledge of the microscopic anatomy of human spermatozoa will be described. Detailed sketches and actual phase microphotographs and electronmicrophotographs will be shown to illustrate the fine detailed structures revealed by these instruments. These structures are (1) head—nucleus. nuclear shell, and galea capitis; (2) neck—double central filament; (3) body—double central filament, bulbous spiral coil, white cytoplasmic line, and terminal node; (4) tail—single fused central filament, fine filamentous coil, and (5) end-piece fibrils. (*Booth 319*)

Combination Therapeutic Tank and Pool

Samuel S. Sverdlik, M.D.
St. Vincent's Hospital
New York City

A model is displayed of a pool in use at St. Vincent's Hospital which combines the advantages of existing hydrotherapeutic tanks and pools in a single device. (*Booth 320*)

Medical Procedure in Workmen's Compensation

Willis M. Weeden, M.D.
New York State Workmen's Compensation Board
New York City

Exhibits of compensation procedure, the relationship of the physician to the case, the various steps followed illustrating the importance and urgency of the medical reports, and the interrelationship of (1) the attending physician, (2) the carrier's physician, (3) the State examiner, and (4) possible consultants are presented. A special exhibit relating the Disability Benefits Law to civil defense will be shown. Illuminated charts and photographs will illustrate pertinent points of the law. (*Booth 321*)

Mycotic Diseases: Clinical, Pathologic, and Laboratory Aspects

Erling S. Wedding, M.D.
Norwegian Lutheran Deaconess' Home
and Hospital
Brooklyn

Clinical pictures and gross and microscopic demonstration of chromoblastomycosis, blastomycosis, actinomycosis, histoplasmosis, and nocardiosis, together with illustrations of life cycle development and classification of mycologic structures by cultural characteristics and slide cultures, will be presented.

Central nervous system and systemic involvements, including lymphatic actinomycosis, with brief case history and treatment will also be presented. (*Booth 322*)

Indwelling Catheterization of the Umbilical Vein in Premature Infants

Harry D. Pasachoff, M.D.
Harry Wallerstein, M.D.
Laura G. Morgan, M.D. (*By invitation*)
Morrisania City Hospital
Bronx

In the lives of small premature infants, the first few days are critical for survival. Technical difficulties have precluded the use of the intravenous route to supply nutritive fluids or medication. This exhibit will demonstrate that a polyethylene tube can be left in the umbilical vein of small premature infants for many days without harm and freely permit the continuous or repeated administration of nutritive fluids and medication, while at the same time permitting the withdrawal of blood for chemical study. The umbilical vein is a readily accessible channel. The method is described, and 18 cases are presented. (*Booth 323*)

New Self-Retaining Retractors and Hemostatic Suction in Operative Gynecology

Robert J. Lowrie, M.D.
St. Vincent's Hospital
New York City

New sliding hinge, self-retaining abdominal or vaginal retractor: The removable blades on universal joints and the sliding hinge permit almost unlimited adjustability with maintenance of exposure of any point in the abdominal or vaginal cavity of any size. Made in four sizes.

New self-retaining, combined anteroposterior and lateral vaginal wall retractor-speculum: Any point in vagina of any size can be maintained exposed. Chiefly for diagnosis but also for minor surgery, this instrument is made in two or three sizes.

New self-retaining vulva retractor: Any point can be kept exposed for diagnosis or surgery.

New hemostatic sucker: Simultaneously clears and prevents more blood from entering operative field. (*Booth 324*)

Preventive Ophthalmology

Isadore Givner, M.D.
Bernard Kronenberg, M.D.
New York University-Bellevue Medical Center
New York Eye and Ear Infirmary
New York City

Each of a series of panels, with photographs in color, is addressed to general practitioners and to specialists in a particular field. The material on these panels calls to the attention of these physicians various problems and measures in which they can cooperate with the ophthalmologist to prevent loss of vision. (*Booth 325*)

The Physician's Responsibility in the Prevention of Traffic Accidents

Cary N. Moon, Jr., M.D., (*By invitation*)
Charlottesville, Virginia

The responsibility of the physician in advising his patient about driving or not driving a motor car is emphasized. Diseases of the nervous system, cardiovascular diseases, abnormalities of the special senses, and physical conditions that may raise the question as to advisability of driving are presented. The advisability of driving after administration of certain drugs is likewise shown. (*Booth 326*)

Surgical Emergencies of Infancy and Childhood

Ernest E. Arnheim, M.D.
Beth-El Hospital
Beth Israel Hospital
Mount Sinai Hospital
New York City

Experiences in three general hospitals in the management of 300 cases of 19 types of surgical emergencies of the newborn period, infancy, and childhood will be presented. The conditions were classified according to age groups. The pathologic and clinical features, diagnosis, treatment, and results will be reviewed and illustrated. (*Booth 327*)

Fresh Frozen Plasma for Hemophilia

JACOB GEIGER, M.D.
EUGENE M. KATZIN, M.D. (*By invitation*)
Blood Transfusion Association
Hemophilia Foundation
New York City

Steps in the preparation of fresh frozen plasma, beginning with screening and examination of donors, to finished product will be shown. Instructions for thawing and administration will be given. (*Booth 328*)

Roentgen Findings in Sprue

RICHARD H. MARSHAK, M.D.
BERNARD S. WOLF, M.D.
DAVID ADLERSBERG, M.D.
ABRAHAM I. FRIEDMAN, M.D. (*By invitation*)
Mount Sinai Hospital
New York City

Forty cases of sprue were studied with repeated small bowel examinations before and after therapy with antianemic and steroid preparations. The roentgen findings in 70 per cent of the cases were characteristic, consisting of initial dilatation of the jejunum, delayed segmentation, evidence of disturbed motor function, and increased secretions. Because the roentgen pattern is characteristic in such a large majority of cases, the term "sprue pattern" has been used to describe the above findings rather than the nonspecific, meaningless term "deficiency pattern." The roentgen evidence of improvement was striking in some cases; in most cases, however, the clinical improvement is not reflected at the present time by alteration of the sprue pattern. Films demonstrating the above findings will be shown; differential diagnosis will also be included. (*Booth 329*)

Malignant Tumors Induced in Rodents by Embedding Plastics

B. S. OPPENHEIMER, M.D.
ARTHUR PURDY STOUT, M.D.
ENID T. OPPENHEIMER, B.S. (*By invitation*)
I. DANISHEFSKY, PH.D. (*By invitation*)
College of Physicians and Surgeons of Columbia University
New York City

Charts will show the types of malignant sarcomas induced by embedding various plastics (polymers) in rodents. The number of tumors produced with each of the following plastics will be given: cellophane, dacron, Kel-F, nylon, polyethylene, polystyrene, polymethyl-methacrylate, polyvinvyl chloride, silastic, teflon, and pliofilm. A chart will show the chemical formulas and related data of the various plastic films employed. Surgeons and surgical specialists are inserting similar plastics in human beings for various purposes, but so far there is no record of a malignant tumor induced in man by embedding a plastic. (*Booth 330*)

Low Back Syndrome Associated with Lesions in the Dorsal Vertebrae

CHARLES J. SUTRO, M.D.
DAVID E. EHRLICH, M.D.
Veterans Administration Regional Office
Brooklyn

The purpose of this exhibit is to stress the value of radiographing dorsal vertebrae, as well as taking the routine radiograms of lumbar and pelvic bones, in all low back disorders. In our experience segmental radiographic studies which include only the lumbar vertebrae and pelvic bones have resulted in misinterpretation and in faulty diagnosis of low back disorders. A few illustrative cases will be demonstrated to emphasize these points. (*Booth 331*)

The Rehabilitation of the Disabled Person from Bed to Job

ROBERT C. DARLING, M.D.
College of Physicians and Surgeons of Columbia University
WILLIAM B. SNOW, M.D.
Presbyterian Hospital
EDWARD E. GORDON, M.D.
Institute for the Crippled and Disabled
New York City

Coordinated activities in patient services, teaching, and research, as carried out at the three affiliated institutions, will be described. Dynamic concept of patient care is considered under the headings, early care, resumption of activity, and assumption of physical and vocational independence. (*Booths 332 and 333*)

The Use of Autonomic Blocking Agents in Cardiovascular Diseases

MARVIN MOSER, M.D.
EDMUND H. REPPERT, M.D. (*By invitation*)
ANDREW G. PRANDONI, M.D. (*By invitation*)
THOMAS W. MATTINGLY, M.D. (*By invitation*)
Walter Reed General Hospital
Washington, D.C.

Results of comparative studies with hexamethonium, dibenzyline, and intra-arterial Priscoline on blood flow, skin temperature, and vasomotor responses in a series of patients with peripheral vascular disease are presented. An appraisal is made of the use of these agents in the treatment of conditions associated with (1) increased vasomotor tone, (2) the postfrostbite syndrome, (3) organic vascular disease, and (4) post-traumatic causalgia.

Results obtained in a series of patients with essential, renal, and malignant hypertension who have been treated for from three months to over two years with hexamethonium, Apresoline, and the Rauwolfia derivatives, either alone or in combination, are summarized.

The presently available agents that are useful in the diagnosis of pheochromocytoma are reviewed. Special emphasis is placed on the correct interpretation of these tests and the so-called "false positive" and "false negative" tests. (*Booth 334*)

The Roentgen Therapy of Deep-Seated Cancer: A Modern Planning System

Bernard Roswit, M.D.
Gustave Kaplan, M.D.
Elaine Rosen, B.A. (*By invitation*)
Veterans Administration Hospital
Bronx

The exhibit presents a concept of an ideal roentgen therapy planning system for deep-seated cancer which would utilize the substantial advances made in the past several years in tumor localization, radiation physics, dosage determination, precisional beam direction, mould technology, rotation therapy, and methods of evaluating results. This system is considered to be clinically practicable, widely applicable, and relatively inexpensive. It provides a means for utilizing and incorporating to full advantage future developments in the roentgen therapy of deep-seated cancer. Just as in modern cancer surgery, there is no excuse for a quality of modern radiotherapy technic which falls in any way short of the highest achievement attained. (*Booth 335*)

A Bacteriologic and Epidemiologic Approach to the Treatment of Sinorespiratory Infections

Samuel J. Prigal, M.D.
New York Medical College, Flower and
Fifth Avenue Hospitals
New York City

A five-year study, clinical and experimental, of sinorespiratory infections and their treatment with antibiotics will be presented. Cultures from 651 patients yielded 1,958 organisms. Yearly variations of organisms are noted, along with yearly responsiveness to in vitro action of antibiotics. Advantages and limitations of in vitro inhibition testing are listed. Bacteriologic studies of family groups highlight intrafamiliar contagion. Reinfection from skin, eye, and ear is demonstrated.

Experimental studies demonstrate the efficiency of seven antibiotics in various combinations. The antibiogram is a graphic presentation of such action. Experimental and clinical development of resistance to antibiotics is demonstrated. The dynamics of chronic and recurrent sinorespiratory infection is depicted along with necessary therapeutic procedures. (*Booth 336*)

The Doctor in Civilian Defense

J. G. Fred Hiss, M.D., *chairman*
Medical Society of the State of New York,
Medical Defense Committee
Health Department of the State of New York,
Medical Advisory Committee

Emergency medical supplies and training aids for the medical defense program will be exhibited. Included will be the completely packaged State Aid Station Outfit (SASO) being stockpiled by the State of New York; individual items of the aid station supplies—instruments, bandages, splints, blood plasma or extender facilities and supplies, litter cots, message forms, emergency medical record forms, antibiotics, etc.; manuals, flip charts, instructor lesson plan books, and visual aids.

SCIENTIFIC MOTION PICTURES

Tuesday, May 11, through Friday, May 14

Boston Room, Hotel Statler

Colgate Phillips, M.D., *Chairman*, Bronxville
E. Dean Babbage, M.D., Buffalo
William P. Corriero, M.D., Brooklyn
Felix Ottaviano, M.D., Oneida
Leo Schwartz, M.D., New York City
Robert L. Yeager, M.D., Pomona

Since several films are still in process of production, the details and timing of the program are not yet available but will be published in the Convention Program.

Through the cooperation of Mr. Joseph Hackel, president of the Medical Film Guild, Ltd., an interesting and varied program is being offered. With his excellent films as a basis, a search has been made for new films with new subject matter. It is hoped that a sizable number of these will come from the members in the future. This year we have already available the following new productions:

1. **Thiersch Operation for Massive Rectal Prolapse and Anal Incontinence**

   Robert Turell, M.D., New York City

   Committee Report: "Excellent photography, concisely presented, modern technic, of general surgical interest, A.C.S. approved."

2. **Radical Surgery of the Head and Neck**

   Martin J. Healy, Jr., M.D., Bronxville

   Committee Report: "Superb photography, excellent clarity and brevity, classic modern technic, of wide surgical interest, A.C.S. approved." Also won first award in Documentary Class at International Film Festival in Venice, Italy, June, 1953.

3. **Hemimandibulectomy and Immediate Restoration with Acrylic Implant**

   Martin J. Healy, Jr., M.D., Bronxville

   Committee Report: "Same excellent technical caliber, clarity, brevity, and teaching value as preceding film. Somewhat less general interest, but stimulating ideas, technic, and presentation."

4. **Injured Can't Wait**

   New York State Civil Defense Film

   Committee Report: "Professional filming. Well-presented summary of medical plans in case of atomic attack. A must for all physicians."

5. **Rheumatoid Disorders—Pharmacology and Clinical Evaluation of a Modern Therapeutic Agent**

   Medical Film Guild, Ltd.

   Committee Report: "Film not reviewed. Subject matter of general medical interest."

6. **Arterial Insufficiency in the Extremities—Physiology, Diagnosis, and Treatment**

   Medical Film Guild, Ltd.

   Committee Report: "Not reviewed. Excellent subject, of general medical interest"

Woman's Auxiliary

to the MEDICAL SOCIETY OF THE STATE OF NEW YORK

18TH ANNUAL CONVENTION

Hotel Statler, New York City—May 9 to 13, 1954

Program

Sunday, May 9

5 P.M.—8 P.M.	Registration—*Washington Room Foyer, Mezzanine* Delegates, Alternates, Guests, Social Functions
8 P.M.—10 P.M.	Reception—*Washington Room, Mezzanine*

Monday, May 10

8:30 A.M.—4:30 P.M.	Registration—*Skytop Foyer, 18th Floor* Delegates, Alternates, Guests, Social Functions
9 A.M.—12 NOON	Round Table Discussions—*Skytop, 18th Floor*
9:30 A.M.—11 A.M.	Board of Directors Meeting—*Washington Room, Mezzanine*
1 P.M.—3:30 P.M.	House of Delegates—*Skytop, 18th Floor*
4 P.M.—6 P.M.	Tea honoring past presidents of the Woman's Auxiliary to the Medical Society of the State of New York—*Skytop, 18th Floor*

Tuesday, May 11

8:30 A.M.—4:30 P.M.	Registration—*Skytop Foyer, 18th Floor* Delegates, Alternates, Guests, Social Functions
9 A.M.—12 NOON	House of Delegates—*Skytop, 18th Floor*
12:30 P.M.—3:30 P.M.	Luncheon honoring Mrs. Thomas M. d'Angelo, president, Woman's Auxiliary to the Medical Society of the State of New York—*Skytop, 18th Floor*
3:30 P.M.—5:30 P.M.	House of Delegates, *Skytop, 18th Floor*

Wednesday, May 12

8:30 A.M.—10:30 A.M.	Registration—*Skytop Foyer, 18th Floor* Delegates, Alternates, Guests, Social Functions
9 A.M.—12 NOON	House of Delegates—*Skytop, 18th Floor*
1 P.M.	Luncheon—*Place to be announced*
7 P.M.	Dinner Dance—*Penn Top, 18th Floor*

Thursday, May 13

9:30 A.M.	Postconvention Meeting of the State Officers and Chairmen, County Presidents, and Presidents-Elect—*Hospitality Room* Board of Directors Meeting—*Hospitality Room*

Officers

President, Mrs. Thomas M. d'Angelo, Flushing
President-Elect, Mrs. Arthur L. Bennett, Buffalo
First Vice-President, Mrs. John L. Mason, Pulaski
Second Vice-President, Mrs. Alfred S. Grussner, Schenectady
Treasurer, Mrs. Arthur F. Holding, Albany
Recording Secretary, Mrs. Albert Vander Veer II, Albany
Corresponding Secretary, Mrs. Ezra A. Wolff, Forest Hills

Convention Committee

Chairman, Mrs. Colgate Phillips, Bronxville
Cochairman, Mrs. Walter T. Heldmann, Staten Island

WOMEN'S MEDICAL SOCIETY OF NEW YORK STATE

Annual Meeting

Sunday, May 9

4 to 6 P.M. President's Tea, Home of Dr. Helen Miller, 375 Park Avenue, New York City

Monday May 10

Hotel Statler, New York City

9 A.M. Business Meeting, *Parlor A, Ballroom Floor*
12 NOON Luncheon, *Parlor A*
2 P.M. Scientific Meeting, *Parlor A*
7 P.M. Dinner Meeting, *Parlor A*

Officers

Honorary Presidents

Mary T. Greene, M.D.
Helene J. C. Kuhlmann, M.D.
Rosalie Slaughter Morton, M.D.

President

S. Elisabeth Vuornos, M.D.
12 Chestnut St., Liberty

Vice-Presidents

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391 Jersey St., Buffalo
Myrtle Wilcox-Vincent, M.D.
134 Main St., Binghamton
Isabel M. Scharnagel, M.D.
139 E. 36th St., New York City

Secretary

Anna Samuelson, M.D.
1455 Sheridan Ave., New York City

Treasurer

Marian Walsh Schierer, M.D.
361 Porter Ave., Buffalo

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48 E. 62nd St., New York City

2nd District Branch

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83-09 35th Ave., Jackson Heights

3rd District Branch

Matie E. Green, M.D.
11 South Lake Ave., Albany

4th District Branch

Mary H. Rowley, M.D.
1520 Union St., Schenectady

5th District Branch

Marguerite McCarthy-Brough, M.D.
1811 W. Genesee St., Syracuse

6th District Branch

Margaret Vencko, M.D.
88 Oak St., Binghamton

7th District Branch

Julia A. Delehanty, M.D.
41 Main St., Geneseo

8th District Branch

Hariet Hosmer, M.D.
333 Linwood Ave., Buffalo

Honorary Councillors

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Clara H. Pierce, M.D.
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Marguerite P. McCarthy, M.D.
Theresa Scanlan, M.D.
Helen G. Walker, M.D.
Adelaide Romaine, M.D.

Honorary Members

Judge Dorothy Kenyon
Catherine Macfarlane, M.D.

CHAIRMEN OF COMMITTEES

Scientific Program

Harriet Hosmer, M.D.
333 Linwood Ave., Buffalo

Legislative

Lois Plummer, M.D.
131 Linwood Ave., Buffalo

Mary T. Greene, M.D.
Sanitarium, Castile

Public Health

Sophie Rabinoff, M.D.
166 E. 96th St., New York City

Public Relations

Leoni Claman, M.D.
40 E. 88th St., New York City

Membership

Marguerite P. McCarthy-Brough, M.D.
1811 W. Genesee St., Syracuse

Resolutions

Helen L. Miller, M.D.
375 Park Ave., New York City

Medical Economics

Florie D. Frothingham, M.D.
133 E. 58th St., New York City

Arrangements

Annabel B. Miller, M.D. (Buffalo)
14 Highgate Ave., Buffalo
Gertrude Felshin, M.D. (New York)
888 Park Ave., New York City

Publicity

Elizabeth P. Olmsted, M.D. (Buffalo)
568 Lafayette Ave., Buffalo
Adelaide Romaine, M.D. (New York)
35 W. 9th St., New York City

Do You Have Your Hotel Reservation for the Annual Meeting?

If you do not now have a confirmed hotel reservation in New York City for the Annual Meeting of the Medical Society of the State of New York, May 10 to May 14, 1954, at the Hotel Statler, please fill out and mail the reservation form at the bottom of this page, and send it directly to the Hotel Statler.

Should your reservation be received after the five hundred rooms set aside for the Society at the Hotel Statler have been assigned, your reservation will be turned over to one of the hotels in the neighborhood. Confirmation of your reservation will come to you direct from the hotel making the accommodation.

If you do not use the reservation form below, be sure to identify yourself as a physician when writing regarding reservations. This will insure proper attention to your request.

W. P. Anderton, M.D., *Secretary*

All Reservations Must Be In By April 20

148th Annual Meeting of the Medical Society of the State of New York, May 10 to May 14, 1954

Front Office Manager
Hotel Statler, New York 1, New York
Please reserve accommodations as checked (√) below:

Name (*Please Print*)..
Address..
City...State..................
(Unless requested otherwise, we will hold your reservation until 6 P.M. of the day of your arrival.)
Date arriving......................Hour..............A.M........P.M........

Room and Bath for one—per day			$ 6.00☐ 7.00☐	$ 8.00☐ 9.00☐	$10.00☐ 11.00☐
Double-Bed Room with Bath for two—per day		$ 8.00☐	9.00☐ 10.00☐	11.00☐ 12.00☐	13.00☐ 14.00☐
Twin-Bed Room with Bath for two—per day	$10.00☐	11.00☐ 12.00☐	13.00☐ 14.00☐	15.00☐ 16.00☐	17.00☐ 18.00☐
Suite—Living Room, Bed Room, and Bath			25.00☐	26.00☐	27.00☐

More Than Two Persons in One Room: For each additional person in Double- or Twin-Bed Room, the extra charge is $3.00 per day.

If a room at the rate requested is unavailable, reservation will be made at the next available rate.

TECHNICAL EXHIBITS

This year the technical exhibits will again be located in the main ballroom, the ballroom foyer, ballroom corridor, and main mezzanine of the Hotel Statler. They will begin close to the registration desk at the head of the mezzanine and will be available as you make your way toward other features of the 148th Annual Convention. Exhibits of varied and unusual interest will be found, and many items to be shown are brand new and may be seen here for the first time. These displays will cover the medical field from the latest pharmaceuticals to the most advanced surgical and x-ray equipment.

Abbott Laboratories, North Chicago, Illinois (Booths 90 and 91), will exhibit Erythrocin (erythromycin, Abbott) and Nembutal (pentobarbital, Abbott). Erythrocin is the new selective antibiotic which is effective orally against a wide variety of organisms, especially gram-positive ones. Erythrocin does not materially alter normal intestinal flora, and gastrointestinal disturbances are rare. No serious side-effects have been reported. Nembutal is Abbott's short-acting barbiturate for oral, rectal, or intravenous use.

The Alkalol Company, Taunton, Massachusetts (Booth 59), will feature Alkalol, the balanced, alkaline, saline solution for the treatment of mucous membranes and irritated tissues. It is bland, nontoxic, and effective and has been a favorite since 1896. We are also showing Irrigol, a powder which in solution makes an aseptic, slightly astringent vaginal douche. It is widely used also for colonic irrigations and as an effective rectal enema.

American Hospital Supply Corporation, Evanston, Illinois (Booth 105), will have on display the complete line of Baxter intravenous solutions and accessory sets, including the new electrolyte solutions, as well as Gentran, an effective, proved plasma volume expander for use in the treatment of shock, and the new Plexitron Blood Pump for safe, rapid pressure transfusions with expendable equipment.

American Journal of Medicine, New York City (Booth 128). The "Green Journal" cordially invites you to visit its booth to see what is new in medicine. During the first half of 1954, the *Journal* is presenting seminars on liver disease, and the May issue will be a symposium on epidemic hemorrhagic fever. The *Journal* also continues to report the latest findings from the leading medical schools and hospitals. It is actively staffed by 24 professors of medicine.

Ames Company, Inc., Elkhart, Indiana (Booth 93), will feature Apamide (N-acetyl-p-aminophenol, Ames), a prescription analgesic with rapid and prolonged antipyretic action; Apromal combines a nonnarcotic, nonbarbiturate sedative with Apamide; Apamide-Ves is a buffered analgesic-antipyretic in a pleasant and refreshing effervescent form.

The Armour Laboratories, Chicago, Illinois (Booths 11 and 12), exhibit features HP Acthar Gel, Tryptar, Crystamin, Armatinic Capsulettes and Armatinic Liquid, and Thyrar. Armour Laboratories representatives will be glad to discuss the latest developments in these products with you.

Association of American University Presses, New York City (Booth G-137). Distinguished for authoritative content and excellence of editorial work, the books of university presses claim an enviable rank among nonfiction and technical publications. The Association of American University Presses has arranged a cooperative exhibit for your convenience and enjoyment at this meeting. It also provides you with the opportunity to purchase some of these important titles for your library.

Aveeno Corporation, New York City (Booth 106). Three valuable products for the treatment of everyday skin problems are featured: Aveeno Colloidal Oatmeal for generalized dermatoses, the advanced technic in colloid bath therapy; Aveeno Skin Cleanser, the colloidal nonsudsing soap-substitute made with Aveeno Colloidal Oatmeal; Bur-Veen, the new wet dressing preparation that combines the recognized therapeutic action of Burow's solution with the soothing, skin-protective effect of Aveeno Colloidal Oatmeal.

Ayerst Laboratories, New York City (Booth 57), cordially invite you to visit their exhibit where their representatives will be on hand to greet you and discuss any of their products in which you may be particularly interested. Literature will be available on Thiosulfil, Premarin with Methyltestosterone, and Mediatric, as well as on the other items in their line of prescription specialties.

Baby Development Clinic, Maternity Counselling Service, Chicago, Illinois (Booth 34), offers demonstration material to aid in teaching expectant mothers: care and support of breast; support of abdomen and relief of back strain; personal cleanliness. Preparation for infant and child care aids on bathing, feeding, toileting, as well as care of feet. Material also available for well-baby conferences.

The Baker Laboratories, Inc., Cleveland, Ohio (Booth 70). You are invited to visit the booth where Baker's Modified Milk and Varamel, two successful products for infant feeding, are on display. Baker representatives will be glad to discuss with you the practical application of Grade A milk, adjusted fat composition, zero curd tension, synthetic vitamins, and other important factors which help to eliminate many of the problems in modern infant feeding.

W. A Baum Company, Inc , Copiague, New York (Booth 13). Sphygmomanometry—all models of the Lifetime Baumanometer will be displayed and demonstrated. Physicians will be particularly interested in the Wall Model for any central examining place and the Standby Model for the busy doctor's office. Representatives will be on hand to discuss individual problems of blood pressure measurement.

J. Beeber Company, Inc., New York City, Philadelphia (Booths 1 and 2), invites members of the medical profession to inspect the latest models of the following apparatus: Mattern X-Ray, Raytheon Microtherm Radar Diathermy, Beck-Lee Cardi-all direct-writing EKG, Dallons Medi-Sonar Ultra Sonic Generator, Beekon Portable Whirlpool Bath, and McKesson BMR. Capable representatives will be glad to demonstrate and discuss this equipment at our booths (near Registration Desk).

Beech-Nut Packing Company, Inc., New York City (Booth 104). Have you used Beech-Nut Strained and Junior Foods for your geriatric as well as your pediatric patients? Beech-Nut nutritionists will be present to answer any questions you may have regarding the products available for special feeding.

Bilhuber-Knoll Corporation, Orange, New Jersey (Booth 82), invite you to visit their booth for the latest information on Tensodin in coronary insufficiency, oral Metrazol in physical and mental retrogression in the aging, Valoctin in dysmenorrhea, and Quadrinal in chronic asthma. Your discussions on these and their other prescription chemicals, Bromural, Dilaudid, Octin, Theocalcin, etc., will be welcomed.

Ernst Bischoff Company, Ivoryton, Connecticut (Booth 74), will exhibit Aminet Suppositories and My-B-Den. Aminet Suppositories have as their base the newly developed Aminet base which is notably nonreactive so that the full potency and therapeutic efficacy of the active ingredients are always insured. They melt readily after insertion and quickly release their active ingredients for rapid absorption. My-B-Den, adenosine-5-monophosphate, is indicated in varicose vein complications and bursitis. Information, literature, and reprints on these products will be available at the booth.

The Borden Company, New York City (Booth 99). There's no better place to talk over the latest information on infant feeding than the Borden Prescription Products booth. On display is the complete line of Borden's infant formula products for every feeding purpose or preference. You can feed almost any baby Bremil, Mull-Soy, Dryco, or Biolac.

George A. Breon & Company, New York City (Booth 45), extend a cordial invitation to all convention members to visit their exhibit on Lanteen products. Representatives will be on hand to discuss Lanteen's well-known gynecologic specialties.

Brewer & Company, Inc., Worcester, Massachusetts (Booth 22). This exhibit consists of specialties centering around Thesodate, the original enteric-coated tablet of theobromine sodium acetate; also, Brewer Capsules and Ampuls, other specialties including Soduxin (sodium succinate, Brewer), and standard pharmaceuticals manufactured by Brewer & Company, Inc., including a complete line of vitamin preparations for internal use and injection. Gel-Ets, the newest mode in oral vitamin therapy; Luasmin, a combination of theophylline sodium acetate, ephedrine sulfate, and phenobarbital sodium for the treatment of bronchial asthma; and Amchlor, enteric-coated, 1-Gm. tablets of ammonium chloride, are also featured. In addition, the Company's representatives will feature Asteric, a special enteric-coated aspirin for massive dosages, and the two newest Gel-Ets PHOB (phenobarbital), and diethylstilbestrol in various strengths. Literature is available on the new Brewer specialties, injectable quinidine hydrochloride; Sus-Phrine, aqueous suspension of epinephrine 1:200 for subcutaneous injection in the treatment of asthma; Kaolose, a mixture of kaolin and methylcellulose for the management of irritable bowel, whether accompanied by diarrhea or constipation; and Novapan Drops, a water-miscible multivitamin drop.

VICEROY
Filter Tip
CIGARETTES
KING-SIZE

Brown & Williamson Tobacco Corporation, Louisville, Kentucky (Booth 129), will exhibit Viceroy cigarets. The exclusive Health-Guard Filter Tip in the Viceroy king-size cigaret provides beneficial protection to the smoker against nicotine and tars. Convincing proof of the unique advantages of this Health-Guard Filter will be of real interest to members and guests who visit the Viceroy exhibit.

The Burdick Corporation, New York City (Booth G-145), will have on display the latest direct-writing electrocardiograph apparatus as well as ultrasonic apparatus used for medical purposes together with shortwave and various other items of physical medicine apparatus.

Burroughs Wellcome & Company (U.S.A.) Inc., Tuckahoe, New York (Booth 49). This exhibit will feature Marezine Hydrochloride brand cyclizine hydrochloride, which controls nausea and vomiting of pregnancy, motion sickness, vertigo, and radiation sickness without inducing drowsiness. Syrup of Antepar Citrate brand piperazine citrate eradicates pinworms and is pleasant to take. Tricoloid brand tricyclamol, compressed, sugar-coated, is a new anticholinergic for relief of hyperacidity, functional diarrheas, and gastrointestinal spasm.

Cambridge Instrument Company, Inc., New York City (Booths 123 and 124). In the Cambridge booths you will find the well-known Cambridge Simpli-Scribe Model Direct-Writing Portable Electrocardiograph, the Cambridge Standard String Galvanometer Electrocardiograph, both in the Simpli-Trol Portable and the Mobile Model Electrocardiograph-Stethograph with Pulse Recorder. Also exhibited will be several other important Cambridge instruments including Operating Room Cardioscope, Educational Cardioscope, Multi-Channel Direct-Writing Recorder, Special Catheterization Recorder and Monitor, Electrokymograph, Plethysmograph, and pH Meter. The Cambridge engineers in attendance will be glad to discuss your problems and make recommendations accordingly.

Carnation Company, Los Angeles, California (Booth 40), cordially invite you to visit our booth where you will see a series of translites on our canning and sterilization process. Carnation medical specialists will explain our sole processing and give you reasons why Carnation Milk deserves consideration as your first choice in infant feeding formulas.

Cameron Surgical Specialty Company, New York City (Booth 113). The Cameron exhibit this year is most interesting. See the unusual instruments for both diagnosis and treatment. More expensive, of course, but worth it. See what you could do in your own office, for example, with a 10-pound radio knife, and get faster healing and better end-results.

Chicago Pharmacal Company, Chicago, Illinois (Booth 68), manufacturers of quality pharmaceuticals for over half a century, welcome your visit to our booth which features a-Estradiol injectables; Calcium Levulinate ampules; diethylstilbestrol tablets; Metystil tablets combining methyltestosterone and diethylstilbestrol for balanced hormonal therapy; and Katrasul, tablet and liquid forms of quadruple sulfonamides.

Ciba Pharmaceutical Products, Inc., Summit, New Jersey (Booth 56), will feature Serpasil, a pure crystalline alkaloid of Rauwolfia which usually produces mild, gradual sustained lowering of blood pressure with a slowing of the pulse rate. Representatives in charge of the Ciba booth will be pleased to discuss the role of Serpasil in the treatment of hypertension and to furnish literature on this new drug.

The Coca-Cola Company, Atlanta, Georgia (Booth 133). Ice cold Coca-Cola will be served through the courtesy and cooperation of the Coca-Cola Bottling Company of New York, Inc., and the Coca-Cola Company.

Coles Electronic Corporation, Philadelphia, Pennsylvania (Booth 60), will exhibit a full complement of surgical equipment of advanced design. Included are precision cutting instruments, both portable and floor models, which permit the use of varied electronic surgical methods to meet the exacting surgical needs of the general practitioner, gynecologist, or proctologist including certain major surgery interventions. See the portable Radiosurg Scalpel, and the new Radiotome, a semihospital combination tube and gap-type cutting unit, which employs a dual foot pedal control and is amply powered to meet the requirements for a moderate sized operating room unit.

Coreco Research Corporation, New York City (Booth G-141). The Coreco Camera is designed to photograph all surface areas of the body from 1 to 1 closeup pictures to half-body size and all cavities of the human body, such as mouth, throat, ear, nose, vagina, and rectum. The camera carries its own specially developed, full-color corrected bulb and a mechanism for complete control of its color temperature and exposure within the camera itself. There is an automatic view-finder synchronized with the automatic camera mechanism to permit viewing until a fraction of a second before exposure. The camera provides for automatic focusing.

Curvlite Surgical Products, Division of Mastercraft Plastics Company, Jamaica, New York (Booth 35), serving the medical profession for over a quarter of a century, will exhibit new plastic development at this meeting and will feature a new design in baby heating incubators; Monocide, a new sterilization product; also a complete line of pessaries, splints, thermometer holders, sippers, hot or cold packs, and masks.

Dairymen's League Cooperative Association, Inc., New York City (Booth 36), will feature Dairylea Milk and Milk Products, produced and distributed by this Cooperative and readily identified by the large Dairylea name in blue and cream on the booth backdrop. Dairylea products range from homogenized vitamin D milk to fat-free milk, and include cottage cheese, sour cream, chocolate drink, and at the booth you will find samples of Dairylea's famous New York State cheddar cheese.

Davies, Rose & Company, Limited, Boston, Massachusetts (Booth 125), cordially invite members of the Society to visit our booth. Although most physicians need no introduction to our outstanding cardiac therapies, Pil. Digitalis and Tablets Quinidine Sulfate, Natural, our representatives will be on hand to greet you and to explain the dependability of this firm's productions.

The Denver Chemical Mfg. Co., Inc., New York City (Booth 15), will feature Dencotar Ointment and Dencotar Shampoo. Dencotar products contain specially processed crude coal tar free of inert sludge and low molecular irritants in irradiated vegetable oil containing ozonides. Dencotar Ointment has a cosmetic type base. It is nongreasy. Dencotar

Shampoo contains specially processed crude coal tar in a castile soap base. Samples and literature available at this booth.

Desitin Chemical Company, Providence, Rhode Island (Booth 83). Desitin Ointment is the pioneer in external cod liver therapy. Indications are diaper rash, slow healing wounds, burns of all degrees, lacerations, hemorrhoids, and fissures. Desitin Powder is a unique, dainty medicinal powder saturated with cod liver oil. Desitin Hemorrhoidal Suppositories with Cod Liver Oil coat anorectal area with soothing, lubricating cod liver oil, give prompt relief of pain, allay itching. Desitin Lotion, the original cod liver oil lotion, soothing, protective, mildly astringent and healing, is used in nonspecific dermatitis, pruritis, poison ivy, etc.

Devereux Schools, Santa Barbara, California, and Devon, Pennsylvania (Booth 3), provide physicians with complete facilities for the children presenting educational and emotional difficulties. Fifteen Devereux Schools in Pennsylvania, as well as the Devereux Ranch School in California, offer a controlled environment and modern training designed for the specific needs of each child. Resident psychiatric, medical, and psychologic personnel, cooperating with the referring physician, provide facilities for student evaluations, integrated programs, and, where indicated, individual and group psychotherapy.

The Dietene Company, Minneapolis, Minnesota (Booth 16). Visit our exhibit and examine the free Diet Service for physicians. The diets are nutritionally well-balanced, easy to follow, and made to appear as if they were typed in your office. Meritene, the economical and palatable whole protein supplement, and Dietene, the Council-accepted reducing supplement, will be on display.

Doak Pharmacal Company, Inc., New York City (Booth 61), the original house devoted solely to perfecting dermatologic products for the medical profession, from its more than a quarter century of experience has developed a three-way complete topical therapy for acne vulgaris based on time-tested and proved ingredients in their most modern form, a wet dressing therapy with plus qualifications. Doak representatives will be happy to exhibit these and other developments at your convenience.

Doho Chemical Corporation, New York City (Booths 75 and 76), exhibits Auralgan, the time-honored decongestant and pain reliever in otitis media, also for removal of cerumen; Rhinalgan, the equally safe nasal decongestant for infants and the aged; New Otosmosan, the fungicidal and bactericidal ear medication. Mallon Chemical Corporation, a subsidiary, features Rectalgan, the liquid topical anesthesia for relief of pain and discomfiture in hemorrhoids, pruritus, and perineal suturing.

Dome Chemicals Inc., New York City (Booth 98). High-potency vitamin A applied topically inhibits scaliness, fissuring, and cracking of the skin. Exhibited here singly and in combination with Estrone U.S.P. and Neomycin are Vi-Dom-A Creme (in two concentrations), Es-A-Creme, and Es-A-Mycin Creme. Acid Mantle Creme, the solid antiphlogistic buffered at pH 4.2, is recommended for all cutaneous inflammations regardless of cause. Traditional therapy of the Chamomile Flower is represented in a buffered, water-miscible base in Chamo-Creme, with a pH of 4.3. In wet dressing preparation Chamo-Powder is shown in one-dose packets. Also present are all the old Dome favorites such as Domeboro, Daxalan, Vi-Dom-A Pillettes, etc. In charge of exhibit is Mr. I. B. Wershaw.

Durex Products, Inc., New York City (Booth 69). This exhibit will show a large variety of vaginal diaphragms and cervical occlusive devices. These will include the Coil Spring, Mensinga, Dumas, Bow-End (which requires no inserter), Duraflex (matrisalus type) Diaphragms, the Flat Rim, Mizpah, and Aluminum Cervical Caps. A sponge rubber teaching model will demonstrate diaphragm placement. Sets are packaged in plastic containers comprising a diaphragm and tubes of Lactikol Jelly and Lactikol Creme, and an inserter will be shown.

Eaton Laboratories, Inc., Norwich, New York (Booth 67). The new antibacterial agent, Furadantin N.N.R., will be emphasized. Solely and specifically for urinary tract infections, Furadantin is producing excellent results, including many refractory cases of Proteus infection. New dosage forms of Furacin, the topical antibacterial agent, will be on display, such as Furacin Soluble Powder and Furacin Nasal with neo-synephrine.

Endo Products, Inc., Richmond Hill, New York (Booth 101). Cumertilin Tablets, a basically new, A.M.A. Council-accepted mercurial diuretic, will be featured. Cumertilin Tablets provide potent and sustained diuresis with little or no gastrointestinal irritation. Information regarding Percodan Tablets, a new analgesic used where aspirin is too weak and morphine too strong, will also be available.

Falk Surgical Corporation, New York City (Booth 27), will display in their booth Profex x-ray apparatus, Birtcher medical diathermy, Burdick electrocardiograph, E.P.L. Metabasal, and Cardiotron. The company will be in a position to answer any inquiries on all other medical equipment.

Fellows Medical Mfg. Co., Inc., New York City (Booth 80). Featured will be Felo'Ral Capsules, the first nonbarbiturate antispasmodic sedative in soft gelatin capsules. Felo'Ral Capsules (pink and white) contain chloral hydrate plus a fixed ratio of the naturally occurring belladonna alkaloids. Fellows Chloral Hydrate Capsules, $3\,^3/_4$ grain and $7\,^1/_2$ grain, the effective and safe sedative and hypnotic without "hangover," without gastric distress, also will be shown, together with other Fellows products. Fellows is the orginator of chloral hydrate in soft gelatin capsules.

H. G. Fischer & Company, Franklin Park, Illinois (Booth 120). See our new full-wave rectified x-ray unit with double-focus rotating anode tube. It provides 200 milliamperes at a full 100 kilovolts in the price class of ordinary 100-milliampere units. The transformer with four x-ray value tubes and the fully automatic control incorporate the best of the unusual and ingenious features of 200-milliampere x-ray generators developed by Fischer for the armed services.

C. B. Fleet Company, Inc., Lynchburg, Virginia (Booth 41), cordially invites you to stop at their booth to see the exhibit of Phospho-Soda (Fleet) and of the new dosage form, the Fleet Enema in the disposable unit. Phospho-Soda (Fleet) is a solution containing in each 100 cc. sodium biphosphate 48 Gm. and sodium phosphate 18 Gm. There is only one Phospho-Soda (Fleet) and one Fleet Enema.

E. Fougera & Co., Inc., and subsidiary, Varick Pharmacal Co., New York City (Booths 107 and 108), cordially invite physicians to discuss with professional service representatives new preparations of importance to their every-day practice. Descriptive literature and samples of all products will be available.

Geigy Pharmaceuticals, Division of Geigy Chemical Corporation, New York City (Booth 102). This exhibit features Council-accepted Butazolidin (brand of phenylbutazone), an orally effective compound which has achieved great clinical success in the treatment of rheumatoid disorders. Also on display will be Council-accepted Tromexan, an oral anticoagulant of rapid action and little cumulation; Eurax Cream, a long-acting, non-sensitizing, antipruritic and scabicide; and Panpahnit, indicated for symptomatic relief of Parkinson's disease.

General Electric Company, X-Ray Department, Milwaukee, Wisconsin (Booth 19). Whatever your needs, you can put your confidence in General Electric, manufacturers of complete x-ray equipment, from portable diagnostic to 2,000,000-volt therapy apparatus; electrocardiography, diathermy, x-ray accessories, and supplies. Service is available to you at more than 60 offices throughout the United States and Canada.

Geriatric Pharmaceutical Corporation, Bellerose, New York (Booth B). You are invited to call for your complimentary copy of Dr. Arthur Master's *Revised Blood Pressure Chart.* Scientific data and samples will be available on Geritinic, the newest concept in the management of the anemias; Gerisal for the management of arthritis; and Manophyllin, safe, nontoxic, effective therapy in the management of essential hypertension.

Otis E. Glidden & Company, Inc., Waukesha, Wisconsin (Booth 6). Please consider the safe, effective bowel management offered by Zymenol and Zymelose. Nonhabit-forming and sugar free, they are indicated in all age groups. Break your patients' laxative habits. Your choice of therapy includes Zymenol, a pleasantly flavored, stable emulsion, and Zymelose, for bulk, in convenient tablets and tasty, fragrant granules.

Grune & Stratton, Inc., New York City (Booth 33). Among the new books that Grune & Stratton will display at their booth are *Diseases of the Liver*, by Mitchel A. Spellberg, M.D; *An Rh-Hr Syllabus: The Types and Their Applications* and *Rh-Hr Blood Types: Applications in Clinical and Legal Medicine and Anthropology*, by Alexander S. Wiener, M.D.; *Heart Disease and Industry*, by Meyer Texon, M.D.; *Pediatric Problems in Clinical Practice*, edited by H. Michal-Smith, Ph.D.; *Acute Pulmonary Edema*, by Mark D. Altschule, M.D.; *Digital Plethysmography*, by George E. Burch, M.D.; *The Technique of Psychotherapy*, by Lewis R. Wolberg, M.D.; the entire four-volume set of the Case-Schinz *Roentgen-Diagnostics*, and many other volumes of interest to every physician.

Hanovia Chemical and Manufacturing Company, Newark, New Jersey (Booth 100), is displaying its new diathermy apparatus. You should check its features, which are outstanding. A new source infrared lamp will be shown, also the general line of ultraviolet equipment for general body and orificial radiation, black light for diagnostic purposes, and germicidal lamps for the destruction of airborne bacteria.

The Harrower Laboratory, Inc., Jersey City, New Jersey (Booth 130). This display features Calcisalin, a prenatal dietary supplement formulated according to a new principle, which provides that maximum assimilation of calcium in the prenatal diet can be achieved through use of a phosphorus-free form of calcium. In Calcisalin, calcium lactate replaces dicalcium phosphate; aluminum hydroxide gel removes excess dietary phosphorus from the intestinal tract; iron and vitamins are included according to recommendations of the National Research Council.

H. J. Heinz Company, Pittsburgh, Pennsylvania (Booth 10). Don't fail to visit the Heinz booth to receive the very latest information about the Heinz Baby Food Line. Literature for office use includes *Nutritional Data* and *Heinz Baby Foods*—variety and ingredient listings. For your patients there are *Your Baby's Diet, Junior Foods for Older Babies, Recipe Magic Using Heinz Strained and Junior Foods, Facts About Foods,* and spill-proof tumblers, premium offer.

Hoffmann-LaRoche, Inc., Nutley, New Jersey (Booth 92). You will find three products featured in the Roche display: Asterol, a new, practically odorless antifungal agent for ringworm of the skin, hair, and nails; Gantrisin, a more soluble, single sulfonamide which provides a wider antibacterial spectrum in systemic and urinary infections, and Roniacol, a new, well-tolerated vasodilator which is useful in vascular disorders and in some cases of angina pectoris.

Holland-Rantos Company, Inc., New York City (Booth 39). Physicians interested in medical contraception are cordially invited to discuss with H-R convention representatives latest information on new clinical and laboratory data concerning the efficacy of Koromex products.

Horlicks Corporation, Pharmaceutical Division, Racine, Wisconsin (Booth 17), introduces Nucalin, a new, unique antacid tablet formulated to dissolve slowly in the mouth, thus providing continuous gastric anacidity in the treatment of peptic ulcer, gastritis, gastric hyperacidity, and pregnancy heartburn.

Irwin, Neisler & Company, Decatur, Illinois (Booth 54), will exhibit Cryptenamine. We believe that new drug should not only pass the most rigid experimental and clinical tests but should also prove practical for the day-to-day practice of medicine. We would like to tell you about Cryptenamine, the new and safe hypotensive drug. This drug is dramatic, particularly in managing acute hypertensive states. Ask us about it.

Ives-Cameron Company, New York City (Booth 72), cordially invite you to visit their booth where trained representatives will be glad to discuss with you Monichol, for the management of hypercholesteremia as associated with cardiovascular disease and diabetes; Duotinic, the nonconstipating hematinic with the dovetailed formula; Oxsorbil and Oxsorbil-PB, indicated in the therapy of hepatobiliary disease; Pabasyl, the modern antirheumatic; Soluthera, the therapeutic water-soluble, polyvitamin capsule, and their other pharmaceutical specialties.

"Junket" Brand Foods, Little Falls, New York (Booth 38). Essential facts on the chemistry of the rennet enzyme and the nutritional significance and psychologic value of rennet desserts in the diet of infants and children are explained. The enzymatic action of rennet in producing softer, finer, more readily digestible milk curds is illustrated by enlarged photos. Literature giving the dietary applications of rennet products is available for your reference.

Kannengiesser & Company, Inc., New York City (Booth G-143). You are cordially invited to visit our exhibit where you will find our representatives prepared to give you the latest information on Kanana Brand Liga Baby Biscuits, imported from Holland, as well as Kanana Banana Flakes.

Keleket X-Ray Corporation, Covington, Kentucky (Booth 48). First showing anywhere! Introducing the modern Keleket X-Ray Kelescope Diagnostic Unit at this meeting. Here is a new low-cost automatic; in just two easy steps you make a radiograph, full-size unit of traditional high quality Keleket equipment. Push buttons perform for easier, safer, coordinated technic assuring optimum diagnostic results and worry-free performance. Visit this initial showing and examine the built in refinements beneath the modern functional design engineered in this economical new x-ray equipment for utmost utility and operation ease.

Kirsch's Beverages, Inc., Brooklyn, New York (Booth G-144), will feature No-Cal only. No-Cal is the original nonfattening soft drink. It contains no fats, carbohydrates, or proteins and no calories derived therefrom. No-Cal comes in five flavors: cola, ginger ale, cream soda, root beer, black cherry, and salt-free club soda. Along with free sampling of No-Cal beverages, we will distribute brochures and weight charts.

Lea & Febiger, Philadelphia, Pennsylvania (Booth 20), invites you to see these new books and new editions: Bonica, *The Management of Pain;* Schroeder, *Hypertensive Diseases;* Fishberg, *Hypertension and Nephritis;* Bellet, *Clinical Disorders of the Heart Beat;* Burch, Abildskov, and Cronvich, *Spatial Vectorcardiography;* Pratt, *Cardiovascular Surgery;* Forsee, *Surgery of Pulmonary Tuberculosis;* Herbut, *Surgical Pathology;* Portis, *Diseases of the Digestive System;* Lichtman, *Diseases of the Liver, Gallbladder, and Bile Ducts;* and many others.

Lederle Laboratories Division, American Cyanamid Company, New York City (Booth 65). You are cordially invited to visit our exhibit where you will find our representatives prepared to give you the latest information on Lederle products.

The Liebel-Flarsheim Company, Cincinnati, Ohio (Booth 43), manufacturers of electromedical equipment for over thirty-five years, cordially invite you to visit our booth in which our latest shortwave diathermy and Bovie electrosurgical apparatus will be available for examination and demonstration. Capable representatives will be on hand at all times, and we hope you will stop by so that we may become acquainted.

Eli Lilly and Company, Indianapolis, Indiana (Booths 110 and 111), cordially invite you to visit their exhibit. The display will contain information on recent therapeutic development and will feature the story of the Lilly Junior Taste Panel. Lilly sales people will be in attendance. They welcome your questions about Ilotycin (erythromycin, Lilly) and other Lilly products.

J. B. Lippincott Company, Philadelphia, Pennsylvania (Booth 4), presents, for your approval, a display of professional books and journals geared to the latest and most important trends in current medicine and surgery. These publications, written and edited by men active in clinical fields and teaching, are a continuation of more than one hundred years of traditionally significant publishing.

P. Lorillard Company, New York City (Booth 77), manufacturers of Old Gold and Embassy cigarets as well as Briggs Pipe Mixture and other famous tobacco products, will exhibit and demonstrate their new Kent cigarets with the exclusive Micronite Filter, which takes out up to seven times more nicotine and tars than other filter cigarets.

M & R Laboratories, Columbus, Ohio (Booth 21). Your Similax representatives are happy to take part in this meeting. They are pleased to have the opportunity to discuss with you the role of Similac in infant feeding. They have for you the latest Pediatric Research Conference Reports. Also available are current reprints of pediatric nutritional interest.

MALTEX
Cereal
MAYPO
OAT CEREAL

Maltex Company, Burlington, Vermont (Booth 71), will display Maltex Cereal and Maypo Oat Cereal made in Vermont. Here, too, you will find height-weight charts, a reducing plan, posters, and daily diet sheets. Stop in to look over the cereal and literature and to sample the home-made cookies and bread.

Massachusetts Indemnity Insurance Company, Boston, Massachusetts (Booth 25). As a leader in the field of noncancellable, guaranteed-renewable (to age sixty and sixty-five) accident and health insurance, the Massachusetts Indemnity welcomes the opportunity to discuss the unique features of our coverage with all the members of the Medical Society. Trained representatives will be on hand to give you the facts about accident and health insurance. Our famous "facts" booklet, "Is your accident and health policy favorable or unfavorable?" will be available for distribution. To our policy holders an especially warm welcome is extended. Stop by! Let us have the pleasure of talking with you again.

The S. E. Massengill Company, Bristol, Tennessee (Booth 42), cordially invite you to visit their booth. Adrenosem, the new Massengill systemic hemostatic, is featured. Adrenosem is a specific in treating those conditions characterized by increased capillary permeability. Their representatives will be glad to discuss with you the latest information and clinical evaluation of this product.

Materna-Line, Inc., New York City (Booth 24). Every physician should be aware of the latest scientific designs available in maternity brassieres and girdles. Materna-Line presents a complete line of such garments. A unique patented construction of resilient panels provides proper support during entire term without sacrifice of fashion. For your patients see and recommend Materna-Line.

Mayflower Surgical Supply Company, Brooklyn and Mineola, New York (Booth 28). Distributors of medical furniture, x-ray, whirlpool, physiotherapy, oxygen equipment, orthopedic department, physicians' supplies.

Mead Johnson & Company, Evansville, Indiana (Booth 50), will feature Dextri-Maltose, the carbohydrate of choice in infant formulas; Lactum, Mead's complete liquid formula; and Olac, Mead's complete powdered formula. Also to be featured will be Natalins, the new smaller prenatal capsule; vitamin products for infants and children, Poly-Vi-Sol, Tri-Vi-Sol, and Mulcin; and the four Pablum cereals.

Medco Products Company, Philadelphia, Pennsylvania (Booth 5). The Medcolator (formerly Medcotron or Medcotronic) is our new model of the 15-pound, compact, low-volt generator. The Medcolator may be used to (1) re-establish muscle sense, (2) reduce pain, (3) reduce edema, (4) increase range of joint motion, and (5) increase muscle strength. One cannot appreciate the value of this instrument until its action is seen and experienced, now completely automatic. Are you willing to be shown?

Medical Business Bureau, New York City (Booth 134), George W. Condit, Director. Administrative services for the individual physical and medical groups. Professional management limited to the medical and allied fields. Will assume accounting, tax, and financial burdens. Improvement of office routines. Assistance in practice, expansion, and office location, city and suburban. Consultation on partnership and group agreements. Group practice administration. Consultants in organizing professional building activity, cooperative or privately owned.

Medical Film Guild, Ltd., New York City (Boston Room). The recognition given Medical Film Guild, Ltd., by the medical profession is a distinct honor and may be due to the painstaking effort taken in making each film a postgraduate report on the subject covered. We take pleasure in announcing the showing at this meeting of such original endeavors as *Rheumatoid Disorders* and *Arterial Insufficiency of the Extremities and Radioisotopes—Their Application to Humans.* Also of vital interest are the films *Ocular Biomicroscopy, The Atomic Apothecary,* and *Occupational Health Problems* (with a twenty-minute section pertaining to overcoming occupational hazards at atomic energy plants). "Medical Films That Teach" range from pediatrics to geriatrics and include such subjects as *Hypertensive Crises, Allergy, Hypothyroidism, Management of the Failing Heart,* and *Urinary Infections.* We cordially invite doctors who wish to broaden their teaching activities to investigate how the transposition of their lectures onto film will reach thousands of physicians in a relatively short time instead of the few who attend isolated lectures. In one year our films reached an audience of 74,326 at local medical meetings and over 30,000 at medical conventions. Program chairmen who wish to add stimulus to their medical meetings are invited to visit our exhibit and review our film subjects for inclusion in their hospital or medical society lecture programs. Many of our films are available at no charge.

Wm. S. Merrell Company, Cincinnati, Ohio (Booth 62). Tace, the unique nonsteroid developed by Merrell, offers a new approach to the treatment of the menopause. Tace is temporarily stored in body fat and released over an extended period of time. One course of Tace therapy is generally all that is required to ease many patients into the symptom-free postmenopausal period. Symptom relief is excellent, and side-effects are virtually absent. Merrell professional service representatives will be present to answer any questions you may have concerning this new and distinctive estrogen. They will be happy to discuss other Merrell specialties as well.

National Dairy Council, New York City (Booth 29). "Ice Cream—A Nourishing Food For All" is the theme of the exhibit provided by National Dairy Council. It presents facts about the nutritive value of that favorite dish, showing how it is an important food for all ages, young and old. Printed materials for use in nutrition programs are on display and will be made available to all persons who request them.

The National Drug Company, Philadelphia, Pennsylvania (Booths 96 and 97), cordially invite you to visit their booth. Dimethylane and Rau-Vertin, two products recently developed by the company's research laboratories, will be featured. Displayed along with these new products will be Resion, AVC Improved and Protinal Powder. Dimethylane is a new, versatile compound for controlling symptoms of dysmenorrhea, the menopause, and associated tension states. Rau-Vertin provides effective oral therapy for hypertension, capable of producing a significant lowering of high blood pressure and of maintaining it at the lowered level.

Nepera Chemical Company, Inc., Yonkers, New York (Booth 112), features Biomydrin Nasal Solution in a plastic atomizer package which is effective against infectious and allergic rhinitis and sinusitis. Thonzonium bromide, a new wetting agent with antibacterial and mucolytic properties, is included among other ingredients in the formula. Also included will be Mandelamine, the urinary antiseptic, and Neohetramine, a highly effective antihistamine.

The New York Medical Exchange Agency, New York City (Booth A). Be sure to visit this booth and consult with Miss Patricia Edgerly of the New York Medical Exchange regarding high type medical personnel. If you are thinking of a location or an appointment for yourself in various specialties or industrial medicine, she probably can give you some good advice.

Obrig Laboratories, Inc., New York City (Booth G-142). The latest developments in solutionless contact lenses will be displayed as well as diagnostic and gonioscopic lenses. Reprints of papers on the success of contact lenses in unilateral and bilateral aphakia will be available at the booth.

Ortho Pharmaceutical Corporation, Raritan, New Jersey (Booth 14), cordially invite you to their booth where the well-known line of obstetric and gynecologic pharmaceuticals will be on display. Featured will be Preceptin vaginal gel, the product for conception control designed for use without a vaginal diaphragm. Your inquiries on Preceptin vaginal gel are invited.

Parke, Davis & Company, Detroit, Michigan (Booth 94). A cordial welcome awaits you at the Parke-Davis booth. Members of our Medical Service Staff will be on hand to greet you and discuss any of our products in which you may be particularly interested.

The E. L. Patch Company, Stoneham, Massachusetts (Booth 87). Our representatives will greet you and tell you about Patch products. There will be a revealing demonstration showing the rapid buffering action of Alzinox, Patch brand of dihydroxy aluminum aminoacetate. Turased, the safe thiocyanate product, will interest you. Also, Glythenoate, Slowten, and Bluban will be featured.

The Pelton & Crane Company, Detroit, Michigan (Booth 7). Pelton autoclaves, designed for the private office, are amazing the medical profession with their speed, economy, safety, and practicality. With a Pelton autoclave in your office you can displace all present means of sterilizing instruments and supplies. During epidemics of all types why use boiling water or chemicals when autoclaving your needles, syringes, and instruments is the only safe means of sterilization? See these efficient sterilizers in our booth on the mezzanine, directly above the hotel entrance.

Pet Milk Company, St. Louis, Missouri (Booth 131). Specially trained representatives will be in attendance to discuss the use of Pet Evaporated Milk in infant feeding and Pet Nonfat Dry Milk for high-protein diets. A variety of services that are timesavers for busy physicians will be furnished on request. Miniature Pet Milk cans will be given to visitors at the exhibit.

Pfizer Laboratories, Division Chas. Pfizer & Co., Inc., Brooklyn, New York (Booth 51). You are cordially invited to visit the Pfizer booth where you will find well-informed representatives who will be happy to supply you with information and answer any questions relative to Pfizer products. Terramycin dosage forms, Bonamine, Cortril, and other Pfizer-Syntex Hormone products will be the feature attraction of the Pfizer exhibit.

Picker X-Ray Corporation, White Plains, New York (Booths 126 and 127), will have on display the Century unit equipped with a light-weight anode tube. This unit has become known as the work horse of the x-ray industry. It will be demonstrated with a motor-driven table and will emphasize the ease with which a single tube unit may be provided to enable the x-ray department to function with a maximum of efficiency. The new, temporary, quick immobilization device, the Flexi-Cast, will also be demonstrated throughout the meeting.

Pitman-Moore Company, Indianapolis, Indiana (Booth 81), will feature in its exhibit Veralba Tablets for the control of hypertension. This drug, recently established as one of the most potent and best tolerated of the veratrum derivatives, is composed of protoveratrine A and protoveratrine B in quantities standardized by an original Pitman-Moore chemical assay. Veralba, which has recently been accepted by the Council on Pharmacy and Chemistry, has been broadly evaluated and should be of genuine interest to all physicians.

Premo Pharmaceutical Laboratories, Inc., South Hackensack, New Jersey (Booth 32), will display many fine products which bear the seal of acceptance of the Council on Pharmacy and Chemistry of the American Medical Association; also their new products, Neogen Suppositories for asthma and associated allergic disorders; Premocones, antibiotic hemorrhoidal suppositories; Secodrin, antidepressant and sedative; and Azodrine for inhalation therapy in bronchial asthma and related conditions.

IVORY
Soap
IVORY

Proctor & Gamble Company, Cincinnati, Ohio (Booth 44). Ivory Soap offers a series of time-saving leaflet pads for doctors, each pad containing 50 identical tear-out sheets. These sheets, which may be given to patients, contain routine instructions for care of acne, bathing a baby, bathing and caring for a bedfast patient, sick room precautions, and hygiene of pregnancy. There are also samples of other free, helpful material prepared especially for physicians. Mrs. Christyne Schwab is in charge.

The Purdue Frederick Company, New York City (Booth G-139), exhibiting the première presentation of Pre-Mens for relief of both psychic and somatic symptoms of premenstrual tension. This new therapy gives relief without hormones, sedatives, narcotics, or antihistaminics. You are cordially invited to visit our exhibit for reprints of clinical studies, descriptive literature, and samples. Our representatives will also be very happy to discuss Chlorogiene and Colpotabs.

Rand Pharmaceutical Company, Inc., Rensselaer, New York (Booth 132), will feature three products: Cobaden, a new parenteral preparation for the treatment of osteoarthritis, bursitis, and associated conditions; Verutal, a time-proved "product of choice" for the treatment of hypertension; Nabocal, a most significant advancement in prenatal care. Members of Rand's professional service department will be on hand to welcome all interested members.

L. & B. Reiner, Inc., New York City (Booth 119), is exhibiting the new revolutionary Jones Air-Basal, a metabolism machine using no oxygen tank or capsules. This unit enables the doctor to obtain a standard tracing on all patients, regardless of weight and pathology, on regular or irregular breathers without any calculations. Also shown is a complete line of low-volt generators and the Teca new Chronaxie Meter. The Whitehall Whirlpool Baths will also be exhibited.

CAMEL
TURKISH & DOMESTIC
BLEND
CIGARETTES

R. J. Reynolds Tobacco Company, Winston-Salem, North Carolina (Booths 114 and 115). Welcome to the Camel-Cavalier Exhibit! You are cordially invited to receive a cigaret case (monogrammed with your initials) containing your choice of Camels, America's most popular cigaret, or Cavaliers, the king-size cigaret of extra mildness and distinctive flavor.

Riker Laboratories, Inc., Los Angeles, California (Booth 109), presents Rauwiloid, an alkaloidal extract from Rauwolfia serpentina, an outstanding hypotensive agent. Rauwiloid is effective in the mild and moderate degrees of hypertension. Rauwiloid-Veriloid and Rauwiloid plus Hexamethonium combinations are available for treatment of the more severe types of hypertension. Ask for complete information at this booth.

Ritter Company, Inc., Rochester, New York (Booth 58). Hundreds of physicians are finding routine examinations and treatments, such as gynecology, proctology, urology, eye, ear, nose, and throat, and all other phases of medicine, easier through using Ritter motor operated "Multi-Level" tables. Let us show you and explain the many benefits derived from this investment in a lifetime of convenience and comfort for both doctor and patient.

A. H. Robins Company, Inc., Richmond, Virginia (Booth 64). Entozyme, comprehensive digestant; Robalate, an antacid-demulcent; and Donnalate, combining Robalate with the Donnatal formula, are featured at the A. H. Robins exhibit. Also shown are Pabalate, Pabalate-Sodium Free, and Allbee with C. Robins' representatives welcome the opportunity to discuss with physicians the therapeutic advantages of these and other Robins' prescription specialties.

J. B. Roerig and Company, Chicago, Illinois (Booth 73), cordially invite members of the Medical Society of the State of New York to visit their booth. Professional service representatives will be on hand to welcome all interested visitors.

Sanborn Company, Cambridge, Massachusetts (Booth 95). Sanborn instruments to be shown will include the direct-writing Viso-Cardiette; the Metabulator, latest model metabolism tester; and the Electrophrenic Respirator. Full data will also be available concerning the Sanborn Poly Viso and Twin Viso (multichannel biophysical research recorders), the Electromanometer (for pressure recordings), and other new Sanborn instruments for cardiac and other research, teaching, and diagnosis.

Sandoz Pharmaceuticals, Division of Sandoz Chemical Works, Inc., New York City (Booth G-140), cordially invite you to visit our display at the meeting of the Medical Society of the State of New York. We plan to feature new information on certain established products and complete data on Sandosten, the newest member in our family of ethical specialties. Sandosten, an antihistaminic with powerful antipermeability action, useful in the treatment of itching, asthma, etc.; Fiorinal, a new approach to therapy of tension headaches and other head pain due to sinusitis and myalgia; Cafergot, available in oral and rectal form for effective control of head pain in migraine and other vascular headaches; Hydergine, a vasorelaxant with central and peripheral action, useful in hypertension and peripheral vascular disorders and geriatric conditions. Any of our representatives in attendance will gladly answer questions about these and other Sandoz products.

The Saratoga Springs Authority, Saratoga Springs, New York (Booth 103). Theme: "The Saratoga Spa—One of New York State's Health Assets." This new exhibit will answer for the physicians two questions: What is spa therapy and its medical indications?, and what is an approved spa? It also emphasizes that a health vacation is good preventive medicine. An attendant will distribute Saratoga Spa literature, etc.

W. B. Saunders Company, Philadelphia, Pennsylvania (Booth 47). Our representatives will be on hand with the complete Saunders line. Among some of the more recent publications are Child, *Hepatic Circulation and Portal Hypertension; Current Therapy 1954;* Conant, *Clinical Mycology;* Gross, *Surgery of Infancy and Childhood;* and Bakwin and Bakwin, *Clinical Management of Behavior Disorders in Children.* Ask about our new Pediatrics Clinics, patterned after the well-known Medical and Surgical Clinics of North America.

Schering Corporation, Bloomfield, New Jersey (Booth 66). Members of the Medical Society of the State of New York and their guests are cordially invited to visit the Schering exhibit where new therapeutic developments will be featured. Schering representatives will be present to welcome you and to discuss with you these products of our manufacture.

Julius Schmid, Inc., New York City (Booth 122). Ramses gynecologic products. Schmid has prepared an interesting and informative exhibit on their products, Ramses Flexible Cushioned Diaphragm, Ramses Vaginal Jelly, and other Ramses gynecologic products all of which enjoy A.M.A. Council acceptance. Introduced to the medical profession more than three decades ago, the Ramses line today is better than ever because of the firm's continuous research and improvement.

G. D. Searle & Company, Chicago, Illinois (Booth 86). You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle products of research. Featured will be Vallestril, the new synthetic estrogen with extremely low incidence of side-reactions; Banthine, and Pro-Banthine, the standards in anticholinergic therapy; and Dramamine, for the prevention and treatment of motion sickness and other nauseas.

Sharp & Dohme, Division of Merck & Company, Inc., Philadelphia, Pennsylvania (Booth 78). The many indications for Hydrocortone or Cortone highlight the therapeutic importance of these hormones in everyday practice. Research data relative to more effective therapy where penicillin is used in conjunction with Benemid probenecid completes the exhibit. Expertly trained personnel solicit discussion on these observations.

Smith, Kline & French Laboratories, Philadelphia, Pennsylvania (Booth 55), will feature Spansule sustained release capsules, the revolutionary new oral dosage form. Just one Spansule capsule, taken on arising, provides a uniform supply of medication throughout the day. Thus, Spansule capsules offer you three advantages: (1) smooth, uniform action; (2) prolonged therapeutic effect, and (3) convenient once-a-day dosage.

E. R. Squibb & Sons, New York City (Booths 84 and 85), feature Raudixin, the safe hypotensive agent. Raudixin contains the whole root of Rauwolfia serpentina accurately standardized for uniform hypotensive and sedative effect. Our representative will be glad to discuss with you the advantages of Raudixin used alone or in combination with other drugs. Also featured will be Noctec (Squibb chloral hydrate) which highlights the exhibit of Squibb in Booth 85. Useful in all age groups and in practically all groups of patients, this ideal hypnotic is available in aromatic, orange-flavored solution and in tasteless, odorless capsules. Your inspection of these outstanding preparations is invited.

R. J. Strasenburgh Company, Rochester, New York (Booth 37), will feature Maxitate with Rauwolfia compound for hypertension; Biphetacel for safe effective appetite control; potent non-narcotic Strascogesic for routine pain problems; Caprylium treatment for vaginitis.

The Stuart Company, Chicago, Illinois (Booth 30).

Swift & Company, Chicago, Illinois (Booth 18). The original all-meat baby foods, Swift's Meats for Babies and Juniors, will be featured at the Swift exhibit. You are cordially invited to discuss the use of these high-protein, body-building foods in the infant diet with the Swift representatives. Literature and information on clinical research available. Also available is information about new Swift's Egg Yolks for Babies. This product offers a convenient and economical way for mothers to give their babies all the nutrients supplied by egg yolks.

Teca Corporation, New York City (Booth 119).

Tampax Incorporated, New York City (Booth 46). To answer the increasing number of questions patients ask about tampons, Tampax offers to physicians literature on internal menstrual protection. The Dickinson charts and booklets on menstrual health are also available at the Tampax booth. Our educational consultants will be glad to discuss with you the correct use of the three absorbencies, Junior, Regular, and Super Tampax.

United Medical Service, New York City (Booth 118). This exhibit will consist of posters, charts, and literature designed to inform the medical profession of the latest trends and developments of their "Doctor's Plan," the nonprofit, voluntary Blue Shield Plan in the New York City area. A convention notebook for physicians will be available.

Universal Products Corporation, Norristown, Pennsylvania (Booth 23), will show the new "Surgeons

Fingalyte," a light at the end of the finger which penetrates and throws the light on and into all tissues or crevices. It is low in wattage and cool for transillumination. It has a headlight that weighs only 2 ounces, all contained in a small case, in a constant vapor sterilizer bath. The Surgeons "X-L-Lyte" will also be demonstrated. This instrument has been in service for twenty years, and over 80,000 are in use. Added attraction will be the Electronic Amplyfying Stethoscope with the volume and tone control.

U. S. Vitamin Corporation, New York City (Booth 63). See the "oil-in-water" demonstration of liposoluble vitamins A and D made completely water soluble, a vitamin technical achievement orginated and developed by the U. S. Vitamin Corporation Research Laboratories. Three pharmaceutical firsts, Vi-Syneral Vitamin Drops, multivitamins in drops solution; Vi-Syneral Injectable, multivitamin parenteral solution, and now Vi-Aquamin, aqueous vitamins and minerals in single capsule. We cordially invite you to our booth for detailed literature and professional samples.

The Upjohn Company, Kalamazoo, Michigan (Booth 52), will feature Cortef, brand of hydrocortisone. Reports from clinicians and practitioners reveal dramatic results in the use of Cortef where cortisone is indicated. Cortef is available in tablet or ointment form for oral or topical use. Upjohn representatives will welcome the opportunity to furnish additional information to the profession.

Vaisey-Bristol Shoe Company, Inc., Monett, Missouri (Booth G-136), will exhibit Jumping Jack Shoes. The important physiologic advantages of the round heel of the human foot will be discussed by medical relations representatives of Jumping Jacks. The philosophy of Jumping Jacks is that nothing but the exercise involved in good foot function strengthens the normally weak feet of an infant.

Walden Industries, Inc., New York City (Booth 31), are showing their "Quick-Clix" projection bulb and Strob outfits for clinical photography. These outfits are equipped with the remote control aperture mechanism which permits the viewer to see the exact picture he will take. They are also showing their new "Walco" units for simple, standardized, daily routine clinical photographs, extremely low priced to induce the widespread use of clinical photography. Another item they will show is their new method for Sterio closeup photography.

Walker Laboratories, Inc., Mount Vernon, New York (Booth 9). Precalcin, Precalcin Lactate, Bacimycin Ointment, Surgimin, Surgimin-T, and the Council-accepted anticoagulant Hedulin will get top billing at the Walker booth. The new Precalcin Lactate product is the same as the original Precalcin except for the source of calcium which is the lactate instead of the phosphate. By providing both forms, the doctor may have his choice of calcium sources to suit individual patient requirements.

Wallace & Tiernan Incorporated, Belleville, New Jersey (Booth 8), will feature Desenex, the well-known undecylenic acid fungicide; Salundek (new) with the improved formulation for treating tinea capitis; Sotradecol, for safe, effective sclerotherapy; Azochloramid, the time-tested chlorine topical antiseptic; and Lorzinex, the new cleansing and therapeutic douche preparation effective at the normal vaginal acid pH.

Warner-Chilcott Laboratories, New York City (Booths 88 and 89). Two important cardiovascular agents will be featured at this booth. Methium, to lower blood pressure and relieve hypertensive symptoms, and Peritrate, to prevent attacks in angina pectoris. A new drug, Parsidol, for the efficient management of Parkinson's disease will also be exhibited. Representatives and research personnel will welcome an opportunity to discuss these drugs with you.

Westinghouse Electric Corporation, X-Ray Division, Baltimore, Maryland (Booth 79). Our representatives will be pleased to meet you and discuss your future or present requirements from the details in the dark room to the style and type of equipment for your specialty. They are well prepared to custom-plan your x-ray facilities for present and future use. Westinghouse appreciates this opportunity to present our x-ray products to you at this meeting.

Westwood Pharmaceuticals, Division of Foster-Milburn Company, Buffalo, New York (Booth 121). Featured will be Gentia-Jel, the specific gentian violet therapy in vaginal moniliasis of pregnancy, in the new, single-dose disposable applicator; Lowila Cake, the only lathering soapless skin cleanser for your soap-sensitive patients; Pro-Derna, silicone skin protective cream, the first really effective skin protective to prevent contact dermatitis.

White Laboratories, Inc., Kenilworth, New Jersey (Booth G-138), will exhibit Mol-Iron Panhemic, new complete hematinic for effective oral therapy of all anemias responsive to known hemopoietic essentials. The B_{12}-activating potency of its unique intrinsic factor concentrate is established by clinical assay. Only one small capsule twice a day provides all known antianemic factors in addition to Mol-Iron, the most effective iron therapy known.

Winthrop-Stearns Inc., New York City (Booths 116 and 117), invite you to visit their booth where the following products will be featured: Telepaque, highly effective and well-tolerated oral cholecystopaque medium which gives denser, clear-cut pictures of the gallbladder and, in a substantial number of cases, also permits visualization of the biliary ducts; Alevaire, nontoxic inhalant which thins sticky pulmonary secretions in bronchitis, bronchiectasis, and neonatal asphyxia due to atelectasis or aspiration of amniotic fluid.

Wyeth Incorporated, Philadelphia, Pennsylvania (Booth 53). The display of Wyeth Laboratories will feature Bicillin, the new penicillin compound, in various forms: Bicillin All Purpose, for prophylaxis and treatment in surgical infections; Bicillin C-R, for use in general practice; Bicillin Injection (various strengths), for prophylaxis of rheumatic fever. Also, Oral Suspension Bicillin, highly effective, stable, nontoxic, and delightfully palatable. Also featured, Phenergan, the unique, most powerful, and longest-acting antihistamine for control of all the manifestations of allergy that are amenable to antihistaminic therapy.

Wynlit Pharmaceuticals, Inc., New York City (Booth 26), associated with Wynlit Pharmazeutische Produkte A.G. in Zurich, British Schering, and Ingram Laboratories in Mexico, have recently started introduction of specialties in the United States. May we talk to you at our display about Hemocoavit, a new antihemorrhagic, Cepevit, an improved vitamin C therapy, and other products.

Zenith Radio Corporation, New York City (Booth G-135). It is conservatively estimated that at least three million people in these United States could be aided by the use of a modern hearing aid. It is conceded that the over-all physical well-being of these people would be materially enhanced by the use of this prosthetic device. The Zenith Radio Corporation would consider it an honor if the medical profession would call on it for any help whatsoever in achieving the very worth-while goal of helping these people.

ANNUAL REPORTS

of the

Officers, Council, Trustees, and Committees

of the

MEDICAL SOCIETY OF THE STATE OF NEW YORK

to the

HOUSE OF DELEGATES

148th Annual Meeting

May 10 to 14, 1954

Hotel Statler, New York City

1954 HOUSE OF DELEGATES—REFERENCE COMMITTEES

Credentials

Charles F. McCarty, *Chairman*, Kings
John H. Wadsworth, Third District Branch, Schoharie
Henry J. Barrow, Bronx
Orin Q. Flint, Delaware
Philip M. Standish, Ontario

President's Report

E. Dean Babbage, *Chairman*, Erie
Benjamin H. Bernstein, Kings
John L. Edwards, Columbia
William E. Pelow, Onondaga
Henry I. Fineberg, Queens

Reports of Secretary, Censors, and District Branches

Joseph A. Lane, *Chairman*, Monroe
Moses H. Krakow, Bronx
George F. Nevin, Cortland
Joseph G. Zimring, Nassau
Frank A. Gagan, Dutchess

Reports of Treasurer, Trustees, Finance Committee, and War Memorial

Thomas F. McCarthy, *Chairman*, Bronx
John F. Mosher, Albany
John L. Sengstack, Suffolk
Kenneth M. Lewis, New York
Sydney L. McLouth, Eighth District Branch, Genesee

Planning Committee for Medical Policies, Permanent Headquarters

Peter M. Murray, *Chairman*, New York
John C. Brady, Erie
Christopher Wood, Westchester
John F. Kelley, Oneida
George D. Anderson, Saratoga

Malpractice Insurance and Defense Board, Legal Counsel

Norton S. Brown, *Chairman*, New York
Dwight V. Needham, Onondaga
Henry E. McGarvey, Westchester
Samuel Sanes, Erie
Frank LaGattuta, Bronx

Constitution and Bylaws Committee of Council

Leonard J. Schiff, *Chairman*, Clinton
Aaron Kottler, Kings
Frank M. Cerniglia, Queens
William J. Tracy, Steuben
Joseph H. Cornell, Schenectady

Council—Part I

POSTGRADUATE EDUCATION
MEDICAL DEFENSE
George A. Burgin, *Chairman*, Herkimer
George E. Anderson, Kings
John C. Kinzly, Niagara
Richard P. Doody, Rensselaer
Adelaide Romaine, New York

Council—Part II

MATERNAL AND CHILD WELFARE
Waring Willis, *Chairman*, Westchester
Harold B. Davidson, New York
R. Scott Howland, Chemung
William J. Orr, Erie
Burke Diefendorf, Section Delegate, Warren

Council—Part III

PUBLIC HEALTH ACTIVITIES A—INDUSTRIAL HEALTH, RURAL MEDICAL SERVICE, GENERAL PRACTICE, PROBLEMS OF ALCOHOLISM
Felix Ottaviano, *Chairman*, Madison
Herbert Berger, Richmond
George Himler, New York
Kenneth F. Bott, Greene
John M. Galbraith, Nassau

Council—Part IV

PUBLIC HEALTH ACTIVITIES B—CANCER, BLOOD BANKS, HEART DISEASE, MENTAL HYGIENE, FILM REVIEW
Alfred A. Angrist, *Chairman*, Queens
Morris Maslon, Warren
William H. Lewis, Jr., New York
Norman C. Lyster, Chenango
Charles A. Prudhon, Jefferson

Council—Part V

PUBLIC HEALTH ACTIVITIES C—PHYSICAL MEDICINE AND REHABILITATION, GERIATRICS, DIABETES, CEREBRAL PALSY, SCHOOL HEALTH, HARD OF HEARING AND THE DEAF
Charles W. Mueller, *Chairman*, Kings
Olin J. Mowry, Oswego
C. Stuart Wallace, Tompkins
Herbert S. Ogden, New York
Abraham Fleischer, Bronx

Council—Part VI

ECONOMICS, PUBLIC MEDICAL CARE, MEDICAL LICENSURE AND MEDICAL SERVICE, HOSPITAL AND PROFESSIONAL RELATIONS
Charles H. Loughran, *Chairman*, Kings
Harry Golembe, Sullivan
Guy S. Philbrick, Niagara
Meyeron Coe, Queens
Robert Hewson, Orange

Council—Part VII

MEDICAL CARE INSURANCE
Walter S. Bennett, *Chairman*, Washington
Walter Dreyfuss, Montgomery
William B. Rawls, New York
Irving J. Sands, Kings
John W. Latcher, Otsego

Council—Part VIII

LIAISON WITH VETERANS ADMINISTRATION, AMERICAN MEDICAL EDUCATION FOUNDATION
Charles Sandler, *Chairman*, Bronx
Arthur J. Sullivan, Albany
Isaac Levine, Kings
Edgar O. Boggs, Lewis
Irving L. Ershler, Onondaga

Council—Part IX

LEGISLATION
E. Kenneth Horton, *Chairman*, Nassau
Samuel B. Burk, New York
Eugene F. Galvin, Ulster
Clyde L. Wilson, Chautauqua
Thomas M. Watkins, St. Lawrence

Council—Part X

WORKMEN'S COMPENSATION
Harold W. Grosselfinger, *Chairman*, Rockland
A. Wilbur Duryee, New York
John L. Norris, Monroe
Leonard J. Flanagan, Broome
James A. Lynch, Bronx

Council—Part XI

PUBLICATION, PUBLIC RELATIONS, HISTORY
Ezra A. Wolff, *Chairman*, Queens
Samuel Z. Freedman, New York
Solomon Schussheim, Kings
W. Walter Street, Onondaga
Elton R. Dickson, Sixth District Branch, Broome

Council—Part XII

CONVENTION, NURSING EDUCATION, WOMAN'S AUXILIARY, OFFICE ADMINISTRATION AND POLICIES, ETHICS, RELATED BILLS
Edward P. Flood, *Chairman*, Bronx
Clarence G. Bandler, New York
Sol Shlimbaum, Suffolk
Arthur Q. Penta, Section Delegate, Schenectady
Alfred L. George, Genesee

Miscellaneous Business A

George J. Lawrence, Jr., *Chairman*, Queens
John F. Rogers, Ninth District Branch, Dutchess
Samuel A. Garlan, Section Delegate, New York
William G. Roberts, Yates
John D. Naples, Erie

Miscellaneous Business B

Edward J. Shea, *Chairman*, Ulster
Charles A. Anderson, Kings
John E. Lowry, Queens
David W. Beard, Schoharie
Walter T. Heldmann, Richmond

Special Committee on Constitution and Bylaws

A. H. Aaron, *Chairman*, Erie
Thomas O. Gamble, Albany
James R. Reuling, Queens

Résumé of Instructions of the 1953 House of Delegates and Actions Thereon by the Council, Board of Trustees, and Officers

Approval of the Reed-Jenkins Bill (Section 111).—The House instructed the secretary to inform the Chicago and Washington offices of the American Medical Association of this Society's approval of the Reed-Jenkins Bill. The secretary complied with these instructions. This bill in the present House of Representatives, H.R. 10 and H.R. 11, was introduced by Mr. Jenkins and Mr. Keogh and is known as the Jenkins-Keogh Bill.

Conserving Medical Military Personnel (Section 122).—The House adopted a resolution that "the Armed Services individually be requested to conserve medical military personnel by assigning nonmilitary duties to civilian physicians" to be transmitted by June 1, 1953, to the Council on National Emergency Medical Service of the American Medical Association. Letters embodying this resolution were sent by the secretary to Rear Admiral Lamont Pugh of the Navy, Major General George E. Armstrong of the Army, and Major General Harry G. Armstrong of the Air Force.

Revision of Fee Schedule for Welfare Cases (Section 138).—As the House of Delegates instructed, a copy of the resolution regarding fee schedule for welfare cases, requesting that it be raised to the level of 75 per cent of the current Workmen's Compensation fee schedule, was sent to to the Commissioner of Social Welfare, June 5, 1954. In his courteous acknowledgment Commissioner Lansdale wrote in part: "Undoubtedly, this matter will be an important item on the agenda of the next meeting of the Medical Society's Subcommittee on Welfare Medical Care with members of this Department." It is possible that this matter has had to be postponed on account of Commissioner Lansdale's resignation and the appointment of his successor.

Spot Radio Announcements (Section 132).—The secretary complied with the instructions of the House of Delegates that a letter be transmitted to the Metropolitan Life Insurance Company commending, as a constructive public service, the spot health statements sponsored by that company over radio station WCBS and the advice given by its commentator, Bob Hite, to "see your family doctor" and "talk with your county medical society."

Motor Vehicle Inspection and Driver Physical Examination (Section 110).—A resolution of the 1953 House of Delegates, petitioning "the Governor of the State of New York to create a committee, which would be financially unremunerated and nonpolitical in character, to survey critically the problems inferred by these statistics [regarding fatal accidents due to defective automobile mechanisms] and recommend appropriate corrective measures," was transmitted to Governor Dewey. Mr. Kent H. Brown, assistant counsel to the Governor, replied that recommendations on the subject were included in Governor Dewey's messages to the legislature dated January 9, 1952, and January 7, 1953. Mr. Brown stated, "The subject matter of the resolution has been a matter of considerable study and effort by the appropriate authorities of this State for some time."

Formal Expression of Appreciation to the President of the United States (Section 82).—The secretary complied with the resolution of the House of Delegates, "that an official expression of commendation and appreciation for the avowed confidence of President Eisenhower in the aims, ideals, and efforts of the medical profession be dispatched to him from the House of Delegates of the Medical Society of the State of New York." Mr. Adams, the Assistant to the President, requested in reply that the House of Delegates be assured of the President's gratitude "for the expression of commendation and confidence in his leadership conveyed by the resolution." He stated, "It is heartwarming indeed to know that this group of doctors so wholeheartedly approve of the establishment of a Department of Health, Education and Welfare, and the President extends his thanks to all of you for this endorsement."

Course in Medical Ethics for Medical Students (Section 200).—The House adopted a resolution that this Society "mail a copy of the *Principles of Professional Conduct* of the Medical Society of the State of New York and a copy of the Medical Practice Act of the State of New York to every new licentiate in medicine in New York State, . . . recommend to the medical schools in this State that a detailed course in medical ethics be given as part of the curriculum in the fourth year, and . . . offer to make available to the medical schools the materials and personnel required for this purpose if requested."

The secretary has instituted the practice of mailing copies of the *Principles of Professional Conduct* to new licentiates, lists of whom are furnished us from time to time by the State Education Department. Dr. Stiles D. Ezell, secretary of the Board of Medical Examiners, informs us that copies of the Medical Practice Act are sent by that department to all new physicians who come into the State, usually with their application for registration.

The secretary informed the deans of the medical schools in this State of the resolution of the House regarding a course in medical ethics.

Dr. Currier McEwen, dean, New York University College of Medicine, replied: "Our teaching in medical ethics has been included in a series of lectures on medical practice given in the department of preventive medicine." Dr. Ralph E. Snyder, executive dean, New York Medical College, Flower and Fifth Avenue Hospitals, replied in part: "We have, for some years, attempted to familiarize our

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Sections referred to are from the Minutes of the House of Delegates of the 1953 Annual Meeting, as published in the New York State Journal of Medicine, September 1, 1953, Part II.

students completely with the principles of professional conduct. We are, of course, planning to continue this practice, and we shall feel free to call upon you for assistance any time." Dr. Jean A. Curran, dean, State University of New York College of Medicine at New York City, replied that he will be glad to bring this action to the attention of his curriculum committee. He also suggested, "Perhaps what is needed is a very thoroughgoing study of the whole problem so that we may better understand where the difficulties lie and what the remedies may be," in regard to our ethics and their enforcement. Dr. Stockton Kimball, dean, the University of Buffalo School of Medicine, replied in part: "...that this school has for a number of years offered regular instruction in medical ethics."

First Aid Training for School Students (Section 145).—Your secretary informed Chancellor John P. Myers of the resolution of the House of Delegates to request the Regents of the University of the State of New York to require satisfactory completion of the American Red Cross Junior First Aid Course or the Self-Help and Neighbor Help for the Injured Course of the New York State Civil Defense Commission for promotion from the eighth grade and to require satisfactory completion of the American Red Cross Standard First Aid Course or its equivalent for graduation from senior high schools. Mr. James E. Allen, Deputy Commissioner of Education, replied that, "the units on first aid which are included in the required State Health Teaching Syllabus for Junior and Senior Highs have been approved by the Red Cross authorities as meeting the standards of their junior and standard first aid courses."

Dues Increase (Section 171).—The treasurer informed the treasurers of component county medical societies of the action taken by the House of Delegates increasing annual State dues to $25, effective January 1, 1954. At the treasurer's request, the secretary conveyed the same information to the secretaries of the component county medical societies.

Period of Remission of County and State Medical Society Dues for Physicians Returning from Military Service (Section 126).—The secretary informed the secretaries of component county medical societies of the resolution of the 1953 House of Delegates, "that all dues for members leaving military service be waived throughout the balance of the calendar year in which they are discharged, upon recommendations by the respective component county medical society to the Council."

Inequality in Junior Membership Dues (Section 133).—The House concurred in the reference committee's approval of a resolution "that junior members who wish to purchase the *Directory* be allowed to do so at a discount so that the dues and the cost of the *Directory* would not exceed the total dues for a regular member." The Council referred this to the Publication Committee. (*See Annual Reports in this issue, Council—Part XI.*)

Pilot Studies on Industrial Health (Section 147).—The reference committee concurred in the suggestion of the Planning Committee for Medical Policies that pilot studies be inaugurated in one or two counties, "patterned somewhat after the so-called Pennsylvania plan or any other plan suitable to our needs and our resources." The House of Delegates adopted the suggestion (see Industrial Health Resolution, Report of the Reference Committee on Report of the Council—Part III, Section 115). The Council voted that this be referred to the Committee on Industrial Health. (*See also Annual Reports in this issue, Council—Part III.*)

Council Committee on General Practice (Section 148).—The House of Delegates voted to approve in principle and to refer, through the Council, to the Planning Committee for Medical Policies for further study a resolution that this Society establish a Council Committee on General Practice. The Council voted to refer this to the Planning Committee for Medical Policies. (*See Annual Reports in April 15 issue, Planning Committee for Medical Policies.*)

Status of Osteopaths (Section 150).—The House of Delegates adopted a reference committee report approving the intent of a resolution that this Society "clarify its attitude toward osteopaths and the relation of the latter to the medical profession" and suggesting "that the appropriate Council committee study this subject in correlation with studies and/or recommendations made by the American Medical Association." The Council voted that this be referred to the Planning Committee for Medical Policies. (*See Annual Reports in April 15 issue, Planning Committee for Medical Policies.*)

Legal Protection in Alleged Criminal Negligence (Section 160).—The House of Delegates voted to "instruct the Council to study the feasibility of providing legal defense against alleged criminal negligence, comparable to that provided for alleged malpractice." The Council voted to refer this to the Malpractice Insurance and Defense Board and legal counsel. (*See Annual Reports in this issue, Malpractice Insurance and Defense Board and Legal Counsel.*)

Care of the Aging (Section 191).—The House of Delegates adopted a resolution that the Medical Society of the State of New York request the Governor of the State of New York to appoint a commission composed of prominent individuals, medical and nonmedical, to study this problem and make recommendations. The Council voted that the secretary be instructed to write to Governor Dewey. A letter was sent to the Governor requesting that this be done. The letter was acknowledged stating that the views expressed in the resolution would receive fullest consideration.

Use of Television in Medical Education (Section 144).—The House adopted a recommendation of the reference committee that a resolution on this subject be referred to the Committee on Public Health and Education for further study. The resolution stated that this Society favors the establishment of television broadcasting stations for educational purposes and provided that the Council:

1. Petition the Governor, the Temporary Commission on the Use of Television for Educational Purposes, and the Legislature of the State of New York to favor the establishment of such broadcasting stations for educational television;
2. Work for and keep abreast of progress made toward these ends, and
3. Request that specified time be made available to the medical profession for medical educational television under the auspices of this Society, the medical colleges and universities in the State, the New York Academy of Medicine, and other local academies and agencies, where available.

The Council voted to refer this to the Committee on Public Health and Education. (*See Annual Reports in this issue, Council—Part I.*)

Industrial Health Bureau (Section 115).—Approving the recommendation of the Committee on Industrial Health that a Bureau of Industrial Health be established with a full-time director and proper personnel, the reference committee recommended, and the House concurred, that for reasons of economy and in view of the estimated cost of the bureau ($25,000) the Council study the possibility of having one director for the Workmen's Compensation Bureau and the Bureau of Industrial Health, while keeping the two departments separate. The Council voted to refer this to the Office Administration and Policies Committee and that this committee confer with other interested committees. After report of this committee to the Council, a special committee was appointed to engage an assistant to the secretary and a director of a Bureau of Industrial Health, perhaps in combination with the Workmen's Compensation Bureau. The committee consists of Dr. James R. Reuling, chairman, Dr. Edward R. Cunniffe, and Dr. John J. Masterson.

Mental Hygiene (Section 212).—The reference committee felt that this Society might well advocate the introduction of study of mental health, from a positive standpoint, into the medical schools of the State. They stated that the education of laymen to increase understanding of the mentally ill should be encouraged by county medical societies and recommended that such encouragement "be activated by the Medical Society of the State of New York." The House of Delegates adopted the report. The Council voted to refer this to the Committee on Public Health and Education. (*See Annual Reports in this issue, Council—Part IV.*)

Blood Banks Pilot Programs (Section 214).—A resolution from the Medical Society of the County of Genesee, requesting this Society to recommend to the Blood Banks Association that Genessee County be designated as one of the counties, and if feasible the first county, in which a "pilot" blood assurance program will be conducted, was approved by the reference committee and by the House of Delegates. The Council voted to instruct the secretary to inform the Blood Banks Association of this decision.

The Technical Subcommittee of the Blood Banks Association of New York State, Inc., which includes officers of the association and the directors of the blood banks at two hospitals in Genesee County, at a meeting on February 4, 1954, adopted a program for the technical operation of a blood assurance pilot program in Genesee County.

Fibrinogen Supply (Section 215).—Upon recommendation of the reference committee, the House of Delegates approved a resolution that this Society, through its representatives on the boards of the National Red Cross and the New York State Red Cross, urge that the blood banks divisions of these organizations "process additional fibrinogen immediately and . . . make available to all counties a central source to supply the fibrinogen when needed." The Council voted to refer this to the Committee on Public Health and Education. (*See Annual Reports in this issue, Council—Part IV.*)

Advertising for Donors (Section 216).—The reference committee reported on two resolutions: one, "that newspaper advertising for professional blood donors, in its revised form, be declared necessary and ethical and hereby approved," and the other, "that the Medical Society of the State of New York looks with disfavor on such paid advertisements and urges all doctors to refrain from such practice."

The committee's recommendation, adopted by the House of Delegates, was that this matter be referred to the Council for study and that "until such time as the Council shall act on this problem, each county be permitted to collect blood under its present acceptable system so that in no way shall the adequate procurement of blood be jeopardized by any change." The Council voted to refer this to the Blood Banks Commission. (*See Annual Reports in this issue, Council—Part IV.*)

Geriatrics (Section 190).—The House of Delegates adopted a recommendation of the reference committee that "the Council consider the expansion of this subcommittee in order to provide regional representation throughout the State." The Council voted to refer this to the Committee on Public Health and Education. (*See Annual Reports in this issue, Council—Part V.*)

Care of the Aging Population (Section 135).—Regarding the 1952 resolution on this subject and the recommendations with respect to it of the Subcommittee on Public Medical Care, the House of Delegates voted that the matter be studied further and a definite report presented at their 1954 meeting. The Council voted to refer this to the Public Medical Care Subcommittee of the Economics Committee.

The subcommittee recommends (1) no legislation at this time, (2) further study of health and hospital insurance, and (3) further observation of the improved working of the New York State Public Welfare Department. (*See Annual Reports in this issue, Council—Part VI.*)

Tenure of Hospital Staff Members (Section 151).—The House adopted a resolution that this Society recommend:

1. That a system of tenure be set up and that no man be summarily dismissed after a probationary period of three years, except for good and sufficient cause after a hearing before the hospital governing board, and

2. That a board of review be established, composed of fair and equal representation of the hospital and the local medical society of the county involved.

The Council voted to refer this to the Committee on Hospital and Professional Relations. (*See Annual Reports in this issue, Council—Part VI.*)

Licensure of Cultists (Section 153).—The House of Delegates adopted a resolution providing:

1. That the Council... be directed to make such studies as may enable the introduction of a bill into the next regular session of the legislature so to amend the Medical Practice Act as to leave no loopholes whereby prosecution and conviction for illegal practice of medicine can be evaded; and

2. That such bill shall contain provisions imposing on all applicants for licensure that they first conform to the educational and ethical requirements that now apply or may hereafter be imposed by law on applicants for license to practice medicine in this State, involving the diagnosis, treatment, or care (within the meaning of the Medical Practice Act as herein proposed) of any mental, psychologic, or physical human complaint, ailment, deformity, or other condition, whether physiologic or pathologic; and

3. That proper exemption be made for all groups now licensed to treat or care for all, or any specific part, of the human anatomy.

The Council voted to refer this to the Committee on Legislation.

A preliminary meeting of four Council members, the executive officer, and the legal counsel has been held to initiate a long-range study of the Medical Practice Act with a view to improvement. The Legislation Committee states that the next step should be a conference with the Department of Education, which they hope to arrange shortly after the 1954 session of the Legislature adjourns. (*See Annual Reports in this issue, Council—Part IX, and Supplementary Report of the Council—Part IX: Legislation.*)

Blue Shield Coverage of Dental Surgery (Section 218).—Upon recommendation of the reference committee the House referred to the Council "for further study and appropriate action" a portion of the report of the Subcommittee on Medical Expense Insurance approving in principle a proposed amendment to Article (9-c) of the Insurance Law which would permit dentists to participate in Blue Shield and recommending that coverage be limited to a carefully determined list of dental surgical procedures. The Council voted to refer this to the Medical Expense Insurance Subcommittee of the Economics Committee. An amendment to Article 9-c of the Insurance Law, enacted in 1953, permits Blue Shield plans to pay for dental services. (*See Annual Reports in this issue, Council—Part VII.*)

Approval of Medical Care Plans (Section 219).—A resolution, "that consideration be given to set up a fair and adequate mechanism" for adjudication of cases in which a medical care plan has received county society approval but not that of the Medical Society of the State of New York, was referred by the House of Delegates to the Council "for further study and action." The Council voted to refer this to the Medical Expense Insurance Subcommittee of the Economics Committee.

A special subcommittee to develop such a mechanism, appointed by the chairman of the Subcommittee on Medical Expense Insurance, has this matter under consideration. (*See Annual Reports in this issue, Council—Part VII.*)

Establishment of a Clinic in a Tax-Supported Public Housing Project (Section 221).—In accordance with the instructions of the Council at its June meeting, the secretary wrote to Governor Dewey, Lieutenant Governor Frank C. Moore, and Mr. Oswald D. Heck, speaker of the New York State Assembly, informing them of the resolution of the House of Delegates to "go on record as being opposed to any agreement or arrangement with any institution or group of individuals that might lead to the establishment of a clinic in a tax-supported public housing project, as outlined by the housing commissioner of New York State... in the April 5, 1953, issue of *New York Medicine*" and to "apprise the Governor and the Legislature of New York State of this action." A copy of the aforesaid magazine article was enclosed with each letter.

A third provision of this resolution, that the Council "study ways and means of providing medical care for the medically indigent," was referred by the Council to the Public Medical Care Subcommittee of the Economics Committee. (*See Annual Reports in this issue, Council—Part VI.*)

Group Health Insurance (Section 220).—The House adopted a resolution disapproving "the principle of making accommodations in a hospital the sole and only basis for remuneration of the physicians, regardless of the patient's income, and recommending that the Council... take every means possible to bring this resolution to the attention of every member of the Medical Society of the State of New York."

The secretary reported that, after consultation with the president, he had ordered copies of the resolution and subcommittee report printed and mailed to all members of the Society at a cost of $1,432.26. He requested approval by the Council. After discussion, the Council voted approval. It was decided to apprise the Board of Trustees of the expenditure.

Policy for Legislative Action (Section 177).—Approving a resolution which called for the adoption of "a vigorous and energetic policy of positive action in furthering the passage of bills which are mandated by the House of Delegates," the reference committee recommended "that delegates hereafter carefully consider the interpretation of the word 'mandate.'" The report was adopted by the House of Delegates. The Council voted to refer this to the Committee on Legislation.

Evaluation of Legislative Activities (Section 184).—At the suggestion of the reference committee the House of Delegates adopted the recommendations of the Special Committee to Evaluate Legislative Activities, summarized as follows:

1. Individual Members: Alert individual physicians to the need for active cooperation.
2. County Society Legislation Chairmen: Set up qualifications for holding office based on experience.
3. State Society Legislation Committees:
   - (*a*) Streamlined executive group for facilitating consultation with and by Albany office.
   - (*b*) Carefully selected chairman, who should retain office over extended period.
   - (*c*) Consider amending Constitution so that chairman need not necessarily be Council member.
4. House of Delegates:
   - (*a*) Clear instruction to Council, with some latitude of action.
   - (*b*) Formulate program coordinated with respect to relative priority of emphasis.
5. Council Members: Year-round liaison with State officials and lawmakers.
6. Albany Office:
   - (*a*) Specific outline of duties and responsibilities of executive officer and legal counsel.
   - (*b*) All matters pertaining to legislation coming from House of Delegates to be funneled through executive officer and his legal counsel for technical advice on form, content, and feasibility of enactment.
7. Public Relations:
   - (*a*) Continue cooperation as at present.
   - (*b*) Year-round educational program stressing positive benefits of medicine and working actively to discredit unscientific cults.
   - (*c*) Extend active public relations program to county and individual levels.
   - (*d*) Nonpartisan approach.
8. Outside Organizations: Foster extra-Society organizations sympathetic with our aims.

The Council voted to refer this to the Committee on Legislation. The specific actions taken on each part of this program are enumerated in the report of the Committee on Legislation. (*See Annual Reports in this issue, Council—Part IX.*)

The House also adopted the recommendation of the reference committee "that all resolutions pertaining to legislative matters be submitted to the Legislation Committee of the Council and to the executive officer... prior to presentation to the House of Delegates so that their comments on form, content, and feasibility of enactment may be available to the House of Delegates and reference committee at the time of presentation of the resolutions." The Council voted to refer this to the Publication Committee and the Speaker of the House.

Hospital Practice of Medicine (Section 178).—The House adopted a resolution calling for introduction at the 1954 session of the legislature of the Friedman Bill, Senate Intro. 122 of the 1953 session, and requiring that this Society "actively work for the passage of this bill." The Council voted to refer this to the Committee on Legislation.

A bill to prohibit the practice of medicine by hospitals has been introduced in the legislature, and a special committee, appointed "to bend every effort to establish a satisfactory agreement between the physicians, the hospitals, and the medical schools," is functioning. (*See Annual Reports in this issue, Council—Part IX.*)

Practice of Psychiatry (Sections 175 and 176).—The reference committee reported on two resolutions: one petitioning "the New York State Legislature to amend the Medical Practice Act to include nervous and mental disorders as part of the duties and responsibilities of duly licensed medical practitioners" and providing "that a copy of the resolution be sent to each member of the Legislature and to the Governor"; the other calling for a statement of approval by this Society of "an amendment to the Medical Practice Act of the State of New York to state specifically that the diagnosis and treatment of mental disorders is part of the practice of medicine." The committee stated, and the House concurred, that the subject "warrants further study by the Council." This was referred by the Council to the Committee on Legislation.

The committee states, "The bill to amend the Medical Practice Act has been drawn up and is ready for introduction. Every effort is being made to procure added impetus from psychiatric societies and the Subcommittee on Mental Hygiene for the passage of this bill. (*See Annual Reports in this issue, Council—Part IX.*)

Injunction Bill (Section 180).—The House adopted a resolution requiring that this Society cause the introduction, at the 1954 session of the legislature, of a bill similar to Senate Intro. 94 of the 1949 session and work actively for its passage. The Council referred this to the Committee on Legislation.

The committee states that a new "Injunction Bill" has been drawn up and introduced. (*See Annual Reports in this issue, Council—Part IX.*)

Free Choice of Physician (Section 183).—The House adopted a resolution that this Society "cause the introduction at the 1954 session of the legislature... of a... bill similar to Senate Intro. 1082 of the 1952 session (the Panken Bill) and work actively for its passage." The Council referred this to the Committee on Legislation.

The Committee states, "Both the 'Condon Bill,' requiring free choice of plan, and the 'Panken Bill,' requiring free choice of physician in any plan, have been introduced." (*See Annual Reports in this issue, Council—Part IX.*)

Free Choice of Plan in Voluntary Health Insurance (Section 181).—The House adopted a resolution that this Society cause the introduction at the 1954 session of the legislature of a bill similar to Senate Intro. 2416 of the 1952 session (the Condon Bill) and work actively for its passage. The Council referred this to the Committee on Legislation. (*See Annual Reports in this issue, Council—Part IX, and above under "Free Choice of Physician."*)

Opposition to Licensing of Cultists (Section 182).—Upon recommendation of the reference committee, the House adopted a resolution to (1) oppose any bills for the licensing of chiropractors and other cultists, (2) secure the cooperation of all interested persons and groups in opposing any bills to license chiropractors and other cultists, and (3) with the assistance of other persons and groups, develop and conduct a program for the education of the people of the State of New York in the dangers of cult practice. The Council referred this to the Committee on Legislation.

The committee states that the Committee on Legislation and the Committee on Public Relations are prepared to put forth every effort to prevent enactment of any bill to license cultists. (*See Annual Reports in this issue, Council—Part IX.*)

Malpractice Liability for Interns and Residents in Municipal Hospitals (Section 179).—It was voted by the House of Delegates that this Society cause the introduction in the 1954 session of the Legislature of a bill similar to the McCaffrey Bill (Senate Intro. 754 of the 1953 session) and work actively for its passage. The Council voted to refer this to the Malpractice Insurance and Defense Board and the Committee on Legislation.

The Committee on Legislation states that a bill "to require municipalities to protect interns and residents in municipal hospitals from malpractice liability" has been introduced. (*See Annual Reports in this issue, Malpractice Insurance and Defense Board and Council—Part IX.*)

Workmen's Compensation Fee Schedule (Section 163).—The reference committee stated that "an adequate fee schedule should be set up more nearly approaching the prevailing fees in private practice"; that "complete revision of the fee schedule is not called for, but a reasonable increase in the fees for general practitioners and for subsequent visits by specialists is urgently requested," and that "many disputes between physicians, carriers, and employers could be avoided by careful editing of the present fee schedule by the chairman of the Workmen's Compensation Board with the assistance of properly qualified physicians." They specify "A first visit fee of $5.00 and subsequent office fees of $3.00 are far from excessive for the general practitioner. The subsequent visits to specialists should be raised to $5.00 as they originally were in the September 1, 1948, schedule." The Council referred this to the Committee on Workmen's Compensation. This statement was referred to the chairman of the Workmen's Compensation Board by the Bureau of Workmen's Compensation of this Society for action.

Recodification (Section 163).—The reference committee stated that if recodification of the Workmen's Compensation Law were found to be necessary, "the committee would like to go on record as being vitally interested... and urge that the chairman of the Workmen's Compensation Board enlist the cooperation of our committee and Bureau in any such recodification." The Council voted to refer this to the Committee on Workmen's Compensation. This information was sent to the chairman of the Workmen's Compensation Board.

Testimony and Mileage Fees (Section 163).—The reference committee supported the motions of the Workmen's Compensation Committee that "fees for testimony for the general practitioner be increased from $10 to $15"; that "mileage fees be increased in accordance with present-day costs"; and that "the chairman of the Workmen's Compensation Board give authority to referees to increase fixed fees within reasonable bounds when a physician is required to spend a considerable amount of time going to and from a hearing, and undue time at the hearing itself." The Council referred this to the Committee on Workmen's Compensation. This was referred by our Workmen's Compensation Bureau to the chairman of the Workmen's Compensation Board.

Hospital Practice of Medicine (Section 163).—The reference committee called upon "the proper authorities to enforce the provisions of the Workmen's Compensation Law in connection with medical care in hospitals, with particular reference to the physiatrist, the anesthetist, and the pathologist." The Council voted to refer this to the Committee on Workmen's Compensation and to the Committee on Hospital and Professional Relations.(*See Annual Reports in this issue, Council—Part X.*)

Restoration of Functions of County Societies (Section 163).—The reference committee strongly recommended "that the Legislation Committee intensify its efforts to accomplish the restoration ... to the four New York counties" of "all those functions which they exercised prior to 1944." The Council voted to refer this to the Committees on Workmen's Compensation and on Legislation. A bill for this purpose was introduced into the 1954 Legislature as in previous years. (*See Annual Reports in this issue, Council—Part IX.*)

Thoracic Surgery (Section 163).—The reference committee concurred "in the recommendation of the Council committee that the chairman of the Workmen's Compensation Board recognize the subspecialty of thoracic surgery under the Workmen's Compensation Law and assign M-17 as the code letters designating such subspecialty." This was referred by the Council to the Committee on Workmen's Compensation.

The action of the House of Delegates was referred by the director of the Workmen's Compensation Bureau to the chairman of the Workmen's Compensation Board, Miss Mary Donlon.

Subscriptions to the Journal (Section 125).—The House adopted the reference committee recommendation, made "after consultation with the editor and the business manager concerning probable costs involved," that "subscriptions to the *Journal* be given gratis to senior students in the medical schools in this State upon their request, provided this is not in conflict with postal regulations governing subscription periodicals, in which case a nominal charge should be assessed." The Council voted to refer this to the Publication Committee.

A letter was sent from the editor of the NEW YORK STATE JOURNAL OF MEDICINE to the deans of the nine medical schools in the State, informing them of this action taken by the House of Delegates. Six hundred thirty-one such subscriptions are being filled for the year 1953–1954.

Public Relations Training for Interns and Residents (Section 147).—The House of Delegates adopted a reference committee report approving the plan to provide training in public relations for interns and residents and suggesting that a letter be written to hospital boards with interns and residents and to all medical schools informing them of the desires of this Society. The Council requested the secretary to implement this request.

The secretary sent a letter to the deans of the nine medical colleges in New York State, to *Hospital Forum* of the Hospital Association of New York State, and to the *Bulletin of the Hospital Council of Greater New York*. Copies were sent to the NEW YORK STATE JOURNAL OF MEDICINE and to this Society's *Newsletter*. The letter to *Hospital Forum* was published and received editorial comment in the August, 1953, issue of that publication.

Continuation of Citizens' Health Education Campaign (Section 131).—The reference committee approved in principle a resolution that (1) the Public Relations Committee conduct citizens' health education campaigns on medical problems facing the general public, such as the advisability of having a family doctor, the proper use of emergency call service, and the advisability of having Blue Cross and Blue Shield insurance, and (2) the campaigns be conducted on a more moderate scale but with every effort "to retain the oraganization and enthusiasm which have been developed during the past year." The reference committee felt that the intent of this resolution would be achieved by recommendations embodied in their report on the report of the Public Relations Committee. The report was adopted by the House of Delegates. The Council voted to refer this to the Committees on Public Relations and Public Health and Education. (*See Annual Reports in this issue, Council—Parts I and XI.*)

A Code of Press Cooperation (Section 130).—The House concurred in unanimous endorsement by the reference committee of a resolution that:

1. This Society work actively to formulate "A Code of Press Cooperation";
2. The Public and Professional Relations Bureau work actively to support this program after its establishment;
3. The code be established in cooperation and consultation with the authorized branches of dissemination of public information, namely, (*a*) the press (newspapers, syndicates, and magazines), (*b*) press photographers, (*c*) newsreel photographers, (*d*) wire services, (*e*) radio and television news services, and (*f*) other authorized branches; and
4. The code be (*a*) presented to the county societies on a permissive basis for their consideration and (*b*) forwarded to the American Medical Association.

The Council voted to refer this to the Committees on Public Relations and on Ethics.

A subcommittee of the Public Relations Committee has drafted such a code, submitted it to officials of this Society for their consideration, and presented it to and discussed it with representatives of the press, radio, TV, press photographers, and other groups. It is hoped that a final code will be ready for submission to the House of Delegates at the 1954 meeting. (*See Annual Reports in this issue, Council—Part XI.*)

Fee-Splitting (Section 203).—Reporting on a resolution which condemned the practice of fee-splitting and required that the Attorney General of the State of New York be memorialized to institute legal action for the full and effective enforcement of Section 6514 of the Education Law, the reference committee recommended, and the House concurred, "that this resolution be referred to the Council for the statistical study of the alleged grievances before complaint is made to the attorney general." The Council voted to refer this to the Committee on Ethics.

The committee reports that until alleged grievances are submitted, no statistical study which might form the basis for a complaint to the attorney general can be made. (*See Annual Reports in this issue, Council—Part XII.*)

Unethical Practice (Section 204).—The House concurred in the recommendation of the reference committee that a resolution regarding the assignment of fees by physicians to hospitals be referred to the Council. The resolution required that this Society "study and investigate these violations (of Section 6514, paragraph 2(f) of the Education Law of the State of New York) and report its findings and recommendations." The Council voted to refer this to the Committee on Hospital and Professional Relations.

(*See Annual Reports in this issue, Council—Part VI.*)

Proration of Fees (Section 199).—The House of Delegates adopted a resolution that Section 6514 of the Education Law of the State of New York should be amended to permit proration of fees under certain conditions. This was referred by the Council to the Committee on Legislation.

It was also voted that when such legislation is enacted, the following paragraph, to be numbered "Section 7," be added to Article VI of Chapter III of the *Principles of Professional Conduct* of this Society:

"PRORATION OF FEES

"*Section 7.* It is not unethical for an indemnity fee to be prorated between two or more physicians

> when such physicians actively participate in the rendering of medical and/or surgical care, and the fee therefor is commensurate with the services rendered; and the patient to whom such care shall have been rendered shall be advised of the participation and of the distribution of the fee through an itemized combined statement or separate statements. Such proration would be considered ethical if it was limited to instances where a contracted fee payment for a service has been made by an insurance company."

The Council referred this to the Committee on Ethics, if and when the law is passed.

The Executive Officer states that the bill introduced to permit proration of fees under certain conditions will not be opposed by the State Education Department. In the opinion of the counsel for that department, proration, under the conditions described, is not now illegal. The report of the Committee on Questions of Ethics proposes an amendment to the *Principles of Professional Conduct* of this Society, to be made if the above-mentioned amendment to the Education Law is enacted. (*See Annual Reports in this issue, Council—Parts IX and XII.*)

Procedure as to Future Amendments of Principles of Professional Conduct (Section 206).—The House of Delegates approved a motion "that the question of the study of any resolutions having to do with the Code of Ethics be referred to the Council who will report to this House next year an implementation to find some better way than the way we are doing at present." It was suggested that proposed changes in this code be studied for a year by an appropriate committee as is done with proposed amendments to the Constitution and Bylaws. The Council voted to refer this to the Committee on Questions of Ethics.

At its November meeting the Council approved a recommendation of the committee that, as a check for hasty action, one year elapse before the change is made, and that Chapter XVII of the Bylaws be amended so that, following the word "Bylaws" in Section 1 of Chapter XVII, there will be inserted the words, "or the *Principles of Professional Conduct.*" The section would then read: "Amendments to these Bylaws, or the *Principles of Professional Conduct*, except such as are obligatory by law, shall be made only at an annual meeting of the House of Delegates." The chapter also requires that proposed amendments lay over a year and receive a two-thirds affirmative vote.

Nursing Education (Section 195).—The House adopted a report of the reference committee in which the committee (1) expressed a hope for "full implementation" of the plans for organization of regional councils on nursing problems, (2) recommended that the Coordinating Council on Nursing Problems urge the Federal government to establish schools of nursing in Federal hospitals or, where this is not possible, to subsidize students in civilian schools of nursing of their own procurement, (3) urged that the Council committee institute a survey of hospitals which offer group nursing for private patients and commend those which do so, and (4) urged that hospitals without training schools start courses or schools for the training of practical nurses. The Council voted to refer this to the Committee on Nursing Education. (*See Annual Reports in this issue, Council—Parts XII.*)

Simplification and Unification of Insurance Forms (Section 140).—With regard to a resolution that this Society urge "the adoption by all insurance companies of uniform certificates" and "reduction in number and character of questions asked to those actually needed," the reference committee recommended "that the specific forms to which objection is made ... be supplied to the Council, and that the Council in turn submit them to the State Insurance Department as being unnecessarily harassing to the members of the medical profession, with the suggestion that the Department recommend the use of more suitable forms to the insurance companies affected." This recommendation was approved by the House of Delegates. The Council voted to refer this to the Subcommittee on Medical Expense Insurance of the Economics Committee.

Simplified and uniform report forms for various purposes are being developed on a national scale by the Council on Medical Service of the American Medical Association, the Bureau of Accident and Health Underwriters, the International Claim Association, the National Association of Insurance Commissioners, and the American Hospital Association. (*See Annual Reports in this issue, Council—Part VII.*)

Early Submission of Resolutions (Section 141).—The House adopted a resolution requiring that, "when possible, proposed resolutions to be considered at the annual meeting of the House of Delegates be submitted to the secretary ... not later than six weeks before the scheduled meeting and that these resolutions be placed in the hands of the delegates not later than two weeks before such meeting." The Council voted to refer this to the Publication Committee and to the Speaker and that the Coordinating Council be notified.

The Coordinating Council was notified and on July 2, 1953, Dr. Anderton wrote to the secretaries of the component county medical societies, quoting the resolution and expressing the hope that resolutions from the societies would reach his office by February 1, 1954, to insure publication in the NEW YORK STATE JOURNAL OF MEDICINE.

Autopsy Law Amendment (Section 108).—The House adopted a resolution providing that this Society "act through its legislative personnel, committees, and officers to make every effort to promote legislation to liberalize the New York State Autopsy Law in conformity with that of the State of Wisconsin." This was referred by the Council to the Committee on Legislation.

The Legislation Committee reports that it will cooperate with the New York State Hospital Association to obtain passage of an amendment for this purpose. (*See Annual Reports in this issue, Council—Part IX.*)

Legalizing the Distribution of Narcotics (Section 109).—A resolution introduced by Dr. Heldmann of Richmond County, presenting a plan for the establishment of narcotics clinics, was approved in principle by the House of Delegates and referred to the Council for further study. The Council voted to refer this to the Committee on Public Health and Education. (*See Annual Reports in this issue, Council—Part I.*)

Retirement Fund for State Medical Society Employes (Section 170).—The House of Delegates adopted a report in which the reference committee, while fully in accord with such a motion, recommended that "the president appoint a committee to study the various plans and report at the next meeting of the House of Delegates." The Council voted that this be referred to the Office Administration and Policies Committee.

Upon recommendation of the committee and Council, the Board of Trustees voted, in October, 1953, to set aside $75,000 for an Employes' Beneficiary Fund in which the employes have no proprietary interest.

Permanent Headquarters (Section 165).—The House of Delegates adopted a reference committee report which stated, "The suggestion [of the president-elect] that a planning committee be assigned to investigate and seriously consider an adequate location and building for the State Society's permanent headquarters is both timely and interesting." The Council voted that the president be empowered to appoint a subcommittee of the Planning Committee to activate this program.

Upon recommendation of the subcommittee, under the chairmanship of Dr. Mellen, and with the approval of the Council, the Board of Trustees voted on September 10, 1953, "that $100,000 of surplus funds be set aside as a nucleus for a building fund, when and if the Medical Society of the State of New York so approves, and that the interest be cumulative in this building fund."

A.M.A. Resolutions.—Dr. Carlton E. Wertz introduced the resolution dealing with the "Essentials of an Approved Internship," adopted by the American Medical Association in December, 1952. Five resolutions dealing essentially with the same subject were introduced and were referred to the Reference Committee on Medical Education and Hospitals. The reference committee recommended the following substitute resolution, and its report was adopted:

> WHEREAS, from the hearings before your reference committee at this time it was concluded that the action taken by the House of Delegates at the session in Denver in 1952 was done without opportunity for thorough study and deliberation by the members of the House of Delegates; and
>
> WHEREAS, there appears to be considerable dissatisfaction with the present Essentials of an Approved Internship as testified to by the number of members who appeared before the committee; and
>
> WHEREAS, the postponement of enforcement and effectiveness of the Essentials for three or four years would serve no practical purpose; therefore be it
>
> *Resolved,* that the House of Delegates abolish the rule whereby approval may be withdrawn from an internship program which for two consecutive years fails to obtain at least two thirds of its stated complement of interns; and be it further
>
> *Resolved,* that further study be continued by a committee appointed by the Speaker of the House of Delegates, at least half of whom are doctors in private practice not connected with medical schools or affiliated hospitals.

Dr. Wertz also introduced the resolution dealing with the matching plan for the apportionment of interns, which was referred to the Reference Committee on Medical Education and Hospitals. The reference committee reported that they agreed with the resolution and recommended that the American Medical Association representatives to the National Intern Matching Program, Inc., be instructed to request that corporation to restudy the problem and implement its improvement. The reference committee report was adopted.

Dr. Renato J. Azzari introduced the resolution calling for re-evaluation of the present postgraduate and residency training program. It was referred to the Reference Committee on Medical Education and Hospitals. The reference committee reported that, while the committee approved the principles involved, it disapproved of that portion of the resolution suggesting that a committee be appointed. The reference committee report was adopted.

Dr. Edward P. Flood introduced the resolution proposing a professional and administrative audit of small as well as large hospitals. This was referred to the Reference Committee on Medical Education and Hospitals. The reference committee, whose report was adopted, approved this resolution and recommended that it be referred to the Board of Trustees for implementation by the Joint Commission on Accreditation of Hospitals.

Dr. Renato J. Azzari introduced the resolution requesting proclamation of an annual Medical Progress Day, which was referred to the Reference Committee on Hygiene and Public Health. The committee approved this resolution in principle, but since it may if successful require time and expenditure of funds on the part of state and county medical societies, the committee felt that without further information this recommendation might be unwise and that such a day might be combined with Hospital Day or with a Doctors' Day which has been inaugurated in some parts of the country by the Woman's Auxiliary. On this account the committee felt it might be better to refer this resolution to the Board of Trustees for study. The reference committee's report was adopted.

Dr. J. Stanley Kenney introduced the resolution entitled "Ethical Relationships Between Physicians" or "Elaboration of Medical Ethics of the American Medical Association." Eleven resolutions dealing with the same subject were introduced and referred to the Reference Committee on Legislation and Public Relations. After careful consideration the committee concluded that the principle emphasis of the 11 resolutions might be summarized as follows:

> "The Principles of Medical Ethics as formulated, interpreted, and applied by the American Medical Association must be considered the only fundamental and controlling application of ethics for the entire profession. Any statement relating to ethical matters by other organizations within the general profession of medicine advances views of only a particular group and is without official sanction of the entire profession as represented by the American Medical Association."

The committee recommended no action on the resolutions "but instead that the House give careful objective consideration to the ethical problem involved." With regard to the request, included in two of the resolutions, for "the development of an approved method for joint billing," the committee expressed the opinion that matters of this nature should first be studied by the Judicial Council. It called the attention of the House to the current opinion of the Judicial Council regarding the matters of fee-splitting and methods of billing published in the *Journal of the American Medical Association* for December 27, 1952. The report of the reference committee was adopted.

The resolution regarding Veterans Administration medical care was introduced by Dr. Herbert H. Bauckus and was referred, with six other resolutions dealing with the same subject, to the Reference Committee on Insurance and Medical Service. The committee concurred in the conclusion of the Liaison Committee to Organizations Concerned with the Care of Veterans that "the original recommendations of the Special Committee on Federal Medical Services, in this regard (first presented on December 4, 1952), should now be adopted by the House of Delegates." The recommendations were that "medical care and hospitalization benefits for veterans in Veterans Administration and other Federal hospitals" be limited to (1) veterans with peacetime or wartime service whose disabilities or diseases are service-incurred or aggravated and (2) within the limits of existing facilities to veterans with wartime service suffering from tuberculosis or psychiatric or neurologic disorders of nonservice-connected origin, who are unable to defray the expenses of necessary hospitalization.

With respect to "the treatment of veterans with tuberculosis and neuropsychiatric disorders of nonservice origin in Federal hospitals" the special committee stated, "Preferential treatment for veterans with these nonservice-connected disabilities cannot be continued indefinitely, in view of its detrimental effect on the health and economy of the entire nation." The reference committee added the recommendation "that all of the facilities of the American Medical Association and of its constituent state and component county societies be employed immediately to disseminate background information and accurate statistical data in this regard." The report was adopted.

The secretary sent copies of the resolution of the 1953 House of Delegates of the Medical Society of the State of New York to the officials mentioned in the final paragraph of the resolution.

Annual Reports

Medical Society of the State of New York

1953–1954

Report of the President

To the House of Delegates, Gentlemen:

In the past months as president-elect and president I have become far better acquainted with the problems, the functions, and the services of the Medical Society of the State of New York than I had previously realized. I sincerely wish all the members of the Society could appreciate and share in this indoctrination. This will be a preliminary report of my stewardship.

First, let me say that it has indeed been a task that has required devotion, interest, thought, and time. However, one who is chosen as the recipient of the honors that I have experienced is fortunate because of the education and broadening influence inherent in the very nature of organized medicine as exemplified by the Medical Society of the State of New York. As president one becomes imbued with a sense of devotion to the problems of the practice of medicine. At no time does the president make the job; the job makes the president.

The friends and contacts one makes are invaluable and shall long be remembered by me. During the past year I have had opportunity to meet with many groups. I particularly enjoyed meeting with the public health group at Lake Placid, through the auspices of the State Department of Health, and in my address I tried to stick to the keynote of cooperation of the medical profession with the Department of Health.

I have had the pleasure of visiting some of the neighboring state medical societies and have been received with acclaim, not for myself but as a symbol of organized medicine in the Empire State. These visits have always been most rewarding.

This also applies to my visits to the various district branches, where the meetings were not only instructive scientifically, but socially they will stand out in my memory as the most pleasant part of being president. At many of these places I spoke on what each district branch has contributed to the State organization and made a plea for fair play in legal and press relationships. I hope my feeble efforts have not been in vain, and I wish to thank all the officers of the district branches for their wonderful cooperation in making these meetings a success. The majority were well attended by their constituents, and the impression I gained was that few of them wished to discontinue these meetings, as was advocated by some not so long ago.

In my efforts this year I have been greatly aided by the president-elect, Dr. Dan Mellen, for which I offer thanks and wish for him a very successful year as president. I have also been greatly assisted by members of the staff, particularly Dr. Walter P. Anderton, our secretary, who has journeyed on these excursions with me and has added a great deal, not only to the efficiency of the work, but an unforgettable companionship. I have had the most earnest and enthusiastic aid and cooperation from the chairmen of all the committees. To them I offer my thanks, and to the other members of the committees, also, I am deeply indebted.

To the editor of the JOURNAL, Dr. Laurance D. Redway, I wish to express my appreciation of his willingness to help me in many of my faltering efforts at presentation of some of the problems that exist. To all the others in the administration, too many for me to enumerate, from the leaders to the least ones, I offer my appreciation, because everyone is a cog in the wheel that makes the machinery of the State Society function efficiently. I have a roster of people that includes all of the office personnel, to whom I am deeply indebted and whose help, kindness, and devotion I shall always cherish. No finer roll could be called.

Now I wish to offer just a few brief paragraphs in regard to some of the aspects of the position of president, with such personal comments about them as have come to me from time to time.

When one stands at this listening post one comes in contact with the good and the bad in medicine and the effect of its public relations. The point that penetrates deeply into the heart of late has been the number of reprimands and criticisms, often based on falsehoods, that have been used by publicity-seeking people to indict a great profession. One of the unfortunate phases of publicity that injures the medical profession is the thoughtlessness, the inconsideration, the loss of confidence by a public misled and unaware of the basic ethical principles which guide medical organizations. Such things are hard to convey to lay people.

Group Practice.—At this point I would remind you that there are groups within the large cities who have personal axes to grind and will not under any circumstances follow the principles of medical organization. In many instances they are as wolves that would gnaw at the very loins of medical care. Some of these groups are at times well intended. I shall not hide under any fog or smog but will bring to your attention the ill things that have been said, frequently untrue, by those who advocate monopolistic group medical insurance and employ misstatements to the effect that the medical profession is against group practice. Such misstatements create a false impression on the public.

Most of us in our own circle practice group medicine in that we refer patients to other doctors who will render good service at a price that patients are able to pay. None of these doctors will fail to render good service to patients who are channeled through them in this method of practice. However, free choice of physician is always the patient's prerogative, as is the free choice of groups. This is unfortunately not true in some of the insurance plans that are being forced upon taxpayers.

The misleading statements are detrimental to prepaid medical insurance of all types. This division of thought and practice not only injures the doctors as a whole, but it confuses and disturbs the understanding so necessary in the doctor-patient relationship. It is my sincere hope that these factions will equate their misunderstandings and difficulties and work with all the understanding they can muster to set up a State-wide comprehensive, smooth, medical insurance program.

To testify that medical societies are opposed to group practice is contrary to the truth, provided there exists freedom of choice for patient as well as doctor and as long as there is no compulsion, monopoly, or arbitrary government subsidy. Anyone who voices this accusation against organized medicine is either ignorant or dishonest. He is certainly possessed of selfishness or the viewpoint of either a juvenile or senile type. These people are mentally prone to distortion and aberration or else deliberate lies.

Medical organizations have always believed in free group practice of medicine when honestly conducted in the framework of good professional ethics. As a matter of fact, day by day, in every hospital and community of doctors in America, group medicine is practiced, but never on a compulsory or monopolistic basis. Any program of voluntary health insurance upon a comprehensive basis would be the culmination of great public service, and success and glory would be vouchsafed to such a program. I can conceive of no greater contribution to humanity unless it might be the discovery of the cause and cure of cancer. It will require give and take, but this should not be difficult for unselfish men.

Medical Education Foundation.—Very appealing to every member of the State Society and to its officers is the cause of the Medical Education Foundation. Contributions have been optional, but I hope that every member has seen fit to contribute at least the amount indicated on the statement of the Society's dues. In turn medical educators should appreciate and weigh not only the amount of these contributions but the spirit in which they are offered. When the alumni remember their alma mater it in turn should reward their contributions by more counsel and influence in the administration of medical education programs.

Blood Banks Association.—The Blood Banks Association of New York State, Incorporated, has held many meetings during the year. Much spadework has been done; much is still to be done to launch the proper program for making blood available to all of the people in the State of New York—blood that is properly processed and administered. On the surface this seems like an easy job, but if anyone will stop to analyze the task it becomes mentally a colossal and almost an insurmountable problem. But under the able leadership of Dr. J. Stanley Kenney and his committees, the Association is on the very threshhold of offering to New York State a really fundamental program of blood procurement and administration with the greatest dispatch, for the good of the patients and the profession. As you know, the Board of Trustees has furthered the Blood Banks Association by its interest as well as by the substantial loan from the Society's treasury. The disbursement of this grant is under the supervision of the Association's board of directors, representing the Council and Trustees of the State Society.

Among the many positive programs the State Society has undertaken is this vital mission of obtaining more blood for patients' needs and of getting more use from the blood we receive. The Association was created as a result of successive mandates from the House of Delegates. An office has been established in the headquarters of the State Medical Society at 386 Fourth Avenue, New York City. Here is a brief survey of its progress from the opening of the office in August, 1953, up to February, 1954.

Membership in the Blood Banks Association has shown satisfactory expansion. As of February over 80 of the 225 blood banks in the State had joined as institutional members. Almost 200 physicians enrolled as individual members.

In February, the immediate objective of the Association was readied for activation in March. I refer to the Blood Exchange Program which will serve you well by providing for blood shipment between member banks whenever and wherever shortages occur. It will facilitate interblood-bank reciprocity by allowing patients receiving blood tranfusions throughout the State to supply donor replacements through a blood bank other than the one which originally gave the blood for the transfusion.

At its last session, the House of Delegates approved a resolution of Genesee County Medical Society requesting that the Blood Banks Association pioneer project in donor procurement be staged in Genesee County. Long and careful preparation has been made and the pilot project takes place in April. Under the method of donor procurement called the "Blood Assurance Program," an individual may give one pint of blood and have four pints of blood guaranteed for each member of his family for the entire year. Actuarial studies indicate that the plan is sound. Genesee County Medical Society feels that the community will get behind the effort wholeheartedly, with the assistance and guidance of the Blood Banks Association.

To put blood in the blood banks is of paramount importance throughout the State. The Blood Assurance Program has been sponsored for this purpose. Its success in Genesee and other counties that may request it, in cooperation with their respective county medical societies, will afford a new approach to the problem of securing donors. Ultimately it is hoped that a speakers bureau will offer programs to county medical societies, hospital staffs, and member banks.

The Blood Banks Association through its clearing house will maintain a State-wide inventory of blood available. I feel that this is a public service as well as being of great value to the medical profession.

The Blood Banks Association of New York State also constitutes a common meeting ground for the community blood bank, hospital blood bank, civil defense authorities, Red Cross, and the State Medical Society, so that problems may be solved by mutual effort and coordination. From the viewpoint of the practicing surgeon or physician, it is felt that there is a great deal to be accomplished in this field. The blood banks believe it will do much "to coordinate and speed the services of all blood banks throughout the country and serve as a meeting ground for individual problems." Great progress has been made toward the establishment of the Association as a self-sustaining organization which will win new friends for the medical profession and prove of real value for our patients.

I should like to take this opportunity to thank the officers and board of directors of the Blood Banks Association for their unselfish efforts to further the work of the Association. Blood banking is a big program and requires the contribution of much time and effort on a voluntary and gratuitous basis.

Annual Meeting.—We are looking forward to the most successful convention in the history of the Society this year, in New York City. Exhibit spaces have already been spoken for, and many applicants have been disappointed because for lack of space their applications had to be turned down. One phase of the convention will be the scientific program of the Blood Banks Association. I urge all of you to evince an interest in this and the many other educational features of the convention.

Medical Economics.—In the field of economics the Bureau of Medical Care Insurance, under the guidance of Mr. George P. Farrell, continues to promote the voluntary insurance plans. As a matter of fact these insurance plans have become so large and successful financially that a query occurs to your president—Should this promotion continue at the expense of the Society? Certainly we should always exercise a certain amount of control and jurisdiction over the various plans. The Bureau has done a tremendous lot of pioneer work in their successful promotion.

What I say now is my own brainchild, and it is that I think the program of prepaid insurance would be less expensive, less complicated, more efficient, and more generally used by the people if we had a State-wide plan, which, for the most part, should carry on its self-promotion. Never, however, would I believe that the Medical Society should turn its face and not inspect, aid, and promote the various phases and help in the solution of the complicated problems of medical insurance.

I wish to state further that it is my belief that to make this insurance more comprehensive and to insure the financial stability of such a program, directed by the medical profession and the Department of Health, would be a service to the public, if this could be done without government directives and with the free choice of medical care. Perhaps a program would be feasible if the principle of free choice was maintained and the best talent in the medical profession was used to promote and control the program. Never does this mean compromise on the basic principles that have for years been the policy of organized medicine—free enterprise and freedom of medical care and research.

Federal and State reinsurance of the voluntary plans will offer many problems and present questions that will be vital to future developments. Certainly vigilance and thoughtful study and planning will be organized medicine's lot. The medical profession can never tolerate a minority voice or control in any governmental agency which attempts to administer a medical program. If governmental reinsurance is administered on the same cooperative principle that applies to the board of managers or trustees of a community hospital with the medical staff of the hospital, where the former exercise financial control and assistance for the maintenance of the hospital yet always bow to the judgment of the medical staff on the principles for conduct of medical care to the patients, then perhaps the medical profession might accept such a Government proposal.

As in so many of the voluntary insurance programs, any insurance or reinsurance should be under the control of a board of directors, the majority of whom are physicians.

Ethics.—An ethical physician "should receive his remuneration for professional services rendered only in the amount of his fee specifically announced to his patient at the time the service is rendered or in the form of a subsequent statement, and he should not accept additional compensation secretly or openly, directly or indirectly, from any other source."

Rigidity about ethics, at least the enforcement of them, would be regimentation. Yet, on the other hand, the liberty of a flexible conscience should not be the selfish personal guide of any doctor's professional conduct. It would do the thoughtless ones good to recall, once a week, the Hippocratic principles so that they could close their eyes at night and sleep with a clear conscience. Too often ethics have been violated—usually, however, by only a small percentage of the profession. Never before has so much harm been done by so few to a great profession.

With the approval of the Council I have appointed a Special Committee on Definition of "Unprofessional Conduct," which reason has been added by law to the causes for discipline by the Board of Regents of the State Department of Education.

Hospital and Professional Relations.—The Council has taken a very forward step toward a rational and mutual understanding of hospital and doctor relationships. This is not an easy problem to solve. The Council has authorized the appointment of a special committee to foster conferences with hospital and medical school authorities in order to encourage community understanding leading to harmonious coordination of all health services to the public. This has been done and the committee is functioning.

The committee was appointed in order to define the problems constantly arising and to endeavor to establish agreement between the hospitals and the Medical Society, which agreement would furnish guides in the relationship between physicians and hospitals. All questions of exploitation of physicians, hospitals, or the public are to be carefully considered. Also, consideration will be given to the full-time and part-time personnel, which includes problems involving interns and residents practicing medicine in hospitals.

Also vital to the very existence of good medical care is the problem of deficit financing of hospitals and medical schools from professional fees. Undoubtedly at present there is much misunderstanding between the hospital and doctor groups, and improvements can be made and are devoutly to be prayed for.

Industrial Health.—Acting on a directive from the House of Delegates, the Planning Committee for Medical Policies has spent many hours in conference and study, resulting in a recommendation that this function of the Medical Society be activated and that a part- or full-time secretary be appointed to investigate, correlate, and implement the best medical care and understanding for the workers of this State.

This is a pioneering program on the part of the State Society, but it has already been too long postponed, and I am sure will be to the great benefit of the public if an understanding and cooperative relationship is developed for the improvement of the medical care of the employe.

Any program of industrial health will require thoughtful consideration not only of the specialist but of the general practitioner. Certainly a rehabilitation program will be a very important item of the agenda. Rehabilitation should at all times be under the direction of the medical profession, which will require education and earnest cooperation of all the interested groups—employer, employe, and the medical profession. The keynote of any success which may be attained will be cooperation.

Legislation.—We are very fortunate to have the understanding and energy and foresight of a most active chairman and Legislation Committee, aided by an efficient Executive Officer. Eternal vigilance has been their watchword so that nothing befalls the public through a poorly planned Medical Practice Act or any type of legislation that might adversely affect medical care to the public. A new generation of medical men should have proper directives from the more experienced. At no time should there be compromise with cultism or poor educational programs. The public are the doctors' wards and responsibility, when it comes to the care of their health. Never should the profession yield or be afraid to educate the public in simple terms as to the danger of improper methods of medical care.

Malpractice.—This Malpractice Insurance and Defense Board has most certainly had a headache, and, just as for all headaches, the solution is very difficult to find and somewhat a will-of-the-wisp; so much so that few doctors, apparently, are satisfied with the number of cases of malpractice occurring, or with the failure in many instances to settle these cases by trial rather than by compromise. It is my opinion that many of these malpractice claims should go to trial. Let it inconvenience the public and the doctors, regardless of the time and effort needed or where the chips fall, so that the malcontents about the principles that have been followed and the cost of medical defense insurance can be set straight. Is the premium for malpractice insurance excessive when compared to the discomfort, poor publicity, loss of time and money that would be involved in bringing to trial every case of malpractice?

Some states claim that they have reduced malpractice cases by just such a procedure of trial, and it is my feeling that a period of experimentation of several years along this line might well be instituted.

Civil Defense.—Medical defense and civil defense should never for one moment be allowed to lapse into a state of complacency. Civilian aides of all kinds should be trained and alerted to be on guard, if needed at a time of catastrophic visitation. In the uncertainty of the world today preparedness may be the keystone of our survival.

Let me quote from a recent issue of the Medical Defense Newsletter: "After an atomic attack, lay personnel will depend on the physician to lead them. Every physician should resolve to learn how before another year is past. Although we all hope we will never be attacked, it will be too late to learn what to do after the explosion."—J. G. Fred Hiss, M.D., Chairman, Committee on Medical Defense.

Unfortunately, we are still a long perilous way from having all the "know-how" in first aid, organized disaster relief, communications operations, and many of the other elements of saving ourselves if a time of sudden and great trouble should befall.

Nursing Education.—A great deal has been said about a joint comission for the improvement of the care of the patient and the establishment of State commissions to further guide a program, representing the State League for Nursing, the State Hospital Association, the Medical Society of the State of New York, and other interested nursing groups. It would be advantageous to form such a commission. The agencies mentioned should work harmoniously together in studying all the phases of nursing. Not only should the topic of highly educated supervisors or directors of nursing be considered, important as this may be, but the actual care of the patient comes within the field of ancillary personnel such as practical nurses, nurses' aids, technicians, and dietitians—even porters and orderlies are essential to good nursing care.

I am quite sure that the Medical Society will be willing to cooperate earnestly in the betterment of nursing care in all its phases and in all types of hospitals. Any commission that will act as a sounding board for exchange of opinions leading to constructive advisory, but not mandatory, action will certainly receive the unanimous approval of organized medicine. We need fewer committees and commissions and more action.

Office Administration and Policies.—You would not for one moment expect me to forget my pet hobby—that the Medical Society of the State of New York deserves a headquarters of its own, befitting the profession. A special Committee on a Permanent Headquarters (or home) has been active in the past year investigating real estate possibilities. I pledge that I shall continue, even after my term of office has expired—if I am permitted to do so—to further the idea of an adequate home for the Society. There are monies available, some of which have already been earmarked for this purpose. But all the surplus should not be used; rather, I think, a campaign for subscriptions to such a project is timely. If the right opportunity presents itself, a bond issue might be tried whereby members of the Society could subscribe for bonds of varying denominations. There are some of us who would be happy to participate in such a program.

Publications.—I have already referred to the JOURNAL, and I believe the editorial board is doing its utmost to make our publication the very best of all state medical journals. I would urge that research workers and medical schools contribute from time to time highly scientific papers as well as those on practical advances in medicine.

The *Directory* troubles me because of the tremendous cost involved, certainly over $100,000 a year. Plans for the 1955 *Directory* are progressing, and it is too late to alter the policies at this time. However, I think a committee should be formed to study the feasibility or practicability for your Society to discontinue the *Directory*, or have some capable publishers take over this project. I would recommend to the House of Delegates a study of future policies in regard to the *Directory*.

Planning Committee.—Under the leadership of Dr. Peter J. DiNatale, the Planning Committee for Medical Policies has really become the hopper into which terrific problems of the Society have been thrust. It has worked indefatigably at solutions and has made valuable contributions and recommendations to the Council. I am sure these will be submitted to the House of Delegates.

One problem that presents itself to me, which I think would be well for the Planning Committee to study, is the streamlining of the agenda and the committees of the State Society. They are too numerous, and certainly some of them could be combined without the loss of efficiency. Probably better coordination would result. Duplication of effort would be reduced, as well as expense to the Society, if committees were cut down by means of consolidation.

Public Health and Education.—This is a facet of the Society which might be the subject of re-evaluation. It is true that when one scans the minutes of the subcommittees the question arises, "Are they necessary and do they repay the Society?" The programs necessary to these various subcommittees make the task a difficult and unwieldy one under one chairmanship. Perhaps some of these problems should be delegated to the special medical organizations that have been properly financed. But under no circumstances should the problems arising in these important phases of public health be lost to the control of the medical profession as represented by the Medical Society of the State of New York.

These statements are offered simply as a basis for future study, and I commend them to the Planning Committee.

The educational feature is good. The postgraduate program should be continued and properly expanded, but it would seem of greater value to the general practitioner if men well-trained in practice were used, instead of college professors, who are unaccustomed to home care and deal in ideas dependent upon extensive facilities of hospitals which often are not available to the general practitioner. Such a program would be more appealing as well as useful to the busy family physician. It should be available on a county basis in most instances and should be offered at least twice a month.

The public health phase of this committee serves as a liaison between the State Society and the State public health agencies, and the spirit of cooperation has been of the best. The medical profession, while cooperative, should not be beguiled by any public health program or recommendations unless these have been thoroughly studied and evaluated as to the possible effect on the private practice of medicine. I have in mind particularly the emphasis now being placed by the Department of Health on cancer and rehabilitation programs, which are essentially the responsibility of the practitioner. I can understand and approve the supplying of proper appurtenances in community centers and hospitals for the efficient delivery of the needed care.

Under the chairmanship of Dr. Theodore J. Curphey I am sure the committee has done everything in its power and will continue to do so to forward the program of public health and education for the best medical care of all the citizens, under the direction of the practicing physician.

Public Relations.—Public relations to me recalls good family relations. It is most difficult and perplexing to develop good will or a spirit of give and take with the species homo, including the legal, press, and public phases. No one knows better than the family doctor how to practice and effect everlasting good will with the public. He is the very quintessence of public understanding. Every day, every moment, and in every way the individual doctor is the sine qua non of the public's good will—call it "relations."

Continuing its policy of sponsoring positive public relations activities, the Public and Professional Relations Bureau during the past year carried on numerous public service projects designed to build better relations between medicine and the people. Among these activities was the preparation and publication of an original series of 12 four-page pamphlets presenting the medical profession's views on timely medical economic subjects. More than a million of these pamphlets have been ordered by county medical societies throughout the State.

The plan of distribution called for the channeling of these pamphlets to the man-on-the-street by placing them in doctors' offices, including them with doctor bills, or supplying them to pharmacies, hospitals, and other health groups. Requests received from the A.M.A. and other medical organizations throughout the country indicate that this project, believed to be the first of its kind undertaken on such a large scale by a state medical society, may be the beginning of another nation-wide program to improve doctor-patient relations.

Another step forward was taken when the Bureau expanded its activities in the fields of radio, television, and the press. The highlight of its television and radio activities took place during the Annual Meeting in Buffalo when more than forty doctors and Woman's Auxiliary members participated in round-table discussions, interviews, and broadcasts over 19 stations. This was the greatest number of radio and television programs ever to be presented during the State Society's Annual Meeting. The Bureau also promoted local radio and television programs throughout the year and assisted in the production of a nation-wide broadcast on the evils of quackery.

Implementing the wishes of the House of Delegates, the Bureau worked closely with the special subcommittee of the Council Committee on Public Relations in the formulation of a guide of cooperation between the medical profession and the fields of radio, television, the press, and photographers. Drafts of the proposed guide have been sent to key persons in all groups concerned. Responses indicate a willingness of representatives of the various communications media to cooperate in the drafting of a guide satisfactory to all interested parties. Conferences have been scheduled with invited representatives of the various groups for the purpose of developing a guide in completed form suitable for submission to the May meeting of the House of Delegates.

With an eye to increasing its usefulness to the public, the Bureau cooperated with the State Health Department in two important projects. The first of these was the distribution of gamma globulin during the polio season. The columns of the *Newsletter* carried several articles prepared by the Department and the Council Committee on Public Health and Education advising doctors on up-to-the-minute developments. The second activity involved the recruitment of medical aids for civil defense. The field representatives and the *Newsletter* were utilized in carrying out the department's plans, in which the State Society's Medical Defense Committee cooperated. In addition, impetus was given to Diabetes Week through the release of information to the press.

Too numerous to mention were the routine activities which were of prime importance in the continuance and development of the Bureau's public relations program. Among the important projects, however, were the field representatives activities as public relations consultants to county societies, press releases, brochures, special mailings, annual conference of county society public relations chairmen, district branch meetings, and exhibits and assistance to the Woman's Auxiliary. An indication of the value of these activities was the recognition given to the public relations kit of materials distributed at the Public Relations Conference. Four selected items were given nation-wide publicity when they were included in the A.M.A.'s "PR Doctor," a compilation of the latest medical public relations materials, sent to key medical people throughout the country.

Briefly, in all its activities the Bureau continued to "accentuate the positive" during the past twelve months, and it plans to continue and expand its constructive public relations projects in the future.

I would be very derelict if I did not refer to the assignment by this bureau of Mr. A. Carl Messinger to the Blood Banks Association on a loan basis. This action has been the key to the success and progress of the Blood Banks Association's publicity and development program. Dr. Floyd S. Winslow, the chairman, deserves gratitude for his cooperation in thus aiding the blood banks' development.

Your President is fully appreciative of all the hard work and accomplishments of the Public and Professional Relations Bureau by its chairman and its efficient staff.

Veterans Administration.—The Veterans Administration offers problems which are subject to great misunderstanding, but at all times I know organized medicine wants to be fair to all who suffered pain and deprivation to maintain our freedom and our way of life. I am sure the doctor would be the last to want to deny them their just due. Our Liaison Committee with U.S. Veterans Administration, under the able chairmanship of Dr. Herbert H. Bauckus, has continued to strive for the best of medical service to the veterans service-connected disabilities through our Veterans Medical Service Plan of New York.

Woman's Auxiliary.—Elsewhere you will read in detail about the numerous and worthwhile accomplishments of our Auxiliary. I shall enumerate but four of its activities, three of which are services our wives perform for the public and medicine, and one which demonstrates the seriousness with which the ladies join us in our task of keeping American medicine free. The activities are: the State Fair exhibit, the Health Poster Contest, the Nurse Recruitment Scholarship Fund and Future Nurses Clubs, and the *Distaff*.

I wish to pay tribute to the Auxiliary's charming president, Mrs. Thomas M. d'Angelo, and to every member, and appeal to every physician in New York State to urge his wife to become a member of the Auxiliary; first, because of what each can contribute to it, and second, so that every doctor's wife in the Empire State will be able to gain the intimate knowledge of the problems of American medicine as revealed by the Auxiliary programs.

There are really a fine group of women in this organization. They have a constructive attitude. Their vision sometimes goes beyond that of the men, but always they want to be helpful according to the program and principles laid down by the Medical Society of the State of New York. We certainly would not want to be without them.

Workmen's Compensation.—This is always a knotty problem. The new investigation of the Moreland Commission may be so far reaching that it will affect not only the medical profession but the carriers as well. Unquestionably there will be programs developed that will put the medical care upon a sound basis in order to render justice to employer, employe, and carrier alike. After all, the cost of workmen's compensation is not the responsibility of the taxpayer but of the employer. There is room for the carriers to offer medical consulting facilities, which I am sure would be accepted by the general practitioner in all sincerity. That would certainly reduce the cost of the services rendered and increase the benefit to the employe.

This considers not only the question of the immediate disability, but more and more the problem of rehabilitating a worker becomes a very important phase of workmen's compensation. Certainly a program might well be developed wherein community hospitals could be aided in supplying the necessary modalities to expedite rehabilitation, under the supervision of the family doctor. Of course, the primary requisite of such a program is postgraduate instruction to supplement the practitioner's ability to care for these cases.

Conclusion.—As one who knows he will pass this way but once, I wish to say that, regardless of how rugged the journey has been, it has been worth it, and, I trust, also for the good of medicine. I also know there is nothing deader than a past-president. However, even though forgotten, I shall always cherish you doctors and all your sincerity and cooperation in my humble efforts. These words are not offered, however, as a placebo for my faltering deeds of commission or omission.

This I know—the medical profession is embattled—but unbowed, because its members have nothing to fear or confess, and so long as justice exists vindication from lies is assured. Let the good ones keep their armor up and carry on. Lies seek and find their own level. The Hitler and Stalin lies remain as an example of failure, regardless of how often they were repeated. Reprisals we have encountered and probably will continue to encounter as long as we oppose selfish interests. In time these selfish interests will become vulnerable. The defenders of the things that law, justice, and science have proved right will conquer, just as Pasteur, Jenner, Lister *et al.* vindicated the truth of their convictions and research.

Respectfully submitted,

ANDREW A. EGGSTON, M.D., *President*

Secretary's Report

To the House of Delegates, Gentlemen:

General Statement.—During the year 1953–1954, the Medical Society of the State of New York has again had a successful and prosperous career, with satisfactory accomplishments for the good of the people and our profession.

Council.—The Council has met monthly, except in July and August. The well-attended meetings have heard reports of officers and committees and have transacted many important matters which are reported to you under other headings.

On June 5, 1953, Dr. John J. H. Keating of New York County resigned as councillor, and Dr. Gerald D. Dorman of New York County was elected to serve in his place until the next annual meeting.

Trustees.—Following each meeting of the Council, the Board of Trustees has convened. This body has given careful scrutiny to the budget, all expenditures, income, and investments. A permanent headquarters fund, an employes' retirement fund, and a replacement and repair fund were established during the past year.

A.M.A.—The delegates of our Society to the American Medical Association were diligent and active. The wishes of this House were carried out, with reports to the Council.

There have been many individual problems in connection with A.M.A. dues.

The records indicate that 16,564 members of our Society were members of the American Medical Association, as of December 31, 1953; this allows us seventeen members of the A.M.A. House of Delegates.

District Branches.—As result of Dr. Arthur F. Gaffney's suggestion at a meeting of the executive committee of the Fifth District Branch, a regular schedule of annual meetings of district branches has almost been completed. Seven of the nine districts have settled on the same day in the same week and month for their annual meetings. This innovation has stabilized a former fluctuating situation and allows programs to be developed at an earlier date each year.

Secretaries Meeting.—The annual meeting of the county medical society secretaries was well attended, in Albany, November 18, 1953. It is believed that these secretaries conferences are beneficial at both the county and State levels.

Representatives.—Delegates from your Society attended the annual meetings of the Medical Societies of the States of Vermont, Pennsylvania, Connecticut, and New Jersey. Dr. Denver M. Vickers went to Vermont; Drs. Andrew A. Eggston and W. P. Anderton visited Pennsylvania; Dr. Walter W. Mott will attend the Connecticut meeting, and Dr. Andrew A. Eggston, James R. Reuling, and W. P. Anderton are scheduled for New Jersey. Dr. Dan Mellen represented the Society at the World Medical Association meeting in Brussels, Belgium, and at the International Congress on Medical Education, at London, England; the latter was also attended by Dr. Stiles D. Ezell, secretary, New York State Board of Medical Examiners.

Liaison with Government.—Your Public Health and Education Committee, under the tactful guidance of its chairman, Dr. Theodore J. Curphey, has continued close and satisfactory cooperation with the New York State Health Department. Your Medical Defense Committee, of which Dr. J. G. Fred Hiss is chairman, maintained splendid working liaison with the emergency preparedness director and his subordinates in the State Health Department. Dr. Herbert H. Bauckus, chairman of the Liaison Committee with U.S. Veterans Administration, and president of Veterans Medical Service Plan of New York, Inc., was successful in his contacts with the Federal government.

During the past year, Drs. Edwin A. Griffin and Frank E. Mallon were reappointed by the Board of Regents to serve upon the Medical Grievance Committee of the State Education Department. One other appointment is to be made by the Regents soon after this report goes to press. The Board of Regents also will appoint another physician to succeed Dr. Norman S. Moore, who had served two terms on the Nurse Advisory Council. Dr. Donald A. Covalt was appointed a member of the State Board of Medical Examiners, and Dr. Ade T. Milhorat was reappointed.

Valiant efforts have been made by the State Education Department and members of the Council to arrive at a satisfactory definition of "unprofessional conduct" as a cause for discipline by the Board of Regents. This was added to the law in 1953. Our conferences have not arrived at a satisfactory conclusion. However, they will continue because all concerned are actuated by mutual respect and good will.

Blood Banks Association.—As the Blood Banks Commission of the State Society will report elsewhere, the Blood Banks Association of New York State, in August, 1953, opened its office at 386 Fourth Avenue, New York 16, nineteenth floor. Institutional and individual membership rolls have increased. Many meetings and much effort have been put into this effort of the State Society to benefit the people of New York State. It is sincerely hoped that this organization will thrive and develop successfully.

Placement Service.—In cooperation with the American Medical Association, your placement service has helped a number of general practitioners to locate. On January 20, 1954, our list of opportunities included 24 for general practice and one for otorhinolaryngology.

Deaths.—On December 13, 1953, Mr. Dwight Anderson died at Miami, Florida. Mr. Anderson was in the employ of the State Society for sixteen years, as director of public relations, and subsequently as executive secretary. When he ended his connection in 1951, he left many warm friends in the Society. A floral piece was sent to Mr. Anderson's funeral, which was attended by representatives of the Society. His widow, Mrs. Marie Anderson, of Miami, Florida, and Center Moriches, New York, survives.

With deep regret we record also the deaths last June of Dr. Henry S. Martin of Warsaw and Dr. Edwin P. Kolb of Hicksville. Dr. Martin had held leading offices in his district branch and county society, and Dr. Kolb had been secretary of the Suffolk County Medical Society for twenty-seven years.

Publications.—The 1953 Medical Directory was distributed in January, 1954. Several uncontrollable factors contributed to its lateness of publication. Work has already started on the 1955 edition. The January 1, 1954 issue of the New York State Journal of Medicine appeared with improved type and front cover, which now sets forth a table of contents. Great approbation has been expressed for these improvements. *Newsletter* has also met with general approval.

Office.—The various departments and bureaus on the nineteenth floor of 386 Fourth Avenue, New York City, have run smoothly during the past year.

The lowering of income taxes has amounted to an increase in take-home salary since January 1, 1954.

On June 25, 1953, an office party celebrated twenty-five years of service by Miss Janet Loy, who is in charge of *Directory* compilation. A wrist watch was presented to her by the Society to commemorate the occasion. The annual office outing took place at Bear Mountain Park, on June 30, 1953. The Christmas party was held at the Statler Hotel, December 22, 1953.

Miss Adeline Briggs, for many years secretary at your office at 100 State Street, Albany, was retired during the past year with appropriate pension. She has the good wishes of the Society.

Ethics.—A copy of the *Principles of Professional Conduct* has been sent to each newly licensed physician in New York State, as directed by the House.

As result of a communication from the New York State Pharmaceutical Association, on November 12, 1953, your Council voted disapproval of a physician having a private, individual telephone connection with a pharmacist; disapproval of a physician recommending one particular pharmacy to a patient or patients, and disapproval of prescription blanks bearing advertising matter for pharmacists.

Assistant to the Secretary.—On January 4, 1954, Dr. John H. Iselin, Jr., commenced as Assistant to the Secretary. His personality and meticulous work have been of much assistance.

Comments.—Your Secretary's monthly reports to the Council have outlined his work during the past year. He has enjoyed the post as much as ever.

Again it is your Secretary's privilege to express thanks and appreciation for the friendship and cooperation which have come from the officers, councillors, trustees, and members of the Society. There has been much pleasure in working with President Eggston, Past-President Wentworth, Treasurer Dattelbaum, and Chairman of Trustees Reuling.

Mr. Thomas E. Alexander, as office manager and business manager for the Journal and *Directory*, has continued his ever diligent and conscientious work for the Society. It has been a pleasure also to work with Miss Doris K. Dougherty, executive assistant to the Secretary; Miss Eileen T. Buckley, Miss Mary McMahon, Miss Mollie Pesikoff, and Miss Janet Loy and her *Directory* assistants. To Mr. William F. Martin, legal counsel, and his staff, there is also due much appreciation for their cheerful and painstaking cooperation. There is not sufficient space to mention all others who have contributed so much to your Secretary's "job satisfaction" during the past year.

Membership.—Membership records show the following:

1952—Membership	22,637	
1953—Members reinstated	663	
1953—New members	978	
		24,278
1953—Deaths	270	
1953—Resignations	342	
1953—License revocations	2	
1953—Dropped from membership in accordance with Bylaws, Chapter I, Section 5	1	
		615
		23,663
1953—Delinquent members		518
1953—TOTAL MEMBERSHIP		23,145

Honor counties (all of whose members paid their dues in 1953) include Allegany, Chenango, Cortland, Genesee, Greene, Lewis, Livingston, Madison, Ontario, Orleans, Saratoga, Schenectady, Schuyler, Seneca, Tompkins, Warren, Washington, Wayne, and Wyoming.

Comparative totals of membership since 1942 follow:

1942	18,313	1948	21,171
1943	18,652	1949	21,489
1944	18,941	1950	21,861
1945	19,234	1951	22,124
1946	20,524	1952	22,637
1947	21,303	1953	23,145

Remissions of 1953 dues were voted for illness or service in the armed forces as follows:

County	*Illness*	*Service*	*Total*
Albany	1	5	6
Allegany		2	2
Bronx	5	27 (1 rescinded)	32
Broome		7	7
Chemung		2	2
Chenango		3	3
Columbia		2	2
Dutchess		2	2
Erie	3	31 (2 rescinded)	34
Genesee		2	2
Herkimer	1		1
Jefferson	1	2	3
Kings	13	43	56
Lewis		1	1
Madison		1	1
Monroe	5	22	27
Nassau	1	25	26
New York	36	83	119
Niagara	1 (1 rescinded)	1	2
Oneida	1	5	6
Onondaga	5	2	7
Ontario		3	3
Orange		2	2
Oswego		2	2
Otsego		2	2
Queens	10	35	45
Richmond	2	3	5
Rockland	2		2
St. Lawrence		2	2
Schenectady		7	7
Schuyler	1		1
Seneca		1	1
Steuben		2	2
Suffolk		14	14
Ulster		1	1
Wayne	1		1
Westchester	5	32	37
TOTAL	94	374	468
Rescinded	1	3	4
	93	371	464

Respectfully submitted,
W. P. ANDERTON, M.D., *Secretary*

The Report of the Treasurer, which was received too late for publication in this issue, will appear in the April 15 issue.

Report of the Board of Trustees

To the House of Delegates, Gentlemen:

Quoting from the Bylaws, Chapter V, section 2, "The Board of Trustees shall have charge of all property including trust funds and shall supervise the financial affairs of the Society and shall invest the surplus from time to time. The budget prepared by the Council shall be submitted to the Board for its approval, and all resolutions and recommendations of the House of Delegates or Council pertaining to expenditures of money must be approved by the Board of Trustees before the same shall become effective. . ."

Section 3 states, ". . .The chairman of the Board of Trustees shall make a report to the House of Delegates of its transactions for the year and of the amount of money belonging to the Society under its control."

It is assumed, therefore, that this would also include the reporting to the House of Delegates and through it to the general membership the Board's opinion regarding the financial status of the Society. In broad general terms this picture is not good.

Lest someone jump to the conclusion that we are approaching insolvency, let me say at the outset that as of now we are better than solvent. However, when one studies trends and projects those trends into the future, serious conjecture would indicate that some correction of spending habits must be made, or, as an alternative, we must look forward to repeated periodical raising of dues.

More than once the question has been asked on the floor of previous meetings of the House of Delegates, "Why do we have to have such large reserves? Why not spend the reserves?" It is hoped that the answer to those questions will become self-apparent before this report is concluded.

Our reserves have been built up over many, many years, a bit at a time, by previous farsighted trustees transferring at the end of each year small surpluses left over from unspent dues income and also by reinvesting dividends and interest received. That procedure was followed almost without a break up to 1945.

Beginning twenty years ago there was a sharp rise in costs following the devaluation of the dollar. This affected salaries, supplies, rent, light, and new equipment, as well as the cost of paper, printing, postage, and everything that goes into the publication of our JOURNAL. All of this does not take into consideration the membership growth of the Society which necessitated increases in the number of our personnel.

Then, in 1943, faced with the emergency of the Wagner-Murray-Dingle Bill, the House of Delegates said in effect "spend the entire dues income as well as all interest from investments." The result of this was that in 1947, before the first raise in dues became effective and which the House authorized in that year, we were short of operating funds and had to borrow $50,000 from the bank to pay our employes and the bills which we owed.

The following two years the increased dues obviated the necessity of borrowing money, but again in 1950 we had to borrow $50,000. In 1951 it was necessary to borrow only $42,000. However, in 1952 we again had to borrow $50,000, and in the year just closed (1953) we have had to borrow $125,000.

The last House of Delegates voted to again raise the dues $5.00 per member, but it takes only a little simple arithmetic to figure that with 20,000 members at $5.00 each we shall have no surplus at the end of this year after we have paid back our loan. Not only that, we shall still have a potential $25,000 deficit which will have to be met out of 1955 dues income.

The wisdom of previous trustees in building up a reserve can be readily seen, for without those reserves we would not have had any collateral with which to borrow such sums of money.

Tables may be boring, but they will pinpoint more clearly than words the problem that we are facing.

Comparative expenditures for the years indicated were as follows (see also Table I):

1935	$117,126
1940	$160,166
1945	$163,600
1950	$308,627
1951	$329,440
1952	$392,555
1953	$424,737

Special attention is called to a number of items which the House has authorized in recent years that are in the nature of expanded programs. It should be made clear that it is not the purpose of this report to question the wisdom of these expanded programs but only to acquaint the membership with their costs and what the trend indicates for the future.

The increases in personnel necessitated by both the membership growth of the Society as well as the expanding program are interesting. In 1933 the Society employed 14 persons, and there were no full-time executives. In 1943 we had 18 employes and seven executives, department heads, or field men. In the year 1953, we have 47 employes, and 15 individuals classified as executives, department heads, or field men.

During this year by unanimous vote of the Board of Trustees, the following changes in bookkeeping procedure have been authorized. There has been set up the following reserves:

Building Fund Reserve	$100,000
Equipment Reserve	$ 50,000
Employes Beneficial Fund Reserve	$ 75,000

While this does not change our total net worth, it is sound administrative and financial practice. An explanation of the reason which prompted the Board to make each of these changes is in order:

1. *Building Reserve:* In 1945 the Society was paying an annual rent of $7,000. We had to have

TABLE I.—Comparative Expenditures

	1935	1940	1945	1950	1951	1952	1953
Public Relations	$1,385	$15,894	$26,091	$68,815	$65,532	$93,335	$96,318
Medical Care Insurance			11,462	16,884	17,482	19,094	19,278
Malpractice Insurance and Defense Board				1,762	1,711	3,626	4,420
Woman's Auxiliary*				2,000	2,210	6,891	10,053
Blood Bank†						588†	12,335**
Industrial Health		Not yet in operation; estimated $30,000 to $40,000					

* An explanation of the large increase of monies appropriated to the Woman's Auxiliary during the past two years is necessary. This is largely a matter of bookkeeping. Roughly $4,000 was removed from the Public Relations budget in 1952 by charging to the Woman's Auxiliary a portion of the salary of the Speakers Bureau, a field representative, and other miscellaneous items.

† Blood Bank Committee.

** Requested $42,000 in 1953 There may be recovery if Blood Bank Association is successful

more space, and in 1947 we took larger quarters at the same address which increased our rent to $18,275. Three years ago we were faced with a further raise in rent to $22,500, and since our lease had but a year to run, the headquarters were moved from 292 Madison Avenue to 386 Fourth Avenue at $25,000 rent. This move we have since found had the disadvantage that clerical and stenographic help is much more difficult to obtain in our present location. It would seem that at some propitious time a society of the size and prestige of ours should have a home of its own and be rid of paying further increasing rents. It has been necessary during the past year, because of the addition of Blood Banking and Industrial Health, to rent more space at our present address, which has necessitated a further increase in rent of $5,500. If and when that propitious time arrives, the advice of the House of Delegates would undoubtedly be sought for the expenditure from the reserve for the purpose of obtaining permanent headquarters.

2. *Equipment Reserve:* The Society carries its furniture, fixtures, and equipment at $2.00. Since we do not depreciate furniture and fixtures, it is necessary to purchase new equipment out of current dues income. Since these things have a way of wearing out in groups, and in order to level off big expenditures in any one year, it seems advisable to set up this reserve and add constant small amounts. When one considers that it cost $11,518 to make the move from 292 Madison Avenue for moving, damage repair, painting linoleum, new lighting fixtures, etc., the setting up of this reserve seems clearly indicated.

3. *Employes Beneficial Fund:* It should be stated at the outset that no employe has any vested interest in this fund. The trustees have studied at numerous and various times the advisability of setting up a retirement pension fund. It has always seemed a very desirable and advantageous procedure, but each committee of the Board that has studied the proposition has brought in a report that has had to be turned down, not only because of the enormous initial cost, but also because of the size of the annual contribution which the Society would have to make. Previous Boards have had several instances where employes with long and faithful service have had to retire and in each instance we have had to pay out of dues income each year sums for the retired personnel. Since many of our employes are getting old, it seems advisable to set up a reserve, add a level amount to it yearly, and again be prepared to do our just duty to faithful helpers. It is requested that this House of Delegates formalize and approve the setting up of this reserve.

The Board has held ten regular meetings and one special meeting during the past year. The attendance at meetings has averaged 87 per cent.

The audit of the funds of the Society made by our accountants Patterson and Ridgeway will be published in the April 15 issue of the Journal.

While the Board has taken no action and given no consideration to the proposed change in the Constitution and Bylaws which would place the responsibility for the preparation of the budget in the hands of the Board of Trustees, it is the opinion of the chairman, gained in personal conversation with various members of the Board, that such a change would have many advantages and very few drawbacks. The funds of the War Memorial, while under the control of the Board of Trustees, are really administered by a special committee who will render a separate report. Suffice it to say that all of the funds for the War Memorial account are invested in United States Government Bonds.

I want to express my personal appreciation to the members of the Board of Trustees for their help, advice, and the kindly consideration that they have shown to the chairman during his term of office.

This report could not be concluded without paying tribute to Miss Doris Dougherty and also paying tribute and giving thanks to Mr. Thomas Alexander, the head of our Accounting Department, and to his staff for their loyal and efficient work.

Finally, it is a privilege and a pleasure to give the highest praise possible to that outstanding gentleman who always has a kind word, who always has a smile, who is always graciousness itself, that individual with the prodigous memory and the even, unruffled temperament, who among a thousand-and-one other duties serves as the secretary of the Board of Trustees, Dr. Walter P. Anderton.

Respectfully submitted,

James R. Reuling, M.D., *Chairman*
John J. Masterson, M.D.
Herbert H. Bauckus, M.D.
Edward R. Cunniffe, M.D.
J. Stanley Kenney, M.D.
Leo F. Schiff, M.D.
Walter W. Mott, M.D.

Report of the Finance Committee

To the House of Delegates, Gentlemen:

It is the duty of the Finance Committee to obtain from all departments and activities of the Society an estimate of the amount such department or activity will need for its operations for the succeeding year. The committee reviews each individual request for appropriations; in many instances it asks for detailed explanations and schedules to support the amount proposed. After each individual budget is prepared, a summary is made up by the Accounting Department and presented to the Council for any action which it decides to take.

The members of the committee do not believe they have an easy task. There are requests for appropriations which exceed the amount provided for the previous year. There are also requests for entirely new activities. The committee has attempted to carry out its functions and, at the same time, not be guilty of attempting to form policy. Obviously, it is an almost impossible task. Your chairman knows that each member has served to the utmost of his capacity.

A comparative tabulation of 1953 income and expenses with the proposed budget for 1954 is appended (Table I). It should be noted that our budget remains continually fluid. As new needs arise, in the past the Council after study has requested the Board of Trustees to approve additions. Our budget, therefore, changes every so often to reflect these changed appropriations. The table presents the budget at the time this is written.

It is to be noted that for the second time since 1949, an excess of income over expenditures is forecast. We hope that the year 1954 will end with a surplus.

It is with sincere thanks that the committee wishes to acknowledge the untiring efforts of Mr. Thomas E. Alexander and his staff and their cooperation at all times in assisting with the work of your committee.

Respectfully submitted,

Maurice J. Dattelbaum, M.D., *Chairman*
Thomas M. d'Angelo, M.D.
Frederic W. Holcomb, M.D.

TABLE I.—Summary of Budget

	1953 Actual	1954 Budget
Income		
Dues (net)	$380,342	$431,700
Journal	27,104	10,108
Medical Directory, 1949 and 1951	173	...
	$407,619	$491,808
Expenditures		
Administrative	$109,221	$119,818
Public and Professional Relations Bureau	93,479	85,036
Legislation Bureau	26,337	26,325
Workmen's Compensation Bureau	23,826	25,860
Bureau of Medical Care Insurance	19,329	19,883
Scientific activities	20,178	22,068
Woman's Auxiliary	10,067	7,647
Travel	23,930	41,150
Annual Meeting, 1953	16,403	-4,760*
Medical Directory, 1953	81,474	...
Medical Directory, 1955	...	57,333
District Branches	2,573	5,200
Planning Committee	1,110	1,100
Malpractice Insurance and Defense Board	3,420	2,900
Malpractice Audit	1,000	1,000
Legal	30,000	30,000
Middle Atlantic States Conference	-2*	...
Committee on Problems of Alcoholism	...	750
A.M.A. Delegates Expense Fund	174	750
Conference of Presidents	75	75
Veterans Medical Service Plan of New York	14	250
Societies for Medical Research	500	500
World Medical Association	1,000	1,000
Pensions	5,400	7,675
A.M.A. Convention (Student)	713	1,000
Alterations	3,320	...
Citizens Health Council	750	750
New York State Blood Banks Commission	335	1,000
Blood Banks Association of New York State, Inc.	4,341	...
Provision for salary adjustments	...	13,000
A.M.A. Convention, 1953	5,314	...
A.M.A. State Convention (Student)	210	520
American Medical Education Foundation	25,000	...
Total	$509,491	$467,830
Excess of Income Over Expenditures	-$101,872*	$ 23,978

* Asterisks denote figures in red.

Report of the Counsel

To the House of Delegates, Gentlemen:

This is the eleventh annual report of your present Counsel on the activities of the Legal Department of the Medical Society of the State of New York. The period covered dates from February 1, 1953, to and including January 31, 1954.

It will bear repetition that it was in 1921 that George W. Whiteside became counsel for the Society, which position he held until his resignation in 1926. Lloyd Paul Stryker succeeded to the post and was counsel until his resignation in 1930. Both are still prominent members of the bar of the City of New York and have, through the years, by many deeds of kindness, helped your present counsel whenever he has called upon them. Lorenz J. Brosnan, who was associated with Mr. Whiteside and Mr. Stryker, became counsel in 1930 and held the position until his death in 1943. I started in the office upon my graduation from Columbia Law School in June, 1928, and this spring marks the twenty-sixth year of my service in the office.

Mr. Robert J. Bell, the attorney for the Society, has been with the office since 1931 and is now a member of the firm. Literally thousands of doctors in the State of New York can testify to his patient, successful, and friendly efforts. There are few lawyers in the State of New York who have a wider acquaintanceship with the bench and bar from Niagara Falls to Riverhead. He has tried cases in over 30 counties in the State. In addition to the great amount of trial work which he handles, he is my very able associate in the work of the Malpractice Insurance and Defense Board.

Mr. John J. De Luca, Mr. Harold Shapero, Mr. William C. Richardson, Mr. J. Richard Burns, Mr. Robert C. Heidell, and Miss Barbara Molinsky are the other members of our staff.

Mr. De Luca has been with us nine years; he has handled many appeals, makes a great many appearances in the trial courts, and conducts many of the depositions which, under the liberalized rules of the State courts, are becoming an increasing burden to all trial lawyers.

Mr. Richardson, who came to this office some years ago from his position as New York claims manager of one of the leading insurance companies, supervises the initial investigation and correspondence on our cases and, in rotation with the other lawyers, makes many court appearances.

Mr. Burns, who is now in his second year with us, helps the other lawyers and has made a specialty of assisting the officials of the State Society, particularly Dr. Anderton, with the many inquiries of a legal nature that come in.

There was one resignation from our staff during the year, Mr. Robert W. Prier, who was the managing attorney and a young lawyer of whom we were very proud; he resigned to take up practice in Haverstraw, New York, upon his appointment as assistant county attorney of Rockland County. We wish him great success in his new position. Before he left the office, we had made two additions to our staff—Mr. Robert C. Heidell, who lives in Rockville Centre, New York, a Navy veteran with three years of service as lieutenant (jg), a graduate of Union College, Class of 1949, and Albany Law School, Class of 1952, has now been with us more than a year, after a short apprenticeship in private practice in Ticonderoga, New York. He has tried and won his first case and has rendered most satisfactory service. The second addition, Miss Barbara Molinsky, daughter of Dr. Meyer C. Molinsky, a Brooklyn physician, is a graduate of Connecticut College for Women and Columbia University School of Law. She has been with us for some months and is acting as managing clerk.

There has been a further significant addition to our staff. When I graduated from law school, I shared the managing clerk's duties in Mr. Stryker's office with Mr. Harold Shapero, who was then a recent graduate of Brooklyn Law School. When Mr. Stryker resigned his position as counsel, Mr. Shapero went with him, and in the intervening twenty-four years he has been engaged in some of the most important litigation tried in this country. He is a charming gentleman and possessed of great legal skill. Recently, he resigned from his association with Mr. Stryker and, with the blessing of Mr. Stryker, has become associated with this office. I feel that his experience and trial ability fortifies us for the busy years which lie ahead.

Cold statistics demonstrate that the work of this office is ever on the increase. The new deposition and trial procedures in the courts, adopted by the New York State courts, require the daily attendance of a substantial number of our staff, and, just as a hospital must book its operations with clock-like regularity to insure available facilities, so must we plan weeks and months ahead to dispose of our cases. And, as in hospitals, emergencies often demand quick changes in the order of things.

Several generations ago, a lawsuit had a great deal of mystery connected with it. The element of surprise was more the rule than the exception. Today, by probing questions asked at extended examinations before trial of both plaintiff and defendant, a great deal of the unexpected is eliminated and a clearer evaluation of the issues involved in a case may be had. It will probably only be a matter of time before all witnesses may be examined before trial as is now the practice in the Federal courts. When you come before a judge in a pretrial hearing now, and there is available the depositions which have been taken in the case, neither side may take a wholly unreasonable attitude in a discussion as to whether the matter is to be tried or settled. There are judges who sit day after day conducting the pretrial parts in the courts, and they are insistent that cases be disposed of so that the vast backlog which confronts their tribunals may be managed to the best of their ability.

As all connected with the Medical Society know, its activities are far more complex than they were twenty years ago. Many more services are rendered, and implicit in the rendition of such services is constant and careful consideration of the legality of all that is done. The number of meetings which we must attend seems ever to be on the increase, and particularly in the few days before and after each meeting of the Council several men must be delegated to cover this work.

As will be pointed out later in this report, in addition to our trial work and the legal advice furnished to the Society, we address a large number of meetings each year on medico-legal subjects.

Litigation.—Before speaking of the volume of claims and suits to which this office attends, I wish to stress the amount of preventative work that seems to be our lot. We have encouraged the doctors of this State, in our speeches and writings, to call upon us whenever they feel they have a problem of patient-physician relationship in which they want advice. As an instance, this last week, in five separate communities spread throughout the State, we were able to counsel our members, and, in each instance, a threatening malpractice claim was avoided by fair and prompt dealing with the patient, and, in two cases, with the hospital involved. I cannot emphasize too strongly that in every instance where litigation ensues, there has been a rupture of the patient-physician relationship which, more often than not, could have been preserved had the doctor followed the Golden Rule and, with full disclosure of the facts to the patient, offered to continue to do everything that was necessary in the management of the patient's condition. When a tragedy ensues, very often consultation with fellow physicians and with an experienced lawyer can avoid future heartaches. Yet, there will always be an inevitable few who will fly off to other advisers, and criticism leads to litigation. As an instance, the problem of a surgeon who has the complication of a fistula is best handled by prompt consultation, frank discussion with the patient, and, if repair work is to be done, having it done under the best possible circumstances by the most skillful person available. Any alternative course of conduct only worsens the prognosis. Overoptimistic predictions as to the end result causes the patient to lose confidence; ill considered and too hasty attempts at repair add to the disability, and although we have, time and time again, cautioned against it, it seems to be a human failing of those who take over the case to criticize their predecessor and cause the patient to go immediately to a lawyer.

A warning is sounded that at the first rumblings of trouble, an insured doctor must promptly notify his carrier. The company is entitled to that prompt notice and can well complain if the situation worsens between the date of the happening and long delayed notice to it. As an instance, if, in the course of an abdominal operation, some injury to a shoulder or limb occurs, or there is an explosion or a burn, prompt notice is most beneficial to all concerned. By no means should the doctor make any admissions of any kind, nature, or description without discussing this matter first with this office and with the insurance carrier. Nothing by way of expense should be underwritten by the doctor personally before he has sought advice. We have several times been embarrassed by hospital bills underwritten by a physician.

TABLE I.—Number of Suits Instituted and Disposed of in 1953–1954

		Instituted 1953–1954 (12 months)	Disposed of 1953–1954 (12 months)
1.	Blood transfusions	1	...
2.	Eye	2	1
3.	Eye operations	4	3
4.	Assaults	2	1
5.	False imprisonment	2	...
6.	Tonsillectomies	8	2
7.	Foreign bodies	10	12
8.	Electroshock	4	5
9	Anesthesia	19	9
10.	Prescription and drugs	6	...
11.	Injections	10	8
12.	Broken needles	2	1
	Operations		
13.	Gall Bladder, etc.	2	...
14.	Gynecology	21	13
15.	Appendectomies	8	1
16.	Hernia	4	...
17	Ear, Nose and Head	7	2
18.	Thyroidectomies	4	...
19.	Other surgical procedures	39	36
20.	Obstetric	24	17
21.	Plastic surgery	6	4
22.	Infections	11	4
23.	Diagnosis	22	15
24.	X-ray diagnosis	2	4
25.	Fractures and orthopedics	25	13
	Burns		
26	Diathermy and infrared, etc.	6	2
27.	X-ray and radium	8	3
28.	Other burns	11	13
29.	Falls from tables, etc.	3	7
30.	Miscellaneous	37	27
	Total	310	203
	Actions for death	59	32
	* Infants actions	44	17
	Total	103	49

* A word is needed as to one particularly dangerous feature of infants actions. No matter at what stage of infancy the alleged cause of action in malpractice arose, the action is timely brought up to the twenty-third year of the infant's life. We have had several cases brought recently which arose approximately fifteen years ago.

A tabulation of new cases and those disposed of during the year (Table I) is attached to this report. It involves an enumeration of intake and final disposition of suits. There are many suits that arose in past years and are as yet pending. They do not appear in the table. There are at all times over a hundred uninsured matters pending in this office. Some court calendars are years behind. I said last year that a large volume of claims are examined every year and that, in addition to claim work, inquiries at the rate of five a day for each working day of the year reach this office. This volume has increased. Many doctors call to discuss their current problems even as they begin the care of a patient. Recently, a surgeon called this office to tell us that he had just taken an x-ray which disclosed the presence of a metal foreign body in a patient. He gave us the name of the physician who had done the previous operation. We called that second physician who was in another community. He immediately got in his car and went to the hospital where the patient was. There was a full and frank discussion with the husband of the patient; the first physician with the assistance of the second physician re-operated and removed the foreign body; the hospital bill was taken care of, the patient and her husband were very pleased, and no litigation developed.

Many times in the course of a year, we are called up in relation to disputed bills and have been able, more often than not, to make a suggestion which avoids trouble. At this point, I wish to sound a caution. Overeagerness in litigating tardy accounts has given rise to many a malpractice case. I recall vividly a recent upstate incident where there was a failure to repair a tendon following a finger injury. The doctor sued for a bill of less than $100. To add insult to injury, the patient was unemployed and could not have paid the bill in any event, but she had to get a lawyer to defend the suit and the lawyer, examining into the whole situation, decided to bring an action for $25,000 damages for failure to recognize the severed tendon. Every time the patient came to the doctor's office, more attention had been directed to the overdue account than to the state of the finger. Finally, another doctor made a fairly good repair. The litigation that ensued was a very expensive one. We recently defended successfully another doctor in a counterclaim suit only to find that the lower court in which he had brought the action for services rendered had on its calendar over ten such actions which he had brought against other patients. Hardly, if ever, is it necessary to resort to litigation to collect a medical bill. What adequate collection methods can't achieve without litigation can rarely be achieved by the expensive process of litigation. It is not a good thing for a doctor to acquire the reputation of bringing his patients into court for the last dime they owe him. Judges have told me that they have a feeling when they see these cases on the calendar for one man too often that it denotes poor patient-physician relationship and more often than not overcharging.

The Malpractice Board is aware that such practices on the part of any doctor present a burden to the other members which must be removed.

In addition to the ease with which all of the facts in a given situation may be made available to the plaintiff's attorney in a malpractice case by full use of the deposition procedures in the State courts, there is a certain gambling instinct that prompts the bringing of any kind of negligence action, including malpractice actions. Very often, serious injuries are involved, and even if you lose a few cases, you may, in the one you get a verdict in, reap a very rich reward for your efforts. Forgetting some of the huge verdicts that have been returned in other fields of negligence cases, and restricting our discussion to malpractice cases, there were recently reported the following: In Fresno, California, a $100,000 verdict; in Davidson County, Tennessee, an $85,000 verdict; in the District of Columbia, a $55,000 verdict, and in Minnesota, a $41,311 verdict. I have not mentioned New York figures, but let me just remark that New York is a fairly high money state so far as verdicts and settlements, are concerned, and recent dispositions made by this office as well as by other firms handling similar matters and by the legal departments of the State of New York and of some cities in the State indicate that a doctor is well advised amply to protect his temporal assets by carrying adequate malpractice insurance.

There is a case or claim pending for one of every 25 doctors in the State of New York. Even if the litigation winds up in a complete victory for the doctor, there is still involved the costly item of investigation and legal expense. As an instance, we recently tried a hospital case; to obtain the necessary testimony, we used investigators in Frankfort, Germany, a Western state, and several Southern states. Several depositions were taken in some of the faraway communities involved. More than 25 witnesses were interviewed. The trial, if it had gone on to conclusion, would have taken nearly a month. You cannot send a boy out to do a man's work; you must employ at every stage of these procedures competent investigators and counsel.

As another instance, today it is the custom in a malpractice case involving an operation to bring in all of the parties that were in the operating room. Every one of them must be seen and most of them are then examined before trial. Even those who have no substantial involvement must employ counsel to work their way out of the situation. In some of the cases involving the so-called "miracle drugs" the companies that purvey them are involved in the litigation and a large amount of research work must be done adequately to prepare the case. We maintain, in our office, a very ample working library, both legal and medical, but we are constantly consulting experts and using the facilities of the Academy of Medicine and various other libraries in the City. A case that may seem very simple to begin with sometimes involves a heartbreaking amount of preparation. Many times a dissatisfied patient wends his way through a great number of other doctors' offices and hospitals. The investigators must check every step. Sometimes when claims of extensive injuries are made, detectives or other special investigators must be employed so that proof may be furnished to deflate the case. It is just as instinctively the work of a trial lawyer, as it is the work of a doctor, to interrupt his treatment of a current matter to consider many prior matters that present some new and different aspect. Of course, not only do we do a great deal of traveling throughout the State ourselves, but in every large community in the State we have the loyal assistance not only of the insurance companies investigating staffs but of other firms of attorneys that we have had an understanding with for generations. There is no place in the State of New York that we cannot almost immediately put trained help at the disposition of the doctors who are in trouble.

There is a unique feature of the services that the Medical Society of the State of New York renders its members which is becoming an increasing burden. Through the office of its Counsel, the Society furnishes gratuitously to an uninsured member in good standing defense in a malpractice case. Recently, we tried in an upstate city for a week a case which had been preceded by depositions held on other dates, and, at times, we had two lawyers working on the matter. All of the necessary expenses involved were underwritten by the Society. Although I am a "voice crying in the wilderness" in this regard, I have reiterated in the past, and do so again, that there must be some consideration of some reasonable limitation to be put on such services.

Of course, it is quite customary for an insurance company that has limited coverage for one of its assureds to warn him today that the complaint in an action against him may seek damages far in excess of his coverage. The doctors are at liberty to employ personal counsel to aid and assist in such a case. Very often they thrust that further duty on us, and to date we have willingly and without any further remuneration undertaken such an obligation.

It is a cardinal principle of our operation that we will not consider representing any person who has any kind of malpractice claim against any professional person. We advise many such people and try to effect a happy conclusion to their troubles but only after immediately notifying the potential defendant involved and securing his consent. Many lawyers that we know throughout the State will call us up and discuss with us problems presented to them by patients. Sometimes we have been able to demonstrate to them that no just claim is involved and they have been happy to talk their client out of litigation. Other times they have come to us with their problems and with the aid and assistance of the professional person involved and his insurance carrier, if there is one, we have effected a reasonable disposition and avoided litigation.

I again wish to call attention to the fact that there is no type of medical practice that is immune to suit. Many suits are arising out of the new drugs which effect a great deal of good but have dangerous side-effects and should only be administered in accordance with rigid observation of the latest knowledge relating thereto. While surgeons are probably the largest category of defendants, many cases are pending against internists, pediatricians, dermatologists, radiologists, and others.

We often hear that it is impossible to get a doctor to testify against another doctor, and that if he does so he will be punished by his fellow doctors. We agree with neither premise. A great variety of doctors, some with considerable background, have testified against us, and there are some who are frankly for hire for such a purpose. If they are ever punished, it is only when they over-reach and are confronted on cross-examination with the truth. I state categorically that in the three decades that this office has been operated by my predecessor and myself, we have never sought to institute, nor has there ever been instituted to my knowledge, any form of disciplinary proceedings against a doctor who testifies for a plaintiff in a malpractice suit. It is our feeling that to do so would make a martyr of such a doctor and increase his value the next time he appears on the scene. For a variety of reasons many of these doctors do not particularly care what other doctors think about them anyway.

Another legend is that in a malpractice case, a lawyer defending a doctor has at his service any and all experts that he needs. This is not so. We have noticed an increasingly cautious tendency on the part of men who could help us at times to refuse to come to court and help a fellow doctor in distress. And I mean help where such help could be given in an honorable and scientifically accurate manner. Some doctors just don't care to be involved in the troubles of other people, but when they are in trouble themselves they want everybody else to help them. Some exact such terms for their help, particularly when they are in a key position in some particular field of medicine that is involved, that it is wholly impractical to use them. It takes a man of character and humility to go to court and defend one of his brethren who has had a very bad end result that may have been no fault of his and admit that he, the expert, might have had the same thing happen to him. Of course, I must pay tribute to my many dear friends throughout the State who have been a source of great strength and consolation to us in our troubles. And I also wish to say that it is in the impersonal atmosphere of New York City that we run into most of our trouble in this regard. We do not ask any of the doctors to testify more than occasionally and we feel that we would wear the welcome off the mat to interfere with their professional affairs on too many occasions. However, when we do come for help we must ask the cooperation of all who are in a position to supply it.

Again, I must call attention to what I feel to be the main reason for the frequency of malpractice cases, namely, the uncharitable remarks made by doctors who take over the care of patients from their fellows. It was said a year ago in this report that in at least one third of all our cases and claims there was evidence of such criticism. I personally think the incidence is much higher. I do not know how you can improve your treatment of a patient by constantly contrasting your accomplishments with the failings of your predecessor. Very often, you may find the shoe on the other foot.

I also wish to call attention to another class of doctors, who, while they are reluctant to testify in a malpractice case, are not the least bit reluctant, for a compensation, to build up such a case in conferences with lawyers. We could tell many a story of lawyers who talked with not one but with a number of doctors and received great encouragement in these cases. Again I must say that before you jump to conclusions about what has happened merely on the say-so of the patient, you call up the preceding doctor and get his version of the facts.

Most important, if you are the preceding doctor, never fail to note on your office record the name of the following doctor who called you and, to the limit of your ability, help him with the care of the patient. We have recently seen several instances where doctors who were discharged by their patients were exceedingly arrogant when called by the following doctor and thereby contributed to their own grief. If a doctor calls you up and says he found a foreign body in a patient you operated, it is hardly appropriate for you to berate him for telling the patient about it, and, while we are on this point of foreign bodies, it is the uniform practice of this office to advise every doctor who finds a foreign body fully and fairly to make that fáct known to the patient or some near relative before operating for its removal.

One note of caution about records. If you are sued, your records will be examined meticulously at a pretrial hearing. Keep good records and do not subsequently change them just to make them look neater or better; such alterations have a way of getting out into the open. For instance, if you operate on a patient and the patient has a very serious postoperative complication, do not as the final note on the hospital record, unless, of course, it is the fact, close out with the statement "improved." This has a way of coming back to plague you, and an inference is drawn that you made an attempt to cover up everything that happened.

I again must pay great tribute to the work of the Malpractice Insurance and Defense Board. The seven doctors who come from all parts of the State to the monthly meetings of the Board now find themselves committed for one entire day until late in the evening. In addition, they must take work home with them and very often must interview a number of our assured in their respective sections of the State. No member of the Group Plan can have his insurance cancelled or modified unless this Board of his fellow doctors so decides. Much tedious work accompanies the deliberations. I know of no other State in the country where such protection is afforded a doctor. Assisting the Malpractice Insurance and Defense Board are many subcommittees, notably in the fields of plastic surgery, x-ray and shock therapy. Members of all these committees act gratuitously and their work is of the very highest order. It is my thought that more rather than less of these advisory committees will be necessary.

I wish to pay my recurrent tribute to the excellent work of my various assistants outside this office. The Yorkshire Indemnity Company which was the carrier until 1949 continues, through Mr. Horace Crowell, vice-president; Mr. Thomas Finnegan, counsel, and Mr. Anthony J. Falke, claims manager, to render great help to us in disposing of their remaining cases. Since June, 1949, the Employers Mutual Liability Insurance Company of Wisconsin has been the carrier. We have received invaluable help from Mr. B. E. Buechle, vice-president at the home office in charge of claims; Mr. Dale Snure, vice-president in charge of the New York office, and Mr. Frank W. Appleton, the head of their claims department in New York. Mr. Appleton heads a very keen group of investigators who, in every large community of the State, are constantly at the service of the members. He has an excellent mind and has worked out various analyses of the risks involved. We are constantly working with him to extend the services and improve the efficiency. The investigators who do our work are well educated and well acquainted in their localities. They carry credentials signed by this office, and I urge all members of the Society to give them their full cooperation.

There has come to my attention in the last year or so that in our deliberations with doctors as to whether a case should be tried or settled, several members who later came before the Malpractice Insurance and Defense Board said that they were assured that no matter what happened to their case, it could not in any way affect the continuance of their insurance. I state categorically, no such representations were or are ever made. We cannot prejudge what matters the Malpractice Insurance and Defense Board will wish to consider or what their conclusions may be. We must take the given situation before us and in a friendly manner give what advice we believe to be best for the sake of the doctor who is our client. Every doctor who comes to this office as a client is, I hope, treated just as I would want a member of my own family to be treated. We are defense counsel and we wish to defend the doctor to the best of our ability, but the advice we give must be realistic. All things considered, when there is a strong probability that a verdict may be rendered against a professional man, we feel that he should be given a chance to settle and avoid a verdict. Of course, we are only finite and the best laid plans of man go astray. Sometimes we may get an unexpected result, good or bad. That is true of all professional deliberations, and we constantly strive for the highest and best average that we can attain. It must, of course, be remembered that involved in any settlement is the thinking not only of the defendant but many experts and the insurance company officials. There are many checks and counterchecks before a decision is reached. We, at all times, encourage the defendant to get other responsible advice if he is uncertain. We wish every doctor to remember, however, that advice is sometimes very freely given and usually is of a consoling nature provided responsibility is not attached to the person giving that advice. Needless to say, any court action is not to be treated lightly. We consider that when, after a full meeting of the minds, a doctor agrees with us (and he must agree in writing without any qualifications) that a case should be settled, that he is doing a great disservice to the Group Plan if, to salve his pride, he goes among his brethren and openly states or covertly hints that he was dragooned into doing something that was against his best interests. If a doctor disagrees with us as to the propriety of settling a case, he and the insurance company may arbitrate their differences. It is extremely significant that in the three decades of the Group Plan never once has there been such an arbitration. Several times when a doctor has signed a consent to settle, he has tried to insert in the settlement consent form remarks which make the doctor feel better. The form is always returned to the doctor and must be a naked written consent to settle. A volume could be written on when to settle and when to try a case. Time and space do not admit of writing that treatise here.

I wish to pay tribute to all the carriers for whom we have worked for the consideration they have shown the many doctors in situations where the company could very well afford to take a risk but where it was to the best interest of the doctor not to take the risk.

I do not think I should close this section on litigation without expressing my thought that the judges sitting in the courts of record of this State are a fair and courteous group of men who do not wish to impose undue burdens on the medical profession. The general rules of law which apply to malpractice cases are good ones. Of course, judges and juries are subject to human emotions, and human emotion is a very hard factor to weigh. Judges do not always approve of the eventual disposition by a jury of a matter which has been fairly submitted to them, but once the verdict is rendered they are at times powerless to do anything about it. Trial work is not the most scientific of endeavors and one does not have a crystal ball which will always predict the precise result that will be achieved. We have had a great volume of past experience and we are constantly having that experience renewed by the flow of matters that come to our attention. We must, by our actions, preserve the respect of the courts, and I like to feel that the judiciary of this State respects the work that we are doing on behalf of the medical profession. I would be exceedingly unhappy if such were not the case. After all, each Supreme Court judge sits for a fourteen-year term and usually goes on still further, and in your lifetime he will have many chances to see you and compare notes about you with his fellows.

Counsel Work.—Each meeting of the Council and Board of Trustees of the Medical Society of the State of New York is attended by at least one representative of this office. Each meeting of the Malpractice Insurance and Defense Board and practically every meeting of its subcommittees are attended by at least one of us. Scores of committee meetings are attended. We are in frequent communication with the legislative representative, Dr. Harold B. Smith. We are in frequent conferences with officials of various country societies. There has been a large volume of work in the preparation for and attendance at recent meetings of the Board of Censors in connection with disciplinary procedures. One of these matters is being prepared for presentation before the next meeting of the House of Delegates. Your counsel continues to participate in the deliberations of the Blood Banks Association of New York State, Inc. Recently, we arranged to obtain a charter for the Radiological Society of the State of New York, Inc., and attended its initial meeting. There has been a large volume of correspondence referred to this office by the State Society. Numerous proposed changes in the bylaws of county societies and district branches have been examined. We have also outlined procedures for the incorporation of certain of the county societies which have not as yet done so. We have conferred with Dr. David J. Kaliski of the Workmen's Compensation Bureau concerning some of the problems of that bureau. We have been and continue to be in conference with the State Department of Education relative to the new section of the Education Law as to the disciplining of physicians.

I treasure as one of my really fine experiences the friendship of Dr. Walter P. Anderton, secretary of the Medical Society. We are in frequent communication regarding the Society's problems, and Dr. Anderton is a source of great help to me. Dr. Laurance D. Redway, editor of the NEW YORK STATE JOURNAL OF MEDICINE, and the other executives of the Society have also consulted us relative to their problems.

During the year, I had occasion to speak to the Society of Medical Record Librarians of the City of New York. I spoke, as did Dr. Thomas M. d'Angelo of our Malpractice Insurance and Defense Board and other speakers, to a forum that drew a packed house at the New York University College of Medicine; I addressed 1,500 doctors at the Omaha Mid-West Clinical Society (may I say that they have many of the malpractice problems that we have and were quite interested in our exchange of views); one of our staff spoke to the Orange-Rockland-Sullivan County Hospital Council; I addressed a joint meeting of the Chenango County Medical and Bar Associations; I spoke to the Schenectady County Medical, Dental, and Bar Associations meeting; I spoke to the membership of the Middle Atlantic Hospital Assembly at Atlantic City and then participated in a forum on their problems; I addressed the spring meeting of the Jefferson County Medical Society and Bar Association at Alexandria Bay; I addressed the Westchester County Hospital Association at White Plains, the Rockland County Medical Society, and the Bay Ridge Medical Society. I spoke at the annual meeting of the Greater New York Hospital Association. Other members of my staff spoke at other medical meetings, but space does not permit an enumeration of them.

In addition, this office attended a score of informal conferences on general problems with various hospital and medical groups in the City. As I have stated before, within the limits of our obligation, we try to be helpful in any problems that these organizations and groups feel we may know something about. Sometimes these inquiries and requests are a great burden to us, and I must ask the members to use some discretion. Very often we will prepare a three- or four-page memorandum for a member who has a problem and, of course, we do this gratuitously; suspecting that we have a further mine of information that is at his disposal, he gets to be a repeated correspondent. Problems at the local level should, so far as possible, be handled by the attorneys for the local county society. We, of course, will help such counsel if they want our advice, but at all times we should be told what the counsel is working on so that a meeting of the minds is arrived at. In disciplinary proceedings, particularly, great caution should be used in seeking the opinion of counsel for the State Society. If the matter eventually comes to the attention of the State Society, it is preferable that we receive it as a new problem so that a proper appellate finding can be made.

Your counsel has also served on many Bar Association committees and very often has presented the views of the Medical Society in some of the deliberations thereof. A great deal of work was done by your counsel as a member of the Committee of the Courts of Superior Jurisdiction of the Association of the Bar of the City of New York that helped set up the impartial medical expert testimony project now in use in New York and Bronx Counties aided by a grant of the Ford and Sloan Foundations. This is a most interesting development, but time and space do not admit of discussing it here.

Conclusion.—I wish to express my deep appreciation of the work of my own staff and the staff of the office of H. F. Wanvig Company, indemnity representative. New procedures adopted in the last year or so have greatly increased the volume of correspondence between the Wanvig office and this office. Preparation of the agenda for the meeting of the Malpractice Insurance and Defense Board is the object of much cooperation between the two offices. To all who in various parts of the State have lightened our burdens throughout the years, may I extend my deep appreciation.

Respectfully submitted,
William F. Martin, *Counsel*

Report of the Board of Censors

To the House of Delegates, Gentlemen:

The Board of Censors has not met during the Society year of 1953–1954.

Respectfully submitted,
W. P. Anderton, M.D., *Secretary*

Report of the Council

To the House of Delegates, Gentlemen:

Your Council has the honor to report on the executive and administrative affairs of the Society in the period following your last meeting, May 4 to 8, 1953. The various matters that came before it, actions thereon, and recommendations are here presented.

Committee on Constitution and Bylaws

The Council Committee on Constitution and Bylaws has the following membership:

Frederick W. Williams, M.D., *Chairman*	Bronx
Norman C. Lyster, M.D.	Chenango
Homer L. Nelms, M.D.	Albany
James R. Reuling, M.D., *Adviser*	Queens

Your committee has reviewed and approved revisions or amendments of the constitutions or bylaws, or both, of the following component organizations of this Society: the Medical Societies of the Counties of Erie, Kings, New York, Niagara, and Washington; the Dutchess County Medical Society, and the First, Fourth, Fifth, Seventh, and Eighth District Branches.

These amendments and revisions were reviewed by the secretary and by legal counsel as well as by each member of the committee before being presented to the Council. The revised bylaws of the First District Branch were approved by the Executive Committee at its meeting on May 3, 1953; all the other changes received the approval of the Council. In each case the component organization affected by the proposed change was notified of its approval.

Our appreciation is due the members of this committee and Mr. John R. Burns of counsel for their meticulous attention to the many revisions submitted to us.

PART I

Postgraduate Medical Education

The Council Committee on Public Health and Education has as its members:

Theodore J. Curphey, M.D., *Chairman*	Garden City
A. H. Aaron, M.D.	Buffalo
Charles D. Post, M.D.	Syracuse

Advisers

Herman E. Hilleboe, M.D., Commissioner, New York State Department of Health, Albany

Leona Baumgartner, M.D., Commissioner of Health, City of New York

The functions of this committee are as follows:

1. To arrange postgraduate medical instruction for the members of the Society.
2. To act as a liaison committee between the Society and the State Department of Health for the purpose of coordinating the efforts of both groups in those fields of medical interest in which there is already common agreement and for resolving differences of opinion, leading to ultimate common action in matters that initially provide room for divergent viewpoints.
3. To coordinate the work of its various subcommittees with that of the Society as a whole and to present to the Council and the House of Delegates the recommendations of these committees regarding matters of policy and contemplated action in their respective fields of interest. Following upon this, future action and policy are determined solely by action of the Council or the House of Delegates.

The Council Committee once more takes pleasure in acknowledging its debt to and its sincere appreciation of the assistance of Dr. Walter P. Anderton, secretary of the State Society, to Miss Doris K. Dougherty, his executive assistant; to Mr. Frederick W. Miebach of the Public and Professional Relations Bureau and his staff; to Mr. "Bill" Bonzer for his cooperation in our mimeographing work, and to Miss Sue Baker, our loyal and energetic executive assistant, whose responsibilities and range of activities increase with each succeeding year.

Sincere thanks also go to the Medical Society of the County of Queens for the continuing facilities and cooperation we receive at the hands of the officers and staff of that society.

Since submitting its annual report for 1952–1953, the committee has arranged, as of February, 1954, postgraduate instruction, presented as lecture series, symposiums, or single lectures for 39 groups. A total of 185 speakers participated in these meetings, as compared with 101 in 1952–1953 and 125 in 1951–1952. It is gratifying to note that this is the highest number since the operation of this service. The increase might be in part due to the efforts of the committee to stimulate the program through a letter sent to 19 county medical societies who had availed themselves but little, if at all, of our postgraduate educational facilities.

Of the following list of postgraduate sessions, 24 were arranged by the Postgraduate Education Department of the State University of New York College of Medicine at Syracuse, in cooperation with our committee.

County	Instruction	Number of Lectures
Albany	Hepatic Cirrhosis	1
	Arthritis	1
Allegany	Orthopedics	1
	Gynecology	1

Broome (Binghamton Academy of Medicine)	Mechanically Induced Cough in Treatment of Bronchiectasis, Asthma, and Poliomyelitis	1
	General Medicine Symposium	3
(Binghamton City Hospital)	Renal Disease, Cancer, Burns, Arthritis, Arteriosclerosis, Tuberculosis in Childhood, Acid Base Balance	7
Cayuga	Obstetrics	1
	Emphysema	1
	Hormone Therapy in Cancer	1
Chautauqua	Hypertension	1
	Allergy	1
	Thoracic Surgery	1
	Surgery of the Elderly	1
Chemung	Dermatology	1
(Chemung County Academy of General Practice)	Anemia	1
	Gynecology	1
Chenango	Hemorrhage in Pregnancy	1
	Uterine Hemorrhage	1
	Gastrointestinal Hemorrhage	1
(Arranged by Syracuse)	General Medicine	8
Cortland	Cortone Therapy	1
	Liver Disease	1
	Glaucoma	1
	Surgery of Genitourinary Tract	1
Delaware	Asthma	1
	Low Back Pain Symposium	2
	Gynecology	1
	Dermatology	1
Erie (Mercy Hospital, Buffalo)	Forceps in Obstetrics	1
Fulton (Fulton County Academy of General Practice)	Gastroenterology Symposium	3
Herkimer	Hormone Therapy	1
	Fluid and Electrolyte Balance	2
Jefferson	Infectious Diseases of Respiratory System	1
	Alcoholism	1
(Arranged by Syracuse)	General Medicine	7
Livingston	Arthritis	1
Monroe (Rochester General Hospital)	Cancer Symposium	3
	Antibiotics	1
Montgomery	Edema	1
	Cortisone and ACTH	1
Nassau	Cancer Symposium	4
Oneida	Medical Examiner System	1
(Utica Academy of Medicine)	Rehabilitation	1
	Headache; Head Injuries	2
	Chest Diseases	1
	Ulcerating Lesions of Stomach	1
	Intramuscular Trypsin	1
Onondaga	Rehabilitation of the Patient with Hemophilia	1
	Hematology	1
	Fluid Therapy in Postoperative Patient	1
	Poliomyelitis Symposium	2
	The Arthritides	1
	Cancer	1
	Congestive Failure	1
Ontario	Cancer Symposium	2
	Antibiotics	1
	Infertility	1
	Acute Surgical Abdomen	1
	Pulmonary Emphysema	1
(Geneva Academy of Medicine)	Knee Joint, Cardiology, Biliary Tract, Proctology, Medical Examiner in General Practice, Fertility and Sterility	7
Otsego	Neurology	1
	Arthritis	1
	Cardiology	1
Queens	Hypertension	1
	Male Climacteric	1
	Cardiology	1
Richmond	The Medical Examiner System	1
	Infertility	1
	Peripheral Vascular Disease	1
St. Lawrence	Hemorrhages of Pregnancy	1
	Use and Abuse of Forceps	1
(Arranged by Syracuse)	General Medicine	9
Saratoga	Headache Mechanisms	1
Schoharie	Abdominal Surgery	1
	Acute Abdomen in Children	1
	Cancer of Head, Neck, Breast	1
	Uterine Bleeding	1
Steuben	Cardiology Symposium	3
	Backache	1
	Adnexal Tumors	1
	Neurosurgery	1
Suffolk (Regular Meetings)	Arterial Emergencies	1
	Cardiac Diagnosis Symposium	3
	Trauma and Infections of Hand	1
(Saturday Morning Series)	General Medicine	19

Tompkins (including Academy of General Practice)	Cortisone and ACTH	1
Ulster	Arthritis Congenital Heart Disease	1 1
Wayne	General Medicine	5
Sullivan	Tumors of Liver Gastric Cancer Surgery Obstetrics	1 1 6

Again this year, several medical organizations not identified with a particular county or city made use of the committee's services. Lectures were arranged for the Mohawk Valley Obstetrical Society on "The Use of Forceps," "Ovarian Tumors," "The Rh Factor," "Dystocia in Labor," and "Sterility." The Syracuse Regional Trauma Committee of the American College of Surgeons heard a speaker on "The Relation of Hernia to Traumatic Surgery and Strain," and the Northern New York Committee on Trauma had a session on "Joint Motion in Fracture Cases." These seven speakers are included in the figures already noted above.

Regional Meetings and Teaching Days.—For regional meetings (consisting of only one session of postgraduate instruction) and for regional teaching days, invitations are sent to the members of the medical societies in counties adjacent to that in which the instruction is given. The committee will arrange for the speakers and for printing and distribution of programs to county medical societies, medical schools, hospitals, the NEW YORK STATE JOURNAL OF MEDICINE, the *Journal of the American Medical Association*, and the Bureau of Public and Professional Relations of the State Society for publication in local newspapers.

The following is a list of counties where regional meetings or teaching days have been held this year or will be held in the near future (these 22 lectures are not included in the figures already given):

COUNTY	REGION	INSTRUCTION	NUMBER OF LECTURES
Broome*	Chemung Chenango Cortland Delaware Otsego Schuyler Tioga Tompkins	Cancer	2
Broome County Medical Society and Broome County Academy of General Practice	(Not regional)	General Medicine	4
Dutchess*	Columbia Orange Putnam Ulster	Cancer	5
Fulton	Montgomery	Thyroid	3
Oneida	Herkimer Madison (including Utica Academy of Medicine, Oneida County Academy of General Practice)	Antibiotics	3
Otsego*	Broome Chemung Chenango Cortland Delaware Schuyler Tioga Tompkins	Cancer	5

Teaching Day at Annual Meeting, 1954.—The Subcommittee on Geriatrics of the Council Committee has been invited to participate in one of the General Sessions on the scientific program. At the time of writing Senator Thomas C. Desmond has been extended an invitation to appear on the program and speak on "The Responsibility of the Community to the Aged." Three physicians will present papers on medical, surgical, and psychologic problems in the aging patient.

Revision of Course Outline Book.—Plans are proceeding for the publication of a revised *Course Outline Book* in time for the annual meeting. It is expected that a section will be added embodying a somewhat different sort of postgraduate educational exercise based on the increasingly popular panel discussion type of presentation.

Luncheon for Subcommittee Chairmen.—At the 1953 annual meeting a luncheon meeting of the chairmen of the various subcommittees was scheduled. Only four out of the 11 chairmen were able to attend. These were Dr. John L. Norris, Medical Film Review; Dr. Floyd C. Bratt, General Practice; Dr. Arthur M. Master, Heart Disease; and Dr. Willis Weeden, representing the Subcommittee on Physical Medicine and Rehabilitation, and the current chairman. Also present were Drs. Aaron and Post and your chairman, as well as Dr. Leonard Schiff, a member of the Planning Committee for Medical Policies, and the present chairman of the Diabetes Subcommittee. The purpose of the meeting was to discuss the possibility of greater coordination of effort among all the committees. The various chairmen reported what had already been done in the way of collaboration but agreed there was room for much improvement. It was decided to convene very early in the fall to consider an agenda based on suggestions to be procured from all the chairmen of subcommittees.

Joint Meetings with State Department of Health.—During 1953, as formerly, the Council Committee of Public Health and Education has met from time to time with Dr. Hilleboe, Commissioner of Health of New York State, and his staff to discuss matters of joint interest or concern, with the idea of developing policies that would reflect the combined views of the two organizations, with due regard to the divergent viewpoints of both groups when such existed. It is gratifying to be able to report that this year has been no exception to prior experience where the upper echelon of the State Health Department in its formulation and implementation of policy has been fully considerate of the interests of the members of the Society and by its action has clearly demonstrated its desire to assist the practicing physician in giving better medical care to the people of the State.

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* Traveling expenses, honoraria of speakers, and printing of programs provided by the New York State Department of Health.

Through the medium of these joint meetings it is felt that the State Health Department is able to obtain a frank evaluation of its policies by canvassing a cross section of opinion of practicing physicians specifically concerned with any particular problem. This is accomplished by periodically inviting such men to attend the joint meetings for the purpose of expressing their views. As a result of this, final policy is determined with full cognizance of the viewpoint of the practicing physician, rather than that of the members of the committee and the officers of the Society only. The experience of the past several years concerning the value of these joint meetings has demonstrated an increasing reciprocal confidence in the motivation of each group in the field of major medical policy.

It is hoped that in the future we might further build on this broad base of mutual confidence that now exists by being accorded a seat at the council table of the various State agencies concerned with health during the early planning stages of programs that have direct concern with the problems of medical care. We feel that the Medical Society with its wealth of experience in the field of medical practice has a major contribution to make in these preliminary discussions and might at times even serve as the mediating agency in reconciling divergent viewpoints on the part of these State agencies on health and educational matters.

A noteworthy achievement this past year has been the improved coordination between the public relations departments of both organizations, stimulated largely by the gamma globulin program for poliomyelitis where by previous agreement the State Health Department and the Medical Society agreed to prepare joint releases for the press. It was particularly gratifying to see the proper recognition given in the press releases from the State Health Department to the role played by the physicians of the State in the immunization program. Our thanks at this time are due to Miss Lucille Rubin, Health Publications Editor of the Health Department, who worked in close liaison with Mr. Frederick W. Miebach of our Public and Professional Relations Bureau in preparing these releases.

During the year the following specific topics were discussed: (1) conservation of hearing among school children; (2) retaining of part-time local men in local health units; (3) Ulster County Tumor Clinic; (3) narcotic clinics; (4) free x-rays in metropolitan hospitals upon admittance; (5) rabies control.

New York State Citizens' Health Council.—On June 12, 1953, the Second Annual Meeting of the New York State Citizens' Health Council was held, attended by 40 members. Mr. Lee B. Mailler, president of the Council and majority leader of the New York State Assembly, outlined the organizational history of the Health Council, giving due credit to Dr. Carlton E. Wertz for his leading role. Discussion, led by Mr. Aubrey Mallach, centered around the problem of developing teamwork for health on the local and the State levels. To assist the Health Council in acquiring additional members President Eggston wrote a supporting letter in July to certain organizations being approached by Mr. Mailler.

New York State Federation of Women's Clubs.—In an interview with your chairman Mrs. William S. Shary, the then chairman of Public Health Committee of the New York State Federation of Women's Clubs, stated that there is a potential of one to one and a quarter million members in the organization. Methods were discussed for the development of a program for yearly physical examinations for every member. Each club was invited to devise a slogan relative to the examination, for which a prize was given at the annual meeting of the organization in Albany last Fall. We have learned that the prize-winning slogan for the New York State group was "Buy Good Health with an Annual Check!" Mrs. Shary has been in touch with Dr. Floyd C. Bratt, chairman of the Subcommittee on General Practice, to discuss the implementation of the organization's health examination program in this State.

Academy of General Practice.—Again this year we received a request from the New York State Chapter of the American Academy of General Practice for financial assistance in the program of their Annual Scientific Assembly, held in October in New York. We reimbursed three of the speakers for a portion of their travel expenses.

Addresses of Chairman.—During the past year your chairman has had the privilege of addressing the medical societies of the Counties of Oneida and Richmond on "The Medical Examiner System."

PART II

Maternal and Child Welfare

The Subcommittee on Maternal and Child Welfare has the following membership:

Charles A. Gordon, M.D., *Chairman*	Brooklyn
Ralph L. Barrett, M.D.	New York City
Eugene R. Duggan, M.D.	Rochester
Thurman B. Givan, M.D.	Brooklyn
Edward C. Hughes, M.D.	Syracuse
Joseph B. Loder, M.D.	Rochester
William J. Orr, M.D.	Buffalo
James K. Quigley, M.D.	Rochester
Frederick H. Wilke, M.D.	New York City
Alfred Yankauer, M.D., State Health Department, Adviser	Albany

Soon after the annual meeting of 1953 a plan for activating the 12 regional chairmen in obstetrics and the 12 regional chairmen in pediatrics of this subcommittee was instituted. A comprehensive questionnaire was sent to these chairmen as well as to the members of the subcommittee, the replies to which formed the basis of the agenda for the meeting of the Subcommittee on Maternal and Child Welfare held November 13, 1953. This was attended by all but three of the committee, by Dr. Yankauer of the State Health Department, by four of the regional chairmen, and by the Council Committee and Dr. Anderton.

One of the matters taken up by the committee was a resolution from the Broome County Medical Society:

> "Whereas, there is no set policy within the Unemployment Commission of the State of New York with respect to payment of unemployment insurance to females who are pregnant and have ceased to be gainfully employed, and
>
> "Whereas, these recipients continue to receive unemployment insurance as long as their physicians certify they are fit to work at their occupation, and
>
> "Whereas, some of these recipients have been known to change physicians in order to continue to draw unemployment insurance, when the first physician has refused to certify that the patient is able to continue to be gainfully employed at her occupation, and
>
> "Whereas, this is reflected in the insurance rates paid by industry in this area, which is later reflected in the cost of living and the cost of the end products purchased by individuals throughout the nation, and
>
> "Whereas, the same situation applies both to prenatal and postnatal periods, be it therefore
>
> "*Resolved*, that no unemployment benefits be paid to females who are twenty-eight weeks or more pregnant or during the period of eight weeks after delivery of the child, and that this policy be standardized throughout the State so that no discrimination will be shown, one patient over another."

It was voted to report to the Council approval of the resolution from Broome County "with hearty enthusiasm" and to recommend that the House of Delegates act favorably upon it.

Dr. Gordon reported that, judging from replies to the questionnaire, blood procurement and other facilities for obstetric and pediatric care were generally satisfactory throughout the State. In Clinton and Schoharie Counties there appeared to be need for prenatal clinics and county health nurse service for the remote rural areas. Dr. Wessell, chairman of Obstetrics for Region 6, expressed the belief that the time was ripe for a health department to be set up in Clinton County and was asked to report to the county medical society's meeting the following week the fact that the Subcommittee on Maternal and Child Welfare was in favor of such a move. He reports that this has been fully approved, and a full-time health officer is being sought.

It was brought out that one of the most important facts the physician can learn is what agencies are concerned with child health in his particular community. It was agreed that this type of information should be available at the county medical societies and that the regional chairmen should take it upon themselves to see that it was procured. Information of this sort for all physicians could be compiled in the form of a handbook on a regional or county basis. The advice of the Subcommittee on School Health will be sought in this project.

The county medical societies will be encouraged to schedule postgraduate courses for physicians on physical examination and health problems of school children.

Through the fine cooperation of Dr. Yankauer, director of the Bureau of Maternal and Child Welfare of the State Department of Health, it was announced that matched certificates of birth and death on a current basis would be available to county or regional groups for review.

The subcommittee gave Dr. Yankauer suggestions as to the wording of certain portions of the Civil Defense manual, "How to Assist in the Birth of a Baby if No Doctor Is Available."

For the purpose of facilitating the task of the regional chairmen several changes were agreed upon in the composition of the various regions. These have been approved by the Council as follows: Seneca County to be added to Region 10, Ulster County to be transferred to Region 3, Green County to be transferred to Region 5, Oswego and St. Lawrence Counties to Region 7, and Herkimer and Hamilton Counties to Region 8. It is proposed to hold another meeting of the subcommittee before the annual meeting.

PART III

Public Health Activities A

Industrial Health.—The Council Committee on Industrial Health has the following membership:

Peter J. Di Natale, M.D., *Chairman*	Genesee
Anthony A. Lanza, M.D.	New York City
Melvin N. Newquist, M.D.	New York City

Your committee has had several meetings this current society year.

Your committee was originally composed of Dr. Anthony Lanza, New York City, and Dr. Frank Ferlaino, New York City. (Dr. Ferlaino died suddenly in September, 1953.) The Committee has been asked to prepare for you a report on the proposed plan for an Industrial Health Bureau including recommendations regarding a director, such assistants or clerical help he might need, and possibly a budget for bureau's operation, and, perhaps most important, to plan a program of activities for the bureau. The committee met on August 12, 1953, to study the above proposals.

Prior to the meeting your chairman contacted a number of medical men engaged in industrial medicine—I wrote to about 15 men that I thought would help in giving us suggestions about industrial medicine—and from them obtained many excellent suggestions to guide us in our planning. From the information thus obtained, and following the committee meeting on August 12, 1953, at which meeting were present representatives of the American Medical Association Council on Industrial Health, your committee suggests the following:

1. It was the vote of the Council that a full-time director of the Industrial Health Bureau and the Workmen's Compensation Bureau be employed. Proper space for the bureau is to be allocated in the Society's quarters.

Salary of the director is to be set by the Office Management and Policies Committee or Council or Board of Trustees. Salary must be geared to director's knowledge of industrial medicine, experience, and/or other qualifications that may be set up by State Society.

It is to be remembered that a sum of $25,000 has been mentioned and proposed at the last session of our House of Delegates.

2. Your committee suggests for some of the activities of this new department:

(*a*) Collect information and statistics about industrial medical practice in New York State.

(*b*) Obtain information about full-time and part-time industrial physicians; obtain a roster of leaders of industrial health for purposes of speakers bureau and teacher group.

(*c*) Maintain a close relationship with various medical schools to foster teaching of industrial medicine.

(*d*) Stimulate and maintain active interest in employers for establishing good industrial health services.

(*e*) Stimulate interest in industrial health practice among the medical profession with particular interest among those general practitioners that could supply medical services to small plants and stimulate need for proper ethical practice and cooperation with family physician.

(*f*) A newsletter distributed to physicians, employer, and labor groups about industrial health matters.

(*g*) Help to establish and improve standards for preplacement and periodic physical examination in industry with cooperation of employers and employes.

(*h*) Interest each county society in establishing industrial health committee to stimulate local interest. We believe this a most important point because industrial health activities should begin at a local level, and pilot studies embarked on must be at a county level at first.

(*i*) Maintain and cooperate with other agencies interested in industrial health services, such as local chambers of commerce, labor organizations, State Health Department, State Labor Department, medical organizations, such as Academy of General Practice and industrial nurses organizations.

(*j*) Set up lectures at undergraduate and postgraduate levels by competent industrial health authorities.

(*k*) Because in New York State under the Workmen's Compensation law industrial medical practice plays an important role because of the free choice principle which permits all qualified doctors to participate in industrial medical practice, the Industrial Health Bureau could work very closely with the Workmen's Compensation Bureau of our Society.

The above could most certainly be a starter for the program of activities. We realize full well that it will take a great deal of time and planning before concrete results can be noticed.

Your Committee desires to make some general comments: We feel that the State Medical Society is vitally interested in seeing to it that the American worker gets the best medical care possible. We desire that our State Society assume its proper place, that of leader in this ever-increasing, important phase of medical practice. We know that the State Society is pioneering in establishing this bureau, and we are being watched by other state medical societies for their future guidance in this matter.

Attempt was made to obtain a part-time man to the position of industrial health director, but up to this moment no one has been obtained.

Your committee met on December 9, 1953 at which meeting was present Dr. Melvin Newquist, New York City, who had been appointed to succeed Dr. Ferlaino; Dr. Lanza; Dr. Kaliski; and Dr. Mellen.

Much discussion took place; it was brought out that a pilot study modeled after the so-called Pennsylvania plan be undertaken. Your committee feels after considerable discussion that a pilot study such as contemplated cannot be carried out without a director who can devote the proper time to the study. It was felt that the committee should suggest to the Council that a sum of $15,000 be at least the talking point in attempting to obtain a director. Such a suggestion was approved by the Council for action by the Board of Trustees.

General Practice.—The Subcommittee on General Practice has the following membership:

Floyd C. Bratt, M.D., *Chairman*	Rochester
Louis Bush, M.D.	Baldwin
DuMont F. Elmendorf, M.D.	New York City
Seymour Fiske, M.D.	New York City
Gregory A. Galvin, M.D.	Ithaca
Leon F. Roper, M.D.	Belmont
Garra L. Lester, M.D.	Chautauqua

At a meeting on October 29, 1953, a brief history of the problems and activities with which the group has been concerned were outlined as follows:

1. Postgraduate education for the general practitioner, particularly in the rural areas.

2. The general practitioner's status in the hospitals in New York State.

3. The problem of interesting the general practitioner in providing periodic examinations for the public, particularly in respect to the detection of cancer.

4. To emphasize the importance of the general physician in public health activities in New York State.

5. To coordinate the aims and purposes of the New York State Academy of General Practice with the program of the State Medical Society.

6. Participation in local civic affairs of each community.
7. The need for each family to choose a family physician.
8. Preceptorships and education for a career of general practice.

Methods were discussed by which to give more extensive publicity to existing postgraduate programs of the Medical Society of the State of New York, particularly in a special section of the NEW YORK STATE JOURNAL OF MEDICINE and in the *General Practice News*. Consideration was also given to making postgraduate medical meetings more attractive to general physicians.

A hospital survey is now being made which is expected to give very complete information concerning the integration of general practitioners into hospital staffs with a special analysis of general practice departments where they exist.

A health examination blank has been drawn up and approved. It is expected that the State Health Department will soon print these blanks for distribution and use by New York State physicians. Cancer detection and the necessity of complete health surveys when patients are being examined by their family physicians are emphasized.

Study groups responsible for the various aspects of the general physicians' problems are functioning under the direction of this subcommittee.

At a forthcoming meeting it is expected that Dr. Amos will be present to analyze the communications of representatives of medical schools of New York State concerning their opinion on matters discussed at a meeting of the Special Committee to Study the Needs of the General Practitioner with these medical educators.

It is recognized and emphasized by this subcommittee that in recent years the general practitioner is taking his educational welfare into serious consideration. He is assuming more interest and responsibility in the affairs of his local hospital and in his county and State medical societies. Training for general practice and preceptorships are recognized as part of a general practitioner's responsibility. Finally, a realization of this responsibility as an ethical leader in community service should go far in promoting favorable medical public relations throughout the State.

For some time the New York State Chapter of the American Academy of General Practice has been anxious that a separate Council Committee on General Practice be established by the Medical Society of the State of New York. A resolution to this effect was introduced in the House of Delegates at the 1953 annual meeting and was referred subsequently to the Planning Committee for Medical Policies. The outcome of their deliberations on this request will be found in their annual report.

PART IV

Public Health Activities B

Cancer.—The Subcommittee on Cancer has the following membership:

William L. Watson, M.D., *Chairman*	New York City
John S. Fitzgerald, M.D.	Utica
Victor C. Jacobsen, M.D.	Troy
John G. Masterson, M.D.	Franklin Square
Dwight V. Needham, M.D.	Syracuse
James Craig Potter, M.D.	Rochester
Samuel Sanes, M.D.	Buffalo
Charles S. Cameron, M.D., American Cancer Society	New York City
Paul R. Gerhardt, Bureau of Cancer Control, New York State Department of Health	Albany

No meetings of this subcommittee have taken place this year. Drs. Watson and Gerhardt are to meet shortly to discuss certain matters which might require action prior to the annual meeting.

Mental Hygiene.—The Subcommittee on Mental Hygiene has the following membership:

S. Bernard Wortis, M.D., *Chairman*	New York City
George R. Lavine, M.D.	Rochester
Curtis T. Prout, M.D.	White Plains
Lewis I. Sharp, M.D.	New York City
Harry A. Steckel, M.D.	Syracuse

There have been no meetings of this subcommittee this year, but it has been called upon by the Committee on Legislation for advice relative to proposed legislation concerning the establishment of community mental health boards, also modification of the Medical Practice Act.

Heart Disease.—The Subcommittee on Heart Disease has the following membership:

George M. Wheatley, M.D., *Chairman*	New York City
J. G. Fred Hiss, M.D.	Syracuse
Frederick L. Landau, Jr., M.D.	Bronxville
Morris E. Missal, M.D.	Rochester

A meeting of this subcommittee was held on December 9, 1953, attended by all members, also Drs. Aaron, Curphey, and Redway. Dr. Norman Plummer was also present, by invitation, as the Medical Director of the New York Telephone Company.

Discussion centered principally around the problem of employment of the cardiac in industry, the young person applying for his first job and the man who has had a heart attack and is seeking a new position. Part of the reluctance on the part of the employer to place these people is due to the workmen's compensation rulings which make these conditions compensable, the extent of which the employer cannot foresee. It was pointed out that the greatest weakness in the Workmen's Compensation Law was its failure to provide for referees who are physicians trained in interpreting the medical evidence. It was recommended that a resolution be prepared and introduced to the House of Delegates recommending a study of these heart disease problems relative to workmen's compensation.

Dr. Hiss, chairman of the Council on Rheumatic

Fever and Congenital Heart Disease of the American Heart Association, said he would like to recommend that standards for diagnostic clinics be set up for small rural counties and that the county medical societies participate actively to keep medical policies and medical treatment in their hands and to assist in an educational program in prevention of primary attacks of rheumatic fever.

It was decided that a letter should be sent to the county societies calling attention to the existence of the New York Heart Assembly and recommending that local medical societies work with chapters of the Heart Association; the communication should also express the interest of the subcommittee in the problem of prophylaxis and suggest that if medical societies have not already done so, they should approach the local heart group to see if the problems can be worked out in a joint community effort.

In this connection it should be reported that in April, 1953, the Council confirmed approval by the Subcommittee on Heart Disease of a statement submitted to them by the State Health Department to be used by full-time health officers and local voluntary health agencies as a guide for local programs of rheumatic fever prophylaxis.

A meeting of the New York Heart Assembly in Syracuse on January 28, 1954, was attended by Dr. Hiss and Dr. Curphey, chairman, of the Council Committee. One of the purposes of the meeting was to organize the program for the First Scientific Session of the Heart Assembly on March 20. Dr. Curphey was appointed to serve on the Professional and Educational Committee of the Assembly.

Medical Film Review.—The Medical Film Review Subcommittee has the following membership:

John L. Norris, M.D., *Chairman*	Rochester
Kenneth B. Olson, M.D.	Albany
Beverly C. Smith, M.D.	New York City
Granville W. Larimore, M.D., New York State Department of Health, Adviser	Albany

During the last year there has been a definite increase in the demand and use of medical films. The preparation and wide distribution of the new Professional Film Catalog, as well as continued publicity in *Health News*, *Bulletin Weekly*, and the NEW YORK STATE JOURNAL OF MEDICINE have done considerable to stimulate interest in professional motion pictures. An exhibit, prepared by the Department of Health and displayed at the State Medical Society meeting at Buffalo and the New York State Health Conference at Lake Placid, depicted the activities of the committee and library.

Twelve new titles were added to the library during the year. Ten films which were reviewed by the committee were not recommended for purchase. Because of the increased demand for films, it was necessary to buy additional prints of films already in the library. There were 675 bookings for films in this library during the year.

Information concerning new films available and in production has come to us through the Medical Audio Visual Institute of the American Association of Medical Colleges. We are grateful for their continued interest and support.

We were happy to learn of the promotion of Dr. Granville Larimore to Deputy Commissioner of the State Department of Health. We shall miss his presence on the committee but are counting on his continued interest.

The chairman takes this opportunity to express his appreciation of the support given to this committee by the other members of the committee, especially Dr. Kenneth B. Olson, director of the Division of Oncology at Albany Medical College, who has prepared several reviews for publication, as well as reviewed a number of other films.

PART V

Public Health Activities C

Physical Medicine and Rehabilitation.—This subcommittee is composed of the following members:

Willis M. Weeden, M.D., *Chairman*	New York City
Arthur S. Abramson, M.D.	Bronx
John W. Ghormley, M.D.	Albany
Alfred L. Lane, M.D.	Rochester
Donald G. MacElroy, M.D.	Schenectady
George M. Raus, M.D.	Syracuse
William B. Snow, M.D.	New York City

A meeting of the Subcommittee on Physical Medicine and Rehabilitation was held on December 2, 1953, to which were invited the members of the Subcommittee on Cerebral Palsy:

George G. Deaver, M.D., *Chairman*	New York City
Austin J. Canning, M.D.	West Haverstraw
Russell P. Schwartz, M.D.	Rochester

With the exception of Drs. Canning and Ghormley all members of both groups were present. The principal matter brought up before the committee was the expressed desire of the New York Medical College to set up a course in physiotherapy. The college authorities felt that it could not do so under the present interpretation by the State Education Department of the law, which states that to be accredited a school must have a curriculum of four years postsecondary school education. It does not state specifically that the student must acquire this training in one place, but such is the contention of the State authorities.

The committee felt that the transfer credit system should apply in the State of New York and recommended that the whole problem of the shortage of physiotherapists and lack of teaching facilities be taken up with the Commissioners of Education and Health for prompt action. (The chairman took up this question at a subsequent meeting of the Subcommittee on Rehabilitation of the Interdepartmental Health Council [State], who agreed to take up the matter with the Interdepartmental Council.)

The committee also recommended that the Council request the State Health Department to approve the introduction of legislation permitting physiotherapists ("rehabilitation aides") from other states to be employed in this State for six months prior to their taking the State examination for licensure. (At the present writing three bills to this effect have been introduced into the Legislature.)

As the result of a letter from Dr. Donald A. Covalt, representing Dr. Howard Rusk and others in the field, the subcommittee recommended that the Workmen's Compensation Committee of the State Society consider the matter of a fee schedule for specialists in physical medicine and rehabilitation, in consultation with the Subcommittee on Physical Medicine and Rehabilitation.

There was discussion of whether or not the State Legislature should set up rehabilitation units throughout the State similar to the tuberculosis hospitals. It was suggested that before any decision is reached by the Joint Legislative Committee the subcommittee offer to define the areas of need for facilities in New York State. It was pointed out that Dr. Brightman of the State Department of Social Welfare was conducting such a survey on his own, and it was decided to offer the services of the subcommittee to him in this study.

Geriatrics.—The Subcommittee on Geriatrics has the following membership:

Frederic D. Zeman, M.D., *Chairman*	New York City
C. Ward Crampton, M.D.	New York City
John L. Edwards, M.D.	Hudson
Vrooman S. Higby, M.D.	Bath
Merwin E. Marsland, M.D.	Mamaroneck

The subcommittee did not hold any meetings this past year, but it did meet with the Subcommittee on Public Medical Care of the Committee on Economics on September 29, 1953. The primary purpose of this meeting was to determine, if possible, the specific area in which each of the subcommittees should operate. The proceedings of the meeting are recorded in the report of the Subcommittee on Public Medical Care.

The subcommittee has arranged a program for a portion of the general sessions morning activities on May 11, 1954, during the annual meeting of the Society. Physicians have been invited to speak on the medical, surgical, and psychiatric problems of the aging patient. An invitation has also been extended to Senator Thomas C. Desmond to participate in the program, giving his views on the "Community's Responsibility to the Aged."

Diabetes.—The Subcommittee on Diabetes has the following membership:

Leonard J. Schiff, M.D., *Chairman*	Plattsburg
Edwin W. Gates, M.D.	Niagara Falls
Charles B. F. Gibbs, M.D.	Rochester
Henry E. Marks, M.D.	New York City
Frederick W. Williams, M.D.	Bronx

A meeting of the subcommittee was held in New York on September 8, 1953. Mr. Richard Connelly, executive secretary, and Mr. S. Ross Pond, field representative, of the American Diabetes Association, were present by invitation.

The objectives of this subcommittee are to stimulate active diabetes detection programs and to further the education of physicians and patients regarding this disease. To stimulate a more active diabetes detection program, a letter was sent to the chairman of the diabetes committee of every county medical society having such a committee. A personal letter was sent to the president of each of the 15 county societies which had no diabetes committee. In several instances letters were also sent to individual physicians known to be interested in diabetes. In each case an attempt was made to secure participation in the Annual Diabetes Detection Drive which was held during the week of November 15 to 21. A considerable amount of interest was aroused in many counties which had never before conducted a diabetes detection drive. At the time of writing this report the exact statistics are not available, but it is known that at least three additional counties conducted diabetes detection drives this year.

A news release concerning Diabetes Week was issued by President Eggston. The Public and Professional Relations Bureau carried items on Diabetes Week in two issues of the *Newsletter*. Through the efforts of Commissioner Hilleboe and Dr. Curphey a press release from Governor Dewey was obtained. The NEW YORK STATE JOURNAL OF MEDICINE carried an editorial and several short reminders urging all physicians to participate in Diabetes Week.

A letter will soon be sent to all chairmen of county medical society diabetes committees suggesting that they have their societies schedule at least one postgraduate lecture on diabetes during the coming year. To assist them, a list of all the lectures on this subject which are currently available through the Council Committee on Public Health and Education, will be included.

Efforts were to be made to have a paper emphasizing the importance of early detection included in the series, "Current Concepts in Diabetes Mellitus," which appeared in the NEW YORK STATE JOURNAL OF MEDICINE.

School Health.—The Subcommittee on School Health is composed of the following members:

William E. Ayling, M.D., *Chairman*	Syracuse
Paul W. Beaven, M.D.	Rochester
Edgar Bieber, M.D.	Dunkirk
Thomas S. Bumbalo, M.D.	Buffalo
Joseph A. Geis, M.D.	Loudonville
Fairfax Hall, M.D.	New Rochelle
Jean Pakter, M.D.	New York City
Alfred Yankauer, Jr., M.D.	Albany

During the year two meetings were held, one in June at Lake Placid and one in New York in November.

The committee has been active in stimulating appointment of a School Health Committee in each county medical society, and it is known that 38 of the 61 counties now have such committees.

Under date of December 17, 1953, a letter was sent to all the county societies urging them to have meetings on topics concerning school health as part of their regular programs or at special sessions. Our committee offered assistance. This action was a result of the New York meeting when the chairman reported on the Fourth Biennial Conference of the American Medical Association on Physicians and Schools, which he attended in Chicago in September as a representative of the State Society.

The committee has offered its services on a consultant basis to the State Education Department, which is currently revising its manual on Supervision of School Health Services, originally published in 1938.

One of the important activities of this committee started at the June meeting when a resolution was submitted which concerned the position of chief of the Bureau of Health Service in the State Department of Education. The resolution pointed out that a permanent appointment of a qualified, licensed physician should be made to fill this position, which was being occupied by an acting chief not licensed to practice in New York State. As a result of this resolution, which was passed by this committee and the Council, and the activities of other interested organizations, a Civil Service examination was held in July, and the appointment of Dr. John A. Frost, was announced in November.

Another resolution, concerning qualifications of part-time school physicians, is now under consideration by the committee. This was recently submitted by the Academy of General Practice.

The chairman has also answered a number of letters relative to school health received by the State Society and referred to him.

Hard of Hearing and the Deaf.—This subcommittee has the following membership:

Edmund P. Fowler, Sr., M.D., *Chairman*	New York City
Charles A. Anderson, M.D.	Brooklyn
Greydon G. Boyd, M.D.	New York
Karl W. Gruppe, M.D.	Utica
Gordon D. Hoople, M.D.	Syracuse
C. Stewart Nash, M.D.	Rochester

Advisers

Clarence D. O'Connor, Ph.D., Lexington School for the Deaf, New York City
Mrs. Eleanor C. Ronnei, New York League for Hard of Hearing, New York City

The chairman, Dr. Fowler, attended a meeting of the parent committee with representatives of the State Health Department on September 25, 1953, and set forth some problems of the hard of hearing and the deaf and some means for solving them. At his request the director of the Bureau of Child Health of the City Health Department, Dr. H. Jacobziner, and the assistant director of Health Education of the Board of Education of New York City, Mr. Daniel Caplin, were present. The lack of trained personnel in this field in the schools was emphasized.

The chairman wrote letters to the Commissioners of Health of the State of New York and the City of New York regarding the early detection of deafness in children and requesting the Health Department:

1. To include in its bulletins and directives to health officers the desirability of determining hearing disability at as early an age as possible and the obligation of reporting deafness to the Department of Health as required by law.
2. To place in the physician's hands simple home tests for babies, with the advice that all children should be tested at least qualitatively twice a year during the first six years of their lives. The committee would gladly furnish suitable tests.
3. To furnish physicians and parents brief instructions in detecting ear disease and deafness and print same on either birth certificates, report cards, or otherwise. It is believed that properly instructed parents may be more efficient than the doctor in determining hearing deficiencies in babies.
4. To state, if the Departments of Health felt unable or unwilling to institute the above measures, what they would be able to do along these lines.

Very appreciative letters were received from the Commissioners of Health with promises of cooperation, but no definite steps were taken to initiate the proposed educational program.

A meeting of the Subcommittee on the Hard of Hearing and the Deaf was held at the University Club, New York City, on November 19, 1953. Present were Drs. Anderson, Boyd, Gruppe, Hoople, and the chairman; Dr. Nash was absent. Also present were the two consultants, Dr. Clarence O'Connor and Mrs. Ronnei, and Dr. W. P. Anderton, secretary of the State Society. Dr. Andrew A. Eggston, president of the Society, honored the committee with his presence. A report of certain recommendations was prepared by Dr. Boyd in cooperation with Mrs. Ronnei, Dr. Hoople, and Dr. Fowler and was forwarded to the parent Council Committee. It was submitted to the Council at its December meeting and was approved. The report follows:

"The following recommendations are made by this Subcommittee:

"1. That a publicity and educational program in the field of the hard of hearing and the deaf be initiated through all media possible. Information should reach doctors, especially industrial physicians; ear, nose, and throat specialists; pediatricians; general practitioners; child psychiatrists; nurses, parents, school teachers, school administrators, health organizations, ministers, etc. It is thought that short, frequent, meaningful statements like 'Does Your Child Hear?,' 'Can he understand easily, or does he say "Huh?,"' are most likely to succeed. Such statements could enlighten people on what to look for, advice on what can be done, and the social, emotional, and mental retardation which may result from neglect. The first five years are the most important learning and character-forming period. More than 200,000 children need help in New York State. Only 10 to 15 per cent are now getting it. The majority of hearing loss can be corrected or stayed, and every child can be rehabilitated more effectively to use what hearing he has.

"Material should be contributed by outstanding personnel. The following media should be utilized on a voluntary basis: radio, television, newspapers, magazines; insurance companies; health education; cartoons, placards; medical journals; education journals; public health through statements on report cards; veterans' organizations, American Legion, etc.; women's clubs; men's clubs, Lions, Rotary, Shriners, Kiwanis, etc.; parent-teacher associations; United Cerebral Palsy and other groups for the handicapped; child health clinics.

"2. (*a*) That additional audiology clinics be established. Some suggested locations are southern tier of counties (Binghamton, Elmira, Jamestown), central Long Island, all boroughs of New York City, White Plains, Poughkeepsie, Plattsburg, Malone, Ogdensburg, Watertown, Buffalo, Cooperstown, and Yonkers.

"(*b*) That medical schools being built, like the State University of New York College of Medicine at New York City, New York University College of Medicine, and Yeshiva, be urged to plan large units for diagnosis, teaching, rehabilitation, and disseminating of complete information for the hard of hearing in their areas.

"3. That funds be requested to pay a Commissioner of Health for Hearing and Speech and his staff, similar to that provided for the Commissioner of the Blind. The staff should include all groups interested in the prevention of deafness, conservation of hearing, and rehabilitation of the acoustically handicapped. A salary of at least $15,000 is recommended for the commissioner so that high caliber personnel will be attracted. Sufficient additional funds should be allotted to enable this unit to function for the coordination of all the activities in this field in the State. This would require approximately $50,000 to $100,000 initially. Working with the three State agencies now responsible for some phase of the problem (Health, Welfare, and Education), the Commissioner would educate, organize, advise, investigate sources of aid such as Federal funds, and government publication facilities. He would be required to travel, lecture, meet with organizations, newspaper and magazine publishers, TV and radio personnel, enlist the aid of actors, teachers, ministers, and see that the best use is made of all voluntary and appropriated money and effort. In this way the State can realize a tremendous return on a small investment. There are more hard of hearing people than those with cancer, tuberculosis, and heart disease together in the State of New York. Individuals handicapped by deafness are far greater in number than those handicapped by blindness, and it is high time this neglected segment of the population be given adequate help. Close coordination could be maintained with the State Health, Welfare, and Education Departments. The Commissioner should be free from political influence, a person dedicated to this work.

"4. That the State Education Department, Division of Teacher Education, be encouraged to provide in at least one of the State teachers' colleges a major course of study to prepare qualified teachers of the hearing handicapped.

"5. That the Commissioner of Health designate someone in authority in his department to confer with the Subcommittee on the Hard of Hearing and the Deaf to further this program of education and conservation.

"6. That the Medical Society of the State of New York publish in the NEW YORK STATE JOURNAL OF MEDICINE short articles, designed for doctors, on the necessity and the means of early diagnosis of ear disease and the detection of deafness."

The chairman has written follow-up letters to the State Commissioner of Health asking for a conference to discuss the proper handling of the prescribing and free distribution of hearing aids. There has already been a meeting of an advisory committee on this subject, with Dr. Schlesinger as chairman.

It is planned to carry out a continuing educational campaign both in the State and county medical society journals, in the press, and by the Departments of Health and Education.

PART VI

Economics

The Council Committee on Economics has the following membership:

Renato J. Azzari, M.D., *Chairman*	Bronx
Arthur H. Diedrick, M.D.	Port Chester
Gerald B. Manley, M.D.	Geneseo

Your Council Committee on Economics is desirous of bringing to the attention of the medical profession certain trends in economics which affect physicians. These trends can be classified in four general categories: (1) income of physicians, (2) expenditures of the medical care dollar, (3) old age and survivors insurance, and (4) Jenkins-Keogh Bills (H.R. 10 and 11).

Income of Physicians.—There has been considerable comment that physicians' incomes have increased proportionately higher than those of other gainfully employed people. From reliable surveys which have been made let us use 1935–1939 as the base period for comparative purposes. Since this base period physicians' mean net incomes have increased approximately 160 per cent, while the increase in the national incomes for those who are gainfully employed was 177 per cent.

Obviously, an increase of approximately 160 per cent in the average income of physicians since the base period cannot be attributed to a general rise in fees alone. There are two other factors which are probably more important in accounting for this increase:

1. Improved collections and a lesser number of charity patients due to the availability of Blue Shield and private health insurance coverage: In our modern era, there is an ever-increasing demand for the consumer's dollar for material things which will bring comfort and enjoyment to him and his family, whether it be a new automobile, television set, or a better home in which to live. It constantly narrows the margin of savings available to

take care of the cost of sudden and unexpected illness. The worker with an average income, therefore, finds it necessary to protect himself and his family against the cost of illness through insurance or become medically indigent.

2. Greater output per physician: During the past decade, over a given period, physicians have increased considerably the number of units of service per physician because of the large number of physicians serving their country, changes in therapy and diagnosis, increased use of technical assistants, and seeing a greater proportion of patients in the office and in the hospital.

Expenditures of the Medical Care Dollar.—Consumer expenditures for total medical care during 1952 were approximately 9.6 billion dollars, representing 4.4 per cent total consumer expenditures. Of this total approximately 2.7 billion was for physicians' services, or 1.2 per cent of the total consumer expenditure. Hospital costs during this period were approximately 2.4 billion dollars or 1.1 per cent. Drugs and sundries, dental services, and all other medical care was approximately 4.5 billion dollars or 2.1 per cent.

In the base period, 1935–1939, 31.1 per cent of all personal consumer expenditures for medical care was paid for the services of physicians and 27.8 per cent in 1952, while the average weekly earnings of production workers in manufacturing industries increased approximately three times during this period. Consequently, far less than 100 per cent of one week's wages in 1952 was required to purchase a given amount of medical care which would have required an entire week's wages in the base period 1935–1939.

Consumers price index as of 1952 rose to 189.7 over the base period 1935–1939, while physicians' fees (general practitioner, surgeon, specialist) rose to 152.2 During this same period hospital rates rose to 288.8 which accounts for most of the moderate rise in the relative cost of medical care, an inclusive term.

Old Age and Survivors Insurance.—In a recent message to Congress the President urged changes under Old Age and Survivors Insurance to cover an additional 10,000,000 or so persons, coverage mandatory for "self-employed farmers, many more farm workers and domestic workers; doctors, dentists, lawyers, architects, accountants and other self-employed professional people."

At the meeting of the House of Delegates of the American Medical Association in St. Louis, December 1 to 4, 1953, the House reaffirmed its position by registering disapproval of the principle involved in this legislation.

Jenkins-Keogh Bills (H.R. 10 and 11).—These bills were approved by the House of Delegates of the American Medical Association at its meeting in St. Louis, December 1 to 4, 1953. They were also approved at the May, 1953, annual meeting of the House of Delegates of the Medical Society of the State of New York. The bills would establish a voluntary retirement plan for the self-employed and the pensionless employed and would amend the Federal Internal Revenue Code but would not change the Social Security Act. The amount of each person's pension would be determined by how much he set aside for his old age. He would be permitted to defer taxes on the annual amount set aside each year until he retired and began to receive his pension, which would be currently taxable.

The provisions in these bills for tax deferment until retirement are the counterpart of those now enjoyed by employed persons covered by more than 20,000 tax-exempt pension plans. Unlike the Social Security Act these bills would not force one into idle retirement in order to draw on his own pension fund. You could continue to work as the majority of practicing physicians do and not be required to retire at the age of sixty-five in order to receive a maximum pension of $85 a month under Old Age and Survivors Insurance.

The American Bar Association, American Dental Association, and the American Farm Bureau Federation have gone on record as opposing the extension of Old Age and Survivors Insurance to self-employed farmers and professional persons.

Current estimates indicate that less than 20 per cent of Old Age and Survivors Insurance benefits being paid out today were prepaid by the beneficiaries or their employers; therefore, that part of your pension fund which you have not paid for will be passed on to your children and to the younger members of the profession. Do you prefer paying for your own retirement, or would you rather have some one else do it?

Public Medical Care.—The Subcommittee on Public Medical Care of the Council Committee on Economics is composed of the following:

Scott Lord Smith, M.D., *Chairman*	Poughkeepsie
William G. Childress, M.D.	Valhalla
William E. Gazeley, M.D.	Schenectady
Charles D. Post, M.D.	Syracuse
Roswell L. Schmitt, M.D.	Middletown

The committee began its activities when two members, as individuals, attended the day-long session in Albany on June 16, 1953, with Dr. I. Jay Brightman, director of Medical Services, New York State Department of Social Welfare, at which time the new manual of the Department was given its final reading.

On June 24, 1953, two other members of the committee met at the annual meeting of the New York State Department of Social Welfare at Lake George for further discussion of the new manual.

Early it became apparent that the well-recognized difficulty in defining medical indigency was even more confusing when the problems in dealing with indigency and senescence mingled in one case. Therefore, this committee and the Council Subcommittee on Geriatrics held a joint meeting on September 29, 1953, to work towards a clarification of their two fields of activity. Present were all four chairmen, Drs. Curphey, Azzari, Zeman, and Smith, and three committee members, Drs. Post, Crampton, and Childress.

Dr. Azzari read from the report of the Reference

Committee on Public Medical Care as approved by the House of Delegates, "The basic function of the Public Medical Care Committee is to maintain contact with the State Department of Social Welfare and to assist it in setting up and administering the provisions of the Welfare Law that affect physicians throughout the State." There followed a discussion as to how many physicians in the State are involved in caring for the indigent aged, where they are located, how many calls are made, the adequacy of the care given by them, the mechanisms by which it is provided, the fees paid to the physicians, and whether or not there is any checking up on the services by the local medical societies. It was agreed that a letter should be written to Dr. I. Jay Brightman, director of Medical Services, Social Welfare Department, for statistics on the points raised.

The task of determining the quality of medical care rendered to such people is difficult. Further discussion was held regarding the effect this new manual would have on (1) the conduct of the Welfare Department, (2) the importance of the manual, (3) its application to the public welfare client, and (4) its application to the doctor furnishing medical care to indigents.

The meeting discussed the resolution presented by Dr. Horn of Monroe County to the House of Delegates in May, 1953, recommending that the Governor appoint a commission composed of prominent individuals, medical and nonmedical, to study the problem of the aged and to make recommendations. It was reported that Dr. Anderton, secretary of the State Society, had already communicated with Governor Dewey on the subject but had received only an acknowledgment of the letter.

There was discussion on the functions of the two subcommittees, and it was recommended to the Council that their several functions be reviewed and redefined.

Dr. Crampton reported that the so-called "Desmond Committee's" latest report contained considerable information on the economic aspect which might be of use to the two subcommittees.

It was agreed that, in general, the area of concern of the public medical care group includes children, adults, and old people from the financial viewpoint. The geriatrics subcommittee is charged with the medical condition of and medical service to old people. Where these two areas converge, each committee should seek advice from the other.

Two matters related to medical care of the aging portion of our population, one each from the 1952 and 1953 House of Delegates. On the first Dr. Gerald D. Dorman presented an analysis of the public medical care administered in the State and advised: (1) no legislation at present, (2) no blanket insurance at this time needed, (3) support of adjuvant measures (Reed-Jenkins Bill), and (4) continued study of hospital insurance.

The House of Delegates, resolved that a study be made by the Public Medical Care Committee of a plan to be presented to the New York legislators to alleviate these problems by State aid.

Your Public Medical Care Subcommittee, having reviewed the resolutions of its two predecessors and added to theirs its own observations as contained in the earlier part of this report, advises:

1. That no radically different plan for providing public medical care is well enough advanced to warrant advocacy.
2. That health and hospital insurance is costly and would require much additional supervision.
3. That free hospital care for those over sixty-five is not yet a recognized "right."
4. That the new Welfare "Manual" currently going into more universal use increases materially the efficiency and realism with which public medical care is sought by and delivered to the welfare recipient, including of course the aging segment of the population.

Therefore it is resolved that this Public Medical Care Subcommittee advises (1) no legislation at this time, (2) further study of health and hospital insurance, (3) further observation of the improved working of the Social Welfare Department.

Again the importance is stressed of the medical profession's taking the lead in providing solutions to medicoeconomic problems lest the initiative and policy-making function be usurped by social workers, insurance companies, and labor unions.

The letter sent to Dr. Brightman was duly answered in considerable detail plus a request for a further meeting with the Public Medical Care Subcommittee.

Both Dr. Azzari and Dr. Curphey desire a second joint meeting which is in process of being arranged. The Public Medical Care Subcommittee will also hold a meeting with Dr. Brightman as he requests.

Medical Licensure and Medical Service

The Council Committee on Medical Licensure and Medical Service consists of the following members:

Leo E. Gibson, M.D., *Chairman*	Syracuse
John N. Dill, M.D.	Yonkers
Ivan N. Peterson, M.D.	Owego
Stiles D. Ezell, M.D., *Adviser*	Albany

In October, 1953, the Committee on Licensure and Medical Service met at the Roosevelt Hotel for the purpose of choosing a candidate from the State of New York for the General Practitioner's award of the American Medical Association. Present at the meeting were Dr. John N. Dill, Dr. Ivan Peterson, and Dr. Stiles Ezell.

The biographies of several physicians submitted by the respective county societies were considered, and Dr. Mary Ross of Broome County was finally chosen as the candidate.

The committee is still considering the names of several individuals who may be the representative of New York State for the President's award on the employment of the physically handicapped.

Hospital and Professional Relations

The Council Committee on Hospital and Professional Relations has the following membership:

Harold F. Brown, M.D., *Chairman*	Buffalo

Carlton F. Potter, M.D.	Syracuse
Joseph E. Corr, M.D.	New York City

The advisory subcommittee consists of the following:

M. J. Fein, M.D., *Chairman*	New York City
Paul M. Wood, M.D.	New York City
Madge C. L. McGuinness, M.D.	New York City
E. Forrest Merrill, M.D.	Rochester
Stuart F. MacMillan, M.D.	Schenectady
Elton R. Dickson, M.D.	Binghamton
James E. McAskill, M.D.	Watertown
H. Leonard Schlesinger, M.D.	Plattsburg
Norman S. Moore, M.D.	Ithaca
Gerald D. Dorman, M.D.	New York City

The Special Committee to Study Hospital and Professional Relations consists of the following:

Louis H. Bauer, M.D., *Chairman*	New York City
James Greenough, M.D., *Co-Vice-Chairman*	Oneonta
Harold F. Brown, M.D., *Co-Vice-Chairman*	Buffalo
Edward R. Cunniffe, M.D.	Bronx
Andrew A. Eggston, M.D.	New York City
John J. H. Keating, M.D.	New York City
John C. McClintock, M.D.	Albany
James R. Reuling, M.D.	Bayside
Floyd S. Winslow, M.D.	Rochester
Christopher Wood, M.D.	White Plains

At the September meeting of the Council, the chairman of the Legislation Committee suggested that such objectives as are embodied in the Friedman Bill might possibly be more satisfactorily attained by means other than legislative action. It was proposed that an effort be made to arrange a conference between committees representing the Hospital Association of New York State and of Greater New York Hospital Association and the Medical Society of the State of New York. The purpose of such conferences would be to discuss problems which concern both hospitals and physicians and to reach an agreement which would be satisfactory to all and of benefit to the public.

President Eggston referred this matter to the Hospital and Professional Relations Committee with the suggestion that our committee work in close cooperation with the chairman of the Legislation Committee to actuate such a program. As a result of the discussion between these two committees, we recommended to the Council that the president appoint a special committee to carry out this program. Inasmuch as the discussion between hospital and medical representatives should be on the highest levels, we recommended that some of the most experienced members of our society should constitute this committee. At President Eggston's request, Dr. Louis Bauer has consented to act as chairman of this special committee. Preliminary meetings of this committee have already been held, and a meeting with representatives of the hospital associations is planned for the near future.

The resolution passed by the 1953 House of Delegates concerning tenure on hospital staffs has been considered by our committee. A subcommittee, of which Dr. J. Corr of New York City is chairman, is studying this matter. A report from this subcommittee is expected at our next meeting. I hope to be able to report on this at or before the next meeting of the House of Delegates.

PART VII

Medical Care Insurance

The Subcommittee on Medical Expense Insurance is composed of the following members:

Carlton E. Wertz, M.D., *Chairman*	Buffalo
Leo E. Gibson, M.D.	Syracuse
Chas. Gordon Heyd, M.D.	New York City
C. Otto Lindbeck, M.D.	Jamestown
William J. McAuliffe, M.D.	Cortland
Fred M. Miller, Jr., M.D.	Utica
Lyle A. Sutton, M.D.	Albany
Matthew E. Fairbank, M.D.	Rochester
Mrs. Louis Harris, Liaison with Woman's Auxiliary	Brooklyn

The Subcommittee has held two meetings, July 16, 1953, and October 15, 1953, which were well attended. Inasmuch as the matters discussed and acted upon at these meetings were interrelated, this report will combine actions and recommendations of both meetings without reference to specific dates unless necessary.

The uniform surgical, in-hospital medical State-wide indemnity contract, approved by the subcommittee at its February 5, 1953, meeting and subsequently approved by the Council has been approved in principle by the New York State plans. Jamestown and Rochester plans, however, which offer service type contracts locally, have not accepted the State-wide proposal. Rochester, on the other hand, offers no objection to State-wide employes in its area being underwritten by another plan offering the State-wide proposal.

United Medical Service had drafted a printer's proof in a form suitable for presentation to the State Insurance Department with minor changes, necessary for administrative procedure as far as United Medical Service was concerned, but which did not change the basic concepts of the contract. These minor changes were approved by the subcommittee and Council.

The subcommittee approved a change in Article IX of the State-wide contract dealing with continuance of coverage. The original article provided that an applicant could continue the contract, provided payments were no longer made through the group where he originally enrolled. The change provides that an applicant may transfer to another enrolled group, to a contract available in that group, or to a contract offered to direct pay applicants. This change was approved by the Council.

Following discussion of the medical indemnity rider to the State-wide contract, the subcommittee approved a schedule of allowances for anesthesia to be 20 per cent of the allowance provided for the coincident surgical procedure with a minimum of $10; a specific fee of $10 for tonsillectomy for children under age thirteen, and $15 for members over age thirteen; no anesthesia allowance for maternity. The rider includes provisions for x-ray according to a schedule of allowances not to exceed a maximum of $25 per contract year for each person insured when followed by or in association with a surgical procedure; also an indemnity allowance for pathology services not to exceed a maximum of $25 per contract year for each person insured when directly related to medical or surgical services and provided by a physician. These allowances will be in accordance with a schedule of allowances.

The rider includes an allowance of $10 per member per contract year for physical medicine while hospitalized, with report on patient's chart. The rider, as approved by the subcommittee, was subsequently approved by the Council.

With the exception of possible minor adjustments to conform to administrative procedures in each plan, the State-wide contract will have to be presented by the plans to the State of New York Insurance Department for approval.

In the subcommittee's supplementary report to the 1953 House, it was strongly stressed that the State-wide proposal be activated for presentation to State-wide groups as promptly as possible. Continued pressure of State-wide groups for uniform coverage, specifically the Niagara-Mohawk group, attests further to the necessity of Blue Shield plans offering the State-wide plan.

A meeting of Blue Cross executive directors was held July 8, 1953, to discuss the possibility of re-enrolling the Niagara-Mohawk group in May, 1954. Mr. Farrell attended this meeting and pointed out that the subcommittee at its November 13, 1952, meeting took action on a resolution presented October 16, 1952, by Blue Shield Plans in District III, to develop a uniform State-wide contract on an indemnity basis for State-wide industries because of the inability of the Buffalo and Utica plans to enter into a service type contract.

The subcommittee took into consideration all of the contracts and schedules of allowances of the seven different Blue Shield plans in New York State and developed a uniform State-wide contract and schedule of allowances on an indemnity basis which was approved by the Council of the Medical Society of the State of New York and approved by the House of Delegates at the May, 1953, meeting.

There was considerable feeling that Health Service, Inc., the national Blue Cross stock insurance company, could underwrite both Blue Cross and Blue Shield coverage for State-wide groups. However, it was pointed out that Health Service, Inc., would be competing with local Blue Shield plans in writing local groups. The subcommittee feels that the national companies should not write intra-State business.

In this connection the subcommittee invited to its October 15, 1953, meeting in Syracuse, Mr. Reginald Cahalane, executive vice-president of Health Service, Inc., (national Blue Cross Plan), and Medical Indemnity of America, Inc. (national Blue Shield Plan), to discuss in detail the functions of these plans.

Mr. Cahalane stated he was aware of the complex problems in writing medical care insurance on national accounts. However, it is necessary for the local plan to underwrite the basic coverage at the local level, and the function of the national organization is to write that part of the coverage a local plan does not offer or is unwilling to accept. It was his feeling that for intra-State groups a uniform State-wide contract should be used and the cost of the program based on a composite rate in accordance with the experience of individual plans. Mr. Cahalane stated that although the national corporations had entered into a joint operating agreement August 1, 1953, whereby each corporation would assume 50 per cent of the other's liability, Medical Indemnity of America, Inc., had not developed its own contract and was not in a position to offer coverage directly to local groups. Also present at this meeting were presidents and directors of Blue Shield plans in the State.

The Council referred the matter of permitting dentists to participate in Blue Shield plan benefits to the subcommittee, on recommendation of the reference committee, for further study and appropriate action. Your subcommittee wishes to point out that prior to the 1953 annual meeting of the Society an amendment to Article 9-c of the Insurance Law permitting Blue Shield plans to pay for dental services was enacted.

The Council referred to the subcommittee, on recommendation of the reference committee, a resolution "that consideration be given to setting up a fair and adequate mechanism" for adjudication of cases in which a medical care plan receives county society approval but not that of the Medical Society of the State of New York. A special committee was appointed by the chairman of the subcommittee to develop an adequate mechanism to adjudicate these cases, to be presented to the Council for approval. The special committee has this matter under consideration.

The Council referred to the Subcommittee a recommendation of the reference committee that the Society "urge the adoption by all insurance companies of uniform certificates and reduction in number and character of questions asked to those actually needed."

Your subcommittee contacted the Council on Medical Service of the American Medical Association regarding this matter and learned that considerable work has been done on reporting forms. A simplified form has been developed for accident, sickness, and individual and group hospital coverage. The sickness and accident forms have been approved by the Health and Accident Underwriters, International Claim Association, National Association of Insurance Commissioners, and the Council on Medical Service of the American Medical Association.

The individual hospital reporting form has also been approved by these groups with the exception of the American Medical Association, but it has been approved by the American Hospital Association.

The Bureau of Accident and Health Underwriters has a special committee which is developing uniform claim forms and plans to have them available in the near future. It is their plan to submit these forms to individual companies, hospital and medical groups, and state medical societies as soon as they are available.

The Council referred to the subcommittee the State Legislature bill to create a temporary commission to study health insurance coverage in New York State. Due to the time limit for report, the subcommittee was unable to meet. However, your chairman reported to the Council at its March meeting that in his opinion he could see no need for this temporary commission because similar studies have been made in the past, and at present studies are being conducted; therefore, he felt the temporary commission basically unnecessary. Dr. Wertz also pointed out that there was no mention of any medical men being included on the commission.

Your subcommittee, through the Council Committee on Economics, recommends that the Medical Society of the State of New York extend its approval for the ensuing Society year to the following Blue Shield Plans: United Medical Service, Inc., New York City; Western New York Medical Plan, Inc., Buffalo; Genesee Valley Medical Care, Inc., Rochester; Central New York Medical Plan, Inc., Syracuse; Medical and Surgical Care, Inc., Utica; Northeastern New York Medical Service, Inc., Albany; and Chautauqua Region Medical Service, Inc., Jamestown.

Your subcommittee is most appreciative of the cooperation of the State of New York Insurance Department in sending a representative to its meetings.

Your subcommittee wishes to express its thanks to the officers of the State Society and to Dr. Renato J. Azzari, chairman of the Council Committee on Economics, for their interest and attendance at meetings.

Mr. George P. Farrell, director of the Bureau of Medical Care Insurance and advisor to your subcommittee, has been of great assistance to the subcommittee in matters brought before it for consideration.

Bureau of Medical Care Insurance.—The Bureau of Medical Care Insurance, Mr. George P. Farrell, director, reports as follows:

The activities of the Bureau are under the direction of the Council Committee on Economics and its Subcommittee on Medical Expense Insurance.

Your director has carried out the recommendations of the subcommittee in revising the State-wide contract as contained in the subcommittee report.

On January 21, 1953, your director attended an Educational Conference at the Biltmore Hotel, New York City, conducted by the Bureau of Accident and Health Underwriters. Three interesting papers were presented: "The Insurance Industry" by Mr. Ralph T. Heller, chairman of the Health Insurance Council; "The Insurance Industry and the Medical Profession" by Dr. J. E. Corr, chairman of the Committee on Medical Economics of the Medical Society of the County of New York; and "The Insurance Industry and Hospitals" by Mr. C. Rufus Rorem, executive secretary of the Hospital Council of Philadelphia.

It was unanimously felt that through meetings of this kind a better understanding would result regarding doctors' charges and hospital costs as they relate to health insurance programs underwritten by commercial companies and that health plans could be developed offering broader coverage when all parties concerned had a better understanding of these problems.

On invitation of Dr. Harold B. Smith, executive officer of the State Society, your director attended the Conference of Legislative Chairmen of County Medical Societies held in Albany, February 19, 1953.

On February 20, 1953, your director had a conference in Schenectady with Mr. R. L. Manley of the General Electric Company in regard to the program which it offers to members of the Mutual Benefit Association for catastrophic coverage. The program provides that 75 per cent of all reasonable medical expenses will be paid above the basic medical care insurance plan coverage, with a deduction of $100 to be paid by the employe. In no instance shall this coverage exceed $1,500 for any one illness or injury and is offered to members of the Mutual Benefit Association only at a cost per member of 20¢ a week. The program is not underwritten by any insurance company but is controlled entirely within the Mutual Benefit Association.

In addition, for employes who are not members of the Association, General Electric offers a medical expense insurance program for catastrophic illness known as the "Elfun Medical Expense Plan," and provides 75 per cent of the expenses of catastrophic illness up to a maximum payment of $5,000, requiring the insured to pay the first $300 of such expense. This program is underwritten by a commercial insurance company, and the premium rate is $2.50 per month for a single subscriber.

Your director attended the 33rd annual meeting of the National Health Council at the Roosevelt Hotel, New York City. Discussed at this meeting were the findings and conclusions of the President's Commission on the Health Needs of the Nation. The meeting was well attended by medical representatives from approximately 25 states.

Your director went to Florida for the Annual Conference of Blue Shield Plans, held April 10 to 16, 1953, at Hollywood and was present at all of the meetings of the Conference of Plans and appeared before several different reference committees.

The above meetings were attended subsequent to the publication of the last annual report but prior to the 1953 meeting of the House of Delegates.

The Annual Meeting of the Medical Society of the State of New York in Buffalo, May 2 to 7 inclusive, was attended by your director. An exhibit showing the progress of the nonprofit voluntary medical care insurance plans approved by the Medical Society of the State of New York for the period 1940 to 1952 was displayed, as well as descriptive folders on all plans and a progress report for the year 1952.

On May 31, 1953, your director attended a Conference of Presidents of State Medical Societies at the Waldorf-Astoria Hotel, New York City, as well as the annual meeting of the American Medical Association House of Delegates held June 1 to 4, 1953, and on June 1 was present at the Medical Society Executives Conference at the Belmont-Plaza Hotel, New York City.

During the months of September and October your director was present at all district branch meetings. Through the courtesy of the district branch presidents, the Bureau displayed an exhibit showing the progress of Blue Shield Plans approved by the Medical Society of the State of New York for the period 1940 to 1952. An annual progress report of the plans' activities and descriptive literature was made available for those attending the meetings. Your director appreciated the opportunity to give a brief résumé of the progress of the plans at each of the branch meetings.

On November 13, 1953, your director was present at a Conference on Veterans Medical Care, held at the Roosevelt Hotel, New York City, under the auspices of the American Medical Association, and on November 18, 1953, attended the Conference of County Society Secretaries in Albany.

Your director was in St. Louis, November 29 and 30, 1953, for the Blue Shield Commission meeting at which time a report was presented by a director of Medical Indemnity of America, Inc., regarding a meeting of its board of directors held November 28, 1953. Among many things reported were resolutions received from United Medical Service of New York and the Pennsylvania, New Jersey, Massachusetts, and Connecticut Blue Shield plans to the effect they opposed negotiations by Medical Indemnity of America, Inc., with national groups without consulting local plans regarding benefits or rates; also the problem encountered in an area where service benefits are offered when the schedule of allowances in the national plan is in excess of the schedule of allowances provided in the local area.

A motion was properly made and carried that a special meeting of member plans be called as soon as possible. It was tentatively proposed that the meeting be held January 17, 1954, in Chicago. The president of Blue Shield Medical Care Plans, Dr. Howard Schriver, appointed a special joint committee of the Blue Shield Commission and Medical Indemnity of America, Inc., to draft an agenda for the special meeting.

The special meeting referred to was held January 16 and 17, 1954, in Chicago and attended by your director. Eighteen resolutions were introduced by member Blue Shield Plans, many similar in intent and purpose but basically covering the following:

1. The service benefit principle is the fundamental purpose of Blue Shield coverage.
2. The interest of subscribing members is best served by adhering to the service benefit principle.
3. The local Blue Shield Plan must be the basic unit of the Blue Shield movement.
4. Medical Indemnity of America, Inc., is a wholly owned subsidiary of Blue Shield Medical Care Plans, Inc., and its purpose is to assist the local Blue Shield Plans to retain and increase enrollment on the basis of the local plan's own coverage, with Medical Indemnity of America, Inc., to provide only incidental excess coverage.

It was recommended that these statements of principles be adopted by the board of directors of Medical Indemnity of America, Inc., and that no insurance contracts entered into, independently or in conjunction with Health Service, Inc., by Medical Indemnity of America, Inc., shall conflict with any of these principles.

The following recommendations of the reference committee were adopted:

> "We are in sympathy with the principle that service contracts are the ideal, and perhaps will be the ultimate, solution of the voluntary health program, but at the present time we recognize that there are a number of plans on an indemnity basis, and we do not feel we should attempt to disturb their organization.
>
> "Any change from indemnity to service benefits has to be agreed upon by the physicians themselves.
>
> "Wherever feasible, Medical Indemnity of America should attempt to conform to the service principle in the areas in which service is sold and to indemnity in the areas in which indemnity is sold.
>
> "Wherever practicable, Medical Indemnity should make every effort to adhere as closely as possible to the existing type of practice. Medical Indemnity should make every effort to sell local benefits at local rates; that Medical Indemnity of America, Inc., submit to local plans involved in national accounts, contract specifications, schedule of allowances, and enrollment regulations before underwriting the account; and that Blue Shield Plans in affected areas have an opportunity to submit rates to Medical Indemnity of America, Inc., for use in developing a composite rate for quotation to a prospective risk; that the Blue Shield Commission request the Blue Cross Commission to join with it to review the cooperative agreement in existence between Medical Indemnity of America, Inc., and Health Service, Inc., especially concerning themselves with the advisability of separately employing a chief executive for Medical Indemnity of America, Inc.
>
> "The four specialties of anesthesiology, pathology, radiology, and physiatry are an integral part of the practice of medicine and should be provided through Medical Indemnity of America, Inc., as medical services and not by Health Service, Inc., as 'hospital services' when rendered by a lay employe of a hospital.
>
> "Blue Shield Medical Care Plans hereby affirms the definitions of the practice of medicine and of medical services as set forth in the official actions of the House of Delegates of the American Medical Association, and that Medical Indemnity of America, Inc., contracts be consistent with these actions, and that this resolution be transmitted to the board of directors of Medical Indemnity of America, Inc., with the urgent request that its provisions be carried out to the extent possible and negotiations be undertaken with Health Service, Inc., to achieve the desired results."

The reference committee recommended that the Blue Shield Commission study and re-evaluate the discontinuance of the automatic 50-50 reinsurance clause between Health Service, Inc., and Medical Indemnity of America, Inc.

Following the approval by the subcommittee of the uniform State-wide contract at the February 5, 1953, meeting, your director held conferences with the president and other officers of each Blue Shield Plan during the months of March and April.

During the past year your director has spoken before the Woman's Auxiliaries of the counties of Westchester, Kings, and Columbia; also at the Annual Conference of the Woman's Auxiliary to the Medical Society of the State of New York, September 30, 1953, in Utica, on "The Underlying Philosophy of Nonprofit Medical Care Plans."

The Bureau wishes to thank the Auxiliary members for their outstanding efforts during the past year in bringing to the attention of the public the value of voluntary Blue Shield coverage by their exhibit at the State Fair in Syracuse and other media. The Auxiliary efforts have been greatly appreciated.

Your director has had the pleasure of meeting with officers and committee members of the Nassau County Medical Society on three occasions during the past year to discuss health insurance plans.

As adviser to the subcommittee, your director has attended its meetings held May 3, July 16, and October 15, 1953.

Quarterly progress reports on the Blue Shield Plans approved by the Medical Society of the State of New York have been prepared and presented to the Council. These reports have been mailed to plan presidents, executive directors, secretaries of component county medical societies, and others interested in medical care insurance.

The Bureau also compiled the Seventh Annual Progress Report for 1952, showing detailed analysis of each plan in regard to membership, incurred and paid claims, claim incidence, operating expenses, premium rates, reserves, cancellation studies, distribution of earned premium income, etc., for the information of the House of Delegates and members of the Medical Society of the State of New York. These reports were included in the material for distribution at the Bureau's exhibit at the 1953 Annual Meeting.

Progress of the Blue Shield Plans in New York State shows that at December 31, 1953, total membership (subscribers and dependents) was 4,311,450, an increase of 544,369.

The following is a statement of membership in Blue Shield medical care plans and Blue Cross Hospital plans, showing comparative increases for 1953:

	Membership		Increase	
Location	Medical	Hospital	Medical	Hospital
New York	3,057,799	5,410,499	337,917	230,061
Buffalo	450,952	677,991	67,167	49,493
Rochester	309,164	428,518	49,907	19,503
Syracuse	102,517	360,963	27,407	7,247
Utica	176,756	199,081	5,776	874
Albany	200,417	328,579	49,120	26,435
Jamestown	13,845	45,030	7,085	1,804
TOTAL	4,311,450	7,450,661	544,369	335,417

The Blue Shield Medical Care Plans had an earned premium income during 1953 of $42,923,738, as compared to $35,967,609 in 1952, an increase of $6,956,129.

Incurred claims during 1953 amounted to $30,454,277, as compared to $25,928,396 during 1952, an increase of $4,525,881.

Incurred claims were 70.95 per cent of earned premium income in 1953, as compared to 72.49 per cent in 1952.

Both the annual and quarterly progress reports are of great value to each plan because they analyze each plan's experience and indicate trends in utilization. It is recommended that they be reviewed carefully by those who are responsible for a plan's operation. The basic information in these reports is published for the information of members in the NEW YORK STATE JOURNAL OF MEDICINE.

The Eighth Annual Progress Report for 1953 will be available for the House of Delegates and members of the Society at the 1954 Annual Meeting.

Your director extends thanks to Dr. Renato J. Azzari, chairman of the Council Committee on Economics, to Dr. Carlton E. Wertz, chairman, and members of the Subcommittee on Medical Expense Insurance for their thoughtful support and cooperation.

Your director wishes to express appreciation to Mrs. Alice Arana for her loyal and efficient services to the Bureau.

PART VIII

Liaison Committee with Veterans Administration

The Council Committee on Liaison with the Veterans Administration consists of the following membership:

Herbert H. Bauckus, M.D., *Chairman*	Buffalo
Walter P. Anderton, M.D., *Secretary*	New York City
Francis O. Harbach, M.D.	Syracuse
George Schwartz, M.D.	New York City
James R. Reuling, M.D.	Bayside
Frederick S. Wetherell, M.D.	Syracuse
Harry Golembe, M.D.	Liberty
George A. Burgin, M.D.	Little Falls

The directors of the Veterans Medical Service Plan of New York, Inc., are as follows:

Herbert H. Bauckus, M.D., *President*	Buffalo
Joseph P. Henry, M.D., *Vice-President*	Rochester
Walter P. Anderton, M.D., *Secretary*	New York City
James R. Reuling, M.D., *Treasurer*	Bayside
J. Stanley Kenney, M.D.	New York City
Dan Mellen, M.D.	Rome
Edward R. Cunniffe, M.D.	Bronx
Arthur H. Stein, M.D.	Albany
Thomas A. McGoldrick, M.D.	Brooklyn

This liaison committee is a committee to represent the Council in the study of medical and hospital care for the veteran. The committee is appointed by the president and confirmed by the Council. The chairman of this committee is called upon to report at the regular meetings of the Council. These reports are included in the minutes that appear in the New York State Journal of Medicine.

The liaison committee represents the wishes and desires of the Medical Society of New York State in the work of Veterans Medical Service Plan of New York, Inc. This is an independent corporation formed in 1946 with a membership and board of directors composed of members of the State Society. Ever since its formation, the president of the Veterans Medical Service Plan of New York, Inc., has also been chairman of the liaison committee. There is a close working relationship between the two organizations. The Plan needed to be a separate organization in order that it might make contracts or agreements (in writing) with the Veterans Administration for the medical care of veterans with service-related disease by fee-basis physicians. This is called the hometown medical care plan.

In the period 1946–1947, there were veterans with service-connected disease or disability in numbers far beyond the medical resources of the Veterans Administration. Accordingly the VA requested the Medical Society of the State of New York to set up this corporation having charge of the hometown fee-basis care. High standards were provided for both the Medical Society and the VA to the end that for seven years only minor changes in the agreement have been necessary. The record of the undertaking now stands by its accumulated experience as a unique and clearly satisfactory system whereby government may secure the services of all practicing physicians with respect to the free choice principle for the veteran patient.

The Plan met an emergency promptly. It was and still is of great benefit to our government and thus to the people of this country. It furnished to the VA a progressive challenge to improve former practices in providing medical care. It gave the benefit of medical service to the veteran in his own community. Physicians in New York State may take great pride in their active participation in this better medical service. The conduct of our physicians in this has been most generous and never devoid of a practical, sincere sympathy for the veteran.

The main change in the working of the plan is that the Veterans Administration, entirely by its own order and design, chose to reduce the activity of the veteran patient's private physicians and thus forced the veterans to give up the services under the plan. It required the veteran to attend the VA clinic for medical care for his service-connected disease or disability or to pay for medical services by private practitioners with his own funds.

I would like to comment briefly on two of several reasons advanced for this change:

1. That the VA was required by law to make use of existing government facilities before employing other services. This "existing" reason or excuse for constantly adding to Federal medical service was achieved by building, equipping, and furnishing with part-time and full-time personnel VA clinical facilities, contract clinics, and outpatient departments. The same travesty on "existing" is present in the construction of new veterans hospitals so that when they are built they stand as an "existing" facility that must not stand idle.

2. That budget deficiencies in certain VA branches at times require curtailment of the fee-basis care until funds are again available. It seems the fee-basis authorization suffers first when funds are not available in the branch office. This sometimes causes interference in care by the reduction of authorizations that have been requested by the attending physician. In the past years I have seen several of these edicts which in effect request physicians to select cases for authorization that are the more "urgent." Considering the absolute reponsibility of the VA to give all needed care to every service-connected disease or disability, this seems to me a queer way to practice medicine. It appears unjust as well, with the knowledge that a fabulous sum of money is allocated to the nonservice hospitalization program.

This country and its veterans have become widely, and of late intensely, interested anew in the discussion of the government responsibility for our growing veteran population.

It should not be overlooked that the hometown fee-basis plan provides for the medical care of the veteran with disease or disability incurred in the military service. The Veterans Administration, and not the medical profession, reduced this aid. Some substitutes for this care were provided, but it is an undeniable fact that the drastic reduction in authorizations has caused numerous service-connected veteran patients personally to pay for the services of their attending physician.

At the 1953 Annual Meeting of the House of Delegates of the Medical Society of the State of New York the following resolution was passed (Diminution of Medical Services by the United States Veterans Administration):

> "*Resolved*, that the House of Delegates of the American Medical Association urge that the Veterans Administration be required by law to restrict any reduction in the medical care of veterans to veterans who have "nonservice-connected" disabilities, except in cases of prolonged illnesses such as tuberculosis, psychiatric conditions, and proved hardship cases where local facilities are not available; and be it further
>
> "*Resolved*, that copies of this resolution be transmitted to the members of the United States Senate Committee on Labor and Public Welfare, to the members of the House of Representatives Committee on Veteran's Affairs, to Honorable Carl R. Gray, Jr., Administrator of the United States Veterans Administration, and to Admiral Joel T. Boone, Chief Medical Director of the United States Veterans Administration."

At the June, 1953, Annual Meeting of the House of Delegates of the American Medical Association the resolution was passed, relating to Veterans Medical Care, which recommends that Congress enact new legislation limiting the care of veterans to the following categories:

1. Veterans with peacetime or wartime service whose disabilities or diseases are service incurred or aggravated.
2. Within the limits of existing facilities veterans

with wartime service suffering from tuberculosis or psychiatric disorders of nonservice-connected origin who are unable to defray the expenses of necessary hospitalization.

The Special Committee on Federal Medical Services of the American Medical Association also recommended that the "provision of medical care and hospitalization in Veterans Administration hospitals for the remaining groups of veterans with nonservice-connected disabilities be discontinued and that the responsibility for the care of such veterans revert to the individual and the community where it rightfully belongs."

On September 1, 1953, Dr. Anderton and the chairman met at a conference with the Committee on Federal Medical Services of the Council on Medical Service in Chicago. Following this a report was made to the Council of the New York State Medical Society.

This was followed by a meeting of the liaison committee which discussed the recommendations of the A.M.A. House of Delegates. At this meeting the Public Relations Committee of the Society was represented by Mr. Miebach. Methods were discussed for making use of the facilities of the State and component county medical societies in support of the plan of the special committee on Federal Medical Services of the A.M.A. Our liaison committee and subsequently the Council formally approved the American Medical Association to the effect that the State Society cooperate with the A.M.A. in its efforts to have the law changed regarding nonservice-connected disabilities in Veterans Administration.

From the American Medical Association we have received packets of several documents of a descriptive and analytic nature. These have been distributed to the Council and to the members of the liaison committee.

On November 13, 1953, the liaison committee and the officers and Council of the Medical Society of the State of New York were invited to a conference sponsored by the Committee on Federal Medical Services. This meeting was held at Hotel Roosevelt in New York City. Representatives of the medical profession of New York, Pennsylvania, New Jersey, Connecticut, and Rhode Island, together with several officials of the A.M.A committee, attended the morning and afternoon sessions. There was much helpful discussion at this meeting with special attention paid to possible methods to be used at state level to inform individuals concerning the A.M.A policy on medical care for veterans with nonservice-connected disabilities.

We plan to distribute some further analysis at the forthcoming meeting of our House of Delegates in May, 1954. In cooperation with our liaison committee, the Committee on Public Relations has distributed its small pamphlet entitled "A Horse of a Different Color."

It may be said that to understand the present regulations relating to veterans medical care will require considerable study on the part of our membership. The appearance of possible new legislation in this regard requires considerable regular reading to keep up with the subject. I have found the Washington Letter of the A.M.A. most helpful, and I recommend that the Council endeavor to secure for these communications a wide distribution to all those who wish to take part in the decisions we need to make on this important subject.

The work of the Veterans Medical Service Plan of New York, Inc., and its coordinators keeps on at the slower rate of the past few years, although there has not been much change. A report will be made to the directors of the Plan, and this will be followed by their recommendations to the Council and the House of Delegates if this proves to be in order.

I present a few financial statistics that will give some idea of the extent of the present work. It is with difficulty that these statistics are secured and evaluated, but I believe them to be substantially correct:

Dr. George H. O'Kane, coordinator, reports for the New York branch that the amount of work done in 1953 is approximately the same as 1952. The number of authorizations issued during the year were 9,223. These average in cost about $12.60 for a total of $116,350. Of these, neuropsychiatry amounted to $17,570, others $98,780. The percentage of neuropsychiatry care is much larger than this in the contract clinics and other facilities not in our Plan.

The coordinators, Drs. Arthur W. Rupert and Thomas G. Fitzgerald, report the expenditure of approximately $146,010 for the Albany branch was about the same as in 1952.

Dr. Frederick H. Petters, coordinator for the Buffalo branch, reports the number of authorizations for the calendar year 1953 as 11,071, of which 9,360 were used. The average daily receipt of authorizations was around 36 for the working day. The amount of money authorized for these visits in 1953 was $117,782. Of these authorizations there was actually paid $91,377. The remaining authorizations not used represented also fees charged by the attending doctor below the fee schedule. The average claim for invoices submitted was $9.75. There were 67 invoices submitted for hospital services by physicians at a cost of $2,529. There were 562 invoices returned for service to Spanish War veterans and 159 such invoices for services to Korean War veterans.

Dr. Paul T. Crosby, coordinator in the Syracuse branch, reports for the fiscal year July, 1952, to June, 30, 1953, as follows: "Total number of physicians participating 995, total number of authorizations processed 13,798, total dollar value of authorizations $183,684.95."

In the fiscal year 1948 there were 1,257 physicians participating with $26,068 and a total value of $400,699. This illustrates the comparison in the two periods but also shows we are doing a considerable amount of work in this area. The authorizations in the fiscal year 1953 were 2,877 in psychiatry, 4,292 in all other specialties, and 6,629 in general practice. The coordinator at this time reviewed 17,244 prescriptions with a total value of $56,414. It is interesting to note this cost compared to the total fee-basis money paid to the physician. The coordinator calls attention to the continued amount of psychiatric treatment which does not abate through the years.

In general, it may be said that the larger cities have very few authorizations in proportion to the population. This is largely because Veterans Administration Clinics exist in these cities to which the veteran has no so-called "hardship" in convenience of attendance.

There is a great amount of detail in the work of the liaison committee and especially in the Veterans Medical Service Plan of New York, Inc. This has been accomplished on an annual budget of less than $500. This conservation has largely been accomplished by the aid of the secretary, Dr. Anderton, whose knowledge, skill, interest, and attention are ever an aid to all of us in the medical profession. Mrs. Arana, of Mr. Farrell's Medical Care Insurance Bureau, has for some years kindly kept the minutes and records of our meetings. I wish to acknowledge with great gratitude these encouraging aids which have been augmented many times by others of the office personnel.

PART IX

Legislation

The Council Committee on Legislation consists of the following:

James Greenough, M.D., *Chairman*	Oneonta
James A. Lynch, M.D., *Vice-Chairman*	Bronx
J. Stanley Kenney, M.D.	New York City
Jurgens H. Bauer, M.D.	Syracuse
James H. Arseneau, M.D.	Lyons
Elton R. Dickson, M.D.	Binghamton
Thomas O. Gamble, M.D.	Albany
Edwin Jameson, M.D.	Saranac Lake
Keith B. Preston, M.D.	Utica
William S. Norton, M.D.	New York City
Joseph A. Lane, M.D.	Rochester
Aaron Kottler, M.D.	Brooklyn
George J. Lawrence, Jr., M.D.	Flushing
George A. Howley, M.D.	Bronx
John M. Galbraith, M.D.	Glen Cove
Edwin McD. Stanton, M.D.	Schenectady
Henry W. Kaessler, M.D.	Bronxville
Irwin E. Siris, M.D.	New York City
John C. Brady, M.D.	Buffalo

The Council Committee on Legislation received, with approval, from the House of Delegates in May, 1953, the recommendations of the Special Committee to Evaluate Legislative Activities (NEW YORK STATE JOURNAL OF MEDICINE, September 1, 1953, Part II, pages 30 to 33 and pages 100 to 103) and 13 specific directives in regard to legislative action.

The recommendations of the special committee will be reviewed first, with an account of the steps the Committee on Legislation has taken to implement these recommendations.

(*1*) *Alert individual physicians to the need for cooperation, and* (*2*) *set up qualifications for office of county society legislative chairmen based on experience.*—The House of Delegates voted at the last annual meeting to discontinue the county legislative chairmen conference in Albany which had been held annually in the latter part of February. It was felt that the expense involved was not justified by the work accomplished at this meeting. The Committee on Legislation believed that a new approach should be made toward improving the efficiency of the county societies and their legislation committees in the light of the first two recommendations of the special committee. Therefore, the Committee on Legislation has attempted to carry out these two recommendations in several ways. The situation in the metropolitan area appeared to approach more nearly that desired than in some of the upstate areas because of larger memberships, larger committees, and more attention paid to utilization of experienced chairmen. During the summer and fall the executive officer and the State Committee held a series of small informal meetings in ten areas. Each meeting consisted of those county chairmen representing one or more State Senatorial districts, at least one member of the State Society Committee, and the executive officer. Our current program was reviewed, suggestions were offered to improve the efficiency of the county committees, and the chairmen were urged to interest their county societies in legislation. A liaison system was set up whereby the executive officer through the local member of the State Committee could reach the county chairmen rapidly when action was needed, and the county chairmen through meetings with their local State Committeeman could reach the Committee and the executive officer with information and suggestions.

A loose-leaf file of general information for county chairmen has also been started which should be a continuing process to be handed on by each chairman to his successor.

In addition, communications were sent to county society presidents asking for election or appointment of experienced legislation chairmen, preferably continuing from year to year and to be succeeded by a member of the society who has had experience as a member of the legislation committee. While this program has been in effect only six months, it is felt that it should improve year by year and strengthen the local impact upon legislative activity as recommended by the special committee.

Your executive officer and the legislation committee would like to make a further suggestion which they believe would improve not only legislative but also other activities of the county societies. The new officers of the State Society are elected in May and immediately take office. Preparation for the ensuing legislative session should start at least as early as June, not a few weeks before the start of the session in January. The annual meetings of the 61 county societies are now held as follows: two in January, two in May, five in June, eight in October, ten in November, 28 in December, and six have no set date. Thus, only seven, or about 11 per cent, of the county society officers are elected near the time of election of State officers. Certainly, in legislative matters a new county chairman appointed or elected in October, November, December, or January is handicapped and handicaps our whole legislative program. Your committee believes that this subject deserves consideration by the House of Delegates, which, after all, represents the county societies. Possibly, by resolution, the House could recommend to the county societies that they change their constitutions and/or bylaws so that their annual meetings and elections of officers are held at the next succeeding meeting after the State convention.

(*3a*) *The special committee recommended that a streamlined executive group be formed from the Committee on Legislation to facilitate consultation with and by the Albany office.*—An executive group of five men, three from the metropolitan area and two from upstate, was formed at the first meeting of the Committee on Legislation. The entire committee met June 3 and November 12, and a meeting is planned for February 13. The executive committee met July 15, September 10, and at least one more meeting will be held immediately after the last day for introducing bills in the Legislature. It appears that this suggestion of the special committee has been carried out.

(*3b and c*) *The chairman of the State Committee should be carefully selected and should retain office over an extended period. Consideration should be given to amending the Constitution so that the State chairman need not necessarily be a Council member.*—These recommendations can only be carried out by the president, the Council, and the House of Delegates.

(*4a and b*) *The House of Delegates should give clear instruction to the Council, with some latitude of action and should formulate a program coordinated with respect to relative priority of emphasis.*—The question of latitude of action has been accomplished by the House of Delegates at the last annual meeting (NEW YORK STATE JOURNAL OF MEDICINE, September 1, 1953, Part II, page 100). Action of the House of Delegates requiring consultation with the executive officer of the Legislative Bureau before introduction of any resolution concerning legislation would help to accomplish the remainder of these recommendations. Your executive officer is employed for this purpose. He should be able to review the previous history of the proposal, to indicate its possibility of passage, and to help draft it in language suitable for a bill or an amendment. It would help to correlate similar resolutions and would enable the executive officer to learn in advance what the program for the ensuing year may include.

(*5*) *Year-round liaison should be maintained between the Council members and State officials and lawmakers.*— This is not a matter for action by the Committee on Legislation.

(*6a*) *There should be a specific outline of duties and responsibilities of the executive officer and legal counsel.*—Conferences have been held to effectuate this recommendation. Further definition of respective responsibilities will be arranged if necessary.

(*6b*) *All matters pertaining to legislation coming from the House of Delegates should be funnelled through the executive officer and his legal counsel for technical advice on form, content, and feasibility of enactment.*—This is already in effect. The last recommendation under (4a) and (4b) above would implement this action more fully.

(*7a, b, and c*) *Continue cooperation between committees on Public Relations and Legislation as at present, carry on a year-round education program stressing positive benefits of medicine and working actively to discredit unscientific cults, and extend active public relations program to county and individual levels.*—The Committee on Public Relations is effectively carrying out these recommendations as may be seen from its annual report.

(*7d*) *Maintain a nonpartisan approach to legislation.*—This is definitely the policy of the Committee on Legislation as it has been in the past.

(*8*) *Foster extra-Society organizations sympathetic with our aims.*—The committee is maintaining liaison with nursing, dental, and pharmaceutical organizations. It is aware of other organizations which are working independently in sympathy with the Medical Society. Their value is their independence; consequently the Committee on Legislation should make no formal commitments with them.

At this time, it is impossible to state what will be accomplished during the present session of the Legislature to obtain enactment of the bills referred to the Committee on Legislation by the House of Delegates and the Council or to prevent enactment of bills opposed by these bodies. The results of the year's work will be submitted in a supplementary report.

The committee received 13 recommendations or "mandates" from the House of Delegates. There were two resolutions calling for opposition to the licensure of cultists. At present the committee can only await action of the cultists to obtain licensure. The Committee on Legislation and the Committee on Public Relations are prepared to put forth every effort to prevent such enactments.

One resolution called for amendment of the Medical Practice Act to include mental and nervous disorders as part of the duties and responsibilities of medical practitioners. The bill to amend the Medical Practice Act has been drawn up and is ready for introduction. Every effort is being made to procure added impetus from psychiatric societies and the Council Subcommittee on Mental Hygiene for the passage of this bill.

A new "Injunction Bill" has been drawn up and introduced.

Both the "Condon Bill," requiring free choice of plan, and the "Panken Bill," requiring free choice of physician in any insurance plan, have been introduced.

A bill has been drawn up and introduced to require municipalities to protect interns and residents in municipal hospitals from malpractice liability.

Two bills have been introduced, the first to restore to the metropolitan counties the functions which they exercised prior to 1944 by abolition of the Medical Practice Committee, the second to require arbitration proceedings under the Workmen's Compensation Law to be held in the county where the involved physician resides.

A bill has been introduced to permit proration of fees under indemnity insurance contracts to two or more physicians involved in the case, according to the services rendered by each and with full knowledge of the insurance carrier and the patient.

The committee was prepared to introduce a bill to liberalize the New York State Autopsy Law in conformity with that of the State of Wisconsin. In a conference with Assembly Majority Leader Lee Miller, it was discovered that he was interested in the same objective for the New York State Hospital Association. After conference with the counsel of the Hospital Association, a minor change in the proposed bill was made at our request, and we agreed to cooperate with the Hospital Association to obtain passage of this amendment.

The House of Delegates by resolution called for the reintroduction of the "Friedman Bill," prohibiting the practice of medicine by hospitals. The Committee on Legislation put a great deal of time and thought on this matter. All county societies were polled to determine their opinions in regard to this legislation. While the majority of those responding were in favor of introducing the bill, there was a substantial minority opposed to it. The matter was referred back to the Council with the suggestion that a special committee of the Council be appointed to endeavor to work out an agreement with hospitals and medical schools which would be beneficial to the public, the Medical Society, the hospitals, and the medical schools. The Council agreed to this proposition, and the president, Dr. Eggston, appointed such a committee (Minutes of the Meeting of the Council, December 10, 1953). In view of the action of the House of Delegates and the opinion of the majority of the county societies, the Council (December 10, 1953) decided that the "Friedman Bill" should be introduced. Thus the problem would be attacked in both ways. Pursuant to the action of the Council, a bill to prohibit the practice of medicine by hospitals has been introduced. The special committee appointed by the Council, Dr. Louis H. Bauer, chairman, is already functioning.

A long-range study of the Medical Practice Act with a view to improvement has been initiated. Drs. Eggston and Anderton, Dr. Gibson, chairman of the Council Committee on Medical Licensure and Medical Service, Dr. Greenough, chairman of the Council Committee on Legislation, Dr. Harold B. Smith, the executive officer, and Mr. Martin, counsel for the Society, have held a preliminary meeting. The next step should be a conference with the Department of Education. It is hoped such a conference may be arranged shortly after the 1954 session of the Legislature adjourns.

Governor Dewey in his inaugural message advocated a program by the State to improve the facilities for care of mental illness. As part of this program a bill, Senate Intro. 11, to amend the Mental Hygiene Law in relation to the establishment of community mental health boards for the development of preventive, rehabilitative, and treatment services and the improvement and expansion of existing community service, has been introduced by Senator Mitchell. Through the efforts of the executive officer, Dr. Arthur W. Pense, Deputy Commissioner of Mental Hygiene, discussed and explained this bill at the Council meeting January 13. The Subcommittee on Mental Hygiene was to study this bill and notify the Committee on Legislation of its opinion in regard to it by January 20 so that appropriate action might be taken.

Miss Adelaide Briggs retired after her thirty years of valuable work as secretary of the Legislative Bureau in Albany. The Society owes her a great debt of gratitude for the excellent work she has done. The Council expressed their appreciation of her faithful service on November 12, 1953. Mrs. Muriel Greenfield has been appointed to succeed her.

PART X

Workmen's Compensation

The following is the report of the Council Committee on Workmen's Compensation for the past year. The committee consists of the following members:

Gerald D. Dorman, M.D., *Chairman*	New York City
Stanley E. Alderson, M.D.	Albany
Herbert M. Bergamini, M.D.	Lake Placid
Arthur E. Corwith, M.D.	Bridgehampton
Irving L. Ershler, M.D.	Syracuse
George C. Ferguson, M.D.	Amsterdam
Joseph P. Henry, M.D.	Rochester
A. W. Martin Marino, M.D.	Brooklyn
Robert W. O'Connor, M.D.	Buffalo
George O'Kane, M.D.	New York City
Guy S. Philbrick, M.D.	Niagara Falls
Charles D. Squires, M.D.	Binghamton
Earl C. Waterbury, M.D.	Newburgh
Joseph A. Wintermantel, M.D.	Olean
David J. Kaliski, M.D., *Director*	New York City

The Medical Society of the State of New York has had a Committee on Workmen's Compensation since 1935, the year the Workmen's Compensation Law was amended, after a study of the operation of the law by a medical commission of ten physicians appointed by Governor Herbert Lehman.* Until 1944 a part-time director carried out the functions devolving upon the Society, and subsequent to 1944 a full-time physician served as director of our Bureau of Workmen's Compensation. Our Committee on Workmen's Compensation was enlarged until at present there are 14 physicians on it, representing every section of the State. This enables the chairman and director to reach every workmen's compensation committee in the State and become familiar with the problems and needs of the membership and of the county medical societies. In matters requiring State-wide participation, the committee serves to obtain the opinion and assistance of a wide segment of the profession.

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* Consisted of ten physicians, five appointed by the Medical Society of the State of New York and five appointed by the New York Academy of Medicine. Dr. Eugene H. Pool was chairman and Dr. David J. Kaliski a member.

The Workmen's Compensation Bureau has now been operating for nearly two decades. It is primarily a service bureau for the membership in all matters affecting the administration of the Workmen's Compensation Law. It assists physicians in the adjustment of disputes and in the collection of medical bills without cost to him. It also serves in an advisory capacity to the 57 compensation committees in the State which, outside of the four major New York counties, have been clothed with considerable executive and administrative functions by the Legislature. In actual practice the Bureau through its director, under the guidance of the chairman of the Workmen's Compensation Committee, serves as the focal point of workmen's compensation activity of the medical profession of the State. He assists, advises, and coordinates the work of the county and State medical societies in their association with the medical profession, with the Workmen's Compensation Board and its administrative and executive personnel, with the State Insurance Fund and Stock and Mutual Insurance Companies, self-insurers, insurance organizations, and with the Legislature and executive departments of the State. We believe our Workmen's Compensation Bureau and the Committee have earned the confidence and respect of those groups to the advantage of all. The director of the Bureau is always ready to assist any physician in his workmen's compensation problems.

Over the years our annual reports have indicated the wide diversity of our interest in workmen's compensation administration. We have from time to time drawn attention to matters requiring action, either to improve administration by insurance carriers, or the Workmen's Compensation Board, or by legislation; to correct or to ameliorate situations adversely affecting the interests of the medical profession or leading to maladministration of the Workmen's Compensation Laws.

We have repeatedly pointed out that the doctor, be he general practitioner or specialist, is perhaps the most important cog in the workmen's compensation wheel. In treating injured workers, in advising patients about their claims, in reporting their accidents, in testifying before referees and the Workmen's Compensation Board, and in their contacts with employers and insurance carriers, the practicing physician can be and usually is an important factor in accomplishing successful and economic administration of the Workmen's Compensation Law. We believe we can do no better than repeat what we said in a previous report, to urge physicians again to familiarize themselves with their responsibilities under the law as well as with its benefits.

We believe we should take a statesman-like attitude toward the future of workmen's compensation in this State. We should try to foresee future eventualities in this important social legislation field. We should attempt to safeguard those privileges which have accrued to us and which we believe have resulted in a high quality of medical care to the injured workman. We refer particularly to the "free choice" principle, which entitles an injured workman to select his own physician, either a general practitioner or a specialist, the only limitation being that the physician who is selected shall be qualified under the Workmen's Compensation Law to treat the particular injury. We believe that physicians should realize that this is the only state which provides free choice from a list of qualified physicians, and to safeguard this important social and medical advantage physicians must so conduct themselves that not only does the patient receive the best medical care but he is treated with the same regard and economy as if he were a private patient. There should be no differentiation in practice between compensation patients and other patients. The physician's responsibility toward these patients should be identical, and the fact that a third party pays the bill should not be an inducement to unethical practice or to too much treatment.

It should be borne in mind that under our present system of free and unlimited medical care, there is placed a tremendous responsibility on the individual physician and upon the medical societies which have been clothed with definite disciplinary and regulatory responsibilities. The patient is entitled by law to all the medical care he needs. We would not wish to give him less, but the doctor should never be a party to needless prolongation of a claim.

Arbitrations.—There are close to one million medical compensation bills submitted for payment yearly by physicians in New York State. Of these only an insignificant number is disputed and arbitrated; the vast majority of bills are paid promptly and in full.

During the past year in cooperation with the New York Compensation Insurance Rating Board, your director attended ten arbitration sessions throughout the State. Only 81 bills were arbitrated, the amount in dispute being $13,400.99, and the amount awarded was $6,289.50 or 46.9 per cent. The Medical Practice Committee has adjudicated bills of which the total will be announced later. We wish to express our thanks and commendation to Mr. Irving Sofferman, director of the Arbitration Division of the New York Compensation Insurance Rating Board, for his kindness and cooperation throughout the year without which the arbitration proceedings would not have been successfully carried out.

We shall not allude in detail to the routine work of the Workmen's Compensation Bureau during the past year. We have had the usual conferences with insurance carriers and employers groups and have served on the advisory committee of the chairman of the Workmen's Compensation Board. We shall report below on our activities on the committee to set up a podiatry fee schedule. Our director participated in workmen's compensation round table discussions before medical societies throughout the State and assisted in the settlement of workmen's compensation disputes in certain counties. We are pleased to note that we have always had the full cooperation of the officers of the county medical societies. We are also pleased to report greater cooperation in a cordial atmosphere on the part of most insurance carriers and the officials of the Workmen's Compensation Board. We are very thankful for this growing sense of mutual responsibility.

Costs of Compensation Coverage.—Governor Dewey has appointed a Moreland Commission to make a thorough, factual, and impartial study of all the items that enter into workmen's compensation costs in New York State. In order to determine whether compensation costs in this State are too high in comparison with those of other states, as seems to be the belief of certain interested parties, the Moreland Commission will be required to make a comprehensive study of the Workmen's Compensation Law in this and other states including the benefits to the worker not only in cash for time lost and disability from injuries and occupational diseases but also in medical and hospital care and other benefits. These benefits vary widely in extent and degree throughout the country and under Federal workmen's compensation laws. Any comparison of rates must take into consideration the total benefits accruing to an injured worker.

The State Medical Society and its constituent county medical societies have already gone on record assuring the commission that the medical societies will cooperate with the Moreland Act Commissioner, Mr. Archie O. Dawson, and his aides to the fullest extent.

It is almost certain that these benefits for time lost by employes will be increased at this session of our Legislature. It is proposed that compensation be increased materially at a cost of not less than 20 million dollars a year. Since this increase meets with the approval of the employers of the State and of the officials of the Workmen's Compensation Board, it will probably be enacted into law. This increase in compensation benefits alone will almost equal the annual cost of medical care in this State.

Cost of Medical Care as Affecting the Cost of Compensation Coverage.—The over-all cost of medical care in this State in our opinion cannot be materially lowered, even though some savings may be effected. The fees paid for medical care are not in excess of those paid for similar services to persons of a like standard of living in private practice. The law provides for the "prevailing rates" in compensation cases. There probably could be some saving if certain administrative and judicial procedures in the workmen's compensation division could be improved. Prompter hearings and fewer postponements would aid materially. One of the most important factors in determining compensation to claimants is the doctor's testimony. The proper evaluation of medical testimony is fundamental in the determination of compensability. We believe that the present system of hearings could be greatly facilitated and improved were the chairman of the Workmen's Compensation Board to take advantage of the provisions of the Workmen's Compensation Law, permitting the setting up of panels of experts in the various specialties, in addition to the routine medical examiners of the Workmen's Compensation Board. These panels could evaluate medical testimony properly, assist the present full-time medical examiners, and advise referees of the Workmen's Compensation Board on questions of disability, causal relationship, necessity for further treatment, etc. Such experts could better evaluate the testimony of physicians than lay persons, although the referee would still be the "judge" in the last analysis. The quality of medical testimony before such groups of medical experts would be different from testimony before lay persons. We have long advocated at least the experimental appointment of one or more panels in the metropolitan area to test out the claim that these panels could greatly facilitate the adjudication of claims with justice and equity to all parties. We believe the cost of these groups of experts would be more than offset by the speeding up of hearings and the more equitable decisions on medical questions as a result of proper evaluation of testimony.*

We believe further that savings could be effected by the setting up, by individual or groups of insurance carriers, of high-class physicians' panels to examine claimants periodically and report on the various phases of medical care to the claimants, the insurance carriers, Workmen's Compensation Board, and treating physicians. We strongly advocate the separation of "claims" from "medical." If a properly organized medical staff was objective in its approach, it would have the respect and confidence of the medical profession. We allude to this subject elsewhere but believe it would be an important factor in effecting an over-all saving in medical costs.

Prompt and adequate rehabilitative measures would decrease disability and return the worker more promptly to useful work, but the cost of such total rehabilitative measures as may be required would be not inconsiderable. The saving may be largely in human values rather than in dollars and cents. However, we feel that proper consideration on the part of the profession of the rehabilitation of suitable cases, both major and minor, especially in connection with our other recommendations, would materially decrease the period of disability and lower compensation costs. As physicians we favor a clinical rather than a legal approach to compensation problems.

We are not unmindful, however, of the fact that the legal aspects of workmen's compensation are of extreme importance. It is up to the medical profession to cooperate to the fullest extent in carrying out its obligations with respect to these legal matters as they impinge on the practice of compensation medicine. We refer of course to proper testimony, attendance at hearings, full and detailed reports, etc. We may anticipate even greater cost for the injured worker under the theory of workmen's compensation benefits as a cost of production if we look for a moment at the conclusions reached at a recent meeting of officials who administer the workmen's compensation laws throughout the country.* A large part of their program this year was devoted to the medical aspects of workmen's compensation. The Committee on Rehabilitation reiterated the need for adopting a working agreement between the compensation authorities of the various jurisdictions and the vocational rehabilitation factors of the states, etc. Special consideration was given to the discussion of permanent partial disability rating and evaluation methods.

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* Changes in laws re panels are appended for the reference committee.

The following are quotations from the report of the meeting.

> "We believe it is obvious to any experienced compensation administrator that the wheels of progress have become mired and bogged down in an entangled mesh of legalistic procrastination and red tape. The cause of this dilemma is not hard to find. Critical analysis of some of our laws shows there is still an underlying tendency to *buy off the injured workman*—to place strict emphasis on monetary values for certain injuries, forgetting all too often that we are dealing with complex human individuals rather than machines. Until and unless there is a change in our basic thinking and philosophy, evaluation for permanent disability will still remain the jumbled, confused chaotic mess it is today."

The Committee outlined certain generalities in respect to disability rating and evaluation for the consideration of the Association.

> "Recognition that (1) compensation benefits and payments during the acute phase of illness following the accident or occupational disease should continue until the condition becomes static, or until the claimant is able to resume full or modified employment.
>
> "(2) Maximum medical restoration of function along with adequate readjustment from a physical, sociological and mental standpoint is a necessary prerequisite of disability rating. That such maximum medical restoration should be supervised and controlled by the various compensation agencies.
>
> "(3) The process of rehabilitation in its broadest aspect is both desirous and a necessary forerunner of successful permanent disability rating.
>
> "(4) Permanent diability within jurisdictional limits is a *clinical* rather than a *legal* problem and that in so far as practical all ratings should be made by experienced, trained personnel employed by the commission, including at least one or two physicians specializing in this work.
>
> "(5) In moderately severe and severe disabilities pensions for permanent disability should be calculated and awarded on a lifetime basis.
>
> "(6) Any rating schedule should be used only as a guide in disability evaluation and that procedural right should be vested in administrative bodies to vary this schedule within certain limits.
>
> "(7) Disability awards and pensions should be subject to review during the lifetime of the claimant, provided medical evidence is produced to show the condition for which the rating was made has changed.
>
> "(8) Our present system of compensating for permanent disabilities has not kept pace with advances in modern industrial and sociological thinking.
>
> "(9) At the present time uniformity and standardization of permanent disabilities throughout the various jurisdictions are neither feasible, practical nor desirable, but that a shift of emphasis to equality of medical treatment with full rehabilitation measures would narrow the gap between awards made by different jurisdictions under our existing laws.
>
> "(10) There is a definite need for a complete scientific study of all aspects of disability ratings on both a state and national level. That this study is of such importance both economically and socially it can be undertaken only by a full-time committee adequately financed."

It is reasonable to agree with many of the above generalizations, many of which are now in effect in this and other states. But the cost of improved and widened administrative procedures in expert personnel and of medical treatments in accordance with modern scientific advances will be considerable. A few excerpts from a statement by the chairman of the Workmen's Compensation Board of New York State will show that while there is criticism on the part of employers as to the cost of workmen's compensation coverage, there are also complaints on the part of workmen's compensation officials and of labor that the claimant gets too little of the dollar spent on workmen's compensation coverage: "Ever since 1940 there has been an industrial and economic revolution with marked advances in labor relations. There has been little if any change in workmen's compensation laws and administration particularly in the field of permanent disability evaluation."

Many of the newer medical procedures will undoubtedly decrease the duration of illness, but their application by physicians and in hospitals will cost considerable. With particular reference to hospital costs it should be borne in mind that costs will rise with no end yet in sight. So far the only relatively static item is the cost of physician services.

Thus, we have pointed out a few of the factors entering into the cost of workmen's compensation coverage other than medical. It is up to us to cooperate fully in every way we can to improve medical care and cut down costs wherever possible, consistent with prescribed fees for such care.

Legislation.—We again call the attention of the House of Delegates to the advisability of the introduction of legislation to restore to the four New York counties having a population of one million or more the functions residing in the other counties in the State. It is becoming increasingly apparent that these functions can be carried out more economically and satisfactorily by the medical societies than by an appointed committee (Medical Practice Committee) of three physicians. The chief reason why these functions were removed from the four counties in 1944 was because it was alleged that the compensation committees had not functioned properly or diligently in detecting and eliminating certain practices with respect to rebating which were disclosed by a Moreland Investigation that year. We should like to point out that despite the power conferred upon the Medical Practice Committee of the Workmen's Compensation Board, under the amendment to the Workmen's Compensation Law in 1944, there is nothing to indicate that the Medical Practice Committee has detected or recommended punishment after investigation and trial of any considerable number of physicians since that time. Certain "recidivists" whose medical bills are constantly objected to by insurance carriers and employers have not, to our knowledge, been investigated by the Medical Practice Committee as to the ethics or propriety of their practices. We know that the Medical Practice Committee calls upon the four county medical societies in New York City for assistance in the qualification of physicians. Such assistance is given, but if the entire onus of qualifying doctors were thrown upon the Medical Practice Committee, which is charged with this responsibility and duty and paid for same (in addition to its other duties), they could not perform this duty effectively or properly.

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* Proceedings of the 39th Annual Convention of the International Association of Industrial Accident Boards and Commissions, Coronado, California, October 4 to 8, 1953.

So far as the settlement of medical bills is concerned, we are constantly receiving complaints from physicians showing their dissatisfaction with the way the hearings on bills are conducted by the Medical Practice Committee, with the delay in placing bills on the calendars and the time consumed at the hearings, as well as with the awards made. No one physician should be permitted to settle disputed medical bills as is the case. Furthermore, the effectiveness of one member of the Medical Practice Committee cannot stand comparison with arbitration of disputed bills by five physicians, upstate. We believe an investigation of the Medical Practice Committee is in order to determine whether this committee should be abolished or continued, and if the former, the functions should be restored to the four New York county societies. Unquestionably it would be a great saving to the State if the latter were done.

Hospital Groups.—The modern hospital is operated along so-called business lines. Many hospitals charge the patient all the traffic will bear and even then claim they are faced annually with large deficits which must be made up by voluntary contributions from individuals or federations of charitably inclined persons or, in the case of government institutions, from taxation. Little wonder that hospitals cast about for every source of revenue other than the per diem cost of bed, board, and ordinary nursing, etc., to meet their mounting costs. Their administrators, many of whom are trained in financial matters, eye with great interest the large revenues that could accrue to the hospital by the treatment of workmen's compensation and private patients. Fees for emergency care, for pathologic and x-ray work, for anesthesiology and physical therapy, in addition to the legitimate charges for bed, board, room, and ordinary nursing service, could yield large revenues to the hospital.

Under the provisions of the Workmen's Compensation Law, a hospital may not operate an ambulatory medical bureau, but this rule is not always observed or is disobeyed by indirection. We learn that groups of physicians have received medical bureau licenses in voluntary hospitals. Also the Workmen's Compensation Law provides that a hospital is not entitled to a fee paid to a physician for medical care. Medical societies and physicians are not always vigilant in calling attention to violations of the law so that they may be abated. In some institutions physicians on the staffs of hospitals rent space from the hospital, employ clerical help, and render bills for services in workmen's compensation cases, the fees being pooled and divided in many ways, either among the physicians participating in the service or among the entire staff of the hospital. In municipal hospitals in New York City the pooling of fees and their distribution among the staff has been going on for years with the knowledge of the officials of the City and of the Workmen's Compensation Board. In years past such fees were often turned over by the recipients to the hospital and used for hospital purposes, such as the purchase of apparatus, special research, etc. Actually this would seem to be in conflict with both the Workmen's Compensation Law and the Education Law which forbid the transference, division, splitting, or rebating of fees.

Under what circumstances should the pooling or division of fees in hospitals be permitted and in what manner? Regulations should be devised to avoid even the suspicion of violation of the law concerning fee-splitting, a practice that should not be condoned even indirectly.

If the pooling and dividing of fees in ordinary practice by groups of doctors is justified and necessary, a similar practice on the part of groups of doctors in workmen's compensation cases should receive consideration by the authorities as we have advocated repeatedly.

All these matters should be studied again, especially taking into consideration the provisions of the Workmen's Compensation Law which deny to a hospital fees that are paid to doctors for medical services, as well as the provisions of the Civil Practice Act which forbid a hospital corporation from practicing medicine. Violations should not be condoned even by indirection and certainly should not be tolerated by our own local county society committees charged with responsibilities under the Workmen's Compensation Law.

May we reiterate what was said in last year's report? We wish to draw attention to the provisions of the Workmen's Compensation Law, Section 13-f, which states that fees for medical service shall be payable only to a physician or other lawfully qualified person: "Hospitals shall not be entitled to receive the remuneration paid to physicians on their staff for medical and surgical services." Thus the Workmen's Compensation Law specifically excludes hospitals from rendering medical care. They may not obtain a medical bureau license as may a physician or an employer for his place of employment, clearly indicating the intent of the Legislature to keep the practice of medicine in the hands of duly qualified physicians. The whole intent of the law seems to be that only a physician can render medical care and be paid therefor. We recommend that the law be enforced.

Qualification of Physicians.—We simply wish to reiterate what we said last year. The functions now carried out by counties of less than one million population including that of qualifying doctors should be restored to the counties having a population of over one million. The Medical Practice Committee, as we have pointed out before, is not able in our opinion to do this job properly. Furthermore, the State should not be shouldered with the expense of supporting a State bureau with a staff for a job that can be better done by the county medical societies without any expense to the State. The House of Delegates has repeatedly approved the introduction of legislation to effect these changes, so far without result. There has been sufficient experience to enable county medical societies to apply the standards for the various specialties carefully, impartially, and with due regard for the type of practice in a particular county. There has been a tendency on the part of the Medical Practice Committee in the four New York counties to demand a certificate or diploma of a specialty board before giving a specialty rating. This is not in conformity with the spirit of the Workmen's Compensation Law which gives original jurisdiction to the county medical societies and to the Medical Practice Committee who are authorized to set up their own standards and apply them to all applicants for specialty rating. These functions were delegated to the county medical societies because it was felt they were better able, because of their professional contact with applicants, to evaluate their qualifications as well as their moral and ethical standing in the community.

The American Medical Association has indicated that the specialty boards have gone too far in controlling and restricting medical practice. Many well-qualified physicians have neither the time nor the money to apply for and take the examinations, even though they may be eligible for same. Many older physicians have been trained in particular hospitals, before hospitals provided residency training of sufficient length to enable applicants to be qualified for specialty board examinations. As we have indicated on many occasions and again emphasize, county medical societies, and we believe also the Medical Practice Committee, should determine a physician's qualifications on the basis of education, experience, and training. We believe the standards which we have established are the equivalent of those of the majority of the specialty boards, and in applying them no clear violation of good practice would be done in granting a rating to a physician who for one reason or another did not take his board examinations but met our standards. We again call for the affirmation of these principles.

With respect to x-ray qualifications, we again draw attention to the fact that we have set up examining committees in various parts of New York State to examine physicians who apply for diagnostic or therapeutic radiology ratings. No rating should be granted unless the physician meets the standards with respect to internship and residency or long experience as the head or chief assistant of a radiology department of an accredited hospital with adequate radiology facilities. All applicants who do not meet these standards should be referred by the county medical society to the Workmen's Compensation Bureau for examination which will be conducted at the nearest point to the applicant's office.

The metropolitan New York Committee on Radiology during 1953 held one examination and examined four applicants.

Fee Schedule.—We are confident that the allegedly high cost of workmen's compensation coverage is not the result of fees charged by physicians in this State. The fee schedule is certainly not out of line with the rule that medical fees shall be in accordance with the prevailing rates in private practice. If an occasional physician is guilty of overtreatment or of unethical fee practices, his is the exceptional case and would not materially affect the cost of medical care. We have on so many occasions spoken of fees in compensation cases that this year we will not burden the record with further comment. We quote from our last year's report:

> "The feeling prevails throughout the State and is confirmed by reports from local county medical societies, through our committees, that general practitioners are not adequately compensated under the Workmen's Compensation Law. There is an insistent demand for a revision of the fee schedule upwards, especially for home, office, and hospital visits by general practitioners and the fees for subsequent office and hospital visits by specialists. Numerous questions which had been raised by changes in the fee schedule in 1947, 1948, and 1949 have not been adequately considered or answered, resulting in frequent disputes over medical bills. All this adds to the cost of workmen's compensation administration. We again urge the chairman of the Workmen's Compensation Board to give prompt consideration to the establishment of adequate fees for medical service.
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> "The fees for various operative procedures in the surgical specialties are, on the whole, considered adequate with the addition of the 8 per cent allowed on May 1, 1951. Where fees are considered inadequate (and there are certain special fees that are too low), it was expected that local members of our committee would submit from time to time recommendations for changes. The fees for specialists in physical therapy are considered inadequate, and recommendations have been made by a special group, not only for a change in first and subsequent office fees but for special procedures carried out under the new rehabilitation program. Fees for assistance in long operations are inadequate."

Additional Recommendations.—We wish to submit a few additional recommendations, some of which have been the subject of prior action by the House and still require implementation.

Fees for testimony before referees and the Workmen's Compensation Board should be increased.

Copies of reports of State Medical Examiners, which are now sent only to the claimant, should also be sent to the reporting physician or specialist.

Copies of reports of impartial specialists assigned by referees or the Workmen's Compensation Board should also be sent to the patient's doctor or specialist.

Consideration should be given to acceptance by physicians of subpoenas by mail if sent at least two weeks in advance of a hearing.

Chairman of the Workmen's Compensation Board should reconsider validity and legality of Rule 19: "Hospitals may bill for physiotherapeutic, anesthesia, and pathologic services when rendered by or under the supervision of salaried physicians on the staff (as amended May 20, 1947)." This applies only to x-ray services in voluntary hospitals.

Chairman of the Workmen's Compensation Board should grant M-17 rating in thoracic surgery.

Chairman of the Workmen's Compensation Board should give consideration to editing, clarifying, and, where necessary, adding new procedures to the fee schedule.

Chairman of the Workmen's Compensation Board should support an amendment to the Workmen's Compensation Law to permit arbitration of medical bills in county in which medical service was rendered rather than in county in which claimant resides.

Workmen's Compensation Medical Fees in Third Party Actions.—We believe the chairman of the Workmen's Compensation Board should consider the advisability of amending the Workmen's Compensation Law, Section 13(c) and Section 29, to permit physicians to charge their regular fees in cases where the accident is caused by a third party.

> "(c) The liability of an employer for medical treatment as herein provided shall not be affected by the fact that his employee was injured through the fault or negligence of a third party, not in the same employ. The employer shall, however, have an additional cause of action against such third party to recover any amounts paid by him for such medical treatment, in like manner as provided in section twenty-nine of this chapter."

We believe that where a third party action is successful and the award or settlement is such as to compensate fully the employer or insurance carrier for any outlay for both compensation and medical care and leave a surplus to the injured employe, the physician should not be bound by the Workmen's Compensation fee schedule. The physician, if he has been paid compensation fees by employer or carrier, pending a third party action, should be permitted to collect the difference, if any, between the compensation fee paid and his regular fee under the circumstances.

Necessity for Authorization.—"Rule 4—When it is necessary for the attending physician to engage the services of a specialist, consultant, or a surgeon, or to provide for physiotherapeutic procedures costing more than $25 or to provide for x-ray examinations or special diagnostic laboratory tests costing more than $10, he must secure authorization from the employer or insurance carrier or the chairman. E.g.—when the total fees for physiotherapeutic treatment approach the sum of $25, the physician shall file an additional C-4 report and request authorization as prescribed in Section 13-a(5).

"This rule also applies to hospitals, specialists, consultants and surgeons, who are actually engaged to perform such services.

"If telephone request for such authorization is made, it should be confirmed by letter. If such authorization is not forthcoming or is not denied within five working days, or if such denial is not justified medically or otherwise, the special services required for the patient's welfare should be proceeded with on the ground that authorization has been unreasonably withheld.

"Such authorization is not required in an emergency under the provisions of Section 13-a(5)."

Our work would be greatly facilitated and many objections to disputes about medical bills would be obviated if doctors would obey this rule. Just write on the C-4 or C-14 forms "authorization for further physical therapy (other nonemergency service) treatment is here requested."

If x-ray or laboratory services are given on a week-end when most insurance carriers' offices are closed, request authorization in writing, either in a letter or on C-4 or C-14 forms.

So many carriers use this technical objection (treatment not authorized) to which arbitrators pay attention that most disputes over bills would fall away if physicians would only obey this rule. (This gives the employer or carrier an opportunity to have the claimant examined if they so desire.)

We recommend that county medical societies from time to time bring this and other workmen's compensation rules to the attention of the membership at meetings and in their publications.

Ex-Medical Policies.—Certain employers under the Workmen's Compensation Law, including many hospitals, carry what is known as ex-medical policies. Under the provisions of this policy the employer provides medical care for compensation patients, while awards for time lost and disability are paid by the insurance carrier. In the past we have had considerable difficulty with certain hospitals which carry ex-medical policies. Some of these employers feel that being a nonprofit organization, they should not be charged by outside physicians treating injured workers employed by these hospitals, who exercise their right to go to their own physician for medical care; in some instances they expect the treating physician to cut his bill materially.

We have learned from Miss Mary Donlon, chairman of the Workmen's Compensation Board, that under the terms of ex-medical policies, if an employer fails to pay a bill for medical service, the carrier is liable. Bills should be sent to the employer. If the employer fails to pay the bill and objects to it within thirty days or sends it to his insurance carrier for objection, the bill is placed on a calendar for arbitration. Under the provisions of Section 13-g of the Workmen's Compensation Law, if the employer fails to object to a bill within thirty days of its receipt, the bill is presumed to be the fair value of the medical services rendered, and the employer is not entitled to an impartial examination of the bill.

Therefore, if such a bill is not objected to within thirty days by the employer or insurance carrier, the insurance carrier becomes liable for the bill if the employer does not pay.

Podiatry.—The new Podiatry Law, Chapter 787, Laws 1952, effective September 1, 1953, added Section 13-k, *The Care and Treatment of Injured Employees by Duly Licensed Podiatrists.* The scope of practice under this new section and fees for podiatry care were the subject of study by the advisory committee to the chairman of the Workmen's Compensation Board and by a special committee appointed by the chairman of the Workmen's Compensation Board. Your chairman participated in the discussions before the Advisory Committee and your director before this committee and on the committee on fees.

The fee schedule recommended by a majority of the committee was adopted by Miss Donlon on November 30, 1953, together with a memorandum from which we quote. Fees are somewhat lower than the fees payable to general practitioners under the Workmen's Compensation Law:

> A. "For the first time administrative decision and action have had to be taken without the unanimous recommendation of the advisors designated, pursuant to statute, to advise with respect to a Podiatry Fee Schedule.
>
> "Differences of view have not been solely between medical practitioners and podiatrists, as it would be easy to assume. There have been differences of opinion and, therefore, of advice among others who have advised administration in the problems underlying the new podiatry fee schedule.
>
> "The basic limitations, found both in the Education Law and in the Podiatry Practice Act, defining the scope of podiatry practice in workmen's compensation cases, appear to be the root cause, directly or indirectly, of differences in viewpoint. Representatives of the podiatrists insist, and quite properly, that they are not professionally qualified to diagnose injuries or disabling conditions other than those affecting the foot alone, and that they should not be put in the position of seeming to hold themselves out, in workmen's compensation cases, as qualified to make such diagnoses. With this, representatives of the medical profession are in agreement. It is widely recognized, of course, that in workmen's compensation cases in this State diagnosis is the usual prerequisite to proper treatment.
>
> "Our law is not nearly so limited as are the workmen's compensation laws of many of the states. Accidents that arise out of and in the course of employment and occupational diseases are likely to affect different people differently, because of other conditions to which they already are subject. For over thirty years the liberal interpretation of the New York law has been to award workmen's compensation benefits according to the effects which the injury produces in the injured person. An example would be a relatively minor foot injury which, if the injured person is a diabetic, might necessitate amputation.
>
> "The problems of diagnosis concern alike the welfare of workmen's compensation claimants and the employers whose financial responsibility workmen's compensation is. Unless there is thorough and competent diagnosis, grave risk is run in many cases that treatment of a foot injury alone may prove not to be adequate to minimize the disability of the worker and rehabilitate him promptly.
>
> "Podiatry care without diagnosis may result in the neglect of a condition that will increase employer liability for the resulting disability and also deprive the claimant-patient of the medical care to which the Workmen's Compensation Law of New York State entitles him."
>
> B. "Chapter 787 of the Laws of the 1952 authorizes, with limitations, the free choice by injured workers of a podiatrist to render care *for injury to the foot alone.* However, if the injury or condition is one which is outside the limitations prescribed by the Education Law for podiatry care and treatment, or if the injuries that are caused by an accident that arose out of and in the course of employment affect other parts of the body in addition to the foot, the podiatrist may not render care except under the supervision of a duly authorized physician.
>
> "Great responsibility thus is laid on podiatry practitioners to decline independent treatment in cases where the injury or condition concerns some part of the body other than the foot, but the fact is that they may not be able to identify the complicating condition. To check on their responsibility for proper medical care places special administrative burdens on the carriers and employers of this State and also on the Board. These are administrative burdens that may be time-consuming and costly.
>
> "The first schedule as promulgated, at least for the present, is confined to those items which are, without serious dispute, appropriate to podiatry practice in workmen's compensation. Discussion will continue as to other items. There was no serious disagreement as to the amount of fees for particular foot modalities, but advice differed as to the fees to be fixed for home and office calls (including examinations).
>
> "Having in mind that in many cases the claimant-patient will be under the necessity of going also to a physician for examination and diagnosis before podiatry practice alone is established as competent care without medical supervision, and that the employer may thus be called upon to pay two fees for examination, and that in these cases or other cases medical care may have to be rendered in addition to podiatry care, it seems appropriate to adopt the majority report of the committee of advisors with respect to the fees for home and office visits (including examinations).
>
> "The code under which podiatrists will be authorized and which they are required to use on their reports filed under the Workmen's Compensation Law is 'DP,' followed by their authorization number.
>
> "It is pertinent to note that the established fees for podiatry care are payable by carriers only in those cases where the claimant-patient is entitled to benefits under the Workmen's Compensation Law for injuries caused by accidents that arise out of and in the course of employment."

We will submit to the reference committee a brief on the question of podiatry practice in workmen's compensation prepared by the Bureau.

Occupational Loss of Hearing.—The question of occupational loss of hearing has recently assumed an importance in workmen's compensation. The New York State Court of Appeals recently sustained an award for partial deafness alleged to have been caused by noise. The claimant had not lost any time from work, continuing at his regular work at fairly high wages. This decision gave substance to a belief that deafness is an occupational disease coming within the provisions of the Workmen's Compensation Law. A similar claim in the State of Wisconsin also was allowed when a worker in a drop forge plant was granted an award for partial deafness in both ears. A number of claims have also been allowed under the Longshoremen's and Harbor Workers Compensation Act (Federal), chiefly to workers in shipyards. These claims are not for damage to the ear by accident but for loss of hearing allegedly as a result of working in a noisy environment.

The chairman of the Workmen's Compensation Board appointed a committee of five experts (four physicians and one physicist) and submitted to them a series of questions designed to develop standards and guides necessary for the determination of claims. Calendars are now being established for the consideration of such claims.

The committee of expert consultants* in its report indicated that noise at a level below 90 decibels is unlikely to be injurious. Above 90 decibels, the committee made three sound level groupings.

> "(*a*) Most persons exposed for several hours daily to noises at intensity levels about 120 decibels whatever the 'composition' of the noise will in a matter of months suffer permanent damage to hearing;
>
> "(*b*) For most industrial noises at 'over-all' levels of 100 to 120 decibels, exposure for several hours daily for a long period of time will cause permanent damage to hearing in a considerable proportion of persons, the proportion being higher the more closely the noise approaches the intensity level of 120 decibels and the more the noise is dominated by high-pitched components;
>
> "(*c*) The hearing of a few very susceptible persons may be permanently damaged by exposure for many years to certain noises at levels between 90 and 100 decibels.
>
> "All decibel levels will be based on the standard reference of 0.0002 dynes per square centimeter.
>
> "Where particular work conditions have already been established before the Board as injuriously noisy in one or another of these three sound level groupings, the decibel levels need not again be measured unless the carrier or claimant wishes to introduce evidence that the previous measurement was wrong.†"

According to Mr. Henry Sayer,** a source of infinite difficulty in the administration of this phase of workmen's compensation and a source of great potential cost is the problem of liability already incurred for partial loss of hearing. Accrued liability refers to the loss of hearing at any given time in a worker who has carried on his job or jobs in which he was exposed to high level or intense noise. A situation similar to that in silicosis is apparent, and special provisions were made for compensation of patients suffering from total disability in silicosis. If an employer now is to be held liable to pay compensation for loss of hearing due to noise, either directly or through insurance, there is no possibility of charging the cost of that deafness to production over the many years during which it was developing. The employer pays for it long after the time of its contraction, with no opportunity to collect it in the price of his goods or service rendered, says Mr. Sayer. The whole cost will have to be charged up after the claim is made. The number of persons exposed to noise is incalculable.

The Workmen's Compensation Board will, in general, prefer as reasonable the standards for evidence that are stated in the report of the Committee on Consultants on Occupational Loss of Hearing.

> "Therefore, when findings have been made of injurious noisy work exposure and of hearing impairment, but the fact and degree of permanency cannot be found because the claimant continued to work in the noisy environment or has been separated from it less than six months, the appropriate findings will be made, with award for lost time, if any, caused by the temporary disability, and the case will be closed without prejudice to the claimant's right to reopen whenever a finding as to permanency can be made.
>
> "As to whether medical care should be directed—
>
> "Inasmuch as occupational noise affects the inner ear which cannot be reached for medical treatment, and medical care will not improve or ameliorate the condition, medical care will not be directed except where there are some special circumstances to justify it.
>
> "The Board recommends that both employers and workers give earnest attention to the committee's recommendation for regular otological examinations in employment. These will be more easily evaluated as evidence in workmen's compensation cases if the committee examination formula is followed."

In view of the present investigation into the alledgedly high cost of workmen's compensation coverage in this State and the effect of this high cost on the possibility of removal of plants from this State or the lack of further expansion of present plants in the State, it would seem that the potential cost of this new liability must be given serious consideration. According to Mr. Sayer there should be a State and country-wide study, preferably by a national body having the organization, the experience, and the means to make an objective study on a nation-wide basis. Such a study should include, "(*a*) an examination and review of existing law, both statute and by court decision, in the several jurisdictions in this country; (*b*) the medical aspects of hearing loss in noisy environment, including the various types of noise, frequencies, noise levels and intensity, the effect of age and pre-existing conditions, and all relevant factors; (*c*) the economic aspects of the problem, including the extent of the exposure, the number of persons estimated to be affected by industrial noise, including the development of statistical data; and (*d*) the engineering phase of noise production in various industries and measures of possible noise control or muffling."

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* Drs. Stacy R. Guild, Otto C. Risch, Gordon C. Hoople, C. Stewart Nash, and Joseph C. Serio.

† We have referred to the reference committee the full report of this committee.

** "Industrial Noise A National Problem," *Compensation Medicine*, Sept.-Nov., 1953, vol. 5.

We are generally interested in (*b*) the study by medical men and physicists.

These recommendations were made by Mr. Sayer at the 18th annual meeting of the Industrial Hygiene Foundation of America, Inc., November 19, 1953.

Mr. Frank Burke of the United Steel Workers Union, CIO, in commenting on the impairment of hearing as a basis for compensation, stated that they would seek enabling legislation in all states where it is necessary. Mr. Burke made the following significant statement: "Take a shop that has 50 men. They would have a potential compensation claim that would amount to $1,500,000 a year. You can see what effect this would have on the general public."

The annual cost to industry in this country on this basis would be incalculable if his estimate is correct. We might, in addition, anticipate considerable medical costs for the determination of loss of hearing and the possible treatment or operation on such cases.

Summary.—Each year we try to make a shorter report than the previous year. However, the activities of the Bureau and the problems presenting themselves are so extensive as to make it difficult to compress our comments into briefer space. We have touched on only the more important phases of our subject, but it must be apparent to all that the subject of workmen's compensation is one that, because of its dynamic nature, requires constant attention and vigilance. This we believe the Bureau and the Committee provide.

Again as in previous years, the director of the Bureau, Dr. David J. Kaliski, is commended for his outstanding contributions to the field of workmen's compensation administration and for his vigilance in protecting the highest interests of the medical profession and of the Society. Without the efficient loyal support of our secretaries, the Misses Elizabeth and Alice Wheeler, the Bureau could not have been operated as efficiently and successfully as it has with the same personnel for more than nineteen years.

PART XI

Publication

The Publication Committee for the current year consisted of the following:

John J. Masterson, M.D., *Chairman*	Brooklyn
Maurice J. Dattelbaum, M.D.	Brooklyn
George W. Kosmak, M.D.	New York City
Laurance D. Redway, M.D.	Ossining
Norman S. Moore, M.D.	Ithaca
W. P. Anderton, M.D.	New York City

The composition of the committee is in accordance with the resolution of the House of Delegates and includes the editor, the assistant editor, the secretary, the treasurer and a member of the Board of Trustees. It includes also the editor emeritus.

Meetings of the Publication Committee have been held monthly throughout the year except in August. At many of the regular meetings the president and the president-elect have been in attendance ex officio. Numerous questions affecting the publication and contents of the JOURNAL and the *Directory* have been discussed, and during the year final approval was given the JOURNAL for a new cover design, new typography, and placement upon the cover of as much of the table of contents as the space allows. The new cover and type appeared in the January 1, 1954, issue. The chairman of the committee has made monthly reports of the proceedings to the Council.

Mr. Thomas E. Alexander, business manager, has continued to provide valuable technical and accounting assistance at all the meetings of the committee. He has made himself available at all times to the editor for the discussion of personnel problems and the business relationship of the JOURNAL with the printer and the paper suppliers. His work deserves the highest commendation.

Because of crowded conditions in the Society's 19th floor quarters, additional space was provided by the Trustees to accommodate the JOURNAL and the advertising representatives on the sixth floor of the same building. Thus for a second time in two respective years the entire JOURNAL staff, records, and belongings had to be moved. It is to be noted that once again the move occurred at a time when the flood of new work from the Annual Meeting together with the beginning of the work on the Minutes of the House of Delegates had to be started. Mr. Alexander's capable handling of the moving, the redecoration of the new space, and the timing of the move was so well done that the work of the JOURNAL office could be carried on almost without interruption. The cooperation of the editorial, advertising, and production staffs of the JOURNAL is also worthy of the highest commendation. No delays in the flow of the material to the printer occurred, and issues continued to be in the mail on time.

The editor and Miss Alvina Rich Lewis, assistant to the editor, undertook the study of numerous type faces and the production of many samples of possible cover designs. From these a final choice was made by the Publication Committee in the fall of 1953. The new typography necessitated numerous conferences with the printer in order to set up a new style book. The changeover to the new cover design and type was deferred until the January 1, 1954, issue so that all material set in the old type could be utilized prior to that date, thus avoiding the necessary expense of killing the old galleys. At the same time, starting in the middle of November, all material for the January issues had to be set up according to the new style book. That all this was accomplished with negligible error and exactly on schedule is a great credit to Miss Lewis and her staff and the splendid cooperation of the printer.

The procedure proposed by the editor and approved by the Committee of referring nearly all submitted papers for review by consultants has worked out, except in a few cases, to the advantage of the JOURNAL. The associate editors during the year have not only stimulated great interest in the JOURNAL on the part of their colleagues but have given unstintingly of their time and knowledge and enthusiasm. At the annual dinner to the associate editors given by the Publication Committee, the editor received many helpful ideas and suggestions for the continuing improvement of the JOURNAL. This distinguished group of medical men deserves the heartiest thanks of the Society for their labors.

During the year 1953, on the recommendation of the Publication Committee, the House of Delegates approved the distribution of the JOURNAL for the academic year to all senior medical students in the nine universities of the State, at their request. Some 600 copies of each issue have gone to the students, thus spreading the readership of the JOURNAL among many who had previously come in contact with it only in libraries. It is highly probable that in the course of time this action of the Society will have acquainted many men and women about to enter practice with the valuable contents of the JOURNAL.

The Publication Committee has considered carefully the question of further development of the JOURNAL. The committee is of the opinion that the growth of the Society and the expansion of its relationship with various agencies and institutions of the State of New York, governmental, private, educational and industrial, scientific and professional, indicate the necessity for a further development of the coverage and scope of the JOURNAL. Until the present time the services of a part-time editor sufficed to carry on the JOURNAL in a more or less static condition.

It is now the opinion of the Publication Committee that the services of a full-time editor have become necessary. The committee recommends this for these reasons:

1. Other state medical journals are entering this area, and it is necessary for the NEW YORK STATE JOURNAL OF MEDICINE to maintain its superiority in a competitive field both from the point of view of its scientific contents and its advertising. We believe that the JOURNAL should be expanded in both categories.

2. If the JOURNAL is to be improved, a wider contact with individuals and institutions of the State will be necessary in order to derive better material for publication. This cannot be accomplished by correspondence alone but necessitates personal contact and development. The schools and teaching hospitals of the State should be more adequately represented in the JOURNAL in order to improve the character of the scientific contents.

3. New means for obtaining material for publication have arisen within the last year or so by use of tape recording and transcription of conferences, annual meeting lectures, discussions, and round tables, many of which have not previously been recorded, and in consequence much valuable material was lost to those members throughout the State who were, through some reason or other, not able to attend the annual meeting or other meetings of district branches and other activities of the State Society.

4. A closer integration of the business end of the JOURNAL, the advertising department, and the editorial seems to be necessary if further progress is to be made. This implies a wider scope of activity and responsibility for the editor than he has previously exercised.

5. Changes in the publishing field, the wider use of color in medical publications for instance, indicate the need for some research work to modernize the state journals. It is the belief of the committee that the NEW YORK STATE JOURNAL OF MEDICINE should take the lead and pioneer experimentally in this field. Attempts of this sort to maintain leadership require study and inquiry predicated upon the time being available of someone who can undertake and work out such improvements.

6. An additional reason for the employment of a full-time editor is the preparation of the history of the Society to be published in some form in 1957. This work will require the coordination of a number of agencies such as the Kings County Medical Society Library, the State Medical Library at Albany, the hospitals of the State, and the State Departments of Public Welfare and Health, all of which latter have developed within the recent past. The assembling and editing of this material in addition to the current material for the JOURNAL and seeing the finally edited copy through the press will need considerable time not now available.

Because of the foregoing reasons, the Publication Committee recommends a full-time editorship for the NEW YORK STATE JOURNAL OF MEDICINE.

The New York State Journal of Medicine.—The JOURNAL has appeared uninterruptedly in 24 issues throughout the year, including a supplement, Part II of the issue of September 1, 1953, containing the Minutes of the House of Delegates.

The editor reports with regret the illness of the editor emeritus, Dr. George W. Kosmak.

The assistant editor, Dr. Norman S. Moore, of Ithaca, commenced his work with the JOURNAL at the beginning of 1953 and has undertaken to familiarize himself in so far as time permits with the detailed operational and production problems of this publication. During the illness of the editor in the summer of 1953 he rendered invaluable assistance to the office staff and to the editor. He has attended the meetings of the Publication Committee regularly and has offered many valuable suggestions.

The editor is pleased to announce the appointment by the Publication Committee and the Council of two new associate editors: Dr. Granville Larimore, Deputy Commissioner of Health in the State of New York, and Dr. Margaret M. Loder, Rye, who is the first woman physician to occupy this position on the staff of the JOURNAL.

During the year the editor has endeavored to broaden the contacts of the JOURNAL not only with individual physicians throughout the State but with the medical schools and the teaching hospitals. If the JOURNAL is to reflect the advances in medical science and the problems of the practitioners of medicine in bringing these advances to the people of the State, it seems imperative that the sources of scientific writings and experimental work in medicine, surgery, pharmacology, and the other specialties should be contacted.

The JOURNAL, with its large distribution within the State and outside of it, constitutes a valuable medium with the history of more than fifty years of continuous service to the people of the State through their physicians. It is the considered opinion of the editor that every effort should be made to improve its quality of service. It carries the record of the official transactions of the Society to those who have little contact with these records except through the JOURNAL. A study of the statistical report which follows will show the extent of its usefulness.

During the year 1953 the series of articles on cancer diagnosis, provided through the unremitting toil of the Subcommittee on Cancer of the Council Committee on Public Health and Education with the cooperation of the American Cancer Society and the State Department of Health, terminated. It was followed by a most informative series of articles on diabetes made available through the Committee on Professional Education of the Clinical Society of the New York Diabetes Association.

A distinguished series of President's Pages has been published during the past year. These pages are a most valuable addition to the JOURNAL, since the president of the Society is the only individual who can express himself thus on any topic which he considers would be of value. His direct messages reach the front line practitioners, and thus he has available a means of speaking to every one in the Society as frequently as he has the time to produce the written word.

The new section on the History of Medicine in New York State has already begun to produce some interesting material, and this will be continued indefinitely. The material as carried through this and succeeding years will be utilized at the time of the sesquicentennial of the Society.

The editor wishes to report that in so far as the editorial and production staff of the JOURNAL is concerned, the intraining program commenced in 1953 has worked well. Each crucial position concerned with the production of the JOURNAL has at least one trainee prepared to take over in case of the illness or incapacity of the chief of that department. This applies also to the advertising section. The occupation of the new quarters on the sixth floor has made possible a very much more closely integrated production group. The value of this program proved itself in 1953 when the assistant to the editor was ill, and the editor himself was ill, and yet the processing of material was in no way interrupted.

A distinguished group of associate editors has labored hard on behalf of the JOURNAL to raise the standards of acceptance for submitted articles. Each submitted article after review by the editor is read by at least one and often more of the associate editors. It is then returned to the JOURNAL office by mail and again reviewed by the editor, taking into consideration the suggestions of the consultants. This procedure has not delayed to any considerable extent the interval between receipt of the article and final notification to the author concerning its acceptability for publication. Frequently a single manuscript may have to be sent back by the editor to the author for revision, shortening, or rearrangement of material. Quite frequently a paper may have to be entirely rewritten. However, the result seems to justify the procedure. It has been in effect for nearly two years and has been the means of salvaging a great many contributions of a scientific nature which would otherwise have been lost to the JOURNAL. Editorial correspondence with authors and consultants has grown to considerable proportions, but the slight additional cost of postage and the investment of time on each manuscript has helped along many authors and cut materially the total number of rejections.

The JOURNAL staff has cooperated with other departments of the Society in many particulars, in addition to performing the work of the editorial office efficiently. The volume of telephoned inquiries by members of the Society, authors, and various other agencies continues to constitute an increasing volume of daily traffic which must be handled in addition to the editorial work.

Miss Alvina Rich Lewis, assistant to the editor, has performed her work most satisfactorily. The Publication Committee is very appreciative of her valuable contribution to the JOURNAL's progress. She has maintained an intraining program, has accomplished the difficult matter of the changeover from the old to the new typography, the setting up of a new stylebook with the printer, and the handling of the manuscript traffic with the utmost efficiency. Miss Frances E. Casey has been most attentive to her work and is proving herself to be a capable assistant. Miss Grace I. West, of the advertising department, and Miss Camille Marra continue to perform their work capably and well. Mrs. Anne G. Colahan has rejoined the editorial staff and has worked efficiently in editing manuscripts. Miss Margaret Blocher is a new trainee both in the editorial and advertising departments. The entire JOURNAL office staff now works together efficiently as a result of continuing experience.

During the Annual Meeting of the Medical Society of the State of New York Miss Lewis continues to work with the House of Delegates, editing resolutions and reports of reference committees with special attention to resolutions for the annual convention of the American Medical Association.

The editor is pleased to report that during the year he has been able to be of assistance to the Public and Professional Relations Bureau by recording on tape material for radio broadcasts and a number of public relations conferences. Much of this material has been published in the JOURNAL.

STATISTICAL REPORT, 1953

The following report of the work of the JOURNAL editorial office is presented for the year 1953. Comparative statistics are given also for 1951 and 1952.

In 1953, there were 24 issues and 1 supplement published, totaling 3,080 pages.

Number of Pages		
1951	*1952*	*1953*
3,052	3,200	3,080

The issues were divided as follows:

- 3 issues of 96 pages
- 1 issue of 104 pages
- 7 issues of 112 pages
- 7 issues of 128 pages
- 1 issue of 136 pages
- 1 issue of 144 pages
- 3 issues of 176 pages
- 1 issue of 200 pages (April 1, Convention)
- 1 supplement, 128 pages

During 1953, a total of 449 articles was submitted, of which 70, or 16 per cent, were rejected. This compares with the two previous years as follows:

	1951	*1952*	*1953*
Number submitted	420	440	449
Number rejected	82	53	70
Per cent rejected	19.5	12	16

It should be pointed out that many manuscripts, rejected for publication, were revised and rewritten by the authors according to the suggestions of the editor and were subsequently accepted for publication.

As of the issue of February 15, 1954, all of the papers from the 1953 Annual Meeting have been published. Of the 449 papers submitted in 1953, 100 were Annual Meeting papers.

There were 568 authors represented in the 349 articles published in 1953, including 246 scientific articles, 70 case reports, 18 special articles, 6 Cornell Conferences on Therapy, 3 clinicopathologic conferences, four articles on history of medicine in New York State, and 2 articles on the doctor in civil defense.

Reprint orders: 1951—372; 1952—395; 1953—389.

Comparative statistics follow:

	1951	*1952*	*1953*
Total number of pages	3,052	3,200	3,080
Text pages	1,880	1,966	2,026
Advertising pages (plus inserts and covers)	1,168	1,106	1,054
Number of articles submitted	420	440	449
Number of articles published	354	423	349
Number of authors represented	650	667	568
Scientific text, pages	1,219	1,299	1,301
Features, pages	382	428	362
Editorials, pages	83	107	143
Minutes and reports, pages	96	136	220
House of Delegates minutes, pages	100	128	128

An analysis of the text pages for 1953 follows:

Scientific articles	1,301
246 articles	
70 case reports	
18 special articles	
6 Cornell Conferences	
3 clinicopathologic conferences	
4 history articles	
2 civil defense articles	
Editorials	39
Editorial Comment	12
President's Page (10)	22
Cancer Diagnosis	24
Diabetes Mellitus	46
Medical Care Insurance	14
Correspondence	10
Malpractice Insurance	4
Medical News	87
Necrology	42
Books	46
Woman's Auxiliary	1
Council Minutes	81
Annual Reports and Annual Meeting information	131
Indexes	23
District Branches	7
State Society Officers	72
County Society Officers	8
Table of Contents	48

Approximately 150 medical journals and periodicals are received in the editorial office and are available for examination and study. After retaining these for three months, they are shipped to the Kings County Medical Society Library.

For each issue, 54 sets of page proofs of the editorial section are distributed to editors of medical journals and selected newspapers.

Financial Statement

Income		
Advertising	$207,442	
Cash subscriptions	2,844	
Other	3,928	
		$214,214
Expenditures		
Printing, paper, and postage	$138,096	
Advertising expenses	56,151	
Editorial expenses	33,463	
Sundry expenditures	18,068	
Loss before dues allocation		245,778
		$ 31,564
Dues allocation		58,668
Final Net Income		$ 27,104

The Directory.—The 1953 *Directory* was delayed in production due to a number of unfortunate and unforeseeable factors. A strike during the summer of 1953 shut down production of paper in the mills of our suppliers. By the time production was resumed deliveries of paper to the *Directory* printer were so delayed that both the printing and the binding were thrown off schedule. However, copies were delivered in December, 1953, and work on the collection of new data for the succeeding *Directory* has now been set in motion. As of February 23, 1954, 734 copies of the 1953 volume had been sold. The 1953 print order was 26,000 volumes.

History of the Medical Society of the State of New York.—The editor is pleased to report that a considerable volume of material for this department of the JOURNAL continues to become available for publication under the enthusiastic guidance of Dr. Frederic D. Zeman, associate editor. It is recommended that the Subcommittee of the Council Committee on Publication as constituted in 1953 be slightly changed. The third member of the subcommittee, Dr. George W. Kosmak, is incapacitated by illness, and it is recommended that Dr. Louis M. Hellman be confirmed as the third member. The committee continues to study the preparation of a condensed history of the Society to be ready in 1957.

Comment.—The Publication Committee is appreciative of the careful and faithful services and loyalty of the personnel of the editorial and production staffs of the JOURNAL and of the *Directory*, and of the business manager of these publications, Mr. Thomas E. Alexander.

The committee's appreciation is also extended to the advertising representatives: Mr. Charles L. Baldwin, Jr., Mr. James M. Kelly, Mr. Joseph Mullaney, and Mr. John A. Bassett, Pacific Coast representative. Their work in soliciting advertising deserves the highest commendation, as a glance at the record shows.

All papers from the Annual Meeting are now published by the end of February of the succeeding year. This has been made possible by the cooperation of the secretary, Dr. Walter P. Anderton and Miss Doris K. Dougherty, assistant to the secretary. Material from the Annual Meeting is turned over promptly to the editor, and delay in processing these papers for printing is reduced to a minimum.

The appreciation of the Publication Committee is extended to Miss Doris K. Dougherty, and to Miss Janet Loy, Miss Eileen Carmody, and Mrs. Evelyn De Marco of the *Directory* Staff, and others for their unfailingly helpful assistance.

The Publication Committee would be remiss at this time if it did not express its deep appreciation to our editor, Dr. Laurance D. Redway, for the efficient manner in which he has carried on the responsibilities of his position. His loyalty to the Society and devotion to his duties have greatly lessened the work of our committee. The wholehearted cooperation of our secretary, Dr. Walter P. Anderton, and his wise guidance have been most helpful to us.

In conclusion, the Publication Committee strongly recommends, for reasons stated previously in this report, that the editor be employed on a full-time basis. Our JOURNAL is published twice monthly, and it is no longer possible, if it be our desire constantly to improve our publication, for the editor to do the work efficiently on a part-time basis.

The Publication Committee also desires to recommend to the House of Delegates the continuation of the Publication Committee as constituted under its original resolution of 1941, with the addition of Dr. George W. Kosmak as editor emeritus.

Public Relations

The Council Committee on Public Relations for the current year consists of the following:

Floyd S. Winslow, M.D., *Chairman*	Rochester
Walter Cane, M.D.	Hempstead
Clarke T. Case, M.D.	Utica
Henry I. Fineberg, M.D.	Jamaica
Reid R. Heffner, M.D.	New Rochelle
Arthur M. Master, M.D.	New York City
John C. McClintock, M.D.	Albany
John D. Naples, M.D.	Buffalo
Kenneth T. Rowe, M.D.	Hornell
Cornelius F. Ryan, M.D.	Oneonta
Edward Siegel, M.D.	Plattsburg

Public and Professional Relations Bureau.—The activities of the Public and Professional Relations Bureau continued under the direction of Mr. Frederick W. Miebach. During the year the field representatives were assigned to new territories as follows: Mr. A. Carl Messinger, the Fifth, Seventh, and Eighth District Branches; Mr. Martin J. Tracey, the Second and Fourth, and Mr. Thomas E. Walsh, the Third, Sixth, and Ninth. In addition, each received a special assignment. Mr. Messinger assisted the Blood Banks Association of New York State, Mr. Tracey edited the *Newsletter*, and Mr. Walsh worked with the Woman's Auxiliary and Speakers Bureau.

General Public Relations Program.—During 1953 the Public and Professional Relations Bureau continued to stress the positive in its program. Believing that the lull in the long battle against socialized medicine was an excellent time to "win friends and influence people," the Bureau concentrated its efforts upon achieving the following constructive objectives:

1. Winning the favor of the public, thereby cultivating a favorable attitude toward the individual physician and his county and state medical societies.
2. Developing improving relationships between the doctor and his patient.
3. Stimulating and encouraging county medical societies to cooperate with the State Society in the development of effective public relations.
4. Promoting the cooperation of individual physicians as well as county medical societies with voluntary prepayment health insurance plans.

Specifically, steps to achieve these objectives included the maintenance of a State-wide publicity and information service; speakers bureau; the instituting of public service projects, such as emergency medical services and mediation committees; the promoting of Citizens' Health Education programs by publishing pamphlets, and liaison with State Society committees, Woman's Auxiliary, and other groups.

Field Program.—The field program during 1953 was a basic operation of the Bureau in the creation and development of the entire public relations program. Through visits to the county medical societies and other groups throughout the State, the field representatives were responsible, in large measure, for the successful completion of the many constructive projects.

Public Service Projects.—The principal projects for the betterment of the public were emergency services and mediation committees. Since these projects are continuing activities of the county medical societies, it was decided to make an up-to-date survey of these projects. The field representatives were employed in obtaining data on how the emergency services and the mediation committees were conducted. After this survey had been completed, a brochure was published by the Bureau giving the results.

In the field of emergency services it was found that there are now in existence 58 such panels throughout the State, an increase of four during the year. Although among the 61 county medical societies many areas do not actually need emergency services because of their physical conditions, the fact that only three county societies do not have emergency service gives an indication of an extremely fine record.

The number of mediation committees also increased during 1953. The latest survey shows that there are 54 such committees. In addition, there are three groups which act as mediation committees since the comitia minora or the board of censors performs the functions. The total, therefore, can now be listed as 57. While this is an increase of only one, it actually is an increase of three in real mediation committees as against the 51 listed last year. On the other hand, last year there were five groups functioning as such committees in the form of comitia minoria or board of censors. This has been reduced to three. The end result is that more and more county societies are following the trend to establish a special mediation committee to hear complaints.

The important point emphasized during the year was publicizing the committee. During the survey it was found that some counties had not effectively publicized these committees. As the year progressed, many county societies publicized these committees as suggested by the Bureau. It is hoped that in the near future every one of the 57 mediation groups will have publicized its availability to the public.

While there are no new medical economics bureaus to report, it can be said that much progress has been made in this field. Many societies are studying the idea of establishing these bureaus. In one instance the medical economics bureau was the reason why the county society reduced its county dues.

Citizens' Health Education Campaign.—Although this committee's last report to the House contained a report of the Bureau's activities in the Citizens' Health Education Campaign, many activities occurred afterwards. These were reported to the House by the chairman of the Citizens' Health Education Committee, Dr. J. Stanley Kenney. Your chairman, however, would like to refer to certain activities that took place after the last report. After the campaign had been completed and more than 460,000 pamphlets had been distributed, the Bureau in connection with the Citizens' Health Education Committee made certain that those who had been on our side were given due recognition by a letter of thanks. This was especially true of the legislators who had been on the side of medicine.

Long after our efforts had been finished, requests came from all over the country for information on how the campaign had been conducted. For example, requests were received from the Medical Association of the State of Alabama and from the director of public relations of the College of Physicians and Surgeons of the Province of Quebec. Another indication of interest was the fact that Mr. Miebach, the Bureau director, was given the opportunity to outline the method used in the successful campaign, to the annual medical public relations institute of the A.M.A. in Chicago last September.

Public Relations Conference.—On September 26, 1953, the Annual Conference of County Medical Society Public Relations Chairmen was held at the Hotel Biltmore in New York City. Approximately 50 persons were present. An innovation in the manner in which the conference was conducted this year was the active participation by representatives of the press, radio, and TV.

In keeping with the custom of the past several years, a "Public Relations Kit for County Medical Societies" was distributed. This contained 17 samples of public relations materials from various sources throughout the country or from the Bureau.

Evidence of the value of this conference was the fact that the American Medical Association's Public Relations Department requested copies of four items from the kit. These were distributed in the A.M.A.'s "PR Doctor," a compilation of public relations materials which was sent to key medical men throughout the nation. Particularly was the discussion on "heartbreak cases" widely reported. The *Journal of the Kentucky State Medical Association, Medical Economics,* and the press carried items about this discussion.

Minutes of this conference were published in the NEW YORK STATE JOURNAL OF MEDICINE.

Annual Meeting.—An innovation at the 147th Annual Meeting of the State Medical Society was the expanded use of radio and television for the purpose of bringing the meeting to the people. The greatest number of radio and television programs from a State Medical Society Annual Meeting was broadcast. More than 40 doctors and Woman's Auxiliary members participated. Although some programs were "live" presentations, many were presented by tape recordings made by Dr. Laurance D. Redway, editor of the JOURNAL, to whom your committee is most grateful. These broadcasts were supervised by Mr. Messinger, while Mr. Tracey acted as moderator for several.

Following the pattern of previous years, a press room was maintained throughout the meeting. Representatives of Buffalo papers, Associated Press, United Press, and a free-lance reporter used our facilities, which were manned by the field and secretarial staff of the Bureau. Available for the press were scientific digests of 18 papers presented at the meetings. These digests, which had been prepared by the field representatives and which had been carefully examined by Dr. George Schwartz, were very favorably received by the press.

In addition to these scientific releases, 98 special releases were mailed to the press, and there were others concerning the fifty-year doctors and the General Practitioner of the Year. Several issues of the *Newsletter* publicized the meeting prior to the convention and reported the convention. Also there were special releases on election of officers of the State Medical Society and the Auxiliary, as well as about the exhibit, entitled "Doctor, What's Your County Society PR Rating," featuring public relations activities advocated for county medical societies.

Publications.—One of the major projects undertaken by the Public and Professional Relations Bureau during 1953 was the publication of a 12-pamphlet series on medical economic subjects. This series, written in language for the man on the street, was in keeping with the spirit of the resolution adopted by the House of Delegates in 1953. This stated in part that the Committee on Public Relations be requested to conduct a Citizens' Health Education Campaign as a continuing effort, covering pertinent problems in medical public relations.

Each of the 12 pamphlets contained four pages on such timely subjects as emergency service, mediation committees, free choice of physician, cost of medical care, cults, activities of county medical societies, and related topics. The entire series was offered to each county medical society at half cost. The pamphlets were brought to the attention of the county societies by various media, such as the personal visits of the field representatives, letters, and items in the *Newsletter*. As a result, at the end of January, 1954, 1,200,000 of these pamphlets have been printed, and distribution has been started to the 32 county medical societies which have ordered them.

The pamphlets were produced under supervision of Mr. Messinger. Some texts, however, were submitted by doctors who had become enthusiastically interested.

Requests from the American Medical Association and other medical organizations indicate that this pamphlet series, one of the first of its type undertaken by a state medical society, may well be the start of another nation-wide program to improve doctor-patient relationships by presenting medical economic problems in succinct form.

While the pamphlet series was a major undertaking, the Bureau also produced several other significant brochures. Among these were "How to Conduct a Meeting Successfully," containing practical suggestions designed to help conduct county medical society meetings; "How to Make New Members Active Members of a County Medical Society," a compilation of the latest technics used by county medical societies in activating new members; "A Report on Emergency Service and Mediation Committees in New York State," containing up-to-date information on these services, and "A Chart of Emergency Services and Mediation Committees in New York State," a map showing the counties which have such services. These were produced under the supervision of Mr. Walsh and Mr. Tracey. Evidence that publications of this nature are of value was the fact that requests were received for an old publication, "Telephone Cues for Medical Personnel," from the Credit Bureau of Alexandria, Louisiana.

Newsletter.—Since 1953 marked the second year that the *Newsletter* has been sent to all the members of the Society, it was decided to conduct a survey to learn the reaction of readers. For this purpose the November issue of the *Newsletter* carried a special questionnaire. This asked doctors whether they were satisfied with the *Newsletter*, what they liked or disliked, and invited constructive suggestions. The result of the survey showed that by a count of more than 3 to 1 the readers were satisfied. Among the standard items favored by the readers were "County Society News Round Up" and "On the Scene in Washington." These suggestions have been helpful to the editor.

During 1953 the editor of *Newsletter* attempted to extend the usefulness of its columns. One step in this direction was the publication of comments by heads of State Society committees. Among these were articles by chairmen of the Committees on Legislation and Public Health and Education, the director of the Workmen's Compensation Bureau, the director of the Bureau of Medical Care Insurance, and others. In addition, the *Newsletter* publicized the State Society's Annual Meeting and brought news of action on legislation in Albany and Washington to the members. News of other interesting activities were also brought to members, such as the development of the Blood Banks Association of New York State.

The columns of the *Newsletter* were also used to promote several important public service projects. Among these was the Medical Aide Recruitment Program sponsored by the New York State Health Department. The *Newsletter* also publicized the gamma globulin program of the State Health Department and printed news of such other public activities as the diabetes detection drive.

While the format of the *Newsletter* was unchanged, constant effort was made to make it more readable and attractive. Liberal use was made of such devices as pictures and cartoons.

Much thanks is due to Dr. Arthur M. Master, a member of this committee, for the time and effort he gave to reviewing copy for the *Newsletter*.

News Releases.—In its role as a publicity and information center, the Bureau distributed approximately 170 news releases during the year, covering many varied subjects. Among these were releases on district branch meetings, the Annual Meeting, scientific papers given at the convention, use of gamma globulin by physicians of Steuben and Chemung County Medical Societies, Diabetes Week, delegates to the A.M.A.'s clinical session, "heartbreak" cases, Outstanding General Practitioner of 1953, fifty-year doctors, committee appointments, and election to the State Society's Board of Trustees.

Exhibits.—The work of publicizing the activities of the State Society through exhibits was continued and even expanded during 1953. Through the combined efforts of Mr. Charles L. Baldwin, Jr., exhibit manager for the Annual Convention, and the Bureau a representation of several important State Society activities was erected in the lobby of the State Society's headquarters at 386 Fourth Avenue.

During the summer an exhibit was maintained in the Hall of Springs at the Saratoga Spa. This was entitled "23,000 Doctors United to Improve your Health" under the caption "Sponsored by the Medical Society of the State of New York." The exhibit depicted various activities designed to assist the people. Reports from the Saratoga Spring Authority showed that 85,558 people visited this Hall of Springs while the exhibit was shown.

On another occasion the Bureau erected an exhibit at the Annual Meeting and assisted in another exhibit at the Syracuse State Fair with the Woman's Auxiliary. The Bureau also assisted county medical societies in presenting several other exhibits.

Liaison with the A.M.A.—As in the past several years, the Bureau maintained a close working relationship with the Public Relations Department of the American Medical Association. This relationship was strengthened by the fact that Mr. Miebach had served for two terms as a member of the advisory committee to the Public Relations Director of the A.M.A. Mr. Miebach's second term ended during the year.

Another means of cementing relations between the two organizations was the fact that the entire field staff and the director traveled to Chicago, September 2 and 3, to attend the Second Annual Public Relations Institute of the American Medical Association. The purpose of this Institute, designed for lay public relations medical personnel, was to provide for interchange of public relations technics and experiences with a view to improving medical public relations programs. Two of the New York men were discussion leaders. Mr. Miebach outlined the State Society's Citizens' Health Education Campaign, while Mr. Walsh reviewed Woman's Auxiliary activities in this State.

Among the many physicians and laymen who attended the A.M.A.'s Sixth Annual Medical Public Relations Conference in St. Louis, November 30, were your chairman and Mr. Miebach, the director of the Bureau. They also attended the clinical session of the A.M.A which followed.

Another indication of the good working relationship between the two organizations was the presentation of New York State items in the A.M.A.'s "PR Doctor." Items pertaining to several county medical societies have also appeared in this public relations compilation.

Cooperation with Executive Officer.—As in the past, the Bureau acted whenever called upon to do so in cooperation with the executive officer in Albany.

District Branch Meetings.—Prior to sending releases to newspapers throughout the State concerning the district branch meetings, the Bureau polled the district branch presidents as to their wishes about handling publicity, either themselves locally or through the Public and Professional Relations Bureau. The presidents favored the latter course, which was continued.

Following the system set up in 1952, the field representatives attended district branch meetings to handle registration. Mr. Miebach also attended each district branch meeting for the purpose of handling negotiations with the local press concerning news items.

Public Relations Special Mailings.—As a means of keeping county medical society public relations chairmen and other officials abreast of progressive PR activities, the Bureau made several special mailings. Among the materials supplied to county society officials were reprints of such favorable press stories as "Physicians Emergency Service Has Had 200 Calls Since Start" (*Daily News*, Batavia); "County Medical Society's Emergency Service Always Has Doctor Member on Call" (Syracuse *Herald American*). Another useful item was an eight-page pamphlet describing how the Pinellas County Medical Society of Florida conducted a medical forum in conjunction with the St. Petersburg *Times*.

Public Relations Session.—The Bureau assisted Dr. John D. Naples, public relations session chairman for the 1954 Annual Meeting, in making preparations. Such details as writing letters and giving publicity to the session in the *Newsletter* were handled by the Bureau.

Liaison with Society Committees and Other Groups.—Another important activity of the Public Relations Committee and the Bureau was working with groups within and outside the State Medical Society. A close liaison was developed between the Bureau and the State Health Department in furthering the latter's gamma globulin program and its Medical Aide Recruitment Program. In cooperation with Dr. Theodore J. Curphey, chairman of the Committee on Public Health and Education, the Bureau assisted in the gamma globulin program through news releases and publication of special articles in the *Newsletter*. A particular example of the result of this teamwork was the excellent publicity given to the county medical societies in Steuben and Chemung for their part in the mass inoculations. It is anticipated that this cooperation will be continued during the spring of 1954 when the new polio vaccine will be tried in this State.

Working in cooperation with Dr. J. G. Fred Hiss, chairman, Special Committee on Medical Defense, and Dr. James H. Lade, director, Office of Medical Defense of the New York State Department of Health, the Bureau assisted in executing the Department's Medical Aide Recruitment Program. After conferences with Dr. Lade, the field men went into their respective territories and brought this program of the State Health Department to the county medical societies. In addition a column of the *Newsletter* carried special messages about it.

The Bureau's director attended the Conference of Secretaries of County Medical Societies at Albany on November 18, and representatives of the Bureau attended the National Health Council meeting in New York City. This discussed the report of the Magnuson Committee created by former President Truman to report on the health needs of the nation. The director also attended the New York State Health Council meeting at Albany. In regard to other groups, good relationships were continued with such other organizations as the Health Insurance Council and the Chamber of Commerce of the State of New York.

The director also advised the director of the Workmen's Compensation Bureau, Dr. David J. Kaliski, and the chairman of the Committee on Liaison with the Veterans Administration, Dr. Herbert H. Bauckus, when requested.

Advisory Service to Press, Radio, and TV.—On many occasions during the year the Bureau was requested by the press, radio, and TV to help in preparation of articles and programs. Writers preparing articles for such publications as *Look*, *Medical Economics*, and the *Toronto Star* of Canada visited the Bureau. These articles varied from stories about mediation committees and emergency services to chiropractic and the scope of New York State's medical postgraduate program. In the field of radio, the Bureau worked closely with representatives of the Columbia Broadcasting System in the preparation of a program broadcast over a nationwide radio chain. This consisted of a one-hour documentary program dealing with false medical cures, including chiropractic.

In the field of actual appearances on radio and television, the Bureau was also active. Among the programs on which the Bureau arranged for doctors to appear, were "Do You Think" (WNBF–TV), Binghamton, New York, and "Behind the Lines" (WNBT–TV), New York City.

Code of Cooperation.—To carry out the wishes of the House of Delegates that a code of cooperation be drawn up between the medical profession, the press, radio, TV, and photographers, Dr. Eggston appointed a special subcommittee of the Committee on Public Relations. The subcommittee, headed by Dr. John C. McClintock, also includes Dr. John D. Naples and Dr. Henry I. Fineberg. Their report follows this one.

Speakers Service.—Although the request for speakers was reduced during the year, the Speakers Service continued to have a panel available. Requests for speakers on medical research, chiropractic, and psychiatry equaled the requests for medical and social topics. In accordance with the established policy, the majority of requests were referred to, and accepted by, members of county societies where the request originated.

As a service to county public relations chairmen, a separate file on all materials on such public relations developments as emergency service, mediation, medical economics bureaus and malpractice insurance committees was assembled. Copies of all the major magazine articles dealing with medicine and medical care also have been made available to interested physicians.

Radio.—A map was prepared showing radio stations throughout the State which broadcast A.M.A. health education transcriptions, and letters were sent to county and Auxiliary public relations chairmen directing their attention to each new series as released. This stimulated the receipt of several requests for transcriptions which were provided through the cooperation of the Bureau of Health Education of the A.M.A. Scripts and speech material for several kinds of radio talks also have been made available to county society speakers bureaus.

Health Films.—The Bureau continued to keep an up-to-date record of health films to make certain that all requests, a majority of which originated from social and civic organizations, secure the type desired. Files included film catalogs of the city and State health departments, Federal Security Administration, and numerous private film organizations.

TV Films.—As part of its effort to promote greater use of the A.M.A's. Television Film Package, the Bureau suggested to every county medical society, where TV stations are located, that the availability of films be brought to the attention of TV station managers. The sponsors indicated that more than seven million residents in the State have, or will soon have, the opportunity to see the four films in the package, namely, "Operation Herbert," "Your Doctor," "A Citizen Participates," and "What To Do." Special television scripts on health subjects and other material for use in the production of television programs by county medical societies also were available.

Woman's Auxiliary.—As reported elsewhere, the Bureau assisted the Woman's Auxiliary during the year in many ways. Among the noteworthy activities were the planning and preparation of the 1953–1954 "Ladder," the State Fair, the fall conference, the Nurse Recruitment Scholarship and Future Nurses Club, convention, the *Distaff*, the preparation of a series of monthly articles for the New York State Journal of Medicine, and the Health Poster Contest. A survey of the amount of publicity given to the poster contest shows that 113 articles appeared in 79 newspapers among 27 counties.

Conferences were also conducted with officers and chairmen of State committees on the following subjects: public relations, legislation, *Today's Health*, Physicians' Home, voluntary medical care plans, membership, and mental health.

The Bureau also continued to provide administrative, secretarial, and clerical assistance and made a special effort to bring the membership files up to date, while representatives of the Bureau spoke before the county auxiliaries whenever invited.

The Bureau is grateful to the president, Mrs. Thomas M. d'Angelo, and other members of the Auxiliary for their constant cooperation.

Public Relations Program for 1954.—The 1954 public relations program will be conducted with the following items as major points of operation:

1. Maintaining a State-wide publicity and information service.
2. Promoting medical forums cosponsored by newspapers.
3. Encouraging programs of "adequate medical care for all regardless of ability to pay."
4. Sponsoring the establishment of a Code of Cooperation between county medical societies and press, radio, and TV.
5. Instituting new public service projects and improving those in existence.
6. Continuing Citizens' Health Education programs through the publication of pamphlets.
7. Maintaining liaison with Society committees, the Woman's Auxiliary, and other groups.
8. Promoting voluntary prepayment health insurance plans.
9. Expanding speakers services and radio and television activities.
10. Continuing the field program.

In closing, your committee wishes to express to the officers, committees, members, and employes of the Society, as well as the officials of the 61 component county medical societies, its heartfelt appreciation of the responsive manner in which suggestions and plans of this committee have been received during the past year. Such acceptance of our efforts inspires us to try most earnestly to continue and increase our services throughout the coming year.

Cooperation Between Medical Profession, Press, Radio, Television, and Photographers

The Subcommittee of the Council Committee on Public Relations appointed by the president to draw up a Code of Cooperation between the medical profession, the press, radio, TV, and photographers, consists of the following:

John C. McClintock, M.D., *Chairman*	Albany
Henry I. Fineberg, M.D.	Jamaica
John D. Naples, M.D.	Buffalo

The first step taken by our subcommittee was to draw up a tentative draft of such a code. This draft was based upon materials gathered from sources throughout the country by the Bureau of Public and Professional Relations. The second step was the presentation of this tentative draft to key officials in the State Medical Society for their consideration.

The third step was the mailing of the tentative draft to important representatives of the press, radio, TV, press photographers, and other interested groups. Among these were the Associated Press, National Association of Radio and Television Broadcasters, American Broadcasting Company, Newspaper Reporters Association of New York City, and the New York State Society of Newspaper Editors.

The fourth step was the appearance of Dr. McClintock and Dr. Naples at a meeting of the New York State Society of Newspaper Editors in early February at the Hotel Statler in Buffalo. Dr. McClintock and Dr. Naples discussed the proposed draft of the code on the invitation of Mr. Burrows Matthews, Association president. Mr. Miebach also attended.

The fifth step was an invitation to leaders of the press, radio, television, and photographers groups as well as the medical profession to attend a joint meeting at the Hotel Biltmore, New York City, on February 12. The purpose of this meeting was to allow representatives of groups to be affected by the code to present their views on a proposed agreement by all concerned.

At the time that this report is being made, it is hoped that a final code, satisfactory to all, will be ready for submission to the House of Delegates at the May meeting.

PART XII

MISCELLANEOUS

Nursing Education

The Council Committee on Nursing Education consists of the following members:

Joseph A. Geis, M.D., *Chairman*	Albany
Elton R. Dickson, M.D.	Broome
Louis M. Rousselot, M.D.	New York City

There has been no meeting of the committee because of inability to set a date which will enable a majority of the members of the Coordinating Council on Nursing Problems to attend.

It might be said that so far there has been a masterful inactivity of the committee.

Woman's Auxiliary

The Advisory Board of the Medical Society of the State of New York to the Woman's Auxiliary to the Medical Society of the State of New York, consists of the following:

Edward T. Wentworth, M.D., *Chairman*	Rochester
Thomas M. d'Angelo, M. D.	Jackson Heights
Harry I. Norton, M.D.	Rochester

The Board expresses appreciation to President Eggston for the opportunity to represent the Auxiliary in the Council and to serve the Auxiliary in any way. The members of this Advisory Board have a very high opinion of the intellectual capacity of the women of our Auxiliary. These wives of doctors are naturally conversant with the ethical, social, and material values governing the doctor. In addition, they can extract from the public its frank opinion of such values more efficaciously than can the doctor himself. It is rather doubtful whether even the professional sociologist can make as valuable a contribution to mature evaluation of those health measures in which the doctor is actively a part as can the Auxiliary. As a result of experiences in listening to the officers, directors, and committee chairmen of the State Auxiliary as they conduct their meetings and numerous conferences, we are deeply impressed with the conscientious sense of responsibility to society which, as they express it, they have assumed upon marrying into the medical profession. We are also deeply impressed by the businesslike efficiency with which their affairs are conducted.

As expressed by the president of the Auxiliary to the American Medical Association, it is necessary for every doctor's wife to be informed on matters concerning the public health or remain quiet, "when out in public," on many of the ethical, economic, political, and social subjects pertaining to the nation's health which are commonly discussed by women meeting in many different types of gatherings.

The Auxiliary publication, the *Distaff*, under the guidance of its very able editor, Mrs. Adolph H. Emerson, of Brooklyn, has advanced to a position of one of the most outstanding of women's publications. The auxiliary also publishes, at the beginning of each year, a rather extensive volume called, "The Ladder to Auxiliary Success," which is an outline of the proposed work for the year on State and county levels. It is full of suggestions for district and county officers and committee chairmen, both State and county. The Auxiliary Bulletin of the American Medical Association is also available to each member of the Auxiliary at $1.00 per year. Dr. Laurance D. Redway, editor of the JOURNAL, is publishing a series of articles on Auxiliary activities in the NEW YORK STATE JOURNAL OF MEDICINE for the purpose of stimulating the physician to a proper understanding and appreciation of the work of the Auxiliary, in order that he may support his wife in such activities. Such publications, plus *Today's Health*, are providing a considerable literature for expression of the highest ideals in medicine and public health.

It is a great pleasure to convey to the House of Delegates expression of the many fine tributes which have been received from our women to Dr. Walter W. Mott and his associates of the preceding Advisory Board. These women have a profound and fine appreciation of the work done to aid them in their service. These women also have always manifested ability in evaluating themselves in the matter of selection of their officers. They have always had outstanding women as presidents. They have again selected an outstanding woman, Mrs. Thomas M. d'Angelo, the wife of our assistant treasurer, as president.

During the past year the Auxiliary has continued in its efforts to carry on its own programs and to supplement the activities of the State Society. Effective if not always tangible results are obtained in public relations and legislation. Perhaps its most tangible effectiveness is manifest in providing a scholarship fund for nurses in training and in supporting the Physicians' Home and the American Medical Education Foundation. During the past two or three years the women of the State and county auxiliaries in this State raised over $41,000 in support of nursing education, making it possible for 246 students to get such an education. The Physicians' Home chairman of the Auxiliary has been made a member of the Physicians' Home Board. The several auxiliaries in the State supported that work by $1,500 during the past year and added $1,200 to the American Medical Education Foundation Fund.

In connection with the Nurse Recruitment Program there has been added this year a system of Future Nurses Clubs, through which young women who are interested are provided with information on the advantages of a career in nursing. The Auxiliary intends to do everything possible to make certain that both patients and physicians in New York State have available, whenever needed, the services of both professional and practical nurses.

Mrs. A. B. Thompson, of Pulaski, chairman, and her group in charge of the Auxiliary exhibit at the State Fair in Syracuse in September estimated that between 6,000 and 7,000 people stopped and reviewed panels on nutrition, voluntary medical care plans, nurse recruitment, medical public relations, and *Today's Health*. The women who have been conducting this exhibit during the past several years are convinced that the number of people being reached would be much larger if the exhibit were not located on the second floor of the Women's Building but in one of the general exhibit buildings on a ground floor. Moreover, the space which they can get in the Women's Building is much smaller than they need for the amount of material which can properly be presented. An objection to moving the place of exhibit is that, were it moved, it would have to be conducted under the auspices of the State Society. Your Advisory Board is strongly of the opinion that this is a project of the Woman's Auxiliary and should remain so. The present location is relatively quiet. Locations in general exhibition buildings are extremely noisy. Probably benefit to 6,000 people, who can really concentrate on what is available, is of greater value than the cursory glance of three times that number.

The State Society allocated $500 to support this exhibit. The Auxiliary returned to the State Society an unused balance of $79.67. Your Advisory Board was provided with a detailed financial statement covering the expenditures.

The Second Annual Health Poster Contest is manifestly popular with both educators and children. Schools in 26 counties are participating this year. Last year, 6,000 children in four age-group levels produced posters. Each participating county selects the outstanding poster in each of the four groups. The final judging of the State contest for selection of the State-wide prize winners will be conducted in Rochester at the Academy of Medicine, April 10. Many of the counties give prizes to their winner. The State Auxiliary awards first and second prizes in each of the four age groups as well as first and second honorable mention in each age group. The State prizes amount to $500 in U.S. Savings Bonds. Selection of posters is based upon the following values: health message, 60 points; originality of design, 25 points; neatness and general appearance, 15 points. Great credit is due Mrs. Isadore Zadek of Bronxville, chairman, and her associates in carrying out so efficiently this great work of instilling into each child an awareness of the fact that he or she is the first guardian of his own and his community's health.

Mrs. Louis Harris of Brooklyn, chairman, and her associates in the Auxiliary Voluntary Health Plan Committee are doing an outstanding work in support of Blue Shield. Your Board is of the opinion that if Blue Shield put on its own advertising campaign at the State Fair, it would release much needed space in the Auxiliary's exhibit and expose Blue Shield to a much larger audience.

Because of the general public interest and increased awareness of the importance of mental health, our State and county auxiliaries are participating in a program initiated by the Auxiliary of the American Medical Association and carried on by Mrs. Albert M. Biglan, of Central Islip, as State chairman. County committees on mental health are being formed to work with other agencies interested in the same problem. Our women are also preparing themselves to assist in the widespread and extremely important project of the new Blood Banks Association of New York State.

As yet the Auxiliary has not promoted any definite, State-wide activity in connection with medical defense but has recommended that the county auxiliaries assist wherever possible. Such assistance has been in personnel recruitment, publicity, cooperation with the American Red Cross in organization of first-aid classes, in registration of doctors, air wardens, and medical aides.

Membership in the Auxiliary is not anything like as large as it should be. Great difficulty has been encountered in arousing interest on the part of the doctor's wife in even some of our largest counties. The problem in some of the low population rural counties can sometimes be met by combination. Four years ago the Council authorized county woman's auxiliaries to accept members from neighboring counties that have no auxiliaries. Authority to decide where such combinations were in order was left with the president of the State Woman's Auxiliary. During the past year the women of Washington County requested the privilege of joining the Warren County Auxiliary. This problem was put up to your Advisory Board. After a rather thorough study of the situation locally in the two counties, including an on-the-spot survey of opinions of the leading physicians in the two counties, and after obtaining official approval of the county societies, the Council approved the request. This is cited because it is an excellent example of the desire on the part of the Woman's Auxiliary to have full approval of the State Society in everything it does.

In the field of legislation the Auxiliary stands ready to assist the State Society by letter writing, systematic telephone communications, and provision of lists of local opinion leaders, to the end that our legislators may be fully cognizant of our opinions on proposed legislation concerning health matters, both State-wide and local.

Although at the time of the annual convention the Auxiliary will be conducting its own meetings, it has consented to conform to Dr. Anderton's request and provide a Committee of Hostesses and Guides as well as to participate in the sale of tickets for the Annual Banquet.

Your Advisory Board suggested to the Council and Board of Trustees a change in the State Society's budget pertaining to the Woman's Auxiliary, which suggestion was approved. This consists of a budgetary reduction of $2,805 for the year 1954. The reduction is entirely a matter of readjustment of charges against the Auxiliary for office salaries, payroll taxes, insurance, and field representatives' salary. It does not reduce by one penny the amount of money actually given to the Auxiliary for publication of the *Distaff*, pamphlets, and bulletins; for stationery, telephone and telegraph, New York State Fair, poster contest, etc. Experience has proved that these budgetary reductions are entirely justified. There has been a good deal of discussion on the part of your Advisory Board with the officers and directors of the Auxiliary, and with the editor of the *Distaff*, concerning the feasibility of reducing the $2,000 expense of publishing the *Distaff* by utilizing advertising support, but no decision has been reached.

Your Advisory Board appreciates greatly the thorough cooperation of all officers, directors, and committee chairmen of the Auxiliary in its work. It also wishes to express, not only for itself but also for the Woman's Auxiliary, gratitude to the entire personnel of the Public and Professional Relations Bureau for its invaluable assistance. The officers, Council, and Board of Trustees of the State Society have given patient and careful consideration to our reports and suggestions. Your Advisory Board includes the House of Delegates and the membership of the State Society in expressing thanks to Mrs. d'Angelo and her devoted coworkers for the tireless and self-sacrificing efforts they are expending in the interest of the physicians and the people of this State.

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Ethics

The Council Committee on Ethics consists of the following members:

Thurman B. Givan, M.D., *Chairman*...Brooklyn
Frank LaGattuta, M.D..................Bronx
Ezra A. Wolff, M.D................Forest Hills

The committee wishes to report on the following matters which were referred to it during the year 1953.

The House of Delegates referred the matter of fee-splitting. Reporting on a resolution which condemned the practice of fee-splitting and required that the Attorney General of the State of New York be memorialized to institute legal action for the full and effective enforcement of Section 6514 of the Education Law, the reference committee recommended, and the House concurred, "that this resolution be referred to the Council for the statistical study of the alleged grievances before complaint is made to the attorney general." The committee agreed that until alleged grievances were submitted, no statistical study evidently could be made; hence no complaints could be made to the attorney general. If and when any such complaints are made, the committee will make such a study.

There was also referred by the House of Delegates for consideration a resolution on proration of fees. The committee felt that if and when Section 6514 of the Education Law is amended to permit proration of fees under certain conditions, a paragraph Section 7, be added to Article VI of Chapter III of the *Principles of Professional Conduct:*

> "PRORATION OF FEES
>
> "*Section 7.* It is not unethical for an indemnity fee to be prorated between two or more physicians when such physicians actively participate in the rendering of medical and/or surgical care, and the fee therefore is commensurate with the services rendered; and the patient to whom such care shall have been rendered shall be advised of the participation and of the distribution of the fee through an itemized combined statement or separate statements. Such proration would be considered ethical if it was limited to instances where a contracted fee payment for a service has been made by an insurance company."

This same question on proration of fees was brought before the House of Delegates of the American Medical Association at the December, 1953, meeting in St. Louis, Missouri. It was referred to the Judicial Council of the American Medical Association for consideration and report at the June, 1954, meeting.

Several questions relating to ethics were referred to the committee from individual members throughout the State. Decisions of the committee were supported in nearly every instance by the Council and have been published in the JOURNAL.

The House of Delegates voted to adopt "A Code of Press Cooperation" (Section 130). The Council referred this jointly to the committees on Public Relations and on Ethics. This matter is being worked on but is not yet ready for final action.

The Council recommended that Chapter XVII, Section 1, of the Bylaws be so amended that following the word "Bylaws" there be inserted the words "or the *Principles of Professional Conduct.*" Chapter XVII would then read:

> "*Section 1.* Amendments to these Bylaws or the *Principles of Professional Conduct*, except such as are obligatory by law, shall be made only at an annual meeting of the House of Delegates.
>
> "*Section 2.* Notice of the proposed amendment shall be given at a previous annual meeting of the House of Delegates, and before the same can be acted upon it shall be published once before the annual meeting in the official bulletin or journal of the Society.
>
> "*Section 3.* The affirmative vote of two-thirds of the House of Delegates present and voting shall be necessary for adoption.
>
> "*Section 4.* Amendments made necessary by law shall be made either by the Council or House of Delegates whenever such necessity exists."

A communication from Dr. Albert Vander Veer, II, secretary of the Medical Society of the County of Albany, was referred to the Committee on Questions of Ethics:

> "WHEREAS, the Medical Society of the County of Albany has expressed its disapproval of hospitals engaging in the practice of medicine by endorsing the recommendation of the House of Delegates of the Medical Society of New York, and
>
> "WHEREAS, plans are being introduced by administrative decision, often without prior consultation with the medical profession, to finance hospital and/or medical college deficits by requiring practicing physicians to contribute their earnings above a predetermined limit, and
>
> "WHEREAS, in many of these plans the practicing physician is denied any voice in the management or disposition of these funds; therefore, be it
>
> "*Resolved*, that the Medical Society of the County of Albany reaffirms its disapproval of hospitals engaging in the practice of medicine; and be it further
>
> "*Resolved*, that the Medical Society of the County of Albany disapproves any plan restricting the income of practicing physicians when the control of the plan is not vested in the members of the plan; and be it further
>
> "*Resolved*, that the Council of the Medical Society of the State of New York to be requested to consider and endorse this resolution; and be it further
>
> "*Resolved*, that the Council of the Medical Society of the State of New York be requested to forward this resolution as endorsed to the House of Delegates of the American Medical Association for their consideration and endorsement."

The matter was presented to the Council which in turn decided to present a substitute resolution to the House of Delegates of the American Medical Association in December, 1953. Because of the shortness of time it was voted to give the New York State Delegates to the American Medical Association power to decide whether or not the substitute resolution should be introduced after they had an opportunity to confer with the Albany County Medical Society.

The substitute resolution introduced by Dr. Thurman B. Givan, New York Delegation, was as follows:

> "*Whereas*, the Medical Society of the State of New York has expressed its disapproval of hospitals engaging in the practice of medicine, and
>
> "*Whereas*, plans are being introduced by administrative decision, often without prior consultation of the medical profession, to finance hospitals and medical college deficits by requiring practicing physicians to contribute their earnings above a limit solely determined by the hospital; therefore be it
>
> "*Resolved*, that the American Medical Association disapproves of hospitals engaging in the practice of medicine; and be it further
>
> "*Resolved*, that participation of a hospital in the professional earnings of a physician (except for equitable payment to the hospital for services it renders the physician, such as provision of office space,

secretarial service, supplies) constitutes practice of medicine by the hospital and is therefore disapproved."

The New York State Council voted that the secretary be instructed to write to Albany County that their resolution, presented to the Council, raised no question of ethics, that they should hold hearings at the local level to determine all of the facts. Those facts should include the proportion of salary to be charged for rent, secretarial service, and all other factors and then determine at the local level whether it is unethical and so advise the parties; also the Education Law, Article 131, Section 6514, paragraph 2 (f) seems applicable to the situation.

Belated Bills

These bills are submitted to the House of Delegates because they were received in the office of the State Society more than ninety days after they were incurred.

1. Telephone calls by Dr. Elton R. Dickson, president of the Sixth District Branch, June 24, 1953, from:

Binghamton to Waverly	$0.55
Binghamton to Waverly	0.70
TOTAL, including taxes	$1.61
Other phone calls	
June 18, 1953 (one) July 6, 1953 (two)	3.65
TOTAL of telephone calls	$5.26

2. In connection with the Second District Branch meeting of October 28, 1953:

Postage	$9.83
Floral decorations for dinner	3.25
Place cards	0.54
TOTAL for dinner	$3.79

3. Women's Auxiliary of Second District Branch, October 28, 1953, corsage for State Auxiliary President, Mrs. Thomas M. d'Angelo, $5.00.

It is recommended that the House of Delegates empower the Board of Trustees to have these bills paid.

Convention

The Convention Committee consists of the following:

Thomas M. d'Angelo, M.D., *Chairman*	Jackson Heights
W. P. Anderton, M.D.	New York City
Maurice J. Dattelbaum, M.D.	Brooklyn
Thomas E. Alexander	New York City

The 147th Annual Convention of the Medical Society of the State of New York was held at the Hotel Statler in Buffalo, from May 4 through 8, 1953.

Registration.—An increase of $16^{2}/_{3}$ per cent was noted in the total registration over the previous Buffalo meeting in 1951, while the physician attendance decreased about 5 per cent. Attendance figures follow:

Physicians	1,534
Allied professions (medical students, interns, dentists, nurses, technicians, and others)	599
Guests	295
Technical exhibitors	321
TOTAL	2,749

House of Delegates.—Because of a curtailment of the amount of available space, the House of Delegates met in a section of the exhibit area rather than in the ballroom as in previous years. A large number of resolutions (77) necessitated an evening session.

It was voted to establish the Session on Legal Medicine, which will present a program at the 1954 convention.

Scientific Program.—The scientific program underwent a change. Instead of the usual two general sessions, there were five, one on each afternoon. The sections held only one scientific meeting, each of specialist interest, and contributed papers to the general sessions of broad interest to other specialists and general practitioners. Dr. Alfred P. Ingegno, chairman, Subcommittee on Scientific Program, with the associate chairmen for general sessions, postgraduate lectures, round table discussion, and section and session officers planned the program. There was an evening round table discussion and two morning postgraduate lectures. Over 100 papers were read. The Pediatric Section and the Section on Obstetrics and Gynecology combined in a joint meeting to present and discuss papers of mutual interest.

It was felt that this changed type of scientific program was highly successful and will be continued at the 1954 convention in New York City.

Attendance figures for scientific meetings follow.

Sections	
Anesthesiology	60
Chest Diseases	170
Dermatology and Syphilology	54
Gastroenterology and Proctology	120
General Practice	150
Industrial Medicine and Surgery	34
Medicine	76
Neurology and Psychiatry	81
Obstetrics and Gynecology	64
Ophthalmology and Otolaryngology	50
Orthopedic Surgery	40
Pathology and Clinical Pathology	35
Pediatrics	85
Preventive Medicine and Public Health	52
Radiology	45
Surgery	45
Urology	36
Sessions	
History of Medicine	40
Physical Medicine	21
Public Relations	20
General Sessions	
Monday	100

Tuesday	250
Wednesday	255
Thursday	200
Friday	150
Postgraduate Lectures	
Tuesday	60
Wednesday	90
Round Table Discussion	65

Scientific Exhibits.—Fifty scientific exhibits were accepted by the Subcommittee on Scientific Exhibits, Dr. Beverly C. Smith, chairman. The exhibits were opened on Monday rather than on Tuesday, as in previous years. However, it is now felt that a Tuesday opening is preferable and will be so planned for the 1954 convention.

The Scientific Awards Committee selected the following exhibits for recognition, and the House of Delegates voted them awards. Signed certificates of award were sent the winning exhibitors.

Clinical Research

First Award: "Long-term Antibiotic Therapy in Chronic Bronchitis and Infectious Asthma," Walter Finke, M.D., Genesee Hospital, Rochester

Second Award: "Prevention of Allergic Transfusion Reactions," Charles S. Coakley, M.D., Harry E. Ferris, D.D.S., and Seymour Alpert, M.D., George Washington University Hospital, Washington, D. C.

Honorable Mention: "Intravenous Trypsin in Thrombotic and Inflammatory States," Irving Innerfield, M.D., Alfred Angrist, M.D., and Alfred Schwartz, M.D., New York Medical College, Flower and Fifth Avenue Hospitals, and Jewish Memorial Hospital, New York City

Scientific Research

First Award: "Synthetic Organ Mechanisms," Arthur E. MacNeill, M.D., University of Buffalo School of Medicine, Buffalo

Second Award: "Surgical Anatomy of the Portal System," John L. Madden, M.D., John M. Lore, Jr., M.D., and Frank P. Gerold, M.D., St. Clare's Hospital, New York City

Honorable Mention: "Injuries to the Menisci of the Knee Joint," Frederick Lee Liebolt, M.D., New York Hospital-Cornell Medical Center, New York City

Television.—Colored medical television was brought to the Buffalo area for the first time. This was sponsored by Smith, Kline & French and was broadcast from the Buffalo General Hospital under the supervision of Dr. John D. Stewart, chairman, Television Committee. It drew an enthusiastic audience of 1,650.

Scientific Motion Pictures.—The motion picture exhibit, under the supervision of Dr. Conrad Berens, chairman, Subcommittee on Motion Pictures, was handled by the Medical Film Guild, Ltd., who reported a total attendance of about 800.

Technical Exhibits.—Mr. Charles L. Baldwin, Jr., in charge of technical exhibits reported 82 exhibits, an increase over the previous Buffalo meeting. The technical exhibits were in the ballroom, a change necessitated by the curtailment of hotel space.

Annual Meeting and Dinner Dance.—The Annual Meeting and Dinner Dance was held on Wednesday evening and was attended by 234 guests. The speakers were Dr. Edward T. Wentworth, Dr. Andrew A. Eggston, and the Honorable Charles S. Desmond, Associate Judge of the Court of Appeals of New New York State. The American Heritage Foundation Award was presented to the State Society by Dr. Thomas R. McConnell, chancellor of the University of Buffalo. A fine orchestra provided dancing after the dinner. Dr. William J. Orr was chairman of arrangements.

Woman's Auxiliary.—The Woman's Auxiliary to the Medical Society of the State of New York held a busy convention. Again the ladies provided a committee of ushers to help direct doctors to meeting rooms.

Miscellaneous.—A card of thanks was sent to each participant in the scientific program. Chairmen of committees and officers of sections and sessions expressed thanks to the State Society personnel for help in arranging the convention.

A meeting of the Convention Committee, including the Subcommittee on Scientific Program, was held October 17, 1953, at the Hotel Statler in New York City. The scientific program for the 1954 meeting was discussed and planned.

The question of dividing the Section on Ophthalmology and Otolaryngology into two sections had been referred to this committee by the Council. After discussion it was voted to recommend to the Council that the Section on Ophthalmology and Otolaryngology be divided into separate sections, the Section on Ophthalmology and the Section on Otolaryngology.

Dr. Ingegno asked this committee whether they thought a questionnaire should be distributed at the convention, asking the members if they like the convention, what their preferences are in regard to the type of program, what pleased them, what did not, etc. It was voted that it be recommended to the Council that such a questionnaire be distributed at the 1954 convention.

Dr. William L. Watson, chairman, Subcommittee on Scientific Exhibits called two meetings of his committee to plan the details of the 1954 scientific exhibit. A new and improved application blank was drawn up and has much facilitated consideration of and arranging the exhibits.

Dr. Colgate Phillips, chairman, Motion Picture Subcommittee, is working out the details of the motion picture exhibit program with his committee.

Office Administration and Policies

The Committee on Office Administration and Policies consists of the following:

John J. Masterson, M.D.,
Chairman........................Brooklyn
Walter P. Anderton, M.D.......New York City
Renato J. Azzari, M.D..................Bronx
Maurice J. Dattelbaum, M.D.........Brooklyn
Andrew A. Eggston, M.D........New York City

The committee is responsible for the management of the clerical office. In general, the employment of personnel, salary adjustments, and the initiation of new procedures is included in the committee's duties in so far as the clerical staff is concerned. Meetings are held once each month, except during July and August. Between meetings daily operation of the office is the responsibility of the secretary and general manager of the Society, Dr. W. P. Anderton. Responsible to Dr. Anderton is the office manager, Mr. Thomas E. Alexander.

At each monthly meeting the committee receives a report from the office manager. This consists of information regarding requested personnel changes, salaries, and any other details pertinent to the daily routine of any office. The committee approves every clerical salary increase before it becomes effective and in each instance gives the matter careful consideration.

Among the various duties of the committee there is the need for continual study and investigation of possible new procedures and the installation of labor-saving equipment. We have found it practical to approve obtaining a counting machine which materially reduces the time and labor expended in handling and mailing of the *Newsletter*, as well as the reconciliation of Membership Department records with the financial records. The saving here amounts to about $200 per year. The committee has also approved the purchase of a copying machine which is basically a photographic process. This was done in an effort to reduce the time and labor involved in preparing lists of members names and addresses in connection with the payment of American Medical Association dues. We know that the time saved through this new procedure will be material.

The committee has always been aware of the need of reducing personnel wherever possible. At the present time we are attempting to operate one of our departments with fewer personnel. If this can be accomplished permanently, there will be a saving of more than $2,700 per year.

Special emphasis has been placed on employe punctuality and attendance during the past year. In some instances, in order to emphasize the need for punctuality and attendance, it has been necessary to deny salary increases to some members of the staff. There has also been installed an employe rating plan, under which department heads will be expected to review periodically the qualifications of each individual member of the clerical staff, as well as the progress being made by that individual. It is hoped we shall be able to improve upon the present staff, as well as recognize the merit of those who carry on the daily clerical work of the Society.

The office staff has gradually become acclimated to our new office. Already, though, we have had growing pains. The need for additional space has been felt because of the allocation of an office to the Blood Banks Association of New York State and the employment of an assistant to Dr. Anderton. In addition, we must be in a position to provide space, if required, when and if a Bureau of Industrial Health is activated.

During the year the staff celebrated the twenty-five years of service of Miss Janet Loy, supervisor of the Directory Editorial Department with a dinner at one of our local restaurants.

The staff held its annual outing in June with a boat ride to Bear Mountain and a picnic lunch. In December a staff Christmas party was held at the Hotel Statler.

In this report your committee would be remiss if it did not commend the staff for the job it is doing. It wishes particularly to express its appreciation to each one. It is with pleasure that we especially commend Miss Mary McMahon, Supervisor of the Membership Department, Mr. William Bonzer, Mail Room Supervisor, and Mr. Frank Grassi, Accounting Department Supervisor. We must remember the contribution to the general and daily routine of the Society which our hard-working secretary and general manager, Dr. Walter P. Anderton, makes to the smooth functioning of each step. The committee expresses its deepest thanks to him.

This committee consists of representatives from the Board of Trustees and the Council, the secretary, and treasurer of the Society. It is recommended that the House of Delegates reappoint a similar committee on Office Administration and Policies for the coming year.

Reports of Special Committees

Report of the Special Committee on American Medical Education Foundation

To the House of Delegates, Gentlemen:

The Special Committee on American Medical Education Foundation has the following membership:

William C. Rausch, M.D., *Chairman*	Albany
Daniel S. Cunning, M.D.	New York City
John L. Edwards, M.D.	Hudson
William J. Orr, M.D.	Buffalo
William E. Pelow, M.D.	Syracuse
Edwin P. Russell, M.D.	Rome

Every practicing physician should be familiar, at least in a general way, with the problem of keeping American medical education financially sound. Institutions of higher learning, especially the medical schools, are faced with dollars and cents problems that must be met. There are 72 medical schools and seven basic science schools, some of which at the present time have converted to a four-year course. Included in that group are the State Universities of Mississippi, Missouri, North Carolina, and West Virginia. These schools now have a total enrollment of over 27,000 pupils with an increase each year. During the past eleven years the total enrollment has jumped 26.6 per cent. Now over 6,000 students are graduated each year. We can feel assured that the increase in production of physicians is well ahead of the increase in the United States population.

In the early 1930's it would cost approximately $5,000 to train a physician for a four-year medical course. Today the cost is close to $12,000, chiefly because of costly laboratory facilities, the high ratio of teachers required per student, the increase in tutelage costs, and the complicated training technics growing out of recent scientific advance. The average tuition for a resident student in a United States medical school is $623. Yet the tuition fee accounts for only 21.5 per cent of medical school operating budgets. Legislative grants and appropriations, gifts, alumni funds, and proceeds from fund-raising groups make up the remainder. The American Medical Association will approve of one-time Federal grants to medical schools for construction and renovation. They will also accept Federal grants for specific research such as cancer, heart disease, etc. It does, however, oppose any appropriation of Federal funds for medical school operations. This objection can be easily understood. We may be proud of the fact that funds available for medical schools for their operations have increased 69 per cent during the past few years without Federal government subsidy. At the present time the total budget of the medical and basic science schools is over 81 million dollars. Again I say these problems of the schools must be met.

The seriousness of this situation prompted the formation of the American Medical Education Foundation in 1950–1951. The Foundation really consists of two bodies: (1) the physicians themselves and what they can raise and (2) the industrial division of the American Education Foundation. The National Fund for Medical Education is headed by leading industrialists who have given unstintingly of their time and efforts to raise money for our schools. They are aided by a Medical Advisory Committee consisting of most of the deans of the schools and outstanding physicians. As of December 31, 1953, through the combined efforts of the National Fund for Medical Education and the American Medical Education Foundation, $5,569,119.18 have been raised since 1951. To the 79 schools there have been distributed so far $4,764,152.79, leaving a balance available for distribution of $804,966.39. In round figures the distribution in 1951 was $1,132,500. In 1952 it was $1,687,501. In 1953 it was $1,944,151, proving that while we have not reached the goal, we are at least making good headway. The national income of the Foundation from January 1 to December 31, 1953, is as follows: from 17,564 physicians we received $467,217.50; from 509 organizations, through physicians, we received $618,200.61; from laymen interested through physicians we received $1,957.49; from securities we received $2,587.33, making a total from 18,176 donors, $1,089,962.93. This is a good improvement over 1952. Grants by the Foundation to the nine schools of New York State in 1953 amounted to $218,043.10. It should be mentioned at this time that all grants to the schools by the Foundation are absolutely unrestricted.

Your chairman attended a meeting of the state chairmen in Chicago on January 24, 1954. The meeting was opened by our own Dr. Louis H. Bauer, who is now the president of the American Medical Education Foundation. He spoke on various types of financing. Dr. Edward L. Turner, now secretary of the Foundation, former dean of the School of Medicine, University of Washington, told us the needs of medical school and student financing. It is his opinion that student financing is entirely an alumni program. Mr. E. J. Ade, director of Fund Raising for the National Fund for Medical Education of New York City, advised the physicians themselves to contact their friends in industry and through them educate their firms to donate more money to this fund. Mrs. Frank Gastineau, national chairman, American Medical Education Foundation Committee of the Woman's Auxiliary, spoke to us about the work that the women can do in helping to raise funds. The total raised by these ladies in 1953 amounted to $34,704.04. Mr. Hiram W. Jones, executive secretary of the Foundation, advised us that the best way to get dollars from doctors was through doctors and that the doctors should do a little bit more about it. A report on the Foundation activity in the State of California was given to us by Mr. J. L. Pettis, associate director, California Medical Association, Los Angeles, California. Mr. Pettis introduced us to the Audio-Digest Foundation, Inc., a nonprofit organization which will turn all the profits over to the Foundations. This is a big recording system in which tape is shipped throughout the United States to those who subscribe, at a fairly nominal fee. On these tapes will be the active recording of extracts from the latest medical journals, native and foreign, condensed to a one-hour program. It is requested that each state society house of delegates permit the demonstration of this at their next meeting. The afternoon portion of the meeting consisted of a seminar discussion of state and local programs. This gave the various chairmen an opportunity to discuss their own problems with those of their neighbors to find means, methods, and ways of collecting more money.

Now let's look at the record of New York State. In 1952 with 984 contributors, New York State donated $28,023.47 to the Fund. In 1953 with 3,120 contributors, it donated $38,456; and with the second $25,000 donated by the State Society, this made a total of $63,456.00. This is more than we donated in 1951, but it is still far from the quota needed to make our State the representative state in the union. The State of Illinois took the lead in 1953 with a total contribution of $190,461.99. This probably is due to the fact that the state society in its house of delegates levied a tax of $20 on every member of the state medical society. It was the consensus of opinion of the state chairmen who met in Chicago that the other states in the union should follow this leadership and should request the houses of delegates of their respective states to do the same and levy an assessment per capita on each of its members. The State of New York has 31,484 physicians. Considering that of this number 3.13 per cent donated in 1952 and 9.91 per cent donated in 1953, we should be ashamed of ourselves when we compare the percentage of donations from the smaller states. Little states, like Wyoming with 25 per cent, South Dakota with 25 per cent, New Hampshire with 28.30 per cent, District of Columbia with 27.13 per cent, and Connecticut with 21.26 per cent, are to be commended. Yet the sting of this is mitigated when we consider that $170,375 were sent direct to the schools through the alumni associations of New York State physicians.

I find from the records that the Schuyler County Medical Society Auxiliary gave $100, the Albany County Auxiliary gave $50, the Thompson County Auxiliary gave $25, the Schenectady County Auxiliary gave $100, the Onondaga County Auxiliary gave $100 twice, and Nassau County Auxiliary gave $100 —much less than last year. It may be that the American Medical Auxiliary Association made up the difference.

The national goal of $2,000,000 from physicians has not been met. The goal of $250,000 from the physicians of New York State has not been met. Your committee believes that the quota can be met if the Medical Society of the State of New York in its House of Delegates should pass a compulsory tax for the Foundation. We also believe that the donations can be augmented greatly if the presidents of the alumni associations of the nine schools in New York State would get busy with their alumni members. There is also the problem of educating all physicians to the responsibility they have to their own profession. Again, as stated in last year's report, your committee needs much more cooperation from the county societies, the alumni associations, and the woman's auxiliaries to put New York State at the head of the list where it belongs.

Respectfully submitted,

William C. Rausch, M.D., *Chairman*

Preliminary Report of the Malpractice Insurance and Defense Board

To the House of Delegates, Gentlemen:

The Malpractice Insurance and Defense Board consists of the following:

Christopher Wood, M.D., *Chairman*	White Plains
Joseph A. Lane, M.D.	Rochester
John F. Kelley, M.D.	Utica
*Chas. Gordon Heyd, M.D.	New York City
J. Stanley Kenney, M.D.	New York City
Leo F. Schiff, M.D.	Plattsburg
Thomas M. d'Angelo, M.D.	Jackson Heights
John C. Brady, M.D.	Buffalo
W. P. Anderton, M.D., ex officio	New York City
Maurice J. Dattelbaum, M.D., ex officio	Brooklyn
William F. Martin, counsel, ex officio	New York City
Harry F. Wanvig, secretary, ex officio	New York City

During the past year the board held ten regular and two special meetings, some of which were attended by the president, Dr. Andrew A. Eggston; president-elect, Dr. Dan Mellen; and speaker of the House of Delegates, Dr. Frederic W. Holcomb. They were also attended by Mr. Robert Bell, attorney for the Society; Mr. Frank B. Martin, of the office of the indemnity representative, and by Mr. James M. Arnold, the assistant indemnity representative. These gentlemen took part in the discussion of matters before the Board, and their advice frequently was most helpful.

As in the past the board devoted considerable time to examining and discussing the new suits and claims filed against members during the year in its efforts to learn more about the actions of members and the attitude of the profession and the public toward each other, which are responsible for the continuous rise in the number of malpractice actions brought in this State. It also examined the suits and claims closed to determine, if possible, whether or to what extent our method of defense or settlement can contribute some further deterrent to the rise in the number of suits filed. Each year it acquires more knowledge of these elements of the problem and develops additional approaches and investigations which may point the way to a better solution than has yet been discovered.

The following is a comparative table of the number of new suits and claims filed and those disposed of during the past two years regardless of the policy years involved.

	1953	1952
New suits and claims filed	580	509
Suits and claims closed	681	467
Net change in outstanding cases	101 (Decrease)	42 (Increase)

As shown above, there were 580 new suits and claims filed during 1953. This is one suit or claim for every 25 insured members, as against one for every 27 members last year. Thus the ratio of claims to members, or the rate of incidence, increased from 3.5 to 4 per cent, which is the highest ever experienced by the Group Plan. As between the two sections of the State, these figures divide as follows:

	Insured Members	Rate of Incidence	Number Members per Claim
Metropolitan	9,820	4.6	21.6
Upstate	4,670	2.7	37.4
State Average	14,490	4	25

As predicted in previous reports, examination into the insurability of individual members in the light of information obtained from cases filed against them has taken up an increased amount of the board's time. Two meetings of the board, acting as a committee of the whole, beginning early in the morning and lasting all day, were devoted entirely to this task. In all the board, either as a committee of the whole or through subcommittees, interviewed 52 members or reviewed their files in detail. In these cases the following actions were taken:

No change in insurance ordered	12
Basic insurance denied	1
Basic insurance ordered cancelled or discontinued at expiration	19
Special coverage denied	7
Special coverage ordered discontinued at expiration	2
Denial of liability approved	4
Changes in classification approved	5
Still pending	2
Total	52

The board also reviewed numerous applications for protection on account of the excluded specialties and approved them either in full or for limited amounts.

Table I is a report of the number of members in the Group Plan by counties and the ratio of insured to members in each.

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* Dr. Heyd resigned from the Board in October, 1953, and Dr. J. Stanley Kenney was appointed by the President to take his place.

TABLE I—NUMBER OF MEMBERS IN GROUP PLAN

County	Number of Members	Number Insured	Per Cent Insured
Schoharie	17	16	94
Cayuga	77	71	92
Schuyler	11	10	91
Yates	21	19	90
Chemung	111	93	84
Broome	245	204	83
Orleans	17	14	82
Sullivan	45	37	82
Rensselaer	148	115	78
Fulton	62	48	77
Herkimer	55	42	76
Oswego	54	41	76
Oneida	280	210	75
Genesee	51	38	75
Wyoming	31	23	74
Allegany	34	25	74
Schenectady	205	151	74
Saratoga	62	45	73
Madison	48	35	73
Clinton	57	41	72
Greene	29	21	72
Delaware	43	31	72
Chautauqua	115	83	72
Albany	380	273	72
Warren	74	53	72
Steuben	108	78	72
Jefferson	90	64	71
Ontario	103	72	70
Tompkins	87	61	70
Richmond	204	140	69
Westchester	1,080	747	69
Orange	206	142	69
Niagara	169	115	68
Tioga	25	17	68
Montgomery	57	38	67
Columbia	46	31	67
Onondaga	534	359	67
Queens	1,873	1,227	66
Chenango	38	25	66
Cattaraugus	97	64	66
Bronx	1,476	963	65
St. Lawrence	86	56	65
Cortland	44	28	64
Monroe	750	469	63
Lewis	19	12	63
Nassau	1,016	637	63
Rockland	125	77	62
Franklin	74	45	61
New York	6,964	4,234	61
Ulster	106	62	58
Putnam	18	10	56
Kings	3,377	1,883	56
Suffolk	419	234	56
Wayne	62	34	55
Washington	36	19	53
Seneca	30	16	53
Essex	34	18	53
Erie	1,172	618	53
Otsego	61	32	52
Dutchess	244	106	43
Livingston	43	18	42
TOTAL	23,145	14,490	63

During the year the number of members insured in the metropolitan counties decreased by 294, while those in the upstate counties showed a normal increase of 162, producing a net decrease for the State as a whole of 132.

This decrease was partly due to doctors who have left the State or gone into military service but principally to members in the metropolitan area who have transferred their insurance to other companies, in some cases at gross rates that average about one third of the net cost of losses alone in the Group Plan. Except in very broad categories there is no effective way of selecting malpractice risks. It follows, therefore, that over a period of time the loss experience of these companies will be no different from that of the Group Plan and that they will be obliged to raise their rates to or above our present level or withdraw from this form of insurance in New York.

As directed by the House of Delegates the Board completed its study of the malpractice insurance offerings of Lloyd's and submitted a report to the Council. This report, in whole or in part, has been published in the JOURNAL and in the bulletins of several of the county societies.

On December 29 the Superintendent of Insurance issued a public warning against purchasing insurance of any kind from unlicensed insurers in this State. An excerpt of his warning, as printed in the December 30 issue of the *New York Times*, is quoted:

> "Residents of New York State were warned yesterday by Alfred J. Bohlinger, superintendent of the New York State Insurance Department, against purchasing insurance from companies not authorized to do business in the state. He emphasized that such insurers are not subject to the supervisory machinery set up for protection of policy holders in New York.
>
> "In addition, Mr. Bohlinger pointed out that unauthorized companies are not subject to the State Insurance Department's supervision, do not file annual financial statements or make financial deposits required for the protection of policyholders in this state."

Organized groups are being urged by members of the Society, and by mail from outside the State, to buy insurance from companies not licensed in New York State. At first glance this might seem to be the concern of the individuals involved, but it is also of importance to the Society in the effort it is making to maintain a stable and reliable source of protection for all members. The market for group malpractice insurance has contracted nearly to the vanishing point, and the Group Plan should have the staunch support of every practicing member.

The loss computation and compilation of rates cannot be completed in time for inclusion in this report. This, therefore, is only a preliminary report. The statistical data, rates, and recommendations of the Board will be submitted to the members in mimeographed form later.

Respectfully submitted,

CHRISTOPHER WOOD, M.D., *Chairman*

Report of the Nominating Committee

To the House of Delegates, Gentlemen:

In accordance with the Bylaws of the Medical Society of the State of New York, Chapter XI, Section 4, the following members of the Nominating Committee were appointed by Dr. Andrew A. Eggston, president, and approved by the Council:

First District	Thurman B. Givan, M.D.	Kings
Second District	Joseph G. Zimring, M.D.	Nassau
Third District	Albert Vander Veer II, M.D.	Albany
Fourth District	Joseph H. Cornell, M.D.	Schenectady
Fifth District	James E. McAskill, M.D.	Jefferson
Sixth District	R. Scott Howland, M.D.	Chemung
Seventh District	Samuel A. Munford, M.D.	Ontario
Eighth District	Carlton E. Wertz, M.D.	Erie
Ninth District	Ralph T. B. Todd, M.D.	Westchester
Member-at-Large	Alfred M. Hellman, M.D.	New York
Member-at-Large	James R. Reuling, M.D.	Queens

The committee met at the Harvard Club, 27 West 44th Street, New York City, on January 14, 1954. The entire committee attended; also present was Dr. W. P. Anderton, secretary, ex officio. The following nominations were voted to be submitted to the House of Delegates at the Annual Meeting in May, 1954:

President-Elect	Renato J. Azzari, M.D., Bronx
Vice-President	Charles A. Prudhon, M.D., Jefferson
Secretary	W. P. Anderton, M.D., New York
Assistant Secretary	DuMont F. Elmendorf, M.D., New York
Treasurer	Maurice J. Dattelbaum, M.D., Kings
Assistant Treasurer	Thomas M. d'Angelo, M.D., Queens
Speaker	Frederic W. Holcomb, M.D., Ulster
Vice-Speaker	Frederick W. Williams, M.D., Bronx

Councillors (*three years*)

Leo E. Gibson, M.D., Onondaga
Thurman B. Givan, M.D., Kings
Gerald D. Dorman, M.D., New York
Albert Vander Veer II, M.D., Albany

Trustees (*five years*)

James R. Reuling, M.D.	Queens
Walter W. Mott, M.D.	Westchester

Delegates (*two years*)

W. P. Anderton, M.D.	New York
Herbert H. Bauckus, M.D.	Erie
Harold F. R. Brown, M.D.	Erie
Elton R. Dickson, M.D.	Broome
Edward P. Flood, M.D.	Bronx
Thurman B. Givan, M.D.	Kings
John J. H. Keating, M.D.	New York
James R. Reuling, M.D.	Queens
Carlton E. Wertz, M.D.	Erie
Floyd S. Winslow, M.D.	Monroe
Ezra A. Wolff, M.D.	Queens

Of these nominees for delegates, the nine receiving the largest number of votes will be elected. The second nine will be alternates.

In order to have nine alternates, it will be necessary that at least seven additional nominations be made at the meeting.

Respectfully submitted,
Carlton E. Wertz, M.D., *Chairman*

Report of Special Committee on Constitution and Bylaws

To the House of Delegates, Gentlemen:

Your committee has discussed in correspondence and meetings matters referred from your 1953 meeting. We report as follows:

Speaker Holcomb referred to our committee a resolution regarding "integration of county, State, and A.M.A. dues and membership." We have reported to the Council as directed. The resolution states:

> "WHEREAS, the American Medical Association is composed of a loose union of state medical societies without integration between any or all of the state societies and the American Medical Association; and
>
> "WHEREAS, the American Medical Association, because of its financial requirements, found it necessary to assess members of the component state societies without previous discussion by or consent of the state societies; and
>
> "WHEREAS, the American Medical Association then found it advisable to establish a dual membership by which separate dues may be paid first to the county and state societies and second to the American Medical Association, by which one may be a member of the county and state society without being a member of the American Medical Association; and
>
> "WHEREAS, such dual membership has resulted in a disproportionate representation of delegates from the state societies to the American Medical Association; and
>
> "WHEREAS, such representation is wholly inequitable and tends to disenfranchise many members of local, county, and state societies; therefore be it
>
> "*Resolved*, that the entire matter of representation, integration of dues, and all questions affecting the relationship of membership in county and state medical societies and the American Medical Association be studied by a special committee of the Council for submission to the next meeting of the House of Delegates of the Medical Society of the State of New York, bearing in mind that unit membership should be sought and one dues payment at the county level be established, if possible, for membership in county, state, and American Medical Association."

Our report to the Council stated:

1. The representation of the Medical Society of the State of New York in the House of Delegates of the American Medical Association, in accordance with the Constitution and Bylaws of both organizations, is at present correct.

2. On May 5, 1953, the House of Delegates tabled a recommendation of its Special Committee on Constitution and Bylaws to add to Chapter II a new section regarding membership in our House which would state: "Delegates shall be members of the American Medical Association." There was considerable opposition in the House before tabling.

3. Dues of county medical societies in New York State, State Society dues, and dues of the American Medical Association are integrated as much as possible at present. Each member receives his bill for all three dues at the same time in January. He can pay them all by a single check.

4. Attention is drawn to part of the report of the secretary of the American Medical Association, on pages 926 and 927 of the November 7, 1953, *Journal of the American Medical Association*, Volume 153, Number 10.

5. Much discord would be avoided if county medical societies, state medical societies and associations, and the American Medical Association had identical types of membership. It would also be advisable if the grounds for dues exemption were the same in all county and state and in the national organizations.

The Council referred the above report to the Planning Committee for Medical Policies, which will study and make recommendations.

Also referred to us were certain proposed changes in the Constitution and Bylaws:

Constitution—Article VII

Present	*Proposed*
BOARD OF CENSORS	BOARD OF CENSORS
There shall be a Board of Censors consisting of the president and secretary of the Society and the president of each district branch, as provided in the Bylaws.	There shall be a Board of Censors consisting of the president, the secretary of the Society, and eight members who shall be elected by the House of Delegates in 1954. Two of these shall be elected for terms of two years, two for terms of four years, two for terms of six years, and two for terms of eight years. Terms of office shall begin as of the date of election. As terms expire, the vacancies shall be filled by appointment by the president, with the consent of the Council for terms of four years. Vacancies occurring prior to expiration of term shall be similarly filled for the unexpired term.

Although sympathetic with the philosophy of the above proposal, your committee recommends that it be not adopted because we prefer a judicial council as advocated below.

Constitution—Article VII

Present	*Proposed*
BOARD OF CENSORS	1. Delete present Article VII. 2. Substitute the following:
There shall be a Board of Censors consisting of the president and secretary of the Society and the president of each district branch, as provided in the Bylaws.	JUDICIAL COUNCIL There shall be a Judicial Council consisting of five members appointed by the president with approval of the Council. The secre-

tary, president, and the legal counsel of the Society shall sit with the Judicial Council with voice but without vote.

Bylaws—Chapter II

Present

SECTION 5. The House of Delegates shall hear and finally determine all appeals taken from decisions of the Board of Censors.

SECTION 8. The following shall be the order of business at the sessions of the House of Delegates:

1. Calling the meeting to order.
2. Invocation.
3. National Anthem.
4. Report of Reference Committee on Credentials.
5. Report by the secretary as to the presence or absence of quorum.
6. Remarks by the speaker.
7. Reading the minutes of the previous meeting by title.
8. Report of the president.
9. Address by the president-elect.
10. Report of the Board of Censors.
11. Report of the Council.
12. Report of the secretary.
13. Report of the treasurer.
14. Report of the Board of Trustees.
15. Reports of district branches by district delegates.
16. Reports of special committees.
17. Reports of reference committees.
18. Unfinished business.
19. New business.
20. Adjournment.

Proposed

Replace "Board of Censors" with the words "Judicial Council" in item 10, so that item 10 in the order of business of the House of Delegates will read "Report of the Judicial Council."

Bylaws—Chapter VI

Present

CENSORS

SECTION 1. Five censors shall constitute a quorum.

The president and the secretary of the society shall sit as chairman and secretary respectively of the Board of Censors, but without vote except that in case of a tie the president, sitting as chairman of the Board of Censors, shall cast the deciding vote.

The Board of Censors shall meet upon the call of the president. The secretary shall prepare and submit the report of the Board of Censors to the House of Delegates.

SECTION 2. The Board of Censors shall have jurisdiction to hear and determine all appeals from decisions on discipline of component county medical societies or decisions of such societies which may involve the privileges, rights, or standing of members, whether in relation to one another or to county medical societies or to this Society. Any member of any component medical society who shall have been disciplined or directed to suffer discipline in any degree by any final decision of his county medical society and who shall have exhausted his right of appeal, if any, with any such county medical society, feeling aggrieved by the decision of such society, may appeal to the Board of Censors of this Society from the decision of such component medical society by filing a notice of appeal with the secretary of this Society and with the secretary of such component medical society within three months after such final decision by such component medical society.

SECTION 3. Any applicant for membership in a component county medical society who may have been excluded from membership in such society, may likewise appeal from the action of said society excluding him. All decisions shall be subject to appeal to the House of Delegates.

SECTION 4. Any notice of appeal shall set forth in writing the name of the appellant, the name of such component county medical society, and the date and substance of the

Proposed

Amend Chapter VI of the Bylaws as follows:

1. Delete entire present Chapter VI.

2. Substitute the following new chapter:

JUDICIAL COUNCIL

SECTION 1. The Judicial Council consists of five members, including a chairman, appointed by the president and confirmed by the Council. In 1954 one member shall be appointed for five years, one for four years, one for three years, one for two years, and one for one year, such appointments to be so arranged that at each annual convention of the Society the term of one member shall expire. Thereafter, whenever the term of a member expires, a member shall be appointed for five years. In the event of a vacancy, a member shall be appointed for the unexpired term.

The Judicial Council shall meet upon the call of the chairman. The secretary of the Society shall prepare and submit the report of the Judicial Council to the House of Delegates.

SECTION 2. The Judicial Council shall have jurisdiction to hear and determine all appeals from decision on discipline of component county medical societies or decision of such societies which may involve the privileges, rights, or standing of members, whether in relation to one another or to county medical societies or to this Society. Any member of any component medical society who shall have been disciplined or directed to suffer discipline in any degree by any final decision of his county medical society and who shall have exhausted his right of appeal, if any, with any such county medical society, feeling aggrieved by the decision of such society, may appeal to the Judicial Council of this Society from the decision of such component medical society by filing a notice of appeal with the secretary of this Society and with the secretary of such component medical society within three months after final de-

decision appealed from and shall indicate the ground or grounds upon which each appeal is taken. If the appellant desires to be present in person or by counsel at the hearing of said appeal, the notice of appeal must so state. In that event, the appellant must file with the notice of appeal a bond in the sum of $500 to cover the costs of said appeal. If the appellant fails to appear in person or by counsel upon hearing of said appeal, he shall forfeit to the Medical Society of the State of New York such share of said bond as represents necessary expenditures incident to convening the Board of Censors for the hearing of said appeal.

SECTION 5. Upon filing a notice of appeal, the appellant and the component county medical society shall submit to the secretary of the Board of Censors all records, minutes, letters, papers, and all written evidence, including a digest of all testimony not stenographically reported relating to the matter. All data so submitted shall be available only to the censors, and, on appeal, to the members of the House of Delegates.

SECTION 6. The Board of Censors shall consider the appeal on the data so submitted to it, and may affirm by a majority vote, modify, or reverse by a two-thirds vote of the censors present and voting, the decisions so appealed from. If, in its opinion, the taking of further evidence is advisable, the Board of Censors may summon witnesses and proceed to take such evidence in such manner as it may deem proper and render its decision by a two-thirds vote of those present and voting; which decision shall be binding until reversed or modified by the House of Delegates.

SECTION 7. The Board of Censors shall investigate all charges preferred (*a*) by a member of a component county society against any component county medical society of which he is not a member; and (*b*) by a component county medical society against another such county medical society or a member thereof, and the secretary of the Board of Censors shall submit the report to the House of Delegates for action thereon.

SECTION 8. Any member or component county society desiring to appeal to the House of Delegates from the decision of the Board of Censors shall within three months after such decision, file with the secretary of this Society and the secretary of the component society a notice of appeal. Such notice of appeal shall set forth in writing the name of the appellant, the name of the component county society, the date and substance of decision appealed from, and the ground or grounds upon which such appeal is taken. The appellant must also state if he desires to be present in person or by counsel.

SECTION 9. Upon the filing of a notice of appeal the appellant and the secretary of the Board of Censors shall submit to the House of Delegates the decision and all records, minutes, letters, papers, and all written evidence including a digest of all testimony not stenographically reported relating to the matter.

SECTION 10. The House of Delegates shall consider and decide the appeal on the data submitted to it, and may affirm, modify, or reverse the decision so appealed from. Such decision of the House of Delegates shall be final and binding.

cision by such component medical society.

SECTION 3. Any applicant for membership in a component county medical society who may have been excluded from membership in such society, may likewise appeal from the action of said society excluding him.

SECTION 4. Any notice of appeal shall set forth in writing the name of the appellant, the name of such component county medical society, and the date and substance of the decision appealed from and shall indicate the ground or grounds upon which each appeal is taken. If the appellant desires to be present, with or without counsel at the hearing of said appeal, the notice of appeal must so state. In that event, the appellant must file with the notice of appeal a bond in the sum of $500 to cover the costs of said appeal. If the appellant fails to appear in person or by counsel upon hearing of said appeal, he shall forfeit to the Medical Society of the State of New York such share of said bond as represents necessary expenditures incident to convening the Judicial Council for the hearing of said appeal.

SECTION 5. Upon filing a notice of appeal, the appellant and the component county medical society shall submit to the secretary of the Society all records, minutes, letters, papers, and all written evidence, including a digest of all testimony not stenographically reported relating to the matter. All data so submitted shall be available only to the Judicial Council.

SECTION 6. The Judicial Council shall consider the appeal on the data so submitted to it, and may affirm, modify, or reverse the decisions so appealed from, by a majority vote of the members present and voting. If, in its opinion, the taking of further evidence is advisable, the Judicial Council may summon witnesses and proceed to take such evidence in such manner as it may deem proper and render its decision by a majority vote of those present and voting, which decision shall be final and binding.

SECTION 7. The Judicial Council shall investigate all charges preferred (*a*) by a member of a component county society against any component county medical society of which he is not a member; and (*b*) by a component county medical society against another such county medical society or a member thereof, and the secretary shall submit a report of the Judicial Council to the Council.

SECTION 8. Three members of the Judicial Council shall constitute a quorum.

Your committee approves of the above proposed amendments to the Constitution and Bylaws.

You will note that the present Constitution provides for an appeal from a decision of the Board of Censors to the House of Delegates. The proposed amendment does not provide for any appeal from the decision of the Judicial Council but requires a report to the Council.

Constitution—Article IX

Present

FUNDS

Funds shall be raised by annual per capita dues or assessment on each component county society at a uniform per capita rate throughout the State, but the dues or assessments of each junior member shall be one third the amount levied on each active member. Funds may also be raised in any other manner approved by the House of Delegates or by the Council when the said House of Delegates shall not be in session.

The approval of the Council and of the Board of Trustees shall be necessary for the expenditure of any funds of the Society.

Proposed

"WHEREAS, the Medical Society of the State of New York has spent more monies than received during the past several years; and

"WHEREAS, this deficit spending has occurred largely because of the fact that activities have been undertaken without taking into consideration or ascertaining whether sufficient funds are available and without providing any appropriation for the carrying on of such activities; now therefore be it

"*Resolved*, that Article IX of the Constitution of the State Society entitled 'Funds' shall be amended by striking out the second sentence beginning with the words 'Funds may' and ending with the words 'in session,' and also striking out the last sentence beginning with the words 'The approval' and ending with the words 'of the Society,' and in lieu thereof adding the following language:

> 'No money shall be paid out of the treasury of the State Society or any of its funds or any of the funds under its management except in pursuance of an appropriation by the House of Delegates. Every such appropriation shall distinctly specify the sum appropriated and the object or purpose to which it is to be applied. All such appropriations shall be subject to the approval of the Board of Trustees and the Council. The Board of Trustees and the Council shall not approve any appropriation of the House of Delegates unless the appropriation can be met without resorting to deficit spending or by pledging the credit of the State Society. No debt shall hereafter be contracted by or on behalf of the State Society unless such debt shall be authorized by the House of Delegates for some single purpose to be distinctly specified therein. Nothing herein contained however shall prevent the Council, subject to the approval of the Board of Trustees, from contracting debts in anticipation of the receipt of dues and revenues for the purposes and within the amounts of appropriations theretofore made.' "

The committee recommends retention of Article IX of the Constitution unchanged. Defeat of the proposed amendment is urged because its adoption would prevent contraction of any debt without previous authorization of the House of Delegates. This would be an almost impossible procedure to follow.

Bylaws—Chapter I Section 2

Present

SECTION 2. The term "good standing" is hereby defined as:

(*a*) A member is in good standing when his dues to his county society and the assessment of the State Society have been paid when they are due and payable. The dues year shall coincide with the fiscal year, January 1 to December 31 of each year.

(*b*) A member whose dues and assessments are unpaid after May 31 of any current year is not in good standing. He is in arrears for dues. He has lost his right to malpractice defense by counsel of the Medical Society of the State of New York for any acts upon which suit may be predicated during the period of his arrearage. This last is not recoverable, even when he becomes reinstated. Immediately upon payment of dues during the current year, his right to malpractice defense by counsel of the Medical Society of the State of New York shall be restored from that date.

(*c*) A member whose dues and assessments are unpaid after December 31 of any current year shall automatically be dropped from the rolls of membership of both his county

Proposed

1. Chapter I, Section 2, subdivision (*a*), second line, after the word "society" delete the words "and the assessment." On the third line, after the word "Society" insert "and the American Medical Association." This will make the paragraph read: "A member is in good standing when his dues to his county society, the State Society, and the American Medical Association have been paid when they are due and payable."

2. In subdivision (*c*), on the fifth line, delete the word "and," and after the words "State Society" add "and the American Medical Association." This paragraph will then read: "The member whose dues and assessments are unpaid after December 31 of any current year shall automatically be dropped from the rolls of membership of both his county society, the State Society, and the American Medical Association without notice to such member by his county medical society or the Medical Society of the State of New York, all without further action on the part of either the county society or the State Society, and upon

society and the State Society, without notice to such member by his county medical society or the Medical Society of the State of New York, or without further action on the part of either the county society or the State Society, and upon such date, he shall automatically cease to be a member of both the county society and the State Society. (*d*) Dues and State assessments of a member elected or reinstated after October 1 shall be credited to the succeeding year, all rights and privileges of membership, however, dating from the time of election; but no member dropped for nonpayment of dues and assessments shall be reinstated until he has, in addition, paid his dues and assessments for the year in which he was dropped.	such date he shall automatically cease to be a member of all three societies." 3. In subdivision (*d*), delete the word "State" in the first line, and after the word "assessments" add: "of county and State societies, and the American Medical Association." This paragraph will now read: "Dues and assessments of county and State societies and the American Medical Association of a member elected or reinstated after October 1, shall be credited to the succeeding year, all rights and privileges of membership, however, dating from the time of election; but no member dropped for nonpayment of dues and assessments shall be reinstated until he has, in addition, paid his dues and assessments for the year in which he was dropped."

Your committee disapproves of the proposed amendment because we do not believe membership in the American Medical Association should be mandatory at this time for members of the Medical Society of the State of New York. However, we believe we should all be members of the American Medical Association and that such should be compulsory at some future date.

Bylaws—Chapter 1, Section 7

Present	*Proposed*
SECTION 7. Junior members shall be those members who have been graduated from medical college not more than five calendar years and licensed by the State of New York. They shall become active members upon entering the private practice of medicine. They shall be privileged to attend all meetings of their county societies where they shall have voice in all discussions but no vote. They shall be entitled to receive the NEW YORK STATE JOURNAL OF MEDICINE and the *Newsletter* but not the *Medical Directory of New York State.*	SECTION 7. Junior members shall be physicians licensed by the State of New York, who are in intern or resident training, or who are in the first five years of practice, except those who are salaried employes of a government or private agency. They shall become active members at the termination of the first five years of practice. They shall be privileged to attend all meetings of their county society where they shall have voice but no vote. They shall be entitled to receive the NEW YORK STATE JOURNAL OF MEDICINE and the *Newsletter* but not the *Medical Directory of New York State.*

Your committee disapproves of the above proposed amendment to the Bylaws, Chapter 1, Section 7. We feel it is unsound financially because, if enacted, it would burden the budget of the Society. We propose, however, the following substitute (new matter in italics):

> SECTION 7. Junior members shall be those members who have been graduated from medical college not more than five calendar years, and licensed by *or eligible to take the medical licensing examinations of* the State of New York. They shall be privileged to attend all meetings of their county societies where they shall have voice in all discussions but not vote. They shall be entitled to receive the NEW YORK STATE JOURNAL OF MEDICINE and the *Newsletter* but not the *Medical Directory of New York State.*

Bylaws—Chapter IV, Section 1

Present	*Proposed*
SECTION 1. (*a*) The Council shall be the executive and administrative body of the Society while the House of Delegates is not in session and shall control all arrangements for the annual meeting. It shall prepare an annual budget for submission to the Board of Trustees. Its resolutions and actions shall be decisive and final except that all resolutions and actions of the Council are subject to review, reconsideration, and action by the House of Delegates. Its actions shall be governed by the Constitution and Bylaws of the Society and the rules and regulations of the House of Delegates. The Council shall have power and authority to employ, discharge, and arrange duties and, with the approval of the Board of Trustees, fix compensation of and for any employe whom it may find necessary for conducting the affairs of the Society.	"*Resolved*, that Chapter 4, Section 1(*a*) of the Bylaws under duties of the Council which reads, 'It shall prepare an annual budget for submission to the Board of Trustees' be deleted";

Your Committee on Constitution and Bylaws approves of the above proposed amendment to the Bylaws so that Chapter IV, Section 1 (*a*), will read as follows:

> "SECTION 1. (*a*) The Council shall be the executive and administrative body of the Society while the House of Delegates is not in session and shall control all arrangements for the annual meeting. Its resolutions and actions shall be decisive and final except that all resolutions and actions of the Council are subject to review, reconsideration, and action by the House of Delegates. Its actions shall be governed by the Constitution and Bylaws of the Society and the rules and regulations of the House of Delegates. The Council shall have power and authority to employ,

discharge, and arrange duties and, with the approval of the Board of Trustees, fix compensation of and for any employe whom it may find necessary for conducting the affairs of the Society."

Bylaws—Chapter IV, Section 10

Present	*Proposed*
SECTION 10. Committees of the Council may include other members of the Society and shall be appointed by the president subject to the approval of the Council. Each committee shall include at least one member of the Council who shall be chairman, except that he need not be chairman for the committee or committees in charge of activities (*a*), (*b*), and (*f*), Chapter IV, Section 9, of the Bylaws. The membership of committees shall not exceed three, including the chairman, except the committee or committees in charge of activities (*a*), (*b*), (*d*), (*f*), (*i*), (*k*), and (*l*), Chapter IV, Section 9, of the Bylaws. The Public Relations Committee shall consist of a chairman and nine other members.	"*Resolved*, that a chairman of a standing committee may or may not be a member of the Council; and be it further "*Resolved*, that in the event someone is appointed chairman who is not a member of the Council, he shall be invited to present his report to the Council and shall have voice; and be it further "*Resolved*, that the Constitution and Bylaws be amended in whatever way is necessary to effect this change."

Also referred to our committee was part of another resolution which advocated that the House "recommend amending the Constitution so that chairman need not necessarily be Council member," as applied to the chairman of the Legislation Committee.

Your committee recommends that such proposed alterations in the Bylaws be not made. We feel that the Council is presently constituted as a well-rounded body, representative of the whole State of New York, of general practitioners and specialists. It consists of the officers, chairman of the Board of Trustees, and twelve councillors. It acts as a coordinating committee and well represents the House of Delegates. The present Bylaw requires that those eligible for chairmanship of most of the important committees shall have been elected to the Council by the House of Delegates. Your committee feels that this is an important protection for the Society.

Bylaws—Chapter V, Section 2

Present	*Proposed*
SECTION 2. The Board of Trustees shall have charge of all property including trust funds and shall supervise the financial affairs of the Society and shall invest the surplus from time to time. The budget prepared by the Council shall be submitted to the Board for its approval, and all resolutions or recommendations of the House of Delegates or Council pertaining to expenditures of money must be approved by the Board of Trustees before the same shall become effective. The Board of Trustees shall make and execute all contracts for the Society. The fiscal year shall begin January 1 and end December 31 of each calendar year.	"*Resolved*, that Chapter V, Section 2, under duties of the Trustees which reads 'The budget prepared by the Council shall be submitted to the Board for its approval' be deleted and be replaced by the following phrase: 'The budget shall be prepared by the Board of Trustees.' "

Your committee also approves of this amendment so that Chapter V, Section 2, will read:

> "SECTION 2. The Board of Trustees shall have charge of all property including trust funds and shall supervise the financial affairs of the Society and shall invest the surplus from time to time. The budget shall be prepared by the Board of Trustees. All resolutions and recommendations of the House of Delegates or Council pertaining to expenditures of money must be approved by the Board of Trustees before the same shall become effective. The Board of Trustees shall make and execute all contracts for the Society. The fiscal year shall begin January 1 and end December 31 of each calendar year."

Bylaws—Chapter XIV, Section 2

Present	*Proposed*
'SECTION 2. Whenever an active member in good standing or a retired member in any component county medical society removes to another county in this State, his name upon his request shall be transferred to the roster of the component county medical society of the county to which he removes, without cost to him, provided that he files a certificate with the secretary signed by the president and secretary of the component society from which he removes as to his good standing in such society. No member, however, shall be an active member of more than one component county society, nor shall any component county society accept a physician residing in another county in any other way than in accordance with the law governing transfers. When a member in good standing ceases to reside and practice in the State of New York, he shall *ipso*	"*Resolved*, that Chapter XIV, Section 2, of the Bylaws be amended by adding to the first sentence the following: 'and provided his application for membership has been acted upon favorably by the members of the society of the county to which he has removed. "Chapter XIV, Section 2, of the Bylaws would then read: SECTION 2. Whenever an active member in good standing or a retired member in any component county medical society removes to another county in this State, his name upon his request shall be transferred to the roster of the component county medical society of the county to which he removes, without cost to him, provided that he files a certificate with the secretary signed by the president and secretary of the component society from which he removes as to his good standing in such society, and provided his application for mem-

facto cease to be an active member of the Society and his component county medical society at the end of the current year. His status shall be deemed that of a resigned member, and all rights and title to any share in the privileges and property of the Society, the district branch, or county society shall be deemed to have been forfeited by such action.

The dues of any member of the Medical Society of the State of New York may be remitted for the current year on account of illness when the request is made by the member's component county medical society.

bership has been acted upon favorably by the members of the society of the county to which he has removed. No member, however, shall be an active member of more than one component county society, nor shall any component county society accept a physician residing in another county in any other way than in accordance with the law governing transfers.

'When a member in good standing, except a retired member, ceases to reside and practice in the State of New York, he shall *ipso facto* cease to be an active member of the Society and his component county medical society at the end of the current year. His status shall be deemed that of a resigned member, and all rights and title to any share in the privileges and property of the Society, the district branch, or county society shall be deemed to have been forfeited by such action.

'The dues of any member of the Medical Society of the State of New York may be remitted for the current year on account of illness when the request is made by the member's component county medical society.' "

Your committee recommends the adoption of this proposed amendment.

Respectfully submitted,
A. H. Aaron, M.D., *Chairman*
Thomas O. Gamble, M.D.
James R. Reuling, M.D.

Report of the Special General Practice Committee

To the House of Delegates, Gentlemen:

The members of this committee are as follows:

Arthur M. Master, M.D.,
Chairman..................New York City
Franklyn B. Amos, M.D................Albany
Samuel A. Garlan, M.D.........New York City

The definition of general practice, given by Joseph S. Collings, in his paper "General Practice, Today and Tomorrow," published in the *New England Journal of Medicine,* January 22 and 29, 1953, pages 148 and 183, is good and is accepted by the committee:

> "A general practitioner is a graduate in medicine from an approved medical school who, after a specific hospital training, is capable of assuming responsibility for the following areas of medical care:
>
> "The diagnosis of all major and minor medical and surgical conditions (except extremely complicated and rare ones).
>
> "The treatment of the great majority of the medical conditions diagnosed.
>
> "Obstetrics to the level of uncomplicated deliveries, the early recognition of abnormalities, and the necessarily immediate treatment of the few unpredictable but potentially catastrophic emergencies that may arise.
>
> "Pediatrics, to the level required for medical and surgical diagnosis and treatment.
>
> "Psychiatry to a level permitting the differentiation of serious, potentially serious, and mild psychoses and psychoneuroses and permitting the treatment of the last-mentioned by intelligent support, clarification, and reassurance."

Of the 31,000 physicians in New York State, 18,000 are engaged in general practice. Most of these are not associated with any good hospitals. Many seldom undertake postgraduate study. None is represented by a committee of the State Medical Society. A Council committee of the Medical Society of the State of New York should be formed, therefore, to represent the general practitioner and to guide him and aid him in solving the problems which constantly beset him.

The general practitioner (family physician) is a very important member of the medical profession. It is to him, rather than to the specialists, that the patient should first go for advice and treatment, for the family physician is intimately acquainted with the patient's physical and mental status, as well as with his economic condition. And it is the family physician who should, whenever he thinks it necessary, refer his patient to the proper specialist. Much unnecessary disability and much worry can thus be avoided and much money saved thereby.

It is, of course, essential that the general practitioner keep abreast of the daily advances which medicine is making. To this end affiliation with some hospital or clinic and postgraduate study at regular intervals should be required.

Obtaining a good hospital affiliation, particularly in urban areas, is the outstanding difficulty of the general practitioner. Frequently the only hospital affiliation he can make is in one of the poorly supervised and ill-equipped institutions. This difficulty must in some way be overcome.

A solution of this problem was suggested, namely, that every general practitioner be given some position in the clinics of big hospitals; that his work there be supervised by the members of the hospital staff, and that he be given courtesy privileges for his private patients in the hospital if he is found to be able and competent. In this way the difficult problem of hospital affiliation might be solved.

To make this plan feasible, it is suggested that each general hospital establish a "Department of General Practice." A member of the hospital staff of this department should be associated with the medical board of the hospital. It should be his duty to recommend general practitioners who are on the visiting staff for promotion. The type of practice in which they engage should not be an obstacle to their advancement.

Perhaps membership in the American Academy of General Practice can be used as one criterion to determine the physician's suitability for staff appointment. In order to remain a bona fide member of the American Academy of General Practice, a physician must not only continue his medical education but must report the exact courses which he attended and the length of time he devoted to them. The courses are in two categories: formal and informal. The formal courses must be of university standard. At the end of three years each member of the Academy of General Practice must be reelected to the Academy. If he has not fulfilled this educational requirement of the Academy and if he cannot give satisfactory reasons for his failure to do so, he is automatically dropped as a member. He must thereupon return his certificate of membership to the Academy.

Aside from offering practitioners hospital affiliation, it is the responsibility of the hospitals as well as of medical schools to help in continuing the education of the general practitioner. To formulate a program for this purpose is difficult. The University of Kansas has attempted to overcome this difficulty. It has arranged that the practicing physician visit the medical schools for a short but definite period every year or two for refresher courses. Roving teams from the universities, consisting of medical and surgical men, as well as investigators in the basic sciences, could systematically and regularly "ride the circuit" in the rural areas. Each general practitioner should undertake postgraduate instruction with State or Federal cooperation. The public will quickly realize the need for this study, and will accept their physicians' absence for one month each year, and will recognize it as an attempt by him to improve himself and, thus, render better treatment. Physicians in practice must be aware of the constant progress made in medicine and of the constant improvements in drugs and technics.

Postgraduate medical education should be thorough and intensive. Direct contact of the instructor with the student is essential in order to determine the educational value of the course and the student's ability and aptitude.

Should a general practitioner decide to engage in more than general practice, it has been suggested that his qualifications (past experience, residencies, postgraduate courses, etc.) be passed upon by examining boards to determine his capabilities. If he is found capable, he may be certified for a subspecialty in general practice. This would affect a general practitioner who prefers to remain in general practice despite the fact that a major portion of his time is devoted to a specialty. This procedure could be facilitated by establishing liaison with the accrediting boards, which could give practical and theoretic examinations to the general practitioner for certification for specialty practice at the G.P. level. Such partial specialization by the general practitioner may itself solve some of his hospital problems.

Last year our special committee recommended that a full-time postgraduate medical education unit should be established in the State under the direction of a full-time, qualified physician. The functions of this proposed unit are as follows:

1. To analyze the postgraduate medical education needs of the 31,000 physicians in New York State, particularly of the estimated 18,000 general practitioners.
2. To collect and inform the physicians of the postgraduate opportunities for medical education.
3. To supplement existing opportunities, particularly for physicians in the rural areas, through study courses or other means. This may be done through the medical schools.
4. To stimulate physicians to avail themselves of present or expanded postgraduate education opportunities.
5. To coordinate all postgraduate medical activities throughout the State.
6. To re-evaluate constantly the need for postgraduate study and the provisions for satisfying these needs and to make periodic reports thereon.

Respectfully submitted,

ARTHUR M. MASTER, M.D., *Chairman*

(*This report is referred to the Reference Committee on Report of the Council, Part III*)

Report of Special Committee on Problems of Alcoholism

To the House of Delegates, Gentlemen:

The Special Committee on Problems of Alcoholism has the following membership:

Harold W. Lovell, M.D., *Chairman*	New York City
Newton J. T. Bigelow, M.D., *Adviser*	Albany
Marvin A. Block, M.D.	Buffalo
Joseph C. Horan, M.D.	New York City
Henry E. McGarvey, M.D.	Bronxville
John L. Norris, M.D.	Rochester
Milton G. Potter, M.D.	Buffalo
John D. Thomson, M.D.	Syracuse

The chairman has conducted the business of the committee with personal and other communication with individual members. Emphasis has been given to furthering the support of State legislation passed in the 1952 State Legislature. Implementation of State-sponsored research and treatment centers is proceeding at a more rapid and satisfactory rate than heretofore. Three members of the committee serve on the Advisory Committee on Alcoholism to the New York State Mental Hygiene Commission. Two members of the committee met with a special committee of the American Medical Association in consideration of the establishment of a separate committee of that body dealing with problems of alcoholism.

Special consideration has been given the problem of narcotic and barbiturate addiction frequently associated with alcoholism. The committee has supported the work of the Attorney General of the State of New York in this regard. A conference with the Attorney General is planned at the next formal meeting of the committee in an effort to coordinate better the work of the medical and legal groups interested in problems of alcoholism and drug addiction.

We recommend continuation of the committee for another year.

Respectfully submitted,
Harold W. Lovell, M.D., *Chairman*

(This report is referred to the Reference Committee on Report of the Council, Part III)

Report of the Special Committee on Medical Defense

To the House of Delegates, Gentlemen:

The members of the Special Committee on Medical Defense are as follows:

J. G. Fred Hiss, M.D., *Chairman*	Syracuse
Harold Bishop, M.D.	Chappaqua
Edward A. Burkhardt, M.D.	New York City
Theodore J. Curphey, M.D.	Forest Hills
Joseph W. Howland, M.D.	Rochester
Herman E. Hilleboe, M.D.	Albany
John J. Masterson, M.D.	Kings
Abraham M. Rabiner, M.D.	Kings
Solomon Schussheim, M.D.	Kings
Stuart A. Winning, M.D.	Ogdensburg
Edward T. Wentworth, M.D.	Rochester
William W. Woodruff, M.D.	Saranac Lake
Floyd S. Winslow, M.D.	Rochester
James E. McAskill, M.D.	Watertown

During the past year this committee followed the organizational plan of its previous chairman, Dr. Masterson. Because so much of the basic policy had been determined during his chairmanship, few meetings were necessary. One meeting was held in September and one in December, 1953. A third is planned for March, 1954. The greatest activity was the special effort made to overcome the general apathy by sending our news letters periodically and by frequent one-page articles in the Journal. Other articles are in press and will be published before the end of the fiscal year. Much additional equipment has been received and stockpiled, and some of this was shown to members of the committee at the December meeting. Recruitment of medical aides was begun with varying degrees of success in different parts of the State. The committee plans an exhibit at the State Medical Society and probably at least two other medical meetings during the year 1954.

During this year your committee and the Office of Medical Defense of the State Health Department has functioned practically as a single unit because of the close cooperation and complete harmony of these two groups.

I wish to thank the members of the Office of Medical Defense and of the Medical Defense Committee of this Society for their efforts in furthering the problem of medical defense.

Respectfully submitted,
J. G. Fred Hiss, M.D., *Chairman*

(This report is referred to the Reference Committee on Report of the Council, Part I)

Reports of the District Branches

Second District Branch

To the House of Delegates, Gentlemen:

"Let's Take A Look At Ourselves" was the theme of the annual meeting of the Second District Branch held at Patchogue, Suffolk County, Long Island, on October 28, 1953.

This was a dinner meeting, and the ladies of the Woman's Auxiliary of both Nassau and Suffolk Counties took an active part in the preparation of the meeting and in the program. Ninety-one members were present.

To develop subject matter for discussion of the theme each Auxiliary member had previously been requested to submit, unsigned, an answer to the following question: "How can the doctors of Nassau and Suffolk Counties improve their services to the people?"

The vice-president, Dr. Leo Flood, was asked to read the minutes of the executive committee meeting of the Second District held at Garden City Hotel on July 18, 1953. The question of continuing or discontinuing the regular membership meetings of the branch was brought to the attention of the membership, and the chair requested a motion if there was any sentiment toward discontinuation. There was no motion and no discussion. The chair therefore announced that regular membership meetings would continue.

Dr. Charles Murphy was elected member to the Planning Committee for Medical Policies.

The speakers were introduced and made addresses in the following order:

1. Dr. Andrew A. Eggston, president, Medical Society of the State of New York.
2. Mrs. Thomas M. d'Angelo, president, Woman's Auxiliary to the Medical Society of the State of New York.
3. Dr. Theodore Curphey, president, Nassau County Medical Society.
4. Mrs. Albert M. Biglan, Councillor, Second District Branch, Woman's Auxiliary.

Suggestions from the Woman's Auxiliary as to how the doctors could improve their services to the people of the counties were then read and discussed for the balance of the evening.

Respectfully submitted,

G. P. Bergmann, M.D., *President*

Fourth District Branch

To the House of Delegates, Gentlemen:

On October 1, 1953, the forty-seventh annual meeting of the Fourth District Branch of the Medical Society of the State of New York was held at the Hotel Johnstown, Johnstown.

A meeting of the executive committee was held in the morning with most of the committee present. A letter from Dr. Magovern offering his resignation as second vice-president was read and accepted Dr. Michael A. Mastrianni of Warren County was selected to replace Dr. Magovern.

After a general discussion it was decided to approve the request of the State Society to fix the time of the annual meeting of this district branch as the third Thursday in October. Our secretary had prepared a new set of bylaws. Some changes were made, and the bylaws, as finally amended, were approved. These bylaws will be sent to the State Society for their approval and presented to the district branch at the next annual meeting in 1954.

We have added a new committee, which will meet with the officers of the Northeastern New York Medical Service and report back to the district branch. The Planning Committee, which was meeting at the same time as the executive committee, elected Dr. Leonard J. Schiff of Clinton County as its representative on the State Medical Society Planning Committee.

Group disability insurance was then discussed, and various insurance company representatives were present. A committee was named to select an insurance suitable for our district.

In the afternoon a very successful and well attended scientific meeting was held.

After a social hour and dinner with the Woman's Auxiliary to the Fourth District Branch, Dr. Eggston, president of the State Medical Society, gave a very interesting address.

Respectfully submitted,

J. Frederick Sarno, M.D., *President*

Fifth District Branch

To the House of Delegates, Gentlemen:

The executive committee of the Fifth District Branch met in Syracuse on May 24, 1953, for the purpose of planning the annual meeting of the branch. The date was set for the last Wednesday in September, the place, Utica. The following topics were suggested for the scientific program: First a movie, and the one suggested was "The Use and Abuse of Obstetrical Forceps," by Dr. Raymond J. Pieri, of Syracuse. The second topic suggested was surgery in children. It was suggested that, if possible, we obtain Dr. Lawrence K. Pickett, with the subject, "Acute Abdomen in Children." The next subject suggested was "Recent Advances in Diabetes," and the speaker to be obtained by the program committee, also a talk on "Geriatrics," with the speaker there again to be obtained by the program committee.

For the evening program it was suggested that we attempt to obtain Dr. Frank G. Dickinson, director of the Bureau of Medical Economic Research of the American Medical Association. During the course of the meeting, it was brought out that it was difficult to arrange a good scientific program in the short period of time between the executive committee meeting and the annual meeting. It was, therefore, moved by Dr. Carl Hofmann, of Syracuse, seconded and carried that the State Medical Society be requested to set a permanent date for the meeting and that the executive committee meeting for the following year be held immediately after the annual meeting. This would do away with the necessity of calling a special committee meeting in the spring, and thus save the State Society considerable expense.

The executive committee confirmed the action of the Planning Committee in stating that they did not want a Group Health Insurance Plan under the auspices of the district branch, but rather that each individual county society could have its own plan.

The annual meeting of the Fifth District Branch of the Medical Society of the State of New York was held September 30, 1953, at Twin Ponds Country Club, in New York Mills, just west of Utica. The meeting commenced at 2:00 P.M., at which time Dr. T. Douglas Kendrick, president of the Oneida County Medical Society, gave a word of welcome. This was followed by a movie entitled the "Use and Abuse of Obstetrical Forceps," by Dr. Raymond J. Pieri, of Syracuse. The movie was well received and several questions were presented to Dr. Pieri following the movie.

The next topic was "The Acute Abdomen in Children," by Dr. Lawrence K. Pickett, of Syracuse. Dr. Pickett pointed out that the physiology of children was somewhat different from that of adults; therefore, it was necessary to treat them in a slightly different manner. His talk was very comprehensive. The third paper on the program was by Dr. George E. Anderson on "Recent Advances in the Treatment of Diabetes." He divided diabetics in three main groups, the absolute, the relative, and the brittle, and described the treatment for each. His lecture was followed by many questions from the floor.

At the business meeting, it was voted to give to the Auxiliary of the county society having the best percentage of attendance at the meeting a prize of $25. The county with the best attendance was Herkimer; therefore, the Herkimer County Woman's Auxiliary will receive the $25 prize. Due to the mixup in the mailing situation, it was necessary to postpone action on the revision of the bylaws. It was voted to approve the suggested date of the third Wednesday in October as the permanent date for the annual meeting, provided the other districts in the State joined in the program.

The nominating committee submitted the following slate of officers: President, Dr. Richard B. Cuthbert; First Vice-President, Dr. Donald C. Tullock; Second Vice-President, Dr. Olin J. Mowry; Secretary, Dr. Charles A. Gwynn; Treasurer, Dr. John F. Kelly. Nominations were requested from the floor. No other nominations were received. It was moved, seconded, and carried that the secretary be instructed to cast one ballot for the slate of officers as presented by the nominating committee. This was carried out as instructed.

The last paper of the afternoon, entitled "What Geriatrics Means to the General Practitioner," was delivered by Dr. C. Ward Crampton, of New York City. Dr. Crampton brought out many salient points which are often neglected by the general practitioner in care of the aged. There was no doubt in the minds of those present that Dr. Crampton is a past master in his field.

The evening session was opened by remarks from the following individuals: first, Mrs. Thomas M. d'Angelo, of Flushing, president of the Woman's Auxiliary to the Medical Society of the State of New York, who stated that the Auxiliary was always willing and anxious to serve the Medical Society in any way which would further the progress of medicine. She was followed by Dr. Andrew A. Eggston, president of the Medical Society of the State of New York, who briefly outlined the aims of the Medical Society for the coming year.

Dr. Dan Mellen, president-elect of the State Medical Society, stated that he realized the amount of work ahead of him was tremendous, and he hoped each and every individual would give him their cooperation.

Dr. J. Stanley Kenney, president of the Blood Banks Association of New York State, Inc., outlined the aims of the association and told how he hoped it would accomplish the exchange of blood from one bank to another, so that each individual in the State needing blood would receive prompt and efficient service.

We then heard the principal speaker of the evening, Dr. Frank G. Dickinson, director of the Bureau of Medical Economic Research of the American Medical Association. Dr. Dickinson's address was entitled "Pensions for Physicians." In his talk, Dr. Dickinson brought out that all employed groups in the United States now had a means of protecting themselves in their old age, but that the self-employed groups still had no organized method of saving for their retirement. He stated that a bill was before the United States Congress known as the Reed-Keogh bill, which would allow the self-employed a method of creating a fund for their old age. The advantage of this bill, if it became law, would be that instead of taxing future generations for the care of the aged as the Social Security Law does, this law would not only operate on the pay-as-you-go basis, but actually on a pay-in-advance basis, thus removing from our children and grandchildren the responsibility of caring for us in our old age. Dr. Dickinson made the points of his speech so clear that everybody realized they had a responsibility in seeing that the Reed-Keogh bill became law.

Following Dr. Dickinson's address the meeting was adjourned.

Respectfully submitted,

Arthur F. Gaffney, M.D., *President*

Sixth District Branch

To the House of Delegates, Gentlemen:

At the executive meeting of the Sixth District Branch of the Medical Society of the State of New York held in Binghamton on May 27, 1953, with officers of the district and Dr. Walter P. Anderton, secretary of the State Society, in attendance, it was decided to attempt an integrated program of medical and surgical subjects which might evince general professional appeal. Among objections to district branch meetings has been the complaint that today's specialist groups and even the general practitioners have a multiplicity of scientific assemblies and have lost interest in general medical discussions. Our committee felt that a program having a personal appeal to all members might make for an attractive and well-attended meeting.

The subject selected by our group was presented on Wednesday, September 16, 1953, at the Arlington Hotel in Binghamton. A panel discussion on "Recent Approaches to Health Problems in Patients Past Fifty" was most ably moderated by Dr. Henry V. Morelewicz, chief, Department of Physical Medicine and Rehabilitation, University of Buffalo Chronic Disease Research Institute. He brought to this subject a stimulating and understanding appraisal of the many complex questions posed by geriatrics.

The medical aspects were presented by Dr. Harold N. Roberts, assistant physician at Meyer Memorial Hospital, Buffalo. Dr. Harry W. Hale, Jr., instructor in surgery at University of Buffalo School of Medicine, discussed the surgical phases. Urologic problems were the theme of a discussion by Dr. Franklin C. Farrow, clinical professor of urology, University of Buffalo School of Medicine. All in attendance at the afternoon session agreed that the panel handled most capably this timely subject.

An interim business meeting was concerned with the Society's Blood Bank program and election of officers. A slate presented by the nominating committee was unanimously elected.

The following will guide the destinies of the district for the next two years: Dr. Gilbert Palen, Margaretsville, president; Dr. James Greenough, Oneonta, first vice-president; Dr. William T. Boland, Elmira, second vice-president; Dr. James Palmer, Binghamton, secretary, and Dr. C. Stewart Wallace, Ithaca, treasurer.

A pleasant cocktail hour shared with our guest speakers and officers was followed by an excellent smorgasbord dinner a la Arlington. This delightful repast was sparked by appropriate remarks by the Society's president, Dr. Andrew A. Eggston, and by Mrs. Thomas d'Angelo, president of the Woman's Auxiliary. The evening speaker was Dr. Simon Dack, chief of the Cardiac Clinic and assistant attending in cardiology, Mt. Sinai Hospital, who gave a masterful and scholarly discussion on "The Rehabilitation of the Cardiac." His remarks made a very appropriate summary on the basic subject of our panel discussion, and it was felt by all who heard our speaker that he handled the subject in a most instructive and timely manner.

The district meetings, particularly in an urban-rural area such as ours, should offer an excellent opportunity for all members of the medical profession to meet on a social-economic-scientific plane. If all these factors are given due emphasis, we might expect a higher percentage attendance, but, unfortunately, this ideal has not worked out in practice. The district meetings are always encountering competition from the specialty groups who are concerned primarily with medical discussions within their own group. It is rather discouraging to have only a 10 to 15 per cent attendance after careful planning and preparation, and one cannot help reaching the conclusion that the existence of the district as a medium for purely scientific dissemination is no longer merited.

It would seem pertinent to have some rearrangements of upstate districts to conform more closely with political subdivisions. The partitioning might lead to more effective cooperation with State Society officers and committees. The legislation committee, in particular, might be able to make more effective contacts and materially improve our medical legislation position. Within the revised framework, implementation of public relations and medical indemnity insurance activities might be brought to more complete realization. Careful planning as to district subdivision might present reduplication of effort, and the Society might strengthen its position in preserving the American concept of medicine.

Respectfully yours,

Elton R. Dickson, M.D., *President*

Seventh District Branch

To the House of Delegates, Gentlemen:

On January 22, 1953, we had a meeting of the advisory council at Clifton Springs at which plans for the coming year were discussed. It was the opinion of the members present that the district branches served a useful function, but there was considerable doubt as to the value of the educational program in that there are already too many meetings. It was felt, however, that for the present the meeting should continue and that the place of meeting should preferably be Rochester, but that this should be determined year by year.

On March 5 the advisory council met in the Sheraton Hotel in Rochester to confer with Dr. J. Stanley Kenney, on the question of "Combating Cults."

On September 10 a third meeting was held at which the advisory council heard the report of Dr.

Steinhausen on the work of the planning committee. Dr. Steinhausen's report of the first year of active work was most impressive. At this meeting plans were also completed for the coming meeting of the Seventh District Branch to be held September 24, 1953, at Rochester.

The Eastman Kodak Company, through its officers, extended its facilities for the district meeting on September 24, providing a guided tour of the plant, an assembly room for the doctors and another assembly room for the Woman's Auxiliary, a luncheon courtesy of the Eastman Kodak Company, and facilities for the afternoon meetings.

At 11:30 A.M., following the guided tour, the subject of the "Relationship of Industrial Medicine to Medical Practice" was discussed by Dr. James H. Sterner, medical director of the Eastman Kodak Company; Dr. John L. Norris, medical director of the Kodak Park Works, and Dr. Gordon Hemmet, medical director of the Hawkeye Works.

At 12:30 P.M. the business meeting was held in the main assembly room. The following officers were elected for the coming two years: Dr. Glenn C. Hatch, Penn Yan, president; Dr. Everet H. Woods, Auburn, first vice-president; Dr. Eldred J. Stevens, Hammondsport, second vice-president; Dr. Joseph A. Lane, Rochester, secretary, and Dr. James Arsneau, Lyons, treasurer.

Dr. Dan Mellen, president-elect of the State Society, was introduced and spoke on "The Relationship of the Doctor to the State Society and His Duties to the Public." Representing the State Society were: the president, Dr. Andrew A. Eggston, and the secretary, Dr. W. P. Anderton. Also present were three past-presidents of the Society: Dr. Edward T. Wentworth, Dr. Floyd S. Winslow, and Dr. Leo F. Simpson. Dr. Sidney McLouth, president of the Eighth District Branch, was also introduced.

The Woman's Auxiliary had a very successful meeting in a separate part of the plant. Owing to technical difficulties, it was impossible to have Mrs. Thomas d'Angelo give her yearly report.

After the meeting adjourned, a luncheon was served in one of the cafeterias of the Eastman Kodak Company and the meeting then moved to the assembly hall.

At the 2:00 o'clock meeting in the assembly hall, Dr. Glenn Hatch, incoming president, introduced a resolution thanking the Eastman Kodak Company for its courtesy and efficiency in handling the meeting.

Dr. Christopher Parnall, Jr., was introduced as the chairman of the afternoon session. Dr. Parnall, in turn, introduced Dr. Edgar Hull, chairman of the Department of Medicine in the Louisiana State University School of Medicine, New Orleans, Louisiana, who spoke on, "The Recognition of Asymptomatic Disease." This talk dealt with the recognition of various symptoms and signs of diseases which are so often overlooked. His talk was illustrated by case reports and graphs.

At 3:00 o'clock a clinicopathologic conference was conducted by Dr. Milton Borod, after which the meeting was adjourned.

The meeting was well attended with the following registration: doctors, 140, auxiliary members, 118, guests 30. At the close of this meeting the new Seventh District Branch officers took office according to the recently adopted constitution.

The program committee consisted of: Dr. Christopher Parnall, Jr., chairman; Dr. Joseph Lane and Dr. Gordon Hemmet. This committee took entire charge of the program and worked faithfully and with efficiency.

Mr. Carl Messenger, of the State Society staff, was a most important co-ordinating influence in arranging meetings and business matters throughout the year.

Finally, I wish to thank the officers of the *Bulletin* for their earnest attempt to make this journal a mouthpiece of the Seventh District Branch and to thank Mr. Carl Weber for his efficient and cheerful work in acting as executive secretary for the branch.

In concluding this report, I wish to pay tribute to the hard-working State Society officers who left nothing undone to help in the various details, not only for this meeting but also in the business of the district.

Respectfully submitted,

S. A. Munford, M.D., *President*

Eighth District Branch

To the House of Delegates, Gentlemen:

The year 1953 for the Eighth District Branch was an active and stimulating one and productive of benefits to our branch, to medical progress, and to the public welfare. Among other things it marked the seventh anniversary of the formation of the advisory council of presidents and secretaries of component county societies of the branch. Branch leaders are agreed that the advisory council has served the purposes and accomplished the objectives which were envisioned when it was organized in 1946.

The branch embarked on its year of activities and programs at the annual midwinter dinner meeting of the advisory council, central conference committee on workmen's compensation problems, and chairmen of legislation committees of constituent societies held at the Hotel Statler, Buffalo, on February 12.

On that occasion the branch accepted with expressions of sincere regret the formal resignation of Dr. Henry S. Martin of Warsaw as branch president, because of ill health. Dr. Sydney L. McLouth, Corfu, the first vice-president, was immediately installed as president of the branch to serve the unexpired term of Dr. Martin. (Death removed Dr. Martin from the rolls of the branch in June.)

The midwinter dinner meeting voted to hold the annual meeting of the branch at the new University of Buffalo Medical-Dental School on September 23, 1953. It also elected Dr. Joseph C. O'Gorman, Buffalo, to be the new chairman of the central conference committee. A third decision reached was that the delegates from the county societies of the branch, to the 1953 Annual Meeting of the House of Delegates of the State Society, would join with members of all branch auxiliary groups in holding a dinner meeting at the Hotel Statler on the evening of Sunday, May 3, on the eve of the opening of the 1953 Annual Meeting of the State Society in Buffalo.

Principal speaker was Dr. J. Stanley Kenney, New York City, chairman of the Citizens' Health Education Committee of the State Society, who spoke on "Medicine's Campaign Against the Cults," rallying opposition against the Seelye-Morgan Bill to license chiropractors, then pending in the Legislature. Other bills of interest or concern to medicine before the 1953 Legislature were considered, and action was taken on numerous measures. Others who addressed the gathering were Dr. Milton Terris, assistant dean for postgraduate education of the University of Buffalo School of Medicine; Dr. John C. Kinzly, chairman of the Eighth District medical advisory committee to selective service; Dr. Matthew J. Callanan, chairman of the military affairs committee of the Erie County Medical Society, and Mr. A. Carl Messinger, of New York City, field representative of the State Society. In spite of bad road conditions in many parts of the branch area, 35 medical leaders and guests attended.

Branch leaders, delegates, and other elements, 30-odd strong, assembled at Hotel Statler, Buffalo, on the evening of May 3 and unofficially "rang up the curtain" on the 147th Annual Meeting of the State Medical Society which got away to its official start the following morning in the same hotel. The agenda for the dinner meeting included consideration and approval of several resolutions to be offered the next day in the House by delegates from county societies of the branch, discussion of the contents of reports to be made to the House by certain officers, committees, and agencies of the State Medical Society, and appointment of a liaison committee to serve as a contact group between actions of the House and its reference committees and the branch organization. Eight speakers addressed the meeting.

Fine autumn weather joined a stellar array of four speakers to bring out a banner attendance at the scientific session of the 48th annual meeting of the branch on September 23 at the new Medical-Dental School building of the University of Buffalo. About 160 physicians, students, and guests attended the afternoon scientific session, arranged by Dr. Victor L. Pellicano, who presided at the request of President McLouth. Speakers and their topics were: Dr. William F. Lipp, "Problems in the Management of Pancreatic Disease"; Dr. Arthur M. Master, "Recent Advances in the Treatment of Coronary Occlusion"; Dr. George S. Phalen, "Treatment of Hand Injuries"; Dr. Milton G. Bohrod, "Pathologic Considerations in the Use and Abuse of Antibiotics."

At the annual business meeting which followed, the following were elected branch officers for two-year terms: president, Dr. Sydney L. McLouth, Corfu; first vice-president, Dr. Elmer T. McGroder, Buffalo; second vice-president, Dr. Wilfrid M. Anna, Lockport; secretary, Dr. Clyde L. Wilson, Jamestown, and treasurer, Dr. Richard A. Loomis, Ellicottville.

The same meeting adopted by a unanimous vote the proposed amendment to the branch bylaws abolishing the "line offices" of first and second vice-president and creating in their stead the two new offices of immediate past-president and president-elect, the new set-up to become effective at the 1955 annual meeting. (The Council of the State Medical Society later gave its approval to this change in the bylaws.)

The day's program had its climax at the dinner meeting of the branch at the Hotel Statler, preceded by a cocktail party given by Mead Johnson and Company. Speakers were Dr. Andrew A. Eggston, president of the State Medical Society; Mrs. Thomas M. d'Angelo, president of the Woman's Auxiliary to the State Medical Society, and Representative William E. Miller of Lockport.

The year's activities concluded with the annual early-winter dinner meeting of the advisory council, central conference committee and planning committee held on the evening of December 10 at the Hotel Statler, Buffalo. Warsaw, Wyoming County, was chosen as the scene of the 1954 annual meeting of the branch. (September 23 subsequently was chosen as the date.) President McLouth appointed Dr. Alfred L. George of Batavia as chairman of the program committee for the annual meeting. Speakers were Dr. John C. Brady, chairman of the legislation committee of the Erie County Medical Society; Harold P. Jarvis, executive secretary of the branch, and Joseph M. Kerrigan, executive director of the Western New York Medical Plan. It was voted to hold the midwinter dinner meeting on February 11.

Respectfully submitted,

SYDNEY L. MCLOUTH, M.D., *President*

Ninth District Branch

To the House of Delegates, Gentlemen:

To summarize the 1953 report of the Ninth District Branch of the Medical Society of the State of New York is to philosophize. Of great importance is the apparent cognizance of its members that a very special segment of higher organization is concerned with its scientific as well as legislation and public relations interests. I submit, as evidence, the splendid and unprecedented number of 250 members and wives who attended the annual meeting at New City.

The State officers and staff have again, as always, rendered an abundance of guidance and inestimable service. The real value of this close liaison lies in the assurance that constant scrutiny by State and national levels cannot fail to anticipate with accuracy sectional problems and possible solutions.

The fourth annual meeting of the Ninth District Branch was held on October 21, 1953, at the Dellwood Country Club, New City. The Lederle Laboratories was host for the day.

Dr. Harold Heller, first vice-president of the district branch, was general chairman of the meeting and did a superior job producing the day's schedule. Working with Dr. Heller were Lederle Laboratories medical directors, Drs. Malcom and Carey, with Mr. John Pfahl.

A beautiful setting in the multicolored hills of the lower Hudson, delectable food prepared and served under the supervision of the Nemiroff Brothers, a "stimulating" cocktail hour, an array of highly informative scientific presentations, and thoroughly enjoyable talks in the evening all combined to make the day a memorable one.

A conducted tour through the Lederle Laboratories was enjoyed by many who arrived early in the day.

Following a buffet luncheon the members assembled in the meeting room to hear Dr. Harold Cox of Lederle who presented an up-to-the-minute report on poliomyelitis vaccine. His hopeful outlook for the next few years is heartening.

Dr. Sidney Farber then enthralled all present with his revelation of research in the field of chemotherapy as carcinostatic and carcinolytic agents. He distinguished himself by his tremendous scientific contribution which he accomplished with such charm and humility by his ready acknowledgments to others in his field.

Dr. Maxwell Finland delivered an illuminating report on antibiotics from sulfa through erythrocin.

Mrs. Isadore Zadek, councillor of the Ninth District Woman's Auxiliary, deserves a hearty round of applause. Her work was started early in the summer and every detail was completed well in advance of the meeting date. Her congenial and efficient manner added much to the success of the day.

Cocktails were served in the lounge and were followed by a delicious steak dinner.

Dr. J. Stanley Kenney spoke briefly on the aims and objects of the newly formed Blood Banks Association of New York State.

Mrs. Thomas M. d'Angelo, president of the Woman's Auxiliary, appealed to us to help the women help us and was her usual charming self.

Dr. Dan Mellen, president-elect of the State Society, kept us on the edge of our seats with his recollections of early experiences in life. He presented an eight-point program as an offering to fight compulsory health insurance which was enthusiastically received.

The guest speaker of the evening, the Honorable Robert A. Doscher, Justice of the Supreme Court, discussed the fostering of better relations between the legal and medical professions. His facetious anecdotes and double talk were of special interest.

The members of the Ninth District Branch are indeed grateful to the Lederle Laboratories for their cordial and generous hospitality. The beautiful Lederle golf trophy which they have given will be used over a period of years to remind many of us of the memorable day we spent as guests of Lederle at the Dellwood Country Club. Again I wish personally to thank Drs. Malcolm and Carey for their friendly representation of an industry which produced a highly informative program in the interest of better public relations with medicine.

Respectfully submitted,

JOHN F. ROGERS, M.D., *President*

The Doctor in CIVIL DEFENSE

Medical Defense Committee of the Medical Society of the State of New York and the Office of Medical Defense, New York State Department of Health

J. G. FRED HISS, M.D., SYRACUSE, NEW YORK, *Chairman*

A Civil Defense Success Story

Forty trained medical aides for every physician in the State is not an impossible goal. Civil defense jurisdictions all across the State have started recruiting and training. To prove that it can be done and to spur efforts in the slower communities, the Office of Medical Defense has distributed to all civil defense jurisdictions a booklet entitled, "A Civil Defense Success Story," a survey of the medical aide program in Cattaraugus County, Olean, and Salamanca. Since January 1, these Cattaraugus County civil defense organizations have enrolled more than 1,700 medical aides. Some communities in the county have even exceeded their quota.

From the survey we have taken the story of Dr. Richard A. Loomis of Ellicottville, chief medical officer of Cattaraugus County, one of three civil defense jurisdictions in the county. Dr. Loomis attended one of the medical aide training institutes which were held State-wide last fall. The institute convinced him that "the civil defense medical aide program had direction, made sense, and offered something attractive and of practical benefit to the volunteer and the community as a whole."

Since then Dr. Loomis has spent every possible minute working on the recruitment of medical aides. First he wrote to high school authorities in the 13 population centers in his jurisdiction telling them about the program and suggesting that they be ready to conduct it under the provisions of adult education. Later he worked with the adult education authorities in recruiting instructors for the medical aide courses. Next he studied the booklet, "Organizing the Training Program," distributed by the Office of Medical Defense in Albany and, using it as his guide, launched a recruitment drive.

Dr. Loomis' hardworking recruitment committee, one member in each of the population centers, consisted primarily of members of the Woman's Auxiliary to the Cattaraugus County Medical Society. They furnished the power, but he kept in constant contact by telephone, finding out how they were doing, helping where he could, and offering advice and assistance. Since Dr. Loomis appointed his wife recruitment chairman in Ellicottville, he was able to see his ideas at work first hand and to iron out difficulties as they developed.

Mrs. Loomis made personal contact the strength of her campaign by calling each family in the community on the telephone, urging that at least one member become a medical aide. She also had posters placed around town and advertised in the local newspaper. As a result a mass meeting planned for recruitment and enrollment brought the same response as did other mass meetings in other communities in the county; the audience overflowed the meeting room into the hall.

All this time Dr. Loomis was working with the office of Cattaraugus County Civil Defense Director Sheriff Morgan L. Sigel in Little Valley, 9 miles away. The Sheriff and Mrs. Sigel work hand in hand on civil defense, and with their help Dr. Loomis succeeded in obtaining the supplies needed for the training program and solved the problem of getting them distributed to every corner of the county. To assist in the delivery of these supplies and training materials, Mrs. Sigel used the established channels of the Sheriff's patrol cars, the only cars brave enough to travel the icy winter roads.

The intensive efforts of all the people who worked together and worked hard for something they believed in, resulted in 1,043 medical aides being recruited from Dr. Loomis' jurisdiction. Every community responded with unexpected enthusiasm; for instance, Little Valley exceeded its quota by 40 medical aides, and Ellicottville, with a population of 1,016, recruited 140 medical aides.

The volunteers and instructors caught the enthusiasm of the leaders, and in some places where the recruits had not previously had first aid, they enrolled also for a first aid course. One night they attend the aid stations course; other evenings the same week they study first aid. By the beginning of April the first group of medical aides will receive their certificates.

The above is just part of the story of what is going on in Cattaraugus County. This is what was done in just one of the three county civil defense jurisdictions. The rest is covered in "A Civil Defense Success Story." However, this summary shows that people are interested in doing their part in civil defense if approached personally. It shows that the quota of 40 medical aides for every doctor can be reached. It shows that if everyone works together, New York State can have an efficient, trained emergency medical service, ready to care for its people in the event of an atomic attack or any other mass disaster.

Make a Note . . . .

- *148th Annual Meeting*
- *Medical Society of the State of New York*
- *May 10 to 14, 1954*
- *Hotel Statler*
- *New York City*

CORRESPONDENCE

Patient-Physician Relationships

To the Editor:

May I be permitted a few comments on Dr. Ernest Dichter's excellent paper in the January 15 issue of the JOURNAL, entitled "Do Your Patients Really Like You?" The comments are those of a general practitioner with a background of over twenty years in practice, and while the point of view is highly personal, it is not much at variance with that of other general practitioners with whom the subject has been discussed.

Dr. Dichter, near the beginning of his piece, describes the idealistic young medical student brought suddenly face to face with the fact that he has to behave like a businessman and how this realization tends to shatter his idealism. I don't know how many young medical students Dr. Dichter interviewed, or how many old doctors, but in my own case my idealism was badly bruised when I returned to practice after a three-year hitch in the Army and actually learned for the first time just how much people really loved me and just how idealistic were the people with whom I had to do business. After having practiced among these people for over ten years, it was rather hard on my idealism to find that I couldn't buy a new car, or an old one either, with which to resume being idealistic in making my house calls, without slipping a bonus of $200 or $300 to the idealistic automobile dealer. It also lacerated my idealism somewhat to find that I couldn't buy any butter from the idealistic corner grocer unless I also bought a dozen eggs. I found too that my idealism, which should have been made of sterner stuff, weakened a little when the milk drivers went on strike and I couldn't get milk for my child. The milk driver recognized that my idealism obligated me to deliver medical service to *his* child at any hour of the day or night but failed to acknowledge any reciprocal idealism which obligated him to deliver milk to *my* child.

As for the changing attitude of the public toward the modern doctor as contrasted with the old family doctor, the reason for the change is obvious. When a doctor told his patient fifty years ago that he had bursitis and that the cure required this treatment and that medicine, the patient accepted the doctor's opinion as final, and in his complete ignorance of matters medical he accepted the doctor's directions and followed his advice with complete faith and without hesitation. Contrast that happy situation with conditions today.

I noted a few days ago in a lay magazine a complete article on the pathology, symptomatology, diagnosis, prognosis, and treatment of bursitis. So what happens now? The patient comes to me with a pain in his shoulder, and after an examination I tell him he has bursitis. That at once puts us on an equal footing, for having just read the magazine he now knows as much about bursitis as I do, except that he has not yet learned the aphorism of Hippocrates, "The art of medicine is long, life is short, judgment is difficult, and experience fallacious." Unfortunately the magazine article doesn't even mention the treatment that I use and have used with eminently successful results for nearly two years. When I tell the patient the treatment I recommend, a treatment he never heard of, what is his reaction? Will his confidence in me be as strong as his grandfather's was in *his* doctor, or will it have been weakened by his own medical studies?

How many times, when a doctor has completed his examination of a sick child and fails to reach into his little black bag for the needle and syringe, does the mother ask, "Aren't you going to give him a shot of penicillin?" I have lost quite a few patients by answering, "No, I don't think it's necessary or advisable." Am I supposed then to spend an hour or so trying to give to these determined mothers a complete course in pathology and bacteriology when they have already acquired from the women's magazines a full and complete knowledge of these subjects? And what weight would my simple explanations have, measured against the authority of the printed word complete with pictures?

The fact is that I envy these people who are able to imbibe in ten minutes through reading an article in a lay magazine more medical knowledge than I have been able to acquire in more than thirty years in the study of medicine. The trouble with the doctor-patient relationship today is that the patient has been educated in medical matters to such a degree that everyone is a master of the subject.

In the magazine articles everything is simple; a certain symptom indicates a certain disease which is always cured by a certain treatment. Under these circumstances how can the doctor presume to be possessed of any superior wisdom or knowledge? And do people dislike doctors because doctors still insist that they know more about medicine than their patients do, and because, from the patient's point of view, they try to make a simple field of knowledge very complicated? And because they charge what appear to be high fees for making what appear to be simple decisions, and for doing what appear to be simple things?

Fifty years ago if the patient survived his illness or his operation, the doctor was a ringtailed wonder. Today if he is not completely well of almost any illness within forty-eight hours, the patient all too often begins to wonder whether his doctor is an ignoramus.

As for the patients' supposed preference for clinical rather than instrumental diagnosis, the fact is that the great majority of them are gadget crazy. It has been shown many times that any quack can make a fortune in no time by setting himself up in business and undertaking to make instantaneous diagnoses by means of some magic black box equipped with flashing lights and swinging pointers.

Bearing in mind Dr. Dichter's contention that to fail to like one's patients is an indication of poor public relations, nevertheless I must admit that there are some people whom I don't like. For example, I don't like those people who call me on a Sunday and insist that I see them that very day for some condition like varicose veins or anal pruritus which they have had for months or years. I also dislike those people who wait all day or for several days and then call me out at 10:30 at night and, in addition, express annoyance because no drugstore in the neighborhood stays open all night to fill the prescription. I don't like the patient who calls me out late at night and doesn't have anywhere on his premises a house number that can be seen from the street. Neither do I like the patient who asks me to falsify by exaggeration a medical report of accidental injuries so that he can claim from the insurance company more money than his injuries entitle him to.

It might be a good idea, as Dr. Dichter suggests, for my patients and myself to adopt the custom of calling each other by our first names. Sir William Osler was a pretty good doctor in his day; I wonder how many of his patients called him "Willy" and how many of the late great Dr. Lahey's patients called him "Frankie?"

It is rather odd to find Dr. Dichter in one place urging the doctors to be more like the old-time family doctor and in another chiding them for insisting on remaining rugged individualists. I do not share Dr. Dichter's belief that the rugged individualist, despite the efforts of the conformists to exterminate him, is an anachronism. It was the rugged individualists who made America great, whose names stand out like mountain peaks above the level plain of mediocrity: Christopher Columbus, Thomas Jefferson, Daniel Boone, Dr. McDowell, Thomas Edison, and Admiral Rickover of our own time. These were the men who exemplified the spirit expressed in the phrases, "On to Oregon," "California, here I come," "Pike's Peak or bust," "Damn the torpedoes, full speed ahead," and "I'll do it if it kills me." If the time ever comes when the rugged individualists are smothered by the blanket of conformity and the pressure of mediocrity, then I say, "God help America."

LYON STEINE, M.D.

56 East Maple Street
Valley Stream, New York

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*The Malpractice Problem**

To the Editor:

The Malpractice Insurance and Defense Board of the Medical Society of the State of New York has caused the publication of an article in numerous county society bulletins and in the NEW YORK STATE JOURNAL OF MEDICINE, defending the status quo on malpractice insurance. In fairness to all concerned, clarification and further statements must be made. The Kings County Physicians Guild does not have for its purpose to destroy or undermine the "legal source of protection which the Society has painstakingly provided for all its members, including the critics themselves." For the record, we state that some of these critics carried their malpractice insurance in other companies, legally licensed in this State, at cheaper rates than those offered by the Society's Plan.

The Guild is interested in securing malpractice protection for all its members. There are some Guild members who are not eligible to receive this protection through the Society Plan because they are not members of the State Society.

Lloyds and English Companies were *solicited* by the Guild, and a contract was negotiated by the board of governors of the Guild and authorized representatives. We are satisfied and convinced after careful study and discussions with the legal authorities that we are justified in our action. Similar action for obtaining malpractice insurance through Lloyds and English Companies was taken by the American College of Physicians on behalf of its membership.

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* This letter was published as an article in the January, 1954, issue of the *Bulletin of the Kings County Physicians Guild, Inc.*

The following excerpt from the article, as published: "In May of this year, the House of Delegates directed the Malpractice and Defense Board to 'study' the offers being made by Lloyds of London to furnish malpractice insurance to members of the Society at excessively low rates. For the sake of the record, it should be stated at once that the Board had been fully aware of the activities of Lloyds and had been investigating them since late in 1952"—leads us to ask the following questions:

1. What are the findings of your investigation since late in 1952?
2. Why is Lloyds of London not licensed in this State?
3. Has the Insurance Commissioner ever denied such license to Lloyds?
4. Has he found Lloyds to be unsound, unreliable in the past, that caused him to act adversely?
5. Is the financial status of Lloyds unsound?
6. Where does the law state that the Medical Society of the State of New York may not directly place its malpractice insurance with an unlicensed company anywhere in the United States?

It is admitted that Lloyds of London is not licensed in this State and that a licensed broker in this State may not solicit insurance for an unlicensed company. It is also admitted, however, that any physician or incorporated body of physicians may secure directly malpractice insurance for himself or for the group from any licensed or unlicensed company in this State.

Another statement was made by the chairman of the Malpractice Insurance and Defense Board:

> "An uninformed statement made in the House of Delegates last May during a discussion of this matter was that our present carrier, the Employers Mutual Liability Insurance Company of Wisconsin, reinsures a part of its business, including our malpractice insurance, with Lloyds. The implication is that if Lloyds was acceptable for reinsurance, they would be equally acceptable for selling insurance direct to members. Statements of this kind ignore the fact that Lloyds is permitted under the law to transact reinsurance business but cannot legally sell through licensed brokers malpractice insurance to members of the Society who are eligible for protection under our group plan, as indicated in the order of the Superintendent of Insurance. Quite aside from this point, however, it is a fact, verified by the vice-president and general counsel of the Employers, that the company has no reinsurance agreement whatever with Lloyds except for occasional extrahazardous risks not covered by their regular insurance treaties."

We have repeatedly stated on the floor of the House of Delegates, in committee, and in the *Kings County Physicians Bulletin*, that such reinsurance on the part of the Employers Mutual Liability Insurance Company of Wisconsin existed. This statement was taken from the remarks of Mr. Linder, one of the actuarial auditors of the survey of the Malpractice Insurance and Defense Board. On page 62 of Proceedings of the House of Delegates, Medical Society of the State of New York, as published in the September 1, 1953 issue, part II, of the NEW YORK STATE JOURNAL OF MEDICINE, Mr. Linder states in answer to this question: "Your own insurance is insured with Lloyds for certain excess losses."

Again, a written communication from Alfred M. Best Company Insurance Publications and Reports states that the Employers Mutual Liability Insurance Company in Schedule E in their annual statement (1952) lists Lloyds of London as one of their reinsurance companies.

These facts are incontrovertible. All juggling of words cannot gainsay the facts as stated by Mr. Linder and Alfred M. Best Company. It is about time that English be spoken and written so that the true meanings are clearly defined.

Again, another excerpt: "Although it should not be necessary to do so, it is again reported for the sake of the record that the Board is and has been in touch with all of the companies willing or able legally to furnish valid and dependable malpractice insurance to members of the Society."

May we ask the Malpractice Insurance and Defense Board to publish the names of these companies and their proposition to the members of the Medical Society of the State of New York, or, if such reports were published in the past, to inform us where we may find them?

The Malpractice Insurance and Defense Board should not concern itself in policing the activities of another profession, that of the insurance brokers. In the recent past, licensed brokers, violating the rules and regulations of the Insurance Laws of this State, were summoned before the Insurance Commissioner. We commend the Insurance Commissioner in taking this action, which is justifiable. He should enforce the insurance laws of this State.

Again, it would be more commendable if the members of the Council of the Medical Society of the State of New York police their own profession and see that physicians comply with the rules and regulations of the Medical Practice Act and the Principles of Professional Conduct. Such Council members should not concern themselves with insurance brokers who solicit members of the Medical Society for malpractice insurance by urging these members to report such solicitation to the Malpractice Insurance and Defense Board.

We can urge the membership to report illegal and unethical activities involving the medical profession. Probably our malpractice rates may then be reduced. Probably our esteem and public relations may improve.

We reiterate our firm stand, backed by the knowledge of legal and ethical determinations, that all physicians have the right and privilege to avail themselves of the opportunity to obtain malpractice insurance coverage through any sound carrier whether licensed or not and offering it at whatever premium is most satisfactory to the physician.

We also reiterate that it is our firm belief that the integrity, honesty, and financial responsibility of Lloyds of London cannot be questioned.

John J. Flynn, M.D.
Aaron Kottler, M.D.
S. Schussheim, M.D.

Kings County Physicians Guild
84-04 Bay Parkway
Brooklyn, New York

Comment by Dr. Christopher Wood

To the Editor:

The members of this Board have read with considerable interest the article on the malpractice insurance situation which appeared in the January issue of your *Guild Bulletin.*

You may not be familiar with the fact that the Group Plan of the State Society was organized and has always been operated under a strict cost-plus agreement with our carriers and that, because of its very low expense ratio, a greater percentage of our premium dollars is available for the payment of losses than that of any other form of casualty insurance and certainly more than that available in any company writing malpractice insurance in this State. Apparently the fact has also been overlooked that every item of cost has been audited and certified by one of the leading firms of accountants and insurance actuaries in the country. The Board therefore believes that the caption of your article is misleading. It is a clear and simple fact that the cost of our losses and loss defense plus a minimum expense ratio has been greater than the premiums charged. It is an incontrovertible fact that since they took over our insurance in 1949, the cost of it to the Employers Mutual has been more than the premiums we have paid to them. There is no "malpractice muddle," therefore, except that created in the minds of members who have not had all the facts before them and who have been badly informed.

Assuming that you desire to present the facts of the situation to your members, the Board has requested me to write you about some of the points mentioned in your *Bulletin.*

Obviously, doctors who are not members of the State Society cannot avail themselves of insurance in the Society's Group Plan. It is no doubt true that "some" members of the Guild have been able to obtain malpractice insurance in other companies, legally licensed in this State, at rates cheaper than those offered by the Group Plan. That has probably been true also of some other members throughout the State. The fact remains, however, that those lower rates have never been available to all members of the Society and that most of the companies that have offered them have been obliged to withdraw from the field in New York.

To get a true perspective of the situation, one has only to recall the rather recent experience of the American Policyholders of Boston, and the fact that the Yorkshire Indemnity Company's loss experience, as the carrier of the Group Plan, was so unfavorable that they found it necessary to give it up. The rates of both of those companies were considerably more than those now quoted to your Guild by Lloyds. The Fidelity & Casualty, the Aetna Casualty, the Yorkshire Indemnity, and the American Policyholders—four companies that had a larger volume of malpractice insurance in this State over a longer period of time than all other companies combined—found the business so unprofitable that they discontinued it and now refuse to issue this insurance to a New York State doctor at any rate. In addition, the Glens Falls Indemnity, the Metropolitan Casualty, and the St. Paul-Mercury, with a lesser experience in this field, have felt obliged to curtail their malpractice writings here or have discontinued them entirely.

The Society was impelled to organize its Group Plan in 1921 to ensure continued and sound protection for all of its members and to exert effective control over the quality, management, and cost of the insurance, and it has completely accomplished that purpose. With the continued increase in the number and cost of suits and claims against our members, and the consequent contraction of the market for this form of insurance, there was never a time when the need for the Group Plan was greater than at present. No company or insurance organization on earth can successfully insure for any length of time the members of the Society at rates lower than those of the Group Plan, and anyone who is led to believe that it can is following a mirage.

It may be true, as your *Bulletin* states, that consciously the Guild "does not have for its purpose to destroy or undermine the legal source of protection which the Society has painstakingly provided for all of its members." The fact remains, nevertheless, that when any organized group of members of the State Society, acting as a group, foster a malpractice insurance plan of their own in competition with that of the State Society, their action tends to accomplish exactly that. There is no question of the right of any group to do so, but it is the duty of the Board to point out the significance of that action to the members of the group concerned, as well as to the rest of the members of the Society.

The Malpractice Insurance and Defense Board is charged by the Bylaws of the Society with responsibility "to study and supervise, on behalf of the Society, all matters having to do with malpractice insurance and defense." It might be useful to keep in mind also that the Board is composed of seven practicing doctors, each of whom requires and purchases malpractice insurance. They are, therefore, as interested in the cost of insurance on their own account as any other member of the Society. They devote several hundred hours each year to all matters bearing on costs and have before them at all times the most complete and detailed data in existncee.

CHRISTOPHER WOOD, M.D.
Chairman

Malpractice Insurance and Defense Board
Medical Society of the State of New York

Physician Available

To the Editor:

I have recently come back from France where I served three years with the Army. While I was there, I met a Polish physician, aged thirty, working in my hospital, who had served as a civilian physician for the Army since the war's end. He had his college training in Warsaw before the war, served briefly in the Polish Army, then the underground, and finally the American Army. He received his medical degree in Paris.

My friend has tried many times to immigrate to the United States, but until the passage of the new Immigration and Nationality Act he has had little success. Under this act he could enter as a skilled specialist if an American hospital, a laboratory, or even a privately practicing physician would apply for his services.

Do you think you can help place my friend in a hospital, laboratory, or with a physician?

I can obtain all his necessary credentials and qualifications for anyone interested in a well-qualified, experienced doctor with only the highest of recommendations from his various hospital directors and commanding officers.

Thank you for any aid you can give me.

WILLIAM C. MILLER, D.D.S.

551 Fifth Avenue
New York 17, New York

The Late Dr. Max Einhorn

To the Editor:

In none of the various obituary notices describing the career of the late Dr. Max Einhorn, including that published in the NEW YORK STATE JOURNAL OF MEDICINE, was there any mention of what, to my mind, was his most significant contribution to medicine.

Dr. Einhorn received his doctor's degree in medicine at the University of Berlin and his Inaugural Dissertation, published in 1884, consisted of a report on the first study of the frequency distribution of the various types of leukocytes in normal human blood—the "differential count." He was working under the direction of Paul Ehrlich, who had been experimenting with differential stains. It was Ehrlich who classified the important types of leukocytes, and he apparently left it to his pupil, Einhorn, to determine the proportion in which these cells occur.

It is also of interest to note that Dr. Einhorn had long been a benefactor of the Physicians' Home during his lifetime.

TASKER HOWARD, M.D.

144–45 Sanford Avenue
Flushing 55, New York

Actinomycin C and Other Antibacterials in Hodgkin's Disease

To the Editor:

Dr. Selman A. Waksman's report to the Sixth International Congress of Microbiology on actinomycin trials in "cancer of the lymphatic system including Hodgkin's disease" received considerable coverage in the September 8, 1953, issue of the New York *Times.* The latter, in turn, elicited interest among physicians and families of patients with this disease. According to the press report, Dr. Waksman detailed the early isolation of this streptomyces-derived antibiotic and its shelving because of profound systemic intolerance which, in turn, seemed due to a marked cytotoxic action, expressed particularly against the lymphatic system. On this basis Dr. Christian Hackmann of the Bayer Institute in Germany began a restudy about three years ago of streptomyces culture filtrates in animal tumors and found a newer isolate, actinomycin C, to be antineoplastic. "Apart from antitoxic effect [it] has a very pronounced inhibitory effect, particularly on the lymphatic system," he stated. Clinical trials on 150 lymphoma patients were undertaken by Dr. G. Shulte of Recklinghausen, Germany, who used as little as 0.25 mg. of Hackmann's antibiotic. In an unstated number of these cases, Dr. Waksman conservatively reports therapeutic benefit.

Actinomycin C or other members of this streptomyces-antibiotic series are not generally available as such in this country, although the various animal feeds, designated APF commercially, and which undoubtedly contain trace antibiotics of this series, are now in rather long supply. At the same time malignant lymphomatous disease, both in its leukemic and aleukemic phases, continues on the increase in this country so that Dr. Waksman's briefing deserves careful scrutiny, both in its practical and scientific aspects. For instance, he reports nonrecurrence of lymphoid tumors, after initial shrinkage, a consummation seldom seen in this country since general utility of "cytotoxic" agents like nitrogen mustards (HN_3) and triethylene melamine (TEM) began. Dr. Waksman mentions "several months" of what can be construed as the remissive state, but this must be evaluated on the basis of European practice where HN_3 and TEM or their analogs have not caught on and where the life duration of the Hodgkin's patient still averages four years, as it once did in this country. This must be contrasted with my own present experience; I know definitely of only three malignant lymphoma patients who survived one year following the application of HN_3 or TEM. The latter agents also cause tumor shrinkage initially, but one could hardly impart to them the coincident "antitoxic" effect mentioned by Hackmann of actinomycin. This brings up the scientific question as to whether the latter is really acting like a "cytotoxin" since the 11-oxysteroids, either autochthonously generated by the stress reaction or administered substitutively, also cause lymphoid involution, and they are neither classically "antibiotic" nor unusually toxic at the cellular level.

The foregoing is not to infer that actinomycin is a "nonspecific alarm agent" or "stressor" in the Selye sense, although mycin antibiotics and the crude culture filtrates like those from which actinomycin C was isolated do produce an adrenocorticomimetic response in subjects with adaptation disease such as lymphoma.[1,2] Nor is there doubt around the validity—quite the contrary as will develop—of either the Hackmann or Shulte reports. There are reasons to doubt, however, that this effect of this particular mycin is unique or due to somatocellular level action, the basis of its selection for clinical trial. These reasons are elaborated.

An antibiotic may evince general systemic toxicity without marked somatocellulotoxic effect, but the converse is never the case. This generalization, whose corollary renders the "therapeutic margin of safety" too slim for me to employ *any* somatocellulotoxin in humans, has been gleaned over a five-year period, the initial two of which were spent in a screening similar to that of Dr. Hackmann, while, at the same time, small doses of nontoxic mycins were being continuously employed in malignant lymphoma. Thereby, some of my lymphoma patients have been maintained in reasonable health throughout a period which certainly exceeds that of Dr. Shulte's trial. Original reports of the application in this connection were made on a crude streptomycin residue with antibiotic spectrum connotative of the actinomycin series activity.[3] Subsequently, however, the same remissive trend was established in Hodgkin's disease and leukemic patients with small doses (1 to 5 mg. per Kg. per day) of crystallin mycins, the tetracyclins (Aureomycin, Terramycin), streptomycin, or other antibacterials not in the mycin class, e.g., cupridihydroporphyrins (Chloresium sodium cupri-isochlorine$_4$), lithium ferrimesoporphyrin, and ichthyol. The latter have a rather restricted spectrum whose main interest resides in ability to alter the metabolic requirement of intestinal strains of proteus which change from a

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[1] Barnard, R. D.: Int. Rec. Med. **164:** 117 (1951).

[2] *Idem:* Lancet 1: 612 (1952).

[3] *Idem:* New York State J. Med. **50:** 1852 (1950).

proteolytic to saccharolytic metabolism.[4] That the true explanation of actinomycin effect in lymphoma may lie in this direction (rather than in that of direct lymphotoxic action) now finds further evidence in the fact that similar remissions are being secured with the mammalian intestinal mucosa extract of Renshaw which appears to be identical with Gyorgy's lactobacillus bifidus growth factor and Elvehjem's "mink growth" factor.[5-7] It must be more than coincidence that all of these materials have been reported to suppress intestinal proteolytic species and to act as growth factors for some non-ruminant vertebrates, the mycins for chicks, turkeys, and swine, the chlorophyllins for ducks and rats, and the Renshaw-Elvehjem-Gyorgy factor(s) for the breast-fed infant and for the mink. It is noteworthy that all of these (or closely related) factors are present in crude streptomyces fermentation residues, and this may lend logic to my own practice of supplementing antibiotic administration with that of crude residues in the management of Hodgkin's disease.[8] These residues, in turn, were those initially introduced as APF ("animal protein factor") on the basis of their ability to promote growth and livability of domesticated animals; it seems unlikely that they do so by "toxic" effect, however discreetly controlled as purports to be the case of actinomycin in lymphoma.

From a practical standpoint, it would be of little moment how it does so if small doses of actinomycin indeed salubriate the course of malignant lymphoma, and I should be content with confirmation of my own stand that small doses of *any mycin* may do likewise. However, other considerations would transcend this empiricism. Drugs used symptomatically have functioned before it was known exactly how, but they have also done harm. Most efficient utilization has always awaited elicitation of their pharmacodynamics—exactly how they operated. A repulse could easily be suffered in our persistent battle against Hodgkin's disease and other forms of malignant neoplasia if we rely on false intelligence about the opponent's soft spots. This was never truer than now when opinions are sharply divided, one group insisting on tactical attack through the cytotoxic or "saturation bombing" approach, while others hold to the strategy of replenishing the whole organism so that it may better cope with the stress decompensation that has permitted neoplastic proliferation in the first place. This latter school of thought considers malignant neoplasm to be a disease of adaptation. I am willing to accept their line of reasoning because it has been proved by results in some cancers with steroid hormone therapy, and the latter, in turn, no matter how imperfect, has made more progress in cancer therapy than has any definitive "cytotoxin."

It is axiomatic that a rise in general nutritional level could fortify the ability of a patient to cope with any adaptation disease so that it remains to postulate that long-term ingestion of mycins or their crude fermentation sources do so raise the nutritional level. Perhaps this is the "antitoxic" effect of which Hackmann speaks. My finding that they improve the patient's general health may lack objectivity since I am obviously prejudiced, and long-term antibiotic feeding experiments abroad, while showing this trend, have not as yet been formally reported. However, two domestic reports bolster the case. Dr. M. M. Marks of Kansas City reported at the New York American Medical Association meeting on June 11 that crude streptomycin (Bicon), Terramycin (Bicon TM, Pfizer), and Aureomycin (Aureofac, Lederle) residues caused a remarkable improvement in ingesting patients with weight gain, hemoglobin rise, and freedom from upper respiratory infection. At the Gerontologic Society meeting in San Francisco on September 16, 1953, Drs. D. H. Sprunt and L. V. McVay reported on small daily doses of Aureomycin over a one and one-half year period in elderly patients. Here again, the "tonic" effect was outstanding.

It is hoped that these reports, along with that of Dr. Waksman, will impel more definitive and more formal ones from those similarly maintaining patients in the leukemia-lymphoma group. I state this because about a score of physicians in this area have privately volunteered information about cases under their care which have remained in remission for long periods while ingesting lower than conventional doses of mycins. When I ask them to publish their findings, I am invariably told that one or two cases (all that the average physician sees during a year) do not justify a report. Dr. Waksman, with mention of more cases, appears to have broken the ice, and I am perfectly willing to crawl out again on the thin shelf to state that the health differential between antibiotic and "cytotoxic" treated lymphoma patients remains glaringly, and pitifully, in favor of the former.

Robert D. Barnard, M.D.

138–48 231st Street
Laurelton, New York

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[4] von Wasielewski, E., and Albrecht, A.: Ztschr. f. Hyg. u. Infektionskr. 9: 448 (1952).

[5] Renshaw, A.: Ann. Rheumat. Dis. 6: 15 (1947).

[6] Gyorgy, P.: Presented at a meeting of the American Chemical Society, Atlantic City, 1951.

[7] Elvehjem, C. A.: Federation Proc. 7: 410 (1948).

[8] Barnard, R. D.: Hawaii M. J. 11: 57 (1952).

An Elastic Sleeve for Edema of the Arm

To the Editor:

In the treatment of edema of the arm secondary to radical breast operation or axillary vein thrombosis, it was found that compression was an indispensable aid together with the use of gravity, massage, and dehydration. A detailed report of the conservative management of these cases was published in *Surgery, Gynecology and Obstetrics* in November, 1951, page 568. In this report an elastic sleeve was described which the patient was directed to wear (Figs. 1 and 2). At the Annual Meeting of the Medical Society of the State of New York in May, 1952, this sleeve was included in the author's scientific exhibit entitled "Vascular Diseases." Because of numerous inquiries for a more detailed description of the manufacture of this sleeve, this additional report is made.

Edema fluid drains out of the arm when the arm is suspended in elevation. When the patient is up and about, it tends to reaccumulate. To prevent this an elastic sleeve is worn. Each sleeve must be made to measure; and measurements should be taken in the morning when the arm has attained its smallest size. The sleeve should extend from the distal portion of the palm to the mid-brachium, allowing a wide opening for thumb movements. Measurements are made of the circumference of the hand, the minimum wrist, maximum forearm, and maximum arm with the distances between these points noted. From these measurements a paper pattern can be constructed. Surgical elastic material is used in the sleeve and must be heavy enough to give firm compression. Some of our patients have been able to make their own sleeves. As the arm shrinks in size, the sleeve must be adjusted or a new one made to fit snugly. Any surgical supply store that makes elastic stockings to measure should be able to make this sleeve if furnished with the proper measurements.

Patients are instructed to don the elastic sleeve upon arising and to wear it throughout the day. After approximately six months of this treatment the lymphatic drainage has become so efficient that many patients are able to discard the sleeve without a recurrence of edema.

William T. Foley, M.D.

Cornell University Medical College
1300 York Avenue
New York 21, New York

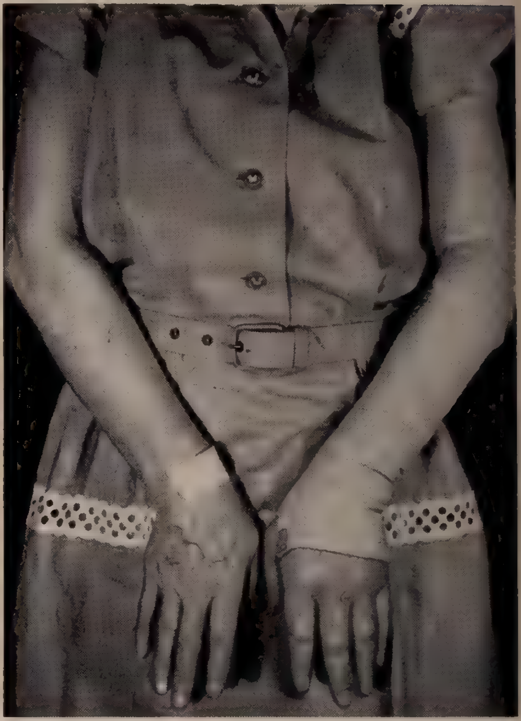


Fig. 1

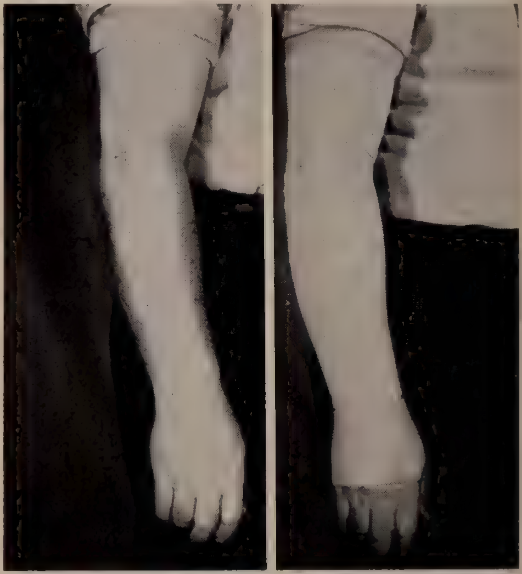


Fig. 2

pain
has two aspects
physical
psychic

Daprisal*

relieves both aspects of pain

physical—because it provides the combined analgesic effect of acetylsalicylic acid and phenacetin, potentiated by amobarbital.

psychic—because it provides the mood-ameliorating effect of Dexamyl* (Dexedrine† and amobarbital).

Formula: Each 'Daprisal' tablet contains 'Dexedrine' Sulfate (dextro-amphetamine sulfate, S.K.F.), 5 mg.; amobarbital, ½ gr. (32 mg.); acetylsalicylic acid, 2½ gr. (0.16 Gm.); phenacetin, 2½ gr. (0.16 Gm.).

Smith, Kline & French Laboratories, Philadelphia

*T.M. Reg. U.S. Pat. Off.

†T.M. Reg. U.S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.

NECROLOGY

Alex Robert Alexander, M.D., of New York City, died on March 4 at Montefiore Hospital at the age of fifty-six. Dr. Alexander received his medical degree from the General Medical School of Chicago in 1923.

William Edward Ball, M.D., sixty-two years old, of Brooklyn, died on December 19, 1953. Dr. Ball graduated from New York Homeopathic Medical College in 1916. He was a member of the New York State Homeopathic Society.

James Stewart Banta, M.D., of Buffalo, died on January 7 at the age of sixty-seven. Dr. Banta graduated from the University of Buffalo School of Medicine in 1913. He was attending proctologist at the Buffalo General and Meyer Memorial Hospitals. He belonged to the American Proctological Society, the Buffalo Academy of Medicine, the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harry Benjamin Biscow, M.D., of the Bronx, died on October 27, 1953, at the age of seventy-five. Dr. Biscow graduated from the New York University and Bellevue Hospital Medical School in 1905. He was a member of the Bronx Obstetrical and Gynecological Society, the Bronx County Medical Society, and the Medical Society of the State of New York.

Harold W. Cowper, M.D., of Buffalo, died on February 6 at the Buffalo General Hospital at the age of seventy-seven. Dr. Cowper graduated from the University of Buffalo School of Medicine in 1897. He was a Fellow of the American College of Surgeons and a member of the American Academy of Ophthalmology and Otolaryngology and the Buffalo Academy of Medicine. Dr. Cowper was a consultant in ophthalmology at Buffalo General Hospital and honorary ophthalmologist at Emergency Hospital.

He served in the Spanish-American War and the Philippine Insurrection.

Dr. Cowper belonged to the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harry L. Fulton, M.D., of Binghamton, was killed in an accident on January 9, in Fresno, California. He was fifty-seven years old. Dr. Fulton graduated from the New York University and Bellevue Hospital Medical School in 1932. A Fellow of the American College of Surgeons, he served as associate attending surgeon at City Hospital and attending surgeon at Lourdes Hospital. At the time of his death he was on the staff of the Veterans Hospital in Fresno, California.

Dr. Fulton belonged to the Broome County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Walter Thomas Glaser, M.D., of Queens, died of a heart attack on February 8. He was forty-seven years old. Dr. Glaser graduated from Long Island College Hospital College of Medicine in 1932. He belonged to the Queens County Medical Society and the Medical Society of the State of New York.

Jacob Martin Golbey, M.D., of Brooklyn, died on October 15, 1953, at the age of seventy. Dr. Golbey graduated from Cornell University Medical College in 1904. He was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

James A. Hogan, M.D., fifty-one years old, of Albany, died on February 19 at his home. Dr. Hogan graduated from Albany Medical College in 1927. He was the surgeon for the Albany Police Department from 1934 until 1952, serving thereafter as physician for the Albany County Jail. He was also a district physician in the Albany County Health Department.

Dr. Hogan was an attending gynecologist in the Outpatient Department of St. Peter's Hospital. He belonged to the Albany County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Erwin Horner, M.D., of New York City, died at the age of sixty-nine on November 8, 1953. He received his medical degree from the University of Vienna in 1909. Dr. Horner was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Junius Hardin McHenry, M.D., formerly of New York City, died on December 4, 1953, at Sasqua Hills, East Norwalk, Connecticut, at the age of seventy-seven. Dr. McHenry received his medical degree from Rush Medical College in 1900. He was a Fellow of the American College of Surgeons and

[Continued on page 1086]

"...use a little wine for thy stomach's sake and thine often infirmities..."

—Paul

The use of wine in nutrition and in medicine dates back to the beginning of history. It is recorded in the ancient Egyptian papyri, in the Bible—as in the oft-quoted admonition from Paul to Timothy—and in epicurean and medical annals from Hippocrates down to our own times.

In recent years there has developed a demand within the medical profession that the true values of wine be determined, and that fact be separated from folklore. Accordingly, fifteen years ago, research projects in many American medical centers were initiated to determine by modern scientific techniques the food values and medical uses of wine.*

The investigations have brought forth evidence which may be of interest and practical value...

...Wine stimulates the appetite in anorexia, and gently increases gastric secretion.

...Wine serves as a quick-energy food. Its small amount of hexose is speedily absorbed, and its moderate content of alcohol is metabolized readily, even by diabetics. Its B-vitamins and absorbable iron make it a useful supplementary source of these substances.

...Wine possesses significant diuretic, vasodilating and relaxing properties. The gentle sedation provided by a small amount of wine at bedtime is a pleasant aid in inducing restful sleep.

...A little wine before or with the meal can offer a needed element of "graceful living" to the patient... it can help in the psychological care of the elderly and the convalescent.

In California (and in other regions, too) a combination of soils, climates and modern wine-making skills makes it possible to grow the world's finest wine grapes of every variety, and to produce wine of strict quality standards, true to type, moderate in price.

*Research information on wine is available upon request.

Wine Advisory Board • San Francisco 3, California

[Continued from page 1084]

belonged to the New York County Medical Society and the Medical Society of the State of New York.

Charles A. O'Malley, M.D., of New York City, died on February 21, at the age of sixty-two. Dr. O'Malley graduated from Columbia University College of Physicians and Surgeons in 1918. He was a member of the New York County Medical Society and the Medical Society of the State of New York.

Hiram Burdette Riggs, M.D., sixty-nine years old, of Gloversville, died of a heart attack on February 5, while driving his car. Dr. Riggs graduated from Albany Medical College in 1911. He was an honorary attending surgeon at Nathan Littauer Hospital. A past president of the Fulton County Medical Society, Dr. Riggs also belonged to the Medical Society of the State of New York and the American Medical Association.

Wallace R. Stewart, M.D., of Buffalo, died on February 5 while making a house call on a patient. Dr. Stewart was sixty-one years old. He graduated from the University of Buffalo Medical School in 1919 and did further postgraduate work in Vienna. He was attending anesthetist at Millard Fillmore Hospital and an associate consultant anesthetist at Buffalo Ear and Eye Hospital. He served as county medical examiner from 1924 until 1943.

Dr. Stewart belonged to the American Society of Anesthesiology, the New York State Society of Anesthesiology, and the International Society of Anesthesia. He was also a member of the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Richard Howard Tyrner, M.D., fifty-nine years old, of Gloversville, died on February 4 of a heart attack while vacationing in Miami, Florida. Dr. Tyrner graduated from Columbia University College of Physicians and Surgeons in 1930. He belonged to the Fulton County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Albert Eckhardt Ullman, M.D., of Babylon, seventy-nine years old, died on November 24, 1953. A graduate of Columbia University College of Physicians and Surgeons in 1899, Dr. Ullman had been completely retired for several years.

Lazar Wallerstein, M.D., of New York City, died on October 17, 1953, at the age of sixty-three. Dr. Wallerstein received his medical degree from the University of Berlin in 1921. He was an associate attending gastroenterologist at Sydenham Hospital and an assistant attending physician at City Hospital. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

FILM REVIEWS

Congenital Malformations of the Heart Series. Part I—Development of the Normal Heart. (15 minutes, color, sound, Dr. and Mrs. M. Samuels, National Health Institute, U. S. P. H. S., 1952. Producer: University of Washington School of Medicine.

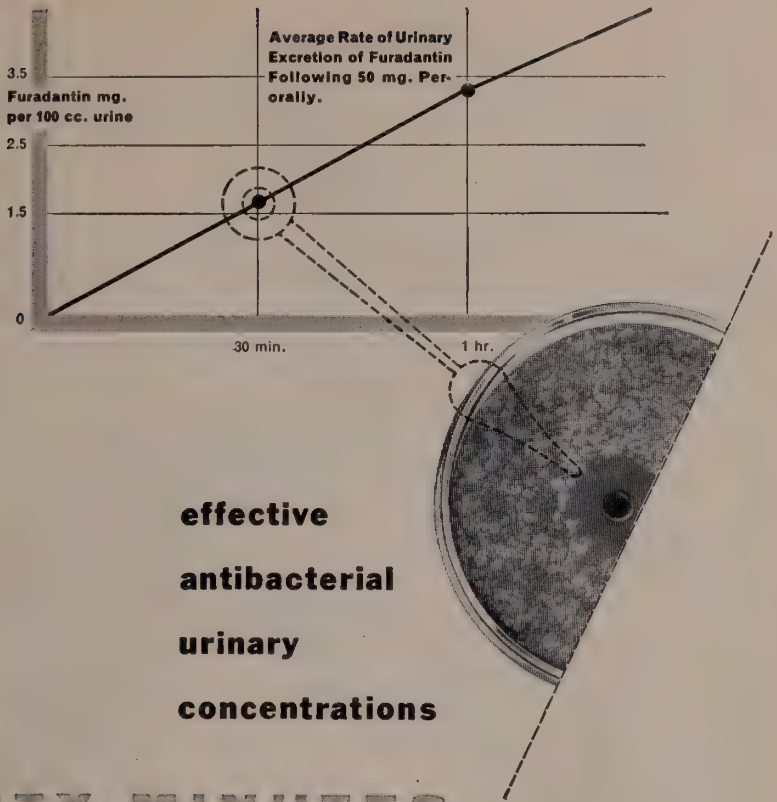
Excellent portrayal of the development of the heart from the earliest pulsations of the walls of the vascular tube to its final four-chambered form. After showing the actual development of the heart of a chick embryo, the film changes to animated drawings which show most effectively the development and closure of the cardiac septa as well as the spiral septa. The subject matter is difficult but lends itself exceptionally well to this type of media. It is an astonishingly clear film and is invaluable for teaching purposes.

Audience: Cardiologists, internists, general practitioners, and medical students.

Perforated Ulcer. Type of film and classification: demonstrational; surgery. Color, silent, 16 mm., 325 feet, 1 reel, 13 minutes. Scientific supervision by Hilger P. Jenkins, M.D., with the assistance of Howard P. Reiser, M.D., and David S. Fox, M.D., Division of Surgery, Woodlawn Hospital, Chicago, 1948. Distribution: Available on loan from the author, 5618 South Maryland Avenue, Chicago, Illinois.

Scientific content is excellent. The cases are described in medical telegraphic style (by title), and the clinical material is simple, clear, and dramatically authentic. The film makes no pretense at being scientifically complete in details of the cases.

Audience: Medical students, general practitioners, and nurses.



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THE **NITROFURANS** — A UNIQUE CLASS OF ANTIMICROBIALS O_2N O R PRODUCTS OF EATON RESEARCH

MEDICAL NEWS

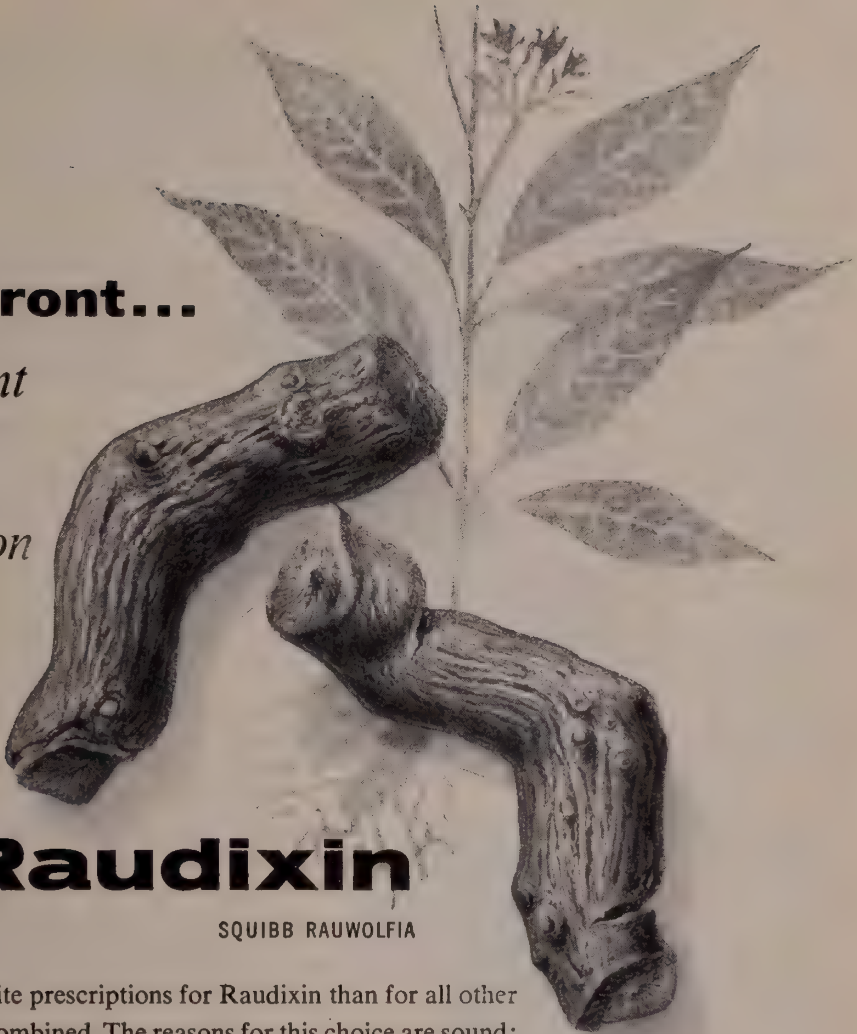
American Medical Education Foundation—Contributors from New York State to the American Medical Education Foundation for the month of February were: *Albany*—Dr. Irving L. Handin; *Astoria*—Dr. Bruno Grossman; *Bayside*—Dr. James R. Reuling; *Big Flats*—Dr. Otto Lederer; *Binghamton*—Drs. Raymond J. Bowen, Alden K. Boyd, John J. Brick, Howard W. Davis, Wilbur M. Dixon, F. Fenning, J. W. Grewal, Howard P. Griffin, Ernest Hock, J. W. Kane, Philip H. Landers, Ralph J. McMahon, Emil C. Mrozek, Leon G. Payes, Mary J. Ross, J. E. Ryan, Walter J. Van Alstyne, Myrtle M. Wilcox, Mark Williams, James W. Wiltsie, James B. Woodruff, and B. I. Wulff; *Bronx*—Drs. M. G. Birnbaum, C. G. Bottino, Paul V. Breitenberger, George Brown, S. M. Buch, A. C. Butts, S. J. Callerame, Sidney Canter, Owen J. Cheevers, J. R. Clarkin, Morris Cohen, T. A. Dwyer, M. Eisenstat, Emanuel Feit, Jacob Feldman, Peter C. Fellegrino, Frank M. Ferrante, Hans Field, J. Fierstein, Hyman M. Finkelstein, Abraham J. Fleischer, Edward P. Flood, S. L. Frank, J. T. Friedman, J. T. Geddis, Israel Gitlitz, Joseph Giuffre, Arthur Goldberg, J. W. Goldenkranz, W. Goldstein, Milton E. Goldstone, J. Golomb, J. Gottesman, M. Greenberg, I. Greene, L. Greenspan, Richard B. Gross, John J. Haggerty, M. Hammer, Jay Hershkowitz, J. Juskowitz, A. Karger, Murray Kaslow, A. Katz, Milton D. Klein, Moses H. Krakow, Armando J. Lauritano, L. Linder, John LoCascio, J. A. Lynch, E. J. McDermott, Martin F. McGowan, L. J. McTague, N. E. Meyer, A. M. Modana, E. J. Murphy, Herbert B. Nelson, J. J. Poggi, Samuel S. Rosenfeld, Arthur Rubin, W. M. Savedoff, S. B. Schecter, Samuel J. Schneierson, Morris B. Schwartzfarb, A. A. Sherman, Milton Shields, D. H. Spotkov, L. Steinbach, J. A. Taferner, Abraham B. Tamis, Jacob Taub, William Turano, S. Wagreich, A. Wainston, M. Widmann, and Joseph W. Wilner.

Also: *Bronxville*—Dr. F. L. Koch; *Brooklyn*—Drs. Ralph Blumberg, Joseph L. Gottesman, David Levine, and Irvin T. Soifer; *Buffalo*—Drs. Robert H. Roehl, Gilbert B. Tybring, Jr., and John V. Walsh; *Callicoon*—Drs. George R. Mills and E. T. Rumble; *Cincinnatus*—Dr. George R. Landwehr; *Cambridge*—Drs. P. Harff, H. H. Romack, and D. M. Vickers; *Clinton*—Dr. Joseph Katz; *Corinth*—Dr. R. S. Snyder; *Cortland*—Cortland County Woman's Auxiliary, Drs. John E. Eckel, N. J. Gabriel, Fred A. Jordan, Robert H. Kerr, and William A. Wall; *East Williston*—Dr. Edward S. Secretan; *Elmira*—Drs. Andrew A. Blash, William T. Boland, Leonard Bolton, Hobart A. Burch, John H. Burke, Jr., M. F. Butler, F. W. Chamberlain, Nathan Cohen, Samuel E. Cohen, Stuart V. Collins, Gerald T. Connelly, William J. Cusick, Charles S. Dale, Edward J. Droleski, Raymond E. Frisk, J. G. Gladston, F. S. Hassett, Frank V. Hertzog, A. H. Hillman, L. L. Hobler, Ross Hobler, Charles M. Hower, Scott R. Howland, William M. Kelly, Charles H. Kinley, J. L. Kinner, Charles Kosmaler, Robert V. Larkin, Robert Leonard, Samuel N. Levine, L. W. Linderberry, Ping P. Liu, Henry B. Marshall, K. D. Maynard, Stuart J. Miller, Richard O. Monohan, George R. Murphy, John P. Murphy, Clyde L. Nagle, William Phillips, Philip J. Reilly, Earle G. Ridall, Earl D. Smith, Arthur C. Smith, Jr., Arthur C. Smith, Sr., Raymond J. Stoddard, Jack E. Thomas, Gideon Tropp, Joseph F. Valicenti, and David Wladis.

Also: *Endicott*—Drs. Stanley G. Padykula and Dante Tocco; *Far Rockaway*—Dr. Robert A. Berman; *Flushing*—Drs. Alfred Berman, B. Colton, and Joseph A. Gaetane; *Forest Hills*—Dr. Arthur Biezunski; *Granville*—Drs. W. S. Bennett and John H. Ring; *Greenwich*—Dr. R. I. Skinner; *Horseheads*—Dr. Walter Impert; *Hollis*—Dr. Raphael De Meo; *Hudson Falls*—Drs. C. V. Latimer, Jr., and John McCann; *Jeffersonville*—Dr. Max Epstein; *Lathams*—Dr. Thomas McCullough; *Levittown*—Dr. Jerome P. Nataro; *Liberty*—Drs. D. S. Payne, George Seiken, and Lee R. Tompkins; *Little Neck*—Dr. Hermann Brenner; *Livingston Manor*—Drs. V. G. Bourke and M. A. Denman; *Long Island City*—Dr. A. Franco; *Lowville*—Dr. Edgar Boggs; *Marathon*—Dr. Walter M. Dresel; *Mechanicville*—Dr. John O'Brien; *Middle Grove*—Dr. Edmond A. Suss; *Monticello*—Drs. Carl Heins, Stanley Kornblum, and Julius Schwarz; *Mount Vernon*—Dr. Julius J. Carucci; *New Hartford*—Drs. A. D. Brown and Esther L. Moeller; *New York City*—Drs. Francis S. Creighton, J. Felson, A. I. Hochberger, Charles Mandel, James W. Ryan, Mervyn Schacht, D. J. Limons, W. J. Walker, and Paul M. Wood.

Also: *Olean*—Cattaraugus County Woman's Auxiliary; *Oneonta*—Drs. John J. Constantine and James Greenough; *Oriskany Falls*—Dr. Burton L. Rockwell; *Pelham Manor*—Dr. Frank P. De Lucca; *Queens Village*—Dr. William C. Brons; *Rome*—Drs. John B. DeLong, Roy J. Marshall, Dan Mellen, Lois C. Menzies, Henry N. Reid, and Joseph A. Valvo; *Roscoe*—Dr. Alfred Hesse; *Roslyn Heights*—Dr. William V. Colangelo; *Saratoga Springs*—Dr. Vincent A. Kelleher; *Schenectady*—Dr. Alfred W. Lucas; *Staten Island*—Richmond City Woman's Auxiliary; *Utica*—Drs. James W. Dimon, James G. Douglas, Henry J. Ehresman, Eliot M. Friedman, Paul H. Girard, Charles M. Greene, N. M. Levine, John R. Malcewicz, Rocco Martoccio, Russell E. Reitz, Joseph W. Sokolowski, Philip L. Turner, and Joseph J. Witt; *Van Etten*—Dr. James R. Cargill; *West Leyden*—Dr. Hans A. Zutraven; *Whitehall*—Dr. L. A. White; *Williamson*—Dr.

[Continued on page 1090]



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[Continued from page 1088]

R. W. De Smit; *Wilton*—Dr. Orra Phelps; and *Woodside*—Dr. E. M. Feller.

Jean Redman Oliver Lecture—Dr. Paul Klemperer, pathologist, Mount Sinai Hospital, and professor of pathology, Columbia University, College of Physicians and Surgeons, presented a paper on "Some Aspects of Collagen Diseases," as the second annual Jean Redman Oliver Lecture at the State University College of Medicine at New York City on March 9.

Walter Niles Memorial Lecture—Dr. Derek Denny-Brown, James Jackson Putnam Professor of Neurology, Harvard University Medical College, will deliver the sixteenth annual Walter Niles Memorial Lecture in the Cornell University Medical College auditorium, New York City, on April 16 at 8:15 P.M. "Visuomotor Mechanisms in the Cerebral Cortex" will be the subject of Dr. Denny-Brown's talk. Sponsored by Tau Chapter of Nu Sigma Nu, all members of the medical profession are invited to attend the lecture.

Veterans Administration Institute—The fourth annual institute in psychiatry and neurology sponsored by the Veterans Administration Hospital, Lyons, New Jersey, The New Jersey Neuropsychiatric Association, and the New Jersey District Branch of the American Psychiatric Association will be held on April 21 at the Veterans Administration Hospital, Lyons.

Registration will be from 9 A.M. to 11 A.M. and the first lecture will start at 11 A.M. Speakers for the institute will be Dr. Lauretta Bender, New York City; Dr. Arthur P. Noyes, Norristown, Pennsylvania; Dr. Benjamin Karpman, Washington, D.C., and Dr. Temple Fay, Philadelphia, Pennsylvania. Dinner will be at 7 P.M. and the afterdinner speaker will be Dr. Leo Bartemeier.

Registration fee is $1.00 and this includes a copy of the Proceedings of the Institute. Reservations for the dinner which must be made in advance will be $4.00. Military personnel and fulltime Veterans Administration personnel are exempt from the registration fee. Checks should be made payable to Dr. C. N. Baganz, Lyons, New Jersey.

Emanuel B. Schoenbach Memorial Lecture—The second annual Emanuel B. Schoenbach Memorial Lecture will be delivered by Dr. William B. Dock, professor of medicine, State University of New York College of Medicine at New York City, on April 22 at 8:30 P.M. in the solarium of the Maimonides Hospital of Brooklyn. The subject of Dr. Dock's lecture will be "Apical Localization of Late Tuberculosis."

International College of Surgeons—Qualifying examinations for fellowship in the International College of Surgeons will be held on May 3 and 4. Written examinations will be given at Cook County Graduate School of Medicine, 707 South Wood Street, in Chicago, on the morning and afternoon of May 3; clinical examinations will be held at Cook County Hospital on May 4.

American Board of Obstetrics and Gynecology, Inc.—The next scheduled examinations, Part II (oral and pathologic) for all candidates will be held at the Edgewater Beach Hotel, Chicago, by the entire Board from May 10 through May 17. Formal notice of the exact time of each candidate's examination will be sent to him several weeks in advance of the examinations.

Requests for applications for appraisal of incomplete training, applications for certification, current board bulletins, and preceptorship or supplemental training forms should be made to Dr. Robert L. Faulkner, secretary, American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.

The New York State Society of Anesthesiologists—The New York State Society of Anesthesiologists in cooperation with the American Society of Anesthesiologists is offering postgraduate training in anesthesiology to any physician in this state who is engaged in full- or part-time practice of anesthesiology. Instruction is individualized and informal and covers fundamental aspects of clinical practice. Training will be given in or close to the applicants' own community on a flexible time schedule. There is no tuition and interested physicians may write to: Dr. Edwin Emma, New York State Society of Anesthesiologists, 137 West 11th Street, New York City 11.

Further information concerning the program may be obtained by writing Dr. Sarah Joffe, chairman, subcommittee on education, New York State Society of Anesthesiologists, 137 West 11th Street, New York City 11.

Harvard University School of Public Health Postgraduate Scholarships—The Harvard School of Public Health announces postgraduate scholarships in amounts ranging up to $5,000 to qualified candidates desiring to study at the school during the academic year 1954 to 1955. Eligible for the scholarships are physicians interested in preventive medicine and seeking training in one or more public health specialties leading to either a master of public health or doctor of public health degree and industrial physicians seeking training in industrial medicine leading to a master of industrial health degree.

Applications for filing for scholarships must be in by April 30, 1954 and winners will be announced by June 1, 1954. Further information may be obtained by writing: Secretary, Harvard School of Public Health, 55 Shattuck Street, Boston 15, Massachusetts.

Meetings—Past

Schenectady County Medical Society

A special meeting was held at the regular meeting of the Schenectady County Medical Society on March 2 to consider a paid secretary for the society. At this session, Dr. Joseph H. Cornell, chairman of the economics committee, had arranged for Mr. Harold N. Howell, executive secretary of the

[Continued on page 1092]

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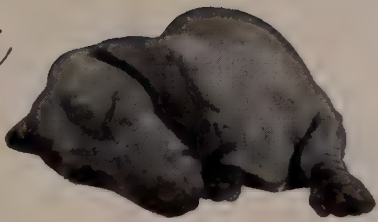

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[Continued from page 1090]

Oneida, Herkimer, and Madison County Medical Societies, and Mr. John Sargent, executive secretary of Broome County Medical Society to explain the duties of an executive secretary and enumerate the advantages the physicians in their respective communities received from this arrangement.

Geneva Academy of Medicine

"Surgical Emergencies as Handled by the Anesthetist" was the subject of a lecture given by Dr. Philip A. Lief, associate anesthetist, Mount Sinai Hospital, New York City, at a meeting of the Geneva Academy of Medicine on March 15.

Mount Sinai Hospital

A clinical conference on "Problems in Antibiotic Therapy" was held at the Mount Sinai Hospital, New York City, on March 15. Problems discussed were "Synergism and Antagonism," by Dr. Reuben Reiman, and discussed by Dr. Horace L. Hodes; "Hypersensitivity" by Dr. Lester Hollander with Dr. Sheppard Segal as discussant, and "Resistance and Fastness," by Dr. Joseph Perloff, with the discussion by Dr. Morton S. Bryer.

Jefferson County Medical Society

The March meeting of the Jefferson County Medical Society was held on March 16 at the Black River Valley Club. Guest speaker was Dr. Robert C. Schwartz, Syracuse, who spoke on "Rh Factor and Pregnancy."

Steuben County Medical Society

Dr. Floyd S. Winslow, associate in pathology, Rochester University School of Medicine, and Coroner's physician, Monroe County, discussed "The Doctor in Court" at the March 18 meeting of the Steuben County Medical Society.

Kings County Section on Allergy

Dr. Leo H. Criep, associate professor of medicine, Pittsburgh School of Medicine, and area consultant on allergy, Veterans Administration Hospital, spoke on "Vascular Allergy" at the regular March meeting of the Section on Allergy of the Kings County Medical Society and Academy of Medicine of Brooklyn. Dr. Joseph Harkavy, consulting allergist, Mount Sinai Hospital, New York City, and assistant clinical professor of medicine, Columbia University College of Physicians and Surgeons, was the discussant.

Binghamton City Hospital

Dr. John J. Duggan, chief, Medical Service, Veterans Administration Hospital, Syracuse, spoke on "Recognition and Management of Clinical Disturbances in Acid Balance" at the Binghamton City Hospital on March 29.

Aero Medical Association

New York doctors who participated at the twenty-fifth annual meeting of the Aero Medical Association held in Washington, D.C., March 29 through

March 31 were: Dr. M. Martyn Kafka, Forest Hills, who spoke on "What the General Physician Should Know About Aviation Medicine," and Dr. K. L. Stratton, medical director, American Airlines, Inc., Flushing, who discussed "Medical Care of Airline Pilot Personnel."

Suffolk County Medical Society

"Foot Problems in Children" was presented by Dr. Frederick Lee Liebolt, Cornell University Medical College, at the March 31 meeting of the Suffolk County Medical Society. Dr. Liebolt is associate professor of clinical surgery (orthopedics) at Cornell.

Meetings—Future

E. J. Barber Hospital Fourth Annual Postgraduate Education Program

Dr. L. Musselman, instructor in clinical medicine, will speak on "Gastrointestinal Disturbances" at a meeting of the staff of the E. J. Barber Hospital in Lyons on April 2. Past speakers and their subjects have been: Dr. Eugene J. Lippschutz, assistant clinical professors of medicine—"Hypertension"; March 12, Dr. Marshall Clinton, assistant professor of pharmacology—"Value and Use of Newer Drugs"; March 19, Dr. E. Slotkin, associate professor of urology—"Kidney Disease"; and March 26, Dr. William Lipp, assistant clinical professor of medicine—"Liver Disease." All speakers are members of the staff of the University of Buffalo School of Medicine.

New York Cancer Society

The sixth meeting of the New York Cancer Society for 1953 and 1954 will be held on April 6, 8:30 P.M. at the New York Academy of Medicine. Dr. Richard B. Cattell, Lahey Clinic, Boston, Massachusetts, will speak on "A Critical Evaluation of the Problem of Cancer of the Pancreas," and Dr. George T. Pack, Memorial Cancer Center, and Dr. Clarence Dennis, State University of New York College of Medicine at New York City, will be the discussants.

All physicians and medical students are cordially invited to attend.

Rehabilitation: Its Effects in Reducing Compensation Costs

The third annual conference for compensation insurers and physicians will be held on April 7 at the Institute, 23rd and First Avenue, New York City. The subject is "Rehabilitation: Its Effects in Reducing Compensation Costs."

Doctors taking part in the panel will be Dr. Robert C. Darling, chairman, Institute's medical board, and professor of physical medicine and rehabilitation, Columbia University, College of Physicians and Surgeons, who will act as moderator; Dr. Robert O'Connor, medical director, Loss Prevention Department, Liberty Mutual Insurance Company; Dr. John P. Stump, orthopedic surgeon, and Dr. Edward E. Gordon, Institute Medical Director.

[Continued on page 1094]

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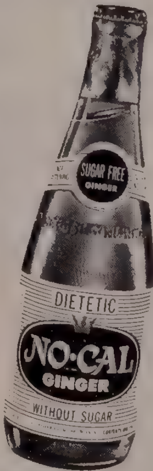

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[Continued from page 1093]

Erie County Chapter of the New York State Academy of General Practice

A symposium on "Acute Infectious Diseases for the General Practitioner" will be held by the Erie County Chapter of the New York State Academy of General Practice on April 10 at the Hotel Statler in Buffalo. The meeting will begin at 9 A.M. Dr. A. A. Aaron, Buffalo, will preside as moderator. From 10 to 10:30 A.M. Dr. Ivan L. Bennett, Jr., assistant professor of medicine, Yale University, New Haven, will discuss "The Significance of Fever in Infection"; 10:30 to 11 A.M., "Rheumatic Fever," by Dr. Arild Hansen, professor of pediatrics, University of Texas, Galveston; 11 to 11:30 A.M. "Immunological Aspects of Poliomyelitis," by Dr. Herbert A. Wenner, professor of pediatrics, University of Kansas, Kansas City, and 11:30 to 12 NOON, questions and panel discussion.

The afternoon session with Dr. Mitchell Rubin, Buffalo, as moderator will open with Dr. Alex J. Steigman, professor of child health, University of Louisville School of Medicine, Louisville, discussing "Diagnosis and Management of Actue Poliomyelitis," from 2 to 2:30 P.M.; 2:30 to 3 P.M. "Infectious Mononucleosis," by Dr. Sidney Leibowitz, associate physician, Beth Israel Hospital, New York City; "Diagnosis and Treatment of Streptococcal Infections," by Dr. Erwin Neter, attending bacteriologist, Children's Hospital, Buffalo, 3:15 to 3:45 P.M., and "Influenza" from 3:45 to 4:15 P.M. by Dr. Joseph A. Bell, chief, epidemiologic section, Laboratory of Infectious Diseases, National Institute of Health, Bethesda.

Questions and panel discussion will close the afternoon session and from 5 to 6 P.M. cocktails will be served.

Cosponsor with the Erie County Chapter of the New York State Academy of General Practice will be the Lederle Laboratories Division of the American Cyanamid Company.

New York Society for Circulatory Diseases

The twelfth regular meeting of the New York Society for Circulatory Diseases which is affiliated with the American College of Cardiology will be held on April 13 at the New York Academy of Medicine. At this time, a symposium on "Surgery of Acquired Heart Disease" will be held. Participants in the symposium will be: Dr. O. Henry Janton, Jr., director, Cardiovascular Laboratory, Presbyterian Hospital, associate professor of medicine, Hahnemann Medical College and Hospital, Philadelphia, Pennsylvania, who will speak on "Pertinent Prognostic Factors in the Selection of Patients with Acquired Heart Disease for Surgery;" Dr. Robert P. Glover, chief, thoracic surgery, Presbyterian and Episcopal Hospitals, and clinical professor, thoracic surgery, Hahnemann Medical College and Hospital, Philadelphia, who will discuss "Present Status of Surgery for Acquired Heart Disease."

Dr. Simon Dack will preside.

International College of Surgeons

The International College of Surgeons will hold its ninth biennial congress in São Paulo, Brazil, April 26 to May 2, in conjunction with the celebration of the fourth centennial of that city. The principal speakers on the program of which the subject is: "Government Controlled Medicine," will be Professor Cesarino, Jr., professor of social legislation, Faculty of Law and Sociology, Faculty of Economic Science, University of São Paulo; Dr. Edward J. McCormick, president, American Medical Association, and Dr. David B. Allman, representing the American Medical Association in the discussions of this important and controversial subject.

The northeastern division of the United States Section of the International College of Surgeons will hold a meeting sponsored by the New York State Surgical Division in Poughkeepsie, New York, May 27 and May 28. Headquarters will be at the Nelson House and the scientific sessions will be held at St. Francis Hospital. Speakers will include Dr. Max Thorek, founder of the College, and Dr. Arnold S. Jackson, president-elect. The Rocky Mountain Division will meet in Salt Lake City, Utah on July 22 and 23. All European sections will meet in Turin, Italy, June 1 and 2.

Eastern States Health Education Conference

The 1954 Eastern States Health Education Conference of the New York Academy of Medicine will be held on April 29 and 30 at the New York Academy of Medicine. The subject of the conference will be "Communication in Health Education," and the program will include four sessions and an evening dinner meeting.

Participation in the conference is limited and those interested in attending should write to Dr. Iago Galdston, New York Academy of Medicine, 2 East 103 Street, New York City 29.

American Society of Medical Technologists

The twenty-second annual national convention of the American Society of Medical Technologists will be held at Miami Beach, Florida, June 13 to 17, 1954. The coheadquarters hotels are the Delano and Delido.

Medical Library Association

The fifty-third annual meeting of the Medical Library Association will be held in Washington, D.C., June 15 to 18 at the Hotel Statler. Included in the program will be a discussion on medical research by embassy attachés, tours of the National Institutes of Health, the National Naval Medical Center, and the Armed Forces Medical Library.

Further information can be obtained from Lt. Col. Frank B. Rogers, Armed Forces Medical Library, 7th Street and Independence Avenue, SW, Washington 25, D.C.

[Continued on page 1096]

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[Continued from page 1095]

Personalities

Honored

Drs. Dorothy H. Anderson, pediatrician and pathologist, New York City, Emily Dunning Barringer, retired New York City gynecologist, Mary M. Crawford, New York City, industrial physician, and Jane Sands Robb, associate professor of pharmacology, Syracuse, who received 1954 Elizabeth Blackwell Citations... Dr. Andrew H. Montgomery, Kew Gardens, at a dinner of the West Side Clinical Society as the only surviving founder of the Society... Dr. Hyman A. Osserman, director of neuropsychiatry at Sydenham Hospital, at a dinner for serving a five-year term as president of the medical board... Dr. James E. McCambridge, one of the founders of St. Francis Hospital in Poughkeepsie, at a dinner... Dr. Robert T. Rogers, resigning as director and pathologist of the City Laboratory of Rome Hospital, a farewell dinner by the hospital staff... Dr. W. H. Stewart, of New York City, a gold medal awarded in recognition of his service to the American College of Radiology... Dr. Isidore Snapper, Brooklyn, guest of honor at a dinner by the United Jewish Appeal... Dr. Joseph Tenopyr, Brooklyn, retiring president of the Caledonian Hospital Medical Board, with a portrait to be hung in the hospital board room.

Retired

Dr. Donald B. Armstrong, second vice-president and director, Metropolitan Life Insurance Company's health education campaign . . . Dr. Louis H. Bauer, from practice in Nassau County to full-time administrative phases of medicine . . . Dr. George P. Coopernail, Bedford Village, from active practice of medicine and surgery . . . Dr. Edward E. Julian, roentgenologist at Rome Hospital, to a post with North Community Hospital, Glen Cove, Long Island . . . Dr. Ralph S. Muckenfuss, assistant health commissioner, to accept appointment as scientific director, Naval Biological Laboratory, University of California . . . Dr. I. H. Scheffer, senior general medical superintendent of the Department of Hospitals to become executive director of Miriam Hospital, Providence, Rhode Island . . . Dr. Walter S. Wiggins, assistant dean in charge of graduate and postgraduate medicine, State University College of Medicine at Syracuse, to become associate secretary for the Council on Medical Education and Hospitals, American Medical Association, Chicago . . . Dr. Philip Besancon, Cazenovia, to begin three-year residency in radiology in the New York State College of Medicine at Syracuse.

Dr. Thomas A. Gonzales, New York City's chief medical examiner... Dr. Paul C. Morton, as chairman of the New York City Medical Advisory Committee to Selective Service... Dr. Joseph Tenopyr, as president of the medical board of Caledonian Hospital, Brooklyn.

Speakers

Dr. Hyman S. Barahal, associate director of the Pilgrim State Hospital and medical inspector for the State Department of Mental Hygiene, at the Brooklyn State Psychiatric Forum in January . . . Dr. Daniel Blain, medical director of the American Psychiatric Association, at the Veterans Administration Hospital, Northport, Long Island, in January . . . Dr. Earl C. Bonnett, medical director of the Metropolitan Life Insurance Company of New York, at a meeting of the Medical Advisory Committee of the National Fund for Medical Education and the Council on Industrial Health of the American Medical Association at the Mellon Institute, Pittsburgh, in December . . . Dr. Henry A. Davison, chief, Program Development of the Psychiatry and Neurology Service Veterans Administration, Washington, in November at the Veterans Administration Hospital, Northport.

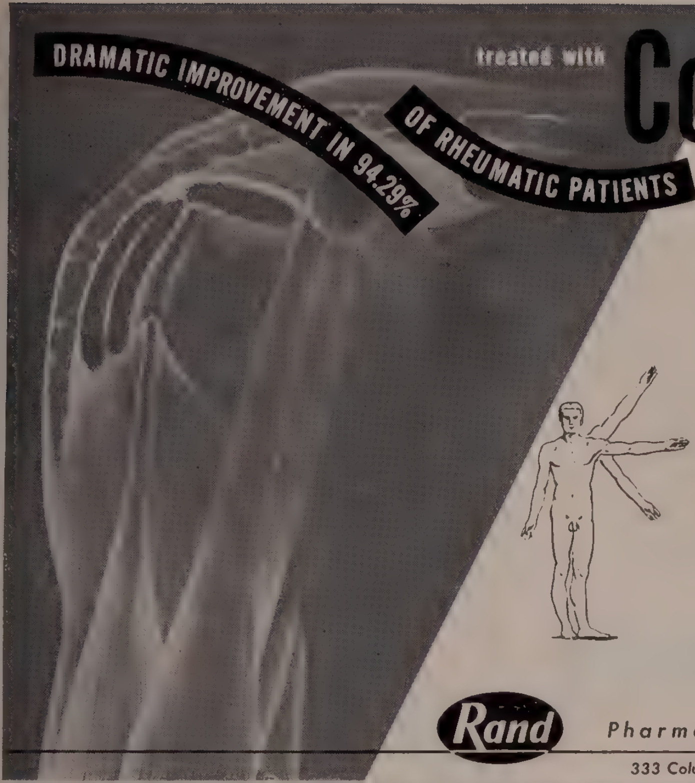
Elected

Dr. Lionel S. Auster, president; Dr. A. Charles Posner, vice-president, and Dr. Abner Stern, secretary and chairman of staff conference of the Medical Board of the Bronx Hospital . . . Dr. Ludwig Karl Bachmann, formerly of Germany, staff physician at Niagara Sanatorium . . . Dr. Michael Crina, president; Dr. Allen A. Fisher, vice-president, and Dr. Warren E. George, secretary-treasurer, of the staff of the Genesee Hospital . . . Dr. James L. Crossley, president; Dr. Charles E. Goodnough, vice-president, and re-elected, Dr. Thomas P. Hamilton, secretary-treasurer of the medical staff of the House of the Good Samaritan, Watertown.

Dr. Everett C. Jessup, the first president; Dr. B. Edmond Thomas, vice-president, and Dr. Helen-Ann Garcia, secretary-treasurer, of the North Shore Hospital . . . Dr. Joseph A. Lane, chief; Dr. J. William Quinlan, vice-president, and Dr. Russell Barone, secretary-treasurer, of the medical board and staff of St. Mary's Hospital, Rochester. . . Dr. Benjamin Miller, re-elected president; Dr. Mahlon H. Atkinson, vice-president, Dr. T. Earl McQuade, secretary, and Drs. Kenneth F. Bott, George L. Branch, and Edwin G. Mulbury, re-elected to the medical board, of the Greene County Memorial Hospital . . . Dr. George W. Nairn, chief of staff, Dr. M. S. Martin, president of the staff; Dr. J. B. Manley, vice-president, and Dr. Paul Arthur Burgeson, secretary-treasurer, of the Wyoming County Community Hospital . . . Dr. Joseph Naumoff, president; Dr. Morris Shapiro, vice-president; Dr. Julius Gelber, secretary; Dr. Gerald Haines, treasurer, and Drs. George Rich and Wyllys H. Dunham, executive board, of the City Hospital in Schenectady.

Dr. Karl D. Rundell, re-elected president; Dr, Dante Tocco, vice-president; Dr. John G. Malia. secretary, and Drs. J. Manning Touhey, Frank G. Moore, and Harry Shapiro, executive committee, of the Endicott Ideal Hospital . . . Dr. John S. Wolff, Jr., chief of staff; Dr. Thomas Argue, vice-president, and Dr. James Mulcahy, secretary-treasurer, of the Corning Hospital.

[Continued on page 1098]



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[1] De Lucia and Strosberg. Med. Times 82:1, p. 47. 1954.

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1. Buxton, C. L., and Vann, F. H.: New England J. Med. 236: 536, 1948.
2. Cushney, A. R.: Textbook of Pharmacology and Therapeutics, ed. 10, Philadelphia, Lea & Febiger, 1943, pp. 436-437.

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[Continued from page 1096]

Appointed

Dr. Frank Brown Berry, New York City, as assistant secretary of defense for Health and Medical Affairs . . . Dr. Saverin Czesnykowski, formerly of Otisville, as assistant physician at Pawling Sanitarium, Troy . . . Dr. G. Jarvis Coffin, vice-president, medical board of St. Luke's Hospital, New York City, as attending physician and director of medicine . . . Dr. Bart Corsentine, Stony Point and Haverstraw, as head of the x-ray department of a hospital in Vincennes, Indiana . . . Dr. Donald A. Covalt, New York City, to the State Board of Medical Examiners for a three-year term . . . Dr. John T. Gentry, former health officer of the Anchorage Health District, Alaska, as health officer-in-charge, Syracuse District Office . . . Dr. Edwin A. Griffin and Dr. Frank Mallon, Brooklyn, to the Medical Grievance Committee for five-year terms . . . Dr. Ting-wei Hsia, Buffalo, as first house physician of DeGraff Memorial Hospital, Tonawanda.

Dr. Samuel Karelitz, attending pediatrician, Mount Sinai Hospital, New York City, as chief, Division of Pediatrics, Long Island Jewish Hospital . . . Dr. J. A. Katzive, former director of health services for the United Auto Workers, as executive director, Maimonides Hospital, Brooklyn . . . Dr. Herbert S. Kupperman, New York City, as adjunct assistant professor in therapeutics, College of Medicine of New York University-Bellevue Medical Center . . . Dr. Phillip E. Lear, formerly director of surgery, University Service, Kings County Hospital, and clinical professor of surgery, New York State University College of Medicine at New York City, as Chief, division of surgery, Long Island Jewish Hospital . . . Dr. John Hugh Mulholland, George David Stewart professor of surgery, College of Medicine, New York University-Bellevue Medical Center, as chairman of the surgery study section of the Division of Research Grants of the National Institutes of Health, United States Public Health Service . . . Dr. Norton Nelson, from associate professor to professor of industrial medicine, Post-Graduate Medical School, New York University-Bellevue Medical Center . . . Dr. Rosa Lee Nemir, from associate to full professor of pediatrics, New York University Post-Graduate Medical School . . . Dr. Theodore Rosenthal, New York City, acting assistant commissioner of New York City Health Department . . . Dr. Donald P. Ross, Niagara Falls, as chief of surgery, Niagara Falls Memorial Hospital.

Dr. Gerrit Willem Hendrik Schepers, Johannesburg, South Africa, as director, Saranac Laboratory of the Trudeau-Saranac Institute, Trudeau . . . Dr. Gordon M. Meade, former medical director, as executive director of the Trudeau Sanatorium . . . Dr. Emanuel Schwartz, Brooklyn, to the three-member Medical Practice Committee of the New York State Workmen's Compensation Board . . . Dr. William P. Shephard, vice-president, Metropolitan Life Insurance Company, as chairman of the National Health Forum . . . Dr. Louis R. Slattery, from associate professor of clinical surgery to associate professor of surgery, Post-Graduate Medical School, New York University-Bellevue Medical Center . . . Dr. Lee Walton, instructor of pediatrics at State University College of Medicine at Syracuse, as acting assistant dean of graduate and postgraduate medical education.

New Offices

Dr. Saverio F. Abenavoli, general practice in Mamaroneck . . Dr. Robert C. Ashley, surgery and medicine, Little Falls . . . Dr. Bert Paul Austin, practice of orthopedic and fracture surgery with Dr. L. J. Strobino, Utica . . . Dr. David M. Bernstein, general practice in Brewerton . . . Dr. Wendall L. Bryce, Troy, general practice in Richfield Springs . . . Dr. William Bruce Carter, Watertown, brain surgery in Watertown . . . Dr. Conrad Clark Clement, Boston, surgery, with the Stamford Medical Center . . . Dr. Fel G. Davies, practice of internal medicine in Utica . . . Dr. Richard Day, Jr., Schenectady, surgery in Glens Falls . . . Dr. Bernard Gottfried, general practice in Port Washington . . . Dr. James R. Guthrie, Tarrytown, pediatrics in Huntington . . . Dr. Robert A. Hulihan, general practice in Newburgh . . . Dr. Francis X. Ipolyi, former resident physician at Gabriels Sanatorium, general practice in Saranac Lake . . . Dr. Mary K. Irving, general practice in Little Falls . . . Dr. Angelo G. Johnson, surgery, in Oneonta . . . Dr. Milton LeVine, formerly with the Army Medical Corps, internal medicine in Utica.

Dr. Alexander E. Messer, New York City, surgery in Sodus . . . Dr. William Newman, Stamford, surgery and obstetrics in Walworth . . . Dr. S. Nussbaum, general practice in Whitesville . . . Dr. Robert Stone, Marathon, general practice in Norwich . . . Dr. B. John Toth and Dr. Charles D. Kelley, formerly of New York City, radiology in Olean . . . Dr. Manderson W. Phillips, formerly with the medical corps in Korea, surgery with Dr. William A. Gasper in Malone . . . Dr. William S. Reed, formerly with the United States Navy, general practice in Lowville . . . Dr. Francis Remy, general practice in Center Moriches . . . Dr. Reginald S. Sanders, former medical officer at Mitchell Air Force Base, general practice in Niagara Falls . . . Drs. George W. Sandiford and Thomas E. Perdue, general practice in Watertown . . . Dr. John C. Sherman and Dr. Henry E. Damm, general practice in Schenectady . . . Dr. Irving Swartz, Syracuse, dermatology in Rome.

Dr. William Abruzzi, another office for general practice in Wappingers Falls. . . Dr. Franklin J. Cannizzaro, Levittown, another office for gynecology and obstetics in Westbury. . . Drs. Emanuel and Vincent deLalla, practice of radiology, Utica. . . Dr. James P. English, general practice with Dr. Charles J. Bobeck, Canandaigua. . . Dr. H. F. Evans, general surgery, Schenectady. . . Dr. Kalman Istok, general practice, Oyster Bay. . . Dr. Morton Jagust, general practice, Centereach. . . Dr. H. W. Jayne, Gelder Clinic, Sidney. . . Dr. Annora McGarry, general practice, Schenectady. . . Dr. George

[Continued on page 1100]

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1. Rev. Gastroenterology 20:744 (Oct.) 1953; abstract in J. A. M. A., 153:1580 (Dec. 26) 1953.

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[Continued from page 1098]

Miley, general practice, Troy...Dr. Harry E. Petzing, obstetrics and gynecology, Hamburg...Dr. John R. Price, general practice, Watertown...Dr. John S. Puzauskas, obstetrics, Oswego...Dr. Louis Rothman, ophthalmology and general practice, Oneonta...Dr. Gerald P. Schneider, internal medicine with Dr. Charles H. Kosmaler, Elmira...Dr. Gerald Segal, radiology with Dr. Emanuel deLalla, Utica...Dr. George H. Shields, surgery, Utica...Dr. John L. Simon, New York City, additional office for neurology and psychiatry, New City...Dr. Porter H. Warren, general practice, Cornwall.

Speakers

Dr. W. G. Eliasberg, New York City, at the Institute of Public Affairs of Long Island University, in November . . . Dr. Houston S. Everett, associate professor of gynecology, Johns Hopkins Medical School, at the Jewish Sanitarium and Hospital for Chronic Diseases, in December . . . Dr. Iago Galdston, executive secretary of the Committee of Medical Information of the New York Academy of Medicine, to the New York State Nutrition Committee in January . . . Dr. Merel Harmel, professor of anesthesiology, and Dr. Sylvan Surks, assistant professor of anesthesiology, State University of New York at New York City, at the Jewish Sanitarium and Hospital for Chronic Diseases, in January . . . Drs. Ray Palmer Baker and David W. Houston, Jr., at a meeting of the board of trustees of the Samaritan Hospital, Troy, in November . . . Dr. Samuel Farrar Kelley, New York City, moderator of panel discussion at a meeting of the American Otorhinoplastic Surgery Society held in Chicago in October.

Dr. A. St. George Huggett and Dr. Esther Killick, University of London, at the Annual Research Society Lecture at the State University College of Medicine at New York City, in December . . . Dr. W. Kenneth Lane, Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, at a six-week symposium on the adaptation of the child with infirmities held in Paris, France, in January and February . . . Dr. Harry Most, Hermann M. Biggs Professor of Preventive Medicine, College of Medicine, New York University-Bellevue Medical Center, in December at a meeting of the American Pharmaceutical Manufacturers Association in New York City . . . Dr. George T. Pack, New York City, to the Puerto Rican Medical Association, Santurce, in December . . . Dr. Frederick Reiss, associate clinical professor, New York University Medical School, to the Mexican Dermatological Association, in January.

Dr. Stephen Rothman, professor and head of the section of dermatology and syphilology, School of Medicine, University of Chicago, the Sigmund Pollitzer Lecture at New York University-Postgraduate Medical School in January . . . Drs. Emery A. Rovenstine and Raphael W. Robertazzi, Post-Graduate Medical School, New York University-Bellevue Medical Center, five-week lecture tour of medical colleges in Italy during January and February . . . Dr. Howard A. Rusk, director, Institute of Physical Medicine and Rehabilitation; Dr. Currier McEwan, dean, New York University College of Medicine, and Dr. Robert Boggs, dean, New York University Post-Graduate Medical School, at the progress report meeting of the New York University-Bellevue Medical Center, in January . . . Dr. Cornelius P. Rhoads, director, Sloan-Kettering Institute for Cancer Research for Memorial Center, in December, at the twenty-ninth annual Greater New York Dental Meeting in New York City.

Dr. Dwight Barnett, director of the Institute of Administrative Medicine of the School of Public Health, Columbia University, at the first annual Interprofessional Health Conference of Omega Epsilon Phi, optometric fraternity in February...Dr. Anne F. Casper, Richmond County Medical Society, before a symposium on Air Pollution sponsored by Wagner College...Dr. David J. Impastato, assistant clinical professor of psychiatry, State University of New York Medical College, to members of staff at Veterans Administration Hospital at Northport, Long Island, in March...Dr. James H. Lade, deputy director, Medical Service, New York State Civil Defense Commission, before two-day regional civil defense conference in Buffalo, in March...Drs. Herman Hilleboe, Martin Cherkasky, and Theodore G. Klump, of New York City, at National Conference on Care of the Long-Term Patient, Chicago, in March...Dr. Frederick A. Mettler, professor of anatomy, Department of Neurology, College of Physicians and Surgeons, the Murray B. Gordon Memorial Lecture at State University College of Medicine, New York City, in February...Dr. Willard C. Rappleye, dean of the medical faculty of Columbia University, before the annual Congress on Medical Education and Licensure, Chicago, in February...Dr. Clara Thompson, executive director of the William Alanson White Institute of Psychiatry, Psychoanalysis, and Psychology, to staff members of Veterans Administration Hospital at Northport, Long Island, in February...Dr. William Trevor, New York City, over WNYC on April 8.

Reopened Office

Dr. Jack Getzlek, surgery in Utica, after completing a residency in general surgery at New Veterans Hospital, Little Rock, Arkansas . . . Dr. Bernard Gottfried, surgery in Port Washington, after serving at Camp Drum as chief of surgical services . . . Dr. Solomon Lando, general practice in Monsey, after serving with the Armed Forces . . . Dr. Frederick M. Leonard, general practice in Ilion, after a year's illness . . . Dr. Walter J. Wawro, general practice in Syracuse, after serving with the United States Navy.

Closed Office

Dr. S. L. Pettit, Ogdensburg, moved to North Dakota.

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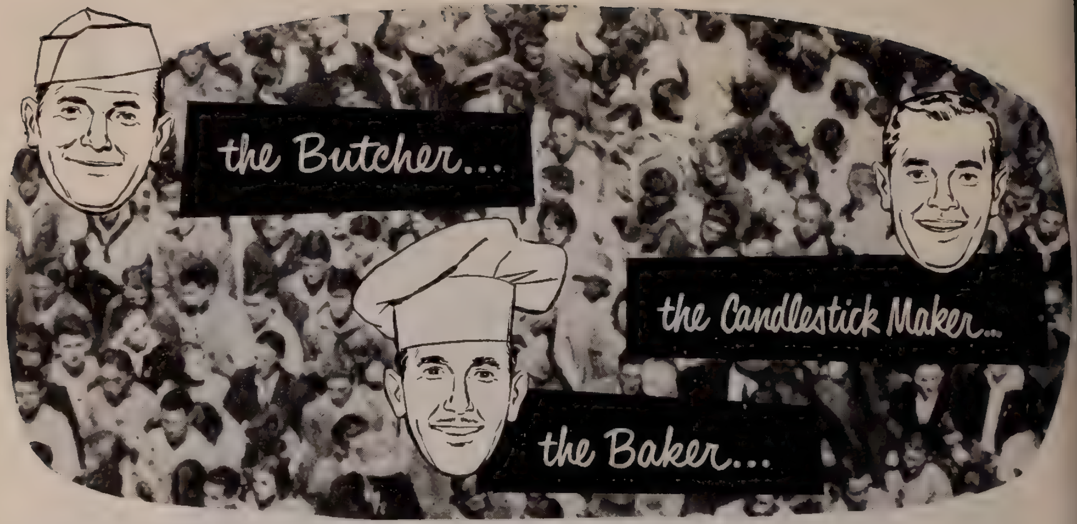
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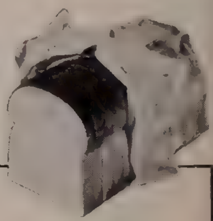

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The Editors of the Journal *assume no responsibility for the opinions and claims expressed in the articles contributed by individual authors. Contributions are accepted for original publication only.*

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Best, R. R.; Hicken, N. F., and Finlayson, A. I.: Ann. Surg. *110*:67, 1939.

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Cheney, G., in Reimann, H. A.: Treatment in General Medicine, ed. 2, Philadelphia, F. A. Davis Company, 1941, vol. 1, p. 851.

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Sanders, R. L.: Am. J. Surg. *72*:811, 1946.

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Cranshaw, J. F.: Am. J. Digest. Dis. *17*:387, 1950.

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Beckman, H.: Pharmacology in Clinical Practice, Philadelphia, W. B. Saunders Company, 1952, p. 361.

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1. Meller, R. L., and Resch, J. A.: *Bull. Univ. Minnesota Hosp.*, 20:78, Oct. 8, 1948.
2. Meller, R. L., and Resch, J. A.: *Postgrad. Med.*, 6:452, Dec., 1949.

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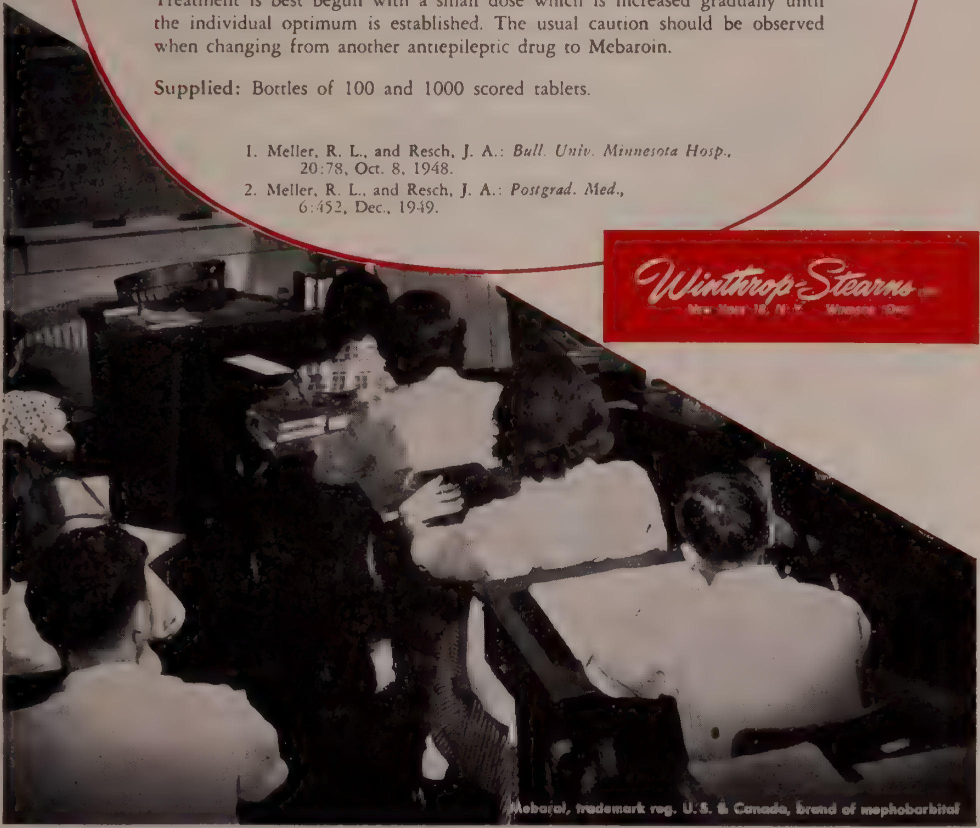

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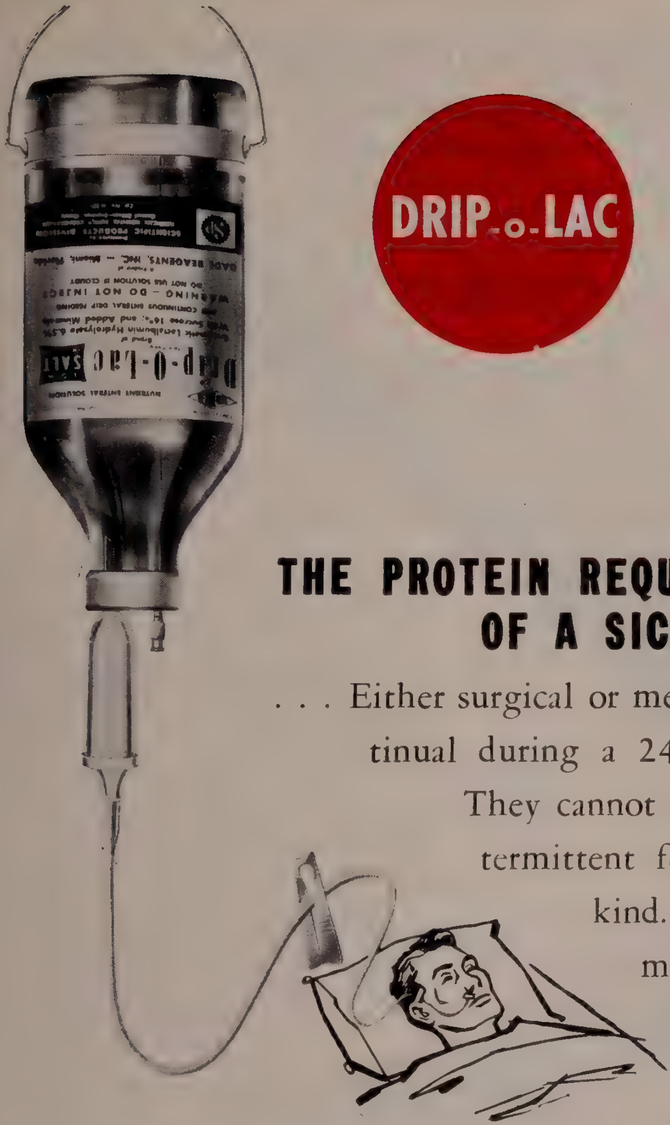

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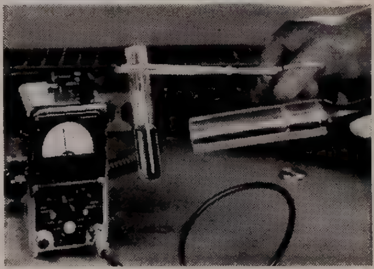

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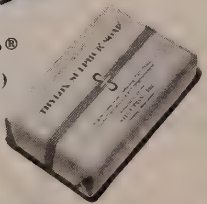

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1. Report by Industrial Toxicology Laboratories, Phila., Nov., 1953. 2. James, B. M., et al.: to be published.

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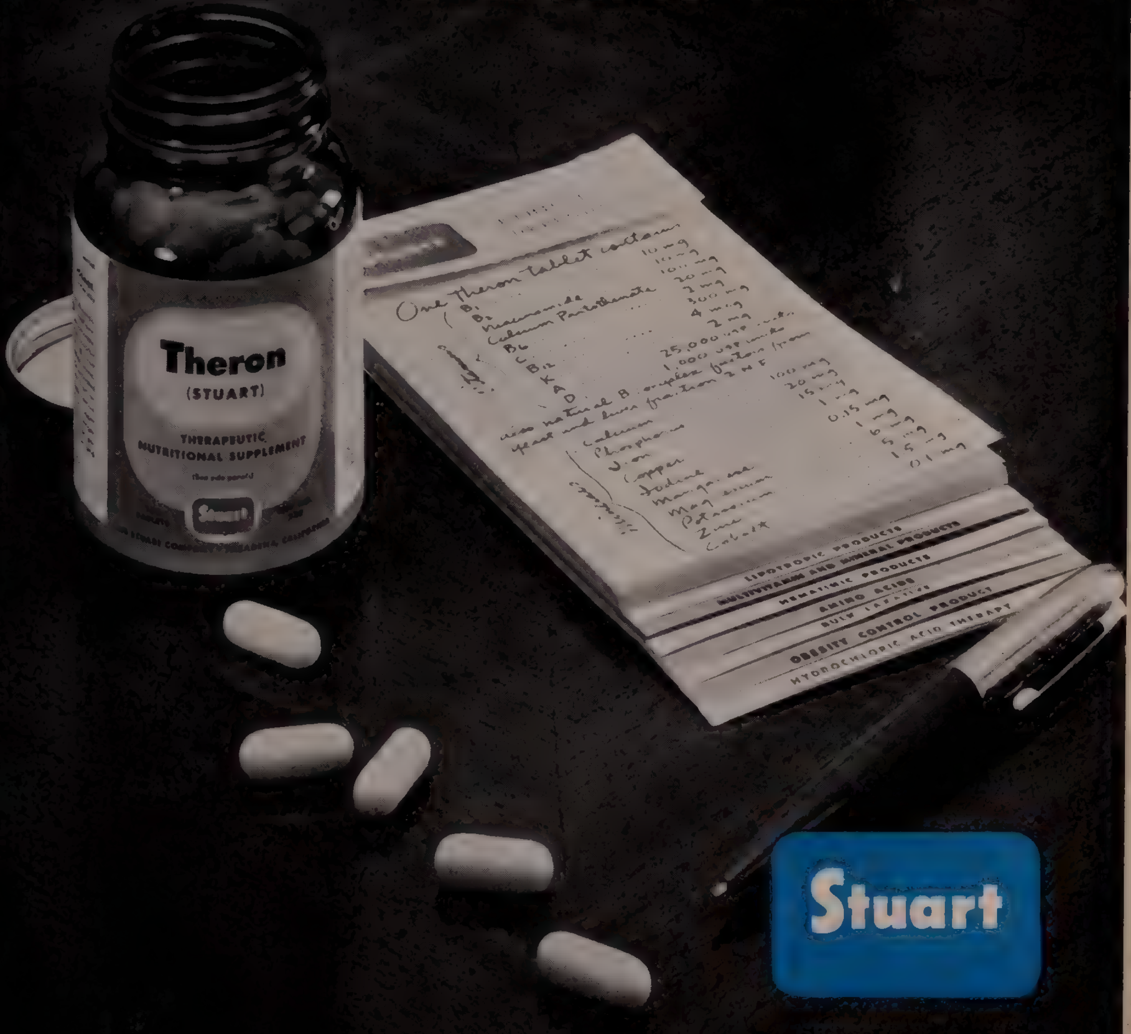
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- Morgan, W.G.: Tice Practice of Medicine, W.F. Prior Co., Vol. 7, 1944, p.670.
- U.S. Dispensatory, 24th ed.: 807(1947).
- Lichtman, S.S.: Diseases of the Liver, Gallbladder and Bile Ducts, ed. 2, Phila., Lea & Febiger, 1949, p.963.

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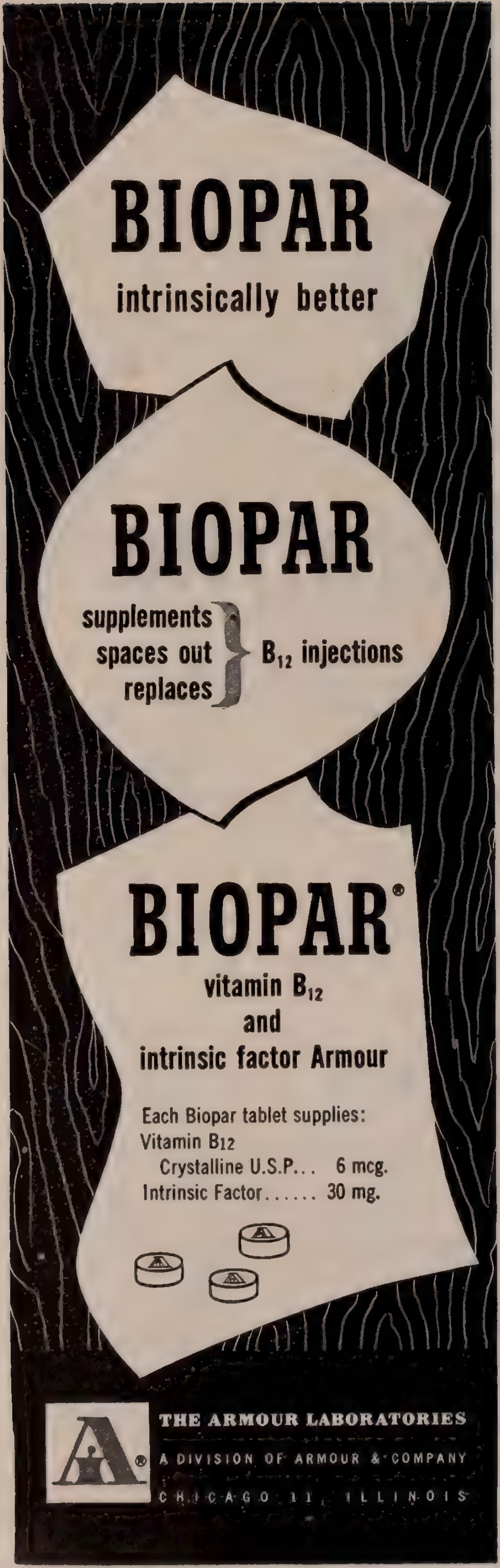
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1. Riseman, J. E. F. and Brown, M. G. Arch. Int. Med. 60: 100, 1937
2. Brown, M. G. and Riseman, J. E. F. JAMA 109: 256, 1937.
3. Riseman, J. E. F. N. E. J. Med. 229: 670, 1943.

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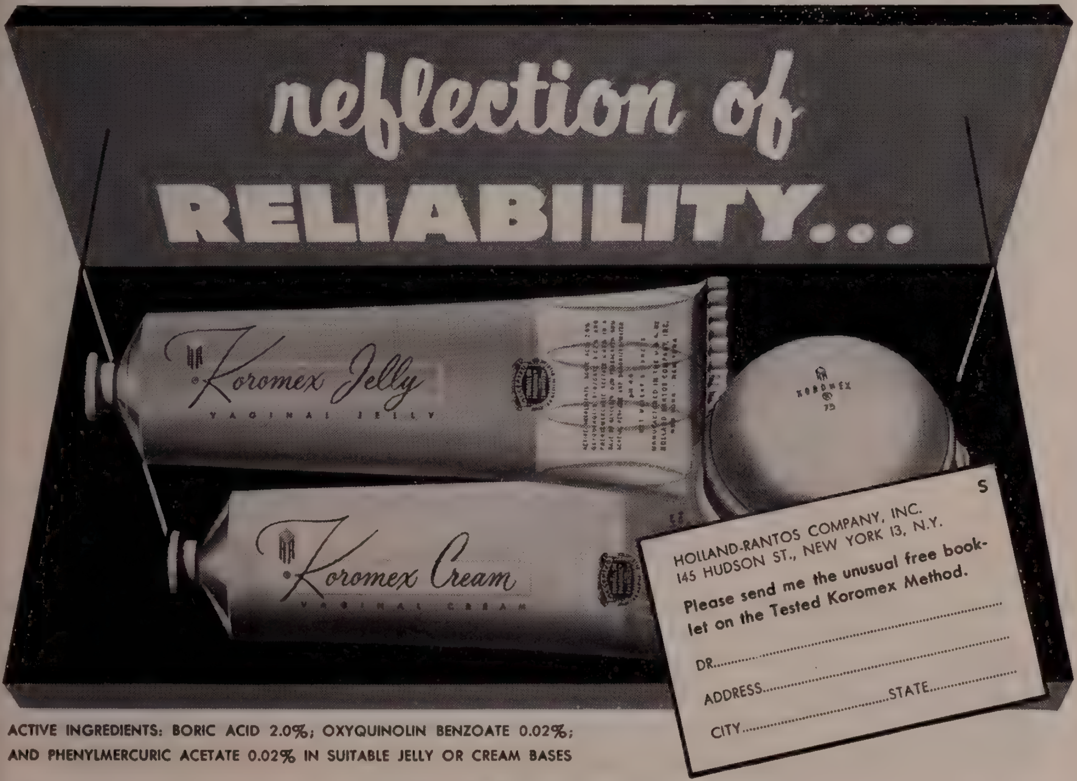

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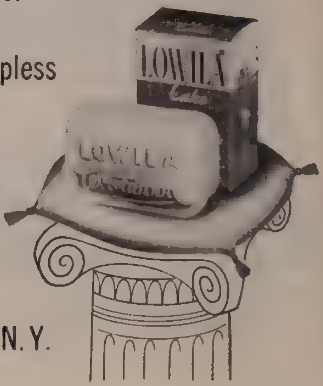

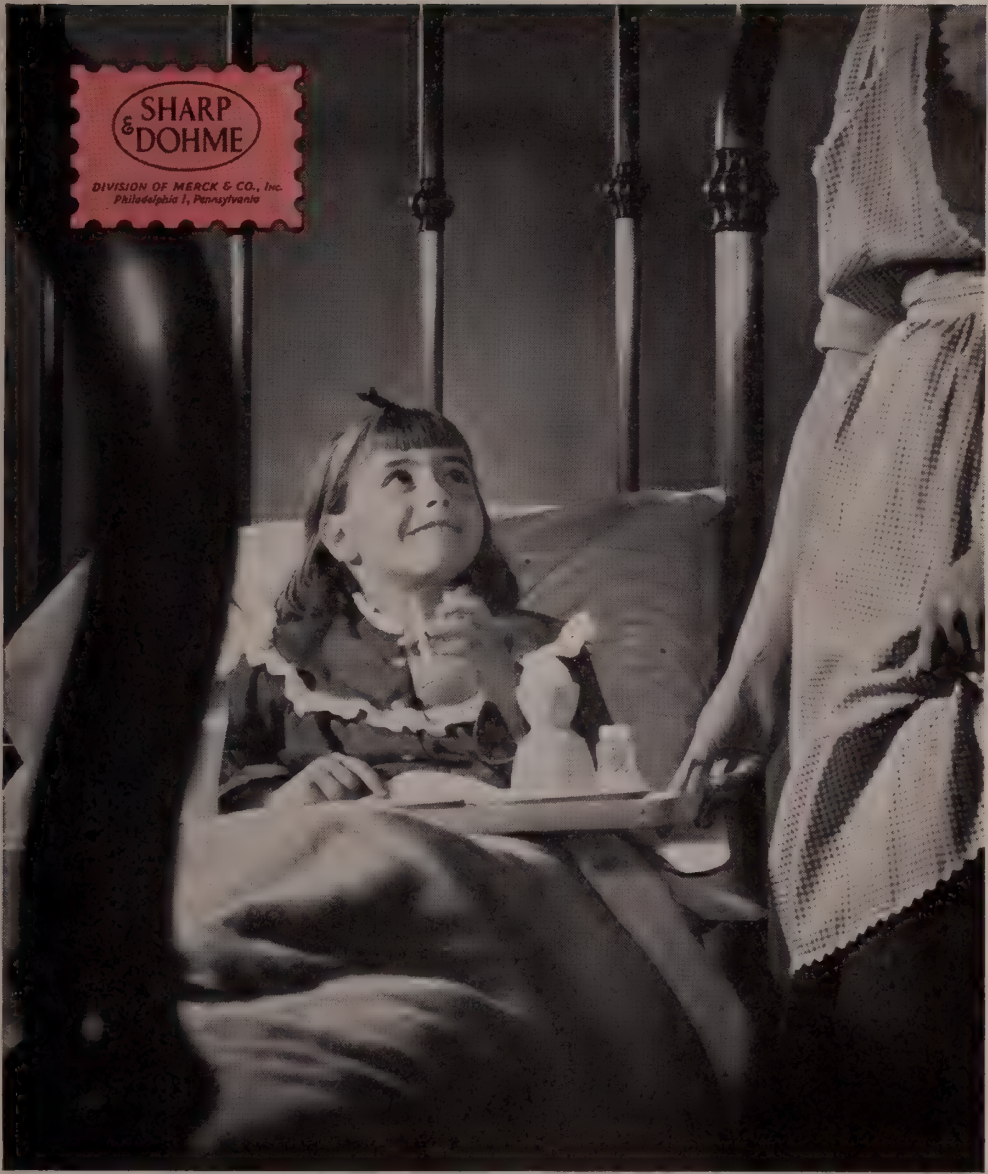

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Herrold, R. D.: Surg. Clin. North America *30*:61, 1950.

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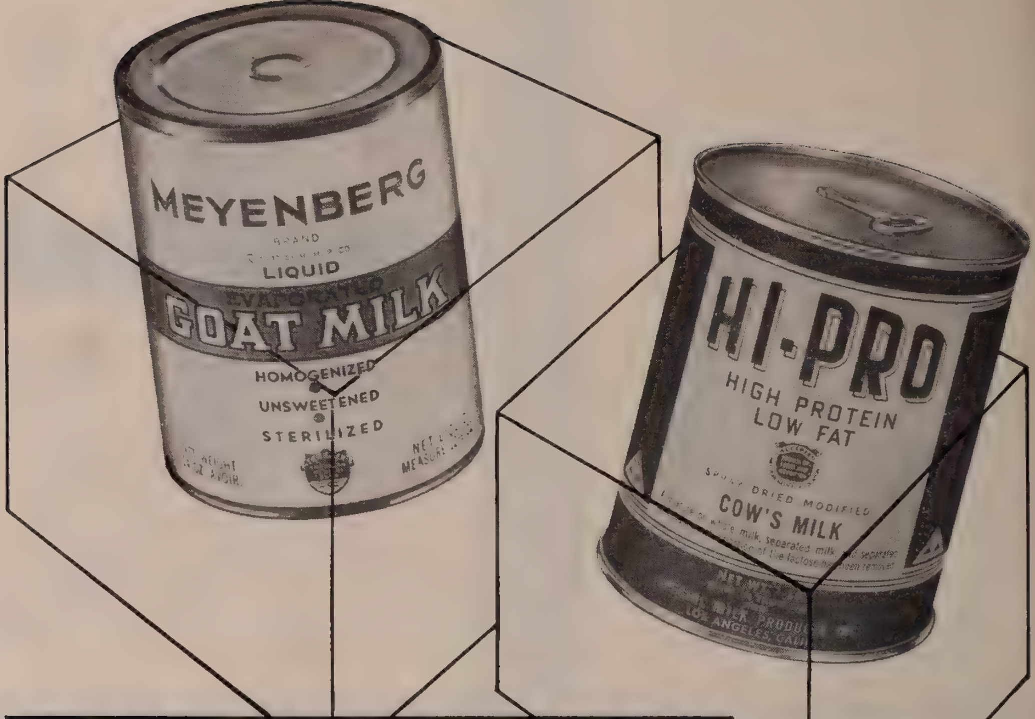
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JM PRODUCTS

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*Friedlaender, A. S., and Friedlaender, S.: Topical Skin Therapy with an Antihistaminic Tar Ointment, J. Michigan M. Soc. *53*:157 (Feb.) 1954.

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AL-AMPHYLLINE TABLETS (4)	1.67	1.84	1.26
AL-AMPHYLLINE TABLETS (4)	1.18	1.54	1.19
AL-AMPHYLLINE TABLETS (4)	0.90	1.16	0.91
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Intravenous Aminophylline (0.5 Gm.)[1]	1.60	1.30	0.70
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1. J. Pharmacol. Exper Therap., 100:309, 1950.

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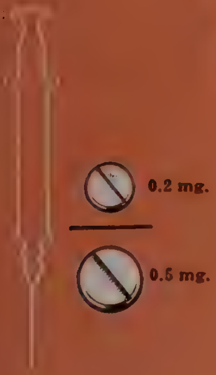

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PITMAN • MOORE COMPANY
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BRAND OF PROTOVERATRINES A AND B

Chemically standardized by an original Pitman·Moore assay.

*TRADEMARK

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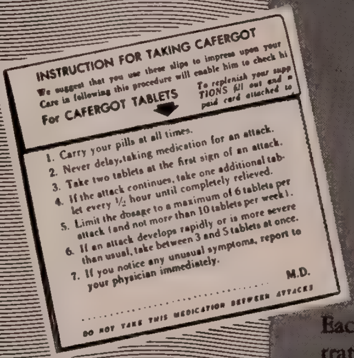
Reminder #2

WHEN...
the headache

- *is of vascular mechanism*
- *has no underlying pathology*

CAFERGOT
TABLETS

Effective in 85 to 90% of the recurrent, throbbing headaches, e.g. migraine.



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3. Take two tablets at the first sign of an attack.
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5. Limit the dosage to a maximum of 6 tablets per attack (and not more than 10 tablets per week).
6. If an attack develops rapidly or is more severe than usual, take between 3 and 5 tablets at once.
7. If you notice any unusual symptoms, report to your physician immediately.

.... M.D.

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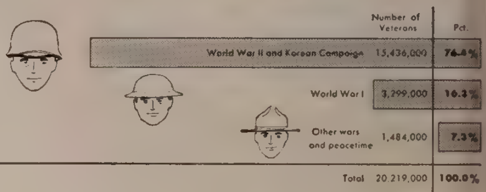

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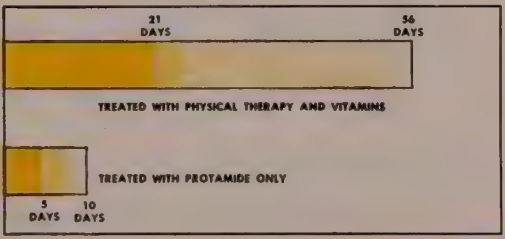

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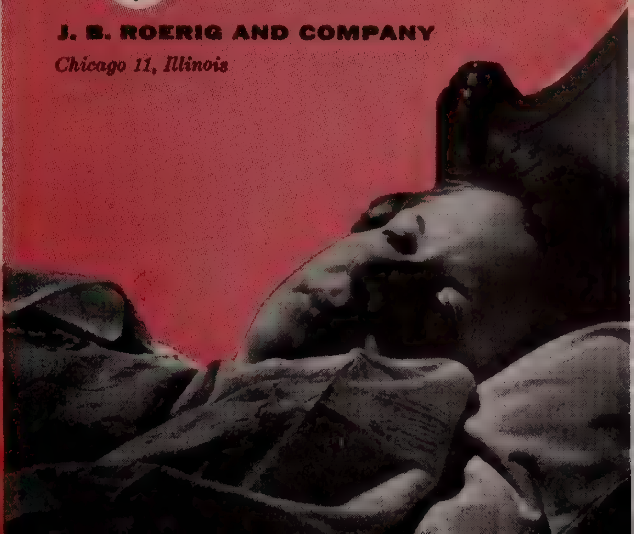

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EDITORIALS

Annual Meeting Plans Progress

The scientific program for the 148th Annual Meeting will feature 70 excellent exhibits, among which will be new and current expositions of many phases of surgery and medicine together with others illustrative of the progress of research along various lines of laboratory and technologic experimental work.

A new feature will be four exhibits having to do with the doctor in relation to traffic accidents. These have been highly recommended by the scientific exhibits director of the American Medical Association, and all will be on view in the Georgian Room of the Hotel Statler, said by Dr. W. L. Watson to be the best location for these the Society has ever had. All exhibitors have agreed to be on hand to demonstrate their work and to answer questions about it.

All final arrangements for the scientific portion of the 148th Annual Convention of the Medical Society of the State of New York, May 10 to 14, 1954, have been reported by Dr. Alfred P. Ingegno, scientific program chairman.

Ranking high among the popular events for which definite plans have been made is the round table discussion on the treatment of bronchogenic carcinoma, arranged by Dr. William Dock, an associate scientific program chairman. Placed on the agenda for Monday evening, May 10, at 8 P.M., in the Skytop, the discussion will be moderated by Dr. Edgar Mayer, clinical professor of industrial medicine, New York University Post-Graduate Medical School. Dr. Dock was originally scheduled to lead the round table discussion. The subject will be discussed by a panel of six physicians. These will include George H. Humphreys, II, M.D., New York City; Valentine Mott, M.D., professor of surgery, College of Physicians and Surgeons of Columbia University; J. Maxwell Chamberlain, M.D., New York City, attending thoracic surgeon, Roosevelt Hospital; Maurice Lenz, M.D., New York City, professor of clinical radiology, College of Physicians and Surgeons of Columbia University; James J. Nickson, M.D., New York City, attending radiotherapist, Memorial Center for Cancer and Allied Diseases; and David A. Karnofsky, M.D., New York City, associate attending physician, Memorial Center for Cancer and Allied Diseases.

Another attractive program, open to the public, will be the Symposium on Medicine in Colonial New York. Listed officially as the Session on the History of Medicine, Dr. Jerome P. Webster, chairman, the event will be held Thursday, May 13, at 9 A.M., in Parlor A, Ballroom Floor. Subjects to be covered will include European influences on medicine in colonial New York, medical correspondence in seventeenth and eighteenth century New York, the rise of medicine in New York City before the Revolution, as well as Cadwallader Colden and the use of tar water. Doctors are invited to bring their wives and friends to this interesting session.

It is hoped that meeting attendance this year will be the largest ever. Do not fail to get your complimentary notebook at the exhibit of the NEW YORK STATE JOURNAL OF MEDICINE on the mezzanine floor near the elevators. You will find it highly useful.

Urgent Reminder!

This is an urgent reminder to all county societies and others having resolutions to introduce into the House of Delegates meeting, May 10 to 12, to have copies of such resolutions on file with the Secretary, Medical Society of the State of New York, *at once!* If such resolutions can be studied by the Speaker of the House in advance of the meeting, the work of the delegates and officers can be materially expedited.

Please comply with this request without delay.

Important Announcement

Some uncertainty has surrounded the status of physicians who failed to pay their dues to the American Medical Association in 1950. We are pleased to bring to their attention the following announcement.

The A.M.A. House of Delegates, meeting in St. Louis, adopted one resolution, relating to the payment of 1950 membership dues, which may have been overlooked in the rush of business by many medical society secretaries. The "resolved" portion of the resolution said:

> *Resolved*, that any active member of the American Medical Association who failed to pay dues for the year 1950, and who was suspended for such delinquency, may be reinstated during the first six months of 1954 by payment of 1954 dues only.

Should such an individual fail to pay his 1954 dues by July 1, 1954, he shall continue to be considered delinquent.

It is hoped that all county and state society officers will immediately contact any physicians in their organizations who were dropped from A.M.A. membership because of nonpayment of 1950 dues. Such physicians should be acquainted with the provisions of this new resolution, especially with the fact that the waiver will be in effect only to July 1, 1954, and that after that date they again will be liable for payment of the 1950 dues if they wish to be reinstated as members of the A.M.A.[1]

Our membership is invited to discuss this announcement in staff rooms and meetings with fellow physicians who may for some reason have failed to read the above action of the House of Delegates of the A.M.A.

---

[1] A.M.A. Secretary's Letter No. 275, Dec. 21, 1953.

Editorial Comment

Medical Society Grievance Committees. From the Council on Medical Service of the American Medical Association, we present some facts concerning the 1953 status of the formation of "grievance committees" by medical societies.

In January, 1952, the Council on Medical Service issued a progress report on medical society grievance committees functioning on a state-wide basis. At that time 36 constituent associations had special committees to handle grievances, and in four states the formation of such committees was under consideration. By January, 1953, all of the 48 state associations, the District of Columbia, and Hawaii had provided in some formal manner for the hearing of complaints from the public. In 38 states, the District of Columbia, and Hawaii, special committees exist which have as their primary function the hearing of public grievances. In seven states such matters are handled by the councils of the state medical associations. In three states the hearing of public complaints is considered a proper function of the county societies.

Although the previous Council reports have been devoted primarily to state-wide committees, they have also pointed out that "progress made toward attaining a nation-wide network of state programs to hear public complaints in no way lessens the importance of similar programs by the local medical societies... Since membership in organized medicine originates in the county medical society, disciplinary action must either originate or end there."

A state committee may be necessary as a "court of appeals" or when local conditions make it difficult for a component society to conduct a thorough and impartial hearing of a complaint. In some rural and thinly populated areas a state committee may be the most effective medium for handling complaints.

The great majority of the grievance committees hear complaints from any source—patients, physicians, or lay organizations.

Although most of the committees study complaints concerning all phases of medical care, a few restrict themselves to certain aspects only. Examples of these aspects are (1) fees and emergency service, (2) medical charges, (3) fees only, (4) screening of members, (5) ethical questions, and (6) grievances against individual physicians.

The number of complaints received during 1952 ranges from 1 to 121. However, about 40 per cent of the committees answering this question report that they received no complaints during the year. Of those receiving complaints, most of the smaller groups have received but one complaint.

Fees, inadequate service, and general misunderstandings comprise the three most frequent sources for complaints. Most of the committees of the larger societies attempt to arrive at a decision satisfactory to both patient and physician. Thus the decisions favoring the physician and those for the patient have been about equal. Otherwise, the physician has a slight margin in the number of decisions in his favor.

Over the past several years there has been considerable discussion concerning the possibility of a more appropriate title than "grievance committee." In June, 1952, a resolution was introduced in the House of Delegates urging that "the name grievance committee be changed to professional relations committee."

The House of Delegates voted to lay the resolution over until the December, 1952, session. In December the Reference Committee on Miscellaneous Business presented the following report, which was adopted:

> Your committee disapproves the resolution on change in name of grievance committee because this House cannot dictate what names state and county medical societies shall give to their committees, and further it believes that "grievance" is the word most readily understood by the laity. It recommends that the Council on Medical Service continue to study the matter of names and bring in a report to this House at the June meeting.

As a result of this study, the Council on Medical Service reported that "it is in full agreement with the suggestion of the reference committee that the 'House cannot dictate what names state and county medical societies shall give to their committees.' " The Council also called to the attention of the House of Delegates that "there is a distinction between the functions of grievance committees and committees on medical ethics, which should not be confused. The Council has used the title 'grievance committee' on its reports on this subject and will continue to do so unless otherwise instructed by the House of Delegates."...

Experience proves that most of the complaints are due primarily to lack of understanding, and these arise because the physician did not take time to discuss either his services or charges. Where charges are involved, they include not only the cost of actual medical service but also of nursing, hospitalization, and drugs. Frequently complaints result from the lack of knowledge that medical care includes these other costs, as well as the physician's fee.

These excerpts from the report of the Council on Medical Service, it is hoped, will bring our members up to date on the progress being made all over the country in this valuable public relations undertaking by medicine in the public interest.

Misuse of Antibiotics. From a report on the Washington Symposium on Antibiotics,[1] the *British Medical Journal* states, in part:[2]

> There seemed to be universal agreement that antibiotics were being grossly misused. Perrin H. Long (New York) picturesquely described the American populace as "an enormous sponge with an infinite capacity for absorbing antibiotics." Maxwell Finland (Boston) referred disapprovingly to the common practice of administering many drugs successively or together for no more precise indication than fever, and blamed advertising pressure for some of this. Sidney Ross (Washington) described the profession as being "inundated literally with a plethora of drugs," and made a plea for a return, for many purposes, to an earlier, simpler, cheaper, and often no less effective treatment; he asked his hearers not to "write off an obituary of sulpha drugs in the current high-power antibiotic era."
>
> A great deal of such need as there is for new antibiotics is due to the waning power of their predecessors, which is a result of the acquired resistance of bacteria to them....

The adaptability of microorganisms to changes in environment unfavorable to their growth or even to their existence has long been known. Yet the longevity of man also continues to increase even granting a certain amount of misuse of drugs, antibiotics, or what have you. It would seem reasonable to assume that mankind is acquiring a certain durability by virtue of which he may be able eventually to survive even the cures for his ailments.

---

[1] October 28 and 29, 1953.

[2] Brit. M. J., Nov. 7, 1953, p. 1043.

County Health Departments. Writing recently in *Health News*[1] Dr. Herman E. Hilleboe, Commissioner, New York State Department of Health, stated that his department proposes that the establishment of county health departments in counties over 100,000 population in New York State be actively stimulated and encouraged during the coming year. Where the population is of that size, there is ample evidence that a health department manned by qualified full-time personnel, assisted by general practitioners who serve part-time as local health officers, is the only realistic approach to meeting the health needs of a large community.

In many of the counties over 100,000 population, there are already full-time city health departments for the more populous cities. Certainly what is needed by the city should be equally essential for the surrounding territory in the country. As a matter of fact, many of the city workers live in the outlying areas and raise their families there. The same public health services should be available to urban and rural dwellers alike.

In counties under 100,000 population, the need for a county health department must be approached on an individual basis. The concentration of population, the kinds of health problems that are present, the attitudes and resources of the people and their doctors, these are the factors that need to be carefully weighed before action is taken by local groups. The State Health Department stands ready to assist these counties in studying their public health problems and determining the best way to meet them. Our major efforts, however, will be concentrated on the counties over 100,000 population where the need is clearly evident.

In some of the counties of New York State having very small populations it is our belief that full-time county health departments are not necessary at this time because the work load in public health is not sufficient to require a full-time complement of county personnel. The district health officers and their public health nurses, sanitary engineers, and other public health personnel can serve several small counties efficiently from one office, provided full use is made of the services of those general practitioners serving part-time as local health officers who accept and make full use of the services of their district office staff. Local health officers need to refresh their knowledge of public health and preventive medicine from time to time to do their work well. They should be paid commensurately with the quality and quantity of the services they render.

The State Health Department plans to augment the postgraduate programs for general practitioners who serve as local health officers and arrange meetings between them and the county, city, and district State health officers. The State Health Department will assist in every way possible to improve the status of every local health officer who is genuinely interested in practicing modern preventive medicine and public health.

There are nine counties in the State with over 100,000 population which, according to the Commissioner, as yet do not have county health departments. We urge the practicing physician membership of those areas to support their local health officers in carrying out the Commissioner's request to hasten the establishment of county health departments "as a positive force in the improvement of the health of our citizens."

---

[1] Health News, Nov., 1953, vol. 30.

Do You Have Your Hotel Reservation for the Annual Meeting?

If you do not now have a confirmed hotel reservation in New York City for the Annual Meeting of the Medical Society of the State of New York, May 10 to May 14, 1954, at the Hotel Statler, please fill out and mail the reservation form at the bottom of this page, and send it directly to the Hotel Statler.

Should your reservation be received after the five hundred rooms set aside for the Society at the Hotel Statler have been assigned, your reservation will be turned over to one of the hotels in the neighborhood. Confirmation of your reservation will come to you direct from the hotel making the accommodation.

If you do not use the reservation form below, be sure to identify yourself as a physician when writing regarding reservations. This will insure proper attention to your request.

W. P. ANDERTON, M.D., *Secretary*

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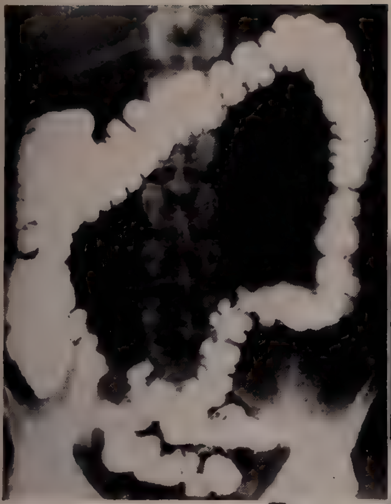

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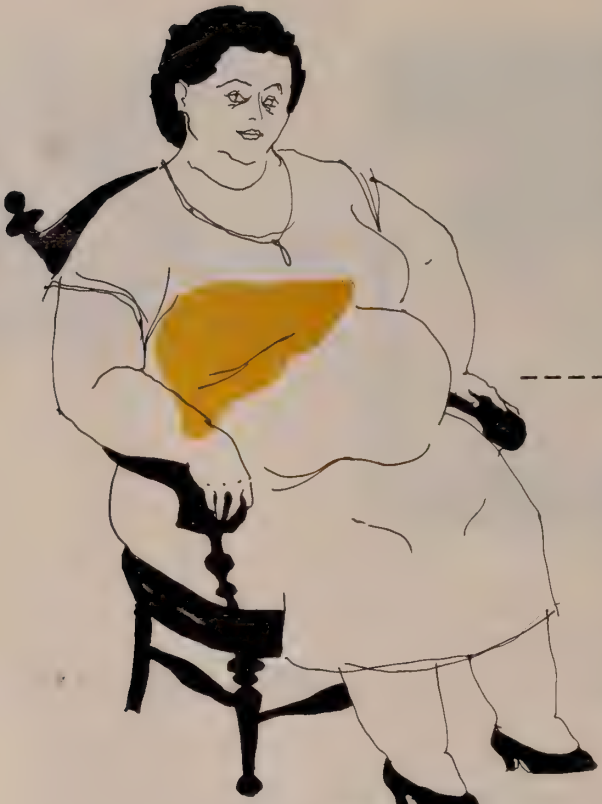

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*Zelman, S.: Arch. Int. Med. *90*:141, 1952.

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SCIENTIFIC ARTICLES

The Lucien Howe Prize Essay for 1953

An Expanded Concept of Tumors of Glomic Tissue

FREDERICK G. ZAK, M.D., MANHASSET, NEW YORK

(From the Department of Pathology, Mount Sinai Hospital, New York City, and North Shore Hospital, Manhasset)

In 1942 the Department of Pathology of Mount Sinai Hospital received for study a polyp removed from the middle ear which on histologic examination was classified by Otani as carotid body-like tumor. As origin for this tumor he suggested a structure described in 1941 by Guild,[1] the jugular glomus located in the adventitia of the uppermost internal jugular vein at the base of the skull as well as along the tympanic nerve within the middle ear (Figs. 1 and 2).* This case was published by the surgeon, Dr. H. Rosenwasser, in 1945,[9] and thus the attention of otologists and pathologists was directed to this new entity.

In the same year the present author had the good fortune to study at autopsy a brain tumor (Case 1 of this paper) which proved to be of the same kind.† A cursory search of the otologic and pathologic world literature disclosed that numerous examples of middle ear polyps and various primary tumors of the petrous bone or the base of the skull were in reality instances of Otani's tumor, as we prefer to call this neoplasm. Various authors arrived at similar conclusions. Some of them reclassified their own material accordingly. The extensive literature has also been reviewed recently by others.[95–97, 110, 116]

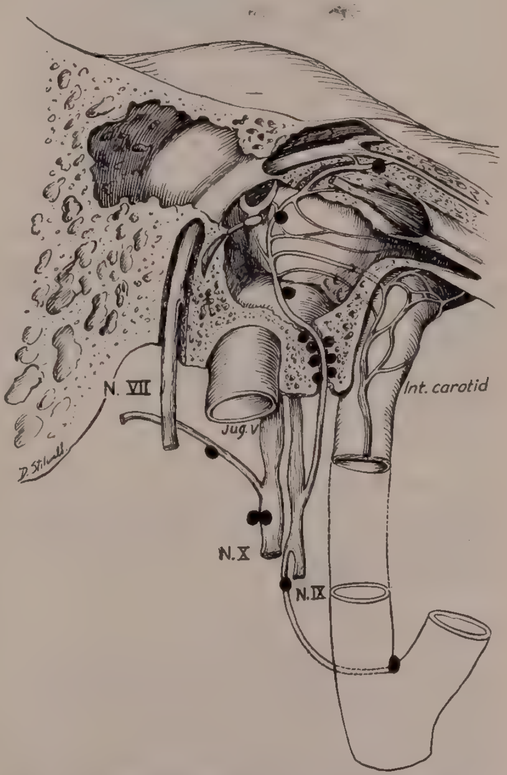

FIG. 1. Right petrous bone. The middle ear has been opened to show the tympanic nerve. The black dots along its course represent the location of the jugular glomus of Guild as reported by various authors. Glomic tissue is also present in and near the nodose ganglion of the vagus nerve. The two lowermost dots correspond to a normal and aberrant carotid body.

Presented at a meeting of the New York Society for Neurosurgery, May 19, 1953.

* This structure appears to be identical with one described by Valentin[2] and Krause[3] but forgotten since. Others preceded Otani in recognizing tumors in this location[4] but failed to trace them to a normally present structure. Thus their observations were soon forgotten. Credit should go, however, to Köhlmeier[5] who, unaware of Guild's and Otani's observations, described a middle ear tumor as carotid body-like and traced it to glomic structures in the ganglion nodosum.[6,7] Guild recently reported the occurrence of glomic tissue in other locations.[8]

† This antedates the reports which appeared subsequent to Rosenwasser's publication.[9] There are two references to this case in the literature.[10,11]

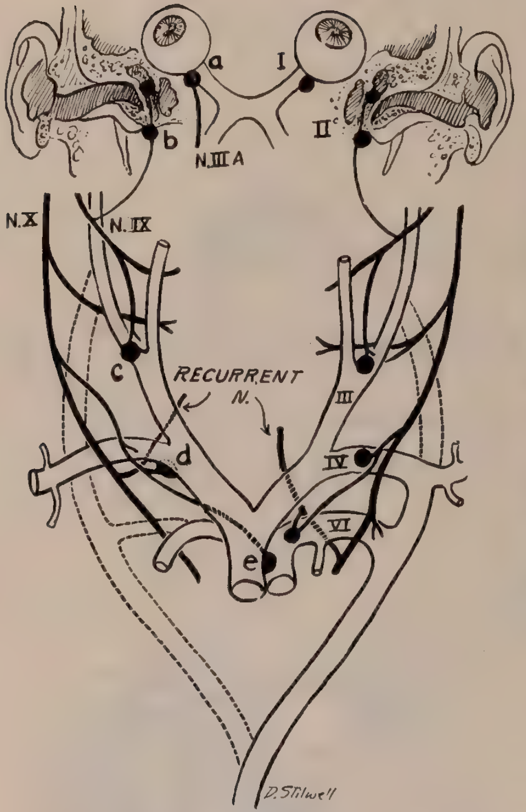

Fig. 2. The Roman numerals in the right half of the diagram show the correlation of glomic tissue with branchial arteries (I and II are hypothetic), those in the left half refer to the glossopharyngeus and vagus nerves (the nervous connections of the ciliary glomus are a matter of conjecture). The letters stand for (*a*) ciliary, (*b*) jugular (and tympanic), (*c*) carotid, (*d*) aortic, and (*e*) pulmonary glomera.

It is one purpose of this paper to show that Otani's discovery also changed our concept of some primary intracranial tumors, as shown by the following cases.

Case Reports

Case 1.—Mrs. J. T., a woman of forty, was admitted to Mount Sinai Hospital in July, 1945. Her past and family history were negative. She complained of progressive left-sided headache of one year duration, usually coming at night. Two months later heaviness of the tongue appeared and some difficulty in swallowing. Two months before her admission the headache seemed to center around the left ear; at about the same time she noticed weakness and a scratchy quality to her voice. Nine days before admission she fainted while sitting in a motion picture theater.

Physical examination was normal except for a palpable node in the right neck which was interpreted by one observer as metastasis of a pharyngeal carcinoma (Schmincke tumor). The following pertinent neurologic findings were made: slight weakness in tilting jaw to left; questionable left facial weakness at rest only; greatly diminished pharyngeal reflex with impairment of swallowing; paralysis of left vocal cord; loss of bulk of left sternomastoid and trapezius muscles; slight left hemiatrophy of tongue with deviation to left on protrusion; no tinnitus, vertigo, or impairment of hearing; audiometric, caloric, and gustatory tests normal.

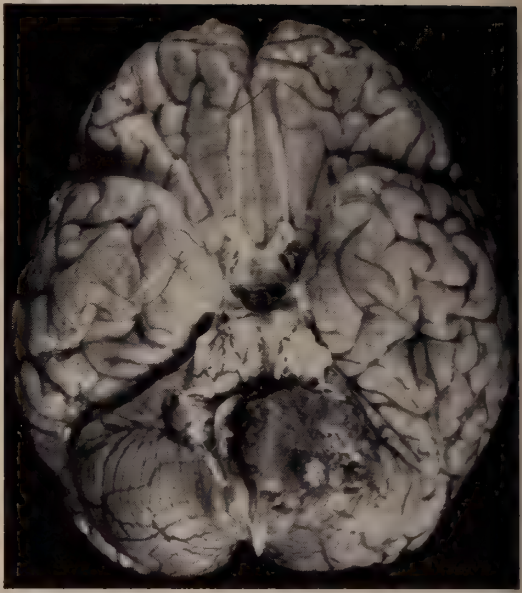

Fig. 3. Case 1—Left cerebellopontile angle tumor.

Skull x-ray was nonrevealing; special films (Schüller, Stenvers, Towne), however, were interpreted by Dr. B. Schlesinger as indicative of a bone-destroying tumor near the jugular and hypoglossal foramina, such as a sarcomatous meningioma.* Lumbar puncture disclosed an initial pressure of 150 mm. With the exception of an elevated protein content (104 mg. per 100 cc.) the fluid was normal. An electroencephalogram was normal.

Most observers felt that medullary and extracranial tumor could be ruled out and that the underlying process was a meningioma or neurofibroma primarily involving the ninth to twelfth nerves on the left side.

The patient refused operation and was discharged only to be readmitted two months later because of increasing regurgitation of ingested liquids. During the three weeks immediately preceding this admission the patient had become bedridden. The headaches had disappeared, but tinnitus had been noted. She had developed acute dyspnea with moist respirations and had become quite weak. Coarse

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* A reproduction of the radiograph is found elsewhere.[10]

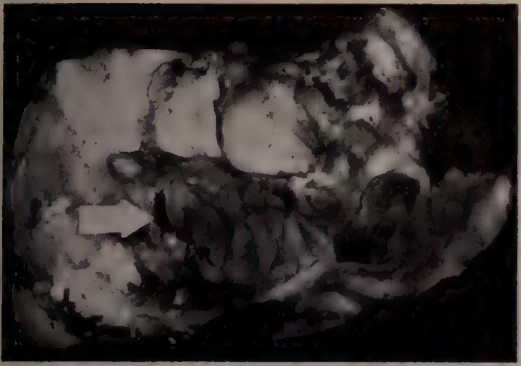

FIG. 4. Case 1—Undersurface of left temporal bone (face down). The internal jugular vein is compressed to a crescentic slit by tumor (arrow).

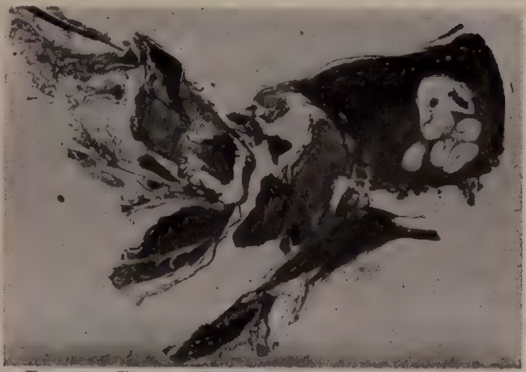

FIG. 5. Case 1—Section of petrous bone showing invasion of marrow spaces and intravenous and extracranial extension. The labyrinth is spared.

rhonchi were heard over both lungs. In addition to the previously noted involvement of the left lower cranial nerves, there was hypalgesia of the left cornea, narrowing of the left palpebral fissure, diminished bone conduction in the left ear, and some ataxia of the left upper extremity indicating involvement of the fifth and eighth cranial nerves and the cervical sympathetic and cerebellar systems. Since her precarious condition precluded surgical exploration, she was given radiotherapy (1,200 r over a period of nineteen days) with slight improvement. Atelectasis of the right lower lobes and pneumonia, probably due to aspiration, developed as well as urinary tract infection. She died with steadily rising fever three weeks after her second admission. Consent was obtained to examine the skull and brain postmortem.

Pathologic Report.—Autopsy was performed by the author. The significant finding was a firm, round, pinkish-gray tumor located in the left cerebellopontile angle covering the left vertebral artery and displacing and deforming the medulla and pons (Fig. 3). The ninth, tenth, and twelfth cranial nerves, as well as part of the eleventh, could not be recognized on the left side. The tumor was carefully dissected away from the dura to which it was adherent. Upon reaching the jugular foramen a tumor pedicle growing through it had to be severed. It was then decided to remove the left temporal and adjacent occipital bone to follow the tumor in its extracranial course. A small, walnut-sized, whitish, fleshy structure, resembling a lymph node, was found applied to the undersurface of the temporal bone (Fig. 4). A tentative diagnosis of Otani's tumor was made then and there and corroborated by frozen section of extra- and intracranial component.

Tissue was also fixed to study chromaffinity and for the demonstration of acid and alkaline phosphatase and lipase, all of which were found lacking. The removed temporal bone was cut serially at right angles to the axis of the pyramid after celloidin embedding and disclosed extensive destruction of bone and invasion of the marrow spaces, extracranial skeletal muscle as well as sigmoid sinus, jugular bulb, and smaller veins (Fig. 5). Yet there was minimal involvement of the middle ear. The tumor in this instance apparently arose from an intravagal or jugular glomus rather than from one located within the middle ear proper, thus accounting for the absence of the features of chronic otitis media so common in this malady.*

A middle-aged woman with a clinical picture of a left posterior fossa tumor *without* otologic features late in her illness developed involvement of left trigeminal, cervical sympathetic, and cochlear nerves. Of note was the presence of a contralateral cervical "lymph node." Autopsy disclosed Otani's tumor which had extensively invaded the left petrous bone and grown through the jugular foramen in a dumbbell fashion forming an extra- and intracranial part.

CASE 2.—L. G., a secretary, thirty-nine years of age, was admitted to the Mount Sinai Hospital in November, 1944. Her family and past history were noncontributory, except for a weight loss of 5 to 10 pounds during the preceding month. The patient complained of a sharp pain which arose in front of her left ear, radiated across to the right temple, and was accompanied by retrobulbar pain. She had worn glasses for many years and had had diplopia, scotomata, and blurred vision, worse in the left eye, with some burning sensation. When getting out of bed, the patient experienced dizziness and intermittent hissing noises in her left ear. The patient appeared somewhat confused. Her sister stated that the patient was well until five months before when frontal headaches and left otalgia set in; two months later confusion and personality changes became apparent followed by groping for words and use of wrong ones. At about the same time there was onset of amenorrhea.

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* It is a pleasure to acknowledge the help of Dr. F. Altmann in surveying the serial sections.

On physical examination there was slight left supraorbital and zygomatic hyperostosis. The blood pressure was 90/80.

Neurologic examination contributed the following abnormal findings: There was absence of swinging of right arm on walking, slight ataxia on turning, deviation of left finger to left in finger-nose test. There was tremor of the left leg in the heel-to-knee test. The normal deep and superficial reflexes were sluggish to very active (the ones on the left were in general less active). No abnormal reflexes were present. There was slight weakness of the muscles of the right shoulder, arm, hand, and fingers. The speech was slow and somewhat slurred. Anomia was present for simple subjects. Impairment of smell could not be evaluated because of anomia. However, there was early bilateral papilledema, more advanced on the left with moderate venous congestion. The left palpebral fissure was wider, and the corneal reflex was sluggish. Right supranuclear type weakness of the facial nerve was present. Hearing was normal on both sides. Air conduction was better than bone conduction, and Weber's test was referred equally to both sides (one observer noted lateralization to the left). There was no nystagmus. The pharyngeal reflex, phonation, and deglutition appeared normal. There was weakness of the muscles of the right shoulder and slight deviation to the right of the protruded tongue.

A skull x-ray showed displacement of the pineal to the right. Lumbar puncture yielded 10 cc. of normal fluid with an initial pressure of 220 mm. and a final pressure of 100 mm.; protein content was 42 mg. per 100 ml. The electroencephalogram was suggestive of a rapidly growing left frontal tumor. The remaining procedures were noncontributory, and a tentative diagnosis of tumor of the left middle fossa, possibly sphenoidal ridge meningioma, was entertained.

The patient's condition deteriorated rapidly during the next two days necessitating an emergency left frontotemporal craniotomy (Dr. Ira Cohn). There was increased vascularity of the skull. The precarious state of the patient required a rapid finger enucleation of a left infratemporal tumor from its dural attachment. The ensuing bleeding was stopped with coagulation, and the rest of the tumor and part of the dura were removed except a small area near the pterion which was thoroughly coagulated as was the dural attachment which was thought to be near the Gasserian ganglion. The patient, who had been comatose at the start, became conscious at the conclusion of the operation. The impression of the surgeon was meningioma arising from dura of middle fossa. This apparently was borne out by microscopic study which was reported a hemangioendothelioma with sarcomatous orientation. The patient received 2,000 r postoperative radiotherapy to each of two fields and was discharged to be seen at yearly intervals.

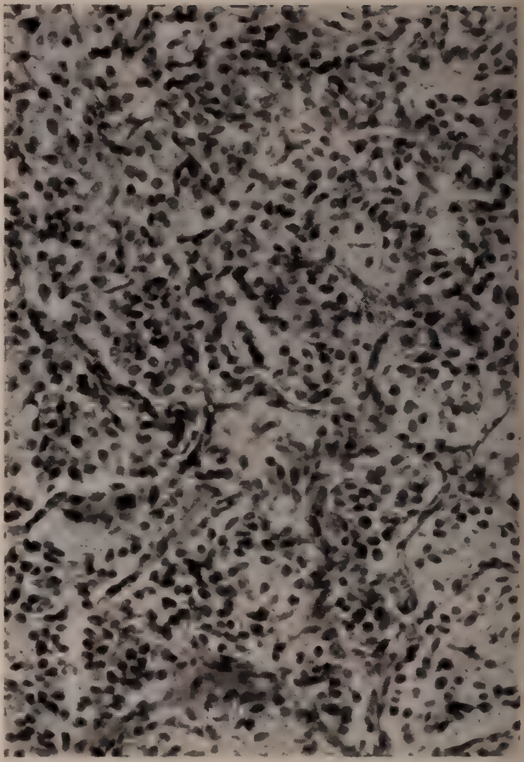
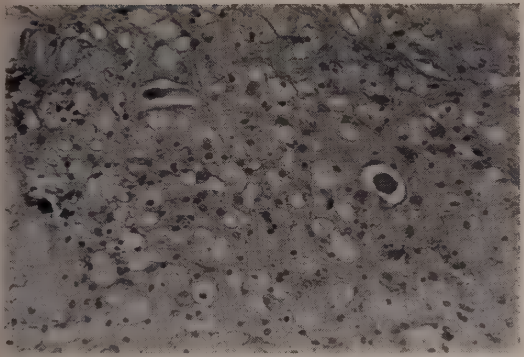


Fig. 6. Case 2—The organoid alveolar pattern of glomic tissue is well shown (biopsy specimen).

Second Admission—Some four years later a tumor developed in the region of the operative site, followed some ten months later by constant throbbing and difficulty in hearing in the left ear; she was therefore readmitted. Physical examination disclosed a pulsating 5 by 7-cm. swelling of the left zygomatic and preauricular areas as well as a firm, red, fixed mass occupying the deeper portion of the left external auditory canal apparently replacing the drum.

Neurologic examination revealed slight past-pointing in right finger-nose test and absence of suprapatellar reflex, ankle reflex, and Mayer's reflex bilaterally, the other normal superficial and deep reflexes could be elicited, the pectoral, biceps, and patellar reflexes being less active on the left. There was questionable ptosis of the right upper eyelid and a slight weakness of the left facial nerve.

The most important finding was an almost complete deafness on the left, greatly diminished air conduction, and Weber's test lateralized to the left side. The preoperative diagnosis was recurrence of meningioma with invasion of skull and middle ear. At operation (Dr. Ira Cohn) it was found necessary to



(*Courtesy of Dr. W. C. Hutcheson*)

FIG. 7. Case 2—Area of extensive fibrosis with scattered foam cells. Viable tumor cells were present elsewhere (autopsy specimen with radiation effect).

ligate the left external carotid artery. An encapsulated, firm, grayish tumor, about 3 by 2 by 2 inches had replaced the zygomatic arch. The capsule was incised, and the tumor was removed followed by excision of the capsule. The patient made an uneventful recovery and was discharged.

The removed tumor tissue was histologically similar to the one obtained at the time of the first operation. The author happened to see a section and made the diagnosis of Otani's tumor (Fig. 6). No radiotherapy was given since it was felt that the tumor had been removed completely.

Follow-up.—However, nine months later she was seen again with a tumor recurrence in the temporal region and a growth in the external auditory canal. The latter was biopsied and gave the same histologic picture as before. A course of radiotherapy was again instituted, and the temporal mass seemed to respond to 7,000 r (tumor dose) given to five different portals over a period of eighty-six days. The frontotemporal mass as well as the tumor in the auditory canal disappeared. She was seen seven months later complaining of pain and drainage from the left ear and hypersensitivity to air currents. A few months later she was admitted to another hospital because of psychosis. There she succumbed to an abscess in the left temporal and frontal lobes which broke into the ventricular system causing suppurative meningitis.* One of the tissue sections showed extensively hyalinized but viable tumor with a collapsed stroma still showing its former angiomatous character. Of interest were scattered islands of foam cells (Fig. 7).

A middle-aged woman manifested signs and symptoms of a left middle fossa tumor. Operative removal and subsequent radiotherapy were followed four years later by local recurrence with invasion of zygomatic bone and external auditory canal. The growth again responded to radiotherapy, but the patient succumbed to brain abscess and subsequent purulent meningitis after eight years of illness. The tumor found at autopsy was almost completely fibrosed due to radiotherapy.

CASE 3.—M. E., a thirty-eight-year-old housewife, was sent to the Neurological Service of the Mount Sinai Hospital by Dr. L. Lazar in April, 1952. For the past three years she had experienced brief episodes of sensations of "floating" with vague recollection of her early life, occurring about twice a month. A week prior to her admission she had a convulsive seizure while asleep. It is of interest that left-sided deafness and otorrhea were noted in June, 1951, more than two years after onset of her psychomotor seizures. A polyp was removed from her left ear by another physician and cauterized.

The following pertinent observations were made while she was in the hospital. The left ear was blocked by a polyp which arose from the middle ear. There was marked left conductive deafness combined with a nerve component. There was no response to caloric testing; Weber's test was referred to the left; Rinne's test showed left bone conduction to be greater than air conduction. Ophthalmologic and neurologic examinations contributed nothing of special interest. No bone destruction was seen on roentgen films. An electroencephalogram, however, disclosed pronounced focal slowing over the left anterior temporal region suspicious of a neoplastic process. Air studies revealed obliteration of the left lateral ventricle apparently due to a mass arising from the basal ganglia. There was a slight displacement of the ventricular system to the right.

The aural polyp was removed by Dr. Druss and found to be a typical Otani's tumor. The patient was discharged to be treated by radiotherapy since it was felt that surgical procedures might well lead to intracranial infection. When last heard of, she was up and around.* The case is being followed up.

Although there is a long history of ear involvement, this case is included in the present series because of the unusual feature of psychomotor seizures and convulsions. We are aware that in the absence of a craniotomy final proof of an intracranial Otani's tumor is lacking.

Comment

The first case suggested a study of the literature which is predominantly otologic and frequently inadequately documented or illustrated.

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* Our thanks are due to Dr. W. C. Hutcheson, Manhattan State Hospital, who gave permission to study the material.

* Thanks are due to Dr. R. Mokotoff of Middletown, New York, for follow-up reports.

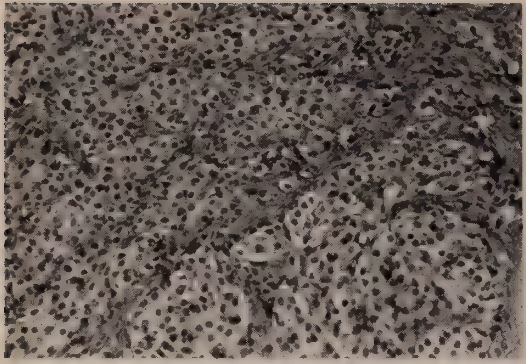

Fig. 8. Meningeal tumor from parietal region suggestive of origin from ectopic glomic tissue (Mount Sinai Hospital 111058).[58] Note similarity to Fig. 15.

The following pertinent facts emerged, some of which were also arrived at independently by other authors. It would serve no useful purpose to quote the entire literature on the subject. Incomplete reviews are available.

Mislabeling of Otani's Tumor.—This type of tumor was mislabeled angioma,* fibroangioma, perithelioma, angioepithelioma, endothelioma (often hemangio- or lymphangioendothelioma), or sarcoma with these prefixes, etc. Because of its alveolar arrangement it was occasionally mistaken for a nevus[12,13] or a tumor arising from the cutaneous glomus of Masson.[5] Intracellular lipid caused it to be mislabeled xanthoma or lipid granuloma.[109,14,15] In common with other "paragangliomas" it was misdiagnosed as myoblastoma.[16–18] Occasional "parotid" neoplasms likewise are instances of Otani's tumors.[19,20]

Aberrant Glomic Tissue Along Internal Carotid Artery and Its Branches.—Ectopic glomic tissue is not too rare along the course of the internal carotid artery in the neck.[21] Tumors arising from these structures have been reported.[21–25] It appears reasonable to assume that occasional instances of neoplasia of a carotid body, reaching from the base of the skull to the bifurcation of the carotid or even into the mediastinum, are instances of abnormally distributed glomic tissue, as well as cases of multicentric glomic tumors. There is reason to believe that tumors arising from aberrant cranial glomera may occur over the cerebral convexity (Fig. 8),[58] in the ventricular lumen,[68–70] and in other locations. Thus, the "frontal bone metastasis" of a carotid body tumor may well represent an independent glomic tumor which became malignant and produced widespread metastases.[71,*] Some cases of intracranial tumors of this kind are labeled angioblastic or transitional or neuroepithelial meningiomas (type IV and V variant 2, of Cushing and Eisenhardt [Fig. 9][73]). Courville also stresses the fact that the angioblastic meningiomas are a "constellation" of various types.[74]

Invasion of Neighboring Structures.—Invasion of the pharynx, the base of the skull, or the cranial chamber is a late complication but may occasionally be the first symptom of a middle ear or posterior fossa tumor with or without clinical ear involvement. With a few exceptions[26,27] intracranial tumors of this kind have been classified as various types of meningiomas,[28–31,†] endotheliomas,** angiomas, etc., either arising from the petrous bone or invading it. Recently neurosurgeons have become more aware of this entity.[103,105,114,116] The case histories of the present paper fall into this group.

Relation of Otani's Tumor to "Hemangioblastoma of Cerebellum."—In addition to these meningeal tumors arising from glomic tissue, another cerebral neoplasm has to be mentioned in this connection, the so-called hemangioblastoma, also known as hemangioma, angioreticuloma, angioglioma, hemangioxanthoma, or Lindau's tumor which is most commonly found in the cerebellum.

On studying reticulum preparations of these tumors Percival Bailey separated them from the large group of cerebellar gliomas. In their monograph Cushing and Bailey[40] depict a number of these lesions which are unquestionably of glomic origin and allude to other cases in the literature. This tumor entity is subdivided by Oberling[41] into angioreticulomas, a term widely used on the continent, and angiogliomas, a term which gave rise to confusion. The latter are unmistakable glomic neoplasms (Fig. 11).

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* It is interesting to note that articles dealing with vascular tumors of the petrous bone are still appearing which most likely represent Otani's tumor.[133–145]

* An extracranial "meningioma" of the temporal region[72] was suspected by us to be of aberrant glomic origin. However, slides of this unique lesion obtained through the courtesy of Dr. J. V. Jørgensen proved the original diagnosis correct.

† Unquestionable meningiomas may invade the petrous bone and even appear in the external auditory canal as polyps (Fig. 10).[32–37] Contrary to some[110] who consider Fischer's first case[33] to be of glomic origin, there is sufficient evidence for the diagnosis of meningioma in both of his cases.[34] Other cases defy classification.

** The term endothelioma as used by otopathologists stands mostly for glomic tumors; as used by neuropathologists, it means meningioma most often. Thus it is evident that an "endothelioma of the petrous bone" will have different meanings to different specialties.

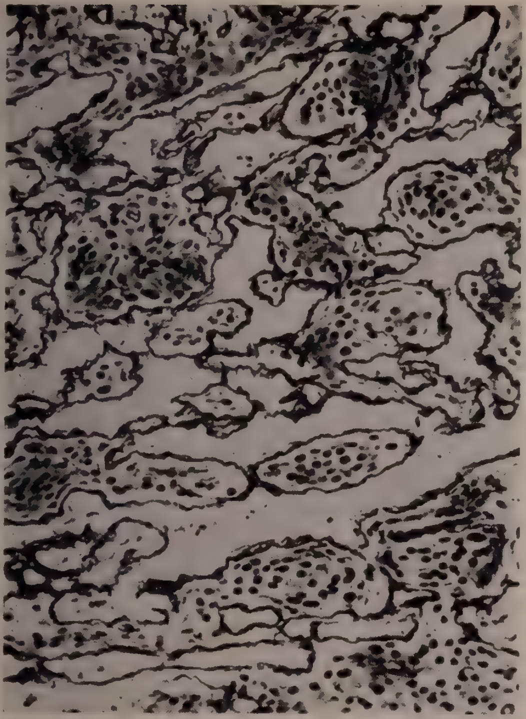

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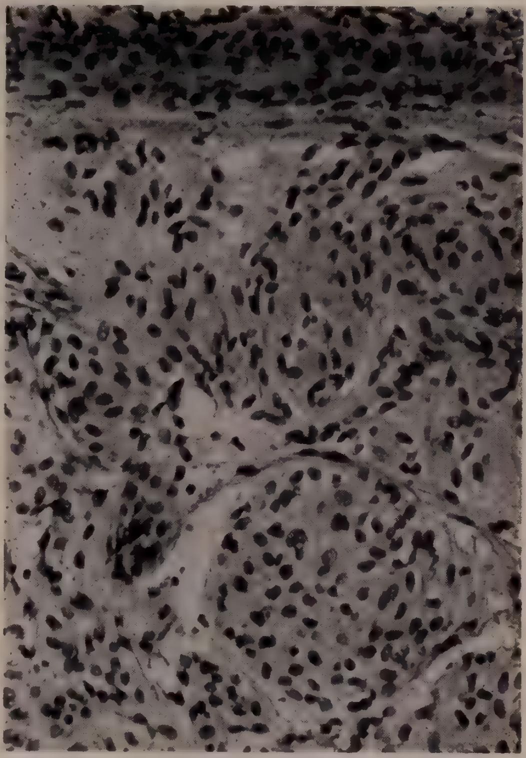
FIG. 9. Cushing and Eisenhardt's vascular meningeal tumor (Fig. 34[73]). Pictures like this are frequently found in glomic neoplasms.



(Courtesy of Dr. J. W. Kernohan)

FIG. 10. Tumorous aural polyp. Note covering epidermis. The alveolar pattern in this case is somewhat deceiving. Typical meningioma of posterior fossa invading petrous bone.[32]

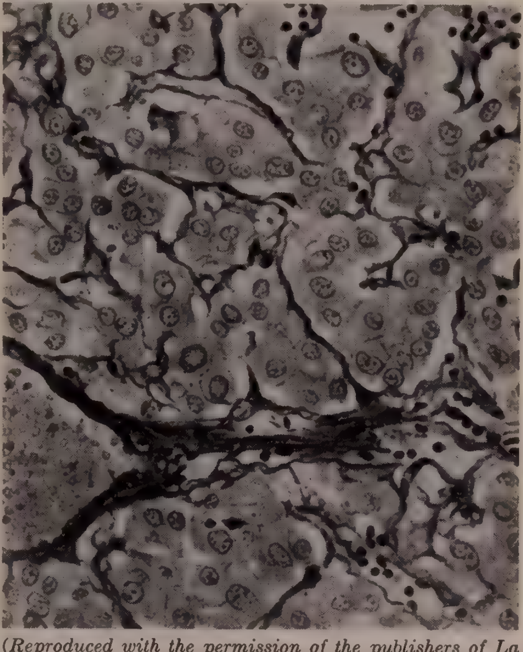


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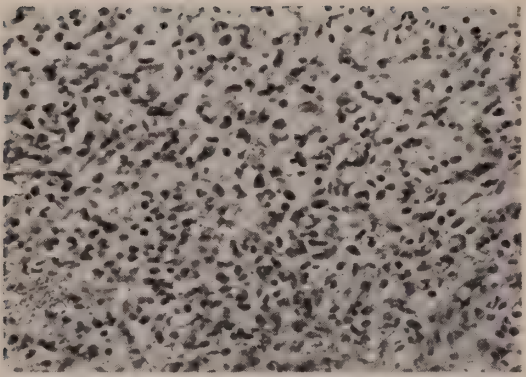
FIG. 11. The "angioglioma" of Roussy and Oberling.[41]

There is increasing evidence that the "cerebellar" hemangioblastoma is a tumor which arises in the leptomeningeal covering of the cerebellum and only appears as an intracerebellar neoplasm.[40,44,46,55] In other words, there is no difference between these tumors and supratentorial meningeal tumors of the same histologic appearance (for a different view see Corradini and Browder[49]). Cushing and Bailey were impressed with the resemblance of some cerebellar hemangioblastomas to carotid body tumors and drew attention to identical pictures in retinal "hemangiomas,"[147] while the similarity or identity of angiomatous petrous bone tumors and hemangioblastomas of the cerebellum or brain stem was noticed by Courville.[135]

These tumors frequently display lipid-laden foam cells which increase in number with the age of the lesion.[53] Postulating the identity of these cerebellar growths with Otani's tumors, one is not too surprised that an occasional instance of this neoplasm was reported as xanthoma or lipid granuloma, as mentioned before. It may be stated parenthetically that the occurrence of foam cells and the formation of cysts are features



(*Courtesy of Dr. L. Bauman*)

Fig. 12. An instance of von Hippel-Lindau's disease (Armed Forces Institute of Pathology, Acc. No. 301671). Although the alveolar pattern is absent in this instance, there is the difference in nuclear size so commonly seen in glomic tissue and its tumors.

of secondary importance in this type of central nervous system tumor and in the analogous lesions of the retina.

Reinterpretation of von Hippel-Lindau's Disease.—This leads to a more significant conclusion, namely, that of reclassifying the ocular tumors of similar or identical structure with which the cerebellar tumors are so frequently (20 per cent,[53] 16 per cent[50])* associated in the syndrome known as von Hippel-Lindau's disease. The following points are presented in support of this reinterpretation of von Hippel-Lindau's disease† as multicentric glomic neoplasia. The cerebellar component may have an unquestionable carotid body-like picture.[40-42,57] The retinal component may do likewise. Tumors of the globe or orbit have for many years been published as angiomas, endotheliomas, peritheliomas, etc.,[149-151] essentially the same type of misnomers with which Otani's tumors were labeled. A tumor of this kind was recently reported as nonchromaffin paraganglioma.[153] Orbital glomic tissue has been found in apes[152] and has been referred to as paraganglion ciliare. Both the multiplicity of lesions and the familial tendency of von Hippel-Lindau's diseases are shared by glomic tumors. Brandt's case[147] of angiomatosis retinae had, in addition to neoplasms of the retina (Fig. 13) and cerebellum, a tumor of the petrous bone among other lesions. Lindau[148] personally restudied this case and came to the conclusion that the various lesions were multicentric primary tumors rather than metastases. It is of interest in this connection to draw attention to a case of "hemangioma" of the petrous bone with blindness in one eye published recently.[135] The author considers the possibility of Lindau's syndrome, while others[110] list this case as glomic tumor. The patient is still alive[139] and well except for unilateral blindness. Thus, histologic proof is lacking.

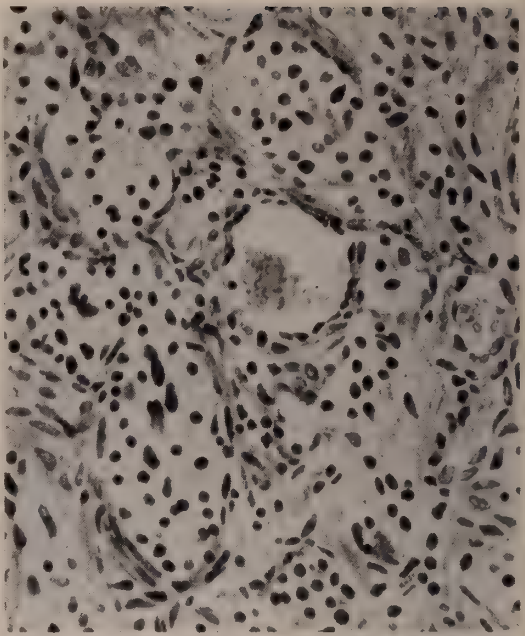


Fig. 13. The retinal lesion of Brandt's case of von Hippel-Lindau's disease.[147] The glomic origin is unmistakable. Note variation in size of nuclei.

The fact that there are not more cases of concurrent ocular and petrous glomic tumors on record does not invalidate the above-stated thesis; neither does the difference in age distribution or prevalence of the male sex. Carotid body tumors do not show the striking preponderance of females which is so typical for Otani's tumors; yet their histologic identity is undeniable.

Multicentricity of Glomic Tumors.—The proclivity of glomic tumors to occur in multicentric fashion, as just mentioned, brings up points of clinical significance. It will be recalled that our first case had a swelling of the opposite side of her neck which suggested to one observer a lymph node metastasis of a Schmincke tumor. Although autopsy limitations precluded examination of this lesion, the possibility of a second independent glomic tumor (carotid body) cannot be denied. A number of instances of Otani's tumor combined with carotid body tumor have been reported (sometimes one large tumor accounts for the clinical findings). The remarkable peritorcular "meningioma" of Towne[154] had a carotid body tumor of identical structure removed a year before and probably arose from a right jugular glomus growing into the dural sinuses and perforating them at a later date.* Another instance of concurrent carotid body tumor is that of Leidler and Sternberg.[155] In this instance, as in several others, the neck lesion was considered clinically a metastasis and was even interpreted histologically as such. Still another case is found in a recent monograph.[156]

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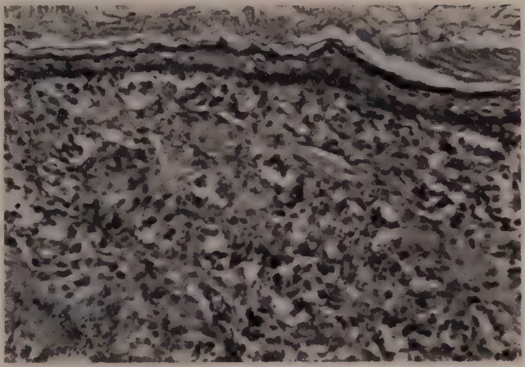
* These percentage figures are considerably higher than those reported by others.[51,52]

† It should be noted in passing that the histologic classification of this disorder is by no means unanimous; there are still some who consider it to be a primary glial proliferation with subsequent vascularization. It is thus conceivable that more than one entity is embraced by the term, von Hippel's disease. Of the three cases of von Hippel's disease whose slides were put at our disposal through the courtesy of Brigadier General E. De Coursey, (MC) USA, two could well be glomic tumors (Armed Forces Institute of Pathology, Acc. No. 136812 and 301671 [Fig. 12]).

Henschen's case 16[157] had a cerebellopontile angle tumor and a separate one in the parotid gland, while his Case 17 had "cervical lymph nodes" replaced by "metastatic" tumor. The presence of glomic tissue in cervical lymph nodes is not definite proof of metastasis from a carotid body tumor. Multicentric neoplasia will have to be considered. This could well be an instance of Otani's tumor with concomitant tumefaction of one or more carotid bodies. Bartels[96] reports seven members of a family with Otani's tumors or carotid body tumors, some of which were concurrent. A somewhat similar family was reported recently in this country.[161] Lubbers,[4] one of the early authors to recognize the histologic identity of the ear tumor in question, describes a contralateral carotid body tumor in his case. Still another instance is that of Loch's Case 10[160] of a "metastasis" of a possible carotid body tumor to the middle ear, labyrinth, lateral sinus, and cerebellopontile angle. It is not unlikely that Morrison *et al.*[162] were also dealing with multicentric glomic tumors (cerebellum, brain, mediastinum, and lung). Numerous additional instances of concurrent carotid, petrous, and other tumors have been reported more recently.[92,94,100,131,139,142,159,172] Less well-defined examples are scattered throughout the older literature.[158]

The tendency to simultaneous occurrence of palpable neck tumors should prove useful in establishing a correct diagnosis of Otani's tumor. A positive family history for tumors in the same or related locations should be sought for in every instance. To this we should like to add a thorough examination of the eyegrounds including the extreme periphery to look for retinal "angiomatosis" as well. When performing an autopsy, the pathologist should bear in mind the possibility of simultaneous neoplasia of various glomera and examine carefully the sites indicated in Fig. 2. This suggestion is also valid for necropsies of instances of "paragangliomas" of remote locations, e.g., in cases of "alveolar soft part sarcomas." Study of the central nervous system should include careful examination of the spinal cord and its roots[44]; examination of the globes and retrobulbar tissue is likewise desirable.



(*Courtesy of Dr. A. Montoya*)

FIG. 14. Tumorous aural polyp. This field was selected to show the purely angiomatous appearance; other areas were characteristically glomic.

CAUSES OF BELATED RECOGNITION OF TRUE NATURE OF NEOPLASM.—The foremost cause of belated recognition of the true nature of this neoplasm is the marked tendency of glomic tumors to appear in various microscopic patterns[81,82] which may occur in one and the same tumor.[42] Some parts are frankly angiomatous (Fig. 14) or xanthomatous. The distortion of microscopic detail inevitable in removed aural polyps is an additional obstacle.

Those few pathologists who recognized the tissue as carotid body-like failed to link it up with a normal structure (the jugular body of Guild) thus giving their reports the value of curiosities only.

Another cause is the fact that the undersurface of the skull is one of several regions which, because of its difficult accessibility and limitations imposed on the pathologist, is not investigated frequently enough at the time of removal of a tumorous brain. Many "meningiomas" and other mislabeled basal tumors would have been diagnosed differently had their extracranial extension been investigated.

Other reasons for the long delayed recognition are the artificial separation between neuropathology and "general" pathology which is detrimental to both, as well as the tendency of specialists to confine their reading to publications within their own fields.

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* Otani's tumors have repeatedly been found in the internal jugular vein as well (Case 1 of present paper).[79,80,110,130,141]

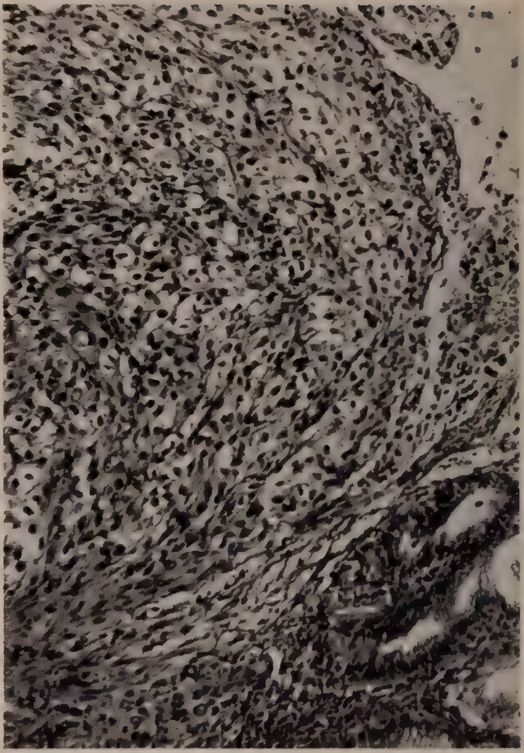
NOMENCLATURE.—At present these tumors are reported under various names (carotid body-like tumors; tumors of the glomus jugulare; glomus tympanicum; paraganglion intravagale or juxtavagale; glomerocytoma tympanicum; glomus tumors; chemodectomas; receptomas, etc.). Of the various names currently in use the term nonchromaffin paraganglioma based on the work of Kohn and his school[83] has found some favor in the American literature.

The weight of embryologic evidence has gradually shifted away from the concept of Kohn who ascribed a neural crest origin to the glomera of neck and mediastinum similar to that of the adrenal medulla. The mesenchyme of the carotid artery first suggested by Arnold in 1865 has again been championed by Boyd[84] as the point of origin for the carotid body.

The carotid and mediastinal glomera represent chemoreceptors concerned with the maintenance of proper blood oxygenation. Thus it is not surprising to find them in lower vertebrates in relation to vessels supplying the gill clefts. Indeed, origin from third, fourth, and sixth branchial arteries has been demonstrated for carotid, aortic, and pulmonary glomera, while the second branchial artery, a branch of which persists as the stapedial, has been suggested as related to the jugular glomus.[85] It is quite conceivable that orbital or retinal tumors arise from glomic tissue related to the first branchial artery.[86] An orbital "chromaffin" glomic body was described in apes,[152] as mentioned before. It is not impossible that intracranial tumors, e.g., the cerebellar hemangioblastomas, arise from ectopic glomic tissue along the course of cerebral or cerebellar arteries.

Without going into finer points of embryologic, endocrine, and neurophysiologic nature, it suffices to say that the paraganglionic character of the "nonchromaffin paragangliomas" is conjectural. Therefore, we side with a number of authors[87–90,163,165] who prefer less definite terms such as tumors of carotid, jugular, aortic, and ciliary glomera or bodies, respectively.

The term, chemodectoma,[89,122,123,163] which has found favor in the Middle West and recently in England, would presuppose proof of a chemoreceptor nature which has been adduced for mediastinal and carotid glomera only.


(*Courtesy of Drs. D. Kershner and P. Gruenwald*)
FIG. 15. Gastric glomic neoplasm.[170]

Smetana[76] recently selected a group of neoplasms from the files of the Armed Forces Institute of Pathology as "malignant tumors of nonchromaffin paraganglia," half of which arose in the thigh.* This author refers to L. C. Johnson who had pointed out the normal occurrence of glomera along the large femoral vessels. For this structure we should prefer the name femoral glomus (glomus femorale) rather than paraganglion for reasons just stated. Tumors in this location as well as glomic tumors in the alimentary canal, liver, and pancreas (Fig. 15), [94,166–172] some of which are chromaffin and others are classified as leiomyosarcomas, are difficult to reconcile with a branchial origin. Abdominal "paraganglia" related to the vagus nerve occur in mice.[173] Concurrent neoplasia of jugular glomus and retroperitoneal glomic tissue would argue in favor of "paraganglionic" neuroectodermal origin of the jugular glomus.[174]

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* The same type of tumor, called "alveolar soft-part sarcoma,"[75] occurred in the thigh in four out of 12 instances.

Clinical Features of Otani's Tumor.—Returning to Otani's tumor, we can state that his neoplasm shows a strong prevalence among young and middle-aged women. An occasional instance of familial occurrence is likewise worthy of note. Because of their slow growth these tumors will tend to masquerade most often as a chronic otitis media with aural polyp formation.

The clinical course of the average case can be divided arbitrarily into various stages:[109,110,136]

1. Before the ear drum is perforated when middle ear symptoms with or without facial palsy are present.
2. After spontaneous or surgical perforation of the tympanic membrane when the growth appears in the external auditory canal.
3. After involvement of the jugular foramen and the cerebellopontile angle with damage to the ninth to twelfth cranial nerves and cervical sympathetic (this stage may precede the previous one as in our first case).*
4. When the intracranial growth produces the picture of a space-occupying lesion (most often in the posterior fossa).

The delayed detection of the tumor combined with its unfavorable location and lack of striking radiosensitivity will make radical extirpation with permanent cures the exception rather than the rule. Some 40 cases recently tabulated from the standpoint of cure[113] bear out this contention. There is need for a long-range study of a large series of cases.

Summary

The discovery by Otani of carotid body-like tumors arising from the middle ear has not only clarified a great number of variously labeled growths of the petrous bone, an observation for which the present author could claim priority, but has also shed light on mediastinal, orbital, ophthalmic, cranial, meningeal, and cerebral neoplasms.

Thus, the cerebellar hemangioblastoma and similar supratentorial neoplasms are reclassified as of glomic origin as is their retinal counterpart. Von Hippel-Lindau's disease, therefore, is considered a multicentric glomic neoplasia.

The pertinent literature is reviewed, and three cases of Otani's tumor appearing as neurosurgical problems are reported.

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* The frequency with which various cranial nerves are involved can be seen from a table.[137]

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Medical Society of the State of New York

ANNUAL MEETING

May 10 to 14, 1954

Hotel Statler ***New York City***

Removal of Pitted Acne Scars and Other Skin Defects by Surgical Planing

JOSEPH J. ELLER, M.D., NEW YORK CITY

COSMETIC defects such as pitted acne scars, unsightly pigmentations, and other disfiguring skin deformities can affect a person's mental well-being and may result in social insecurity and economic hardships. The removal of such defects with good cosmetic results can be done effectively by use of rotary steel brushes.

For many years dermatologists have removed scars by various methods, such as so-called sandpaper surgery,[1-4] scarification,[5] electrodesiccation, solid carbon dioxides, and topical applications of chemicals such as trichloracetic acid and phenol. The sandpaper abrasion technic, as developed by Iverson, while the best of the aforementioned methods, has disadvantages such as hospitalization, general anesthesia, and the potential danger of silica granuloma caused by small imbedded particles. The revolving steel brush method was first used by Kromayer[6] many years ago and in recent years by Kurtin and others.[7]

During the past few years I have been correcting various types of pitted acne scars, smallpox scars, and certain scars caused by trauma by means of surgical abrasion with the use of rotary stainless steel wire brushes with excellent cosmetic results. The procedure is comparatively simple and painless and does not require hospitalization. Local anesthesia with ethyl chloride is used.

Equipment

This surgical abrasion technic requires the following equipment:

1. A set of stainless steel wire brushes of various widths (Fig. 1).
2. An electric motor capable of revolving the stainless steel wire brush about 12,000 revolutions per minute.
3. Air blower.
4. Ethyl chloride sprays.
5. Ice packs, preferably plastic ice packs containing 5 per cent propylene glycol in water.

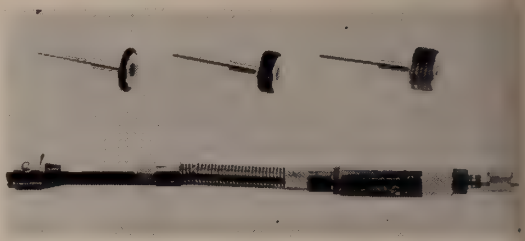

FIG. 1. Stainless steel wire brushes of various widths.

6. Tincture of Zephiran chloride.
7. Petrolatum ointment.
8. Sterile gauze pads.

Operative Procedure

Before the planing procedure an ice pack containing 5 per cent propylene glycol in water, which has been chilled previously in a refrigerator, is placed over the area to be treated for about twenty minutes. The operation should be done in a well-ventilated room. The skin is cleansed with alcohol. Specific areas are demarcated with tincture of Zephiran antiseptic for delineation of the field for the operator. When working on the face, the scalp is draped, the eyelids are covered with a petroleum ointment, cotton plugs are used to close the ear and nasal orifices. Ethyl chloride is sprayed on the areas to be treated. Simultaneously, a current of air from a blower is directed on the surface to accelerate the evaporation of ethyl chloride and the freezing of the skin which usually occurs in thirty to sixty seconds. The ethyl chloride acts both as a local anesthetic and also solidifies the skin, presenting an even, hard surface.

The scars to be treated are planed (abraded) down by a revolving stainless steel electrically driven brush. Different width brushes may be used, depending upon the size of the scars and area to be treated. The rapidity of the revolutions of the brush is controlled by a foot pedal. The revolving brush is placed against the surfaces of the skin horizontal to the area and is then moved slowly up and down causing an abrasion of the scarred area. If bleeding occurs be-

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Paper presented and technic demonstrated on patients at the Ninth Inter-American Congress of the Pan American Medical Association, Caracas, Venezuela, January 11, 1954, and in Havana, Cuba, January 19, 1954.

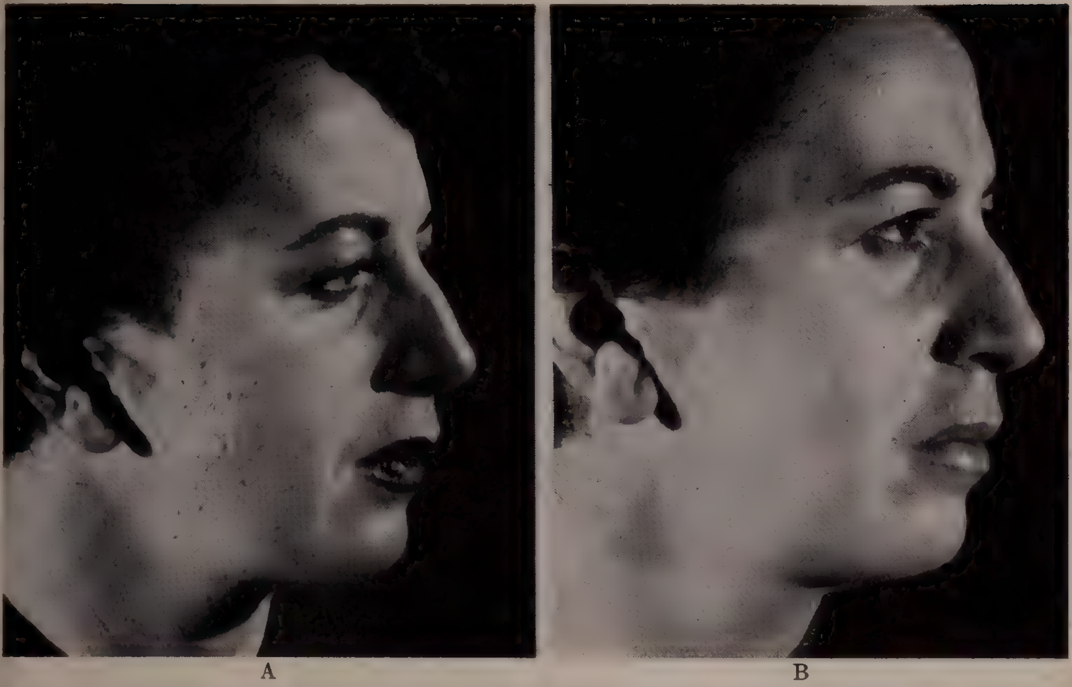


FIG. 2. (*A*) Patient with pitted acne scars before surgical planing by rotary stainless steel brush. (*B*) Good cosmetic result after a single planing.

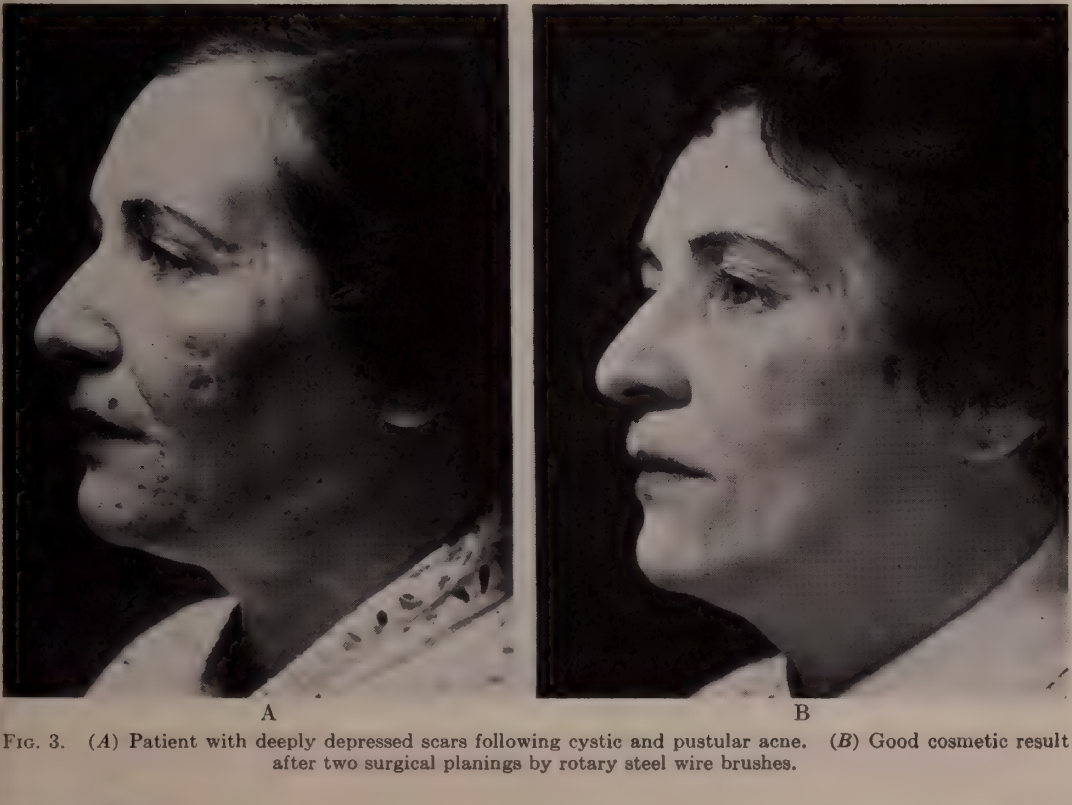
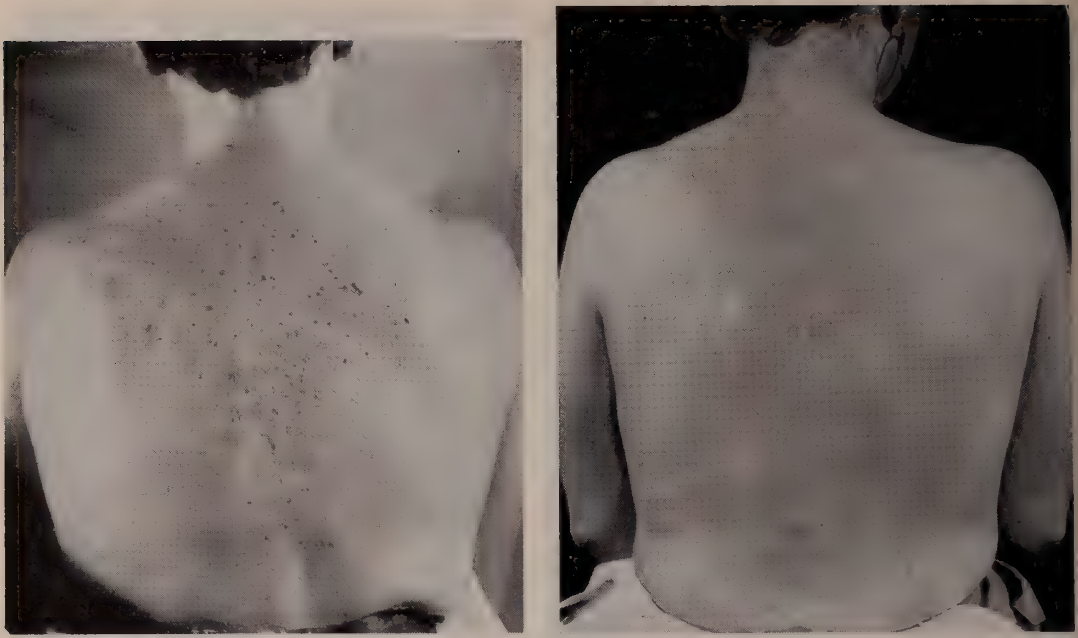
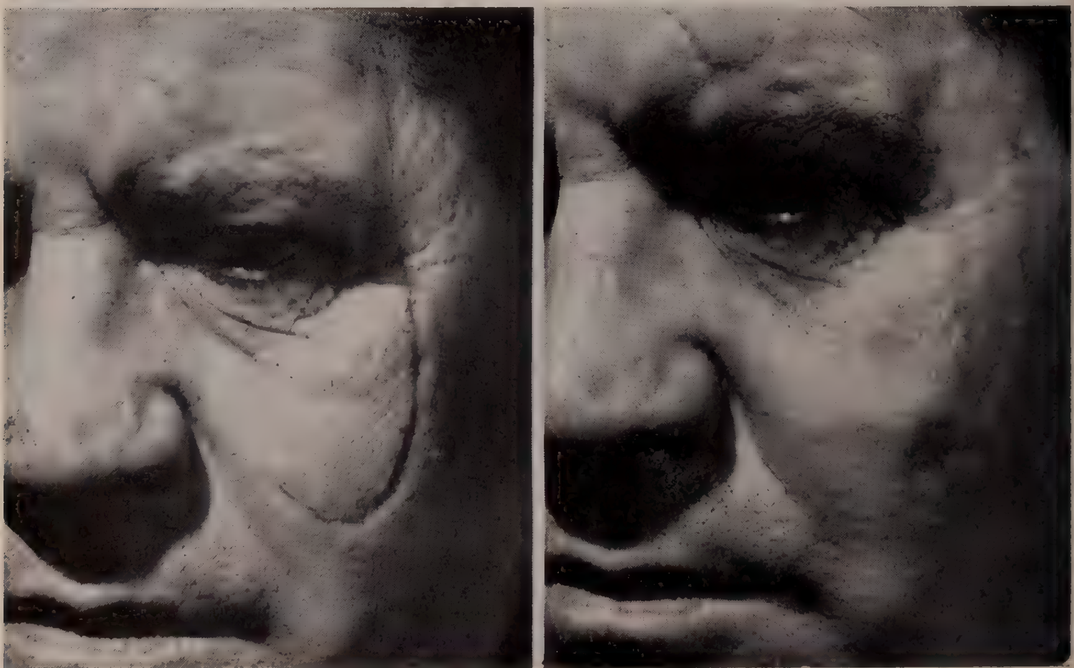


FIG. 3. (*A*) Patient with deeply depressed scars following cystic and pustular acne. (*B*) Good cosmetic result after two surgical planings by rotary steel wire brushes.



A B

FIG. 4. (*A*) Patient with severe pitted scars with indolent active pustular acne extending over entire back. (*B*) Good cosmetic result after three surgical planings at four-week intervals.



A B

FIG. 5. (*A*) Traumatic scar of thirty years duration. Patient, now forty-eight, had received laceration from nail on telephone pole. (*B*) Complete healing with good cosmetic result three weeks after surgical planing.

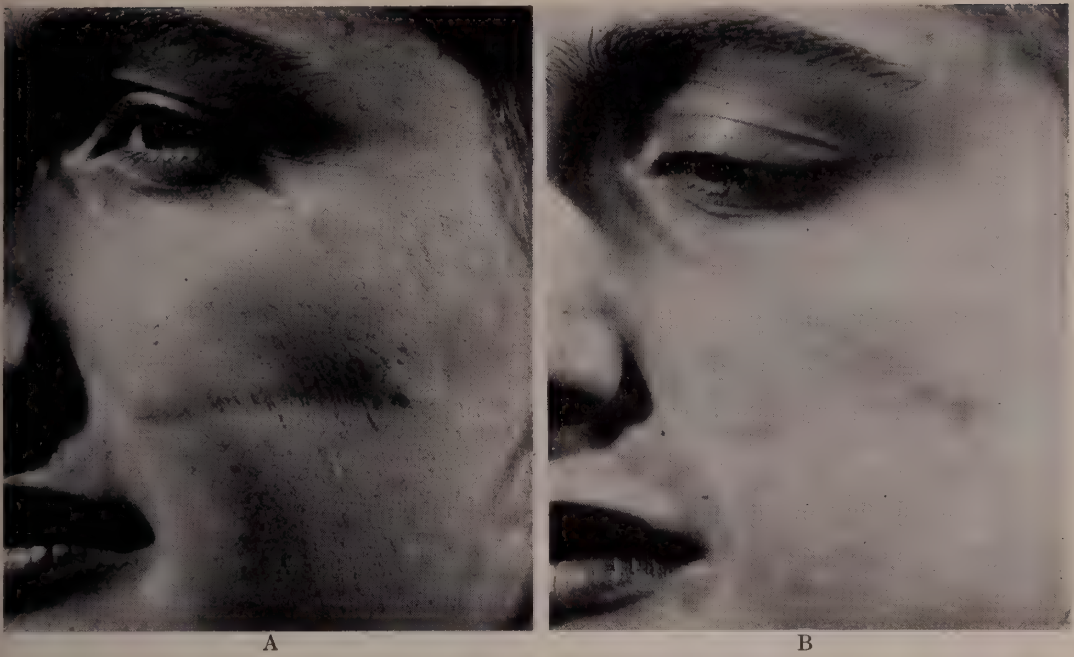


FIG. 6. (*A*) Patient, eighteen, with traumatic scar following automobile accident two years ago in which patient was thrown through windshield. Scar had been previously excised twice. (*B*) Good cosmetic result six weeks after single planing.

fore the desired amount of abrasion is completed, stop the use of the abrasive brush. Reapply the ethyl chloride until the bleeding stops and the skin becomes rigid again. Usually it is advisable to limit the treated area to about 12 square inches, although both cheeks and the forehead can be done at one sitting. Following the operation and the softening of the tissues, there usually is moderate bleeding. Dry sterile gauze is applied with slight pressure for about twenty minutes. The treated areas are then dressed with a sterile petrolatum dressing covered by gauze and changed daily.

Results

Complete healing of the operative area usually takes place in ten days to two weeks. This depends upon the tissue response of the patient and the amount of granulation and scar tissue present before the "surgical" abrasion. For the average case of pitted scars, usually one abrasive planing is sufficient to produce an excellent result (Fig. 2). This procedure may be repeated in six weeks or months later if necessary. In severe cases of pitted scars it may be necessary to perform two or three planings (Figs. 3 and 4).

This technic has also been used for the removal of certain traumatic scars (Figs. 5 and 6), pigmentations such as senile lentigines, and other skin lesions, with good cosmetic results.

Conclusion

This writer has been correcting pitted acne scars, smallpox scars, and traumatic scars for over twenty years by the various methods mentioned above. In my experience with over 200 cases, the use of rotary stainless steel wire brushes has proved this method of removing scars to be the most efficient for obtaining excellent cosmetic results.

745 FIFTH AVENUE

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The Ballistocardiogram in Diabetes Mellitus

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CARDIOVASCULAR disease is a common complication of diabetes mellitus. It often occurs early in the course of diabetes and often cannot, at that time, be diagnosed clinically. Since the ballistocardiogram may reveal cardiovascular abnormalities prior to the appearance of heart symptoms and electrocardiographic changes, a study was undertaken to determine its value[1–5] in the detection of early heart disease among known, controlled diabetics.

Method

Seventy-five unselected patients from the Diabetic Clinic of the Mount Sinai Hospital were examined consecutively. They had been observed in the outpatient department for many years. A complete cardiac study was made in each case, including a 12-lead electrocardiogram. A Master "2-step" exercise electrocardiogram[1] was taken when the resting electrocardiogram was negative. The ballistocardiographic tracings were recorded in all cases with the Pordy dual ballistocardiograph.[6] Both photoelectric (displacement) and electromagnetic (velocity) records were made during slight inspiration, deep inspiration, and deep expiration. The qualitative appearance of the component waves—amplitude, slurring, notching, etc.—was the sole factor which determined the normality or abnormality of the tracing.[1–5] The normal ballistocardiogram is of a "W"-shaped appearance with the amplitude of the I wave less than that of the K wave. Abnormal ballistocardiogram patterns include (1) diminished or absent I waves; (2) exaggeration of the normal respiratory variation, i.e., the amplitude of waves during expiration is 50 per cent or less than that during inspiration; (3) definitely slurred or notched I, J, or K waves; (4) prominent H waves (early M pattern); (5) late, deeply notched J waves (late M pattern); (6) prominent diastolic waves (L, M, N, etc.); (7) deep, wide, or absent K waves; (8) low amplitude or totally bizarre complexes. These alterations may occur alone or in various combinations in any one case.[4] Since I wave abnormalities are the most frequent ballistocardiographic alterations encountered, it should be emphasized that an I wave is considered abnormal if the amplitude is 15 per cent or less than the K wave amplitude (in photoelectric displacement records). Any "I" wave which does not reach below the baseline is considered absent, and the record is, therefore, abnormal.

TABLE I.—DIAGNOSIS IN 75 PATIENTS

Diagnosis	Under 50 Years	50 Years and Over	Total
Uncomplicated diabetes	34	9	43
Diabetes complicated by			
Hypertension	6	4	10
Arteriosclerotic heart disease	0	12	12
Arteriosclerotic heart disease with angina pectoris	0	5	5
Arteriosclerotic heart disease with coronary occlusion	2	3	5
TOTAL	42	33	75

The cardiovascular diagnosis, previously established in the 75 diabetic patients, is listed in Table I. The patients were divided into two groups: Group I—those under fifty years of age (42 cases), and Group II—those fifty years of age and older (33 cases).

Group I—Patients Under Fifty

UNCOMPLICATED DIABETES WITH NEGATIVE DOUBLE "2-STEP" TESTS (22 CASES).—This group consisted of 22 patients, 12 females and 10 males, ranging in age from twenty-three to forty-nine years. The diabetes had been discovered and under treatment for an average of six years. From the cardiac standpoint all were asymptomatic and were normal on physical examination. The blood pressure, the cardiac fluoroscopy, and the 12-lead resting electrocardiogram were also normal. The double "2-step" exercise tolerance test was negative.

Despite these normal findings the resting ballistocardiograms were abnormal in 18 of the 22

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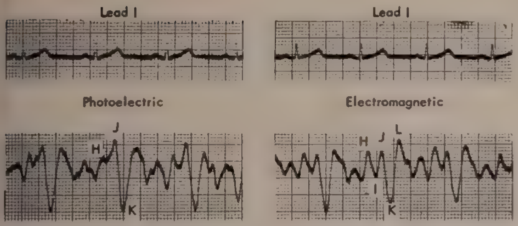

Fig. 1. H. K., male, age forty-seven, diabetic. Ballistocardiogram abnormal: photoelectric (displacement) shows absent I waves; electromagnetic (velocity) shows an early "M" and tall L.

patients, borderline in one, and normal in three (Table II). Thus, only three of these 22 patients, who were believed to have uncomplicated diabetes, were found to have a completely normal ballistocardiogram at rest. Figure 1 is an example of this group.

Uncomplicated Diabetes with Positive Double "2-Step" Tests (12 Cases).—This group comprised 12 patients, two females and ten males, ranging in age from nineteen to forty-nine years. The diabetes was under treatment for an average of six years. All were asymptomatic from a cardiac standpoint. The physical examination, the blood pressure, the cardiac fluoroscopy, and the 12-lead resting electrocardiogram were normal, but the Master double "2-step" test was positive.

The resting ballistocardiograms were abnormal in ten of the 12 patients and normal in two (Table II). Figure 2 is an example from this group.

Diabetes Complicated by Hypertension and/or Coronary Occlusion (8 Cases).—Among the 42 diabetic patients who were under fifty, only six suffered from hypertension; in one case the diabetes was complicated by a previous anterior myocardial infarction, in another by a previous anterior and diaphragmatic myocardial infarction. The patients in this group were under treatment for diabetes for an average of six years.

The resting ballistocardiographic tracings were abnormal in all the eight patients (Table II).

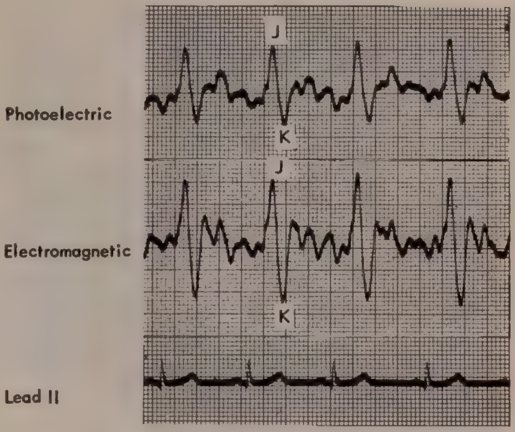

Fig. 2. E. Z., female, age forty-six, diabetic. Simultaneous ballistocardiograms abnormal: photoelectric and electromagnetic tracings show absent I and notched upstroke J waves.

Group II—Patients Over Fifty

Uncomplicated Diabetes with Positive Double "2-Step" Tests.—This group consisted of nine patients, five females and four males, ranging in age from fifty to sixty years. These patients had had known, treated diabetes for an average of nine years. From a cardiac standpoint all were asymptomatic and were normal on physical examination. The blood pressure, the cardiac fluoroscopy, and the 12-lead resting electrocardiograms were also normal, but the Master double "2-step" test was positive.

The resting ballistocardiographic tracings were abnormal in eight of these nine patients and normal in only one (Table III).

Diabetes Complicated by Arteriosclerotic Heart Disease, Hypertension, and/or Coronary Occlusion (24 Cases).—This group comprised 24 patients, 15 females and nine males, ranging in age from fifty to seventy-six (Table III). These patients were longstanding diabetics under treatment for an average of eleven years. The complicating condition was arteriosclerotic heart disease 12 cases, arteriosclerotic heart disease and angina pectoris five cases,

TABLE II.—Ballistocardiogram in Diabetic Patients Under 50 Years

Diagnosis	Total	Resting Electrocardiogram	Double "2-step"	Ballistocardiogram		
				Normal	Abnormal	Borderline
Uncomplicated diabetes	34	Normal 34	Negative 22	3	18	1
			Positive 12	2	10	0
Diabetes complicated by Hypertension (6) Coronary occlusion (2)	8	Abnormal 8	Not done	0	8	0
Total	42	. . .	. . .	5	36	1

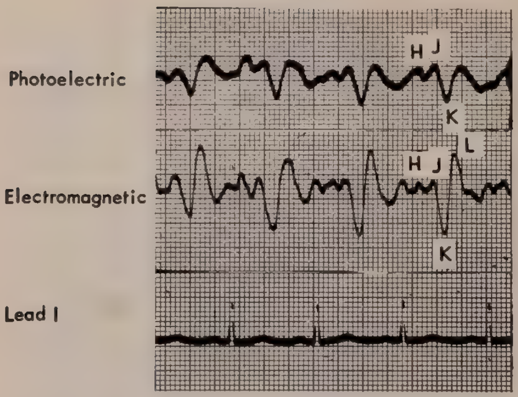

FIG. 3. S. W., male, age sixty, diabetic and arteriosclerotic heart disease. Simultaneous ballistocardiograms abnormal: photoelectric shows absent I waves; electromagnetic absent I wave and tall L wave.

arteriosclerotic heart disease and hypertension four cases, and previous coronary occlusion three cases.

All had cardiac symptoms and presented abnormal findings on physical examination. Since the resting electrocardiograms were abnormal in 16 of these 24 patients, the "2-step" exercise test was not done in them. The abnormalities were hypertrophy of the left ventricle with involvement of the ventricular muscle (seven cases), myocardial disease (six cases), previous posterior myocardial infarction (two cases), and previous anterolateral myocardial infarction (one case). The Master double "2-step" test was performed in six of the remaining eight patients whose resting electrocardiograms were normal. In three cases the test was positive; in the other three it was negative. Two patients who suffered from typical angina pectoris could not undergo the test because of a complicating arthritis.

The resting ballistocardiographic tracings of all these 24 patients were abnormal (Table III). Figure 3 is representative of this group. Thus, all the 24 patients over the age of fifty, whose diabetes was complicated by arteriosclerotic heart disease, hypertension, and/or coronary occlusion, were found to have some abnormality of the resting ballistocardiogram.

Résumé of Ballistocardiographic Findings

Only six of the 75 patients presented entirely normal ballistocardiograms (Table IV). In one case the tracing was borderline. Among the remaining 68, I-wave abnormalities were most frequent, occurring in 59 of the photoelectric (displacement) records. Other abnormalities found in the photoelectric records included bizarre tracings in four cases, notched JK waves in two cases, early "M" patterns in two cases, and a combination of such alterations in one case. The ballistocardiographic changes found were *not* specific for any one cardiovascular abnor-

TABLE III.—BALLISTOCARDIOGRAM IN DIABETIC PATIENTS OVER 50 YEARS

Diagnosis	Total	Resting Electrocardiogram	Double "2-step"	Ballistocardiogram Normal	Ballistocardiogram Abnormal
Uncomplicated diabetes	9	Normal 9	Positive 9	1	8
Diabetes complicated by Arteriosclerotic heart disease, Hypertension and/or Coronary occlusion	24	Normal 8	Normal 3 Positive 3 Not done 2	0	8
		Abnormal 16	Not done	0	16
TOTAL	33	33	. . .	1	32

TABLE IV.—BALLISTOCARDIOGRAM IN DIABETES

	Patients Under 50 Years			Patients 50 Years and Over	
	Uncomplicated Diabetes		Complicated Diabetes*	Uncomplicated Diabetes	Complicated Diabetes*
	Double "2-step" Positive	Double "2-step" Negative		Double "2-step" Positive	
Total cases	12	22	8	9	24
Normal	2	3	0	1	0
Borderline	0	1	0	0	0
Tiny I	7	16	3	4	12
Absent I	2	1	3	2	9
Bizarre	0	0	1	1	2
Notched JK	0	1	0	1	0
Early M	0	0	1	0	0
Absent I and notched J	1	0	0	0	0

* Complicated by arteriosclerotic heart disease, hypertension, and/or coronary occlusion.

mality. A direct comparison of the photoelectric and electromagnetic tracings will be the subject of a separate communication.

Comment

It is well known that diabetes is associated with cardiovascular disease in a high percentage of cases. Dolger[7,8] has maintained that cardiovascular disease is not a complication of diabetes but an integral component of the disease and may even precede its clinical discovery. Autopsies and clinical surveys attest to the extremely high incidence of vascular lesions in diabetics, especially among females.[9–17] Thaler and Wornas[18] emphasize the importance of the effective control of diabetes in the prevention of coronary artery disease or on its rate of development. Stearns[19] concludes that early detection of coronary artery disease in diabetics is necessary if the sequelae of coronary arteriosclerosis are to be delayed or averted.

We studied 75 diabetics, 39 females and 36 males; of these, 32 had definite heart symptoms and/or previous cardiac histories, and 43 had none. The resting electrocardiogram was abnormal in only 24 of the 32 diabetics who were known to have cardiovascular disease. Since the 12-lead resting electrocardiogram may be normal in from 40 to 75 per cent of patients with organic heart disease, we utilized the Master double "2-step" exercise electrocardiogram in 49 of the 51 patients whose resting electrocardiograms were normal. In two cases the presence of arthritis prevented the performance of the exercise test.

The double "2-step" test was positive in 21 of the 43 diabetics who showed no clinical evidence of heart disease. The ballistocardiogram was abnormal in 36 of these 43 patients and borderline in one. There is evidently no correlation between the abnormal "2-step" test and the abnormal ballistocardiogram, and none should be expected since the former is a measure of electrical activity and the latter of mechanical force.

The double "2-step" test was done on six patients with cardiac symptoms whose resting electrocardiograms were normal; it was positive in three. All these six patients presented abnormal ballistocardiograms. Because of the low incidence of abnormal ballistocardiographic tracings in normal controls below the age of fifty,[3–5] the age factor has been considered important in the interpretation of ballistocardiograms. Therefore, we divided our 75 cases into two groups: 42 cases under the age of fifty (Table II) and 33 cases of fifty years of age and over (Table III). The ballistocardiogram was normal in only five of the 34 cases with uncomplicated diabetes under the age of fifty. The ballistocardiogram was abnormal in all the eight cardiac diabetics under the age of fifty. Among the 33 patients who were fifty years or older, the ballistocardiogram was abnormal in eight of the nine uncomplicated cases and in all the 24 diabetics with overt cardiac disease.

Of the 75 patients studied, 39 were female and 36 male. Unlike age, which does affect the diagnostic interpretation of ballistocardiograms, sex is apparently not a significant factor in ballistocardiography.

We have previously reported that peripheral vascular disease may affect the ballistocardiogram, even in the absence of cardiac damage.[20] None of the 75 diabetics in this series, however, was suffering from any manifest peripheral vascular disorder. Thus, the high incidence of abnormal ballistocardiograms in these diabetics is added evidence of the great value of ballistocardiography for early cardiac diagnosis in diabetes.

It is of great interest that recent workers have shown by use of calorimetric measurement of the great toe circulation[21] and by means of microplethysmography that following ganglionic blockade with tetraethylammonium[22] in young diabetics, there is definite impairment of the blood flow in the smaller peripheral vessels. It is also suggested that similar early changes in diabetes may occur in other regions of the body such as the heart and the brain.[22] Although this work is not directly comparable with ballistocardiography, it appears to correlate well with our abnormal ballistocardiographic findings in diabetics.

It is obvious that early detection of cardiovascular disease is important, both for its control and for the control of the diabetes itself. The importance of routine electrocardiography and of the "2-step" exercise electrocardiogram cannot be overestimated. However, ballistocardiographic abnormalities may appear even before electrocardiographic changes occur. The ballistocardiogram, therefore, is a valuable aid in the diagnosis of early cardiovascular abnormalities.

Summary and Conclusions

1. Ninety-one per cent of the 75 diabetics

studied presented abnormal ballistocardiographic tracings. Forty-three suffered from uncomplicated diabetes. Their cardiac histories were negative. They showed no evidence of cardiovascular abnormality on physical examination, by chest roentgenogram, and by fluoroscopy. The double "2-step" test was negative in 22 of these patients (50 per cent), yet the ballistocardiogram was abnormal in 36 (84 per cent). The results of this ballistocardiographic survey are in conformity with the known high clinical incidence of arteriosclerotic heart disease in diabetic patients, as well as with necropsy findings among diabetics.

2. The ballistocardiogram is a valuable instrument for the diagnosis of early cardiovascular abnormalities among diabetics. Ballistocardiographic changes appear even before electrocardiographic alterations occur.

3. The study herein reported is being continued through follow-up examinations of all the patients.

We are indebted to Dr. Henry Dolger, chief of the Diabetic Clinic, Mount Sinai Hospital, for his cooperation and aid in this study. We also wish to thank Miss Iris Kanner for her technical assistance.

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Make a Note . . . .

- ***148th Annual Meeting***
- ***Medical Society of the State of New York***
- ***May 10 to 14, 1954***
- ***Hotel Statler***
- ***New York City***

Major Surgery in Patients with Chronic Auricular Fibrillation

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THE operative risk of certain cardiac conditions has been recently reported to be much better than generally believed because of improvement in modern medical, surgical, and anesthetic technics.[1-4] It is the purpose of this report to evaluate the factors contributing to the operative risk of patients with chronic auricular fibrillation and, conversely, the effect of major surgery on such heart disease. The operative mortality associated with auricular fibrillation has been reported from 3 to 20 per cent.[5-9]

Sixty patients with chronic auricular fibrillation were subjected to 76 operations at Memorial Center, New York City, from January 1, 1946, to February 29, 1952. During this same period 34,344 operations were performed at this hospital. All the patients of this series had both chronic auricular fibrillation and organic heart disease according to the criteria of the New York Heart Association, and all were submitted to an operative procedure of at least one hour duration under general and/or spinal anesthesia.

The degree of intraoperative cardiovascular complication was classified as *mild* if the change in pulse and blood pressure did not exceed 10 to 14 per cent of the preinduction level and did not last more than fifteen minutes, *moderate* if the changes lasted up to thirty minutes or represented 15 to 25 per cent variation, or *severe* if the changes exceeded the previous limits in degree or duration. The types of postoperative complications were classified and their relationship to the cardiovascular status evaluated.

Results

Of the 60 patients undergoing 76 operations, 34 developed mild, 16 moderate, and four severe intraoperative cardiovascular complications. There were 17 postoperative cardiopulmonary complications, including three postoperative deaths. Fifteen per cent of the 60 patients died from cardiovascular disease: one postoperatively, five within six months of operation, and the remaining nine from twelve to thirty-nine months postoperatively. Table I shows the lack of correlation between the incidence of intraoperative cardiovascular complications and the incidence of postoperative cardiopulmonary complications and/or eventual cardiovascular deaths. In addition, postoperative cardiopulmonary complications apparently did not lead to an increased death rate from cardiovascular disease.

These 60 patients had 57 various malignant tumors and 11 benign conditions, of which 21 were head and neck lesions, ten breast, four thoracic, 18 gastrointestinal, five genitourinary, seven gynecologic, and three soft tissue and bone tumors. Nine (17 per cent) had multiple primary cancers. There was no significant relationship between the site of cancer or surgery and the incidence of intraoperative cardiovascular complication. The number of postoperative

TABLE I.—CORRELATION OF THE INCIDENCE OF INTRAOPERATIVE CARDIOVASCULAR COMPLICATIONS WITH POSTOPERATIVE CARDIOPULMONARY COMPLICATIONS AND DEATHS FROM CARDIOVASCULAR DISEASE

Degree of Intraoperative Cardiovascular Complication	Number of Operations	Number of Postoperative Cardiopulmonary Complications	—Deaths from Cardiovascular Disease— Less than 12 Months Postoperative	More than 12 Months Postoperative
None	22	4	1	3
Mild	34	11	3	5
Moderate	16	1	1	..
Severe	4	1	1	1
Total	76	17	6	9

Presented at the 147th Annual Meeting of the Medical Society of the State of New York, Buffalo, Section on Medicine, May 7, 1953.

TABLE II.—CORRELATION OF REGIONAL DISTRIBUTION OF PRIMARY DISEASE WITH CARDIOVASCULAR MORBIDITY AND MORTALITY

Region	Number of Operations	Intraoperative Complications Number	Intraoperative Complications Per Cent	Postoperative Complications Number	Postoperative Complications Per Cent	Deaths from Cardiovascular Disease Less than 12 Months Post-operatively	Deaths from Cardiovascular Disease More than 12 Months Post-operatively
Head and neck	26	17	65	1	3	4	2
Breast	10	6	60	. .	. .	. .	2
Thorax	4	2	50	1	25	. .	. .
Gastrointestinal	20	14	70	7	35	2	2
Genitourinary	7	7	100	4	57	. .	2
Gynecologic	6	6	100	2	33	. .	1
Extremities	3	2	66	2	66	. .	. .

TABLE III.—CORRELATION OF AGE, ETIOLOGY OF HEART DISEASE, AND FUNCTIONAL CARDIAC CLASSIFICATION WITH CARDIOVASCULAR MORBIDITY AND MORTALITY

	Number of Patients	Number of Operations	Intraoperative Complications Mild	Intraoperative Complications Moderate	Intraoperative Complications Severe	Intraoperative Complications Total	Intraoperative Complications Per Cent	Postoperative Complications Number	Postoperative Complications Per Cent	Deaths from Cardiovascular Disease Less than 12 Months Post-operatively	Deaths from Cardiovascular Disease More than 12 Months Post-operatively
Age											
Less than 50 years	1	1	1	. .	. .	1	100	1	100	. .	. . .
50 to 59 years	16	21	14	2	1	17	81	5	23	2	4
60 to 69 years	27	34	7	12	2	21	62	6	17	1	3
70 to 79 years	13	15	9	2	1	12	80	5	33	2	2
More than 80 years	3	5	3	. .	. .	3	60	. .	. .	1	. .
Totals	60	76	34	16	4	54	71	17	22	6	9
Etiology of heart disease											
Hypertensive and arteriosclerotic	26	30	16	5	1	22	73	6	20	2	6 (33%)
Arteriosclerotic	23	33	11	9	2	22	66	6	18	1	2 (13%)
Rheumatic	9	11	7	1	. .	8	72	5	45	2	1 (33%
Luetic	2	2	. .	1	1	2	100	. .	. .	1	. . (50%)
Totals	60	76	34	16	4	54	71	17	22	6	9
Functional cardiac classification											
I B	11	16	6	4	2	12	75	2	12	1	1 (36%)
II B	23	29	11	7	. .	18	62	4	13	1	1 (8%)
II C	12*	14	7	3	1	11	78	4	28	2	2 (33%)
III C	15*	17	10	2	1	13	76	7	41	2	3 (33%)

* One patient classified as II C on first operation was reclassified III C on second procedure.

TABLE IV.—COURSE OF 18 PATIENTS WITH PAST HISTORY OF CONGESTIVE HEART FAILURE

Time of Failure Prior to Admission	Number of Cases	Intraoperative Complications Mild	Intraoperative Complications Moderate	Intraoperative Complications Severe	Intraoperative Complications Total	Intraoperative Complications Per Cent	Postoperative Complications Number	Postoperative Complications Per Cent	Status
On admission	1	. .	1	. .	1	100	1	100	Died sixth postoperative day
Less than 1 month	2	1	. .	. .	1	50	2	100	Died cancer
1 to 2 months	1	1	. .	. .	1	100	. .	. .	Died cardiovascular disease 25 months postoperatively
More than 1 year	14	8	3	1	12	85	6	42	Living 7 Died cancer 1 Died cardiovascular disease 6*

* One day and 1, 6, 13, 16, and 20 months postoperatively.

cardiopulmonary complications were low in head and neck and breast operations and high in genitourinary and extremity procedures, although the number of cases is too small to be statistically significant (Table II).

Age, sex, and race could not be correlated with intra- or postoperative morbidity or mortality or eventual death from cardiac disease. Thirty-seven patients were male and 23 female; 58 were white and two Negro. The youngest patient was twenty-nine, the oldest eighty-seven, with a mean of 64.4 years and a median of sixty-five years; 71 per cent were sixty years of age or older; 26 per cent were seventy years or older (Table III).

Table III also shows the lack of correlation between the etiology of the heart disease and the incidence of intraoperative cardiovascular complications, postoperative cardiopulmonary complications, and deaths from cardiovascular disease. The number of cases in each group is too small to be statistically significant. There is, however, correlation between the severity of the heart disease, as expressed by the functional classification, and the incidence of postoperative cardiopulmonary complications as shown in Table III.

The duration of auricular fibrillation was over five years in 14 patients, two to five years in three patients, less than one year in two, and unknown in 41 instances.

A past history of congestive heart failure was given by 18 patients, in 14 of whom the failure had occurred more than one year prior to surgery. A history of congestive heart failure within two months of surgery occurred in four patients and was accompanied by a high operative morbidity and mortality rate as shown in Table IV. Forty-two per cent of the 14 patients who had congestive heart failure more than one year prior to surgery incurred postoperative cardiopulmonary complications and accounted for 46 per cent of the eventual cardiovascular deaths. Two of the three postoperative deaths had a history of congestive heart failure, one of whom was admitted in failure.

Eight patients had a history of previous myocardial infarction and submitted to ten operations; there were six instances of intraoperative cardiovascular complications, two postoperative cardiopulmonary complications including one postoperative death from uncontrolled infection; and two other deaths from cardiovascular disease, thirteen and sixteen months postoperatively.

Five other patients gave an unequivocal history of angina pectoris but had neither history nor clinical evidence of a previous myocardial infarction. In six procedures this group incurred four instances of intraoperative cardiovascular complications, three instances of postoperative cardiopulmonary complications, and three have died of cardiovascular disease, one, thirteen, and sixteen months postoperatively.

There was definite correlation between heart size and eventual death from cardiovascular disease inasmuch as both of the patients with marked cardiac enlargement preoperatively and nine of the 24 patients with moderate enlargement died of cardiovascular disease (Table V). Thus, 73 per cent of the patients eventually dying of cardiovascular disease exhibited moderate or marked cardiac enlargement. There was no significant relationship between the degree of cardiac enlargement and the incidence of intraoperative or postoperative complications (Table VI).

A variety of electrocardiographic patterns was obtained, all of which demonstrated auricular fibrillation and varying degrees of myocardial disease. The electrocardiogram failed to predict possible intra- or postoperative complications.

For the purpose of this analysis digitalization was considered to be adequate if the patient received standard dosages of a digitalis preparation for at least twenty-four hours preoperatively,[10] had no evidence of congestive heart failure, and had an apical rate less than 90. In 55 operations the 44 patients classified as adequately digitalized had 39 (71 per cent) intraoperative complications (blood pressure and pulse change), ten (18 per cent) postoperative cardiorespiratory complications, and 15 (27 per cent) instances of postoperative tachycardia, making a total of 25 (45 per cent) postoperative cardiovascular abnormalities. Ten (22 per cent) patients of this group died of cardiovascular disease, five within a year of operation. Of the 16 patients classified as inadequately digitalized and subjected to 21 operations, 15 (71 per cent) developed intraoperative complications, seven (33 per cent) postoperative cardiopulmonary complications, and nine (42 per cent) postoperative tachycardia—a total of 16 (76 per cent) postoperative mishaps due to inadequate digitalization. Five (31 per cent) died of cardiovascular disease, one within twelve months of operation.

Included in the inadequately digitalized group

TABLE V.—Correlation of Heart Size and Etiology of Heart Disease

		Etiology of Heart Disease				Deaths from Cardiovascular Disease	
Cardiac Enlargement	Number of Patients	Hypertensive and Arteriosclerotic	Arteriosclerotic	Rheumatic	Luetic	Less than 12 Months Postoperatively	More than 12 Months Postoperatively
Marked	2	1	..	1	..	1	1
Moderate	24	13	6	4	1	4	5
Slight	10	5	2	3	..	..	2
Borderline or none	24	7	15	1	1	1	1

TABLE VI.—Correlation of Heart Size and Duration of Operation with Cardiovascular Morbidity and Mortality

		Intraoperative Complications					Postoperative Complications	
	Number of Operations	Mild	Moderate	Severe	Total	Per Cent	Number	Per Cent
Degree of cardiac enlargement								
None or borderline	27	13	6	1	20	74	5	18
Slight	16	7	3	1	11	68	4	25
Moderate	31	13	7	2	22	71	7	22
Marked	2	1	..	..	1	50	1	50
Duration of operation								
Less than 60 minutes	3	1	..	..	1	33	..	..
60 to 119 minutes	36	15	8	1	24	66	6	16
120 to 179 minutes	19	6	5	2	13	68	6	31
180 to 239 minutes	14	11	1	1	13	93	5	35
More than 240 minutes	4	1	2	..	3	75	..	..

are five patients in six procedures who received no digitalis preoperatively. All had a preoperative ventricular rate between 60 and 80 per minute. All had mild intraoperative pulse and blood pressure changes, two had postoperative cardiopulmonary complications, and three others had postoperative tachycardia. Postoperative tachycardia was recorded in those individuals who had a pulse rate of 100 or more which was not related to fever or other explicable cause except inadequate digitalis therapy.

There is a statistically significant higher complication rate in the inadequately digitalized group, despite the fact that the criteria of adequate digitalization are obviously inadequate as evidenced by the fact that 27 per cent of those so classified developed a postoperative tachycardia. Seven patients had an adequate trial on quinidine preoperatively but failed to revert to a normal sinus rhythm; there were no episodes of embolic phenomena in these cases.

There were 21 different, significant complicating medical diseases noted on admission. Thirteen patients had various vascular diseases, including ten instances of generalized arteriosclerosis, 14 instances of respiratory tract diseases of which 13 were senile pulmonary emphysema, nine various gastrointestinal diseases, eight genitourinary diseases of which six were chronic renal insufficiency not otherwise specified, five instances of diabetes mellitus, five instances of obesity, and 15 patients with six other miscellaneous diseases. All patients with anemia received sufficient blood transfusions preoperatively to correct this deficiency, and, therefore, anemia has not been included in this listing. Senile pulmonary emphysema, renal insufficiency, generalized arteriosclerosis, and obesity seemed to be associated with an increased complication rate, although the number of cases is too small to warrant a definite conclusion.

In these 60 patients undergoing 76 major operations, 138 procedures were done varying with the type and extent of the primary disease. Space does not permit tabulation.

Table VI shows the lack of correlation between the duration of the operation and the complication rate in this series of patients. Each of the three patients with procedures less than 60 minutes had additional longer procedures in order to be acceptable for this series.

Atropine sulfate or scopolamine hydrobromide, 0.3, 0.4, or 0.6 mg., and morphine sulfate, 8 or 10 mg., or demerol, 50, 75, or 100 mg., in various combinations and oral or parenteral sodium phenobarbital or pentobarbital were given preoperatively. There was no relationship between the preoperative medication and the complication

TABLE VII.—End Results

	Post-operative Deaths	Months Postoperatively				Total	
		0 to 6	7 to 18	19 to 35	More than 35	Number	Per Cent
Died of cardiovascular disease	1	5	4	3	2	15	25
Died of cancer	. .	2	7	2	1	12	20
Died of intercurrent causes	2	1	. .	. .	. .	3	5
Living with progressive cardiovascular disease	. .	2	6	2	4	14	23
Living with no progress of cardiovascular disease	. .	2	2	2	3	9	15
Lost to cardiovascular follow-up	. .	. .	1	5	1	7	11

r mortality rate. The use of atropine in a digitalized fibrillating patient did not increase the complication rate.

Neither did there appear to be any relationship between the choice of anesthesia and complications. Nitrous oxide and ether, Sodium Pentothal, and cyclopropane, either separately or in combination, were used, together with supplemental oxygen. Ten cases received a combination of spinal anesthesia and Sodium Pentothal. Procaine infiltration was employed when specific nerve block was indicated. Curare was used to supplement Sodium Pentothal to provide relaxation in three different procedures. It is important to realize that at all times adequate oxygenation and the avoidance of anoxemia and hypoxia was an important factor in the low complication rate. There were no instances of laryngospasm or cardiac arrest in this series.

Blood and fluid replacement during the operative and postoperative periods were restricted to losses and were carefully calculated as to total amount and speed of administration, especially saline. One instance of overtransfusion occurred and was associated with mild congestive failure in the postoperative period.

Early ambulation and early oral feedings were practiced. In this series only eight cases were maintained solely on parenteral feedings for more than two days.

In addition to three postoperative deaths there were eight surgical complications, 14 cardiorespiratory complications, and one each of serum hepatitis and diabetic neuritis. In 33 procedures no postoperative complications were observed.

Six instances of congestive heart failure were detected in the postoperative period, four of whom were classified as inadequately digitalized. One of the patients classified as adequately digitalized was overtransfused as previously described, and the other failed to receive maintenance digitalis therapy postoperatively. All recovered, but two eventually died of cardiovascular disease, thirteen and thirty-nine months postoperatively.

Thirty-nine of the 57 surviving patients were maintained on standard doses of digitalis.[10] In five patients digitalis was discontinued postoperatively, and one developed slight congestive failure during hospitalization which cleared spontaneously. Another developed congestive failure after discharge and was digitalized as an outpatient, and the remaining three patients have remained compensated during the period of observation.

Eleven patients after 14 operations required increased digitalis dosage for control of their fibrillation; the dose ranged from two to 15 additional cat units, followed by standard maintenance therapy.

Thirty of the 60 patients in this group have died, 15 from cardiovascular disease (Table VII). Follow-up data are available on 23 patients: 14 (61 per cent) have progressive cardiac disease, and only nine are living without severe cardiac symptoms.

Case Reports

There were three postoperative deaths: one from a probable cerebral embolus on the first postoperative day; another patient, admitted in congestive failure, incurred a period of prolonged shock postoperatively and expired on the sixth postoperative day with progressive renal insufficiency and electrolyte imbalance but no evidence of congestive failure. The third died from uncontrolled infection. The case reports follow:

Case 1.—I. M., a fifty-two-year-old white female, who had a migratory polyarthritis at the ages of fifteen and eighteen and toxemia of pregnancy with her third child, presented herself with a history of auricular fibrillation and intermittent congestive heart failure of ten years' duration. She complained of mild digestive symptoms for almost one year with a 40-pound weight loss. X-rays taken elsewhere showed an advanced gastric carcinoma involving the body and fundus of the stomach. Cardiac examination revealed rheumatic heart disease, class III C, with enlarged heart, auricular fibrillation, mitral stenosis and insufficiency, and probable aortic stenosis and insufficiency. She had not been taking digitalis regularly and, when seen twenty-three days before operation, was redigitalized. On the day prior to her operation she demonstrated no significant tachycardia within forty minutes after receiving 0.5 mg. atropine sulfate subcutaneously, indicating complete digitalization.

Under endotracheal nitrous oxide-oxygen-ether anesthesia a total gastrectomy and incidental splenectomy with a retrocolic esophagojejunostomy with supramesocolic jejunojejunostomy was done in three and one-half hours. She withstood the operation well, although her blood pressure declined during the last half hour from a level of 120/80 at the beginning of the procedure to 100/70. She received 1,000 cc. of packed red blood cells and 150 cc. of physiologic saline solution during the procedure.

The pathologic report was adenocarcinoma of the stomach, grade IV, metastatic to nodes.

Postoperatively the patient did well; her cardiac status was excellent, and she was started on sips of water by mouth. Twenty-four hours after operation, the patient suddenly had a short convulsive seizure of her right arm and right side of face, rapidly lapsed into deep coma, and expired within five minutes of onset. The clinical impression was that this attack probably represented a cerebral embolus. Autopsy revealed rheumatic heart disease with mitral and aortic valvulitis and a mural thrombus in the left auricular appendage. There was a partial bilateral pulmonary atelectasis; the operative site was negative. Unfortunately, examination of the brain was not permitted.

Case 2.—L. R., a sixty-nine-year-old white female, had a total hysterectomy elsewhere ten months previously for carcinoma of the fundus uteri. She had had postmenopausal bleeding for sixteen months before her operation and, when seen here, had symptoms of lower abdominal pain and increasing anorexia and fatigue of six months duration with a large but unknown amount of weight loss. Patient had had a known hypertension for ten years with date of onset of fibrillation unknown, but she had been taking digitalis, 0.1 Gm. daily, for one month. When admitted, she had marked dyspnea, orthopnea, minimal ankle edema, enlarged heart, auricular fibrillation with an apical rate of 108 and a pulse deficit of 10, bilateral basilar rales, but no evidence of venous distention or hepatomegaly. Her electrocardiogram showed evidence of myocardial disease and premature ventricular contractions. She was classified as arteriosclerotic and hypertensive cardiovascular disease, class III C.

She was placed on strict bed rest, salt-free diet, digitoxin 0.2 mg. daily, aminophylline 0.5 Gm. intramuscularly every eight hours, and mercurial diuretics. In two days, the patient was considerably improved, and she was further prepared with two transfusions of 250 cc. of packed red blood cells which raised her hemoglobin from 10.8 to 13.0 Gm. and, after a test dose, was given quinidine sulfate, 0.3 Gm. every eight hours for one day, without any effect. Her significant preoperative laboratory tests revealed a routine urine specimen of specific gravity 1.008 and otherwise negative except for four to five white blood cells per high power field in the centrifuged sediment. Blood urea nitrogen was 18.2 mg. per 100 cc. Urinalysis on the operative day was reported as specific gravity 1.010 and otherwise negative except for 15 to 30 white blood cells per high power field with occasional clumps.

On her eighth hospital day, under nitrous oxide-oxygen-ether anesthesia, excision of recurrent carcinoma in the vaginal cuff and bladder with resection of 12 inches of adjacent small bowel and side-to-side anastomosis was accomplished in one hour and fifteen minutes Her blood pressure, which preoperatively was maintained about the level of 230/130, was quite stable during the operation at about the level of 200/110, but fell to 140/70 one hour postoperatively She had received 100 cc. of physiologic saline solution during the operation and 1,000 cc. of 5 per cent dextrose in distilled water which was continued postoperatively After receiving 500 cc. of packed red blood cells, her blood pressure returned to the preoperative level about seven hours postoperatively.

Patient was oliguric until the time of her death, the twenty-four-hour output reaching a maximum of 480 cc. on the second postoperative day and a minimum on the fourth day of 130 cc. On the second postoperative day she developed a thrombophlebitis of her left femoral vein. By the third postoperative day her blood urea nitrogen had climbed to 72.8 mg. per 100 cc., and urinalysis was reported as red in color, specific gravity 1.012, 4 plus albumin, and the centrifuged sediment was "loaded with red blood cells." The patient became progressively worse with increasing uremia and delirium and expired on the sixth postoperative day. Permission for autopsy was denied. She showed no evidence of cardiac failure during her postoperative course.

Case 3.—R. F., an obese, sixty-six-year-old, white male, with a past history of coronary thrombosis four years previously, was seen at Memorial Center complaining of soreness in the rectum for two years and blood-streaked stools for eight to nine months. An infiltrating ulcerated 4-cm. mass, 5 cm. above the anal margin, was biopsied and showed adenocarcinoma, grade II. The date of onset of fibrillation was unknown, but the patient had been taking digitalis irregularly " as a tonic" for four years. He was digitalized in the outpatient department by 1.2 mg. digitoxin with daily maintenance of 0.2 mg. digitoxin, resulting in good improvement of exertional dyspnea and palpitation at the time of admission two and one-half weeks later.

On the third hospital day he suddenly developed an attack of severe epigastric pain radiating to the interscapular region associated with nausea and vomiting. He demonstrated increasing right upper quadrant tenderness, fever to 101.4 F., and leukocytosis. Two days later, with intermittent periods of freedom from pain, pain again became more severe, fever spiked to 105 F., leukocytosis to 22,800 with 68 per cent filamented polymorphonuclear cells and 16 per cent nonfilamented. At this time the patient first demonstrated clinical and laboratory evidence of obstructive jaundice. Under nitrous oxide-oxygen-ether anesthesia exploration revealed an empyema of the gallbladder. Because of the marked edema and inflammation of the surrounding tissues and the poor condition of the patient, common duct exploration was not feasible, and a cholecystomy was done. The operation lasted one and one-half hours during which time the pulse and blood pressure were stable.

Postoperatively the blood pressure fell from the operative level of 120/50 to 80 to 90/50 to 60 with apical rate of 100, pulse 90. During the operative day he received 2,500 cc. of 5 per cent dextrose in water and 500 cc. blood, and twelve hours postoperatively his blood pressure had risen to 100/70 where it stabilized. The patient became progressively more jaundiced, and urinary output remained very scant for seven days postoperatively, blood urea nitrogen rising to 169 mg. per 100 cc. and plasma carbon dioxide content falling to 12.9 mEq. Serum sodium, potassium, and chloride remained within satisfactory limits. Fluid replacement was according to losses and metabolic requirements. Patient demonstrated transient sacral edema and rales at lung bases which cleared within two days.

On the ninth postoperative day, the patient began having a diuresis reaching 3,200 cc. on the eleventh postoperative day. However, at that same time he began showing evidence of uncontrolled sepsis; his temperature which had been 100 to 101 F. postoperatively began to rise until it reached 107 F. at death on the twelfth postoperative day. His blood urea nitrogen and serum bilirubin had decreased considerably. He was comatose for four days prior to death and subterminally demonstrated evidence of a bilateral bronchopneumonia. Autopsy revealed an acute suppurative cholecystitis, cholangitis, and hepatitis with focal interstitial nephritis, bilateral bronchopneumonia, and chronic hemorrhagic cystitis. The common bile duct was patent. There were no metastases from the untreated adenocarcinoma of the rectum.

Comment

Adequately treated auricular fibrillation per se did not appear to be responsible for any increase in morbidity or mortality, although one postoperative death may have been due to cerebral embolus. The mortality and complication rate compares favorably with any group with similar degrees of cardiac involvement not associated with auricular fibrillation undergoing surgery of equal magnitude.[1–4]

Although the number of patients in this series is too small to permit complete statistical evaluation, some general conclusions may be made. There was no correlation between age, sex, race, type of heart disease, heart size, electrocardiogram, past history of myocardial infarction, choice of anesthesia, preoperative medication, or duration of operation with the observed complication and mortality rates. A poor functional classification of heart disease, a history of previous congestive failure, and an unequivocal history of angina pectoris were associated with an increase in the complication rate.

The incidence of operative and postoperative mishaps was significantly increased in the patients who were inadequately digitalized and in those who had a history of recent congestive heart failure. Minor, subclinical, or even frank congestive failure will develop more rapidly in the incompletely digitalized, fibrillating patient. There is some evidence that with the appearance of cardiac failure the fibrillating patient receiving maintenance digitalis therapy may require additional amounts of the glycoside to regain or maintain full compensation.[12-14] This was apparent in 11 of our patients who required 2 to 15 additional cat units during the postoperative period to bring their auricular fibrillation under control.

The optimum amount of digitalis is not easily determined, even in the patient with auricular fibrillation. This is particularly true in the so-called "slow fibrillators,"[12,14] in whom control of the resting pulse rate does not necessarily signify full therapeutic digitalization. In our series three of the six patients who developed congestive failure postoperatively had preoperative pulse rates of 72, 80, and 88 and were given only 3 to 5 cat units of digitalis per week. This has led us to the employment of the atropine test[15] and to an exercise response, in which the patient is considered to be inadequately digitalized if his apical pulse rises above 100 and fails to return to less than 90 five minutes after performing a double standard exercise test[16] or exercise that results in cardiovascular symptoms.

Recent reports indicate that a high percentage of a group of chronic fibrillators can be converted to a normal sinus rhythm with adequate quinidization.[17–21] The data presented here are insufficient to express an opinion as to any change in the risk effected by restoration of normal sinus rhythm, although recent studies indicate that cardiopulmonary function of certain patients may be improved after conversion to a normal sinus rhythm.[18,22]

The deleterious effects of congestive heart failure on cardiopulmonary,[23] renal,[24,25] and hepatic[26–29] function have been demonstrated. Operation and/or anesthesia, with their concomitant physiologic effects and stress, produce generally similar effects in these functions.[30–34] The reduction in cardiac output and lowered cardiopulmonary function that is associated with auricular fibrillation have been well documented.[18,22,35–38]

It seems obvious, therefore, that the patient with auricular fibrillation who is to be subjected to major surgery must be accurately digitalized and meticulously maintained on the drug. An inseparable corollary, of course, is the correction of all abnormalities of the cardiovascular, pulmonary, hepatic, and renal systems, not only preoperatively but also during the operative procedure, the postoperative period, and the recovery phase. This implies adequate oxygenation, maintenance of stabile circulation, and calculated fluid and blood replacement. Neglect of one or any of these factors will be associated with an increase in morbidity or mortality.

Summary and Conclusions

1. Three (5 per cent) of 60 patients with chronic auricular fibrillation died following major surgery.
2. Intraoperative cardiovascular complications were seen in 54 of 76 procedures (71 per cent).
3. Postoperative cardiopulmonary complications occurred following 17 of the 76 operations (22 per cent) and did not seem to be related to the incidence of intraoperative cardiovascular complications.
4. Fifteen of these 60 patients with chronic auricular fibrillation and organic heart disease (25 per cent) died within thirty-nine months of operation as a result of their cardiovascular disease. Eleven (73 per cent) had moderate to marked cardiac enlargement preoperatively. There seemed to be no relationship between the occurrence of intraoperative cardiovascular and postoperative cardiopulmonary complications and eventual death from cardiovascular disease.
5. The natural history of the cardiovascular disease of the patients surviving surgery did not appear to be influenced by the operative experience. Auricular fibrillation per se did not seem to increase the operative risk, but rather that risk varied with the severity of the underlying heart disease.
6. The complication rate was not affected by age, race, sex, etiology of the heart disease, history of remote myocardial infarction, electrocardiogram, heart size, preanesthetic medication type of anesthesia, duration of operation, and type and amount of parenteral fluid administration, although careful evaluation must be given to all these factors.
7. The complication rate appeared to be increased in patients with pulmonary emphysema, azotemia, generalized arteriosclerosis, obesity, past history of congestive heart failure, angina pectoris, and a poor cardiac functional classification.
8. There was a statistically significant increase in the complication rate of patients who were inadequately digitalized or who gave a history of recent congestive heart failure.
9. The importance of complete digitalization and the maintenance thereof is stressed. If medical complications are to be minimized, the entire cardiovascular, pulmonary, hepatic, and renal systems must be brought into compensation and stability preoperatively and anoxemia, hypoxia, and circulatory inadequacy avoided at all times.

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Discussions

Edwin P. Maynard, Jr., M.D., *Brooklyn.*—Drs. Finkbeiner, Wroblewski, and LaDue have made an important contribution to our knowledge in the field of surgery for the patient with heart disease. This work represents a meticulous study of 60 patients, and the conclusions drawn are sound and fully supported by the evidence presented.

I have been interested in this field for a good many years and have seen great advances made. Surgical technics have improved tremendously. Anesthesiology is now on a high plane. The antibiotics and improved postoperative care have greatly reduced surgical morbidity and mortality. As a result there is danger that our surgical confreres will become overconfident and think that the only contraindication to surgery is rigor mortis.

Dr. Finkbeiner's study has emphasized very clearly that an orderly procedure must be followed in evaluating a patient with heart disease for surgery. A careful history is essential with special inquiry as to a previous episode of heart failure and the existence of symptoms of cardiac insufficiency or angina pectoris. Dr. Finkbeiner found that these were associated with an increase in the complication rate. A careful physical examination is also extremely important, especially in detecting signs of heart failure. The most striking conclusion in Dr. Finkbeiner's paper was the fact that the incidence of operative and postoperative mishaps was significantly increased in patients who were inadequately digitalized. Furthermore, they found they could not rely on heart rate alone to determine this point. Careful examination of the patient is essential. The electrocardiogram and the x-ray study of the heart should not be omitted because it would be extremely useful to know that our patient had a high degree of heart block or an aneurysm of the aorta. After all this has been done, there should be a conference between the surgeon, the anesthesiologist, and the internist to go over the findings.

Operation should be postponed if congestive failure is present or if the patient is not adequately digitalized. If coronary heart disease with angina pectoris exists, all concerned should know of its presence. Proper plans can then be made for limiting the operation as much as possible to avoid shock and hemorrhage and for the judicious and cautious use of blood, plasma, and electrolytes.

Elective surgery should not be undertaken at all in poor risk patients. A patient with a hernia should wear a truss and a woman with fibroids should have radiation therapy unless operation becomes obligatory. Nevertheless, as the authors have shown, necessary major surgery can be carried out without undue risk, provided there is good teamwork between all concerned and the patient is in the best possible condition before surgery is begun.

John H. Bogle, M.D., *Brooklyn.*—The modern surgical attack upon malignant disease is becoming more and more extensive. As it does so, surgery is being performed upon patients with complicating medical disorders which in the past have interdicted extensive surgical procedures. It is necessary to protect and support these patients before, during, and after surgery.

Aside from the improvements in technic and anesthesia, the development of antibiotics, etc., which enable the surgeon to operate upon poor risk patients with greater safety now, one of the most important developments is that of teamwork in the care of patients. Close cooperation between the surgeon and the internist in all phases of the care of the patient is very important. It is nowhere better exemplified than in the care of patients at the Memorial Center.

The writers show that auricular fibrillation in itself did not appear to increase the operative risk. Great care must be exercised, however, in fluid and blood replacement so that not too much is given. It must also be certain that the patient is adequately digitalized. This requires vigilance at all times on the part of the team in order that lapses in treatment or overdosage do not occur. If all such details are given meticulous attention, it is surprising how much surgery patients with severe cardiac damage can withstand.

I think it is well, if possible, to have patients with cardiac disorders admitted to the hospital as long as necessary before operation so that their status can be thoroughly evaluated. Frequently, the rest in the hospital will build up cardiac reserve for the ordeal of the operation as well. It is axiomatic that abnormalities of the pulmonary, hepatic, and renal systems should be corrected, as the writers state.

I would particularly urge that the condition of the mouth, especially the teeth, be investigated. This is likely to be overlooked with interest centering upon the patient's pathologic condition for which he has entered the hospital. Infected, carious, and loose teeth and infected gums should all be cleared up.

Similarly, the history of any pulmonary disorder should be carefully investigated. Postural drainage may disclose a hidden bronchiectasis. All infection in the mouth, tracheobronchial tree, and lungs should be cleared up as far as possible before surgery. Patients can be carried through very formidable surgical procedures with severe cardiac disease alone, but if pulmonary complications such as bronchial obstruction, atelectasis, and pneumonitis occur postoperatively, they may succumb. This can be largely avoided if the mouth, tracheobronchial tree, and lungs are clear of infection and exudates before operation.

It is interesting that in the series of cases here presented, only one possible instance of embolization occurred, a cerebral accident (unproved by postmortem examination of the brain, however). This possibility must nevertheless always be kept in mind since mural thrombi frequently occur in the auricular appendage in chronic fibrillation, and emboli must be looked for, especially in the lower extremities. In cases of cardiac arrest with massage of the heart, embolization should especially be looked for since thrombi can be dislodged from the heart into the peripheral circulation by the squeezing of the heart.

If the patient is unconscious or irrational in the postoperative period, the extremities should be frequently examined since the patient cannot call attention to symptoms of occlusion that may occur.

Dates to Remember . . .

May 10 to 14, 1954
Hotel Statler, New York City
Annual Meeting
Medical Society of the State of New York

Effects on Gastric Secretion of WIN 4369 (Monodral), A Synthetic Anticholinergic

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CLINICAL conditions associated with gastrointestinal hypermotility, hypersecretion, and spasm, such as peptic ulcer and a variety of organic and functional small and large bowel disturbances, are often benefited by the use of antispasmodic and antisecretory compounds in conjunction with appropriate dietary measures. Old favorites in this connection have been belladonna and its derivatives. However, their undesirable side-effects, such as dryness of the mouth, mydriasis, nervous excitation, etc., when used in clinically effective dosage, have been a constant stimulus to a continuing search for compounds having a more selective efficacy. The ideal of target effectiveness has yet to be attained, but the newer synthetics now being studied in laboratory and clinic suggest that the clinician may soon have available a comfortable battery of agents appropriate for the specific control of a particular organ dysfunction and with few or none of the undesirable effects.

Compounds having active spasmolytic and antisecretory properties in animal experiments are, more often than not, quite ineffective when tested in human beings. Purely clinical estimates of therapeutic efficacy are often difficult to evaluate objectively. Hence, it is always desirable to attempt to estimate the probable worth of such compounds by reasonably controlled studies of their effect on human gastrointestinal motility and secretory patterns. A series of synthetic compounds is being subjected to such studies in the Gastro-Intestinal Research Unit of the Long Island College Hospital.

One of these newer compounds, WIN 4369 (Monodral; 2-diethyl-aminoethyl 2-cyclopentyl-2-(2-thienyl) hydroxyacetate methobromide)* was found to be strikingly effective in inhibiting gastric and small bowel motility as determined by a multiple intraluminal balloon-kymographic technic, as well as by radiographic observations of the progress of a barium meal.[1] It was efficacious in orally administered doses of 10 to 20 mg. and, aside from moderate dryness of the mouth in the larger dosages, had few other undesirable effects.

WIN 4369 is a white crystalline powder which melts between 122 and 124.6 C. (corrected) and is soluble in water to at least 20 per cent. A 1 per cent aqueous solution has a pH of 6.7, which may be adjusted to a pH of 7.0 with tenth-normal sodium hydroxide without precipitation.[2] With appropriate experimental methods[3,4] studies have shown it to be a potent anticholinergic agent.[5] It possesses approximately eight times the in vitro activity of homatropine against spasm of the isolated rabbit ileum induced by acetylcholine and has 56 per cent of the potency of atropine. In anesthetized dogs approximately 50 to 90 per cent inhibition of the stimulation of the small intestine caused by carbamylcholine resulted from the intravenous injection of 2 to 8 micrograms per Kg. of WIN 4369, and intraintestinal doses of 32 to 1,000 micrograms per Kg. brought about 60 to 100 per cent inhibition. The compound was found to be less active than other agents in producing central nervous system stimulation in cats and had little central effect in spasmolytic dosages to dogs. It inhibited salivary secretion induced by pilocarpine in albino rabbits and by carbamylcholine in dogs, but its mydriatic effect in cats was less than that of atropine.[6]

Toxicity studies in animals have shown the drug to be relatively nontoxic.[7] Studies of

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Reviewed in the Veterans Administration and published with the approval of the Chief Medical Director. The statements and conclusions published by the authors are the results of their own studies and do not necessarily reflect the opinion or policy of the Veterans Administration.

* Synthesized by chemists of the Winthrop-Stearns Research Institute.

TABLE I.—EFFECT OF WIN 4369 ON NOCTURNAL GASTRIC SECRETION

	—Volume— (Cc.)		—Free Acid—		—Total Acid—	
Time	Placebo	WIN 4369	Placebo	WIN 4369	Placebo	WIN 4369
10 to 12 P.M.	86	54	31	19	48	43
1:30 to 4:30 A.M.	41	28	16	8	34	26
6 to 9 A.M.	64	39	7	1	21	17

acute intravenous toxicity in mice showed an LD_{50} of 16 ± 1.4 mg. per Kg., while subcutaneous and oral LD_{50} values were 350 ± 28 mg. per Kg. and 1,350 ± 160 mg. per Kg. (seven-day), respectively. There were no pathologic findings, and growth was normal following the daily oral administration to rats of doses up to 400 mg. per Kg. for three weeks.

In view of the experimental effectiveness of WIN 4369 as an anticholinergic agent in animals and its potent influence in suppressing gastrointestinal motility in humans, the drug has been further tested for its effect on gastric secretion. For these experiments the compound was available in 5-mg. tablets and was given orally in doses of 5 to 15 mg. In these dosages given singly or every four hours for three to four doses, there were mild to moderate dryness of the mouth, no significant mydriatic effect, and no undesirable systemic manifestations. An attempt was made to assess the influence of the drug on nocturnal secretion and on secretion following stimulation by histamine, by insulin-induced hypoglycemia, and by an Ewald test meal. The results of these experiments are summarized below.

Studies have also been made by Kersner and Palmer[8] of the effect of WIN 4369 on gastric secretion. They found the compound effective in reducing both volume and acidity. In studies on basal gastric secretion in man anacidity was produced in eight of 16 patients. In four patients the inhibition of acidity persisted for three and one-quarter to nearly five hours.

Effect on Gastric Secretion

OVERNIGHT SECRETION.—Seven males, aged twenty-two to sixty-one years, were used in this experiment. Six had duodenal ulcers; one had regional enteritis. Each subject had a liquid supper between 5 and 6 P.M. At 7 P.M. a Levine tube was passed, and at 8 P.M. the stomach was emptied of its contents. A placebo milk sugar tablet with 1 ounce of tap water was administered at 8:30 P.M., at 12:05 A.M., and at 4:35 A.M. The stomach was completely aspirated at 10, 11, and 12 P.M., at 1:30, 2:30, 3:30, and 4:30 A.M., and at 6, 7, 8, and 9 A.M. In each subject the procedure was repeated the following night except that WIN 4369 in doses of 5 to 15 mg. was given instead of the placebo. Intermittent rather than continuous aspiration was employed. By this means the possible removal of placebo or drug which had been given orally was avoided. The volume in cubic centimeters and the free and total acid in clinical units of each specimen removed were determined, using Topfer's reagent and phenolphthalein as indicators. Three of the subjects were given doses of 5 mg., two of 10 mg., and two of 15 mg. The effect was almost the same with all three dosages.

In Table I the average hourly volumes, free acid, and total acid found after the first, second, and third doses of the placebo and WIN 4369 are compared. It will be seen that the volumes obtained after the drug are less than those obtained with the placebo, suggesting an inhibition of volume secretion by the former. Doubtless this effect is even more marked than the figures suggest, since the inhibition of motility and hence of stomach emptying by WIN 4369, as determined in other studies,[1] would lead to the retention of larger volumes than might otherwise be expected. It is also apparent from the table that the total concentrations of acid found (and incidentally, of combined acid also) were not appreciably different in the two instances, although the free acid present was considerably less during the WIN experiments. The amount of free acid was approximately 39, 50, and 86 per cent less after the first, second, and third doses of WIN 4369, respectively, than after the like periods with the placebo. The findings indicate that exhibition of WIN 4369 results in smaller nocturnal volumes of gastric secretion of lower acid concentration, or perhaps in smaller volumes more adequately buffered in the hypomotile stomach. This effect appears to be more marked after the second and third doses of the drug, suggesting that around-the-clock administration might have had an even more striking inhibitory effect.

AFTER INSULIN STIMULATION.—Three fasting male subjects, aged thirty to fifty-six years, were used in this experiment. Two had gastric ulcers; one had regional ileitis. A Levine tube was passed into the stomach and contents removed.

TABLE II.—Effect of WIN 4369 on Gastric Secretion After Stimulation by Insulin

Time (Minutes)	Average Blood Sugar	15-Minute Volumes (Cc.) Placebo	15-Minute Volumes (Cc.) WIN 4369	Free Acid (Clinical Units) Placebo	Free Acid (Clinical Units) WIN 4369	Total Acid (Clinical Units) Placebo	Total Acid (Clinical Units) WIN 4369
0	106	35	40	21	18	36	30
15	..	18	17	49	40	70	63
30	..	32	30	16	20	31	35
45	..	..	..	..	..	..	..
60	..	..	..	..	..	..	..
75	..	38	36	19	10	29	16
90	36	28	23	20	14	34	24
105	..	21	12	11	1	28	20
120	..	21	10	17	2	66	41
135	..	26	17	33	17	80	29
150	..	17	29	37	9	87	35
165	..	21	35	52	16	85	30
180	91	36	33	56	16	81	22

TABLE III.—Effect of WIN 4369 on Gastric Secretion After Histamine

Time	15-Minute Volumes (Cc.)	Free Acid (Clinical Units)	Total Acid (Clinical Units)
9:45 A.M.	41	37	53
10:00	38	45	65
10:15	28	39	51
10:30	15	26	37
10:45	13	1	15
11:00	16	13	25
11:05	WIN 4369, 5 to 15 mg. and 1 ounce water		
11:30	Histamine base, 0.5 mg. subcutaneously		
11:45	10	41	56
12:00 NOON	26	48	63
12:15	19	27	43
12:30	14	15	26
12:45	7	11	27
1:00	11	4	18

A fasting blood sugar was then taken, followed by two aspirations of stomach contents at intervals of fifteen minutes. At thirty minutes the placebo with 1 ounce of tap water was given. Twenty units of insulin were given intravenously at sixty minutes. At seventy-five minutes aspirations were resumed at periods of fifteen minutes until the end of the experiment at one hundred and eighty minutes. Blood for sugar determination was taken at ninety and one hundred and eighty minutes. In each subject the experiment was repeated on the following day, but instead of the placebo WIN 4369 was given at the thirty-minute point. One subject received 5 mg. of the drug, another 10 mg., and the third 15 mg. Determinations of volume and free and total acid were made on all the specimens removed, as noted previously.

In Table II are listed the averages of the determinations in the three patients. These indicate rather clearly an inhibitory effect of WIN 4369 on volume secretion as well as on concentration of free and total acid. This effect was most apparent in the one hundred and five- to one hundred and thirty-five-minute period, which was the time of maximal vagal effect from the induced hypoglycemia. After one hundred and thirty-five minutes the comparative volumes were about the same, but the diminished acid concentration was still apparent in the drug experiment. Although for brevity of presentation the individual experiments are not recorded, the effect of the dose of 15 mg. of WIN 4369 was more striking than the dose of 10 mg., and the latter more than the dose of 5 mg. However, even the dose of 5 mg., which did not have too much effect on volume, nevertheless, caused an appreciable diminution of the concentration of acid. It would thus seem that, as might be anticipated from the anticholinergic properties of WIN 4369 demonstrated in other experiments, this drug, even in small doses, has an appreciable effect in blocking the vagal stimulation of gastric secretion caused by insulin-induced hypoglycemia.

After Histamine Stimulation.—The same seven males, aged twenty-two to sixty-one years, who were used in the studies of nocturnal secretion, were used in this study. With a Levine tube in the fasting stomach at 9 A.M. the stomach was emptied of its contents. The placebo with 1 ounce of tap water was given at 9:05 A.M., followed by the subcutaneous injection of 0.5 mg. of histamine base at 9:30 A.M. The stomach contents were then aspirated at fifteen-minute intervals from 9:45 A.M. to 11 A.M. inclusive. After the aspiration at 11 A.M. WIN 4369 in doses of 5 to 15 mg. with 1 ounce of water was given and the histamine injection repeated at 11:30 A.M. Aspirations were resumed at intervals of fifteen minutes from 11:45 A.M. to 1 P.M. inclusive. Each specimen removed was studied as to volume and free and total acid in

TABLE IV.—Effect of WIN 4369 on Gastric Secretion After an Ewald Meal

Time	15-Minute Volumes (Cc.)	Free Acid (Clinical Units)	Total Acid (Clinical Units)
9:30 A.M.	56	19	32
9:45	43	38	56
10:00	35	32	57
10:15	12	48	74
10:30	19	50	71
10:45	9	48	73
11:00	17	48	68
11:05	Ewald meal repeated plus 5 mg. WIN 4369		
12:00 NOON	53	37	55
12:15	44	32	59
12:30	21	38	46
12:45	32	46	70
1:00	19	42	66
1:15	16	34	58
1:30	44	38	63

clinical units, using Topfer's and phenolphthalein as indicators.

The average values for volume and acid are noted in Table III. There was no appreciable difference in the acid values following the WIN drug as compared with the interval after the placebo had been given. Hence, it may be concluded that WIN 4369 in single doses ranging from 5 to 15 mg. given orally has no appreciable blocking effect on the secretion of gastric acid stimulated by histamine. This particular study does not indicate what the effect might be if several doses of the drug were serially administered. It will be noted from the table that the volumes aspirated after the WIN drug were less than those obtained at comparable periods after the administration of the placebo. Perhaps this difference would have been even greater if WIN 4369 did not have an inhibitory effect on gastric motility. Some degree of inhibition of any vagal stimulus of secretion present might be expected. At any rate the lack of significant effect on concentration of acid under the conditions of this experiment is evident.

After an Ewald Test Meal.—Three male subjects, aged forty-seven to fifty-seven years, each of whom had an active duodenal ulcer, were used in this experiment. The contents of the fasting stomach were removed at 8 A.M., and an Ewald meal, consisting of two slices of toast and a cup of tea, was given at 8:30 A.M. The placebo with 1 ounce of water was then administered. Aspirations at intervals of fifteen minutes were made from 9:30 to 11 A.M. Then the Ewald meal was repeated, and 5 mg. of WIN 4369 were given. From 12 to 1:30 P.M. the stomach contents were collected at intervals of fifteen minutes. All specimens were examined as in the histamine study.

Table IV gives the averages for volume and free and total acid in these subjects. No demonstrable effect on any of these values was produced from the administration of this admittedly small single dose of the WIN drug.

Summary and Conclusions

WIN 4369 (Monodral; 2-diethylaminoethyl 2 - cyclopentyl - 2 - 2 - (2 - thienyl) hydroxyacetate methobromide), a new synthetic anticholinergic compound, has been found to possess potent spasmolytic properties in experimental animals and appears to be relatively nontoxic. Preliminary studies in humans have shown it to have a markedly suppressive effect on gastric and small intestinal motility when given orally in doses of 10 to 20 mg. In this report the effects on human gastric secretion of doses of 5 to 15 mg. of the drug are compared with similar studies when a placebo was used. The evidence suggests that WIN 4369 has an inhibitory effect on nocturnal gastric secretion and following the hypoglycemia induced by insulin. It had no appreciable effect on gastric secretion after histamine and following an Ewald meal.

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History is the shadow of the past thrown upon the darkness of the future in the light of the present.—Voltaire

Acute Phlegmonous Gastritis

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Acute phlegmonous gastritis, suppurative gastritis, or gastric phlegmon is a fulminating, acute suppurative infection of the stomach which primarily affects the submucosa. This condition belongs to the group of rare abdominal emergencies, and its diagnosis is extremely difficult.

As early as the seventeenth century there were pathologic descriptions of the disease by Varandaeus[1] and Sand.[2] Sundberg (1919)[3] reported 215 cases. Gerster (1927)[4] collected and reported 48 cases, and in 1932 Watson[5] reported 12 new cases. Eusterman and Balfour[6] described nine cases at the Mayo Clinic which are included in the collection of 31 cases of Eliason and Murray-Wright.[7]

Etiology

Two modes of onset of phlegmonous gastritis have been described: (1) secondary to underlying gastric disease, trauma, or systemic bacterial invasion and (2) idiopathic. The offending organisms that have been isolated from the peritoneal fluid and the phlegmonous material in patients with this disease are alpha streptococci,[8] Bacillus proteus, B. subtilis, B. welchii,[9] pneumococci,[10] staphlococci, and B. coli. According to Watson[5] 70 per cent of cases are due to streptococci. However, Fink[11] has injected pure cultures of streptococci into the submucosa of dog stomachs, as well as giving the organisms by mouth, and has also injected them intravenously without producing this disease. Many other attempts to reproduce this disease in dogs have been unsuccessful.

Theoretically penetration of bacteria through the pathologic mucosa of chronic gastritis, gastric ulcer, or cancer has been described but has never been proved. Cases have been reported[5,11] following drainage of abscesses of the oral pharynx, extraction of infected teeth, tonsillitis, stomatitis, and purulent bronchitis. Cases have also been reported following gastric surgery.[5] Infected emboli resulting from bacteremia have been known to produce the condition. Abdominal trauma has been described as a predisposing factor. Hypochlorhydria and achlorhydria in the presence of a debilitating condition, anemia, malignancy, etc., may make the gastric mucosa less resistant to the invading organism.

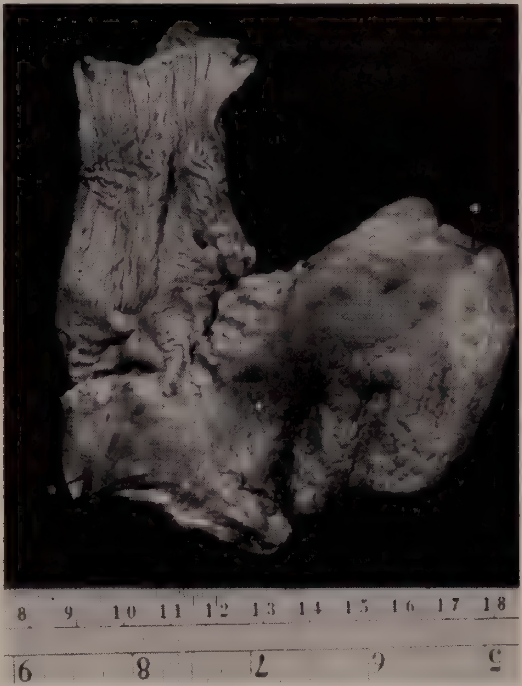

FIG. 1. Stomach at the junction of the esophagus. Note the hypertrophic, flattened stomach rugae. The inflammatory process does not traverse the cardiac sphincter.

In the presence of systemic disease acute phlegmonous gastritis has been described as occurring with scarlet fever, typhoid fever, smallpox, diphtheria, acute polyarthritis, and postpartum pelvic inflammation.[8]

In the idiopathic type there is no evidence of any systemic infection or of pathologic findings denoting a previous gastric lesion. Lawrence[12] suggested that the so-called postoperative dilatation of the stomach may be a form of gastritis.

Incidence

Occurrence in all age groups has been reported,

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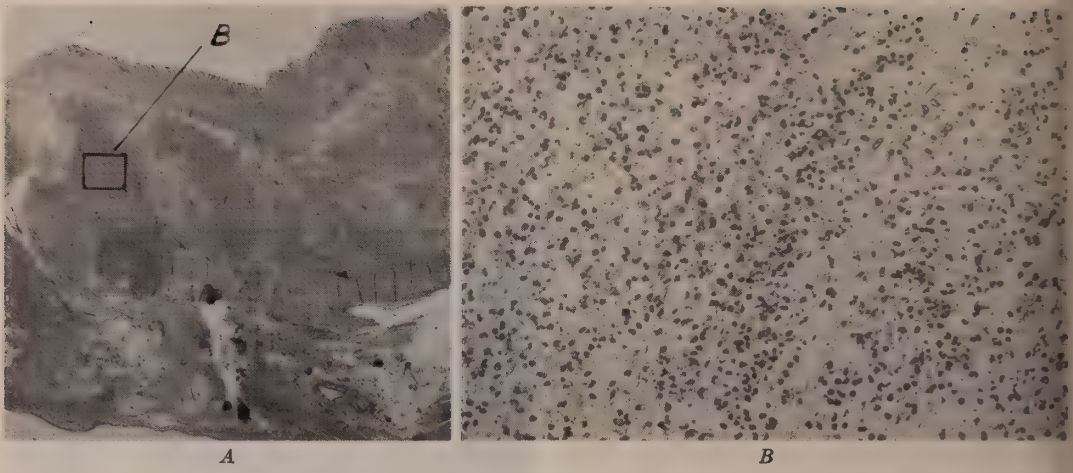

Fig. 2. (*A and B*) Photomicrographs of a section of the stomach wall showing the thickened submucosa extensively infiltrated with polymorphonuclear cells and with areas of necrosis.

the greatest incidence being in the middle decades, thirty to fifty years of age. Gerster[4] found it to be three times more common in males than in females. Lawrence[12] in a review of 5,000 autopsies found only two cases.

Pathology

The suppurative process may be localized or diffuse. In the localized form there is a circumscribed area of inflammation in the submucosa that often goes on to abscess formation. At times the muscularis and serosa are invaded resulting in perforation. Rosenthal and Tobias[13] have reported a case with multiple perforations. Virchow has described it as a carbuncle of the stomach. Localization of the lesion in the submucosa has led some to believe it to be an erysipelas of the stomach[8,14] because it primarily manifests itself as an infection of a single layer of the stomach wall and because the organism is most often streptococcus.

In the diffuse form the infection always remains within the confines of the stomach and does not traverse the cardiac or pyloric sphincters (Fig. 1). The stomach wall is greatly thickened, indurated, and edematous[15] with the submucosa extensively infiltrated by polymorphonuclear cells and numerous organisms. Areas of necrosis and perivascular infiltration by leukocytes are frequent. Muscle bundles may be involved, and areas of granulation tissue contain numerous fibroblasts (Fig. 2). The inflammatory process usually spreads through the overlying peritoneum leading to a purulent peritonitis. The mucosa is usually intact unless there has been a pre-existent, acute, chronic, or carcinomatous ulceration. Where the mucosa is intact, the inflammation is apparently bloodborne.

It is possible that milder undiagnosed cases may recover with gastric fibrosis and lead to a form of linitis plastica.

Symptomatology, Differential Diagnosis, and Prognosis

Patients with this disease present a picture of severe acute abdominal disease with marked distress, abdominal pain, vomiting, and varying stages of shock.

The following characteristics have been observed:

1. Acute epigastric pain which is well localized, increasing in intensity without being referred to the back or shoulder. Absence of pain referral may help to differentiate it from an acute pancreatitis and acute cholecystitis.
2. Pain is not increased on sitting up but is somewhat relieved (Deiningers sign).[4,5] Patients with perforated peptic ulcers resent sitting up.
3. Diffuse tenderness ensues when generalized peritonitis takes place.
4. Continuous, severe vomiting.
5. High fever, tachycardia, and increasing leukocytosis.

Reports of x-ray studies are relatively rare with Olsson[16] stating that gastric series exhibit a distended, atonic stomach with loss of the normal mucosa-rugal pattern. Flat plate of the abdomen in upright position may show absence of stomach air (Fig. 3). Abdominal paracentesis

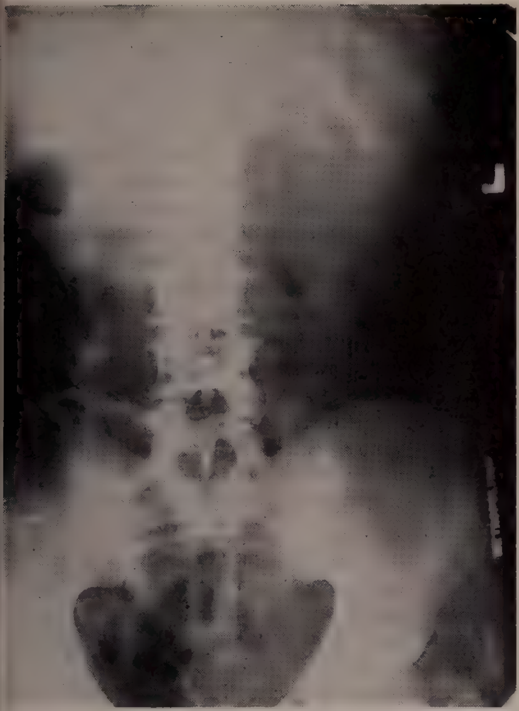

FIG. 3. Upright abdominal roentgenogram The left upper quadrant is hazy and devoid of intestinal and stomach gas. There is no evidence of free air under the diaphragm. The properitoneal fat line is obliterated.

may yield purulent fluid with numerous leukocytes depending on the involvement of the gastric serosa or the presence of gastric perforation.

Very few cases have been diagnosed preoperatively or antemortem,[10] and there are no pathognomonic signs or symptoms. Three acute abdominal emergencies which must be differentiated include perforated peptic ulcer, acute cholecystitis, and acute pancreatitis.

Fulminating untreated cases may die within forty-eight to seventy-two hours after onset, the less severe ones expiring after two to three weeks and the over-all mortality being 90 per cent.[3]

Treatment

Since the diagnosis is extremely difficult but the condition is an acute surgical lesion, the patient should be explored if he can be brought into an operable condition. Where small phlegmonous areas are found, cure may be obtained by adequate partial gastrectomy. Inadequate excision, gastrostomy, and gastroenterostomy[5] have resulted in failure.

Where phlegmon of the entire stomach is present, Weinstein and Klein[17] have suggested exteriorization of the stomach and multiple incisions through the serosa and submucosa for drainage, together with a feeding jejunostomy. Total gastrectomy for diffuse phlegmonous gastritis has not been described.

Since some believe[18] that spontaneously cured cases drain through the mucosal perforations, attempt at surgical cure may be made with gastrotomy and mucosal incisions into the submucosa. This has been suggested but not actually performed.[7]

Supportive therapy, however, is paramount. With the use of the nasogastric tube with suction, large doses of antibiotics, parenteral therapy, and the various surgical procedures mentioned, the prognosis may be improved.

Case Report

CASE 1.—S. Q., fifty-three, a Puerto Rican male, was admitted to the Metropolitan Hospital at 4:40 P.M. on March 10, 1952, with a sudden onset, for the first time, of severe abdominal pain. It commenced approximately thirty-six hours prior to admission followed by repeated attacks of nausea and vomiting of yellow material. Questionable history placed the onset of pain first in the epigastrium and a second time in the right lower quadrant which caused him to double up. There was no previous history of intestinal complaints. Bowel movements the day before admission were normal. There was no history of food intolerance or having ingested any foreign substance. He had no knowledge of any pulmonary or cardiac disease. A language barrier did not permit us to obtain a more detailed history. No previous operations were performed. An additional history from the sister revealed that two weeks prior to admission he fell down a flight of stairs following which upper abdominal pain resulted but was minimized by the patient.

Physical examination revealed a well-developed, markedly dehydrated, acutely ill, restless, cyanotic patient. The blood pressure was unobtainable on arrival but was stabilized at about 80/60 after whole blood and electrolyte solutions had been started. The pulse was very weak, averaging 140. The temperature was 41 C. and respirations 28. The heart and lungs were negative except for a tachycardia. There was marked tenderness in both lower quadrants but no rigidity. Rebound tenderness was present. There was no peristalsis and no loss of liver dullness. No evidence of contusion of the abdominal wall was noted. Rectal examination was negative.

Laboratory results showed a hemoglobin of 17 Gm. and hematocrit of 50. The white blood cells

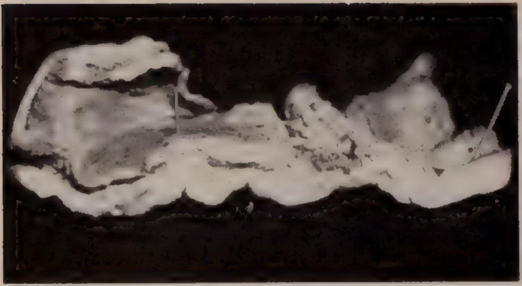

FIG. 4. Cross-sectional view of Fig. 1. Note the phlegmon involving the submucosa.

were 16,000, neutrophils 65 per cent; lymphocytes 35 per cent. Urinalysis was negative, and the serum amylase was 8 units (normal 32 units). The blood sodium was 124 mEq., chlorides 104 mEq., potassium 4.75 mEq., and carbon dioxide combining power 12 mEq.

A peritoneal tap with a 20-gauge needle was performed in the right lower quadrant and yielded some cloudy, yellow fluid which contained many white cells microscopically.

A chest x-ray was negative. A flat plate of the abdomen (upright) showed no free air under the diaphragm. The left upper quadrant appeared rather hazy and was devoid of intestinal and stomach gas (Fig. 3). The significance of this was not appreciated until the diagnosis was made. The properitoneal fat line was obliterated. A small rounded density was noted in the right upper quadrant.

The patient appeared most likely to have a purulent peritonitis on the basis of a ruptured peptic ulcer, a ruptured appendix, or gallbladder. Operative intervention was postponed because of the patient's uncontrollable shock state. Therefore, conservative therapy was instituted consisting of continuous stomach suction via a Levine tube, continuous nasal oxygen, and liberal doses of morphine. He was kept in Fowler's position. An antibiotic regimen included 1,000,000 units of penicillin and 1 Gm. of dihydrostreptomycin immediately followed by 300,000 units every three hours and 0.5 Gm. every six hours of each, respectively. Ringers lactate and 5 per cent glucose in saline infusions and whole blood were necessary to correct the dehydration and maintain electrolyte balance. It was necessary to administer them in strict moderation since his urinary output during the first twenty-four hours totaled 280 cc.

On the third day his temperature remained above 40 C. Cyanosis was very marked, and the blood pressure was unobtainable. Respirations were labored and finally continued on to Cheyne-Stokes. He was pronounced dead at 9:25 A.M., approximately forty hours after admission.

Autopsy Findings.—On opening the abdomen several thousand cubic centimeters of cloudy, amber-colored fluid with strands of mucopurulent material were evacuated. This fluid was not cultured. The small intestines were moderately distended. There were many areas of purulent, plastic exudate on the visceral and parietal peritoneal surfaces, especially in the upper abdomen. There were many soft, discrete, slightly enlarged, inflammatory lymph nodes in the mesentery.

The stomach was moderately enlarged and had a heavy, rubbery consistency. The serosa was smooth and contained several small, scattered purpuric spots. On opening it, the mucosa had a velvety feel, and the hypertrophic rugal folds were flattened (Fig. 1). There were several areas of small petechiae. The thickness throughout the wall was about 1.5 cm., and there was a yellow purulent layer about 0.5 cm. in thickness in the center of its cross section (Fig. 4).

Both lungs showed evidence of pulmonary congestion. The gallbladder showed evidence of chronic inflammation and contained a small calcified stone. The liver was in the early stages of Laennec's cirrhosis. The appendix was normal.

It was possible to isolate alpha streptococci from tissue cultures of the lung, spleen, stomach, liver, and mesenteric lymph nodes.

Summary

1. A fatal case of acute phlegmonous gastritis with autopsy findings is reported.

2. Etiology, pathology, prognosis, and treatment of this disease are discussed.

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CLINICOPATHOLOGIC CONFERENCE

ST. JOSEPH'S HOSPITAL, ELMIRA, NEW YORK

Conducted by JOHN C. ROEMMELT, M.D. FEBRUARY 25, 1953

Discussed by DANIEL BURDICK, M.D., SYRACUSE, NEW YORK

Case History

The patient was a fourteen-year-old school boy who was admitted to this hospital complaining of pain in the left arm.

Present Illness.—Three months before his admission he had been struck by a batted baseball over the anterior upper aspect of the right thorax. Two days after this he began to develop pain in this area. Chest x-ray showed "a very slight pleural thickening . . . laterally near the apex." Since then there had been a marked increase in the severity of the pain and also a change in the location of the pain. For six weeks preceding admission the pain had been limited principally to the left anterior chest, often radiating to the back and frequently down the left arm. Because of the severity of the pain, the patient had been unable to attend school since its onset. The pain was severe enough to cause him to cry frequently and prevented him from sleeping normally. He denied cough, expectoration, or hemoptysis. Breathing had no influence upon the severity of the pain.

Past history was essentially negative.

Family History.—Father and mother were alive and well and were the parents of five children. The maternal grandmother died of carcinoma of the liver; the maternal grandfather died of carcinoma of the stomach. The paternal grandmother died of carcinoma of the uterus. These people were beyond age sixty.

One year before the patient's admission, his sister, age fourteen, had been admitted to the hospital because of headache and convulsions which followed shortly after a fall in a roller skating rink when the patient had struck the occipital region of the head a severe blow. Two months after the injury, the patient was transferred to another hospital where a craniotomy was done and inoperable brain tumor was found. The patient died.

Physical Examination.—Examination showed a well-developed, well-nourished boy, pale and restless, and obviously having severe pain. Head and special senses showed no abnormalities except a soft nontender mass on the right side of the vertex which was pea-sized and increased to egg-sized before death. The lungs showed expansion to be equal bilaterally. There was dullness over the extreme right apex anteriorly and posteriorly. Breath sounds were absent over the extreme right apex posteriorly. The heart sounds were of normal quality and were transmitted to the right apex, being heard best in the right supraclavicular area. Abdominal examination was negative. Motion of the upper extremities caused pain, especially rotation of the right arm. The arterial pulsations in both arms were equal. The neurologic examination was negative.

Temperature, pulse, and respirations were normal. Blood pressure was 128/64.

The urine was negative. The red count was 4,200,000 with 13.3 Gm. of hemoglobin. The white count was 7,600 with a normal differential. The sedimentation rate was 48. Platelets were normal. The coagulation and bleeding times were normal. The prothrombin time was 76 per cent of normal. Total proteins were 5.8, with 4 Gm. of albumin and 1.8 of globulin.

Seventy-two-inch and right lateral x-rays of the chest revealed a "circumscribed round area of opacity close to 8 cm. in diameter in the right apical region extending down to the level of the fifth rib and interspace posteriorly. It is rather central in location . . . . Possible slight irregularity of the second rib posteriorly close to the spine." Multiple localized views of the chest with extra penetration showed "a lack of sharpness of outline of the second rib from near the costovertebral junction out to the lateral angle of the rib." Films of the left forearm and left humerus and of the skull showed no bony pathology. Films of the lower dorsal and upper lumbar region were negative.

Course in the Hospital.—The patient's course was progressively downhill. During the entire hospital stay the patient had constant severe pain requiring the use of opiates. He ate poorly and lost weight. During the first eleven days of hospitalization his temperature remained within normal limits, and then there was a gradual elevation until a high of 107 F. was reached just before death.

Eleven days after admission, the patient first experienced difficulty in urination, and two days later it became necessary to use an indwelling catheter because of retention. The next day he complained that he was unable to move his legs and that his abdomen felt numb. Neurologic examination revealed an absence of pain sensation to the level of the fourth dorsal dermatome. No deep tendon reflexes were elicited in the lower extremities. There was an absence of pain upon Achilles tendon pressure and upon genital pressure. Babinski reflexes showed a mass defense reaction. Cremasteric reflexes were absent. Lower abdominal reflexes were absent, but the upper abdominal reflexes were present. A lumbar puncture showed no cells and a cerebrospinal fluid protein of 428.

Three days before death the chest plate revealed a small amount of fluid in the right chest. The second rib changes posteriorly were more marked. The day before death the patient became very dyspneic, and all attempts to relieve this dyspnea were futile. The temperature rose sharply, and the patient expired.

Additional History.—It has been learned that a sister, age twenty-five, about a year following this patient's death, struck her left breast, and a mass developed. She was under the care of an obstetrician in New York City who advised removal of the mass. She was pregnant at the time, and it was decided to do a cesarean section at term followed by a removal of the mass from the breast. However, the patient developed peritonitis after the cesarean section and died. No postmortem or biopsy was done.

Discussion

DR. DANIEL BURDICK: This case is a very interesting one, and I should like to go over certain aspects of the protocol very briefly. Perhaps, I may ask one or two questions about some things that are not given here. First, we have a boy of fourteen, presumably very active and in good health at the time he was struck in the right upper anterior chest by a batted baseball. We have no record of whether there was an ecchymosis or swelling over the chest wall, a hematoma, or anything local relating to the initial trauma.

DR. JOHN C. ROEMMELT: We have no knowledge of that except that he had constant pain from that time on.

DR. WILLIAM M. KELLY: I didn't see him at that time, but shortly after, he was brought here to the emergency room, and a chest x-ray was taken. I don't know whether there was any external evidence of injury at that time.

DR. BURDICK: At any rate, two days after this injury, he developed some pain in this particular area of the chest, and a chest x-ray was taken which was said to show some slight pleural thickening. I wonder if we can see that first chest x-ray?

DR. HOBART A. BURCH: The first chest x-ray was taken when he was sent up from the emergency room with a history of having been struck by a baseball. We note that there is a little coarse pleural thickening—you can just see it—laterally near the right apex.

DR. BURDICK: Dr. Burch, did you see anything in the rib at that particular time?

DR. BURCH: With hindsight I see a little, just a little, thickening in the second rib. This rib is just a little different from the other ribs but did not appear significant at the time of the first examination for injury.

DR. BURDICK: Maybe there is just a little ragged change in this particular section of the second rib. It seems a little different from the other side.

DR. BURCH: At that time it was thought to be a hematoma in the pleural region. After seeing the later films, the true nature of the type of pathology was more definite.

DR. BURDICK: At any rate the boy went along fairly well for a little over one month and then began to complain of considerable pain, not only in the right chest, but also in the left chest with radiation through to the back and down the left arm. It's a little difficult to explain the nature of this pain and the location from the protocol and findings that we have. We can postulate, for example, that he may have had some root type of pain, something that was causing pain bilaterally in the chest and some radiation down the left arm. However, in light of the findings upon physical examination, in which the neurologic examination was described as being negative, it's difficult to understand how there could have been much nerve pressure causing root pain with a normal neurologic examination. It is possible that there was some irritation of the second intercostal nerve which had caused some reflex pain down the left arm and in the left anterior chest. This pain apparently became severe and persistent and was sufficiently severe to cause this boy to be admitted to the hospital. At no time was the pain associated with difficulty in breathing, cough, expectoration, or hemoptysis, which makes us lean away from something primary in the lung or primary in the pleura. If this had been a primary pleurisy, a hemothorax, or an empyema, or a primary neoplasm of some sort in the lung or pleura, he would have had considerable difficulty on respiration, and deep inspiration might have caused aggravation of the pain; none of these was present.

His past history was essentially negative. But we see a very interesting family history in which there is apparently a very strong family tendency toward carcinoma. The maternal grandmother died of carcinoma of the liver, the maternal grandfather of carcinoma of the stomach, the paternal grandmother of carcinoma of the uterus, and we find that a sister, following a head injury, was found to have had an inoperable brain tumor. In the addendum at the end of the protocol, we are told of another sister who developed a mass in the breast which, unfortunately, was not biopsied. It may have been a carcinoma, but we don't know that for sure. At any rate, there certainly is a very strong family history here pointing toward neoplastic disease. How much importance should we attach to this in considering this particular case? That's a most difficult question, and I'm afraid I can't answer it as definitely as you might like.

When we get a strong family history, it tends to keep us on our guard. We certainly have to think of neoplastic disease in this particular case. But in an entire review of the literature, we find that there is no proved hereditary transmission except in three definite neoplastic conditions. One is a rare skin disease called xeroderma pigmentosum which is supposed to be very definitely hereditary. A second condition is neuroblastoma of the newborn infant. The third is the well-known congenital or hereditary intestinal polyposis. Other than these three conditions, however, no one has ever proved that any particular type of neoplastic disease is inherited. It has been proved that the predisposition to malignant disease may be transmitted in some way. However, it's often difficult to tell whether it's simply an environmental factor which may be playing a part. For example, we know that in certain families where there is a very definite familial cancer history, all members may have a similar environment. That would be particularly true in certain types of skin carcinoma; for example, the family might be exposed to the outdoors as farmers. The same could be true of certain types of lung malignancy where it is believed that increased bronchial irritation over a long period of time may have some bearing. I throw these in simply to indicate that it's difficult actually to place a finger on any very definite evidence for hereditary transmission of malignant disease. What we may be dealing with in any particular instance is a common environmental factor. In summary on this particular point, we may say that in other than the three situations which I have already mentioned, it has not been definitely proved that there has been hereditary transmission of neoplastic disease.

But in this case, I believe that this is a very interesting family history, and I think it points up the fact that we have to be on our guard. We have to suspect neoplastic disease in anyone in this family, but it certainly doesn't mean that there has been any definite transmission by means of heredity.

Now we pass on to the physical examination when this boy entered the hospital, which was approximately two and one-half to three months after the initial trauma. The boy was complaining of severe pain, and he was pale. The head and special senses showed no abnormality except for a soft tissue mass. I have two questions. First, is there any mention of a Horner's syndrome at any time in the clinical record?

Dr. Roemmelt: There is no mention of a Horner's syndrome.

Dr. Burdick: As a speculation, if this were a neurofibroma or neurofibrosarcoma or some other mass in the superior posterior mediastinum, it is conceivable that he might have had some pressure on the cervical sympathetic chain causing a Horner's syndrome.

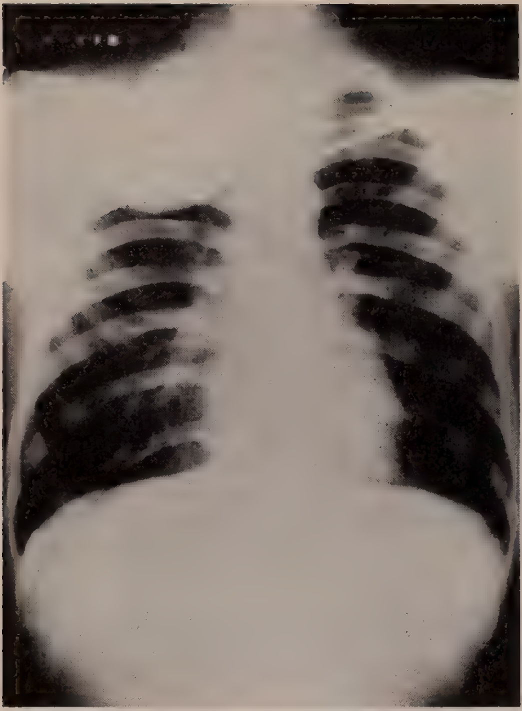

FIG. 1. Chest x-ray on admission showing rounded, circumscribed area of opacity in right apical region.

The next interesting point is the description of "a soft nontender mass on the right side of the vertex, which was pea-sized and then increased to egg-sized before death." This is disturbing, to say the least. This means that this mass increased very rapidly. If my calculations are correct, this boy was in the hospital about fourteen days. Is that correct?

DR. ROEMMELT: Yes, fourteen days.

DR. BURDICK: In other words this mass has increased rapidly from pea size to egg size in a two weeks period of time. Where was this mass located, in the scalp itself or in the skull? Did it seem to be a bony mass?

DR. KELLY: It was a soft mass in the scalp. It was movable and nontender.

DR. BURDICK: Did you at any time consider biopsying this mass?

DR. KELLY: We didn't biopsy it because the boy was obviously dying. We had already gotten permission for the autopsy.

DR. BURDICK: All right then, we have a very rapidly growing soft tissue mass in the right side of the scalp. The additional findings on physical examination were primarily confined to the chest, where there was dullness and absent breath sounds over the right apex, especially posteriorly. This would go along with the large mass which was to be found later on x-ray. No mention is made as to whether there was any local heat or tenderness on palpation of the area.

DR. ROEMMELT: Not noted.

DR. BURDICK: On admission to the hospital temperature, pulse, and respirations were normal; the blood pressure was 128/64. He had a mild secondary anemia. The white count was normal. The sedimentation rate was 48, which is elevated. Coagulation and bleeding times were normal. The prothrombin was 76 per cent of normal, which I don't know quite how to explain. I don't know whether that means that there was an increased bleeding tendency in this boy or whether it possibly means that there was some liver damage. If he had a neoplasm, it might mean that there had been involvement of the liver.

DR. ROEMMELT: There was only a one second difference between the control and the patient.

DR. BURDICK: We will consider that normal. The total proteins were 5.8, which is just a little bit on the low side. On admission to the hospital a large x-ray of the chest was taken. May we see that?

DR. BURCH: The chest was negative except for (1) a rounded circumscribed area of opacity 8 cm. in diameter in the right apical region extending down to the fifth rib level posteriorly and (2) a slight irregularity of the margins of the second rib right posteriorly (Fig. 1).

Bucky films showed even more definitely the destructive changes in the second rib from the costovertebral angle out to the lateral angle of the rib, contiguous with the mass.

A film of the forearm was taken which was negative. A progress plate was taken which showed the mass extending down to the sixth rib; in other words, the mass has grown considerably in nine days time. The films of the skull reveal no bony change. A soft tissue mass was reported on the vertex. I don't see any unusual soft tissue swelling on the film. The last film was taken three days before he died, and the mass was as before with adjacent pleural widening below it (Fig. 2). We can see a little fluid appearing at the right base. The periosteal changes have progressed further in the second rib.

DR. BURDICK: Were there other nodules in the lung on that side?

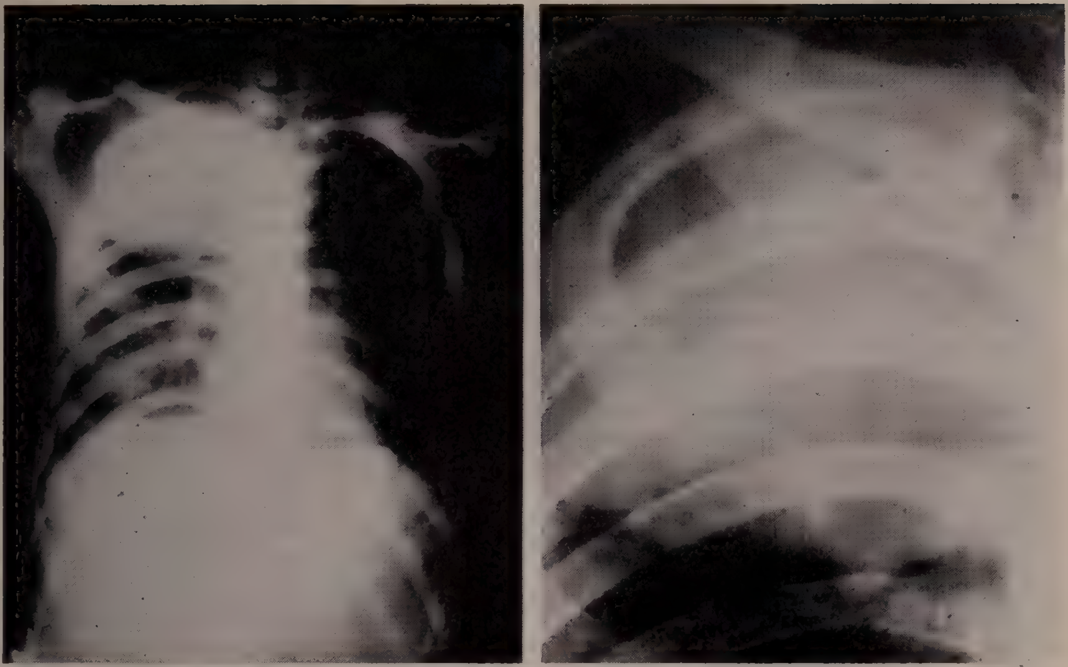

FIG. 2. X-ray taken three days before death showing mass as before with adjacent pleural widening, a little fluid in right base, and progression of periosteal changes in the second rib.

DR. BURCH: Laterally below the primary large soft tissue mass, there was a smaller new area of increased density that could be pleural fluid or tumor.

DR. BURDICK: Did you notice any destruction of the pedicles of the vertebrae or widening of the intervertebral spaces?

DR. BURCH: No special films were taken of the spine to check detail on that point.

DR. BURDICK: Then this boy's course was very rapidly downhill, and his entire hospitalization, as you've heard, was a matter of fourteen days. Eleven days after admission, he developed what was presumably a complete paraplegia. He had difficulty in urination, followed by inability to move his legs with absence of pain sensation and deep reflexes. All of this is described in the protocol. We postulate that he developed a complete paraplegia from the fourth thoracic level down, which would correspond to the second thoracic vertebra, the dermatomes being approximately two below the vertebrae. A lumbar puncture showed no cells but did show a marked increase in the spinal fluid protein to 428 mg. This certainly indicates that something is irritating the cord. Later he developed fluid in the chest, as you've heard. He became very dyspneic, which may mean that his intercostal muscles were knocked out. The temperature rose sharply, to 107 F. I believe, and he expired. I wonder if there was any question of giving x-ray therapy to this case or if any surgery or biopsies were done?

DR. KELLY: A surgeon saw him and told us there was no need to operate. I don't believe they even wanted to do a biopsy. X-ray therapy was not used.

DR. BURDICK: We have, in summary, a fourteen-year-old boy who, following a trauma to the right upper anterior chest, developed some pain, first in the right chest and then later in the left chest with radiation down the left arm. Pain became severe and persistent, and approximately two and one-half to three months later he was admitted to the hospital. By x-ray he was found to have a large mass in the right upper posterior chest with irregularity of the second rib posteriorly. A small mass in the right side of the scalp was noted which increased very rapidly in size before death. The course was very rapidly downhill. The final development was a paraplegia at the fourth thoracic level.

In discussing the differential diagnoses, we might divide the headings into six main groups. First are the congenital conditions. Now what possible congenital conditions could be present in the chest to cause these findings? There are dermoids and teratomas occurring in the mediastinum. However, dermoids and teratomas occur more commonly in the anterior rather than the posterior mediastinum. I would not expect them to cause erosion of a rib, as was shown to be present in this case. And I would think that we would have had some evidence of a mass on the earlier film.

Another congenital abnormality which could be present is primary hamartoma, which occurs very commonly in the lung. Hamartomas are a congenital arrest of tissue, usually a mixture of varying types of tissue, but these are more apt to be benign rather than very rapidly growing, as we see in this case. So, I would veer away from anything congenital in the particular situation.

The second main heading that we have to consider are the infections. What possible types of infection might occur either in the chest or in the spine to produce this particular picture? Osteomyelitis? Osteomyelitis with destruction of the rib and a large soft tissue mass adjacent to the rib—we would expect that there would be localized tenderness, perhaps heat, over the area; we would expect that the pain would have been accompanied by systemic symptoms, high fever, perhaps chills, leukocytosis, or other findings that would go with a generalized infection. Another type of infection that we might have to consider would be tuberculous abscess. I think this rather unlikely. Here again, we would expect the boy to have marked systemic response with fever. We know that tuberculous abscesses may start in the vertebra as a Pott's type of abscess and burrow its way, perhaps along the chest wall, and point either in the chest wall itself or out in the flank. But, we would expect there to be evidence on x-ray of vertebral destruction, which we don't have here.

Could this be something like an epidural abscess, something which started adjacent to the spine and then found its way along the proper tissue planes so that it seemed to localize in the upper posterior portion of the chest? Again, I think it is unlikely. In an epidural abscess we would expect our spinal symptoms to be first. Here again, there would be marked systemic response, and we should have some vertebral body or pedicle destruction, which we don't have here.

In view of the fact that this boy developed a complete paraplegia, could this be some infection of the central nervous system such as a very unusual type of poliomyelitis? Again, I think that is most unlikely for several reasons: first, because we are dealing primarily with a large mass in the chest and the neurologic symptoms developed late, and, second, our spinal tap revealed a marked increase in protein with no cells in the spinal fluid, which would be against any primary process involving the spinal cord. So, in general, I would like to rule out any infectious causation in this case.

The third group is the traumatic conditions. What possible traumatic conditions do we have in this location which should be considered? Could this have been due to bleeding, an organized hematoma which formed following the injury, or could this be a localized, encapsulated hemothorax? I think this unlikely in view of the fact that there was considerable rib destruction shown by x-ray. Could this have been a very bizarre arteriovenous fistula, which is certainly very rare if it arises in the intercostal vessels? Arteriovenous fistulas have been reported in the intercostal vessels following trauma, but, again, I think it would not be so rapidly invasive. It would not cause such very rapid rib changes; this boy would not be expected to go downhill so rapidly. Also, we would probably find that there would be a bruit heard over the mass. If this were to go on for any period of time, we would expect some secondary cardiac enlargement, which this boy did not have on the films. Could this have been a rib fracture as a result of the trauma, which has gone on to callous formation and, perhaps, some other secondary scar formation? Again it is unlikely because in the initial films there was no evidence of fracture. So, I would be against any specific traumatic condition in this case.

The next heading is the degenerative conditions. These we are primarily concerned with in elderly patients. In a boy, though, there are various types of rare neurologic degenerative conditions such as the progressive muscular atrophies, etc., which I would think unlikely inasmuch as the neurologic signs developed late.

The next heading is the metabolic conditions. Could this in any way be related to parathyroid disease, where we know we have cystic changes in the bones? We would expect this to be a more diffuse process. We would expect that on x-ray there would be marked cystic changes in the bones rather than the ragged, irregular changes described in this case. Rare metabolic conditions are the lipid dystrophies such as Hand-Schüller-Christian disease. This would be unlikely because in these diseases we have other changes in lipid metabolism, and we are very apt to find osteolytic lesions in the skull. So, I would like to rule out, for these reasons, all these five general headings and come to the sixth heading which is neoplastic disease. I would like to confine my discussion from now on to neoplasms. I think the diagnosis in this particular case falls into this group.

First of all in favor of it, we have a boy who had a large tumor mass in the upper posterior portion of the chest with extensive erosion of a rib in a very short period of time. It progressed very quickly, and the course was very rapidly downhill. In addition, there was a secondary nodule described in the scalp. If the diagnosis was neoplastic disease, we have to break it down into the types of neoplasm that might be encountered.

Could this neoplasm arise primarily in the lung? Could this be some sort of a sarcoma of the lung? Could this be a bronchogenic carcinoma? I think both of these conditions are extremely rare in a boy of this age. Furthermore, we would not expect that a primary lung tumor would behave in this manner. In the initial film there already has been, at least in hindsight, some changes in the second rib.

The next type of neoplasm is that arising from the pleura. Here we have to consider such things as a primary mesothelioma which is a malignant tumor arising from the surface of the pleura. I believe they can occur in young people. They may become very rapidly malignant. However, there should have been some evidence of increased difficulty in breathing or pain on respiration, which this boy did not have. Furthermore, I would not expect the very extensive rib destruction that was seen in this case to occur with a primary pleural neoplasm.

Could this have been a tumor arising in the soft tissues of the upper posterior mediastinum? The common tumors which occur in that particular area are usually from nerve tissue, either neurofibromas or ganglioneuromas or, if they go on and become malignant, the so-called neurofibrosarcomas. It's a well-known fact that we may have benign neurofibromas occurring in the posterior mediastinum and that with the intrathoracic component there may be an intraspinal component, the so-called "dumbbell tumor." This tumor usually is benign, a benign neurofibroma rather than a neurofibrosarcoma, and it usually does not have the very rapid course that this particular patient showed. In addition, there should be rather marked destruction of the pedicles or lamina on the x-rays with widening of the intervertebral spaces due to pressure. While I think this diagnosis has to be strongly considered in this case, I think the absence of these particular findings on x-ray, the absence of destruction of the pedicle and the intervertebral space, would be against the diagnosis. Furthermore, these tumors are rare in childhood. They usually occur in adults and usually in patients over thirty-five or forty. So, while we must think of this, I think it was not the diagnosis in this case.

We come to the fourth and final type of neoplasm, which is primary bone tumor. In a discussion of bone tumors there are many, many different classifications, as you well know, and any discussion can be very confusing. In this case, because of the fact that it was a very rapidly growing tumor which caused death in a very short period of time, we are dealing with a very malignant tumor. The benign tumors such as the osteomas, the chondromas, the osteochondromas, the benign giant cell tumors, I think, are out of the picture in this case. There were no cystic changes described in the x-ray. There was no fine honeycombing, or trabeculated appearance, which usually goes with giant cell tumors, be they of the benign variety or of the malignant variety, which can occasionally occur.

In any discussion of the malignant bone tumors, there are approximately four that we have to consider: (1) primary osteogenic sarcoma of bone, (2) the Ewing sarcoma, (3) primary reticulum cell sarcoma of bone, and (4) chondrosarcoma. As a fifth, we might consider a solitary myeloma of bone.

In general, osteogenic sarcoma occurs in childhood or young adult life but may occur at any age. The majority of osteogenic sarcomas occur below the age of thirty-five or forty. However, osteogenic sarcomas occur more commonly in the extremities; approximately 70 per cent occur in the extremities. They may occur primarily in the femur, which is the most common, the tibia, humerus, etc. They may occur primarily in the bones of the pelvis, and they may occur primarily in the rib. So, I think that diagnosis definitely has to be considered in this case. However, osteogenic sarcoma usually starts at the metaphysis or toward the end of the bone where there will be a rather uniform enlargement of the bone. It spreads from the metaphysis to the diaphysis of the bone and not in the manner seen in this case.

Osteogenic sarcoma metastasizes through the venous system to the lungs. At a very early stage, we find that there are pulmonary metastases in the very malignant osteogenic sarcomas. I believe that this boy had a primary malignant bone tumor which metastasized to the spine, and as a general rule osteogenic sarcomas do not metastasize to the spine. They may, I believe, but usually they metastasize first to the lungs.

The second type of tumor which we have to consider is reticulum cell sarcoma. While these are very rare tumors, as the name applies, they arise from the reticulum of the bone tissue. They are not quite so rapidly invasive, as rapidly malignant, as this particular tumor was, and they are much more common in adults. They occur over the age of thirty-five or forty, and they are very rare tumors of childhood. I think that tumor might be a possibility in this case.

Primary chondrosarcoma of the bone arises usually near the end of the long bone rather than in the center of the bone as was seen in this case. Chondrosarcoma does not occur primarily in the ribs but occurs more commonly either in the pelvis or extremities. It may be rapidly invasive and rapidly destructive, but I don't believe quite as rapid as in this instance.

Solitary myeloma of bone does occur but not commonly in this age group. It usually occurs in older individuals. It may cause a large soft tissue mass such as we saw here. We expect there to be Bence Jones protein in the urine. Again, I think myeloma unlikely.

So I come down to what I offer as my diagnosis in this case, that is, a Ewing's sarcoma arising in the second rib posteriorly and spreading very quickly to involve the soft tissue of the posterior chest and metastasizing to the spine and to the scalp. Ewing's sarcoma is very highly malignant, spreads very quickly, and we know that it occurs most commonly in childhood and in young adults. It is extremely rare to find a case of primary Ewing's sarcoma over the age of thirty. This tumor characteristically arises in the shaft of the long bone; it appears more commonly in the extremities, but it does occur in the ribs. Arising in the shaft of the bone there is very early periosteal irregularity produced. The destruction may be either on the outer table of bone or on the inner table so that either the periosteum or endosteum may be destroyed early. In a very early stage of the disease there is a large soft tissue mass produced. Against Ewing's sarcoma are two things which are a little bit disturbing. One is that these patients often have fever, which, it is true, that this boy had late, but usually during the course of the disease they run a temperature. Also, there may be some local tenderness or heat over the area of the tumor.

Because this tumor arose in the shaft of the bone, and because, very early, there was a soft tissue tumor mass which destroyed a large segment of bone, and because Ewing's sarcoma may metastasize to other bones, I would like to make that diagnosis in this case: Ewing's sarcoma arising in the right second rib with metastases to the spine and scalp.

Dr. Roemmelt: Thank you, Dr. Burdick. Would any of you care to ask any questions or make any comment?

Dr. Burch: Do you see soft tissue metastases in Ewing's tumor?

Dr. Burdick: Ordinarily you do not see soft tissue metastases. It has been described rarely. Ordinarily they are bony, and that is why I wanted to know particularly whether this mass in the scalp was in the bone or in the soft tissue.

Question: How about fibrosarcoma from the periosteum?

Dr. Burdick: I think it very definitely should be considered. I did not go into the breakdown of all the different types of primary bone tumors, and I think that we could get very involved in our discussion if we did. There are so-called sclerosing tumors of bone; there are fibrosarcomas which many believe actually arise from the periosteum as you say. I think that definitely should be considered in this case. But it's hard for me to understand the paraplegia which developed very, very suddenly in this boy on that basis. At no time do we have evidence on the x-rays of a direct extension of the mass through intervertebral foramina with destruction of pedicles, etc., as we might expect with something like a fibrosarcoma. So I have to postulate that it metastasized to the spine, and the one tumor that does that is a Ewing's.

Question: You said nothing about the history of trauma in this patient?

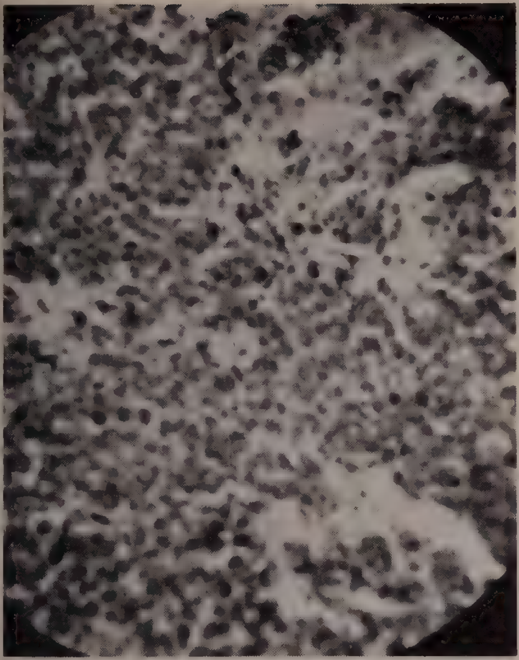

FIG. 3. Section from tumor mass at apex showing typical histologic picture of Ewing's tumor.

DR. BURDICK: I purposely have left that out at the moment. I have much to say about that in a few moments.

Pathologic Report

DR. JAMES A. MITCHELL: The body was that of a well-developed and well-nourished boy of fourteen years. The heart and mediastinum were shifted to the left. The right pleural cavity was filled with thin, serous, straw-colored fluid.

There was a tumor mass about the apex of the right upper lobe which was moderately soft and grayish yellow in color. It extended into the chest wall involving the second rib posteriorly and extended medially into the second thoracic vertebra. The tumor compressed the lung downward and involved the visceral pleura but did not extend into the lung parenchyma. There were several small metastatic grayish nodules, 5 to 6 mm. in diameter, along the mediastinal pleural surface on the right and several along the diaphragmatic surface of the pleura. The left lung on section showed several small metastatic foci throughout the parenchyma of both lobes.

The tracheobronchial tree was patent throughout and showed no gross evidence of tumor. The heart and abdominal viscera were essentially negative, and there was no evidence of lymphadenopathy in the hilus, periaortic, or mesenteric lymph nodes. The kidneys and adrenal glands showed no gross pathologic changes.

The scalp over the region of the right parietal bone revealed a bulging globular tumor 6 cm. in diameter situated between the scalp and the bone and not eroding or infiltrating the bone itself.

Following the autopsy we were not certain as to the origin and type of tumor which presented itself. The possibility of a mesothelioma of the pleura was considered, but a definite diagnosis was not made until the histologic sections of the tumor were examined.

Section from the tumor mass at the apex showed the typical histologic picture of Ewing's tumor (Fig. 3). It was composed of small, polyhedral-shaped cells with a pale cytoplasm and small hyperchromatic nuclei without nucleoli or a definite cell border. In areas the cells tended to to form pseudorosettes which is one of its distinguishing characteristics.

The one tumor in children that this picture may be confused with histologically is the neurocytoma or neuroblastoma arising in the adrenal glands, but gross and histologic examination of the adrenals ruled out this possibility. Dr. Burdick has covered the essential features of this tumor in his discussion. Ewing thought this tumor consisted of angioendothelial cells, and he called it endothelial myeloma and believed it arose from endothelium. There has been much controversy in recent years as to the cell of origin, and the idea is growing that this tumor is lymphoblastic and arises from the reticular tissue of the bone marrow rather than from endothelial vascular elements.

The metastatic foci in the left lung and the lesion in the scalp showed the same histologic picture.

DR. BURDICK: Did the spinal mass compress the spinal cord?

DR. MITCHELL: The spinal cord was not examined, but the vertebra was eroded, so I don't think there is any doubt that the spinal cord was involved which accounts for the neurologic signs.

Summary

DR. BURDICK: This case is a very exciting one, and the relationship of the initial trauma to the subsequent development of the neoplasm, I think, is very interesting. This subject has been debated back and forth for many, many years.

I had occasion to review a symposium on the relationship of trauma to malignant disease which was held at the University of Chicago four years ago. At this conference there were three doctors, two of whom were pathologists, and two lawyers. It is very interesting to read the question and answer period because it's a highly debatable subject, as you all know, and has many medical-legal implications. In general, most medical men feel that we do not know the cause of malignant disease, and, not knowing the cause, we cannot prove that trauma, a single trauma, per se causes malignant disease. The lawyers, on the other hand, feel that because you do not know the cause of malignant disease, you cannot disprove that trauma has some relationship, and, therefore, you must give the patient the benefit of the doubt. The debate goes back and forth.

The arguments against a single trauma causing malignant disease are based on a statistical analysis of the incidence of trauma in this country. It is estimated that there are approximately ten million traumatic injuries occurring every day in this country, and these are primarily in children and young people. And yet the incidence of carcinoma or malignant disease is certainly low in childhood and young adult life and much higher in the older age groups. Furthermore, every single day in all the hospitals of the country there are traumas performed in the nature of surgical operations. At no time has a neoplasm every been proved to occur at the site of the operative incision. This is offered as evidence against the contention that a single trauma can be the inciting factor in neoplastic disease.

Experimentally, for many years pathologists have been trying to produce neoplasms by injuring various parts of experimental animals, as you well know. They have fractured legs many, many times and have been unsuccessful, by means of one single direct trauma, in producing carcinoma. Also in a patient with a known carcinoma, they have never been able experimentally to incite a metastasis. In other words, they have never been able to injure a part at a distance and cause a metastasis to occur at that site. So, in general, it is believed that trauma itself is purely coincidental and simply calls attention to the neoplasm in the patient.

I thought it would be interesting to read to you, very briefly, the five postulates that Pack[1] set up governing the relationship of trauma to the origin of malignant tumors. In order for there to be a direct relationship he said:

1. The site of the injury must correspond to the region in which the tumor develops. That would be obvious. In this particular case trauma was to the anterior chest, and the tumor subsequently occurred at another spot, the posterior chest wall.

2. There should be definite proof of injury over this particular area. In other words, local evidence of the injury should be found, such as swelling or ecchymosis, not just the patient's or the family's story. That's why I asked the question whether at the time of the original injury there was any swelling or local ecchymosis on the chest. Furthermore, this swelling, hematoma, or ecchymosis should persist right up until the time that the diagnosis of the tumor becomes obvious. In other words, it shouldn't go away completely and then later a tumor develop.

3. There should be a reasonable time interval elapsing between the trauma and the later development of the tumor. In this case the trauma occurred, and two days later the patient complained of pain in the chest. I believe on those initial films in hindsight there is already the beginning of a neoplasm. That would be much too short a time interval for a neoplasm to occur following the episode of trauma.

4. This is extremely difficult to prove, the previous integrity of the part. We have to rely upon previous examinations, in this case bone x-ray examinations, which would show that before the trauma the part, the rib, was perfectly normal and that there was no evidence of the changes subsequently found.

5. The character of the growth structure of the particular tumor should be simple and not complex. By that he means that it should be either a fibrosarcoma or soft tissue mass and not a complicated internal or "organoid" tumor, as Dr. Pack called it, where the tumor might be in the stomach, liver, or some other internal structure.

So those are five postulates which he believes have to be fulfilled in order for you to say there is a direct, causal relationship. As you can see, that would be extremely difficult to do in this case.

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CASE REPORTS

Intracardiac Foreign Bodies

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Success with surgery in the treatment of heart wounds with or without retained foreign bodies is neither new nor rare. Dshanelidze[1] in 1924 found a 50 per cent mortality rate in 535 surgically treated heart wounds which he had collected from the literature up to 1921. In 1939 Decker[2] reported 109 cases of heart injury with retained foreign bodies which he had collected from the literature since 1900. The operative removal of 47 of these carried a 17 per cent mortality which did not differ appreciably from that of conservative management. This operative mortality was uniformly associated with severe infection which had remained the principal deterrent to surgical removal.

Such figures persisted until the recent World War when many medical advances made possible the lack of mortality in the series of cases reported by Harken[3] and by Miscall and Harrison.[4] The successful removal of a bullet from the right ventricle seems to merit reporting to illustrate some of the principles involved. This has particular value in civilian life, where the relative rarity of such injuries precludes wide individual experience and where the very efficient organization streamlined by the military for their care does not exist.

Case Report

C. P., a sixteen-year-old Puerto Rican male, was admitted to the Queens General-Triboro Hospital Medical Center on January 4, 1951, shortly after having been shot in the chest accidentally with a 22-caliber rifle. An apprehensive state, cold, clammy, perspiring skin of ashen gray color, rapid shallow respiration, feeble thready pulse, and lack of obtainable blood pressure were ready evidence of profound shock. He complained of minor pain in the small, clean nonsucking wound of entrance just to the left of the sternum in the fifth intercostal space from which a small amount of blood oozed.

Physical examination showed clear lungs and faintly audible heart sounds over the cardiac area which was enlarged in all directions. The hemoglobin stood at 13.3 Gm. with 4,200,000 red and 6,300 white blood cells with a normal differential. Fluoroscopy and plates which showed marked increase in the cardiac shadow, and greatly depressed excursion confirmed the clinical impression of hemopericardium with tamponade (Fig. 1). Replacement therapy with plasma and blood, positioning, sedation, and the use of oxygen were immediately instituted.

When very close observation failed to elicit that prompt and adequate improvement in the vital signs which was expected with good reason, the need for more aggressive action was clear. The relief of the tamponade by aspiration of 200 cc. of dark blood from the pericardium through the anterior approach evoked a dramatic clinical improvement with a drop in pulse rate to 80 and a rise in blood pressure to 100/70. After the prophylactic administration of tetanus antitoxin and polyvalent gas serum the patient was transferred to the Thoracic Service where penicillin and streptomycin were added to the routine. At six hours the stabilization of the pulse, blood pressure, and respiration coupled with his very satisfactory general condition indicated that the bleeding probably had ceased. This impression was supported by further roentgen examinations which failed to show any increase in the size of the pericardial outline.

Two days after admission his general condition deteriorated with a fever to 102 F., a rising pulse rate, and a falling blood and pulse pressure. Previous unfavorable experience with the conservative approach to recurrent tamponade, retained foreign bodies, and infection played a large part in the decision to employ surgery rather than simple reaspiration.

Under ether anesthesia with endotracheal technic the thorax and pericardium were explored through a left parasternal incision extended into the fifth space with resection of the third, fourth, and fifth costal cartilages. Much clotted blood was evacuated and the pericardial sac cleaned with saline irrigation and light sponging. The bullet had missed the pleural space in its course into the right ventricle, on the anterior wall of which a 6-mm. wound had sealed over completely. Another small ecchymotic area adjacent to the anterior descending branch of the left coronary artery was attributed to trauma during anterior pericardial aspiration. In spite of diligent but gentle search supplemented by roentgenograms the bullet could not be found. It was apparent that either it had left the heart as an embolus or that the speed of the portable plates was too slow to stop motion and permit visualization. Operation was terminated with loose closure of the pericardium, tube drainage of the left thorax, and closure of the incision in layers using interrupted silk throughout.

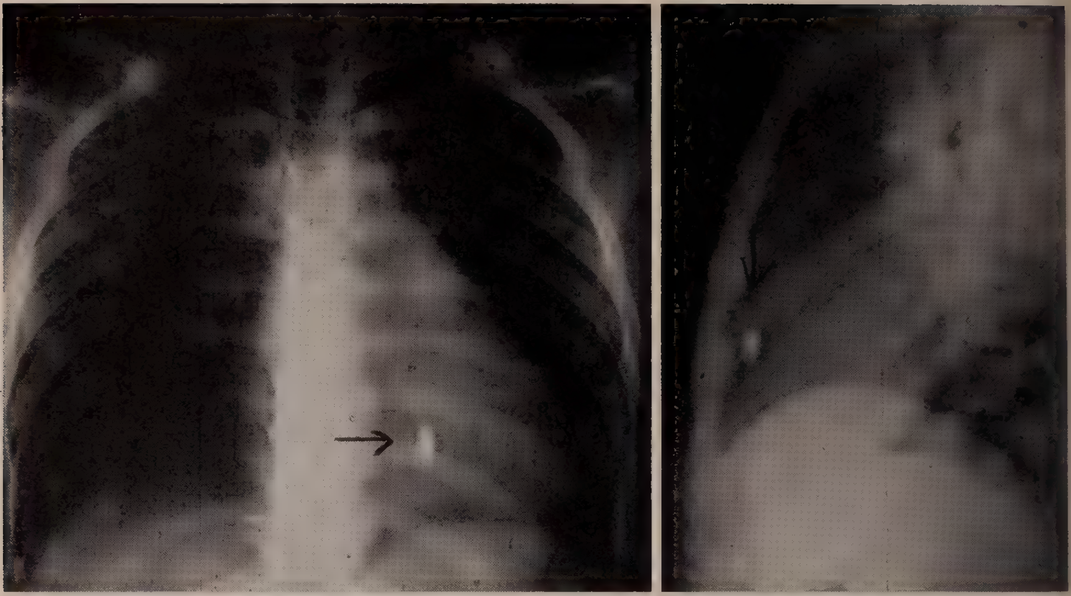

FIG. 1. Preoperative Bucky films on admission. Note motion of bullet.

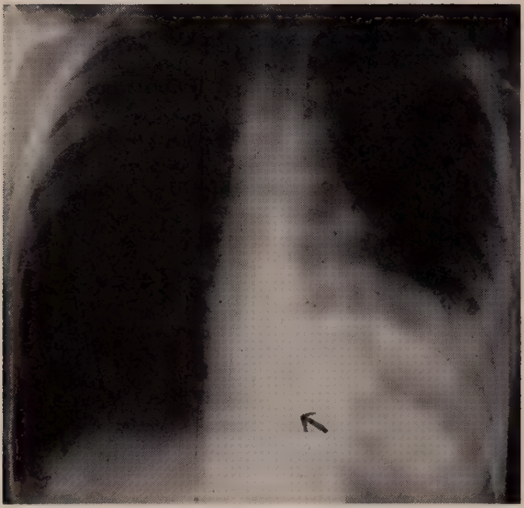

FIG. 2. Rapid exposure film during interval between thoracotomies. Note change in position of missile within cardiac silhouette.

With adequate antibiotics, fluid, blood, and supportive therapy his convalescence progressed quite smoothly.

In the ensuing days further fluoroscopy, angiocardiography, and kymography showed the bullet in the cardiac silhouette and possibly within the right ventricle (Fig. 2). The heart was re-explored on February 2, 1951, twenty-eight days after injury. With ether anesthesia and endotracheal technic the previous incision was reopened. After the division of some fine pleuropericardial adhesions a marked but regular tachycardia developed. This subsided after the insertion of 10 cc. of 2 per cent procaine into the pericardial sac, and arrthymia was not a problem during the rest of the procedure. With a thin additional nylon glove the heart was explored by digital pressure between the left thumb and index finger. After several unsuccessful attempts the bullet finally was located moving freely in the right ventricle. It was trapped at the apex, and while its fixed position in the chamber was maintained by the digital pressure, two number 3-zero silk sutures were placed under it. The use of these transluminal hammock sutures to add stability, to minimize the chance of loss of the missile, and to reduce blood loss has been described elsewhere. The anterior ventricular wall then was incised and the edge of the bullet pressed into view which permitted its easy removal with Allis forceps. Blood loss during this was limited to less than 50 cc. by crossed tension on the hammock sutures which were removed after closure of the heart with two fine interrupted silk sutures tied over Gelfoam. The pericardial and pleural spaces and the incision were treated as in the first operation, and the patient was returned to his bed in excellent condition after receiving 750 cc. of blood.

Recovery was satisfactory until the eighth day when fever to 103 F. was accompanied by chills, a nonproductive cough, and pain in the right lower chest where a few fine rales but no friction rub appeared. In twenty-four hours chest plates changed from normal to a definite shadowing over the right lower lobe (Fig. 3). When the fever rose again to 104 F. and the electrocardiograph and other findings were reported, the diagnosis of pulmonary infarction was established. It was attributed to the presence of a mural thrombus in the right ventricle. Anticoagulant therapy with heparin and Dicumarol was combined with more intensive use of antibiotics. The fever fell to normal on the fourth day, and the

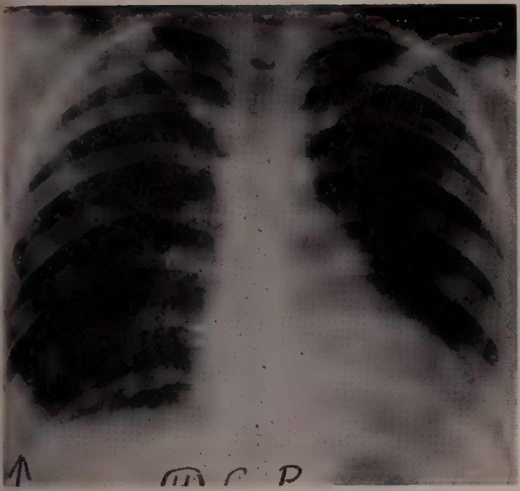

FIG. 3. Eleven days after second thoracotomy. Note obliteration of right costophrenic angle and congestion at right base as evidence of pulmonary infarction.

lungs had cleared by the tenth day both on the plates and on physical examination. The electrocardiogram which first indicated evidence of right heart strain showed a steady return toward normal. All treatment was discontinued in twenty-five days, and he was discharged. He returned to school in three weeks and is now perfectly well more than one year after injury (Fig. 4).

Comment

The treatment accorded this patient has several points worth emphasis. An excellent early result followed a careful analysis of and attention to the details of the problem. Simple supportive measures, including the administration of plasma, blood, oxygen, sedatives, etc., were used with that restraint generated by a wholesome respect for the grave danger of an overburdened circulation in the presence of intrapericardial hemorrhage and tamponade. The well-timed application of pericardial aspiration yielded an excellent, prompt, and sustained result. Certainly experience has taught that such conservation is the safest and most uniformly successful means of bridging the critical early period and should not be abandoned until an adequate trial has proved it to be wanting.

When response did not measure up to expectancy, the need for more energetic methods became readily apparent. This decision was and usually must be based upon clinical evaluation rather than a mass of laboratory data. The need for emergency surgery usually arises when continuing blood loss or tamponade cannot be controlled by the conservative measures. When the heart or great vessels are the origin of such recurrent hemorrhage, it is rare to have the opportunity to use surgery since these patients usually succumb before they can reach any care. In many of the cases which do come to operation attention should be directed to the lung or chest wall as the common sources of continuing hemorrhage. Furthermore, although bleeding from a wound may cease, oozing may persist as a cause of recurrent or delayed tamponade. If surgery is contemplated, it is advisable to keep these facts in mind in planning the approach. However, it is fortunate that most cases follow the pattern of this reported case, and the need for radical early treatment rarely arises.

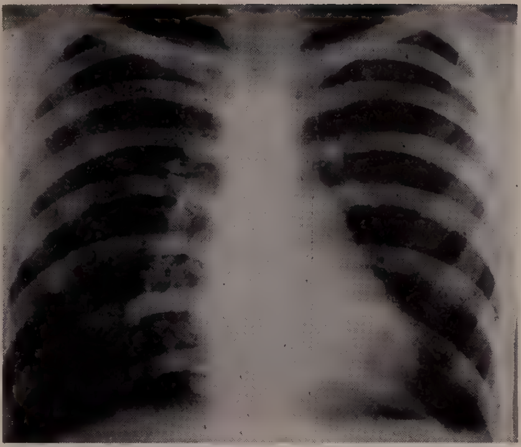

FIG. 4. Thirteen months after operation. Lung fields clear and heart has resumed normal configuration.

When evidence of recurrent tamponade developed, surgical exploration rather than aspiration was employed for several reasons: Infection seemed to be mounting; the exact position of the foreign body and its relation to infection and hemorrhage were not entirely clear; and the patient who had been well prepared for operation by the use of conservative methods seemed well able to stand the procedure without risk. The excellent result speaks for the wisdom of the decision.

Certain facts should be raised in answer to those who question the advisability of removing the bullet in a second operation. Foreign bodies within the heart cannot be neglected without some mortality. In the literature[2,5–9] they have been associated frequently with embolization and infection. In the experience of one of the authors (L.M.), the ability of the antibiotics to protect against such infection has removed this main reason for not operating. Experience has proved also that it can be a very safe procedure. The part that the original injury and the operation for removal of the bullet played in the late pulmonary infarction can be debated. Since it appears impossible to separate them, perhaps one more reason for removal exists. The wisdom of carefully observing all the cardiac injuries and the institution of anticoagulant and antibiotic therapy as soon as any evidence of embolism appears are clearly demonstrated.

Summary

1. A review of the literature for surgical removal of intracardiac foreign bodies has been made.
2. A report of a case which occurred in civilian life is presented.
3. Discussion of the pre- and postoperative management is presented.
4. The facts for and against removal are cited.

Conclusions

1. Surgical intervention is recommended as a definitive treatment for intracardiac foreign bodies because of the high incidence of serious complications with conservative therapy.
2. Present-day supportive aids including use of antibiotics, blood, and improved anesthesia make this a safe procedure.

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Coccidioidomycotic Granuloma in New York City

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COCCIDIOIDOMYCOSIS is an endemic disease of the Southwest and South of the United States and is rarely observed in any other part of the country. Occasionally, however, a person may acquire an infection in an endemic area which may become apparent only when the individual moves to another region.

Thus, occasionally, cases have been observed in other nonendemic parts of the United States. With the exception of the case report of Rifkin *et al.*[1] who described the coexistence of pulmonary tuberculosis and pulmonary coccidioidomycosis, there is no record of another case in the State of New York. We believe, therefore, that this is the first case to be described in New York City of the cutaneous and osseous manifestations of coccidioidomycosis.

Our observation is an additional illustration of the protean nature of this disease, which may account for the probable failures in diagnosing the condition. The large and transient population of this city should bring to our attention from time to time other illnesses which are endemic in other parts of this and other countries.

Case Report

P. S., a twenty-seven-year-old, white male, of Mexican extraction, was born in Texas and lived there up to December, 1950, at which time he moved to New York City.

He was first seen in January, 1951, for a painful, swollen left knee of three months duration. There was a history of gonorrhea in 1939 for which he had received treatment. Physical examination at that time revealed a tender, diffusely swollen left knee. It was tapped, and 30 cc. of yellowish, cloudy fluid were aspirated. Culture of this fluid for bacteria was negative. X-ray examination of the left knee revealed no bone pathology; x-ray findings of the chest were also negative. Repeated search for gonococci from prostatic smears and urine cultures were to no avail. The blood Wassermann, Mazzini, and Kahn were 4 plus.

The patient received daily 1,000,000 units of penicillin for ten days and was then discharged with the diagnosis of gonococcal arthritis. His condition appeared slightly improved.

A few weeks later he was readmitted to the hospital. A large, painful, hot, and tender fluctuating mass had developed in the dorsolateral aspect of the left knee. This was incised and drained. A culture of the purulent material revealed Coccidioidis immitis. The culture mount showed numerous arthrospores, racquet mycelia, and occasional chlamydospores (Fig. 1). Inoculation of this culture material into a guinea pig produced the disease with typical spherules (courtesy of Dr. C. W. Emmons, National Institute of Health, Bethesda, Maryland). Healing was very slow. The patient was discharged two months later, the wound still partially open. Subsequently, a sinus tract developed at the lower pole of incision. In July, 1951, excision of the sinus tract was performed. The wound was approximated and healed well.

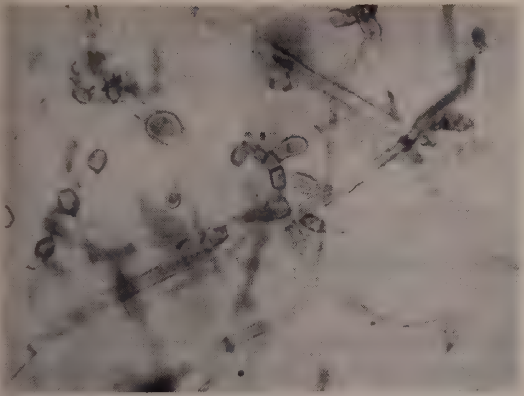

FIG. 1. C. immitis culture mount, showing arthrospores, racquet mycelia, and chlamydospores.

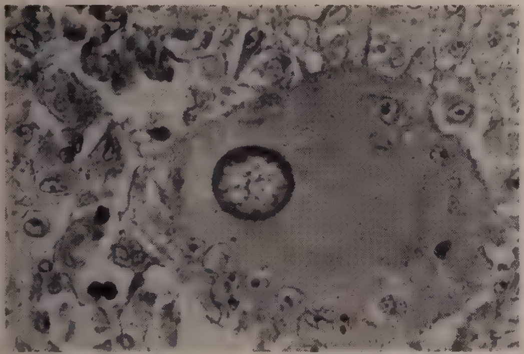

FIG. 2. Coccidiomycotic granuloma composed of lymphocytes, plasma cells, and giant cells, one of which contains a spherule with endospores.

The biopsy report was as follows: "Section reveals a skin disrupted by a sinus tract lined with granulomatous tissue. The granulomatous tissue is composed of lymphocytes, plasma cells, and numerous multinucleated giant cells, frequently of great size. In a fair proportion of the giant cells, as well as in the debris, large (approximately 35 micra in diameter), rounded spherules containing numerous endospores are seen (Fig. 2). At the margin there is considerable fibrosis, indicating that the sinus tract was incorrectly removed."

The patient failed to return for follow-up and was not seen again in the Skin Clinic of Bellevue Hospital until November, 1952. He stated that approximately six months after the excision of the sinus tract, the lower edge of the scar broke down. At this time he presented a scar measuring 8 cm. over the lateral surface of the left knee. At the lower pole of the cicatrix was a heaped-up granulomatous sinus opening measuring 2 cm. in diameter (Fig. 3). A yellowish, thick, purulent material drained from this opening. Culture from this material revealed C. immitis.

An x-ray of the left knee at this time showed a granulomatous lesion on the lateral aspect of the lateral condyle of the left femur (Fig. 4). X-ray findings of the chest were again negative.

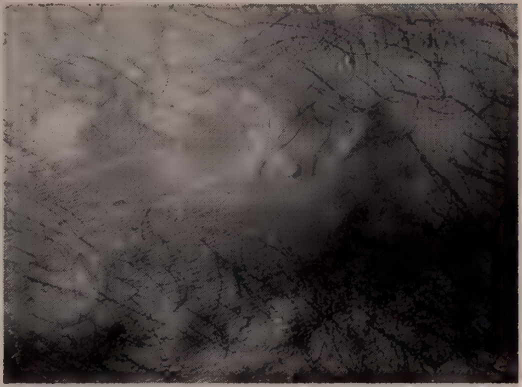

FIG. 3. Sinus opening surrounded by granulomatous tissue.

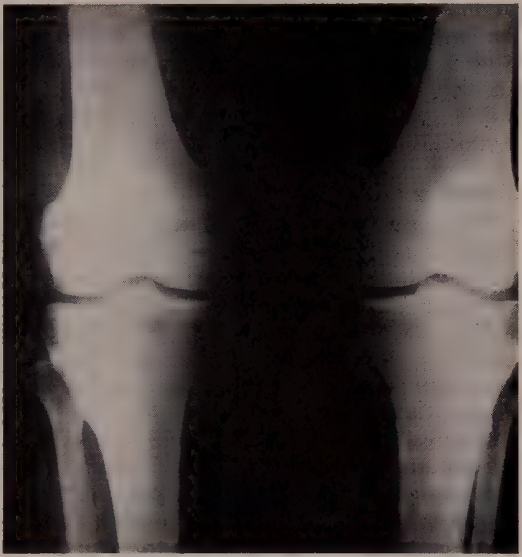

FIG. 4. X-ray of the left knee showing a granulomatous lesion of the left femur.

Comment

Coccidioidomycosis generally has a tendency to develop multiple foci of infection with active lesions of the lung. In most instances several bone lesions also develop. This case is unusual not only because of a monoarthritic involvement but also because the acute arthritic onset is a clinical rarity. It is of added interest that despite its long duration the disease has remained localized. This case should be a reminder of the fact that whenever an infectious type of arthritis fails to reveal bacterial pathogenes, deep fungous infection should be considered.

Summary

A case of coccidioidal granuloma, occurring in New York City and which at its onset simulated a gonococcal arthritis, is reported.

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SPECIAL ARTICLE

The Biologic Effects of Cosmic Rays

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THE earth is constantly being showered with cosmic rays coming from outer space. Their origin is unknown, but physicists have studied many of their properties both at high altitudes and at sea level in various parts of the world. The two questions that concern us here are (1) can cosmic radiation exercise any effect on living organisms similar to the action of other types of radiation, and (2) do cosmic rays behave differently in urban and in rural environments?

Nature of Rays

The primary cosmic radiation entering the earth's atmosphere consists largely of protons with energies of several billion electron-volts; there is even evidence that some of these primaries may have energies as high as 10^{17} electron-volts, i.e., 100 million times one billion electron-volts. This compares with the few hundred million electron-volts produced in man-made cyclotrons.

After collision with atomic nuclei in the upper atmosphere, the primary radiation is changed into two classes of secondary radiation: a "hard" component consisting largely of μ-mesons and a "soft" component composed of electrons, positrons, and gamma quanta. The mesons have a weak interaction with nuclei and can thus in some cases penetrate several hundred feet of rock or water before decaying. The soft component, on the other hand, is readily absorbed.

The intensity of cosmic rays is lowest in the equatorial zone and increases about 16 per cent to a maximum around latitude 45 degrees (north and south), namely, the temperate zone in which we live. It then remains fairly steady toward the two poles. At sea level in the temperate zone the intensity has been calculated at about 2 ion-pairs per cc. of air per second; it increases to a maximum of about 300 ion-pairs at altitudes between 20,000 and 30,000 meters, namely, near the top of our atmosphere. About two million cosmic particles of one kind or another are estimated to fall on a human body in the open air during a day.[1]

Taking into account the estimated specific ionization of cosmic rays at sea level, Hess and Meyers have calculated that the human organism is exposed to a cumulative intensity of 0.0315 r per year, whether the organism is indoors or outdoors. This is extremely low when compared with the estimated maximum tolerance dosage of 0.1 r per day for x-rays and gamma rays.[2]

Cascade Effect

An interesting property of the "soft" component of cosmic rays is its ability to produce cascades of electrons, positrons, and photons when passing through matter of fairly high atomic number such as some metals. A high-energy electron, on striking a lead plate, for example, may produce a photon radiation (the Bremsstrahlung process); this photon, interacting with matter, may then produce a particle-pair consisting of an electron and a positron and so on in a cumulative process which can result in the production of a cascade of several thousand particles with energies varying between 1 and 10 million electron-volts.[3]

Biologic Experiments

Figge[4] treated 174 male mice with 0.25 mg. of methylcholanthrene in sesame oil and distributed them equally in eight aluminum cages. Lead plates, 1/4-inch thick, were placed over five of the cages, these being expected to produce cosmic cascades. At the end of ten weeks the results reported were as follows:

Cage	Animals with Tumors
Without lead	33%
With lead	75%

In one cage, covered with a double thickness of lead and an iron plate, 91 per cent of the mice had developed tumors. The average latent period for the development of tumors in mice under lead was 8.5 weeks, compared with 11.3 weeks for the uncovered controls.

In a further experiment Figge placed his control group of mice in a Pennsylvania coal mine where they were claimed to be comparatively free from cosmic radiation, while the experimental group was placed under 5 and 8 cm. of lead at ground level.[5] The latent period for the induction of tumors was again stated to be lower in the lead-screened groups.

George and Horning[6] tried an experiment similar to that of Figge, using the same carcinogen, and found that induced tumors in mice developed within eleven weeks under 1 cm. of lead and within 12.1 weeks in uncovered cages. Varying thicknesses of lead, however, produced inconclusive results.

Eugster[1] used a special strain of white mice which by continuous inbreeding had a high incidence of congenital mammary cancer with rapid metastasis to the cervical region. Of the 509 mice used, 390 were covered with lead plates, and 119 were left uncovered to serve as controls. Of the mice that died of carcinoma, 91 per cent had been under cosmic cascade conditions, while 9 per cent were from the uncovered cages. Taking into consideration all the mice involved in the experiment, Eugster calculated that the incidence of cancer was four times higher among the animals exposed to cosmic cascade conditions than among the controls.

Apart from carcinogenesis, two sets of experiments should be noted on the possible effect of cosmic radiation on fertility. Eugster exposed female rabbits for over a year in cages under lead screens to produce cascade effects. He then noted: "In all six experimental animals, either complete sterility or a very serious impairment of the reproductive function was developed."[1] Some embryos were damaged in utero more than others, while cystic changes and epithelial degeneration in the ovarian follicles were also observed. The use of iron plates instead of lead ones produced similar results.

Barnothý and Forró[7] reported similar reproductive dysfunctions in Angora rabbits and mice. In the animals under lead screening there was a high proportion of dead embryos, the ratio in three groups being 20 dead against 25 living in the unscreened groups. The mean loss of mice under lead screening was given as 82 ± 7 per cent as compared with 22 ± 9 per cent in unscreened cages.

These are the only major biologic experiments on living animals that this writer has been able to discover, with the exception of Ong's report[8] that he had observed a higher incidence of tuberculosis in mice exposed to cosmic rays at the Jungfraujoch high-altitude research station. There have been a number of experiments made with simpler organisms, however, which indicated that cosmic radiation could decrease bacterial counts, stimulate and then inhibit the growth of plants, and stimulate the reproduction rate of Drosophila melanogaster, i.e., exercise some effect on the mitosis of cells.

General Theories

It is presumed that the biologic effect of any type of radiation on living tissue is to interfere with either the physiology or morphology of cells which are composed largely of protein and water molecules which, in turn, contain conventional atomic structures. It has been shown that radiation can cause the protoplasm of cells to become cloudy and swollen, while the chromosomes in the nucleus become clumped and shrunken. Small doses of radiation which do not cause any observable change in the general appearance of a cell may, however, produce changes in its descendants.[9]

Second, the passage of any ionizing particle through the water content of cell protoplasm can transform a water molecule into a hydroxyl radical and hydrogen peroxide. The latter substance not only can alter the composition of protein molecules but can also oxidize enzymes. An altered enzyme, particularly if it were one that regulated cellular growth, could obviously alter the electrochemical balance of a great number of cells, even to the extent of rendering them precancerous or malignant.[10]

In line with the mutation theory of the origin of malignant cells, Hess and Eugster[1] expressed the possible carcinogenic properties of cosmic rays in these terms: "We must consider the possibility that the increased incidence (of cancer) among irradiated animals might arise from a mutation of a normal cell into a cancer cell under the influence of secondary showers of cosmic radiation. The effects we have observed may be considered analogous to the mutations induced by short-wave radiation."

Figge's own theory,[4] arising out of his experiments, was that while cosmic rays might not be carcinogenic in themselves, they might exert a supportive effect on such known carcinogens as tars and hydrocarbons. He stated, "According to this hypothesis, a carcinogenic substance such as methylcholanthrene induces cancer by converting some of the energy of cosmic radiation into carcinogenic stimuli: in other words they sensitize tissues to this kind of energy."

It was for some years believed that the biologic effect of cosmic radiation should be negligible because of the low specific ionization of cosmic particles compared with other forms of radiation. But as Schaefer[11] has pointed out, the peculiar nature of cosmic radiation makes any calculation of its biologic effects in terms of conventional roentgen units a dangerous oversimplification. There is reliable evidence that equal roentgen doses of different kinds of radiation do not produce equal effects. There is, therefore, a need for caution in calculating what may be called the "milliroentgen equivalent man" as distinct from the "milliroentgen equivalent physical." Our knowledge in this field is still very fragmentary.

Further Research

It is obvious that there exist several important gaps in our understanding of the possible biologic effect of cosmic rays on the human organism. Virtually all the research on these rays has been done in special conditions; this writer has not been able to discover any actual tests made in typical urban-industrial environments where millions of human beings live most of the time under metal screens of some kind: ferroconcrete buildings, motor and railroad vehicles, etc. It would seem to be of great importance to determine experimentally the intensity and frequency of any cosmic cascades that may be produced in such conditions.

It should also be noted that the atmosphere of cities and industrial regions contains quantities of chemical substances which are strongly carcinogenic, notably tar and benzpyrene. In view of the higher incidence of cancer, notably lung cancer, in urban than in rural areas, one is entitled to ask whether there is any relation between cosmic radiation, air pollution, and certain forms of malignant growth.

Another gap in our knowledge lies in the fragmentary nature of the initial experiments made by Figge, Horning, Eugster, and others. It should be possible to confirm or refute these findings by controlled experiments made under typical urban-industrial conditions, allowing also for our greater knowledge of radiation effects since those experiments were made some five years ago.

Summary and Conclusions

Cosmic particles of extremely high energies are constantly reaching the earth, and experiments have shown that in passing through certain types of matter some of these particles can give rise to cosmic cascades.

Laboratory experiments have provided tentative evidence that these cosmic particles may have a supportive, if not causative, effect on the development of cancerous growths or may interfere with normal reproductive functions in mammals.

No data are known to exist on the nature and behavior of cosmic cascades or of the penetrating component of cosmic radiation in typical urban-industrial environments. Further research, therefore, is needed, both in physics and biology, to determine whether cosmic radiation plays any significant part in the etiology of certain biologic dysfunctions, notably in the development of cancer.

200 West 15th Street

The Research Division of New York University, in collaboration with Dr. Fry, has now prepared a complete research project comprising the points raised in his article. Further information may be obtained from the Research Division.

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New Treatment for Sensitive Skins

An ointment containing silicone fluid which forms a protective coating on the skin was used in the treatment of 107 patients with various dermatologic conditions.

The silicone fluids, known chemically as dimethylsiloxane polymers, meet a need, long felt by dermatologists, for a preparation that can be used topically as a safe and effective protection against common irritants such as soaps, detergents, industrial chemicals, and other allergens. They are inert, nontoxic, nonabsorbable, nonsensitizing, adherent, and water repellent, and they are invisible on the skin, do not interfere with tactile sensations, and do not occlude perspiration.

The patients, most of whom had been treated previously by conventional methods without benefit, were instructed to apply silicone ointment to the affected areas of skin four times daily and to wipe off the excess with a moist towel. Cure or satisfactory control was obtained by 83 of the 107 patients, the skin usually clearing in one to three weeks after use of the ointment was begun. The protective ointment was particularly effective in control of diseases caused by water-soluble and oil-soluble irritants.

Silicone ointment has no curative power. It simply protects the skin and permits healing to progress. Patients in the present series were instructed not to use the ointment constantly once healing had occurred, but to apply it only before they were to come into contact with offending agents. Many of the patients were able to discontinue wearing cotton-lined rubber gloves and to omit other precautionary measures that formerly were more or less routinely prescribed in the management of the diseases they had.—*California Medicine, January, 1954*

The Doctor in CIVIL DEFENSE

Medical Defense Committee of the Medical Society of the State of New York and the Office of Medical Defense, New York State Department of Health

J. G. FRED HISS, M.D., SYRACUSE, NEW YORK, *Chairman*

One Doctor Does His Part

After having been recalled as a reserve officer in the United States Army, Dr. Harold George Stacy returned in 1952 to a busy practice as general practitioner in Hoosick Falls, New York. Following his resignation from the Army Reserve, he soon realized that if there should be another war he would be working with civilians. He also concluded that the job he would be called upon to do as a physician would be so tremendous he could not possibly do it without trained help. Since he was not content to depend on others to supply him with trained personnel in a time of disaster, he decided to make sure himself that people were trained.

Dr. Stacy's first step was to approach the Civil Defense officials in Rensselaer County, where Hoosick Falls is located. He discussed the emergency medical services program, his plans, and obtained Civil Defense help with secretarial work. Then he went home and posted a notice on the bulletin board in his waiting room appealing to people to enroll for training. He approached his patients and friends and put publicity in the newspapers. People enrolled; for instance, there was a man who had been a chief petty officer in the Navy, and there were people with no training at all.

In September, 1952, the first class of Medical Aides with 30 volunteers came into being. At that time there were no manuals on training Medical Aides published by the New York State Emergency Medical Services, so Dr. Stacy embarked on his own program, based on his army experience which had included every type of army medical job from the bottom to the top. When the State's program finally was released, Dr. Stacy's program turned out to be along the lines of that recommended by the State.

Orientation was first, lasting four to six hours. It included detailed information on the functioning of a first aid unit. Twelve hours of first aid came next. This course highlighted first aid knowledge which would be needed in atomic war, such as bandages, burns, shock, etc., and was practical rather than theoretic. Says Dr. Stacy, "I am a great believer in learning by doing."

Since Hoosick Falls is automatic aid for Troy in a time of atomic attack, Hoosick Falls takes part in State-directed training demonstrations in Troy. In the spring of 1953, Schenectady was holding a training demonstration; therefore, Dr. Stacy took his trainees to Schenectady to learn what they could. When they returned, they discussed what they had seen and used their observations to help them solve the Troy problem in July.

To prepare his Medical Aides for participation in a training demonstration, Dr. Stacy worked out a detailed time schedule for assembly, loading of equipment and personnel, and movement into the attacked city. He obtained trucks and station wagons and held practice drills. Using copies of road maps, he held mapping exercises on how to find the way. He oriented the group on the probable confusion and lack of direction at a time of atomic attack. He says that, "Attending training demonstrations is quite an experience for personnel being trained. They feel they have been a part of something, and they learn a lot, particularly if a critique is held afterwards to discuss what happened."

Now Dr. Stacy is branching out from his own community in his Civil Defense activities. He has been asked to give an instructor's training program to doctors, dentists, pharmacists, veterinarians, and nurses in the northern part of Rensselaer County to prepare them to train Medical Aides in their respective communities. It is an experimental program which will be used in Troy if it is a success in the upper part of the county.

Dr. Stacy aims to give his instructors a packaged plan on how to teach Medical Aides. The instructor-training program will consist of two hours each of orientation and aid station unit functioning, and two hours on methods of instruction, use of training aids, etc.

"It's easier to train a lot than a few. People should be trained as a unit. All should be trained at the same level but assigned to special jobs," says Dr. Stacy. Like many people, Dr. Stacy has many ideas on medical aide training, but he's not content just to talk. He's busy all the time, thinking and planning and putting his ideas to work. If there ever is an atomic attack and he needs the help of volunteers, he wants to be sure they are trained and oriented as to the over-all medical setup.

Blood Banks Association of New York State

J. STANLEY KENNEY, M.D., PRESIDENT

The Physician, the Public, and the Use of Blood

You're a physician in New York State. For the benefit of civilian patients you and your colleagues use approximately 500,000 pint units of blood annually. Or you may be a blood bank director in New York State, a physician, who faces the laboratory tasks involved in processing blood and the solution of such problems as the transmission of homologous serum jaundice, transfusion reactions, and blood procurement.

In either case, you are serving the public of New York State, numbering about 15 million persons. The average citizen knows little about blood types, serology, or outdating. He does understand that blood frequently means the difference between life and death.

Today's paramount problem is how to secure the 500,000 units of blood used annually. Although the public, and a portion of the medical profession, is unaware of it, this vast amount of blood is becoming increasingly difficult to secure.

There are other problems. One is how to secure rare types of blood quickly and efficiently, to maintain a continuous program of postgraduate medical education in the use of blood, and to employ research to solve the many complexities involved in the transfer of blood from one human being to another.

In 1951 and 1952 the House of Delegates of the Medical Society of the State of New York mandated the organization of a blood banks association. The recommendations made by the Reference Committee were as follows: "...to form a State association of blood banks similar to that of California and Florida, with regional organization utilizing all existing blood facilities, encourage county societies to retain and establish blood banks on the local level, and prevent discontinuance of any established blood banks..." These recommendations were unanimously adopted in both years by affirmative action of the House of Delegates.

In order to ascertain still further the need for such an association, a State-wide survey was instituted to obtain the opinions of blood bank directors and other physicians. The survey revealed diverse and urgent needs. Views expressed were then incorporated into the organizational objectives. Briefly the bylaws of the Blood Banks Association of New York State define these as follows: "...The purpose of the corporation shall be to federate into one organization the blood banks of the State of New York; to foster cooperation between blood banks; to encourage the development of blood banks where needed; to extend medical knowledge and advance the science and use of blood; to promote and encourage all phases of research in the use of blood; to enlighten the public in regard to the problems of blood; and to plan for needs in time of disaster."

It should be emphasized that the formation of State blood bank societies has been urged repeatedly by the American Medical Association since 1948. The purpose of these organizations is to provide a coordinated program whereby blood bank facilities will be brought under control of the medical profession, but in cooperation with all agencies interested in the use of blood. It is not proposed to countenance repetition of the situation that led to a National Blood Program under government domination.

The Blood Banks Association of New York State has on its board of directors representatives of all organizations in the field including the New York State Health Department, the American Red Cross, New York State Association of Public Health Laboratories, community and hospital blood banks, and the Medical Society of the State of New York.

In the past eight months the Blood Banks Association has activated its program. What has been accomplished?

Membership

Over 100 blood banks throughout the State are Institutional Members. On the basis of questionnaires answered, it is estimated that these blood banks utilize annually over 350,000 units of blood.

Over 250 additional physicians have joined as Individual Members, including the entire membership of Sullivan County Medical Society. These doctors represent many fields of medicine: general practitioners, internists, surgeons, anesthetists, gynecologists, obstetricians, pediatricians, and others.

Our membership is now located in 43 counties of the State.

Blood Exchange Program

Activated on a regional basis in April of this year, the Blood Exchange Program will maintain a daily inventory of blood throughout the State. In the event that a physician needs a certain type of blood that is not available in his local blood bank, the Association's Clearinghouse locates that particular type and expedites its shipment to the hospital.

The Clearinghouse will arrange to bleed donors who live at a distance from a blood bank. For example, a patient hospitalized and transfused in one city may have donors in his home area bled for replacement to the hospital where he is ill. A paper credit or transfer of blood is then arranged through the Clearinghouse.

The day-by-day inventory of blood available throughout the State will also be a public service and insurance against emergencies resulting from major catastrophe or atomic attack.

Blood Assurance Program

This is an entirely separate program to stimulate donor procurement. Under the plan a citizen able to give 1 pint of blood will assure himself and each member of his immediate family 4 pints of blood each for one year, when needed. He will be issued a certificate that fully outlines the agreement and an identification card carrying his name, the name of the participating blood bank, the county medical society, and the Blood Banks Association. This identification card will allow him to secure benefits anywhere in New York State or in the nation.

Individuals without dependents coming under the Blood Assurance Program will receive unlimited blood for one year.

The Blood Assurance Program is an extension of the Blue Shield and Blue Cross principle Its major emphasis is on the citizen protecting his own immediate family. It has received long actuarial study and is considered sound.

In 1953 Genesee County Medical Society petitioned the House of Delegates that the first pilot project of the Blood Assurance Program be staged in the Genesee area. The request was granted, and in April of 1954 the program is now receiving its first test in the crucible of public opinion.

Local physicians have already begun talking to civic, fraternal, religious, social, business, and women's groups. The doctors are outlining the plan as a public service by the county medical society in cooperation with St. Jerome Hospital and Genesee Memorial Hospital Blood Banks. Simultaneously, a volunteer community organization of over 200 persons is being built under the chairmanship of a leading citizen. These committees are being indoctrinated concerning the need for blood, with emphasis on the fact that only the veins of a human being can supply it.

It is being emphasized that while the physician is charged with responsibility for prescribing, processing, and administering blood, from the practical side he should not be expected to have to function as the "giver" and "getter." The entire program is outlined as one in which the physician and the community have an inseparable interest, and for this reason it can only be successful if cooperation between the two groups is initially established and continued.

Surplus blood from the Genesee County pilot project will be distributed on a regional basis and, if necessary, to other member banks throughout the State.

It is the feeling of physicians studying the long-range program of the Association that 100,000 persons annually must be enrolled under the Blood Assurance Program to justify its existence. It is considered a new approach to the problem of getting donors from the large segment of our population which has never contributed. To these persons and to all citizens the plan should appeal as protection for the persons who are most dear to every man, his own immediate family, wife, children, or parents. (Under a separate proviso an individual may give blood for another family. In this way the head of a family could at a later date donate blood for, as an example, his parents. The certificate is then entered in the name of the family to which the benefits have been assigned.)

Scientific Activities

The Blood Banks Association will present its third scientific program during the 1954 Annual Meeting of the State Medical Society. These programs have been uniformly excellent. In addition to an outstanding array of speakers, demonstration sessions for physicians and technicians are held in various cooperating blood banks.

Standards

The development of more uniform and higher standards of technical performance is a primary objective. Although this activity has not fully developed, visits are already being made to member blood banks by member physicians designated by the board of directors.

Cooperation Stressed

The Blood Banks Association is a noncontroversial project. It operates under the policy guidance of the Blood Bank Commission, which is an appointive board of the Medical Society of the State of New York. We ask you to remember, however, that the task of providing coordination for 225 blood banks scattered throughout the State, as well as keeping informed over 23,000 physicians who have a definite interest in the use of blood, is an immense assignment. Although the Association has under way a vigorous program of professional education, some time will elapse before confusion is eliminated. Just as Rome was not built in a day, so this task will not be accomplished overnight. In the meantime, however, speakers are carrying the message to county medical societies and hospital staff meetings; an explanatory brochure will be mailed in May to every member of the State Medical Society, and printed material is being released through many channels of professional communication.

Both the Commission and Association are proving to be a common meeting ground for all agencies within the State interested in the use of blood. Opinions are expressed and debated by representatives of the various agencies. For the first time these representatives are sitting down frequently to discuss and attempt to solve their mutual problems. To strengthen understanding further, the Blood Banks Commission has requested each agency represented in its membership to keep informed the organization it represents.

A representative of the American Red Cross on the Association's board of directors has stated that "the American Red Cross is anxious to cooperate within the limits of its basic policies." Close liaison is maintained. On the operational level the Association has invited all groups within the State to contribute their facilities to the success of the Blood Exchange Program and the plan of donor procurement. Whatever final success may be achieved will be reached as a result of harmoniously integrated efforts on the part of all agencies working together.

Summary

The over-all Blood Banks Association program will benefit your patients. It will insure control by the medical profession of blood as a therapeutic tool. It will pioneer a bold new program in public service that will benefit good public relations for the physicians of the entire State.

With the aid of medical associations in other states, similar programs have succeeded. While the scope of this program goes beyond that of other states, we feel that it can succeed here and that its success will forge a new bond between the physician and the public which he serves.

What America needs is a little mutual trust on all levels.—H. I. Phillips

ADDITIONAL ANNUAL REPORTS

Medical Society of the State of New York

1953–1954

Report of the Treasurer

To the House of Delegates, Gentlemen:

In another part of this issue of the JOURNAL you will find the condensed report of the annual audit made of the books of the Society by the firm of Patterson and Ridgway, Certified Public Accountants.

Table I, appended, details income and expenditures for the years 1948 through 1953.

You will note from this table that the Society suffered a loss of $100,991 for the year ended December 31, 1953, insofar as the General Fund is concerned.

It is not the intention of your treasurer to present a great deal of detailed comment. If you will give some study to the figures presented in Table I, they will speak for themselves. Some items must be pointed out for your particular attention. The JOURNAL suffered a loss of $31,564 before the allocation of dues. This compares with a loss of $12,466 in 1952 and is an increase in net expenditures of $19,098.

In 1953 our annual meeting in Buffalo cost us $16,403. The Buffalo meeting in 1951 cost $8,638 or an increase of $7,765.

Your treasurer again sounds the warning that income must at least equal outgo. In this respect, we failed to accomplish this to the extent of more than $100,000. The General Fund now shows a deficit of $66,431. With the increase in dues which became effective January 1, 1954, it is hoped that your Society may end this present year in the black. The only answer to this large deficit is to insist that the Society as a whole operate within its income.

Respectfully submitted,

MAURICE J. DATTELBAUM, M.D., *Treasurer*

Table I from the Report of the Treasurer follows on page 1216.

TABLE I.—INCOME AND EXPENDITURES, 1948 THROUGH 1953

	1948	1949	1950	1951	1952	1953
INCOME						
Members' dues	$317,480.00	$319,758.00	$329,336.00	$433,010.00	$439,400.00	$439,010.00
JOURNAL	1,332.87	*4,909.78**	*9,937.55**	2,532.16	*12,466.30**	*31,563.68**
Interest	516.82	625.53	651.99	672.90	855.47	881.05
Sundry	69.72	12.50	28.74	16.28	....	....
TOTAL INCOME	319,399.41	315,486.25	320,079.18	436,231.34	427,789.08	408,327.37
EXPENDITURES						
Administrative	81,798.85	92,982.24	93,289.19	97,766.81	102,657.88	109,220.70
Public and Professional Relations Bureau	27,545.46	64,332.85	68,815.43	65,531.85	93,334.88	93,479.05
Legislation Bureau—Albany Office	18,217.27	19,794.54	27,031.37	31,289.96	25,828.73	26,336.47
Workmen's Compensation Bureau	20,263.87	20,522.11	20,661.19	21,329.33	23,396.84	23,825.92
Bureau of Medical Care Insurance	15,137.29	15,985.84	16,883.63	17,482.44	19,094.39	19,328.92
Scientific Activities	18,586.90	16,126.00	19,400.90	20,622.05	19,952.04	20,177.92
District Branches	2,747.48	2,498.12	2,995.22	3,648.71	2,764.94	2,573.25
Planning Committee for Medical Policies	895.63	397.37	424.11	426.67	1,088.83	1,110.04
Woman's Auxiliary	2,000.00	2,000.00	2,000.00	2,210.16	6,890.95	10,067.13
Malpractice Insurance and Defense Board	1,744.13	1,114.92	1,011.91	910.22	2,625.91	3,420.32
Malpractice Audit	....	1,000.00	750.00	800.75	1,000.00	1,000.00
Counsel—Retainer and Expenses	16,000.00	21,990.71	21,975.90	27,000.00	27,000.00	30,000.00
Traveling Expenses	17,465.20	17,371.94	26,657.53	28,385.69	26,126.11	23,929.96
World Medical Association	488.76	....	1,000.00	1,000.00	1,000.00	1,000.00
A.M.A. Conference Room Expense	461.42	499.94	91.77	164.50	769.81	173.77
Societies for Medical Research	500.00	....	500.00	500.00	500.00	500.00
Committee on Alcoholism	....	414.88	274.52	783.57	26.23	....
Conference of Presidents	....	50.00	50.00	50.00	50.00	75.00
Pharmacopeia Revision Committee	....	100.00	....	....	....	....
Special Legal Services	....	9,054.00	11,777.18	7,087.03	1,000.00	....
Veterans Medical Service Plan	456.04	495.13	1,451.14	26.78	249.23	14.42
Medical Directory	34,000.00	44,320.60	48,665.70	48,960.62	44,088.85	81,301.22
Annual Meeting	*33.18**	10,677.93	*4,929.68**	8,637.60	*3,872.91**	16,403.31
Cult Subcommittee	630.31	....	....	....	....	....
Moving Expenses and Alterations	898.00	....	....	....	11,517.68	3,320.46
A.M.A. Convention—Students	....	....	....	216.43	129.01	712.77
Middle Atlantic States Conference	....	....	....	25.09	53.22	*1.52**
Pensions	....	....	....	5,000.00	5,000.00	5,400.00
Citizens' Health Council	....	....	....	....	1,000.00	750.00
New York State Blood Banks Commission	....	....	....	....	588.54	334.66
American Medical Education Foundation	....	....	....	....	25,000.00	25,000.00
American Medical Association Convention	....	....	....	....	....	5,313.55
State Convention—Students	....	....	....	....	....	209.53
Blood Banks Association of New York State, Inc.	....	....	....	....	....	4,341.36
TOTAL EXPENSE	259,803.43	341,729.12	360,777.01	389,856.26	438,861.16	509,318.21
NET INCOME	$ 59,595.98	$ *26,242.87**	$ *40,697.83**	$ 46,375.08	$ *11,072.08**	$*100,990.84**

* Italics denote figures in red.

Supplementary Report of the Board of Trustees

To the House of Delegates, Gentlemen:

Appended is the annual audit of our accounts by Patterson and Ridgway, Certified Public Accountants.

Respectfully submitted,

James R. Reuling, M.D., *Chairman*
Walter W. Mott, M.D.
Herbert H. Bauckus, M.D.
Edward R. Cunniffe, M.D.
John J. Masterson, M.D.
J. Stanley Kenney, M.D.
Leo F. Schiff, M.D.

Auditor's Certificate

To the Board of Trustees, Medical Society of the State of New York.

We have examined the balance sheet of the Medical Society of the State of New York as of December 31, 1953, and the related statements of operating income and general and other funds for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

We did not confirm the unpaid members' dues by correspondence with the members.

In our opinion, the accompanying balance sheet and the statements of operating income and general and other funds present fairly the financial position of the Medical Society of the State of New York as of December 31, 1953, and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Patterson and Ridgway
Certified Public Accountants

March 11, 1954

Balance sheet and statements of operating income and general and other funds follow beginning on page 1218.

Balance Sheet—December 31, 1953

ASSETS

GENERAL FUND

Current Assets			
Cash in Banks and on Hand	$ 82,665.22		
Less: Due American Medical Association	1,350.00	$ 81,315.22	
Accounts and Notes Receivable	16,477.16		
Less: Reserve for Doubtful Accounts and for Agency Commissions	1,623.17	14,853.99	
Dues Receivable—net, estimated		7,000.00	
Due from Endowment Funds—per contra		500.00	
Inventory of Paper Stock		19,289.06	
Inventory of Pamphlets and Bulletins		3,780.00	
Total Current Assets			$ 126,738.27
Prepaid Expenses			
Advance Costs (net), *Medical Directory* 1955		15,943.58	
Sundries		6,101.74	
Total Prepaid Expenses			22,045.32
Furniture and Fixtures—At Nominal Value			2.00
Advances to Veterans Medical Service Plan of New York		16,972.53	
Less: Reserve		1,212.00	15,760.53
Advances to Blood Banks Association of New York State, Inc.		12,000.00	
Less: Reserve		4,341.36	7,658.64
TOTAL GENERAL FUND			172,204.76

INVESTMENT FUND

Cash in Bank—Checking Account		3,715.00	
Cash in Banks—Savings Accounts		43,949.64	
Investments at Cost (Market or Redemption Value $417,505.11)*		321,712.77	
Accrued Interest Receivable		1,761.09	
Loan Receivable from General Fund		25,000.00	
		396,138.50	
Less: Due to Other Funds		86.08	
TOTAL INVESTMENT FUND			396,052.42

SPECIAL FUNDS UNDER CONTROL OF THE BOARD OF TRUSTEES

Building Fund			
Investments—U.S. Treasury Obligations at Cost (Market Value $97,224.00)*	100,000.00		
Accrued Interest Receivable	687.23		
Total Building Fund		100,687.23	
Employes Beneficiary Fund			
Investments—U.S. Treasury Obligations at Cost (Market Value $74,006.00)*	75,120.46		
Accrued Interest Receivable	240.14		
Due from Investment Fund	70.36		
Total Employes Beneficiary Fund		75,430.96	
Repair and Replacement Fund			
Investments—U.S. Treasury Obligations at Cost (Market Value $50,014.00)	49,987.50		
Accrued Interest Receivable	183.43		
Due from Investment Fund	15.72		
Total Repair and Replacement Fund		50,186.65	
TOTAL SPECIAL FUNDS			226,304.84

ENDOWMENT FUNDS

Cash in Bank		13,757.40	
Less: Due to General Fund		500.00	
TOTAL ENDOWMENT FUNDS			13,257.40

WAR MEMORIAL FUND

Cash in Bank		17,379.58	
Investments—U.S. Treasury Bonds (Market Value $208,418.00)		215,765.80	
Accounts Receivable		1,306.25	
Accrued Interest Receivable		1,374.78	
TOTAL WAR MEMORIAL FUND			235,826.41
TOTAL ASSETS			$1,043,645.83

MEDICAL SOCIETY OF THE STATE OF NEW YORK

Balance Sheet—December 31, 1953

LIABILITIES AND CAPITAL

GENERAL FUND		
Current Liabilities		
Loans Payable to Bank (Secured by $152,000.00 U.S. Treasury Bonds)*		$100,000.00
Loan Payable to Investment Fund		25,000.00
Accounts Payable		67,111.46
Commissions Payable—Journal and *Directory* Advertising Sales		1,328.91
Taxes Payable (Including Withholdings)		6,290.17
Total Current Liabilities		199,730.54
Deferred Credits		
Journal advertising, circulation, reprints, etc.	$ 6,035.54	
Annual Meeting, 1954	24,147.50	
Membership Dues, 1954	8,721.63	
Total Deferred Credits		38,904.67
General Fund		*66,430.45*†
TOTAL GENERAL FUND		172,204.76
INVESTMENT FUND		
Reserve for Depreciation of Investments	50,000.00	
Balance	346,052.42	
TOTAL INVESTMENT FUND		396,052.42
SPECIAL FUNDS UNDER CONTROL OF THE BOARD OF TRUSTEES		
Building Fund	100,687.23	
Employes Beneficiary Fund	75,430.96	
Repair and Replacement Fund	50,186.65	
TOTAL SPECIAL FUNDS		226,304.84
ENDOWMENT FUNDS		
Lucien Howe Prize Fund	5,460.82	
Merritt H. Cash Prize Fund	2,013.78	
A. Walter Suiter Lectureship Fund	5,782.80	
TOTAL ENDOWMENT FUNDS		13,257.40
WAR MEMORIAL FUND		235,826.41
TOTAL LIABILITIES AND CAPITAL		$1,043,645.83

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* U.S. Treasury obligations totaling $152,000.00 par value in the following funds were pledged to secure bank loans:

Investment Fund	$ 9,000.00
Building Fund	99,000.00
Employes Beneficiary Fund	44,000.00

† Italics denote figures in red.

Note: The Society's application for exemption from New York City sales tax has been denied, and we are not in a position to determine what, if any, tax liability may exist.

$152,000.00

MEDICAL SOCIETY OF THE STATE OF NEW YORK

Statement of Operating Income and Expenses

For the Year Ended December 31, 1953

OPERATING INCOME

Members' Dues for the Current Year—After Reserve		$438,650.00
Less: Allocation to JOURNAL Circulation Income as Authorized by the Board of Trustees		58,667.50
		379,982.50
Arrears (Dues)		360.00
Interest on Savings Accounts		881.05
Operating Income from JOURNAL (Deficit)	$ *31,563.68**	
Plus: Allocation of Dues	58,667.50	
		27,103.82
Sales of 1949 and 1951 *Directories* (Net)		172.85
		408,500.22

OPERATING EXPENSES

Administrative	109,220.70	
Public and Professional Relations Bureau	93,479.05	
Legislation Bureau—Albany Office	26,336.47	
Workmen's Compensation Bureau	23,825.92	
Bureau of Medical Care Insurance	19,328.92	
Scientific Activities	20,177.92	
District Branches	2,573.25	
Planning Committee for Medical Policies	1,110.04	
Woman's Auxiliary	10,067.13	
Expenses of Blood Banks Association of New York State, Inc.	4,341.36	
Malpractice Insurance and Defense Board	3,420.32	
Malpractice Audit	1,000.00	
Counsel—Retainer and Expenses	30,000.00	
Annual Meeting	16,403.31	
Traveling Expenses	30,165.81	
American Medical Education Foundation	25,000.00	
World Medical Association	1,000.00	
A.M.A. Conference Room Expense	173.77	
National Society for Medical Research	100.00	
New York State Society for Medical Research	400.00	
New York State Citizens' Health Council	750.00	
Conference of Presidents	75.00	
Blood Banks Commission	334.66	
Middle Atlantic States Conference	*1.52**	
Pensions	5,400.00	
Veterans Medical Service Plan of New York	14.42	
Medical Directory 1953 (One-half of the Estimated Loss Was Allocated to 1952)	81,474.07	
Alterations	3,320.46	
TOTAL		509,491.06
EXCESS OF EXPENSES OVER INCOME		*$100,990.84**

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* Italics denote figures in red.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

Statement of General and Other Funds

For the Year Ended December 31, 1943

	General Fund	Investment Fund	Building Fund	Employes Beneficiary Fund	Repair and Replacement Fund	War Memorial Fund	Lucien Howe Prize Fund	Merritt H. Cash Prize Fund	A. W. Suiter Lectureship Fund
BALANCE AT JANUARY 1, 1953	$ 34,560.39	$595,049.03	....	....	....	$236,574.17	$5,423.99	$2,059.31	$5,684.98
ADDITIONS									
Transfers from Investment Fund as Authorized by Board of Trustees....		*225,111.32**	$100,000.00	$75,123.82	$49,987.50	....	....	....	....
Assessments Collected................		....	....	....	....	299.00	....	....	....
Interest on Bank Balances............		1,083.62	....	....	....	....	136.83	54.47	147.22
Income from Securities...............		24,367.50	687.23	307.14	199.15	5,353.24	....	....	....
Profit (Net) from the Sale of Securities		2,754.67	....	....	....	....	....	....	....
Distribution Received from Estate....		....	....	....	....	....	....	....	0.60
Total Additions		*196,905.53**	100,687.23	75,430.96	50,186.65	5,652.24	136.83	54.47	147.82
DEDUCTIONS									
Excess of Operating Expenses over Income, not Including Income from Securities..........................	100,990.84	....	....	....	....	....	....	....	.....
Provision Made for Reserve for Depreciation of Investments..........	....	50,000.00	....	....	....	....	....	....	....
Custodian and Investment Service Fees	....	2,091.08	....	....	....	....	....	....	....
Prizes................................	....	....	....	....	....	....	100.00	100.00	50.00
Benefits Disbursed....................	....	....	....	....	....	6,400.00	....	....	.....
Total Deductions...............	100,990.84	52,091.08	....	....	....	6,400.00	100.00	100.00	50.00
Net Increase or Decrease.....	*100,990.84**	*248,996.61**	100,687.23	75,430.96	50,186.65	*747.76**	36.83	*45.53**	97.82
BALANCE AT DECEMBER 31, 1953....................	$ *66,430.45**	$346,052.42	$100,687.23	$75,430.96	$50,186.65	$235,826.41	$5,460.82	$2,013.78	$5,782.80

* Italics denote figures in red.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

December 31, 1953

Cash in Bank and on Hand

GENERAL FUND	$ 82,665.22†
INVESTMENT FUND	47,664.64
Total	$130,329.86

ENDOWMENT FUNDS	Union Dime Savings Bank
Lucien Howe Prize Fund	$ 5,560.82
Merritt H. Cash Prize Fund	2,213.78
A. Walter Suiter Lectureship Fund	5,982.80
Total	$ 13,757.40

WAR MEMORIAL FUND	
On Deposit	$ 17,379.58

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† Includes $1,350.00 due American Medical Association.

Investments

The investments of the Society are summarized as follows:

	Cost	Market
INVESTMENT FUND		
U.S. Government Bonds	$ 69,300.00	$ 66,568.00
Railroad Bonds	5,551.25	5,692.00
Industrial Bonds	25,000.00	25,875.00
Mortgage	3,878.83	3,878.83
Preferred Stocks	35,087.63	33,572.12
Common Stocks	182,895.06	281,919.16
Total	$321,712.77	$417,505.11
BUILDING FUND		
U.S. Government Bonds	$100,000.00	$ 97,224.00
EMPLOYES BENEFICIARY FUND		
U.S. Government Bonds	$ 75,120.46	$ 74,006.00
REPAIR AND REPLACEMENT FUND		
U.S. Government Bonds	$ 49,987.50	$ 50,014.00
WAR MEMORIAL FUND		
U.S. Government Bonds	$215,765.80	$208,418.00

These securities (except the mortgage, which is held by the Society in the office) are held by the Chase National Bank as custodian.

Planning Committee for Medical Policies

To the House of Delegates, Gentlemen:

This is the eleventh report of this committee. This is the fourth report by the present chairman. The previous chairmen have been Drs. Louis Bauer and J. Stanley Kenney.

The Planning Committee is a special committee of the House of Delegates, and that body sets up the personnel of this committee. One member is selected by each district branch, and the other members are "president, president-elect, secretary, speaker, and one trustee."

The following is the makeup of the committee for the current Society year, 1953–1954:

Peter J. Di Natale, M.D., *Chairman, Eighth District Branch*	Batavia
George Schwartz, M.D., *First District Branch*	New York City
Charles C. Murphy, M.D., *Second District Branch*	Amityville
Edward F. Shea, M.D., *Third District Branch*	Kingston
Leonard F. Schiff, M.D., *Fourth District Branch*	Plattsburg
Arthur Gaffney, M.D., *Fifth District Branch*	Clinton
Norman S. Moore, M.D., *Sixth District Branch*	Ithaca
Theodore B. Steinhausen, M.D., *Seventh District Branch*	Rochester
John F. Rogers, M.D., *Ninth District Branch*	Poughkeepsie
Andrew A. Eggston, M.D., *President*	New York City
Dan Mellen, M.D., *President-Elect*	Rome
Walter P. Anderton, M.D., *Secretary*	New York City
Frederic W. Holcomb, M.D., *Speaker*	Kingston
Walter W. Mott, M.D., *Trustee*	White Plains
John J. Bourke, M.D., *Consultant*	Albany

The Planning Committee was originally set up with the specific purpose of developing long-range policies for our State Society. The Committee was to consider among other things: (1) distribution of physicians, (2) educational requirements for licensure, (3) voluntary insurance plans for decreasing the cost of medical care, (4) socializing influences, (5) relationships of the medical profession with government agencies, commercial laboratories, and vendors concerned with any phase of medicine, (6) the relationship of hospitals and the practice of medicine, (7) relationship with and the status of the nursing profession, and (8) such other matters as the committee deems important from the standpoint of protecting the public and the medical profession from attempts to bring about inadequate medical care and unwarranted interference by outside agencies with the practice of medicine. From the stated eight points one can readily see that a goodly number of the problems confronting the medical profession are in the forefront in the studies and discussion of your State Society. A number of the eight points enumerated are under study by either standing committees or special committees of the Council. We urge you to read the reports as published so that you may be better informed of the activities of your State Society.

We of the Planning Committee earnestly urge that any member of the State Society, through his local county or district society, who has any constructive ideas about long-range medical policies, please forward them (ideas) to the secretary, Dr. Walter P. Anderton. Suggestions will be given due consideration and study.

Again let us state that many meetings have been held by the Planning Committee since its formation; many topics have been discussed, and in the State Medical Society's office copies of the minutes of those meetings can be inspected. Prior to February 1, 1954, the Committee has had four meetings.

The committee is asked by our Council to study each year several matters referred to the Council by our House of Delegates. This current Society year the Planning Committee had referred to it for study:

1. Permanent Headquarters: The House of Delegates adopted a reference committee report which states: "The suggestion (of the president-elect) that a planning committee be assigned to investigate and seriously consider an adequate location and building for the State Society's permanent headquarters is both timely and interesting." The Council voted to refer this to a subcommittee of your Planning Committee for Medical Policies to be appointed by the president.

2. Council Committee on General Practice: The House voted to approve in principle and to refer, through the Council, to the Planning Committee for further study a resolution that this Society establish a Council Committee on General Practice.

3. Status of Osteopaths: The House adopted a reference committee report approving the intent of a resolution that this Society "clarify its attitude toward osteopaths and the relations of the latter to the medical profession," and suggesting "that the appropriate Council committee study this subject in correlation with studies and/or recommendations made by the American Medical Association."

4. Also December 23 letter "Report of Special Committee on Constitution and ByLaws" on integration of county, State, and American Medical Association dues and membership.

Your Planning Committee also discussed annual meeting dates for the district branch meetings; the problem of the chronically ill; "the study of Council and other committees of our Society from the standpoint of the number of committees, the size of the committees, the expense of committees, etc." was approved by the Council following a suggestion of the Planning Committee that such a study be undertaken.

Permanent Headquarters.—The Subcommittee on Permanent Headquarters has the following membership:

Dan Mellen, M.D., *Chairman*	Rome
Maurice J. Dattelbaum, M.D.	Brooklyn
Peter J. Di Natale, M.D.	Batavia
Norman S. Moore, M.D.	Ithaca
Walter W. Mott, M.D.	White Plains
Edward F. Shea, M.D.	Kingston

Several meetings of the subcommittee have been held and a number of consultations with representatives of insurance companies and others who may aid and guide us. Several buildings have been inspected. Inspection of another was planned by the subcommittee for February 10, 1954. Consideration, of course, must be given in a project such as this to many factors such as original cost, upkeep, proper maintenance of facilities, adequate facilities for proper functioning of our Society, proper working conditions for the personnel of our Society, location, etc.

Consideration has been given to the idea that perhaps other mutually interested groups could be invited to participate in our plans.

The Planning Committee requested the Council to recommend to the Board of Trustees that they establish a permanent headquarters *fund* with an original sequestration of $100,000 more or less. This has been done.

This project is under continuing study by your Planning Committee, and it is earnestly hoped that some day we may have headquarters of our own. We urge that we do not jump to quick decisions. We urge too that these headquarters be not elaborate but modest and in keeping with the honor and dignity that the State Society justly deserves. Already there exists crowding in our 19th Floor. For a number of months your Council has been meeting away from State Society Headquarters.

Establishment of a Council Committee on General Practice.—Your Planning Committee has discussed this problem at most of our meetings. There are at present two committees concerned with General Practice: (1) Subcommittee of the Council Committee on Public Health and Education, composed of seven members; the present chairman is an active member of the New York State Chapter of the Academy of General Practice. (2) There is also a special committee on general practice appointed by our president, representing the State Health Department, State Medical Society, and general practitioners' group. Five members of the combined membership of ten of these two committees were invited to confer with us. At this moment we know of no other segment of our profession that is thus represented.

We know of no reasonable request that has ever been presented to our State Society that has not received the utmost care and consideration.

It was stated that there are about 31,000 physicians in New York State; 18,000 or 19,000 are general practitioners, and about 1,800 to 2,000 are members of the New York State Academy of General Practice.

Much discussion took place about the practice of certain hospitals having established rules and orders or directives that are detrimental to the hospital practice of the general practitioners. There was much talk about discrimination against general practitioners.

Your Planning Committee deplores the action of some hospitals in issuing rules or directives that are detrimental to the hospital practice of any legally qualified licensed physician of New York State, and your Planning Committee wishes to quote again number 6 of its last year's report: "Your Committee strongly reaffirms its opposition to the practice of medicine by hospitals and medical schools under any guise and urges its members to be constantly on the alert to combat this encroachment on the practice of medicine."

Your committee feels that while a Council Committee on General Practice might add dignity and prestige to the general practitioner, such a committee will not solve local hospital and doctor relations. We believe this can be done more effectively locally in consultations and discussions with hospital boards of directors and superintendents of hospitals, with the guidance and advice of our State Society.

We feel that to grant a particular group of practitioners their request for a Council committee will inevitably lead to other groups' asking for the same consideration.

We earnestly hope that our State Society continues its always active interest in all the physician members and not any one particular group. We believe that the problems of any group should be the problems of all of us.

We of the Planning Committee feel that representation on the Council committees comes only following hard and long work at local county and district levels and election at such levels and at House of Delegates meetings and only in such a way and no other. We urge physicians to take a more active interest in their local county society and district branch society and be ever willing to donate their time and energies fully to further the interest of the organized medical profession.

In view of the above and also in view of the fact that the Council has approved a study of our committee setup, your Planning Committee recommends that action on the establishment of a Council Committee on General Practice be deferred at this time.

Your Planning Committee also would like to suggest to the president when he makes up his committee assignments for the next current society year that the Subcommittee on General Practice be continued at this time but that it be made a subcommittee of the Council Committee on Hospital and Professional Relations.

Status of Osteopaths.—Your Planning Committee wishes to state that the following report in regard to the osteopathic problem does not necessarily represent the policy of the Medical Society of the State of New York. It is merely the thinking of the Society at this time, to be combined at the top level with the thinking of the other state medical societies. This is offered for purposes of discussion and further study at the next session of the A.M.A.

In order to acquaint the members of the Council and House of Delegates and to review briefly the above situation, let us state that at the June, 1953, session of the A.M.A. in New York City a special committee of the A.M.A. House of Delegates reported to the House of Delegates on its study and made the following recommendations:

1. That the House of Delegates declare so little of the original concept of osteopathy remains that it does not classify medicine as currently taught in schools of osteopathy as the teaching of "cultist" healing.
2. That the House of Delegates state that pursuant to the objectives and responsibilities of the American Medical Association, which are to improve the health and medical care of the American people, it is the policy of the Association to encourage improvement in undergraduate and postgraduate education of doctors of osteopathy.
3. That the House of Delegates declare that the relationship of doctors of medicine to doctors of osteopathy is a matter for determination by the state medical associations of the several states, and that the state associations be requested to accept this responsibility.
4. That the Committee for the Study of Relations Between Osteopathy and Medicine or a similar committee be established as a continuing body.

Following this, the Board of Trustees of the A.M.A. made the following recommendations:

> "Because of the length of the report and the controversial nature of its subject, the Board feels that the House should have adequate time for its study and that the state associations should have opportunity to express their opinions. Therefore, it is recommended that the committee be continued but that action on the report be deferred until the June, 1954, Session.
>
> "It is suggested that at that time the House be prepared to answer the following questions:
>
> "1. Should modern osteopathy be classified as "cultist" healing?
>
> "2. Since the objectives of the American Medical Association include improvement in undergraduate and postgraduate education, should doctors of medicine teach in osteopathic schools?
>
> "3. Should the relationship of doctors of medicine to doctors of osteopathy be a matter for determination by the several state associations?"

There was a division of opinion on the report of the Reference Committee on Miscellaneous Business, to which the special committee report was referred at the House of Delegates Session.

The majority opinion was as follows:

> "We, the majority of the Reference Committee on Miscellaneous Business, recommend the adoption of the Supplementary Report of the Board of Trustees on the report of the Committee for the Study of the Relations Between Osteopathy and Medicine. The resolution introduced by Dr. J. Lafe Ludwig for the California Medical Association on the subject of osteopathy was considered with the supplementary report of the Board of Trustees on osteopathy, and it is our opinion that this resolution is covered by the supplementary report of the Board. A minority report from your reference committee will be presented.
>
> "It is our opinion that the committee of the Board of Trustees has made a great contribution in its Study of the Relations Between Osteopathy and Medicine. It is a splendid and constructive accomplishment and requires complete knowledge, time, and very careful consideration in order that we may make no mistake in our recommendations and deliberations concerning it.
>
> "There are many differences in the types of licensure granted to osteopaths in different states.
>
> "The Board of Trustees also recommends that action on the report be deferred until the June, 1954, session.
>
> "It is our present belief that these recommendations are sound, constructive, and demand from the House of Delegates the usual evaluation and support it likes to give to reports of our Trustees. We cannot see any cause for emergency action. As members of the Reference Committee on Miscellaneous Business, we would like to move the adoption and concurrence with the recommendations of the Supplementary Report of the Board of Trustees on the Study of the Relations Between Osteopathy and Medicine."

Your Planning Committee, in order to make proper study of the problem and to give the osteopathic group an opportunity to be heard and also so that we could obtain information that would guide us in our deliberations, invited to our meetings the following individuals representing osteopathy: (1) the president and also immediate past-president of the New York State Osteopathic Society, (2) the present member of the New York State Board of Medical Examiners, (3) a former member of the New York State Board of Medical Examiners, (4) present secretary of the New York State Osteopathic Society, (5) a past-president of the American Osteopathic Society and chairman of the Bureau of Hospitals of the A.O.S., (6) the president of the Chicago College of Osteopathy. Information by letter and by appearance in person was obtained by your committee from the deans of our New York State medical schools; also the secretary of the State Board of Medical Examiners presented his views.

We of the Planning Committee feel that the above men were of the higher echelon of the osteopathic physicians. They represented their particular group very ably. They are men of the highest intention and desires. They are trying to elevate their members to higher standards and to the highest type of their particular practice of osteopathic medicine.

Many statements and questions and answers have been recorded. Many opinions have been expressed. Minutes of these meetings are on file in our State Society's office. There are about 100 pages of statements, questions, and answers devoted to this problem of osteopathy.

The Planning Committee was selected by this Council to study this problem. We have spent a great deal of time at our meetings in this discussion. We have studied statements made by several deans of our medical schools, letters from great majority of the deans in response to a letter from your chairman, and statements made by Dr. Ezell, secretary of the State Board of Medical Examiners, who has visited several osteopathic schools.

We believe that the questions that have been propounded by the Trustees of the A.M.A. in regard to this osteopathic problem could have been answered by a "yes" or "no." However, we believe, too, this was not the intent of this Council. Let us not forget that this issue was the most controversial one brought before the House of Delegates meeting of the A.M.A. in June, 1953. With that in mind, we attempted to survey this issue as thoroughly as we could in the prescribed time. This we believe we have done.

We would suggest that the questions asked by the Trustees of the A.M.A. in regard to this osteopathic problem be rearranged in order, and to that end, we desire to offer our comments to question 3, namely, "Should the relationship of doctors of medicine to doctors of osteopathy be a matter for determination by the several state associations?" We believe that, at this time, this should be a matter for determination by the several state associations.

Question 2, "Since the objectives of the A.M.A. include improvement in undergraduate and postgraduate education, should doctors of medicine teach in osteopathic schools?" The first paragraph of the Oath of Hippocrates is as follows:

> "I swear by Apollo, the physician, and Aesculapius, and Health, and All-heal, and all the gods and goddesses, that, according to my ability and judgment I will keep this oath and stipulation: to reckon him who taught me this art equally dear to me as my parents, to share my substances with him and relieve his necessities if required; to regard his offspring as on the same footing with my brothers, and to teach them this art if they should wish to learn it, without fee or stipulation, and that by precept, lecture and every other mode of instruction, I will impart a knowledge of the art to my own sons and to those of my teachers, and to disciples bound by a stipulation and oath, according to the law of medicine, but to none others."

Following considerable discussion, your committee desires to answer this portion of the A.M.A. questionnaire as follows: We of the Planning Committee believe that doctors of medicine should teach in osteopathic schools provided that (1) we of organized medicine know more definitely what role these physicians would be permitted to play in the teaching program; (2) provided these physicians have a part in controlling the curriculum; (3) provided these physicians have a voice in developing teaching standards and teaching methods; and (4) provided that proper inspection is permitted by the A.M.A. Council on Medical Education and Hospitals or other medically accepted accreditation groups. We do not believe that physicians should teach in osteopathic schools just as "window dressing" only. We also believe that this approval should be given for a stipulated time such as five years, and after that period has lapsed, re-evaluation of the problem to be again studied to observe evidence of general good faith and intent on the part of these osteopathic institutions.

Question 1, "Should modern osteopathy be classified as 'cultist' healing?," we think should be answered last. Definition of "cult" according to Webster is as follows: "1. A system of worship of a deity; as, the cult of Apollo. 2. Hence: (*a*) the rites of a religion. (*b*) Great devotion to some person, idea, or thing, esp. such devotion viewed as an intellectual fad. (*c*) A sect" (*Webster's New Collegiate Dictionary*, copyright 1949).

Quote from Cline report on the concept of osteopaths follows:

> "Osteopathy was begun in 1874 by Dr. Andrew Taylor Still, a practicing physician. He promulgated a concept that all 'disease is the result of anatomical abnormalities followed by physiological discord,' and that the 'anatomical abnormalities' consisted of lesions of bones, joints, and their supporting structures. These, in turn, induced disturbances of nerve and vessel functions that produced pathological conditions in other tissues. He inveigled against drugs, serums, vaccination, and 'electricity, x-radiance, hydrotherapy or other adjuncts.' He believed that 'Osteopathy is an independent system and can be applied to all conditions of disease. . .and that surgery should be advocated only "as a last resort.' " He said, 'We believe that our therapeutic house is just large enough for osteopathy and that when other methods are brought in just that much of osteopathy must move out.'
>
> "The original concept of Dr. Still could be classified only as a 'cultist' healing.
>
> "Since that time a great evolutionary change has taken place in osteopathy. It is difficult to trace the chronological course of this development and to document it with relation to time. Apparently no historical account exists. We were unable to find one and the American Osteopathic Association could not furnish us with a reference to one."

Quote from *Principles of Professional Conduct*, New York State Medical Society follows: "A sectarian or cultist as applied to medicine is one who alleges to follow or in his practice follows a dogma, tenet, or principle based on the authority of its promulgator to the exclusion of demonstration and scientific experience."

It would appear from statements made at our meetings and from reports received by our committee from the deans of our medical schools and from information obtained from numbers of physicians and from the secretary of the New York State Board of Medical Examiners that there is much evidence to show that modern osteopathy should no longer be classified as "cultist" healing. We believe that this classification should be subject to a time limit, and five years was suggested. At the end of that period of probation, if you will, organized medicine shall review the situation noting well what changes, if any, for the better and how the osteopaths meet other conditions that may be set up by medically accepted agencies.

We of the Planning Committee wish to state further that we approve of removing the stigma of "cultist" and approve physicians teaching in osteopathic schools with the provisos stated, not because they have been licensed by our State Board of Medical Examiners or State Board of Regents but in spite of that fact, lest we forget we had nothing to do with their licensing.

Meeting Dates of District Branches.—Your Planning Committee studied the suggestion that the various district branches have some uniformity of meeting date, particularly pointing to the fact that this would allow considerably more time in arranging yearly meetings, and also that schedules could be prepared for meetings by officers of our State Society.

The following dates were suggested:

First District—The week during the House of Delegates meeting.
Second District—Dinner and evening meeting, Wednesday, third week in September.
Third District—Morning, luncheon, and afternoon, Thursday, third week in September.
Fourth District—Afternoon and dinner meeting, Thursday, third week in October.
Fifth District—Afternoon and dinner, Wednesday, third week in October.
Sixth District—Afternoon, dinner, and evening, Wednesday, fourth week in October.
Seventh District—Morning, afternoon, and dinner meeting, Wednesday, fourth week in September.
Eighth District—Morning, afternoon, and dinner meeting, Thursday, fourth week in September.
Seventh and Eighth Districts change in 1955.
Ninth District—Afternoon, dinner, and evening, Thursday, first week in October.

These dates of course are subject to consideration and approval by the district branches.

Before these dates were suggested, various organizations holding meetings about the dates suggested were contacted. It is felt by us that any date picked for a meeting might conflict with some other meeting.

Care of the Chronically Ill.—A Planning Committee subcommittee on the care of the chronically ill begs to submit the following report. They wish to reaffirm the Proposal Program for the Care of Chronic Illness in New York State.

"The studies of the Health Preparedness Commission indicate a growing realization throughout the State that present facilities for the care of chronic illness are inadequate. It is becoming more and more difficult to obtain long-term hospital care or good nursing-home care. The number of persons affected by chronic illness has increased and will continue to increase because of the aging of our population. The prevalence of chronic illness rises with increasing age, but the majority of cases now occur within the productive ages of twenty-five to sixty-four years. Consequently, success in preventing and lessening the effects of chronic disease will assume mounting importance in our economy, particularly in assuring a sufficient labor force. Thus, on economic as well as humanitarian grounds, there has arisen widespread acceptance of the need for a comprehensive program for improving the care of the chronically ill and for advancing the preventive and rehabilitative aspects of chronic disease. The launching of such a program requires State leadership to provide coordinated effort of all the various agencies, official and private, which are concerned with various phases of this problem.

"In order to provide such a program, the Commission makes the following recommendations: That the State would provide or designate an agency for developing, coordinating, administering, and carrying out a program of education, research, rehabilitation, and improvement of facilities and services for the care of chronic illness, exclusive of tuberculosis and mental diseases. Such a program should be carried out in cooperation with both State and local official and voluntary medical, health, and social agencies and would include, but not be limited to, (*a*) assistance to local communities for the purpose of strengthening and developing facilities and services for the care of the chronically ill; (*b*) cooperation with other State agencies concerned with the care of the chronically ill; (*c*) education of the public and professional personnel in the prevention, care, and amelioration of chronic illness; (*d*) provision of consultation services to physicians, hospitals, other institutions, and agencies caring for the chronically ill; (*e*) coordination of services provided by the official and voluntary State and local agencies caring for the chronically ill; (*f*) research in the prevention, diagnosis, and treatment of chronic disease; (*g*) development of services for the economic and social rehabilitation of the chronically ill; (*h*) development and encouragement of preventive services for chronic illness.

"The following specific actions are recommended:

"1. That a suitable resolution be introduced at the 1954 meeting of the House of Delegates endorsing the recommendations of the New York State Health Preparedness Commission. This resolution, if passed, could be sent to the Governor and other State leaders.

"2. That the district branches be asked to devote a portion of their 1954 programs to the subject of chronic illness.

"3. That a suitable committee or subcommittee of this Society be asked to include a continuing study of this problem in its program. Perhaps the Subcommittee on Public Medical Care or the Subcommittee on Geriatrics might be suitable."

Study of Committee Setup.—The study of the committee setup has just begun, and no report on that activity is available at this time. This study is figured to take at least a year from this date for its possible completion. Ideas and suggestions about our committee setup in the State Medical Society will be gladly accepted and reviewed.

May I express my sincere thanks to the members of the Planning Committee for their valuable aid and for their attendance at our meetings and for their confidence expressed.

Sincere thanks to the deans of our medical schools who answered our letters and to those deans that appeared in person; also to the members of the osteopathic physicians group who appeared before us, some coming from quite far.

Thanks to any and all of the secretarial staff: Mrs. Grimm, Miss Dougherty, and Miss Alice Wheeler for their help.

War Memorial

To the House of Delegates, Gentlemen:

The War Memorial Committee consists of the following members of the Board of Trustees:

Edward R. Cunniffe, M.D., *Chairman*.....Bronx
Walter W. Mott, M.D.............White Plains
Leo F. Schiff, M.D.................Plattsburg
Maurice J. Dattelbaum, M.D.,
ex officio.........................Brooklyn

This committee wishes to report the progress of the administration of the War Memorial Fund which is now in its sixth year. It was established by the House of Delegates as a memorial to members of the State Society who were killed or who died as a result of wounds or sickness contracted in the line of duty in World War II. After eligibility to receive benefits has been established and has been approved by the committee, each child of the deceased member may receive $600 a year, after registration at an approved college, to help defray expenses of his collegiate and postgraduate education. These benefits may be paid until the beneficiary is twenty-five years old, providing he or she is unmarried.

The committee feels it is necessary to remind members of the State Society of the provisions which entitle children to receive these benefits.

> "To each beneficiary covered by this Memorial Fund there shall be made a contribution of $600 per annum, beginning on completion of secondary (high school) education and continuing while the beneficiary pursues a collegiate and/or a professional postgraduate course up to the age of twenty-five years, if he or she remains unmarried. The amount of this annual contribution shall be changed only by vote of the House of Delegates. The Council shall be authorized to care for cases of special educational need arising in the secondary (high school) level within the limitations of the available funds."
>
> ". . . benefits to be paid the children of the members of the Medical Society of the State of New York who were killed in action or died of wounds or disease connected with their service in the Armed Forces during World War II."

To date, 19 college students have been aided by the War Memorial Fund. Thirteen are receiving payment for the 1953–1954 academic year. The other six who received benefits either graduated or for some other reason discontinued their education.

TABLE I.—Number of Years Beneficiaries Have Received Aid from Fund

	Number		
Number of Years Benefits Paid	Currently Receiving Benefits	Now Discontinued	Total
1	3	2	5
2	1	1	2
3	3	1	4
4	..	1	1
5	3	1	4
6	3	..	3
Total	13	6	19

Table I, showing the number of years the beneficiaries have received aid from the fund, is of interest.

During 1953 a total of $299 in assessments was received for this fund and $5,353 in interest on investments. Payments to beneficiaries for the same period amounted to $6,400. Since the fund has been in existence, there has been contributed $243,351 by our members. A total of $30,600 has been disbursed to beneficiaries. The fund decreased $748 during the year, and as of December 31, 1953, the surplus amounted to $235,826. The monies of the fund are invested in United States government bonds. A more detailed financial report is included in the Report of the Treasurer.

The committee keeps in touch with the War Memorial Fund students through correspondence. Their letters tell of progress and their gratitude for the opportunity given them by the fund to have a college education, which otherwise might have been denied them. It is felt that the War Memorial Fund is of inestimable value as a living memorial to the deceased officer-physicians of the Medical Society of the State of New York.

It would be remiss indeed if the committee did not at this point add a word of commendation regarding the intelligent, conscientious, and efficient services of Miss Mollie Pesikoff. As her experience in the work grows, her fund of knowledge increases, and she therefore becomes more valuable to the committee as time goes by. We deeply appreciate her efforts.

Respectfully submitted,

Edward R. Cunniffe, M.D., *Chairman*

(*This report is referred to the Reference Committee on Reports of Treasurer, Trustees, and Finance Committee*)

Blood Banks Commission

To the House of Delegates, Gentlemen:

Your Blood Banks Commission is composed of the following members:

Dan Mellen, M.D., *Chairman*	Rome
Andrew A. Eggston, M.D.	New York City
Theodore J. Curphey, M.D.	Queens
Floyd S. Winslow, M.D.	Rochester
Samuel Sanes, M.D., Representative, New York State Association of Public Health Laboratories	Buffalo
Quentin Jones, M.D., Representative, Hospital Blood Banks	Utica
Lester J. Unger, M.D., Representative, Hospital Blood Banks	New York City
John Scudder, M.D., Representative, Hospital Blood Banks	New York City
Ernest Witebsky, M.D., Representative, Hospital Blood Banks	Buffalo
John J. Clemmer, M.D., Representative, Community Blood Banks	Albany
Herman E. Hilleboe, M.D., Commissioner of Health, New York State Department of Health	Albany
Jacob Geiger, M.D., Representative, Blood Banks Association of New York State	New York City
Herbert Brown, Jr., M.D., Representative, American Red Cross	Rochester
William M. Markel, M.D., Representative, American Red Cross	New York City

The Blood Banks Commission has viewed with interest and appreciation the efforts of the board of directors of the Blood Banks Association of New York State to create an organization during the interim between the 1953 and 1954 meetings of the House of Delegates. These efforts were reviewed during a meeting of the Commission in March of this year.

As a result of funds loaned by the Medical Society of the State of New York, on recommendation of the Commission, the Association was formally activated by the establishment of an office, in the headquarters of the State Medical Society, on August 10, 1953. Since that time, accomplishments may be succinctly summarized as follows:

Membership.—Over 100 blood banks throughout the State have joined as Institutional Members. Over 200 physicians have joined as Individual Members.

Blood Exchange Program.—Detailed plans have been drawn for a clearinghouse whereby an inventory will be maintained of blood throughout the State. Under this program banks will be able to dispose of blood and reduce outdating to a minimum. Rare types of blood will be located anywhere in the State.

The Exchange Program is scheduled to begin in April, 1954.

Blood Assurance Program.—In cooperation with Genesee County Medical Society, and at the recommendation of the House of Delegates, the Association will conduct the initial pilot project of the Blood Assurance Program beginning March 22. The primary purpose of this experimental endeavor is to test the system's public appeal.

Under the Blood Assurance Program an individual may subscribe 1 pint of blood, and for one year 4 pints are provided when needed for himself, spouse, or children. Benefits are extended throughout the State and nation.

The plan is considered to be an extension of the Blue Shield principle and is based on actuarial studies.

Education.—Primary stress has been placed on education of the medical profession. Association speakers have appeared before all of the annual district branch meetings and many county medical society and hospital staff meetings. A monthly bulletin is issued to physicians active in State and county medical societies or interested in the use of blood by reason of their medical specialties, and in May an explanatory brochure will be mailed to every member of the Medical Society of the State of New York.

A program of public education will begin on May 10 with a press luncheon in New York City. Initial contacts with press and broadcasting people have been favorable.

Your chairman would like to thank the officers and directors of the Blood Banks Association for the time and effort they have expended to advance the program during the past year. The immensity of their task may be realized when one considers that in August the Association had no members, no blueprint for either the Blood Exchange or Assurance Program, and faced an almost total job of education concerning its program and objectives among the medical profession of this State.

Through the interest, personal sacrifice, and good will of officers, board, and committee members, the Association has rapidly expanded. The officers of the Association are Dr. J. Stanley Kenney, president, who has spearheaded the movement; Dr. John J. Clemmer, vice-president; Dr. W. P. Anderton, secretary; and Dr. James R. Reuling, treasurer. Members of the board of directors are Drs. W. P. Anderton, Milton A. Carvalho, John J. Clemmer, Theodore J. Curphey, Andrew A. Eggston, Jacob Geiger, J. Stanley Kenney, William M. Markel, Dan Mellen, John K. Miller, James R. Reuling, Lester J. Unger, Denver M. Vickers, Edward T. Wentworth, and Ernest Witebsky.

A special note of appreciation should be given to the officers and membership of Genesee County Medical Society, headed by the president and immediate past-president, Drs. George S. Young and Joseph Diasio, respectively, and the chairman of the Blood Banks Committee, Dr. Robert S. Jenks, for their enthusiastic cooperation in planning and executing the initial pilot project of the Blood Assurance Program.

The Commission notes with pleasure that activities of the Association have closely followed the summary of the Blood Banks Commission concerning the need for a blood banks association in New York State, as presented to the Council and Trustees in December, 1952.

It is further noted that the board of directors of the Blood Banks Association has maintained and encouraged cooperation with all agencies interested in the use of blood.

At its March meeting the Commission recommended to the Council and Trustees of the Medical Society of the State of New York that an additional $12,000 be made available "with the proviso that any portion of this amount would be advanced to the Association as the need arises." This request was in accordance with the over-all amount of starting capital approved by the Commission in 1952. The amount advanced was on a loan basis with the intent that the Association would reach a point of organization where it will be self-sustaining. After this objective has been attained, the total starting capital advanced by the State Medical Society will be amortized and repaid over a period of years.

Your chairman wishes to extend his appreciation to each member of the Commission for guidance and assistance offered during the year.

Respectfully submitted,

DAN MELLEN, M.D., *Chairman*

(This report is referred to the Reference Committee on Report of the Council—Part IV, Public Health Activities B)

RESOLUTIONS

1954 House of Delegates

Medical Society of the State of New York

The following resolutions will be presented to the House of Delegates of the Medical Society of the State of New York, May 10 to 12, 1954, in New York City, and are published here for information.

Change in Qualifications for District Branch Presidents

Proposed by Dr. J. Frederick Sarno, president, in the name of the Fourth District Branch

WHEREAS, Article XI, Section 2, of the Constitution of the Medical Society of the State of New York provides that the president of a district branch must have first served as a president of a component county society; and

WHEREAS, it is not possible for some interested and competent leaders to become presidents of their county societies; and

WHEREAS, this provision may prevent worthy members from becoming active in district branch affairs; therefore be it

Resolved, that Article XI, Section 2, of the Constitution of the Medical Society of the State of New York be amended by deleting the words, "and they must provide that the district branch president shall have first served as a president of a component county society," so that this Section shall now read, "Each district branch may adopt a constitution and bylaws for its government and may amend the same; but before becoming effective they shall be approved by the Council. They shall be consistent with the Constitution and Bylaws of this Society."

Admission Policies of Physicians' Home

Proposed by Dr. J. Frederick Sarno, president, in the name of the Fourth District Branch

WHEREAS, there is confusion in the minds of some members of the Medical Society of the State of New York regarding the admission policies of the Physicians' Home; and

WHEREAS, this confusion has, in some instances, led to ill feeling directed against the Physicians' Home; and

WHEREAS, it is believed that a full explanation of the admission policies of the Home would dispel this feeling; therefore be it

Resolved, that the directors of the Physicians' Home be requested to clarify the situation by a statement of their admission policies together with the reasons for them and to make such statement known to all members of the Medical Society of the State of New York.

Request for A.M.A. Curb on Derogatory Statements by Physicians

Proposed by the Nassau County Medical Society

Whereas, self-appointed spokesmen for medical groups have made public statements to the press and lay magazines, accusing members of the medical profession of gross breaches of ethics, specifically "split fees," "ghost surgery," "overcharging," and "unnecessary operations"; and

Whereas, these statements have resulted in the publication of vicious articles degrading the medical profession, under such headlines as "Why Some Doctors Should Be in Jail"; and

Whereas, the appearance of such material in print has created an atmosphere of unjustified suspicion, resulting in a loss of confidence and faith in all members of the medical profession; therefore be it

Resolved, that the Medical Society of the State of New York go on record as (1) strongly condemning the practice of physicians making derogatory statements about members of the medical profession to the press or representatives of lay magazines, (2) requesting the American Medical Association to state its views, in definite terms, on all phases of unethical practice and what it proposes to do to bring disciplinary action against individuals guilty of such practice, and (3) urging the American Medical Association to use every means available to prevent spokesmen for medical groups, as well as the members at large, from making statements derogatory to the medical profession; and be it further

Resolved, that the Medical Society of the State of New York direct its delegates to present this resolution at the next meeting of the delegates of the American Medical Association and that copies of this resolution be sent to the American Medical Association and to the American College of Surgeons.

Change in A.M.A. Membership Procedures

Proposed by Dr. Benjamin M. Bernstein, Kings County, as an individual

Whereas, the American Medical Association is composed of a union of state medical societies; and

Whereas, the representation of delegates from the various states to the House of Delegates should depend on the number of members in each state society; and

Whereas, membership in the American Medical Association is a direct privilege and obligation of each individual member and not by way of membership in his state society; therefore be it

Resolved, that the delegates from the Medical Society of the State of New York to the House of Delegates of the American Medical Association protest the ruling now in effect, under which representation is based on the number of members in the American Medical Association from each state; urge a change in this procedure, which now penalizes the state as a whole when it fails to persuade all of its members to pay dues directly to the American Medical Association, and also urge instead the establishment of a preferable method whereby one dues payment to the county would cover membership and dues to the county and state medical societies and the American Medical Association.

Publication of Results of National Board Examinations

Proposed by Dr. Benjamin M. Bernstein, Kings County, as an individual

Whereas, it is of vital concern that the public be fully informed concerning the education of the doctor; and

Whereas, the profession has not given due publicity to certain important aspects related to such education; and

Whereas, the legal profession, especially in certain areas of the country, regularly publicizes the results of the examinations for the privileges of practicing in a particular state; and

Whereas, most graduates from medical schools take the examinations of the National Board of Medical Examiners which permits its diplomates to practice medicine in 39 States of the Union; and

Whereas, the character of these examinations, given as they are in three parts spaced at intervals through the medical course, attests to the thorough training given to our medical students in preparation for their careers of medical care; and

Whereas, these examinations and their results with the names of the successful candidates ought to be given the widest possible publicity; and

Whereas, such publicity is ethical, desirable, and long past due; therefore be it

Resolved, that this resolution be conveyed to the House of Delegates of the American Medical Association urging that they approve its recommendations to the end that the necessary procedure may be established whereby the results of the examinations by the National Board of Medical Examiners are made available to the American Medical Association for the publicity they so richly deserve.

MINUTES OF THE COUNCIL

The following is a summary of the minutes of the February, 1954, meeting of the Council of the Medical Society of the State of New York.

THE Council met February 11, 1954, from 9:15 A.M. to 1:45 P.M. at the Manhattan Club, Madison Square, New York City, Dr. Andrew A. Eggston, president, presided.

Secretary's Report

Communications.—1. Letter from Mr. John F. McCormack, vice-president and secretary of United Medical Service, Inc., asking approval of the following nominations for membership on the United Medical Service board of directors: Dr. Carl R. Ackerman, Bronx; Dr. Chas. Gordon Heyd, New York City; Dr. John J. Masterson, Brooklyn; Dr. J. Stanley Kenney, New York City; Dr. Earl C. Waterbury, Newburgh.

Approval *was voted.*

2. Letter from the Medical Society of the County of New York, asking similar approval for Dr. John J. H. Keating and Dr. Gerald D. Dorman.

Approval *was voted.*

Executive Committee.—Dr. Anderton reported that the following recommendation was made at the executive committee meeting on February 10, 1954: The comparison of costs and income from the collection of American Medical Association dues, as presented by the secretary to the Council in November, shows a net cost to this Society for the three-year period covered, 1950, 1951, and 1952, of $10,723.18. The executive committee recommended that the Council authorize the secretary to write to each member of the Board of Trustees of the American Medical Association requesting reimbursement to this Society for that amount.

This recommendation *was discussed* and, by vote, *was laid on the table.*

Dues Remission.—The Council voted to remit annual State dues of five members for 1953 and of 26 members for 1954 because of illness; to remit 1953 dues of five members and 1954 dues of 89 members because of service with the armed forces; to remit 1953 dues of two members because of financial hardship; and to refund 1954 dues of a member who resigned in January, 1954, to practice abroad. The Council also voted to request remission of American Medical Association dues of one member for 1952, 13 members for 1953, and 95 members for 1954. It was voted to request exemption for 19 members from the further payment of dues to the American Medical Association because they are more than seventy years of age.

General.—Through the courtesy of Dr. James R. Reuling, it gives me pleasure to report regarding the funds of the National Society for Medical Research, to which you have subscribed, for the year July 1, 1952, through June 30, 1953:

Total operating income	$60,776.13
Total operating expense	57,898.90
Balance	2,877.23

Your secretary has received notice that the Eighth General Assembly of the World Medical Association will be held in Rome, Italy, from September 26 to October 2, 1954. President-elect Dan Mellen has represented the State Society at the past two general assemblies. It is respectfully suggested that he be appointed representative from our Society to this Eighth General Assembly.

It *was so voted.*

The secretary takes pleasure in notifying you that Colonel James M. Arnold has accepted the post as assistant indemnity representative.

On January 14, 1954, your secretary attended a meeting of the Nominating Committee; on January 19 a meeting of the Medical Society of the County of Westchester at White Plains; on January 20 the Scientific Exhibits Subcommittee meeting; on January 24 reception at the newly built New York Infirmary for Women and Children; on January 29 a meeting of the Planning Committee for Medical Policies.

Your secretary is scheduled to attend on February 10 the JOURNAL Advertising Conference; Publication, Office Administration and Policies, and Executive Committees; and Malpractice Insurance and Defense Board.

Much commendation is due the Publication Committee for the 1953 *Medical Directory of New York State.* It is a volume of which we may all be proud.

It *was voted* to approve the report as a whole.

The Treasurer's report was accepted.

Reports of Committees

Blood Banks Commission.—Dr. Dan Mellen, chairman of the Blood Banks Commission, requested Dr. J. Stanley Kenney to report on the Blood Banks Association of New York State. Dr. Kenney stated: "Mr. President and gentlemen, since January we have met with representatives of the Genesee County Medical Society in Batavia. Plans are blueprinted, and all committees are at work in putting the pilot project of the blood assurance program into action in April. The blueprint for the opening of the blood exchange program is also being established. We met yesterday, and I can say that program should be operating between now and the first of March."

Dr. Peter J. Di Natale stated: "Dr. Curphey came to Genesee County a week or so ago and talked on blood banks. I want personally to commend him. I think the Society can all be proud of the chairman of the Public Health and Education Committee. He did a grand job and was well received." (*Applause*)

Economics.—Dr. Renato J. Azzari, chairman, presented the following report of the Bureau of Medical Care Insurance, George P. Farrell, director: "On January 16 and 17, 1954, your director attended a special meeting of Blue Shield Medical Care Plans, held in Chicago. At this meeting 18 resolutions were acted upon.

"On January 19, 1954, your director discussed health insurance plans at a meeting of the Nassau County Medical Society."

Dr. Azzari also presented Mr. Farrell's report on Dr. Charles G. Hayden's testimony before the House Interstate and Foreign Commerce Committee.

Hospital and Professional Relations.—Dr. Harold F. Brown, chairman, reported: "We had a preliminary meeting yesterday at the Harvard Club, at which were present Drs. Bauer, Cunniffe, McClintock, Winslow, Greenough, and myself. We explored the situation and discussed strategy.

"We feel that any invitation to the New York State Hospital Association and the Greater New York Hospital Association should come from the president of the Society.

"We do not feel that the interest of the doctor is the primary objective; rather, the welfare of the patient.

"Various things were discussed, including the full-time man and whether he is fulfilling the job that has been done in the past by the part-time man; whether as a result of present-day practices in medical education and hospital training we are turning out men who are well-rounded or men who have been experienced only in hospital practice and laboratory medicine."

Legislation.—Dr. James Greenough, chairman, reported: "I am merely going to read one paragraph of the report at this time: Your chairman met with the president and another representative of the Podiatry Society on January 16. They have presented their case for inclusion in indemnity plans with considerable persuasion. Your chairman consulted with Mr. Farrell and Dr. Wertz concerning this matter. Dr. Wertz suggested that the Podiatry Society confer with the administrators of the various plans with the aim of a working agreement such as that in Michigan, rather than attempting to solve the problem by legislation. That suggestion was sent to the president of the Podiatry Society in a letter. Dr. Mullens will speak to the Council this morning."

At this point Dr. B. C. Mullens, president, Mr. Chernin, counsel, and Mr. Gilbert Hollander, executive secretary, of the Podiatry Society of the State of New York, entered and were introduced by Dr. Eggston.

Dr. Mullens presented his arguments and concluded with a request for the cooperation of the Council to amend the Corporate Health Act, Section 250 of the Insurance Law, to permit an insured person who has a foot disability under one of these corporate health plans to have freedom in choosing his doctor.

Mr. Chernin, attorney for the Podiatry Society, answered questions.

Dr. Harold B. Smith, executive officer, and Mr. Chernin commented, and the podiatric representatives withdrew.

> After discussion it *was voted* that the bill be opposed and that the matter *be referred* to our Bureau of Medical Care Insurance to take up with the Blue Shield Plans of New York State.

Dr. Greenough continued: "The first portion of my report had to do chiefly with the meeting of Dr. Brown's committee last night. It has already been covered by Dr. Brown. I will, however, state one thing that was not mentioned, the question of inviting Dr. John J. Bourke, executive secretary of the New York State Hospital Survey and Planning Commission, to whatever joint meeting is held. The Committee felt it advisable.

"Considerable attention has been paid to the administration's bill (Senate Intro. 11) to provide psychiatric clinics throughout the State by action of local county and municipal units and State reimbursement. Dr. Smith, Dr. Curphey, the Subcommittee on Mental Hygiene, and your chairman have all been in communication concerning this bill. Dr. Smith conferred with Mr. Brown, assistant secretary to the Governor; and your chairman, with Dr. Smith, talked with Mr. Heath, confidential law adviser. The administration plans to pass this bill as it was presented to the Council last month and later amend it. One suggestion made by Dr. Smith has been accepted by the Department, which would stop any reimbursement for treatment of individuals able to pay. The Department does not want to name doctors specifically to the Board of Managers of such mental health units, in order to avoid specific naming of other agencies. This suggestion was made by the Subcommittee on Mental Hygiene. We were assured, however, that no reimbursement would be permitted unless there was adequate medical representation on any such board.

"Dr. Smith and your chairman met February 1 with Dr. Newsome of the Education Department, Dr. Pense of the Mental Hygiene Department, and Drs. Cooke and Zuchor, psychologists, to discuss the licensing of psychologists. The object of such licensure would be to prevent quackery. The stumbling block is to reach an acceptable definition of the fields of psychiatry and psychology. The decision reached was for one or two psychiatrists and psychologists to formulate an agenda concerning the problem, then to hold a meeting of probably three psychiatrists and three psychologists to try to reach an agreement for legislative action. No legislative procedure is contemplated at this session. Therefore, your chairman reported the suggestions to Dr. Curphey since the immediate steps were believed to be in the province of the Subcommittee on Mental Hygiene. The Legislation Committee will await their decisions.

"Our executive officer is following carefully the bills which are introduced. Some 27 bills covering 18 subjects seem of particular importance (February 7, 1954). Chief of these have to do with psychiatry, extension of part payment of indemnity medical plans to State employes, prohibition of practice of medicine by hospitals, free choice of physician in medical indemnity plans, fee-splitting, and inclusion of podiatrists in indemnity plans.

"Our own bills have been introduced. Our counsel thought it advisable to wait until after the budget message February 1.

"The Legislation Committee will meet tomorrow to go over the entire program.

"I would like to amplify on Senate Intro. 11. Since I wrote that report, Dr. Smith has received a telephone communication from Mr. Heath and other representatives of the Executive Department at Albany who are meeting this afternoon in regard to this bill to establish mental hygiene clinics throughout the State. If there is anything more that the Council wishes to discuss in regard to that bill, it might be advisable to let us know about it so we can transmit the information to the meeting this afternoon. The whole bill will be taken up in the Legislation Committee tomorrow."

After discussion it *was voted* that the president of the Medical Society of the State of New York write the presidents of the component county medical societies recommending them to see that representatives of our profession are chosen as members of the local mental hygiene governing boards.

Dr. Alfred P. Ingegno, president of the Medical Society of the County of Kings, addressed the Council regarding the Bannigan and Bauer Bills to require free choice of physician in medical care insurance plans.

The report of the Legislation Committee *was accepted.*

Nursing Education.—Dr. Joseph A. Geis, chairman, stated there would be a meeting of the committee shortly.

Office Administration and Policies.—Dr. John J. Masterson, chairman, reported that at a meeting of the committee on February 10 various personnel matters were approved, and it was decided to request appropriations for the purchase of a Remington Rand "Portagraph-Transcopy" machine and to cover the cost of erecting a private office.

It *was voted* to accept the report.

Publication.—Dr. Masterson, chairman, reported that the committee met on February 10. It considered a complaint from the Union Health Center that they had been denied listing in the 1953 *Directory*, whereas the Sidney Hillman Health Center had been listed. The committee authorized a reply stating that the Sidney Hillman Health Center had been listed because we had been informed that it served the general public and that there was no intention on the part of this Society to discriminate between them on any other ground.

The committee decided to sell the 1953 *Directory* without the usual brochure; to request transfer to the 1954 budget of the amount allocated in the 1953 budget for *Directory* circulation promotion, none of which was used in 1953; to continue the same advertising rates for the 1955 *Directory;* to pay an additional 5 per cent commission on any net advertising in the 1955 *Directory* the gross of which exceeds the total gross advertising in the 1953 edition; to request an appropriation to cover the cost of a *Directory* advertising promotion campaign in the JOURNAL and at the 1954 annual meeting; and to grant the request of the Jewish War Veterans of the United States, Inc., for a complimentary copy of the 1953 *Directory.* Various procedural matters from the *Directory* editorial department were acted upon.

The business manager reported on JOURNAL finances, noting that advertising for January, 1954, exceeded that for January, 1953.

The committee also decided to make changes in the JOURNAL exhibit for annual meetings; to request an appropriation for printing 2,500 JOURNAL cover facsimiles with inside pages for notes, to be distributed at the 1954 annual meeting, and to recommend the awarding of a daily door prize to be donated by advertisers; to request an appropriation for a revised edition of "Key Medical Market," a promotion piece used in selling JOURNAL advertising.

The committee approved the request of the editor to continue a tape recording service during the 1954 annual meeting and a suggestion that, instead of publishing annual meeting papers in groups according to sections, an attempt be made to diversify subjects in each issue.

It was decided to keep index cards on file for five years to be available if the publication of a five-year cumulative index is undertaken; to print authors' names as well as titles of articles on the JOURNAL cover; and to purchase a reconditioned "Soundscriber" recorder. No action was taken on the suggestion that changes of addresses and telephone numbers of members be published in the JOURNAL. The following consulting editors were appointed: Dr. John G. Masterson, cancer, and Dr. William G. Childress, tuberculosis.

It was decided that the chairman of the Publication Committee recommend in his report to the House of Delegates that the editor be employed on a full-time basis.

Stating that many letters have been received which praise the improved appearance and content of the JOURNAL, Dr. Masterson commended Dr. Redway, the Associate Editorial Board, Miss Lewis, and the staff for effecting this improvement.

After discussion it *was voted* to accept the report, with an amendment to delete the recommendation that a daily door prize be awarded at the annual meeting.

Dr. Masterson presented a letter received from Dr. S. Schussheim of Brooklyn regarding malpractice insurance. The letter was substantially a copy of an article published in the January issue of the Kings County Physicians' Guild *Bulletin*. Dr. Schussheim requested that it be published in the correspondence columns of the JOURNAL. Dr. Masterson also presented a reply written by Dr. Christopher Wood, chairman of the Malpractice Insurance and Defense Board. He expressed the opinion of the committee that both letters should be published.

Dr. d'Angelo stated that the Malpractice Insurance and Defense Board did not wish to make a recommendation with regard to a Publication Committee question but felt that, in general, letters from members should be published.

After further discussion, it *was voted* to publish these two letters in the JOURNAL.

Planning Committee for Medical Policies.—Dr. Peter J. Di Natale, chairman, reported: "The establishment of a Council Committee on General Practice has been discussed at most of our meetings. There are at present two committees concerned with General Practice, (1) Subcommittee of the Council Committee on Public Health and Education, composed of seven members, the present chairman of which is an active member of the New York State Chapter of the Academy of General Practice; (2) a Special Committee on General Practice representing the State Health Department, State Medical Society, and general practitioners' group. Five members of the combined membership of these two committees were invited to confer with the Planning Committee.

"We know of no other segment of our profession that is thus represented, that is, having two committees for their particular type of practice. We know of no reasonable request that has ever been presented to our State Society that has not received the utmost consideration.

"It was stated that there are about 31,000 physicians in New York State; 18,000 or 19,000 are general practitioners of whom 1,800 to 2,000 are members of the New York State Academy of General Practice.

"Much discussion took place about the practice of certain hospitals having rules and orders that are detrimental to the hospital practice of general practitioners. There was much talk about discrimination against general practitioners.

"The Planning Committee deplores the action of some hospitals in issuing rules or directives that are detrimental to the hospital practice of any duly licensed physician of New York State.

"Your Planning Committee wishes again to quote Number 6 of its 1953 annual report: 'Your committee strongly reaffirms its opposition to the practice of medicine by hospitals and medical schools under any guise and urges its members to be constantly on the alert to combat this encroachment on the practice of medicine.'

"Your committee feels that while a Council Committee on General Practice might add dignity and prestige to the general practitioner, such a committee will not solve local hospital and doctor relations. We believe this can be done more effectively locally, in consultations and discussions with hospital boards of directors, superintendents of hospitals, with the guidance and advice of our State Society.

"We feel that to grant a particular group of practitioners' request for a council committee will inevitably lead to other groups asking for the same consideration.

"We earnestly hope that our State Society continues its always active interest in all the physician members and not any one particular group. We believe that the problems of any group should be the problems of all of us.

"We of the Planning Committee feel that representation on the council committees comes only following hard and long work at county and district levels and election at such levels, and at House of Delegates' meetings—and only in such a way and no other. We urge physicians to take a more active interest in their local county society and district branch and be ever willing to donate their time and energies to further the interest of the medical profession.

"In view of the above and also because the Council has approved a study of our committee setup, your Planning Committee recommends that action on the establishment of a Council Committee on General Practice be deferred."

It *was voted* to adopt this portion of the report.

Dr. Di Natale added: "In reviewing the minutes of our meeting, I would like to suggest to the president when he makes his committee assignments for the next Society year that the Subcommittee on General Practice be continued but that it be made a subcommittee of the Committee on Hospital and Professional Relations. I ask first Dr. Curphey's approval if he wishes to recommend that."

Dr. Curphey heartily endorsed the recommendation.

After discussion it *was voted* that the Subcommittee on General Practice be transferred from the Council Committee on Public Health and Education to the Council Committee on Hospital and Professional Relations in the 1954–1955 Society year.

Dr. Di Natale continued: "The next subject that involved considerable time was the status of osteopaths. Those of you that sit in the House of Delegates of the American Medical Association remember the report that was brought in last June. The Board of Trustees, following that report, suggested that the House of Delegates of the American Medical Association be prepared to answer the following questions:

"1. Should modern osteopathy be classified as 'cultist' healing?

"2. Since the objectives of the American Medical

Association include improvement in undergraduate and postgraduate education, should doctors of medicine teach in osteopathic schools?

"3. Should the relationship of doctors of medicine to doctors of osteopathy be a matter for determination by the several state associations?

"Your Planning Committee, in order to make proper study of the problem and to give the osteopathic group an opportunity to be heard and to obtain information that would guide us, invited to our meetings the following individuals representing osteopathy: (*a*) the president and the immediate past-president of the New York State Osteopathic Society, (*b*) the osteopath member of the New York State Board of Medical Examiners, (*c*) a former osteopath member of the New York State Board of Medical Examiners, (*d*) the secretary of the New York State Osteopathic Society, (*e*) a past-president of the American Osteopathic Society who is chairman of the Bureau of Hospitals of the American Osteopathic Society, and (*f*) the president of the Chicago College of Osteopathy. Information by letter and by appearance in person was obtained by your committee from the deans of our New York State medical schools. Also the secretary of the State Board of Medical Examiners presented his views. Copies of the minutes are on file at the State Society. We feel that the group of men that appeared before us, particularly of the osteopathic group, were of the higher echelons of that profession and represented their group very ably. They are trying to elevate their members to higher standards and to the highest type of practice of osteopathic medicine. Many statements and questions and answers have been recorded. Many opinions have been expressed.

"The Board of Trustees of the American Medical Association has asked each state medical society to study the osteopathic situation and be prepared at the June, 1954, session to answer the above questions."

At this point Dr. Di Natale presented the Planning Committee's recommendations.

After discussion it *was voted* that the report be referred back to the Planning Committee for revision and afterward to be mailed to members of the Council.

Dr. Di Natale continued: "Many of us have seen an ad in the paper, 'More Power to America,' by the General Electric Company. It is in regard to the Capehart-Miller Bill for the development by business enterprise of additional power at Niagara Falls. After thinking about this, I wrote out this resolution:

> 'WHEREAS, there is a proposal to produce additional electricity at Niagara Falls; and
>
> 'WHEREAS, five electric companies of New York State (Rochester Gas & Electric Corporation, Niagara Mohawk Corporation, New York State Electric & Gas Corporation, Central Hudson Gas & Electric Corporation, and Consolidated Edison Company of New York, Inc.) are ready to develop this new additional power; and
>
> 'WHEREAS, there exists no justification for the creation of a government-owned electric power business; and
>
> 'WHEREAS, this new project does not involve flood control, reclamation, irrigation, or navigation, which reasons have been previously used to justify other government power projects; and
>
> 'WHEREAS, we believe in the private enterprise system and not government control or regimentation of any business; therefore be it
>
> '*Resolved*, that we, the members of the Council of the Medical Society of the State of New York, go on record as favoring private enterprise development of the new Niagara project, as embodied in the Capehart-Miller Bill; and further be it
>
> '*Resolved*, that copies of this resolution be sent to the Senate Public Works Committee, Washington, D.C., also to our representatives in Washington, and to the New York State Legislature.'

"Also copies should be sent to Senator Capehart and Congressman Miller."

The resolution *was tabled*.

Public Health and Education.—Dr. Theodore J. Curphey, chairman, reported: "The Council Committee has been active in the past month in preparing questionnaires. One for the general practitioners, the Subcommittee on General Practice, is going to all hospitals of the State requesting information about general practitioners' services.

"We are also preparing a questionnaire for the Subcommittee on Diabetes, urging county societies to schedule postgraduate meetings for which we will furnish speakers.

"There is also a questionnaire for the Maternal and Child Welfare Subcommittee asking county societies if they have a committee in this field and what its activities are.

"We are working on the *Course Outline Book*. Letters have been sent to the deans of the nine medical schools. We have also circularized many of the physicians who have charge of special sections of the book.

"While in Chicago recently, I talked to Dr. de la Chapelle relative to the possibility of revising the honoraria for our lecturers. Dr. Amos happened to be there. Dr. de la Chapelle felt that many men associated with New York University are not getting enough in the way of honoraria for our lecture services. He told me that many of the same men going to New Jersey for the same purpose are receiving anywhere from $50 to $100 a lecture. It was inferred that action by our committee would be welcome.

"Since the last meeting we have set up 24 lectures for county medical societies, three of which have been arranged by the State University at Syracuse.

"I have one request to make, Mr. President, that you approve the appointment of Dr. Leona Baumgartner, the new Commissioner of Health of the City of New York, as an advisory member of the Council Committee to replace the previous Health Commissioner; also that Dr. James Quinlivan be appointed an advisory member of the Medical Film Review Subcommittee. I so move."

Approval *was voted*.

Dr. Curphey continued: "I have a letter here from the Colorado State Medical Society with a resolution. I won't read all the whereases, but it refers to the mortality from automobile accidents. The resolved reads:

> 'That the Society hereby recommends to the motor car manufacturers of America that they equip all automobiles with safety belts to meet the specifications of the C.A.A. Technical Standard Order, T.S.O.-C22 A, November 15, 1950; and
>
> 'Further recommends that these manufacturers provide seats, cushions, and doors which will withstand impacts of 10 to 15 G's without injuries.'

"The Colorado State Society has been sending this around the country, and they desire our support. I presume it is prior to presentation to the American Medical Association. I move that this Society goes on record as supporting that resolution."

After discussion it *was voted* to table the matter for further study and action.

It *was voted* to adopt the report as a whole.

Public Relations.—Dr. Floyd S. Winslow, chairman, presented the following: "The activities of your committee and the Public and Professional Relations Bureau since our last report to the Council have been concerned chiefly with the distribution of the medical economic pamphlet series, the guide to cooperation with radio, press, and television, and routine matters.

"A letter containing copies of each of the 12 pamphlets has been sent to county society presidents, secretaries, and public relations chairmen, as well as to members of the Council and Board of Trustees, county society executive secretaries, and members of this committee. The letter invited comments concerning public response to the pamphlets as well as the reaction of physicians.

"The work of shipping the pamphlets to the county medical societies has begun. At the time this report was drawn up, 32 county medical societies had given definite orders. This represents an additional five county societies which have ordered the pamphlets since our last report.

"In regard to the guide to cooperation with the press, radio, television, and photographers, a joint meeting of leaders in these fields has been scheduled for February 12 at the Hotel Biltmore in New York City. The purpose will be to allow representatives to present their views on a proposed agreement previously submitted to them. As a result of this conference it is expected that a guide satisfactory to all concerned will be ready for the May meeting of the House of Delegates. Arrangements for this meeting have been under the direction of Dr. John McClintock, code subcommittee chairman.

"On February 1 Dr. McClintock and Dr. John D. Naples of Buffalo, of the subcommittee on the preparation of the guide, participated in a panel discussion at the winter Buffalo meeting of the New York State Society of Newspaper Editors. They appeared at the invitation of Mr. Burroughs Matthews, association president. Mr. Miebach was also in attendance.

"A report on the opinion survey conducted in the November, 1953, issue of the *Newsletter* to find out what readers think of the publication has been submitted to members of this committee. By a count of more than three to one, replies indicated that readers are satisfied with the publication. Among the features favored by the readers were the 'County Society News Round-Up' and 'On the Scene in Washington.'

"At the request of its chairman, Dr. John D. Naples, the Bureau assisted in the arrangements for the Public Relations Session to be held during the annual meeting in May.

"As reported elsewhere, the Bureau assisted the Woman's Auxiliary. Of particular note was the help in the publication of the first in the series of articles on Auxiliary activities in the January 1 issue of the NEW YORK STATE JOURNAL OF MEDICINE and the mailing of four letters to county auxiliary presidents and committee chairmen.

"The Speakers' Service arranged for addresses at two county medical societies and assisted several persons in securing films on health subjects.

"Public relations activities in New York State received nation-wide publicity through the A.M.A.'s 'PR Doctor' for January, 1954. This compilation of public relations materials, which are sent to key medical people throughout the country, contained four items prepared by the Bureau and two articles concerning county medical societies. The Bureau's items had appeared in the Public Relations Kit for County Medical Society Public Relations Chairmen, distributed at the Annual PR Conference. Copies of newspaper articles concerning the Onondaga County Medical Society's activities and several newspaper releases on gamma globulin and polio, describing the role played by the counties of Oneida, Herkimer, and Madison, were other materials in the A.M.A.'s public relations kit."

It *was voted* that the report be adopted.

Dr. Winslow supplemented his report as follows: "The American Medical Association is a member of what is known as the Farm-City Conference Board, in which they cooperate with numerous national organizations such as the Grange, the General Federation of Kiwanis Clubs, and a great many others. Their first project is a crusade against unnecessary government spending. In view of the fact that they have endorsed this, they would like the support of our State Society, and I move that we endorse their program and send notice of such endorsement to our county societies, so that we may cooperate with them. There is no financial involvement of any kind. I make that motion."

Approval *was voted.*

Dr. Winslow continued: "We have a set of 12 little pamphlets that we send out to our membership throughout the State that they can distribute to their patients and other people. We have published 1,200,000 copies of these, and the cost was $5,700. Up to the present time we have pledges from county societies throughout the State that involve $3,000 that will be paid to us, so that the total cost will only be $2,700 to us. We think about $700 of that will also be liquidated, so it will only cost about $2,000 for the State Society. I thought you would consider that pretty good news.

"One more item is that we received word from the Public Relations Bureau of the American Medical Association that these pamphlets represent the finest effort which they have known. I say that not in praise of Public Relations but in gratitude to the Council and to the Board of Trustees, who have given us the opportunity to do this piece of work."

Dr. Reuling stated: "Having been critical at times of the Public Relations Department and the amount of money that goes into it, I would say I have read each of these pamphlets carefully. I, personally, think that is the finest thing that has come out of the State Society in that department in a long time, and I think they have a great deal of value. I want to compliment Public Relations, and I want to say that I think this is a wonderful piece of work."

A vote of commendation to the Public Relations Committee and the Public and Professional Relations Bureau for these 12 pamphlets *was passed.*

Veterans Administration, Liaison with.—Dr. Herbert H. Bauckus, chairman, stated: "I have no special report to make. From our coordinators' reports to prepare for the annual report, I find that the amount of work that we have done in the past year is about the same as the year before."

Workmen's Compensation.—Dr. Gerald D. Dorman, chairman, stated: "There is no report for this past month except to say that we are going to have a meeting of the Workmen's Compensation Committee this afternoon."

New Business

Reports to the Council to Be Confidential.—Dr. Anderton proposed and Dr. Winslow seconded the following:

> "*Resolved*, that reports to the Council be confidential until acted upon by the Council."

After discussion it *was so voted.*

Dr. Hilleboe's Speech.—Dr. Eggston presented Dr. Herman E. Hilleboe, Commissioner of the New York State Health Department.

Dr. Hilleboe described a bill to transfer adult rehabilitation from the Education Department to the State Health Department and to establish centers for diagnosis, rehabilitation treatment, and nursing homes.

It *was voted* that the Society support this bill in principle and to refer it to the Committee on Public Health and Education for study.

A vote of thanks *was extended* to Dr. Hilleboe for explaining the bill.

Don't Forget - - - -

Make your hotel reservations for the annual convention. For your convenience—a reservation is blank on page 1150.

NECROLOGY

Alfred W. Armstrong, M.D., of Canandaigua, died on March 4 of arteriosclerosis at Thompson Hospital. He was seventy-eight years old. Dr. Armstrong graduated from the Syracuse University College of Medicine in 1904. He was a Fellow of the American College of Surgeons and consultant in surgery at Thompson Hospital.

Dr. Armstrong was a director of Thompson Hospital for thirty-six years, serving as secretary of the board for thirty years. During World War I he was a captain in the U.S. Army Medical Corps. Dr. Armstrong was a member of the Canandaigua County Medical Society and the Medical Society of the State of New York.

Jacob Branower, M.D., of New York City, died on March 16 at the age of sixty. Dr. Branower graduated from the Long Island College Hospital School of Medicine in 1915 and interned at Mount Sinai Hospital. He was a Fellow of the American College of Anesthesiologists and belonged to the American Society of Anesthesiologists. Dr. Branower was attending anesthetist at Lebanon Hospital. He was also a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Arthur C. Bright, M.D., of New York City, died on December 21, 1953, at the age of sixty-eight. Dr. Bright graduated from the Long Island College Hospital School of Medicine in 1913. He belonged to the American Association of Military Surgeons, the New York County Medical Society, and the Medical Society of the State of New York.

Nathan Elias Broder, M.D., of New York City, died on March 9 at his home. He was seventy-five years old. Dr. Broder graduated from the New York Homeopathic School of Medicine in 1902 and interned at Cumberland Hospital. He was a Diplomate of the American Board of Obstetrics and Gynecology.

Ralph Monroe Bruckheimer, M.D., of Cassadaga, died at the Woman's Christian Association Hospital in Jamestown on February 19. Dr. Bruckheimer was sixty-four years old. He graduated from the Columbia University College of Physicians and Surgeons in 1911 and interned at Mount Sinai Hospital. He was an assistant attending physician at Newton Memorial Hospital and served as health officer for the township of Stockton.

Dr. Bruckheimer was a member and past-president of the Chautauqua County Medical Society and also belonged to the Medical Society of the State of New York and the American Medical Association.

Henry Thorndyke Chickering, M.D., of New York City, died of a heart attack on March 15 at his home at the age of sixty-seven. Dr. Chickering graduated from the Harvard University School of Medicine in 1911 and interned at Presbyterian Hospital. He was a Fellow of the American College of Chest Physicians and a member of the American Society for Clinical Investigation and the New York Academy of Medicine.

At the time of his death, Dr. Chickering was a consulting physician at Lawrence Hospital, Bronxville, and at Mount Vernon Hospital. From 1913 to 1917 he was a resident physician at the Rockefeller Institute for Medical Research, where he helped develop a serum for use in lobar pneumonia. Until eight years ago he had been chief of the tuberculosis clinic at Presbyterian Hospital. During World War I he served as a major in the U.S. Army Medical Corps. Dr. Chickering was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

William J. Cranston, M.D., of Walton, died on February 28 at the Delaware Valley Hospital at the age of eighty-eight. Dr. Cranston graduated from the Bellevue Hospital School of Medicine in 1894. He was a consultant in ophthalmology and otolaryngology at Benedictine Hospital. Dr. Cranston belonged to the Delaware County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

David Jurist, M.D., of New York City, died on March 11 at his home at the age of seventy-six. Dr. Jurist came to the United States from Roumania as a child. He graduated from New York University and Bellevue Hospital School of Medicine in 1901 and interned at Bellevue Hospital. Dr. Jurist belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Felix Kleeberg, M.D., of Levittown, died on January 3 at the age of eighty-five. Dr. Kleeberg received his medical degree from Jefferson Medical College, Philadelphia, in 1899. He had been retired for several years.

Charles E. Maxwell, M.D., of Schenectady, died at his home on March 2 after a long illness. He was sixty-eight years old. Dr. Maxwell graduated from the Albany Medical College in 1911. After serving overseas in the U.S. Army Medical Corps during World War I, Dr. Maxwell became a lieutenant colonel in the Army Medical Reserve Corps. He was an attending cardiologist at Schenectady City Hospital and had also served as parochial school health officer since 1926.

Dr. Maxwell belonged to the Schenectady County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Martin B. Tinker, M.D., of Ithaca, died on February 26 in Boston, Massachusetts, at the age of eighty-four. Dr. Tinker received his medical degree from Jefferson Medical College, Philadelphia, in 1893. He was a Diplomate of the American Board of Surgery, a Fellow of the American College of Surgeons, and belonged to the American Surgical Association and the American Goiter Association. Dr. Tinker was a pioneer in the surgical management of goiter in this country.

During World War I he served as a lieutenant colonel in the U.S. Army Medical Corps and was chief of the surgical service in the reconstruction hospital then located at Fort Des Moines, Iowa. In recent years he had been in semiretirement.

Dr. Tinker was a past-president of the Tompkins County Medical Society and a member also of the Medical Society of the State of New York and the American Medical Association.

MEDICAL NEWS

Hearing Week, May 2 to 8, 1954—All doctors (not only otologists and pediatricians) are urged to give continuing thought to the hearing capacity of children, especially little babies. Early detection and treatment of ear conditions causing deafness are measures of great prophylactic value in the prevention of deafness. Elaborate apparatus is not necessary. Instruct parents to notice whether or not their baby or little child gives any evidence of not hearing ordinary sounds when these originate out of sight of the child. A few of such sounds, which should be easily heard by a child with fairly good hearing, are a moderately loud voice coming from the next room, a telephone bell or a door bell, mother's footsteps, ticking of clock, etc.

The healthy baby usually shows awareness of loud sounds during the first few weeks of life. Often baby will be startled by noises made by clapping the hands or shouting when only a week or so old. Ordinary sounds may easily awaken the child or delay the child in going to sleep. If a baby hears loud sounds it has at least some hearing. How much should be determined by careful testing.

To be sure your baby has good hearing check it every few weeks during the first six months and every month or so during the rest of babyhood. To do this will take only a few seconds—well spent. Other simple tests will be published from time to time in this and other media designed to reach all doctors.

Dr. Edmund Prince Fowler is the chairman of the Subcommittee on Hard of Hearing and Deaf, and the other members are Drs. Charles A. Anderson, Greydon G. Boyd, Karl W. Gruppe, Gordon D. Hoople, and C. Stewart Nach.

The Presbyterian Hospital—Doctors who participated in the eighth annual dinner for the Twenty-Five-Year Club of the Presbyterian Hospital at the Columbia-Presbyterian Medical Center which was held in Bard Hall on March 18 were: Dr. Franklin M. Hanger, vice-president of the Hospital's medical board and attending physician in the medical service, who was elected president of the club; Dr. Martin DeForest Smith, associate attending physician on the medical service who discussed the "New Look" in the club's organization, and Dr. Thomas W. Stevenson, Jr., associate attending surgeon on the Hospital's surgical service and a former president of the American Society for Surgery of the Hand, who spoke as an entering member.

New Medical Center—The Institute of Physical Medicine and Rehabilitation will be the first building put into operation of the new New York University-Bellevue Medical Center. The Medical Science building, now under construction, will be opened for students in the fall of 1954. Its adjoining building, the Henry W. and Albert A. Berg Institute for Experimental Physiology, Surgery, and Pathology, is scheduled for occupancy at about the same time. Other buildings to be constructed are the 20-story, 600-bed University Hospital, the Hall of Residence, and Alumni Hall and Lecture Rooms.

The Institute of Physical Medicine and Rehabilitation is under the direction of Dr. Howard A. Rusk, who is also an associate editor of the *New York Times* and president of the American-Korean Foundation.

[Continued on page 1242]

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[Continued from page 1240]

Markle Fund—The John and Mary R. Markle Foundation has appointed 25 Scholars in Medical Science, all faculty members of medical schools in the United States and Canada. The purpose of the Fund is to offer both academic security and financial help to faculty members at the start of their careers in academic medicine. The scholars are nominated by deans of medical schools.

Dr. William H. Bergstrom, instructor in pediatrics, Syracuse College of Medicine; Dr. Roy Craig Swan, Jr., assistant professor of physiology, Cornell University Medical College, and Dr. S. M. Tenney, instructor in medicine and physiology, University of Rochester School of Medicine, were the recipients of Markle scholarships in New York.

Transportation Arrangements for International Cancer Congress—Information about transportation and tours in connection with the sixth International Cancer Congress to be held in São Paulo, Brazil, July 23 to July 29, 1954, may be obtained from the Ocean Travel Bureau, 71 West 23rd Street, New York City 10.

Medical Personnel Needs—The Board of Missions of the Presbyterian Church needs a general practitioner qualified to administer anesthesia for the Sage Memorial Hospital, Arizona. They offer a salary of $3,400 plus a furnished house, light, and heat. For further information contact the Department of Missionary Personnel, room 703, 156 Fifth Avenue, New York City 10.

The Municipal Civil Service Commission of the City of New York will accept applications for examinations for anesthesiologists, Grade 4, in person or in writing at 96 Duane Street, New York 7, New York. The requirements, in addition to an M.D. degree, are two years or the equivalent of approved residency in anesthesiology plus three years of experience. The salary is $25 or $16 per session lasting up to and including three hours.

St. Lawrence County Medical Society—Officers elected for the 1953 to 1954 year of the St. Lawrence County Medical Society are: *president*—Dr. A. J. Levine, of Massena; *vice president*—Dr. H. L. Mills, Gouverneur; *secretary*—Dr. W. R. Carson, Potsdam; *treasurer*—Dr. M. J. Elder, Massena; *Board of Censors*—Dr. D. C. Tulloch, Ogdensburg, Dr. T. M. Watkins, Potsdam; Dr. P. T. McGreevy, Massena; *Delegate to the District Branch*—Dr. M. L. Stevenson, Potsdam and alternate, Dr. John H. Stauffer, Canton; *Delegate to the House of Delegates*—Dr. T. M. Watkins for a two-year period, and alternate, Dr. Louis Benton.

Committee chairmen and members appointed by Dr. A. J. Levine for 1954 are: *Public Health and Medical Education:* Dr. Edward Whalen, Ogdensburg, Dr. Ernest Adler, Gouverneur; Dr. Henry Vinicor, Norwood; Dr. M. L. Stevenson, Potsdam, and Dr. John Clough, Massena. *Legislative:* Dr. Henry Vinicor, Norwood; R. L. Stacy, Ogdensburg; Dr. E. E. Thompson, Lisbon; Dr. S. L. Pettit, Ogdensburg; Dr. J. H. Stauffer, Canton; Dr. J. P.

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Public Relations: Dr. L. J. Weston, Massena; Dr. E. H. Stretton, Canton; Dr. A. D. Redmond, Ogdensburg; Dr. A. E. Head, Gouverneur; Dr. R. D. Samets, Massena, and Dr. M. L. Stevenson, Potsdam. *Armed Service:* Dr. D. C. Tulloch, Ogdensburg; Dr. L. T. McNulty, Potsdam; Dr. R. R. Plante, Massena. *Civilian Defense:* Dr. J. H. Stauffer, Canton; Dr. R. M. Collins, Potsdam; Dr. H. L. Mills, Gouverneur; Dr. M. J. Elder, Massena; Dr. E. G. Claxton, Ogdensburg; Dr. J. Farrell, Newton Falls; Dr. T. F. Paprocki, Ogdensburg; Dr. Max Thaler, Parishville; Dr. W. F. McKenna, Ogdensburg.

Workmen's Compensation: Dr. W. R. Carson, Potsdam; Drs. D. C. Tulloch and S. A. Winning, Ogdensburg; Dr. P. T. McGreevy, Massena; Dr. T. M. Watkins, Potsdam, and Dr. H. L. Mills, Gouverneur. *Membership:* Drs. L. J. Baker and H. Levi, Ogdensburg; Dr. Sidney Aiken, Massena; Dr. C. V. W. Kimball, Gouverneur; Dr. Ludwig Auerbach, Waddington; Dr. H. E. Scheyer, Potsdam. *Necrology:* Dr. C. Elkins, Massena; Drs. F. Clark and M. Stearns, Ogdensburg. *Consultant in Welfare:* Dr. M. L. Stevenson, Potsdam; Dr. G. C. Alverson, Jr., Heuvelton; Dr. Henry Vinicor, Norwood; Dr. R. V. Persson, Star Lake; Dr. F. Drury, Gouverneur, and Dr. E. G. Claxton, Ogdensburg.

Medical Indemnity: Dr. R. Cudlipp, Sr., Winthrop; Dr. D. D. Depue, Ogdensburg; Dr. Martin Brandt, Norwood; Dr. L. L. Samets, Massena, and Dr. E. Klein, Potsdam. *Grievance Committee:* The Comitia Minora. *Blood Bank:* Dr. L. C. Weston, Massena; Dr. R. D. Rodger, Ogdensburg; Dr. R. V. Persson, Star Lake; Dr. R. L. Cudlipp, Sr., Winthrop; Dr. G. H. Hanlon, Gouverneur; Dr. J. H. Stauffer, Canton, and Dr. W. F. McKenna, Ogdensburg. *Postgraduate Committee:* Dr. J. B. Pike, coordinator for Massena; Dr. William Sapsin, coordinator for Potsdam; Dr. M. L. Stevenson; Dr. G. H. Hanlon, coordinator for Gouverneur; Dr. S. A. Winning, coordinator for Odgensburg; Dr. G. F. Etling, coordinator for State Hospital; Dr. W. R. Carson, secretary and coordinator for the Society.

Mental Hygiene: Dr. G. F. Etling, Ogdensburg; Drs. W. G. Cooper, J. E. Brown, H. E. Dollar, all of Ogdensburg. *Diabetes:* Dr. Warren Hellen, Ogdensburg; Dr. A. E. Dodds, Edwards; Dr. R. L. Hatch, Potsdam, and Dr. Jacob Grunbaum, Massena. *Cancer:* Drs. J. J. Barry, and J. F. Majeranowski, Ogdensburg; Dr. P. T. McGreevy, Massena; Dr. T. Watkins, Potsdam, and Dr. G. H. Hanlon, Gouverneur.

University of Buffalo School of Medicine—The first annual United Cerebral Palsy Associations Lectures by Dr. Temple Fay, active consulting neurosurgeon, Philadelphia General Hospital, and co-

[Continued on page 1244]

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[Continued from page 1243]

founder, American Academy for Cerebral Palsy, was given on March 29. A teaching clinic in cerebral palsy was held at the Crippled Children's Guild from 9:30 A.M. to 12:30 P.M.; "Cerebral Palsy: Recent Advances in Etiology and Therapy," at the Children's Hospital, 3 P.M., and "The Problem of Cerebral Palsy," which was also open to the public, at Capen Hall, University of Buffalo, at 8 P.M.

Spring Television Series—A glimpse into current research on the problem of arthritis and rheumatism will be presented by Smith, Kline and French Laboratories and the American Medical Association on April 20 at 10 P.M. Eastern Daylight Time. This will be the tenth March of Medicine program since its inception in June, 1952.

Field Workshop in Rehabilitation Teamwork—A field workshop in rehabilitation teamwork will be held June 1 to 25, 1954, under the sponsorship of the Department of Special Education, Teachers College, Columbia University and the Institute for the Crippled and Disabled.

The workshop will be an intensive four-week training course for professional persons in the field of the rehabilitation of the disabled. Supervision of field activities will be maintained by the staff of the Institute for the Crippled and Disabled, class sessions will be conducted by University personnel, and case seminars will be jointly planned.

Department of Health, Education, and Welfare—A single copy of the new edition of "Training and Research Opportunities under the National Mental Health Act" which has been revised to reflect recent policy changes with respect to traineeships and research fellowships, may be obtained free of charge from the National Institute of Mental Health, Bethesda 14, Maryland. Copies may be purchased for 10 cents each with a 25 per cent discount on orders for 100 or more to be sent to one address by ordering from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D. C.

Columbia-Presbyterian Medical Center—A week-long arts, photography, and crafts exhibit was held at the Columbia-Presbyterian Medical Center in March. Among the exhibitors in this, the fourth annual show, were Dr. Allen O. Whipple, Valentine Mott professor emeritus of surgery and former president of the American Surgical Association; Dr. Mayer M. Melicow, chairman and president of the New York Physicians Art Association; Dr. Henry S. Fenimore Cooper; Dr. Samuel R. Detwiler, and Dr. James A. Corscaden.

Federal Hospital Construction—The present status of hospital construction authorized in New York State under a Hill-Burton grant is as follows: Sixty-four projects, supplying 3,328 additional beds are completed and in operation; ten other projects designed to supply 948 additional beds are under construction, while eight projects, planned to provide 949 additional beds, have been approved.

Meetings—Future

Geneva Academy of Medicine

Dr. George Crile, Jr., chief, Department of Surgery, Cleveland Clinic, Cleveland, Ohio, will speak before the Geneva Academy of Medicine on April 19, on "Diseases of the Thyroid Gland." The, meeting will be held at 8:30 P.M. at The Belhurst, Geneva.

Sullivan County Medical Society

"Technics of Radical Hysterectomy" will be discussed by Dr. Albert A. Plentl, assistant professor of obstetrics and gynecology, Columbia University College of Physicians and Surgeons, at a meeting of the Sullivan County Medical Society on April 21, at the Monticello Hospital. The next talk will be on April 28 at which time Dr. John S. Labate, assistant clinical professor of obstetrics and gynecology, New York University College of Medicine, will talk on "Recognition and Prevention of Injuries and Diseases of the Fetus." On May 5, Dr. Arthur M. Rich, clinical professor of obstetrics and gynecology, New York University College of Medicine, will present a paper on "The Treatment of Obstetrical Bleeding."

This series of meetings was opened by Dr. John J. Gamble, professor of obstetrics and gynecology, Albany Medical College, who talked on "Management of Difficult Labor" on March 31; followed by "Diagnosis and Treatment of Lesions of the Vulva," by Dr. Mortimer D. Spaiser, associate clinical professor of obstetrics and gynecology, New York University College of Medicine, on April 7, and "Diagnosis and Treatment of Ectopic Pregnancy," by Dr. Myron E. Goldblatt, associate professor of obstetrics and gynecology, New York University College of Medicine, on April 14.

Resident's Night at Kings County

The Kings County Medical Society offers a program of five discussions in their auditorium, at 1313 Bedford Avenue, Brooklyn, on April 26 at 8:45 P.M. There will be an election of officers for 1954 to 1955 and a collation will be served after the meeting.

The subjects to be discussed are: "Thrombocytopenic Purpura Following Digitalis Intoxication," with Drs. Seymour H. Kaplan and Samuel Mandel; "An Unusual Case of Glycogen Storage Disease," with Drs. Jerome Schulman and Benjamin Kramer; "Congenital Lung Cyst in a Newborn," with Drs. Lili Fleck and Morris Josell; "Fatal Vaccination Reaction due to the Absence of Antibodies," with Drs. David Spielsinger and Philip J. Kozinn; "Hypoglycemia of the Newborn with Newer Investigative Aspects," with Drs. Bertha Capt and Oscar Schwartz.

American College of Cardiology

The American College of Cardiology will hold its third annual convention at the Conrad Hilton Hotel in Chicago, May 27 to 29, 1954. An interesting scientific program has been arranged for this meeting. The topic will be "Prognosis of Heart Disease." Guest speakers of national prominence will cover all the various aspects of cardiac prognosis. In addition to the scientific sessions, there will be scientific exhibits on cardiovascular research and commercial exhibits outlining the latest advances in the field of cardiology.

Program information may be obtained from the secretary of the College, Dr. Philip Reichert, 140 West 57th Street, New York City 19.

Personalities

Awarded

By the New York Heart Association in March, a new fellowship to Dr. Murray A. Greene, Maimonides Hospital; Dr. Abel Alfred Lazzarini, Jr., Cornell University Medical College; Dr. Leonard M. Gaines, Jr., College of Physicians and Surgeons of Columbia University; renewal of grants—Dr. N. E. Capeci, Dr. R. L. Hirsch, and Dr. B. J. Sobol, added support for research already started—Dr. H. W. Fritts, Dr. B. M. Wagner, and Dr. G. T. Kiss.

Appointed

Dr. Walter H. Camp, New York City, as head of radiology department of Littauer Hospital. . .Dr. Clement C. Clay, administrator of the Hospital Center in Orange, New Jersey, to associate director of the Hospital Council of Greater New York, as of May 1. . .Dr. Donald G. Dickson, present deputy commissioner of health in Rensselaer County, as Clinton County commissioner of health. . .Dr. Howard Wesson, as chief of the diagnostic and therapeutic clinic of newly organized thyroid clinic at the Jewish Memorial Hospital, New York City. . . Dr. Herman Wirth, as provisional director of the New York State Department of Health program on chronic disease and geriatrics.

Elected

Dr. John Elliott, president, Dr. Raymond R. Meyers, secretary, Dr. Francis Ehret, vice-president, and Dr. Robert W. O'Connor, treasurer, of the Sisters of Charity Hospital medical staff, Buffalo. . . as state delegates to the Association of American Physicians and Surgeons, Inc., Dr. Ralph E. Goodall, New York City; Dr. Joseph S. Delaney, Jackson Heights; Dr. Albert W. Palmer, Buffalo, and Dr. Thomas O. Gamble, Albany.

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THE MONTH IN WASHINGTON

Just about a year ago the Hill-Burton hospital construction program was under heavy attack in the House Appropriations Committee. But the damage was not permanent. The program has made a complete recovery. More than that, Congress shows every intention of doubling the appropriation for the program, but earmarking the additional money for grants to diagnostic and treatment centers, rehabilitation facilities, hospitals for the chronically ill, and nursing homes. At this stage the legislation to stimulate health facility construction is believed to be closer to enactment than any other major health project of the Eisenhower administration. Although the main objectives have not been altered, some significant changes were made in the bill by the House Interstate and Foreign Commerce Committee in two weeks of intensive work at closed-door sessions. Then, in mid-March the Senate committee took up the bill and considered additional amendments.

Most changes are designed to tighten up eligibility for grants. For example, money could go to only two types of diagnostic or treatment centers, those operated by and for a governmental unit or by a group that also operates a nonprofit hospital. Nor would centers or nursing homes be eligible unless under medical supervision or operated by an association that also operates a hospital.

Another change written into the bill would rule out a project if it were not to be open for full and unrestricted use by the general public. Thus labor union, fraternal, and prepayment health plans could not benefit if they offered their own subscribers any advantage in service at the center or hospital.

On the financial side several amendments have been tentatively adopted. One would allow states to use the original Hill-Burton formula for apportioning money among projects or to accept a flat 50 per cent Federal contribution. (As in the original Hill-Burton act, the poorer states would be allocated more per capita.) States would be allowed to pool their allocations for construction of interstate facilities, and the United States would be authorized to recover its proportionate share of a project if at any time the project were converted to profit use or were transferred to ineligible interests.

Of major interest to the medical profession, although not far along on its legislative course, is the administration's proposal for subsidizing prepaid health plans for Federal civilian employes. The government would pay a maximum of $26 per year, to be matched by the employe, for the purchase of any type of prepaid insurance. Any cost above $52 per year would be borne entirely by the employe.

As a part of the program, the administration is proposing that payroll deductions be authorized, a concession the insurance and prepayment insurance organizations have been urging for years. Currently Federal executives differ on whether payroll deductions would be "legal," but none is willing to risk authorizing deductions in the absence of specific approval from Congress.

Still following a slow and controversial course is the administration's proposal for reinsurance of health plans. Early in the session, with the ardent support of chairman Charles S. Wolverton of the key House committee, this legislation appeared pointed toward enactment. However, the Department of Health, Education and Welfare was not satisfied with Mr. Wolverton's bill and decided to draft one of its own. The drafting consumed many weeks, time that may prove fatal with a Congress hoping to adjourn early for the fall elections.

The Defense Department, made uncomfortable by a few suspected subversive physicians and dentists it doesn't quite know what to do with, is asking for an amendment to the Doctor Draft act. The department's problem is this: The most recent Court of Appeals decision holds that physicians or dentists drafted or called up from the reserves must, under the Doctor Draft act, either be commissioned or discharged. So, technically, a man who refuses to fill out his loyalty questionnaire would be rewarded by a release. To correct the situation, the Department is asking that the law be changed to allow it to withhold a commission from a loyalty suspect, yet keep him on duty for the specified time in noncommissioned status and assigned to professional duties.

The American Medical Association is continuing its support of Senator Bricker and others who are convinced they still can enact a resolution calling for an amendment to restrict international agreements. The Association's position is that unless a safeguard is written into the Constitution, future international agreements could impose on the country social and medical care programs that Congress itself would not approve.

Prepared by the Washington Office of the American Medical Association, Washington, D.C.

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1. Wetzel, N.C.; Hopwood, H.H.; Kuechle, M.E., and Grueninger, R.M.: J. Clin. Nutrition *1*:17 (Sept.-Oct.) 1952.
2. Best, C.H., and Taylor, N.B.: The Physiological Basis of Medical Practice, Baltimore, Williams & Wilkins, 1950, p. 741.

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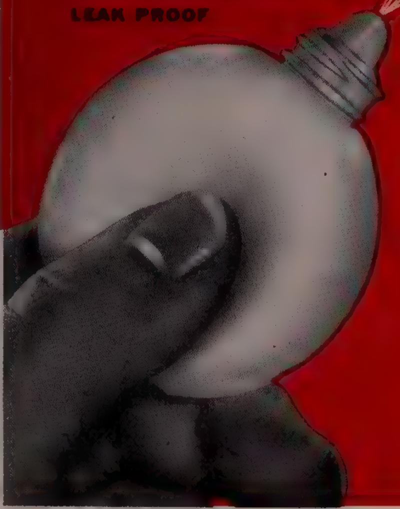

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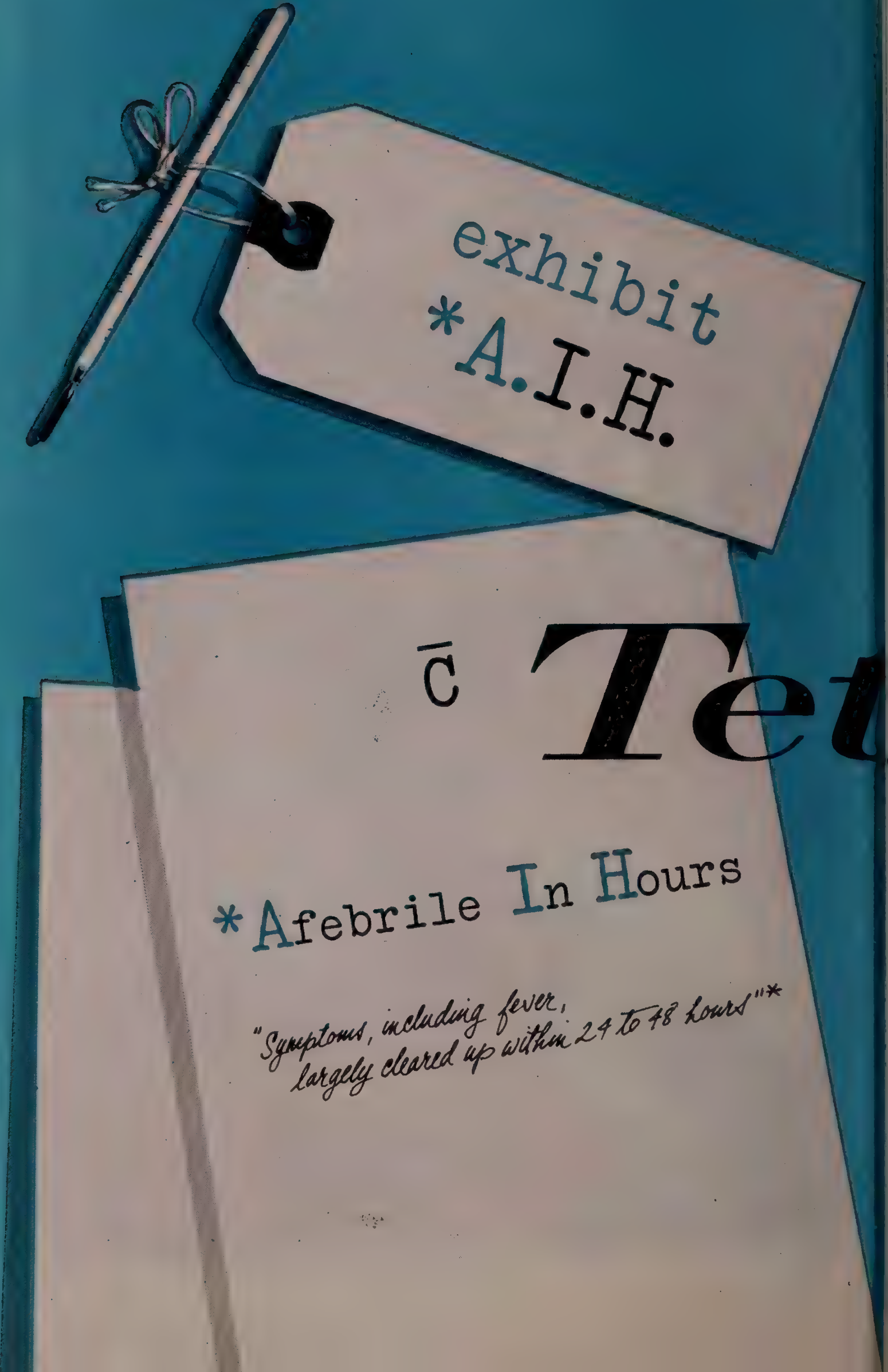
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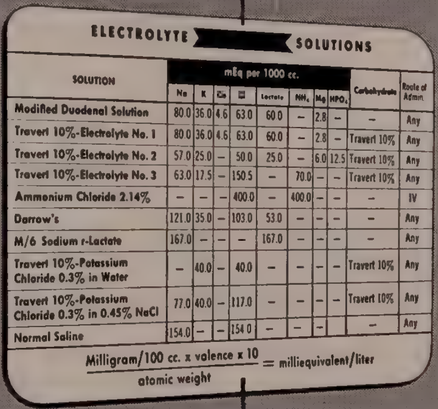

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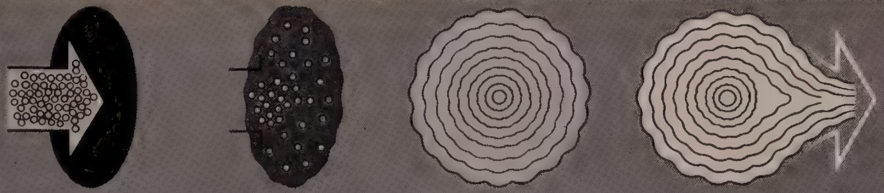

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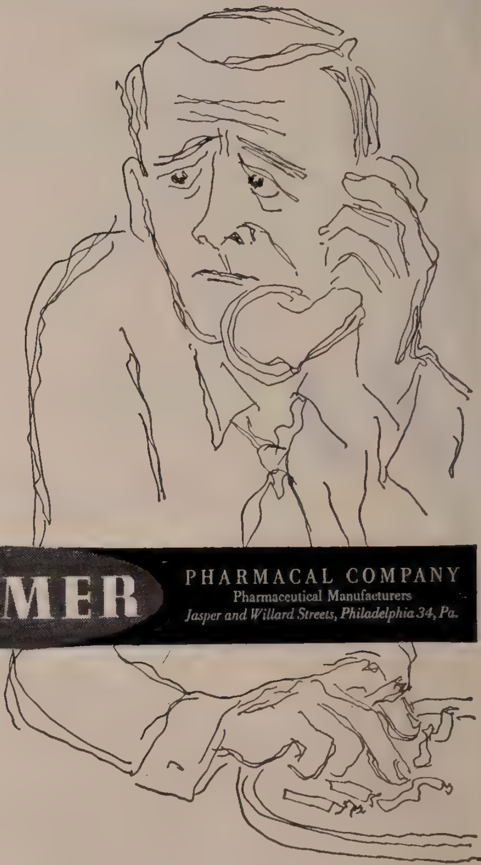

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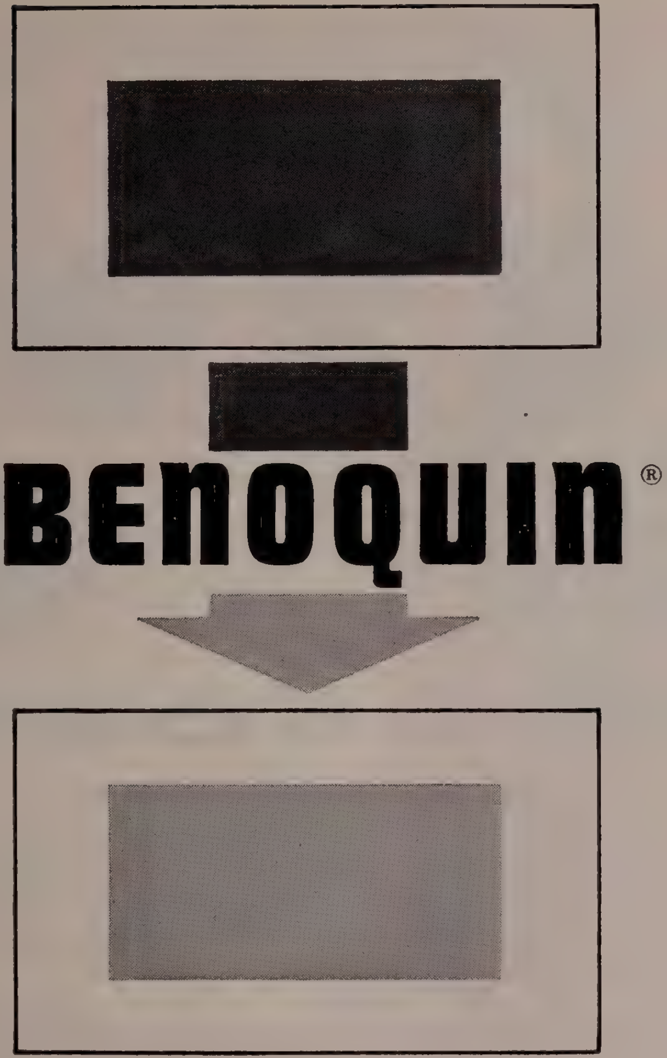

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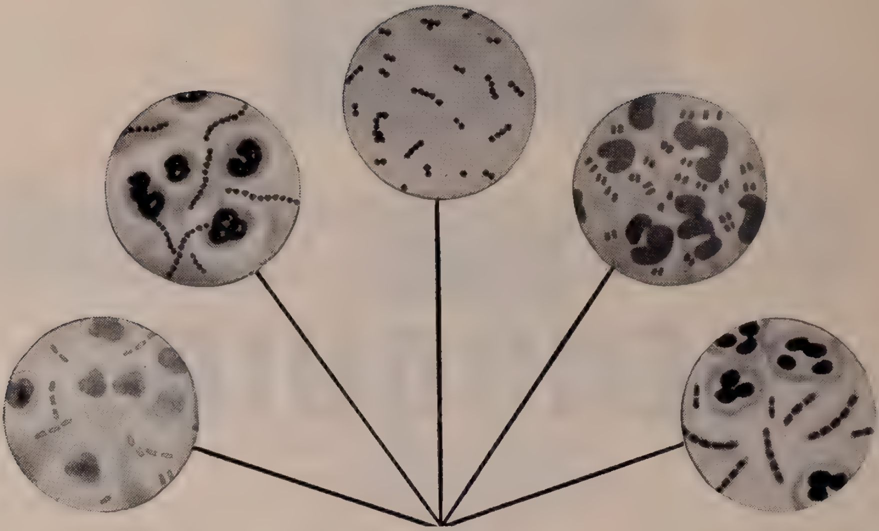

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2. Lehr, D.: Antibiot. & Chem. *3*:89 (Jan.) 1953

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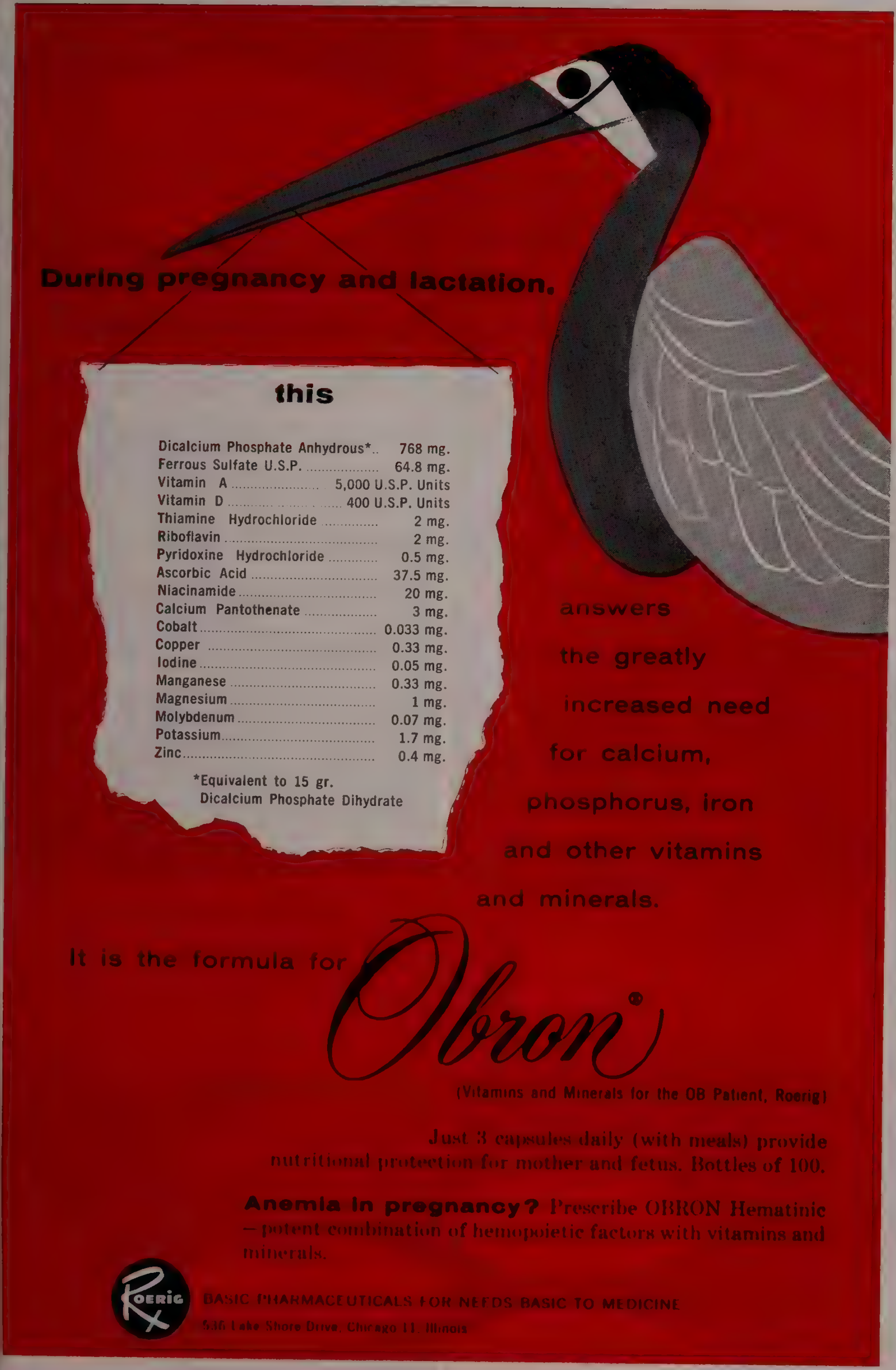

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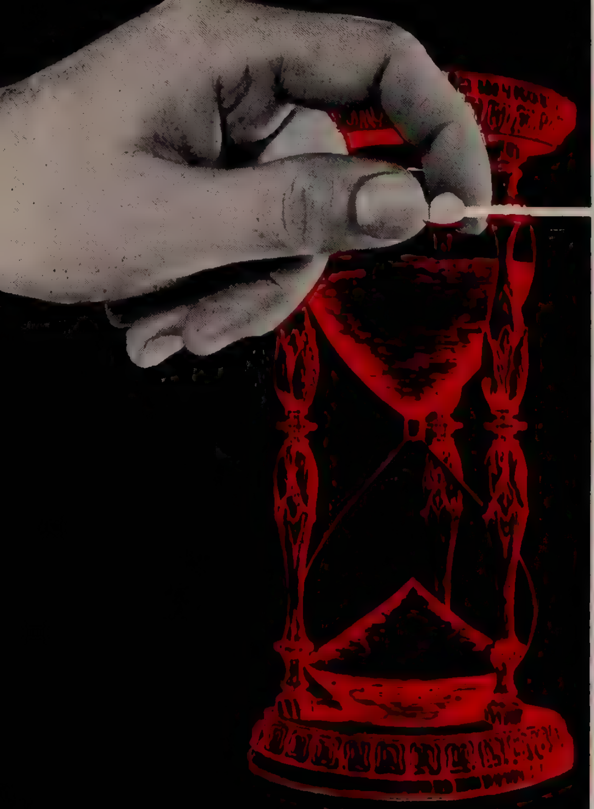

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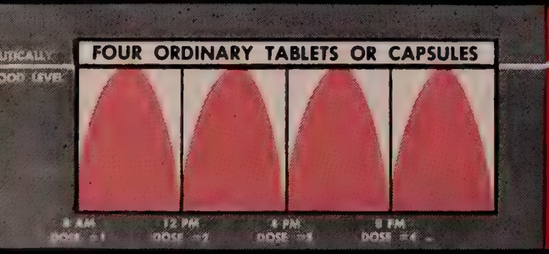
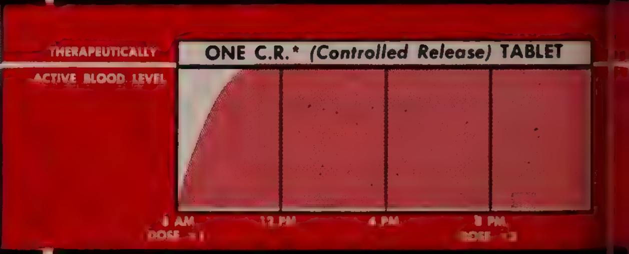
a new approach in the administration of oral medication providing *prolonged, uniform, controlled release*[†] of your drug of choice.





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1/25 gr Nitroglycerin

ADDITIONAL DRUGS OF CHOICE IN C.R. FORM SOON TO BE RELEASED

*T.M. Registration Applied For.

HERE ARE THE FACTS . . .

• CONTROLLED UNIFORM RELEASE

C.R. Tablets provide for a pre-determined release of their active drugs, achieving the maintenance of a desired therapeutic blood level for a period of 10 to 12 hours. Manufactured under a new process, C.R. Tablets are composed of tiny granules of varying sizes which are compressed into one tablet. It is the precise combination in a C.R. Tablet of these various size granules, each encasing a portion of the active drug, which provides for a uniform, controlled release of the medication for absorption in the bloodstream over an 8 to 10 hour period.

• ABSORPTION

Releasing the medication at a uniform rate, C.R. Tablets permit a steady absorption of the active agent into the bloodstream, resulting in maintenance of an even therapeutic level. Conventionally prepared tablet or capsule dosage forms, including those which are enteric-coated, result in a significant degree of peaks and valleys in blood level concentrations. Administration of C.R. Tablets successfully overcomes the uneven absorption levels inherent in other dosage forms.

• ELIMINATION

An important aspect of the controlled release principle is that with the uniform release of the medication achieved by the administration of C.R. Tablets, the elimination of the active agent is maintained at a reduced rate. Peak concentrations of toxic residue are less likely to occur as with other dosage forms where blood levels fluctuate widely. This becomes particularly beneficial — as in cases of hepatic impairment — where the organs of elimination must struggle to rid the body of peak loads of toxic residue.

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The single administration of one or more C.R. Tablets, in the morning and/or night, provides the desired therapeutically active blood level for 10 to 12 hours. This new, convenient concept in orally taken medications, made possible by C.R. Tablets, assures greater patient cooperation and presages the obsolescence of the t.i.d. and q.i.d. administration techniques in a variety of such drugs. With C. R. Tablets, a new concept in chemo-therapy which assures a constant therapeutically active blood level, it is possible that quantitive reductions in the medications may become desirable.

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to increase antibacterial
range and reduce resistance . . .

Three strengths:
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Sulfamerazine . . . . 0.167 Gm.
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relapsing cases

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Supplied:
Protection-coated tablets
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CLIFTON SPRINGS, NEW YORK

Hospital and Clinic Building

Sanitarium Main Building

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a patient

to a diet

but **you can't make him eat it!**

There will be much less balking at diets, however, if you advise the patient to add Ac'cent to his food. Ac'cent, though not adding a flavor of its own, brings out the *natural* flavors of foods. It makes heavy seasoning unnecessary. Even in foods that are held for a long period of time, Ac'cent retains the true delicious flavors.

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A new form of a synthetic narcotic analgesic . . . approximately twice as potent as racemic Dromoran (dl) Hydrobromide 'Roche' . . . inducing prompt pain relief with longer duration of analgesic effect than morphine.

. . . indicated for the relief of severe or intractable pain . . . preoperative medication and postoperative analgesia.
. . . "A striking characteristic is its ability to produce cheerfulness in pain-depressed patients the morning after an evening dose."*
. . . less likely than morphine to produce constipation, nausea or other undesirable side effects . . . whether administered orally or subcutaneously.

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CAUTION:
Levo-Dromoran Tartrate is a narcotic analgesic. It has an addiction liability equal to morphine and therefore the same precautions should be taken in dispensing this drug as with morphine.

*Glazebrook, A. J.: Brit. M. J., *2*:1328 (Dec. 20) 1952.

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LEVO-DROMORAN®—brand of levorphan

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Geriatric Vitamin-Mineral Supplement Lederle

"Yessir, I'm doin' better work right now than I did 20 years ago!"

Lederle's complete geriatric line provides the vitamin and mineral supplements often needed for greater activity and happiness in the later years. GEVRAL provides 13 vitamins and 12 minerals in convenient capsule form. GEVRABON* Geriatric Vitamin-Mineral Supplement is a pleasant-tasting and wine-flavored liquid.

*Reg. U.S. Pat. Off.

LEDERLE LABORATORIES DIVISION AMERICAN Cyanamid COMPANY Pearl River, New York

Lederle

EACH CAPSULE CONTAINS:

Vitamin A (acetate)	5000 U.S.P. Units (125% MDR)
Vitamin D (viosterol)	500 U.S.P. Units (125% MDR)
Vitamin B_{12} as present in concentrated extractives from streptomyces fermentation	1.0 microgram
Thiamine Hydrochloride (B_1)	5.0 mg. (500% MDR)
Riboflavin (B_2)	5.0 mg. (250% MDR)
Niacinamide	15.0 mg.
Folic Acid	1.0 mg.
Pyridoxine Hydrochloride (B_6)	0.5 mg.
Ca Pantothenate**	5.0 mg.
Choline Dihydrogen Citrate**	100.0 mg.
Inositol**	50.0 mg.
Ascorbic Acid (C)	50.0 mg. (166% MDR)
Vitamin E (Tocopheryl acetates)**	10.0 Units
Rutin**	25.0 mg.
Iron ($FeSO_4$)	10.0 mg. (100% MDR)
Iodine (KI)	0.5 mg. (500% MDR)
Calcium ($CaHPO_4$)	145.0 mg. (19% MDR)
Phosphorus ($CaHPO_4$)	110.0 mg. (14.6% MDR)
Boron ($Na_2B_4O_7 \cdot 10H_2O$)**	0.1 mg.
Copper (CuO)**	1.0 mg.
Fluorine (CaF_2)**	0.1 mg.
Manganese (MnO_2)**	1.0 mg.
Magnesium (MgO)	1.0 mg.
Potassium (K_2SO_4)	5.0 mg.
Zinc (ZnO)**	0.5 mg.

**The need for these substances in human nutrition has not been established.

MDR—Minimum daily requirements for adults.

Meats-in-a-Can

and Kitchen-Cooked Meats... Comparative Nutritive Values

From a practical dietary standpoint, meats-in-a-can—preserved by commercial canning—are nutritionally interchangeable with meats of like variety prepared in the home.[1] For taste appeal, for economy and "keeping" quality, and for household convenience, meats-in-a-can are advantageous in many respects.

As the comparative data here shown indicate, kitchen-prepared meats and similar meats-in-a-can are closely alike in the amounts of various nutrients they provide.

COMPARATIVE COMPOSITION OF KITCHEN-COOKED AND COMMERCIAL-CANNED MEATS
(Nutrient Amounts per 100 Grams)

	*Kitchen-Cooked Ham[2]	**Canned Ham[3] (Chopped, Cured)	Kitchen-Cooked Beef Round[2]	Canned Roast Beef[2]
Water	50%	50%	59%	60%
Protein	21 Gm.	20 Gm.	27 Gm.	25 Gm.
Fat (ether extract)	28 Gm.	20 Gm.	13 Gm.	13 Gm.
Niacin	4.0 mg.	4.3 mg.	5.5 mg.	4.2 mg.
Riboflavin	0.21 mg.	0.19 mg.	0.22 mg.	0.23 mg.
Thiamine	0.46 mg.	0.40 mg.	0.08 mg.	0.02 mg.

*Values after conversion from 42% to 50% water basis.
**Values after conversion from 58.69% to 50% water basis.

Experimental studies have shown that the processing which meats-in-a-can undergo leads to little if any greater vitamin losses than does home-cooking of similar cuts of meat. In general, meats-in-a-can retain of their original vitamin content approximately:

60 to 80 per cent of thiamine
90 to 100 per cent of riboflavin
90 to 100 per cent of niacin
80 per cent of biotin
70 to 80 per cent of pantothenic acid.[4,5]

During storage for customary periods, at usual warehouse temperatures, meats-in-a-can show little, if any, further vitamin loss except in thiamine. Even thiamine, a highly thermolabile vitamin, was 52 per cent retained in pork-in-a-can after ten months' storage at 80° F. Retention of the vitamin was notably greater when the canned pork was stored at 38° F.

Since meats-in-a-can are thoroughly cooked in processing, they may be consumed as purchased, merely warmed or mildly cooked. When the meat is moderately cooked in preparation for consumption, little or no further loss in vitamins need to occur.

Recent studies show that meats-in-a-can are excellent sources of needed amino acids.[6] The 18 amino acids determined in these studies appeared in similar ratio and amounts in canned beef, pork, and lamb as in the respective fresh or home-cooked meats.

---

1. Howe, P. E.: Foods of Animal Origin, Handbook of Nutrition, American Medical Association, ed. 2, Philadelphia, The Blakiston Company, 1951, p. 637.
2. Watt, B. K., and Merrill, A. L.: Agricultural Handbook No. 8, United States Department of Agriculture, 1950.
3. Schweigert, B. S.; Bennett, B. A.; Marquette, M.; Scheid, H. E., and McBride, B. H.: Food Res. *17*:56 (Jan.) 1952.
4. Rice, E. E., and Robinson, H. E.: Am. J. Pub. Health *34*:587 (June) 1944.
5. Schweigert, B. S.: Am. Meat Inst. Foundation, Circular No. 8, Nov. 1953.
6. Schweigert, B. S.; Bennett, B. A.; McBride, B. H., and Guthneck, B. T.: J. Am. Dietet. A. *28*:23 (Jan.) 1952.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

American Meat Institute
Main Office, Chicago . . . Members Throughout the United States

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DIVISION OF MERCK & CO., Inc.
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Makes intractable asthma tractable

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(HYDROCORTISONE, MERCK)

IMPRESSIVE RESULTS: A recent review[1] emphasizes that hormonal therapy has provided either marked or complete control of symptoms in approximately 85 per cent of patients with refractory acute bronchial asthma.

In the treatment of such patients, Hydrocortone offers significant advantages. It is a principal adrenocortical steroid and considerably more potent than cortisone. Published reports indicate that unwanted physiologic effects are less likely to arise with smaller but equally effective doses of Hydrocortone. This is particularly advantageous in the long-term management of certain asthmatics who can be maintained symptom-free on low dosage therapy.

[1] Thorn, G. W., *et al.*, *New England J. Med.* **248**:632, April 9, 1953.

SUPPLIED: ORAL—Hydrocortone Tablets: 20 mg., bottles of 25 tablets; 10 mg., bottles of 50 and 100 tablets; 5 mg., bottles of 50 tablets.

All Hydrocortone Tablets are oval-shaped and carry this trade-mark:

RAPID CURES

of urinary tract infections prevent permanent kidney damage

Infections of the lower urinary tract rarely remain localized for any length of time. The kidneys are often invaded rapidly unless effective treatment is instituted immediately. Hence, the choice of the first drug used may decide the fate of the kidneys.

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Furadantin is unique, a new chemotherapeutic molecule, neither a sulfonamide nor an antibiotic.

RAPID ACTION. Within 30 minutes after the first Furadantin tablet is taken, the invaders are exposed to antibacterial urinary levels.

WIDE ANTIBACTERIAL RANGE. Furadantin is strikingly effective against a wide range of clinically important gram-negative and gram-positive bacteria, including strains notorious for high resistance.

Scored tablets of 50 mg.	Bottles of 50 and 250.
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ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

Also available: Furadantin Pediatric Suspension, containing 5 mg. of Furadantin per cc. Bottle of 4 fl. oz.

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A UNIQUE CLASS
OF ANTIMICROBIALS
PRODUCTS OF
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in rheumatoid arthritis

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tablets

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LORZINEX®

A VAGINAL CLEANSING AGENT

that is different!
that is efficient!

LORZINEX solutions cleanse at the *acid pH of 4* (normal to the vagina) and efficiently disperse mucus debris[1]. Inclusion of a zinc salt in the formula promotes astringency. Lactose (a good nutrient for Doederlein bacilli) is added to further establish the physiological flora.

Contains: The newly discovered trichomonacidal synthetic wetting agent —*Sodium Lauryl Sulfate.*

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TRICHOMONACIDAL ACTION
ANTIFUNGAL ACTION
ASTRINGENCY

LORZINEX is recommended (before administration of therapeutic agents) as an aid in—

MONILIASIS OF THE VAGINA
VAGINAL TRICHOMONIASIS

Highly Effective . . .
Unusually Economical

(1) Lawrence, E. D., W. J. Surg., Ob. & Gyn., 58, 236-7, 1950.

Samples and literature sent on request

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In MOOD ELEVATION *Therapy...*

WHY COURT INSOMNIA...JITTERINESS... CARDIAC POUNDING?

RAUWIDRINE presents a new experience in mood elevation. The combined central effects of rauwolfia and amphetamine solve the problem so frequently encountered in mood amelioration therapy—largely eliminate the amphetamine side actions which so often prove intolerable for the patient.

Rauwidrine combines—in one slow-dissolving tablet—1 mg. of Rauwiloid (the alseroxylon fraction of rauwolfia) and 5 mg. of amphetamine.

The central action of Rauwiloid . . . tranquilizing and mildly sedative . . . complements and augments the mood-elevating influence of amphetamine; but the cardiac pounding, jitteriness, tremor, and insomnia engendered by amphetamine are largely overcome by the gently bradycrotic, calming influence of Rauwiloid—and all without the use of barbiturates.

- The tranquilizing action of Rauwiloid largely prevents overstimulation, virtually eliminates jitteriness.
- The mild sedative action of Rauwiloid prevents excitation—the patient enjoys restful sleep.
- The gently bradycrotic action of Rauwiloid usually prevents palpitation—avoids the cardiac pounding so frightening to the patient.

IN APPETITE SUPPRESSION, TOO

In weight reduction management Rauwidrine proves particularly advantageous. The appetite-suppressing effect of the amphetamine component can be maintained for long periods, since side actions are obviated.

DOSAGE: ***For mood elevation,*** one to two tablets, each before breakfast and lunch. Dosage should be individualized, and as much as 6 tablets per day (in 3 doses) may be given if needed. ***For obesity,*** one to two tablets 30 to 60 minutes before each meal.

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Riker LABORATORIES, INC.

8480 BEVERLY BOULEVARD • LOS ANGELES 48, CALIFORNIA

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AGE 22-44	77.2%	62.7%	13.5%
45-64	21.8%	27.4%	73.7%
OVER 65	1.0%	9.9%	12.8%

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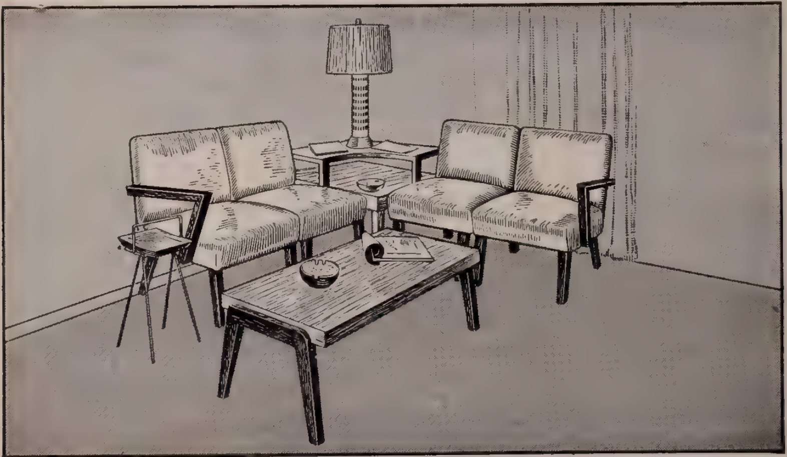

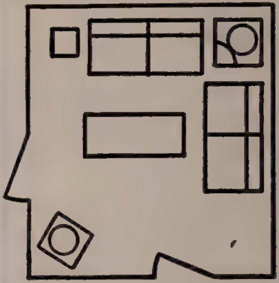

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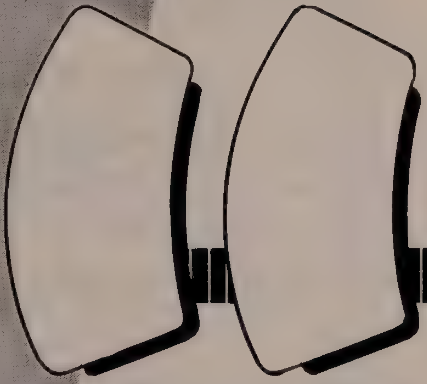

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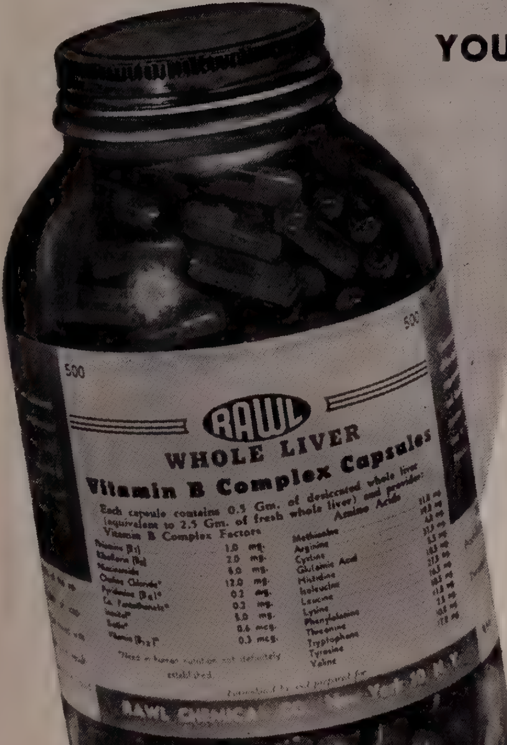

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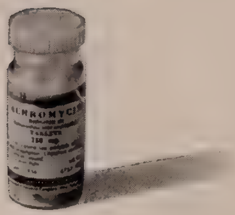

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EDITORIALS

Color in the Journal

The Editors of the JOURNAL call the attention of the membership to yet another change in their publication, the sparing use of color in some text illustrations. In the belief that this would further modernize and make the publication more attractive, the Publication Committee recently authorized this experimental procedure, believed to be the first such use of color illustrations in the text by any state medical journal in this country.

In this and subsequent issues the articles on medical aspects of civil defense will be so illustrated with the assistance of the New York State Department of Public Health and the Committee on Public Health and Education of the Medical Society of the State of New York. The use of color in one or more signatures of the JOURNAL poses certain problems in layout and printing dependent on the colors used in the advertising pages. If any one of these colors is used in the text, no extra press run is involved.

It is believed that the sparing use of color to highlight charts, graphs, line drawings, and some halftones can be a means of making the New York State Journal of Medicine a more lively, interesting, and attractive publication.

It is hoped that after study of the present pilot experiment, the use of color may be extended to other sections of the magazine. The Publication Committee invites comment by the readership of the Journal on this innovation. The articles on cancer previously published with four color inserts provoked such favorable reaction that the editors and the Committee were encouraged to experiment further. If you like the change, please say so; it follows on the new cover design, the placement of the table of contents on the cover, inclusion on the cover of the names of authors, and the new type faces.

The Journal is your publication. It represents your Society at home and abroad in a modern age of continuing progress and development. The editors are making every effort to increase its attractiveness as well as its interest to every reader.

Blood Transfusion Dangers

With the development of blood banks blood has become more readily available and more easily administered. The medical profession has responded to this, and there has been a year by year increase in the number of blood transfusions given. There are those[1] who believe, however, that the pendulum has swung too far and that in certain instances transfusions are administered unnecessarily. This subject is on the program of the next meeting of the Medical Society of the State of New York.

That blood transfusion is a lifesaving procedure is well known. However, blood is dynamite! It can do great harm as well as great good. Reports of transfusion accidents have appeared from time to time in the medical literature, but undoubtedly most of the unfortunate results are not reported. Our British colleagues have commented editorially on "The Dangers of Transfusion."[2] They state, "Only fatal incompatible transfusions are reported, and perhaps three to fifteen times as many incompatible transfusions are given without leading to the patient's death." The mortality from blood transfusion has been said to equal that of appendicitis or ether anesthesia. The clinician, therefore, before requesting this therapeutic measure must weigh the need for the transfusion against its dangers. Elimination of transfusions for which the indication is not clear would also help toward relieving shortage of the available supply of blood.

With the increase in the number of transfusions administered there has necessarily been an increase in the number of transfusion accidents. There has been also a comparable increase in the number of lawsuits arising from such accidents. In a recent report[3] the Committee on Medicolegal Problems of the American Medical Association states that there is approximately one death in 1,000 to 3,000 transfusions. A similar report has been published in the British journal, *Lancet.*[4]

In this issue of the New York State Journal of Medicine, there is a timely contribution on the "Dangers of Blood Transfusions," by Lester J. Unger. He states that even though the therapeutic value of blood is beyond dispute, the administration of blood is not without danger. He points out various pitfalls and the methods he has found of value in avoiding them. Many of the errors made are due merely to carelessness. Mislabeling, giving telephone reports instead of written reports, delivering the wrong blood, interchange of bloods would all seem to be avoidable if

[Continued on page 1297]

---

[1] Strauss, B., and Torres, J. M..: J.A.M.A. 151: 699 (Feb. 28) 1953.

[2] Editorial: Lancet 2: 1204 (1953).

[3] Wiener, A. S., Grant, D. N. W., Unger, J. L., and Workman, W. G.: J.A.M.A. 151: 1435 (Apr. 1) 1953.

[4] James, J.D.: Lancet 2: 243 (Aug.) 1953.

The Doctor in CIVIL DEFENSE

Medical Defense Committee of the Medical Society of the State of New York and the Office of Medical Defense, New York State Department of Health

J. G. FRED HISS, M.D., SYRACUSE, *Chairman*

Setting Up Aid Stations

FOLLOWING an enemy attack, aid stations will be of vital importance in saving the lives of great numbers of injured. Unless both first aid stations and secondary aid stations work effectively to bring the injured under medical care and route them to installations that can give them definitive treatment, the emergency medical services plan will break down. As illustrated in Fig. 1, this plan is designed to provide initial care as close as feasible to the site of injury and to divert all but the most serious cases from the hospital resources that remain usable or can be improvised in the attacked city. If this first step is not taken, relatively few of the injured will survive to reach definitive treatment.

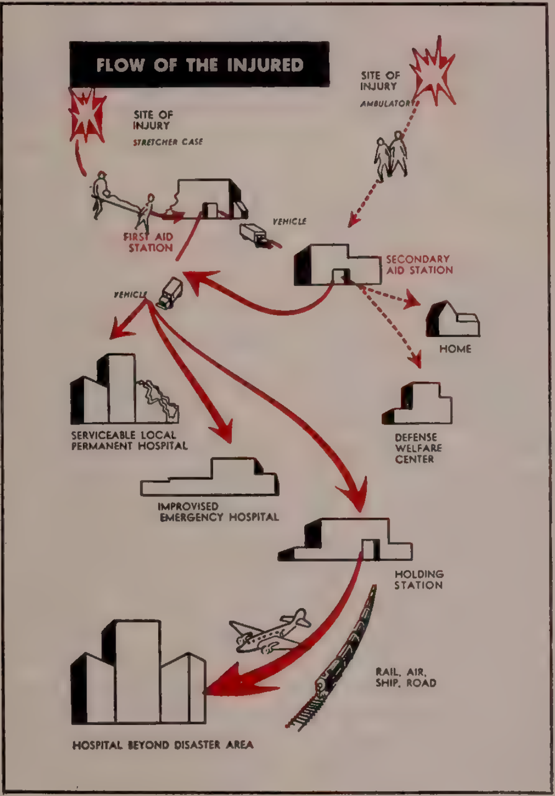

FLOW OF THE INJURED
SITE OF INJURY
STRETCHER CASE
SITE OF INJURY
AMBULATORY
FIRST AID STATION
VEHICLE
SECONDARY AID STATION
VEHICLE
HOME
SERVICEABLE LOCAL PERMANENT HOSPITAL
DEFENSE WELFARE CENTER
IMPROVISED EMERGENCY HOSPITAL
HOLDING STATION
RAIL, AIR, SHIP, ROAD
HOSPITAL BEYOND DISASTER AREA

FIG. 1.

Many physicians will be assigned to aid stations in the hours immediately after attack. Since the first physician to arrive at an aid station will be in charge of, and responsible for, operations until the physician previously designated as "officer in charge" arrives, all physicians in the State should know how to set up and operate these stations.

In each target city at the present time, a number of buildings have been selected to serve as secondary aid stations after attack. These buildings, located no more than 2 miles apart, are earmarked as initial bases of operations. Since these preselected buildings are presently utilized for a variety of purposes, public and private, the limit of preattack preparation is the storage of medical supplies (in the form of State Aid Station Outfits, or SASO's) in those buildings that have space for such storage. After attack the number of these installations will be augmented by additional buildings to be used as secondary aid stations.

First aid stations will not be preselected but will be established in any suitable standing building, e.g., a school building, or improvised locations near the first sizable concentration of injured that is encountered. First aid stations will

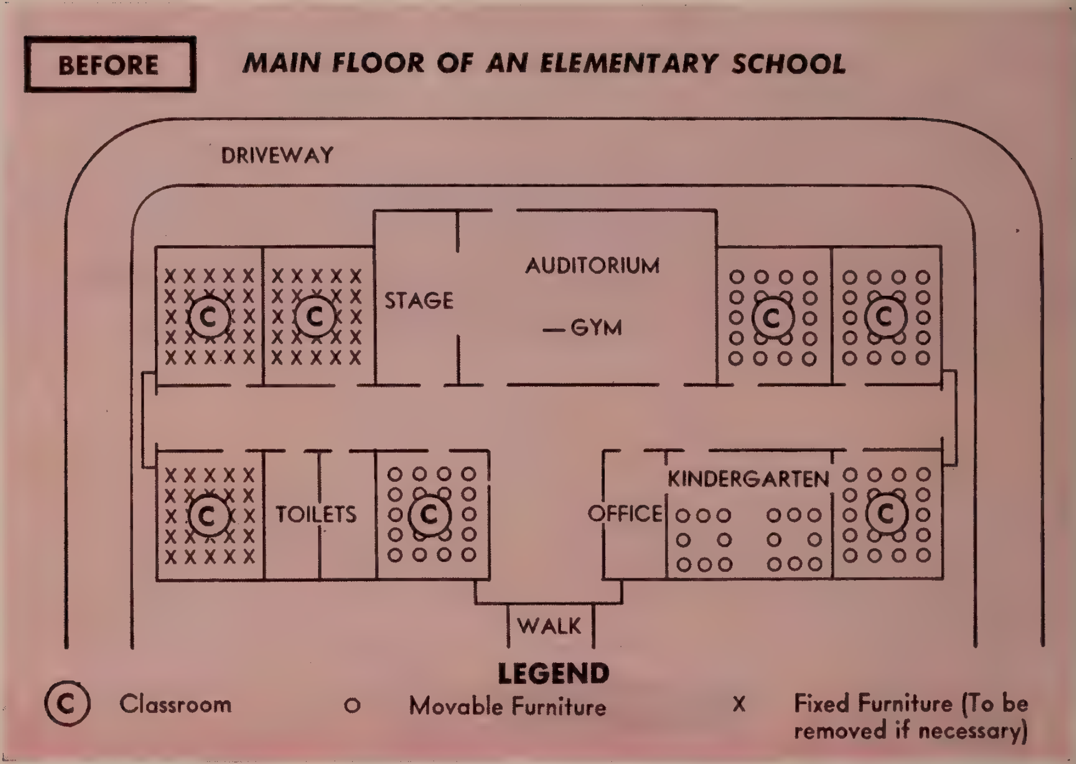


Fig. 2.

augment the work and facilities of the secondary aid stations.

The limited number of physicians that will be available for service in any aid station will require effective delegation of responsibilities by the physician in charge. Whenever possible, junior professional personnel should be utilized to administer treatments of a routine nature (such as the giving of intravenous therapy by nurses who have taken emergency training in this technic). The executive officer should be charged with as many of the administrative duties as possible, and trained medical aides should be utilized to the limit in the performing of routine nursing duties, sterilization, preparation of syringes of penicillin for intramuscular administration, and the like. The objective should be the maximum concentration of the physician on *triage* and on the less elementary treatments, of which he alone is capable in the aid station situation.

The basic staff of a secondary aid station is two medical training units. A medical training unit is composed of one physician, one executive, one medical associate (dentist, veterinarian, or medical student), three nurses, one supply officer (pharmacist), 40 medical aides, one messenger leader, and eight messengers.

Responsibilities of Secondary Aid Station

The work of the secondary aid station consists of sorting the wounded for transport to a local hospital or to a hospital in another city; giving stretcher cases only such treatment as cannot be postponed, including blood, plasma, morphine, emergency surgery; treating the walking wounded; directing the work of first aid stations and supplying them with personnel, supplies, and vehicles; keeping the zone headquarters informed about the situation and obtaining from it personnel, supplies, and vehicles for the secondary aid station and its first aid stations. In order that hospitals in the disaster area may concentrate on the most urgent cases, the secondary aid station must effectively screen out all patients for whom definitive treatment can be postponed.

There are six working areas in the secondary aid station: receiving, walking wounded treatment, stretcher case treatment, patient transfer,

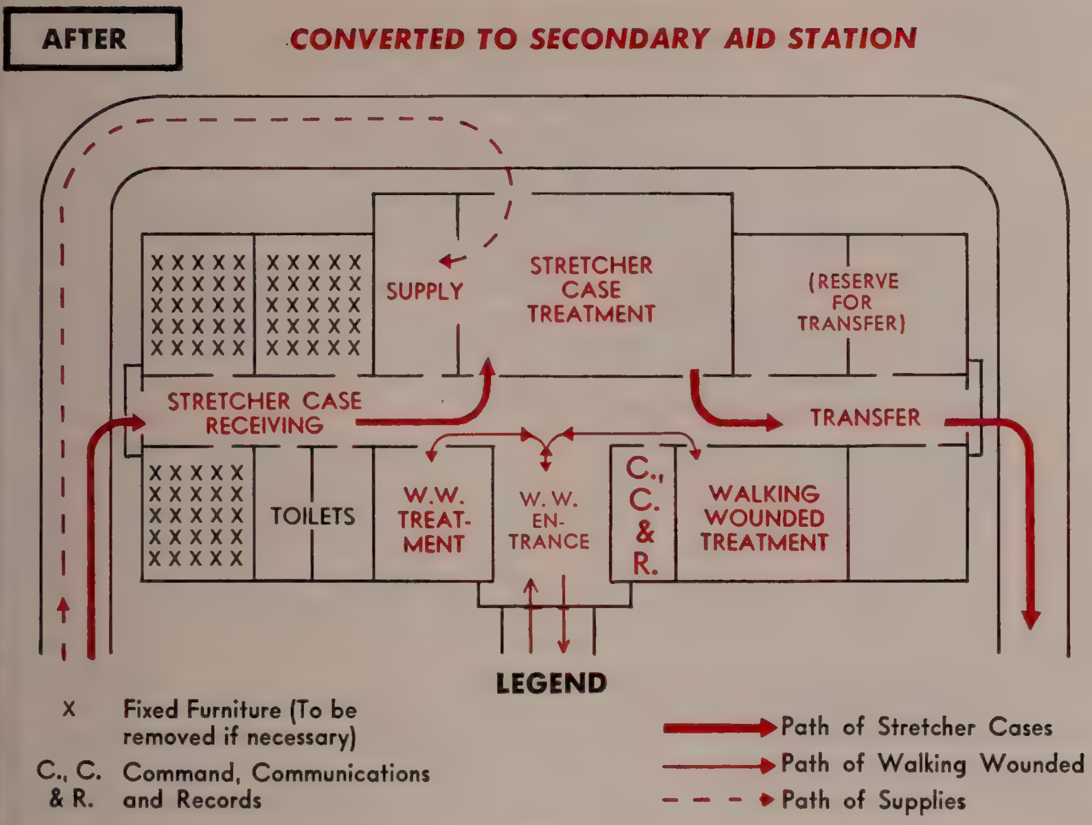

AFTER
CONVERTED TO SECONDARY AID STATION
SUPPLY
STRETCHER CASE TREATMENT
(RESERVE FOR TRANSFER)
STRETCHER CASE RECEIVING
TRANSFER
TOILETS
W.W. TREATMENT
W. W. ENTRANCE
C., C. & R.
WALKING WOUNDED TREATMENT
LEGEND
X Fixed Furniture (To be removed if necessary)
C., C. & R. Command, Communications and Records
Path of Stretcher Cases
Path of Walking Wounded
Path of Supplies

Fig. 3.

supply, and communications. Figure 2 shows a typical floor plan in a school before, and Fig. 3 after, its development as a secondary aid station.

Teams sent forward from secondary aid stations will establish first aid stations. The basic staff of a first aid station is one medical training unit, although the work of the station will not be delayed until all are present. The first aid station will send stretcher teams of medical aides into the surrounding area to locate the injured, give them first aid, and bring them back to the station.

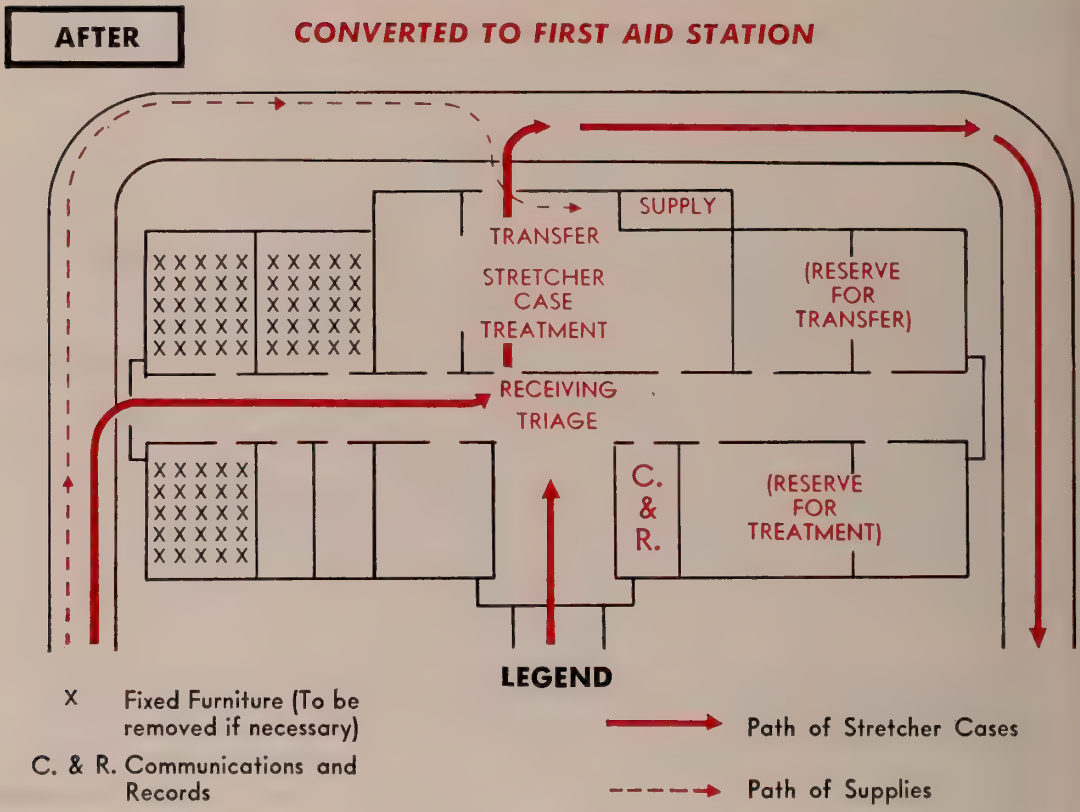
Responsibilities of First Aid Station

The first aid station staff will be concerned almost wholly with controlling bleeding, dressing burns and wounds, giving morphine, applying and adjusting splints, giving antibiotics, and sorting patients for transport to a secondary aid station, holding station, or hospital. They will also keep the secondary aid station informed of the situation, their need for personnel and supplies, and the need for any additional first aid stations in the area.

Any safe buildings that remain standing are likely places for first aid stations to be located. Since there is no way to know in advance the buildings which will be usable as first aid stations, the layout of each station will be different from the others. Figure 4, however, shows a school utilized as a first aid station.

Identification by Signs and Armbands

The establishment of the sections of the aid station in a building with which personnel are unfamiliar will be facilitated by the use of signs. A number of such signs, in accordance with the section names listed above, is contained in the State Aid Station Outfit (SASO) which is being stockpiled in and near the target cities and which forms the basic uniform equipment list for both secondary and first aid stations. Another aid to efficient operation of the staff lies in the use of a new addition to the SASO, a group of insignia to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C. & R. Communications and Records
Path of Stretcher Cases
Path of Supplies

Fig. 4.

identify the personnel category of each worker, professional and nonprofessional. Worn on the clothing or on the civil defense armband, these insignia should prove of inestimable value in distinguishing workers in a situation involving from 50 to more than 100 workers of 12 different categories plus indefinite numbers of walking injured.

During the first eighteen hours after an atomic attack, medical personnel will be so scarce that physicians will be assigned to installations where they are needed most, regardless of specialties. *All* physicians, therefore, should know how to work within the plan of the emergency medical service, so that they may be most effective in saving the lives of the injured.

Medical Society of the State of New York

ANNUAL MEETING

May 10 to 14, 1954

Hotel Statler *New York City*

Blood Transfusion Dangers

[Continued from page 1292]

greater care were taken and if there were a greater understanding of the responsibilities involved. It is inexcusable to administer blood without reading the label to determine whether it bears the name of the patient. Obviously, when this happens the nurse and the physician each have relied on the other. Why not require *both* to read the label and make this step doubly safe?

Some other accidents are due to lack of training, to inexperience, or lack of knowledge on the part of laboratory workers. Immunohematology has made great progress since the discovery of the Rh factors by Landsteiner and Wiener. We are now a far journey from the days when many believed that all that was necessary was to obtain a donor whose blood was of the same A-B-O group as that of the patient and that such blood could be given even without any crossmatching test. Moreover, the simple expedient of matching donor's cells in a saline medium with patient's serum and vice versa can no longer be considered satisfactory or adequate. Now many blood group systems besides the A-B-O system have been identified and must be taken into account. The human erythrocyte envelope contains a variety of agglutinogens. Each agglutinogen has one or more properties called factors. If a patient receives blood cells containing one or more factors absent from his own cells, isoantibodies specific for such factors may appear in the patient's plasma. If then more blood of the same type is transfused, a serious post-transfusion hemolytic reaction may result. Pregnancy or the subcutaneous or intramuscular injection of blood may also bring about the formation of unusual isoantibodies.

To complicate the matter still further, isoantibodies differ not only in specificity but also in their variety. Different laboratory methods are necessary to identify these varieties. Obviously, special training is necessary. Frequently, in emergencies insufficiently trained personnel are called upon to do the pretransfusion tests.

The average laboratory, generally, has neither the necessary diagnostic antisera nor the personnel to solve unusual cases of isosensitization. These should then be referred to laboratories specializing in this type of work. Fortunately, there are a number of blood grouping laboratories, and they would be happy to receive such material and evaluate it, not only to be of assistance to you and your patient, but also to obtain research material.

There are certain hazards of transfusion for which no reliable method of prevention is known, such as the transmission of homologous serum hepatitis. For this, one must depend entirely on the history given by the donor, but homologous serum hepatitis can be transmitted also by donors who, to their best knowledge, have never had this disease. The use of disposable needles for hemoglobin determinations, as well as disposable phlebotomy sets, will prevent transmission of this disease by needles.

Many workers take part in the various steps required when a transfusion is given. The chain is long and includes the manufacturer of blood transfusion equipment, the blood bank furnishing the blood, the hospital and laboratory that carry out the grouping and crossmatching tests, the physician who orders the transfusion, and the physician who administers the blood. Each plays his part. Each must exercise care and skill. On various occasions legal action has been brought against various combinations of these workers. It is most important that every conceivable preventive measure be taken by all involved to avoid transfusion accidents, in order to protect patients entrusted to our care, and to make this valuable and relatively safe procedure even safer. If this is done, unpleasant litigation will simultaneously disappear.

Important Notice

Operators of now illegal diathermy apparatus are jamming shortwave communications, interfering with radar screens, and endangering aircraft, according to information supplied recently by the Federal Communications Commission. Here are the facts.

On June 30, 1953, Part 18 of the Commission's Rules and Regulations became applicable to the operation of all shortwave medical diathermy equipment. Since that date the operation of medical diathermy equipment which is not type approved, certified, or licensed in accordance with the provisions of the Commission's Rules has been illegal, and operators of such illegal equipment are subject to the penalties prescribed by the Communications Act of 1934, as amended.

The Commission is aware that a fair number of medical diathermy machines which do not comply with its rules are still being used. Most of them are operated by doctors or other persons who either are not aware that they are violating the law or do not appreciate the compelling reasons which forced the Commission to adopt its rules governing the use of medical diathermy and other types of industrial, scientific, and medical equipment.

Consequently, the Commission is using this public notice to explain the necessity for strict compliance with these rules and why it is important that only approved medical diathermy equipment be used. We hope the membership will take note of these instructions in the public interest.

Radiation from medical diathermy equipment can cause harmful interference to the various radio communication services. A diathermy machine is, in effect, a radio transmitter. As shown on the map in Fig. 1, interference may be caused *hundreds of miles* from the point where the diathermy equipment is being operated. Moreover, because of spurious radiations, interference can be caused on frequencies far removed from the one on which the diathermy equipment is operating.

Spurious radiation is not essential to the use of medical diathermy equipment from a therapeutic standpoint. Practically all spurious and harmonic radiation can be effectively suppressed, while the fundamental frequency can be confined to allocated bands. The Commission's Rules are designed to accomplish those very purposes and so reduce to a minimum the probability of interference from the operation of diathermy equipment.

Use of such banned equipment can:

1. Foul up instrument landing signals, causing an airliner to crash.
2. Block a nearby radar screen used by airports to prevent midair collisions.
3. Throw a radio-controlled guided missile, like the Army's new NIKE, off its course and even bring it homing into the machine itself.
4. Interfere with police radio calls and other shortwave communications for hundreds of miles around.
5. In the event of air attack, provide a radio beam for enemy bombers to ride to their target.

An estimated 35 per cent of all diathermy machines now in operation are illegal. They were made before 1947 when the FCC first assigned specific frequencies on which the machines should operate. At that time, owners of existing machines were given until June 30, 1953, to get back their investment. On that date the old machines were to have been discarded.

But since the equipment is too expensive to convert to the new frequencies, many physicians and hospitals have continued operation despite the ban. We are informed that on January 8, FCC monitoring stations from Maryland to California picked up signals from a physician's office in Miami, Florida.

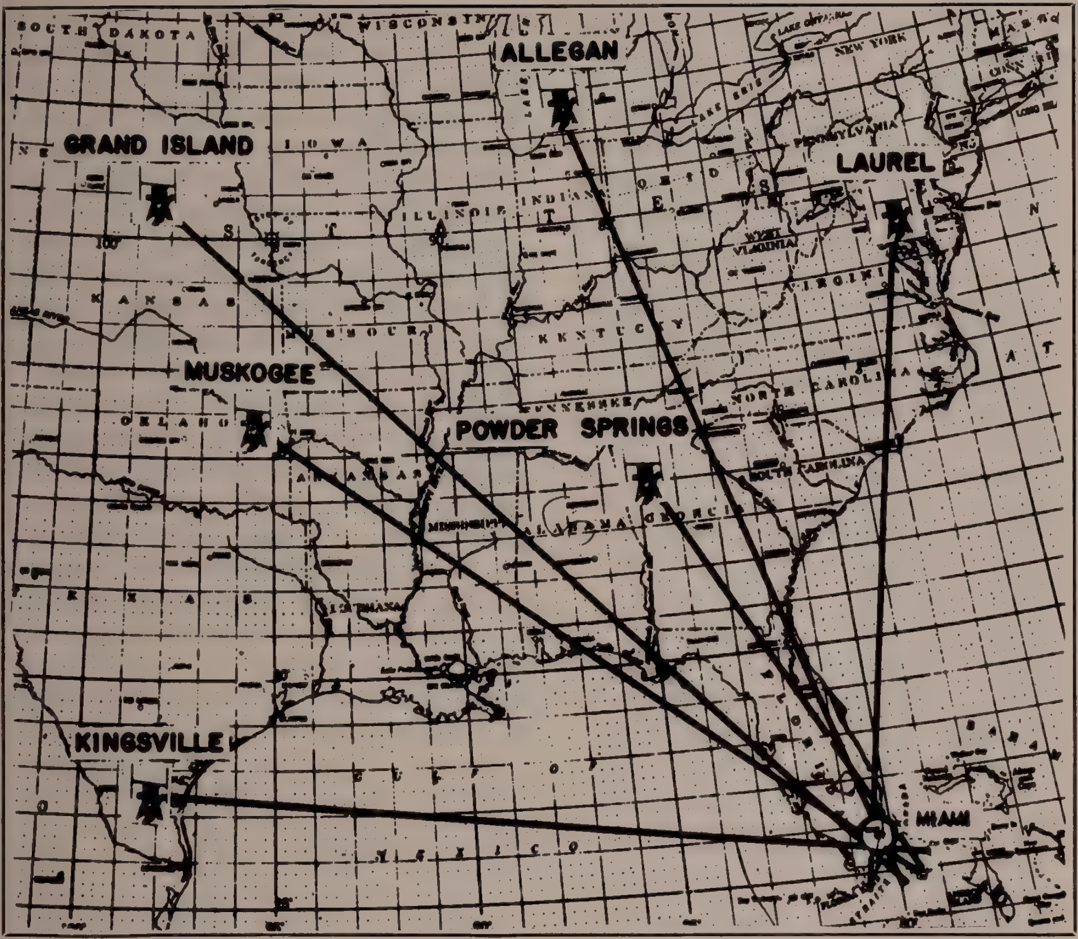
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Fig. 1. Plot of long-range radio direction finding bearings which were taken at the Federal Communications monitoring stations on a signal from an illegal diathermy machine in Miami, Florida, on January 8, 1954. The signal was also heard in Washington, Oregon, and California.

So far, violators have been let off with a warning. But a spokesman said they face up to $10,000 fine and two years in prison for use of the illegal machines, according to advices from the Chicago Office of the Commission.

We feel sure that many physicians and hospitals are unaware that they may possibly be violating the FCC's regulations. They will of course wish to assist the national defense by checking at once with the Commission. Call or write Mr. William L. Kiser, 641 Washington Street, New York 14, New York, if you are in doubt about your diathermy apparatus.

Figure 1 is a map showing the area affected by radiation from a single faulty piece of apparatus located in Miami, Florida. The Commission says in Public Notice 54-230, issued February 19, 1954: "If my equipment was legal before June 30, 1953, why is it dangerous now?"

Medical diathermy equipment which radiates excessively has been an interference problem for a long time. The Commission's Rules initially became effective June 30, 1947. However, to enable the owners of existing equipment to amortize their investments, the Commission gave the owners and users of equipment manufactured and assembled before July 1, 1947, a total of *six years*, until June 30, 1953, within which to comply.

The use of radio as a navigational aid in air and marine travel has developed and is still developing at a tremendous rate. Hundreds of new television stations and millions of new television receivers are now in operation. The possibility of interference both to important safety services and to television broadcasting reception is therefore constantly increasing.

"What should the owners and operators of noncomplying equipment do?"

The owner or operator of a medical diathermy machine which does not comply with the Commission's Rules should do one of the following things:

1. Obtain a machine which has been type-approved by the Commission and which bears a type approval number. A certificate of type approval means that the Commission's engineers have tested a prototype of the machine and have found that it complies with the requirements. Type approval is not an absolute guarantee that the machine will not cause interference, but it does indicate that under normal conditions of installation and operation the machine will not do so.

2. Have a competent engineer certify that the machine is capable of operating in accordance with the Commission's Rules. Such certification is accomplished in the manner specifically prescribed in Part 18 of the Commission's Rules. However, the owners of older diathermy machines are cautioned that the certification of such machines will usually require extensive modification or shielding by a skilled engineer as well as the use of special field intensity equipment, and the Rules also require that the certification must be renewed every three years. In many cases the certification process may prove more costly than the purchase of a new type-approved machine.

Current Editorial Comment

How Obfuscated Can You Become? We are indebted to a correspondent who has submitted to us without comment the following excerpt from "Winning Chess" by Irving Chernev:

> Not so long ago, a New York plumber observed that hydrochloric acid was highly effective for opening clogged drain pipes. He enthusiastically passed on his discovery to the U.S. Bureau of Standards, which informed him accurately but stiffly that "The efficiency of hydrochloric acid is indisputable, but the corrosive residue is incompatible with metallic permanence."
>
> When it developed that the plumber took this rebuff for high praise, a second warning was sent to him. "We cannot assume responsibility for the production of toxic and noxious residue with hydrochloric acid, and suggest you use an alternative procedure."
>
> The plumber remained obtuse and again thanked the Bureau. At this stage another scientist was called in. His message—"Don't use hydrochloric acid. It eats hell out of the pipes." This message was understood.

We do not play chess ourself, but it is quite possible our correspondent is unaware of this fact. Even if we did, there seems to be little relevancy in this intricate narrative of the plumber's correspondence with the Bureau of Standards and the moving of little men from one square to another. As a mere scrivener, knowing even less about the intricacies of the plumbing trade than about chess, we are at a loss to understand our correspondent's motivation in submitting the excerpt to us. Why did he take the trouble?

We publish this in the forlorn hope that perhaps some of our readers or authors may be able to supply the answer. If not, at least they may acquire an insight into some of the perplexities that beset an editor.

One Way. We are indebted to *GP*[1] for this novel approach to a possible solution of the average cigaret smoker's problem: The significance of cigaret smoking in the etiology of carcinoma of the lung has received widespread attention. In one study of men with bronchiogenic carcinoma other than adenocarcinoma, 96.5 per cent were moderately heavy to chain smokers for many years, compared with 73 per cent among the general male hospital population without cancer. Other data indicate that pipe smoking and cigar smoking bear no relationship to lung cancer and that there is no association of carcinoma of the lung with inhaling during cigaret smoking. Furthermore, no relationship is claimed between adenocarcinoma of the lung and cigaret smoking.

Statistical analysts are having a grand time with all the figures, and the arguments go on and on.

Meanwhile one of the most constructive suggestions regarding the problem was made in an editorial in the *New England Journal of Medicine* for September 10, 1953, in which it was stated: "The situation affords unusual opportunities for the vast tobacco interests to support impartial researches into the effects that their products may have on human health."

As for the average smoker, his reaction to all this is quite human. His approach may be like that of the fellow who smoked about a pack of cigarets a day and read in the paper a report suggesting that smoking may cause cancer of the lung. A few days later, he read the same thing in a magazine. Still later, he read a similar report in a book. All this worried him so much that his smoking pleasure was spoiled—so he decided to give up reading!

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[1] GP **8:** 30 (Nov.) 1953.

Nonservice Connected Investigations. We are informed that,

> Under a new plan which has been put into effect by Veterans Administration, the Department of Justice will be called in to handle cases of suspected fraud concerning the "inability to pay" declaration of veterans with non-service connected disabilities. VA itself is forbidden by law to look behind the veteran's statement that he can't afford private treatment. According to testimony introduced in Congressional hearings, this has resulted in some abuses.
>
> The new arrangement provides that if a VA hospital manager has good grounds to suspect that the veteran's claim of indigency is fraudulent, he will confer with federal law-enforcement officials. An investigation will then be conducted by Justice Department, the regular law-enforcement arm of the federal government. If the facts justify prosecution, the case may be taken to federal court. There the government will have to prove that the veteran in question set out "pre-meditatedly, purposefully and intentionally" to defraud the government. . . .[1]

This change in procedure should benefit everyone concerned. It should safeguard the veteran who has a legitimate nonservice-connected claim for assistance, it should strengthen the hand of the VA hospital administrator in the conservation of his resources for legitimate uses, and somewhat lighten the burden of the taxpayer. This is a move in the right direction.

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[1] A.M.A. Washington Letter, No. 41, Oct. 9, 1953.

Let us not concern ourselves about how other men do their duty, but concern ourselves about how we shall do ours.—LYMAN ABBOTT

PRESIDENT'S PAGE

Medical Care: Links and Gaps

To define medical care requires a very broad view of the necessities involved. To broaden it to the fullest extent one should take in public health, sewage disposal, housing, even the air that one breathes, and many other phases of living. Apparently some statisticians have included these items in the cost of medical care. One wonders, in comparison, what the cost of governmental agencies, legal care, cosmetics, beverages, and entertainment—elective demands—would amount to if they were similarly analyzed critically.

It has been estimated that private medical care in the United States amounts to some ten billion dollars annually. This is an interesting observation because the maximum estimate, at the time when governmental medicine was being considered by the "Deals," was around four billion dollars. Certainly the point of view seems to alter the estimate. To the over-all cost of private medical care there should be added at least two billion dollars as philanthropy in the form of free medical care contributed by physicians.

It is not my intent to delve into all the facets of medical care but to confine these remarks to some of the immediate necessities demanded for the care of the sick individual. To explain the title of this presentation, the links are those phases that bind and contribute toward good, efficient medical services. Too often the good is accepted and taken for granted, but rarely praised. The gaps in medical care are the defects that are publicized and certainly deserve serious corrective studies.

The style of this presentation will be in the form of a glossary or delineation. Medical care connotes to the public the monies paid to physicians. But other items of medical care are equally entailed—hospitals, nurses, pharmaceuticals, etc.

Medical Schools—World's best institutions, yet fail to equate supply and demand, apparently due to myopic viewpoint. There is a great need for an efficiency survey as to waste of space and personnel.

Medical Faculty—Highly trained scientifically; poorly indoctrinated in the delivery of medical care in the byroads and homes where it fails to meet the public need.

Recent Graduates—Well-trained; theoretic, often impractical, unimaginative, and lacking in resourcefulness.

Interns and Residents—Poorly distributed, community hospitals suffering thereby; the interns and residents in turn deprived of experience in community and home medical care.

Specialty Boards—Excellent idea for the specialist, but a handicap to the public who wish family doctor care.

Foreign School Graduates—Good spirit, but language and educational handicaps. Sadly needed as replacements, frequently without public gratitude or professional recognition.

Medical Center Hospitals—Wonderful institutions, absolutely indispensable. Constituted too much on a teaching program. Efficient, self-centered, abstract, and cold; inclined to absorb and monopolize the practice of medicine.

Community Hospitals—The medium of delivery of medical care to the public; often poorly equipped, financed, and staffed.

City Hospitals—Too often politically administered; materially handicapped and, therefore, inefficient.

Private Hospitals—Fill a gap, but inclined to be mercenary, which is incompatible with the best interests of the sick.

Mental, State Hospitals—A necessity, and costly. Medically inadequate, which at times is disreputable; generally excellent custodial care.

Geriatric and Convalescent Institutions—Greatly needed now and for the future; better supervision is much to be desired.

Insurance—A great boon to public independence; at present lacking comprehensiveness and often preventing free choice of physician. A great pioneer field for research.

Reinsurance—Offers a solution and should have a controlled trial under medical supervision.

Hospital Trustees—Outstanding citizens and businessmen who freely assume legal and moral responsibility in hospitals. A great error was committed when physicians were excluded as trustees.

Hospital Directors—Directors of the lay type are good businessmen, but are medically confused and cannot comprehend medical problems. The medical directors often are not good businessmen and are inclined to personality problems with the staff.

Attending Staff—Devoted to the medical care of all patients regardless of remuneration, but indifferent to many of the economic needs of the institution.

Courtesy Staff—Good to their patients. Use the facilities, but indifferent or insensible to the organizational problems of the hospital. Solo practitioners.

Nurses—Supervisory nurses are essential to the educational program, but many of them are too pedagogic.

Private Nurses—Generally good; individualists, therefore usually efficient.

Practical Nurses—Conscientious, hard workers and an absolute necessity in the hospital and the home.

Nurses' Aides—When the time comes for rewards, these people deserve a crown. Many hospitals would be in a sad state if it were not for their interest and contribution.

There is a critical dearth of all types of nurses. The educational program should be made attractive to high school girls who desire to enter this profession. Certainly tuition should not be charged during their apprenticeship, regardless of what class of nurse they wish to become.

Technicians—These are the people that carry out many of the x-ray, physical medicine, and laboratory services. They are usually excellent and conscientious. A great scarcity exists because of inadequate educational facilities.

Secretaries—These are an important cog in the wheel, not only for the economic angle of the hospital but for accuracy of records and reports. More and better schools are needed.

Orderlies and Porters—They are a lowly class in most hospitals, and there is certainly room for a great economic lift for these individuals into whose hands your very life may be entrusted.

There are dangerous tendencies in medical care:

1. The threat of governmental medical care, which organized medicine has fought and stemmed for the time being. Thus the public has been spared a great disillusionment.

2. For better or worse, the fact remains that medical schools, hospitals, groups, and clinical centers have become wedded to a system of medical care that threatens the very existence of the solo practice of medicine. If this system prevails, it will eliminate one of America's greatest individuals, the general practitioner and beloved family doctor. This loss of medical freedom and personal care is approaching a great American tragedy. Nothing short of re-evaluation can halt this tendency.

3. Greed is often the basis of unethical conduct of doctors. This is beyond the comprehension of a good doctor. A degree in medicine gives no license to any person to act against or violate the Hippocratic Oath, which is a creed of devotion to one's patients and the medical profession. Anyone who violates it deserves to be dealt with summarily and ex-

posed and should have all rights and privileges and licenses taken away from him. It is a pity that organized medicine has not the necessary means to police the recalcitrants.

In spite of its defects, medical care in America is the best in its history and in the world. The span of life has been increased from forty-nine to sixty-nine years. Contagious diseases have been practically eliminated. Man's longevity is here, bringing with it the problem of caring for this aging population. This will increase and add to the responsibilities of the average citizen as well as the medical profession in the future of this country.

This script is staccato. Well, I intended it to be just that. These, in brief, are the last words of a president who well knows he will pass this way but once. It has been an arduous but instructive journey, but never let this chore discourage anyone who seeks the good fortune of a liberal medical and general education—an education that leads to an understanding of the medical problems, the doctors, and the intimate relationship to public service.

Thanks deeply for your patience and trust in my humble yet sincere efforts to do what I felt was best in medical contributions to the people. I will always remember the help of every single person in the Medical Society for his devotion and cooperation. I bid you farewell.

Sincerely and gratefully yours,

Andrew A. Eggston

Physicians' Home

The files of the Physicians' Home contain many appreciative letters from its guests, who now number 28, throughout the State of New York. They include doctors and doctors' widows.

The support of doctors and friends of the Physicians' Home has made it possible for the Home to help our colleagues through the years, and the Board of Directors feels that the following communication is of sufficient interest to pass on to members of the Medical Society of the State of New York.

Beverly C. Smith, M.D., *President*
Physicians' Home

March 3, 1954

Dr. Beverly C. Smith
63 East 84th Street
New York 28, New York

My dear Doctor Smith:

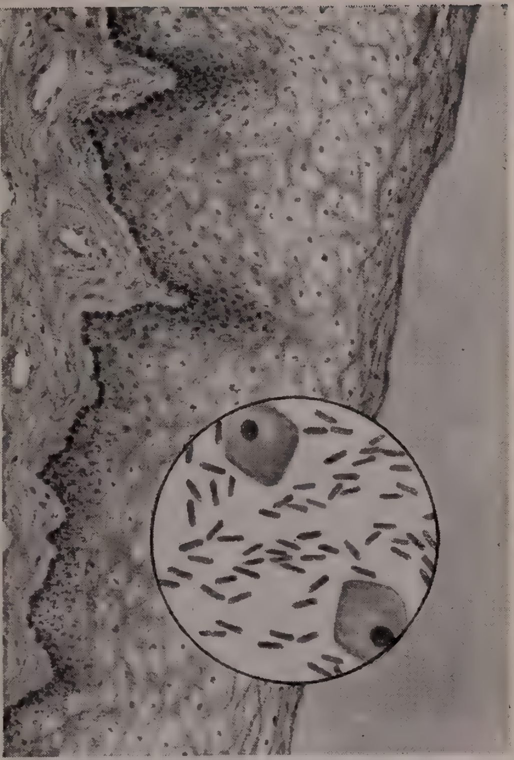
It is with the feeling of deepest gratitude that I write to thank you, Dr. Smith, and the members of the board of "The Physicians' Home," for the kindness you have extended to me. The increase in my check is most welcome and will help me more than you know.

When you have been in the practice of medicine for fifty-three years, and suddenly find your health and money are slipping away, you think life has passed you by. Then a wonderful friend, "The Physicians' Home," comes to your aid. Then you know there is still a God in Heaven and that life is still worth living.

Please extend my sincere thanks to the Board of Directors for their kindness to me.

Sincerely yours,
(Name Omitted)

Senile vaginal epithelium is low in glycogen, low in acid and (inset) low in protective Döderlein bacilli, encouraging growth of pathogenic organisms.



Normal vaginal epithelium is high in glycogen, is definitely acid and (inset) contains adequate Döderlein bacilli to combat pathogenic organisms.

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To discourage multiplication of trichomonads and to encourage physiologic protective mechanisms, a comprehensive therapeutic regimen with Floraquin® is instituted.

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As infection develops, the epithelial cell layers, which normally number between forty-five and fifty-five, may decrease to as few as fifteen to twelve layers or may disappear entirely. With this loss of glycogen-bearing cell layers, the available carbohydrate released by physiologic desquamation into the vaginal secretion and ultimately converted into lactic acid is proportionately decreased.

Floraquin not only provides an effective trichomonacide (*Diodoquin®*), destructive to pathogenic organisms, but furnishes sugar and boric acid for reestablishment of the normal vaginal acidity and regrowth of the normal protective flora. G. D. Searle & Co., Research in the Service of Medicine.

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Simple regimen

Together with significant improvement in the EKG,[1,2] Peritrate prophylaxis will reduce the nitroglycerin need in most angina pectoris patients.[3] A continuing schedule of only 1 or 2 tablets 4 times daily will usually

1. *reduce the number of attacks in almost 80 per cent of patients*[2]
2. *reduce the severity of attacks which cannot be prevented.*

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1. Russek, H. I.; Urbach, K. F.; Doerner, A. A., and Zohman, B. L.: J.A.M.A. *153*:207 (Sept. 19) 1953.
2. Humphreys, P., *et al.*: Angiology 3:1 (Feb.) 1952.
3. Plotz, M.: New York State J. Med. *52*:2012 (Aug. 15) 1952.

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SCIENTIFIC ARTICLES

Dangers Associated with Blood Transfusion

LESTER J. UNGER, M.D., NEW YORK CITY

(Director of the Blood and Plasma Bank, New York University-Bellevue Medical Center)

Blood is indispensable in clinical medicine, but if misused it can do great damage. Even though blood transfusion is a relatively safe procedure and the percentage of untoward reactions is small, such reactions have become more common because of the vast increase in the number of transfusions administered. At the same time, based on such accidents, there has been an increase in the number of law suits, some of which have received newspaper notoriety, and this in turn has stimulated others to sue for damages, real or imaginary. In fact, the subject has become so important that the Committee on Medicolegal Problems of the American Medical Association has published a report entitled "The Medicolegal Aspects of Blood Transfusion."[1-6]

The progressive increase in the amount of blood used has been due to the development of blood banks, which have made blood more readily available and easier to administer. Blood transfusion is an invaluable and often lifesaving measure. Yet, as with other worth-while therapeutic agents easily obtained, the desire to aid the patient tempts one to try its efficacy in a large assortment of diseases. In some instances, to say the least, the indications may not be clear-cut. With respect to blood transfusion one frequently hears the fallacious statement, "It may do good and it can do no harm." At medical meetings devoted to blood transfusion the subject of the use and abuse of blood transfusion is often discussed.[7] Whether or not a transfusion is clearly indicated, it always has certain inherent dangers. Unfortunately, the mortality of blood transfusion equals that of anesthesia or appendectomy and is said to be approximately one death in 1,000 to 3,000 transfusions. In the London area there is "one death in 13,000 bottles of blood."[8] If my own average in New York City of 2.7 bottles of blood per transfused patient holds true also for London, this implies one death in approximately 4,800 patients transfused. The clinician should be aware of these dangers and weigh them against the patient's need for blood. He should recognize that dangers associated with blood transfusion begin with the manufacture of equipment used and continue from the time the donor enters the blood bank for a period of several months after blood has been transfused. He must also recognize that a large number of workers participate in the selection and bleeding of the donor, the laboratory examinations, and the administration of blood, and their mere number increases the chance of error. Dangers and complications are present from beginning to end. Some of these, such as human errors, are avoidable, while others are not.

This report is not meant to alarm or to discourage necessary blood transfusions but rather to call attention to some of the possible dangers so that they can be better avoided, and to report some illustrative cases that I have had the opportunity to see in consultation, not only clinically but also medicolegally. These problems can be divided into three groups depending upon their origin: (1) at the blood donor center, (2) at the laboratory, and (3) at the patient's bedside.

Blood Donor Center

Clerical errors, such as mislabeling of the bottle of blood or pilot tube, it would seem, should never occur, but the fact is that they do and will probably continue to occur as long as human beings are human beings. To avoid such errors the blood bank staff must constantly be made aware of their possibility, and great care must be exercised to avoid their occurrence. To accomplish this at our blood bank we reduce clerical work to a minimum and further depend upon

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Presented at a meeting of the American Academy of Forensic Sciences, Chicago, February 24, 1954.

check, double check, and at times triple check. For each donor's blood a perforated strip of eight labels is used, and on each label is preprinted the serial number assigned to him. The end label of this strip is pasted onto the donor's card in *advance* of his appearance, without separating the rest of the strip, so that automatically the same number which will appear on the bottle and on the various test tubes will also appear on the donor's card. When the name of the donor is written on the card, it is at the same time written on the appropriate labels of the strip, and only then are the seven other labels of the strip detached from the card. These labels are then applied to the empty bleeding bottle and empty test tubes. One of these tubes, which will contain blood for crossmatching, is securely attached to the bottle and remains that way at all times, insuring that blood in the bottle and that in the tube are identical. If at any time this pilot tube is detached, this can be detected because the bottle label is automatically torn. The bottle and all the accompanying test tubes for this donor's blood are placed in one container and given to the donor. *Before* and again *after* the donor is bled, all names and numbers on the bottle, test tubes, and donor's card are verified to be certain that all are identical and actually belong to this donor, and those to whom the duty of checking and rechecking is assigned enter their initials on the donor's card to indicate by whom this has been done.

At the time of phlebotomy, as well as immediately thereafter, the donor must be protected. After examination by a physician, only those physically fit are bled, and the requirements of the Sanitary Code of the City of New York and those of the National Institutes of Health are observed. The rules of asepsis are scrupulously followed. After the phlebotomy the donor is not permitted to leave until he is fit. At all times a licensed physician is in attendance.

The Laboratory

Errors in the laboratory may be either clerical or technical in nature. A bottle of blood meant for the transfusion of one patient may be inadvertently labeled with the name of another. Laboratory errors in connection with other examinations such as blood counts, etc., are not catastrophic, whereas laboratory errors associated with a blood transfusion may cost the patient's life. The technician must be made to realize that she is accepting a grave responsibility. Such responsibility, however, should not be placed on the shoulders of untrained technicians or residents. Laboratory errors are more apt to occur at night, week ends, or holidays, when relatively inexperienced people may be called upon to carry out necessary pretransfusion tests and when adequate supervision is not available.

Even the labels on the vials of diagnostic serums constitute a pitfall for the inexperienced. The diagnostic serums are labeled Anti-A (group B) and Anti-B (group A). Inexperienced workers may misinterpret this labeling, and although the maneuvers of the test are properly carried out, group B blood may erroneously be called group A and vice versa. Such workers may also fail to check their results by testing the individual's serum against known group A and group B cells. Then, with a bottle of blood of the same blood group as that to which the patient was *believed* to belong, the crossmatching test is carried out, and although incompatible, the blood selected is passed as compatible and administered. After such accidents it is almost always admitted that it was felt that something was wrong with the results of the crossmatching test, but that lack of self-confidence caused by lack of experience and knowledge interfered with the conclusion that the bloods were incompatible. Since the blood of the patient was believed to belong to the same A-B-O group as the blood in the bottle, a second erroneous assumption was arrived at, namely, that they *must* crossmatch and any evidence to the contrary must represent a technical error due to the examiner's inexperience. I have seen a number of such instances, some with dire results.

Therefore, an experienced staff should be available at all times, including nights and holidays. Moreover, whenever possible, transfusions should be scheduled so that the more experienced day staff can carry out the grouping and crossmatching test, and suitable arrangements must be made for emergencies occurring when the day staff is off duty. Another safeguard against this error is to establish the rule that at no time is the grouping that appears on the bottle of the donor's blood to be taken for granted. The A-B-O grouping of both patient and donor should be done simultaneously, and the results of each must be identical if both bloods are to be accepted as belonging to the same A-B-O group.

To the test tubes into which donor's blood is drawn for various pretransfusion tests, we attach the lower half of a label of two parts with perforations between each. On both halves the donor's number is preprinted. When the blood is examined, the unattached part of the label is removed, the report entered on it and pasted onto the donor's card. To insure accuracy of the A-B-O blood grouping, three different specimens of blood are examined by three different technicians working independently, each using a different method. Each blood specimen is examined as follows: (1) the cells are grouped by the saline agglutination method, (2) the cells are grouped by the conglutination method, and (3) the serum is grouped using a saline suspension of known group A_1 and group B cells. These three tests are carried out not only on each donor's blood but also on each patient's blood. All blood grouping serums must meet the standards of the National Institutes of Health and not be obtained merely by bleeding random donors.

No donor's blood should be considered Rh-negative unless tested not only for the Rh_0 factor but also for the $\mathfrak{R}h_0$ (Rh_0 variant) as well as for the rh′ and rh″ factors. Routinely, only blood of the same A-B-O group as the patient should be transfused, and only Rh-negative blood should be given Rh-negative patients. Only in an emergency when delay will jeopardize the patient's life may there be any deviation from this rule. In such an emergency situation group O, Rh-negative blood may be transfused to patients whose blood group is unknown or for whom group-specific blood is not available. Either such blood should have a low anti-A and anti-B titer or preferably the plasma should be removed and only the sedimented cells transfused. In emergencies it has been recommended to take any group O, Rh-negative blood at random when low-titer, group O blood is not available and add A and B group substances before administering it. When the antibody titers are very high, the addition of group substances may not reduce the titer to a safe level nor do they neutralize univalent antibodies. Moreover, injection of group substances into female recipients may cause their anti-A and anti-B titer to rise with possible detrimental effect on future pregnancies. While Hr factors present in Rh-negative blood theoretically might sensitize an Rh-positive patient lacking these factors, this rarely occurs because of their low antigenicity. Rh-positive blood may in a dire emergency be given an Rh-negative patient, particularly males, if no Rh-negative blood is available. However, prior to each transfusion, tests for Rh sensitization must be made, and once Rh antibodies have developed, only Rh-negative blood may be transfused. It is recognized that Rh-positive blood should not be given to Rh-negative females from birth to the climacteric; otherwise normal pregnancies may become impossible. Yet, as a lifesaving measure, this may be justified. All these deviations from the usual routine become justified only when any other procedure would endanger the patient's life. A note to that effect should then be entered by the physician on the patient's chart.

The crossmatching technic must also be such that it takes into account the most recent advances made in this field. The clinician must understand that it is no longer possible properly to carry out the crossmatching test in ten minutes but that approximately one hour is needed. Any crossmatch technic which fails to test for antibodies, not only of the bivalent but also of the univalent variety, including those which can be detected only by the antiglobulin method, is inadequate and fails to take into account present-day knowledge of the subject. Isoantibodies vary not only in specificity but also in variety. To detect all known varieties, different methods are necessary. Certain antibodies will react in saline media and are called saline agglutinins, bivalent antibodies, saline-acting antibodies, or early immune antibodies. There is another variety of antibody which can be detected not in saline but in high colloid media. These are called blocking antibodies, univalent, or late immune antibodies, etc. In addition, there are antibodies, for example, anti-Duffy, which react neither in saline nor in albumin media but can be detected only by indirect antihuman globulin (Moreschi-Coombs) technic. It is, therefore, necessary, particularly if the patient has received one or more transfusions and in females who have been pregnant, to carry out the crossmatch by the test tube water-bath method using a saline medium, and if the result shows no clumping, an antiglobulin test should be performed on the cell sediment in each of the tubes used in the crossmatch. An additional crossmatching test using high colloid medium should also be performed. Only if all of these tests are negative for clumping may the donor's blood be considered compatible.

The Rh_0 factor is the most antigenic factor of the Rh-Hr system and has been responsible for 90 percent of post-transfusion hemolytic reactions, and the crossmatching technic must be adequate to detect Rh_0 blocking antibodies. Sensitization to any of the Rh-Hr factors or, for that matter, to blood factors of any other blood group system could result in a post-transfusion reaction if the donor's blood contains a blood factor reactive for an antibody present in the patient's plasma.

Blood grouping, the detection and identification of atypical isoantibodies, and the titration of such antibodies have become complicated and specialized procedures[9–12] which require expert knowledge and experience. Even if a laboratory has neither the personnel nor the necessary diagnostic serums for this special work, it should at least have a technician sufficiently trained to recognize hemolytic transfusion reactions. Under such circumstances no further blood should be administered, and specimens of donor and patient should be sent to a laboratory qualified to solve the problem and furnish compatible blood. If blood is absolutely necessary and there is any doubt whatsoever about its compatibility, only 50 cc. should be administered and then two hours allowed to elapse. If no reaction has occurred and re-examination of the patient's plasma shows no evidence of hemolysis, the balance may be administered. If, however, a reaction does occur, give no more of this donor's blood until the problem is resolved.

A number of cases illustrative of post-transfusion hemolytic reactions due to the Rh-Hr, P, M-N, and other blood group systems could be cited. In fact, some of these have already been published,[13–17] and they are deliberately omitted, therefore, from this communication. As a result of studies made following post-transfusion reactions, a number of hitherto unknown blood factors have been uncovered. The most recent is the U factor[18] which was responsible for a patient's death.

Clerical errors may occur even though the laboratory work has been accurately carried out. For example, a technician whose last name began with the letter "B" inserted her initial where the result of the blood grouping test was meant to appear, and put the blood group, namely, "O" in the space meant for her initial. To avoid such clerical errors, our blood bank makes use of printed labels. The letter representing each of the four blood groups is printed on differently colored paper. Each label consists of two identical parts in a strip with perforations between so that they can be separated. When the technician has completed her examination, only half the double label is pasted to the donor's card, leaving the second portion attached but not pasted to the card. Later, after the three blood grouping tests previously described have been completed, the remaining loose section of the label is detached and simply pasted on the bottle. A similar procedure is employed for the pilot tube containing blood for the crossmatch. In these ways the chance of clerical errors is reduced by reducing the number of written entries to a minimum.

Although clerical errors may occur in the laboratory, all transactions must be written and not oral. The following case illustrates the danger inherent in oral reports:

Case 1.—A patient's blood was found to be group O, Rh positive, and the technician *telephoned* this report to the resident physician, who at the time was very busy and postponed ordering blood from the bank from which it was regularly obtained. About 2 A.M. the next day, realizing that he had failed to order blood, he telephoned the bank asking that a pint of *group A*, Rh-positive blood be sent to the hospital early the following morning. This was done. The technician, pressed for time, crossmatched blood of the patient with that of the donor. She later stated that she "felt that the crossmatch was not perfect" and repeated the tests, making the cell suspension more dilute and finally concluded that it was compatible. At no time did she look back at the record of her results of the test of the previous day or regroup the patient's blood submitted for crossmatch. She simply assumed that the resident had ordered blood of the same group reported over the telephone. The blood was administered. The patient died, and a lawsuit was instituted.

At the Bedside

When a transfusion is ordered, a specimen of blood for the crossmatch test may be drawn by one not associated with the bank. At times no label whatsoever is put on the specimen. Obviously this can lead to serious trouble. Such unlabeled specimens should not be accepted for examination. Errors in mislabeling specimens are very difficult to control because there is not only a rotation of resident physicians but also a turnover in the nursing staff, and they may not acquaint themselves with the routine of the institution. The following illustrates this type of error.

Case 2.—Transfusions were ordered for two different patients in the same ward. A resident physician put into *unlabeled* test tubes a sample of blood for the crossmatching test from each patient, and a nurse *later* labeled them. A pint of blood was crossmatched for each patient, and both were administered. One of the patients developed slight chill, fever, and oliguria, and the clinician attributed these to a cause other than the transfusion and ordered a second transfusion for this patient. Routinely, for each transfusion a *freshly drawn* specimen of blood for crossmatching is insisted upon by this bank, and the laboratory technician each time repeats the A-B-O grouping and Rh testing. On completion of the tests she compares her results with the record of the previous transfusion. Many think that this re-examination of a patient's blood is unnecessary and that the first specimen of blood may be used for crossmatching, and the results of the first tests taken for granted. However, because of this routine of repeating the tests, it was found that the second specimen of blood belonged to group O, whereas the record showed that the result of the previous test was group AB. If the routine of using the first specimen had been followed, this patient would have been given a second pint of group AB, and the result might have been fatal. Experience has shown that when specimens are interchanged, two errors result. After the second patient believed to be involved was identified, specimens of both patients were re-examined for the A-B-O group, Rh-Hr, and M-N types, and it was readily determined that when the specimens of both patients had been drawn, the nurse had reversed and mislabeled them. Fortunately, no harm resulted to the group AB patient because he had received group O blood, and he was discharged from the hospital unaware of the error. The group O patient who had received group AB blood, even though he made a complete recovery, instituted a lawsuit.

To avoid such incidents, blood for crossmatching should be drawn from one patient at a time. The test tube should be properly labeled *prior* to drawing blood. The person drawing blood should be certain that the tube into which blood is placed bears the name of the patient whose blood was drawn. In addition, for each transfusion a *freshly drawn* specimen of blood should be used, and each time an A-B-O grouping and Rh testing should be performed and the result then checked with the previous examination.

Particularly when a technician crossmatches blood simultaneously for two or more patients, there is danger that the blood meant for one patient may be labeled with the name of another, or the error may consist in the delivery to one patient of blood intended for another[19] as in the following cases.

Case 3.—*An aide*, taking from the blood bank two bottles of blood for two different patients, in error delivered the wrong bottle to each patient. As a result, a group A patient in the operating room was given group B blood, whereas a group B patient in a ward received group A blood. Neither the aide, nor the *two* nurses, nor the *two* physicians involved checked the name on either bottle of blood with that of the patient for whom they were intended. The anesthetist, during the course of the operation, requested a second pint of blood. This time the correct blood, group A, was delivered to the operating room. Fortunately, the anesthetist noticed that the color of the label as well as the letter indicating the blood group on the second bottle of blood differed from those of the first bottle. He withheld administration of the second bottle of blood and reported his observations to the blood bank. Again, it was recognized that when such error occurs, two patients are usually involved. Oxalated specimens of both these patients were drawn, and the supernatant plasma of each was compared with the supernatant plasma of the specimens drawn for crossmatching. The color of the plasma of the pretransfusion and post-transfusion specimens from the group A patient who had received the group B blood was identical. Hemolysis evidently had not taken place, or if it had, it was minimal. Subsequent titration of the patient's serum showed a low anti-B titer. One thousand cubic centimeters of tenth-normal sodium lactate were administered, and nothing further was done. This patient made an uneventful recovery.

The color of the plasma of the post-transfusion blood specimen of the group B patient who had received group A blood showed the presence of marked hemolysis, as compared with the pretransfusion specimen. An exchange transfusion of 5,000 cc. of group B blood was then carried out, followed by 1,000 cc. of tenth-normal sodium lactate given intravenously, and 10 grains of sodium bicarbonate by mouth every four hours for three doses. The color of the urine was faintly reddish, and the amount excreted was below normal. There was slight jaundice of the sclerae and skin. These symptoms quickly disappeared, and the patient made a complete recovery. There were no medicolegal repercussions.

CASE 4.—Two patients in the same ward each required transfusion. For one, 1,000 cc. of blood had been crossmatched and for the other 500 cc. All three bottles were simultaneously delivered to the nurse in charge of the ward who erroneously placed one of the two bottles meant for one patient together with the one meant for the second patient on the bedside table of one of these patients, and a resident physician started the transfusion and left the ward. The nurse, before leaving, instructed her assistant to replace the first bottle when it became empty with the second. This was done, but soon the patient was in distress. Both nurses had failed to read the labels on the bottles, and although one bore the name of this patient, the second bore the name of another. Unfortunately, this patient died. There has been no medicolegal action.

CASE 5.—A surgeon, who routinely orders blood for all his patients undergoing major surgery, had two cases scheduled for that afternoon, and blood for both was in the operating room. The anesthetist, *without reading* the labels and believing both bottles were for the patient undergoing surgery, started the transfusion using the bottle of blood meant for the second patient. The patient was under anesthesia, and no chill resulted; yet he went into shock and later developed jaundice and almost complete anuria. The small amount of urine he did pass was deeply red in color. An exchange transfusion was carried out by me but the patient died.

These cases illustrate the necessity to enter on the bottle of blood the name of the patient for whom the blood is intended and for those who administer the blood actually to read the name on the label and check it with the name of the patient to be certain that the wrong blood is not administered. When the name of the patient is entered on the bottle label and it is turned upside down in the process of administration, it becomes practically impossible to read. Therefore, to each bottle of blood we attach an "upside-down label" on which the name of the patient is entered twice, permitting it to be read and checked not only when the bottle is standing on the table but also when it is inverted during administration. Besides entering the name of the patient, the patient's chart number might be added. Such double identification may be necessary since two patients in the same ward may have the same or similar names. Yet no method of labeling and no degree of accuracy will be of any use unless labels are read and checked. Both nurse and physician must actually read the labels and must not rely on the other doing this. It is surprising how difficult it is to have this done.

Other Sources of Error

Contamination of Blood.—Medicolegal action may result from administration of blood contaminated by bacteria due to a break in asepsis at the time of phlebotomy. To avoid this, the donor's arm at the site of the venipuncture must be thoroughly scrubbed with tincture of green soap, followed by alcohol, then ether, and then painted with tincture of iodine.[20] The rules of surgical asepsis must be meticulously observed.[21] Great care must be taken on the part of the phlebotomist not to pass his unsterile arm or hand across the sterilized cork of the bottle or across the field made sterile for the phlebotomy. We treat these two fields in the same fashion as surgical fields.

Yet, even with the greatest care and most perfect asepsis, a bottle of blood may become contaminated. The deeper layers of the skin always contain some few bacteria, and when the needle is inserted, a piece of such skin may be cut loose, enter the lumen of the needle, and be washed into the bottle. If the blood were immediately transfused, probably nothing would happen. With storage of blood these few bacteria may multiply, and gross contamination may result.[22–25] This may occur especially if at any time blood is not stored continuously at 4 to 10 C. For that reason, if the refrigerating unit has failed and the temperature of the icebox risen, all blood stored in it at that time must be discarded. However, it has also been shown that even under proper storage at low temperature, certain bacteria may multiply, and when such blood is administered to a patient, death may follow.

To detect bacterial contamination by making cultures of blood in the bottle prior to administration would be useless, because blood which actually was sterile might become contaminated by the very procedure of taking the culture. In addition, blood would age while awaiting the result of the culture. Examining stained films made from blood of the bottle has the limitation that small bits of fibrin may be mistaken for gram-negative bacilli, and erroneously the blood may be thought to be grossly contaminated. However, there are those who believe that this procedure is of some value since in fatal cases, which are generally caused by gross bacterial contamination, smears of the blood have always been positive for bacteria. Stevens *et al.*[25] state, "While earlier reports indicated more frequent contamination, an incidence of 1 to 3 per cent may be expected in modern blood banks." They also report that although many of these organisms rarely produce serious reactions, certain gram-negative bacilli that do not grow at temperatures of 32 C. or above multiply freely at storage temperature, and these are the organisms that have produced the serious transfusion reactions. If a bottle of stored blood is entered for any reason, for example, for the examination of a stained film for gross bacterial contamination or for the preparation of packed or washed cells, such blood must be used immediately and not stored because there is always the possibility that it has become contaminated while carrying out these procedures.

Hemolysis.—Hemolysis of stored blood may occur. In fact, it begins immediately after blood is drawn and progresses as the blood ages. Another cause of hemolysis is freezing of the blood. I frequently receive telephone inquiries because the record shows that the temperature of the refrigerator has dropped below freezing, an accident which generally occurs over the week end when opening and closing the refrigerator is at its minimum. In such accidents usually the entire supply of blood has frozen, and the technician in charge of the blood bank is aware of this but is loath to discard the bloods and, naturally, is deeply distressed when told that this must be done. When such frozen blood thaws, hemolysis results, and the transfusion of such blood can cause hemoglobinuric nephrosis. More dangerous, however, is the isolated bottle of blood that by standing in contact with the refrigerating unit becomes partly frozen. The technician is likely not to notice this, and when she moves the blood away from the freezing unit, it thaws and hemolyzes. It is important to inspect the supernatant plasma of each bottle of blood daily and discard those which show signs of hemolysis.

Transmission of Diseases.—The dangers of transmission of syphilis, malaria, and homologous serum hepatitis are ever present. While syphilis has been transmitted by transfusions of fresh blood, it is hardly likely to be transmitted by banked blood because when blood stands in the refrigerator for seventy-two hours or more, the spirochete dies. Moreover, with banked blood there is ample time to carry out adequate tests for syphilis.

The transmission of malaria[26] by blood transfusion is always possible. Aside from obtaining a careful medical history and rejecting all donors who have ever had malaria or who have been given suppressive treatment within a year of the time of blood donation, there is no protection against this disease. At our bank we made thick smears of blood specimens from 20,000 consecutive donors without once demonstrating the presence of the parasite.

The incidence of homologous serum hepatitis has been considerably higher following desiccated plasma transfusions than after whole blood transfusions. This is due to the fact that plasma from eight to 50 donors is generally pooled.[27] If the blood of one donor contains the virus, the entire pool is contaminated. The transfusion of a pint of whole blood from one donor suffering from this condition, however, affects only one recipient. Irradiation of plasma gives some but not complete protection against transmission of this disease. At our bank we have for years used pooled liquid nonirradiated plasma that has remained standing at room temperature for at least six months. Under these conditions even if the virus was originally present in the plasma, it has been said that it has disappeared. However, according to the well-controlled experiments of Murray *et al.*,[28] known icterogenic plasma which had been stored at room temperature for three months produced cases of hepatitis in three out of five volunteers inoculated with 1-cc. doses. The same material which had been stored for six months resulted in one case out of 19 individuals who had received 1 to 2-cc. doses.

A number of medicolegal actions have been instituted by patients who developed homologous serum hepatitis, and some of these are still pending. There is no accepted method to protect the patient against this transmissible disease except by a careful medical history of the donor, rejecting any who have ever had hepatitis. However, there are donors who, to their knowledge, have never had hepatitis, yet can transmit the disease. Using disposable needles for both the hemoglobin test and the phlebotomy will prevent transmission of the disease by contaminated needles.

Route of Transfusion.—The safest route for transfusing blood is a peripheral vein, but complications, even gangrene of the arm, in very rare instances, can follow this recognized procedure. When a peripheral vein is used, infection at the site rarely if ever occurs unless an incision of the skin has been made. Intramedullary transfusions may result in osteomyelitis. The intra-arterial route should not be used because of the dangers of gangrene.[29] Intra-peritoneal transfusions are rarely if ever given today. The superior longitudinal sinus may be used in infants, but because of the danger of extradural extravasation of blood, this route should be reserved for experts. The umbilical vein in newborn infants is a very useful and accessible vein but is not wholly without danger.

Case 6.—A *very narrow* catheter was applied to the arm as a tourniquet at the time of the transfusion of a newborn infant. Numerous unsuccessful attempts at inserting the needle through the skin into the vein were made. The physician decided to make an incision of the skin and, after successfully exposing a vein, removed the tourniquet and administered the blood. At this time it was noticed that the arm was cold, and its color differed from that of the other arm. The tourniquet had been left in place for a considerable period of time, namely, from the very beginning of the procedure until the needle had been inserted into the vein. This had evidently damaged the brachial artery. Gangrene resulted, necessitating amputation of the arm. Medicolegal action was instituted by the parents.

Case 7.—A critically ill and practically moribund infant required a blood transfusion. Attempts to insert the needle through the skin into the vein failed. An incision was made into the antecubital fossa, a blood vessel was exposed and a nick made in it. Much to the surprise of the physician blood began to escape in spurts, and he then realized he had cut an artery rather than a vein. Since in his judgment blood was needed, he gave an intra-arterial transfusion and then *ligated* the artery. Gangrene developed, necessitating amputation of the arm. Legal action was instituted by the parents.

Use of Calcium Gluconate.—Patients who are having massive external bleeding obviously urgently require transfusion. In fact, such huge quantities of blood may be poured into these patients that they receive what almost amounts to a continuous infusion of citrated blood. Yet the bleeding is not controlled. Because of failure to give calcium gluconate, in some cases large amounts of blood have been unnecessarily administered without controlling the bleeding. In some cases called to my attention, the patient has been subjected to surgery in the hope that the site of bleeding will be found.

Case 8.—A patient with bleeding from the bowel received 125 pints of blood, 109 of which were given within a period of seven days. He was practically moribund and lost the blood as fast as it was replaced, yet he was kept alive by the transfusions. Because of his extremely poor condition no surgery was attempted. Such large amounts of sodium citrate had been administered that the patient was unable to metabolize it, and the bleeding became uncontrollable. On my advice, 10 cc. of 10 per cent calcium gluconate were administered intravenously, and this was repeated after each 1,000 cc. of transfused blood. The bleeding then stopped.

Within the past year I have seen four similar cases. In three the bleeding was fairly promptly controlled by calcium gluconate, although in one it continued and in spite of surgery the patient died.

Avoidance of Transfusions.—With recognition of possible dangers associated with transfusion as well as possible benefits, each must be weighed against the other. Unless the indication is clear and unless benefits are reasonably certain and worth while, it would seem wise to avoid transfusing such patients. In fact, it has been stated that, "It appears unjustifiable to place any patient at risk for 1 pint of blood."[8] The following case illustrates this point.

Case 9.—A patient who had been operated for a simple ovarian cyst and whose recovery had been uneventful was about to be discharged from the hospital. The physician noted a slight pallor, and a complete blood count revealed a low-grade, secondary anemia. He explained to the patient that she could go home that afternoon if she wished but that it would then be necessary for him, at his office, to treat the anemia, probably for a period of six months. He further stated that if, however, she would stay in the hospital one additional day and receive a blood transfusion, she would most likely not need any further treatment. She chose the latter course. Laboratory examination showed that her blood was group B, Rh positive, and 500 cc. of group B, Rh-positive blood were ordered and admittedly received. After the laboratory technician crossmatched the bloods and reported them to be compatible, the blood was administered. By that evening the patient's temperature was 106 F., and by the next morning she was jaundiced and had anuria. Within twenty-four hours she was dead.

When the technician was asked for the pretransfusion specimen of the patient's blood, she said she had discarded it. This, of course, should never be done. At our blood bank we retain both the patient's and the donor's blood for a period of two weeks. However, some blood was obtained postmortem from the heart of the patient and some of the donor's blood still remained in the bottle. These two specimens were examined, and the donor's blood was found to be group B, Rh-positive as represented on the bottle, whereas that of the patient was group AB, Rh-negative, which did not correspond with the technician' findings. Yet no evidence of sensitization to the Rh factor could be demonstrated in the postmortem blood specimen. There was no question about the fact that this was a hemolytic post-transfusion reaction, yet it could not have been due to the A-B-O incompatibility since group AB blood contains no anti-A or anti-B. In all likelihood the hemolytic reaction was due to Rh antibodies or some other atypical antibody which had been completely absorbed from the patient's serum as a result of the transfusion of incompatible blood. Lacking the pretransfusion specimen, this could not be established. The possibility that the reaction was due to a very high anti-A titer in the donor's blood exists, although unfortunately no such titration was made.

At any rate the husband of the deceased instituted legal action against the hospital where the transfusion had been administered, against the surgeon who had recommended the transfusion, against the hospital blood bank which had sent the blood, and against its director. At the time of trial a jury was selected and a summary of the case presented by opposing attorneys. The judge then intervened and dismissed the case against two of the defendants, namely, the supplying hospital blood bank and its director. He then asked both attorneys to meet with him in his chambers, and an agreement was reached awarding as damages to the plaintiff $2,500 against the hospital where the blood had been erroneously crossmatched and $2,500 against the surgeon who had merely ordered the transfusion!

Conclusions

With the development of blood banks blood has been made readily and easily available, and the number of transfusions has steadily increased. Simultaneously, the number of medicolegal actions against hospitals, blood bank directors, and clinicians has also increased. Even though the percentage of unfortunate results and litigation is relatively low, the total number is such as to become "news," and such publicity undoubtedly stimulates others to seek redress for real or even imaginary damage. With the recognition of the pitfalls it is at times possible to take appropriate steps to avoid or minimize their occurrence and thereby protect the patient.

Blood transfusion has been used at times on the theory that it can never do harm and might possibly benefit the patient. This idea is wrong because there are dangers inherent in blood transfusion. The clinician must weigh these dangers against the possible benefits and, therefore, must be thoroughly aware of their existence and their legal implications. Blood is an extremely valuable therapeutic agent and is often lifesaving, yet it must be used not when its benefits are highly problematical but only when clinically clearly indicated. The mortality of blood transfusion is as high as that of anesthesia or appendectomy. The responsibility placed upon the blood bank and laboratory personnel carrying out this work is a grave one, and this should be understood by them. Every effort should be made to have fully qualified personnel available at all times. If this is possible only during the usual daytime working hours, wherever possible, transfusions should be ordered so that the experienced day staff carries out the pretransfusion tests. Responsibility for carrying out the necessary tests should not be placed upon the shoulders of an insufficiently trained substitute staff. For emergencies occurring when the regular staff is off duty, other satisfactory provisions should be made. Assistance in problem cases can always be obtained from banks qualified to solve them and to furnish compatible blood. At all times the requirements of the National Institutes of Health must be observed.

Aside from the donor a large number of workers are involved to make available for transfusion a particular bottle of blood. It is most important that the one who administers the blood makes certain that this particular bottle is actually meant for his patient, by reading all labels carefully himself.

Although cases offering difficult problems in compatibility are encountered, most untoward accidents are traceable to failure to carry out elementary blood grouping procedures properly or to human errors, as shown by illustrative cases which occurred at various hospitals. To avoid transfusion accidents great care must be taken in carrying out the procedures associated with the drawing of blood, its storage, the laboratory examinations, and its administration.

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Erythromycin in Infections of Infancy and Childhood

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ERYTHROMYCIN is a new antimicrobial agent which is produced by an organism isolated from a soil sample on the island of Panay in the Philippines. It was identified on the basis of cultural characteristics, morphology, and physiology as a strain of Streptomyces erythreus.

Erythromycin was described first by McGuire and associates[1] who demonstrated that it was active in vitro against many strains of gram-positive bacteria including pneumococci, staphylococci, group A hemolytic streptococci, Corynebacteria, and Clostridia. It also showed activity against gram-negative organisms including Hemophilus pertussis, Neisseria gonorrhea, and some strains of Brucella. Rickettsial infections in eggs and spirochetal infections in mice responded also to erythromycin treatment. The drug did not affect the Coli-Salmonella-dysentery group of organisms. McCowen has shown that pinworms, amebas, and trypanosomes are sensitive to erythromycin in vivo.[2]

Heilman and his associates,[3] Haight and Finland,[4] and Smith and coworkers[5] extended and confirmed the observations of McGuire. These three groups of investigators also did clinical studies and reported the results of treatment in a number of adult patients who suffered from various infections. To date about 920 strains of bacteria have been tested by a plate dilution method for sensitivity to erythromycin. Pneumococci and group A hemolytic streptococci were highly sensitive. They were inhibited by 0.01 to 0.6 microgram per cc. of serum.[3,4] The staphylococci were less sensitive. Among 614 strains tested by Haight and Finland, two thirds were inhibited by 0.39 microgram per cc., and no strain required 1.50 micrograms per cc. According to Welch and his associates,[6] H. influenzae strains were inhibited by 0.6 to 2.5 micrograms per cc., H. pertussis by 1.5 micrograms, N. gonorrhea by 0.5 microgram, and N. meningitidis by 0.2 to 0.7 microgram per cc.

Welch *et al.* demonstrated that erythromycin, which has a bacterial spectrum similar to that of penicillin, is more effective against streptococci and pneumococci than the broad-spectrum antibiotics like Terramycin, aureomycin, and chloramphenicol.

Rantz and Randall,[7] who studied the synergism of various combinations of antibiotics on the inhibition of growth of Staphyloccocus aureus, stated that erythromycin was of greater potential value than any of the other combinations tested.

Erythromycin is readily absorbed from the gastrointestinal tract.[3] Fasting patients absorb erythromycin well, but persons who have taken meals before administration absorb the drug rather poorly.[5] Erythromycin is very sensitive to acids.

Smith and associates[5] demonstrated this fact in six patients with proved pernicious anemia who showed high serum concentration of the drug even when taken after meals. In healthy persons the increased secretion of gastric juice produced by the presence of food in the stomach caused destruction of the drug.

Erythromycin diffuses generally throughout most of the tissues. However, in the presence of noninflamed meninges, the diffusibility into the cerebrospinal fluid is slow.[3] It is excreted in large amounts of urine. In the presence of normal hepatic function erythromycin is concentrated in the liver and excreted in the bile in a biologically active form.

The serum levels of erythromycin[3–5] were determined after oral administration of the drug in dosages ranging between 100 to 1,000 mg. The serum levels after 500 mg. were usually 2 to 4 micrograms per cc. of serum. The serum concentration begins to decline between four to six hours after administration. Patients who received 1 Gm. at six-hour intervals developed

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The drug, Ilotycin (erythromycin, Lilly) was supplied by Eli Lilly Company, Indianapolis, Indiana.

TABLE I.—Summary of Cases Treated

Diagnosis	Number of Cases	Results: Cured	Results: Improved	Results: Not Improved	Number of Cases with Toxic Manifestations
Lobar pneumonia	2	1	1	..	..
Bronchopneumonia	13	10	2	1	3
Acute bronchitis	5	5	..	..	..
Acute tonsillitis	3	3	..	..	..
Otitis media (acute and chronic)	2	2	..	..	..
Acute conjunctivitis	1	1	..	..	..
Vulvovaginitis	1	..	1	..	..
Abscess	1	1	..	..	..
Pyelitis	2	..	..	2	..
Subacute bacterial endocarditis	1	..	..	1	1
TOTAL	31	23	4	4	4

symptoms of gastrointestinal irritation. Haight and Finland reported that cultures of patients with streptococcal pharyngitis who received doses of 100 mg. every three hours remained positive. They became negative when each dose was increased to 250 mg. In the series of cases reported by Smith, all patients who had infections caused by hemolytic streptococcus were cured with a dose of 300 to 500 mg. given at six-hour intervals.

Resistance to erythromycin can develop during treatment as evidenced by one case of subacute bacterial endocarditis reported by Heilman[8] and two cases with staphylococcal endocarditis reported by Haight and Finland.

Since the early investigations in adults were quite encouraging and none such were done in infants and children, additional clinical studies were undertaken. This survey describes the results of a clinical trial of erythromycin in 31 infants and children who were hospitalized on the Pediatrics Ward of St. Clare's Hospital between October, 1952, and April, 1953.

Methods

The drug was given orally to all patients at six-hour intervals. The infants and young children received the powdered form mixed with ice cream or applesauce, and older children received acid-resistant coated tablets of erythromycin. The amount of erythromycin per Kg. of body weight was calculated primarily on the basis of age and type and severity of illness. A daily dosage of 12.5 to 25 mg. per Kg. body weight was given to children who could swallow tablets. Since the pure powder form undergoes destruction by the gastric acids, the minimal dosage given to infants was increased to 50 mg. per Kg. Two patients received 100 mg. per Kg.: Case 28 who had gonoccal vulvovaginitis and Case 31 who had staphylococcal endocarditis.

The patients were divided into age groups as follows:

	Number of Cases
Under 12 months	6
1 to 5 years	15
5 to 13 years	10

Nine cases received 50 mg., 15 received 25 mg., and five cases 12.5 mg. per Kg. of body weight. The total erythromycin dose varied from 1,200 to 8,000 mg. The duration of treatment was from three to fifteen days. Toxic reactions were manifested by vomiting, nausea, and soft stools. They were noticed only in four cases and were of a mild nature. The symptoms usually disappeared when the drug was reduced to half of the original dose. The mild toxic manifestations had no apparent relation to the amount of erythromycin used, nor did these children have any allergic background. The patient who had subacute bacterial endocarditis and received 100 mg. per Kg. vomited only on the first day of treatment; his dose was not reduced but continued for five days without toxic manifestations.

Seven cases received other antibiotics before erythromycin treatment was started. Cases 2, 11, and 22 received 300 units of procaine penicillin one day before admission; Case 19 was treated at home with sulfadiazine without clinical response, and Case 25 received penicillin for two weeks in another institution and also did not show any improvement. Case 31, subacute bacterial endocarditis, was treated with penicillin for four days, receiving a total of 5,000,000 units with no improvement. The treatment was then changed to erythromycin which was given for five days, but the temperatures still remained between 102 and 104 F., and the blood cultures continued to be positive.

TABLE II.—ANALYSIS OF CASES OF PNEUMONIA AND ACUTE BRONCHITIS

Case	Age	Organism	Temperature Normal After Days of Treatment	Duration of Positive Lung Findings	24-Hour Dosage (Mg. per Kg. Weight)	Days of Treatment	Total Dosage (Mg.)	Result
				Pneumonia				
1	12 months	Pneumococcus	2	5	50	6	3,600	Cured
2	14 months	Pneumococcus	2	8	50	9	2,700	Cured
3	14 months	Pneumococcus	1	5	50	6	2,400	Cured
4	17 months	Pneumococcus	2	5	25	5	3,000	Cured
5	3 years	Pneumococcus	2	4	50	4	1,200	Cured
6	3 years	Pneumococcus	4	6	25	6	2,400	Cured
7	$4^{1}/_{2}$ years	Pneumococcus	3	5	25	5	2,000	Cured
8	5 years	Pneumococcus	3	5	25	5	3,000	Cured
9	9 years	Pneumococcus	3	4	125	6	2,800	Cured
10	6 months	H. influenzae	3	5	50	5	2,000	Cured
11	6 months	H. influenzae, Pneumococcus	18	25	50	4	1,200	Not Improved
12	11 months	H. influenzae, Pneumococcus	1	14	50	15	6,000	Cured
13	$8^{1}/_{2}$ years	H. influenzae, Pneumococcus	4	19	25	14	5,600	Improved
14	9 years	H. influenzae, Pneumococcus	1	14	25	8	4,600	Improved
15	13 years	H. influenzae	5	9	25	6	6,200	Improved
				Acute Bronchitis				
16	9 months	Pneumococcus	2	4	50	5	3,000	Cured
17	5 years	Pneumococcus	2	4	25	4	1,800	Cured
18	7 years	Pneumococcus	1	2	25	5	2,220	Cured
19	9 years	Pneumococcus	2	4	125	5	2,100	Cured
20	1 year	H. influenzae	1	10	50	10	4,000	Cured

Results

Of 31 cases, 23 were cured, four were improved (Cases 13, 14, 15, and 28), and four were considered to be failures (Cases 11, 29, 30, and 31).

As illustrated in Table I, the clinical conditions treated in this survey were lobar pneumonia, bronchopneumonia, acute bronchitis, acute tonsillitis, otitis media (acute and chronic), acute conjunctivitis, vulvovaginitis, abscess, pyelitis, and subacute bacterial endocarditis. The organisms which were responsible for these various diseases were isolated from the blood, urine, sputum, larynx, pharynx, and nose and were identified as follows: pneumococcus, Staph. aureus hemolyticus, hemolytic streptococcus group A, H. influenza, H. Koch-Weeks, Neisseria gonorrhea, Escherichia coli, and Aerobacter aerogenes.

PNEUMONIA.—There were 15 cases of pneumonia in this study, of which 13 were diagnosed as bronchopneumonia and two as lobar pneumonia. Nine were caused by pneumococci, two by H. influenzae, and in four others the cultures were mixed. Every patient on admission had roentgenographic evidence of pneumonia.

In all of the nine cases where pneumococcus was found to be the responsible organism, a prompt therapeutic response was obtained (Table II). The mean duration of temperature was 2.4 days, the cough 2.8 days, and the lungs were clinically normal to auscultation and percussion on the fifth day. The average total erythromycin dose per Kg. of body weight was 181 mg. The average duration of treatment was 5.7 days.

In a group of six patients (Cases 10 to 15) where H. influenzae or pneumococcus plus H. influenza were isolated, only two patients were cured (Cases 10 and 12); three patients (Cases 13, 14, and 15) were improved, and one (Case 11) did not show any response after four days of treatment. Case 10 was clinically considered as mild and had a small area of infiltration over the right lower lobe. Case 12, which also was cured, required fifteen days of treatment, and the total erythromycin dose was 6,000 mg. The remaining four cases required other antibiotic treatment after erythromycin was discontinued.

ACUTE BRONCHITIS.—As shown in Table II, all the cases of acute bronchitis were cured. Four cases were caused by pneumococci and one by H. influenzae. The curative dose given in H. influenzae bronchitis (Case 20) was considerably higher than that given in pneumococcal bronchitis.

OTHER INFECTIONS.—All cases of acute tonsillitis, otitis, conjunctivitis, and subcutaneous abscess responded well as shown in Table III. The temperature was normal twenty-four hours after treatment with erythromycin. The total dose

TABLE III.—Analysis of Cases with Other Infections

Case	Age	Diagnosis	Organism	Temperature Normal After Days of Treatment	24-Hour Dosage (Mg. per Kg. Weight)	Days of Treatment	Total Dosage (Mg.)	Result
21	2 years	Acute tonsillitis	Group A hemolytic streptococcus	2	25	4	1,600	Cured
22	9 years	Acute tonsillitis	Staph. aureus hemolyticus	1	12.5	4	1,600	Cured
23	4 years	Acute tonsillitis	H. influenzae	1	50	3	2,400	Cured
24	8 years	Acute otitis media	Pneumococcus	1	12.5	6	2,400	Cured
25	8 years	Chronic otitis media	H. influenzae	Normal on admission	25	6	3,600	Cured
26	14 months	Acute conjunctivitis	H. Koch-Weeks	1	50	4	1,600	Cured
27	9 months	Abscess	Staph. aureus hemolyticus	1	50	3	1,200	Cured
28	2 months	Vulvovaginitis	N. gonorrhea	Normal on admission	100	3	1,200	Improved
29	4 years	Pyelitis	E. coli	Normal on admission	25	10	4,000	Unimproved
30	4$^1/_2$ years	Pyelitis	A. aerogenes	5	50	6	4,000	Unimproved
31	5 years	Subacute bacterial endocarditis	Staph. aureus hemolyticus	No response	100	5	8,000	Unimproved

was lower than in the pneumonia group. In Case 26 with conjunctivitis the purulent discharge ceased in twenty-four hours, although slight conjunctival injection was still present on the third hospital day. Case 13 had an abscess of the buttock which measured 3 cm. in diameter; on the third hospital day no tumor mass was palpable even though incision and drainage had not been performed. In Case 28 of vulvovaginitis, vaginal discharge was not observed on the second day. However, despite a high dose of 100 mg. per Kg., a few gonococci were still present on the third day. After administration of 300,000 units of procaine penicillin, organisms were not found on the following day. In two cases of pyelitis and one case of subacute bacterial endocarditis, a therapeutic effect was not obtained.

Comment

In this group of pediatric patients, erythromycin proved to be a valuable antimicrobial agent in certain infectious diseases. The results are generally the same as those obtained by Heilman *et al.*, Haight and Finland, and Smith and his coworkers in adults. The response to erythromycin administration varied with the etiologic organisms and the disease itself. In conditions like bronchopneumonia, acute bronchitis, acute tonsillitis, otitis media, subcutaneous abscess, and acute conjunctivitis, where the causative agents were found to be pneumococci, Staph. aureus hemolyticus, hemolytic streptococci, or H. Koch-Weeks, good results were obtained. However, in staphylococcal endocarditis, as previously pointed out by Smith and associates, the limitation of the drug became apparent because high serum concentrations are required to reach the organisms. In infections caused by N. gonorrhea and H. influenzae, variable clinical improvement was noticed. Erythromycin seemed to have no bacteriostatic effect on E. coli and A. aerogenes. In recognition of the fact that erythromycin given in powdered form is destroyed by the action of hydrochloric acid in the stomach, it was empirically decided in this study to increase the dose in infants above the usual calculated dose in order to obtain a greater therapeutic effect.

Summary

1. Thirty-one pediatric cases treated with erythromycin are reported.
2. Twenty-three patients were cured; four were improved, and four failed to respond to the drug.
3. The amount of erythromycin administered depended upon the age of the patients, the causative organisms, and the severity and type of the illness.
4. Erythromycin was effective in vivo against gram-positive organisms such as pneumococcus, Staph. aureus hemolyticus, group A hemolytic streptococcus, and also gram-negative H. Koch-Weeks. Variable clinical improvement was obtained in infections caused by N. gonorrhea and H. influenzae. Erythromycin had no bacteriostatic effect on E. coli and A. aerogenes.
5. Toxic manifestations were observed in only four cases and were unremarkable.

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The Problem of Osteitis Pubis

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The high incidence of osteitis pubis following retropubic prostatectomy has deterred many urologists from performing this operation. Differing opinions of writers on this subject indicate that the nature of osteitis pubis is still poorly understood, and no satisfactory explanation has been offered for its relative frequency following retropubic as compared to suprapubic prostatectomy. Therefore, an attempt to reach a better understanding of this disease appears justified.

Etiologic Considerations

Beer,[1] the first to describe the disease, believed it was due to injury to the periosteum of the pubis. The most accepted theory is that infection in the prevesical space involving the periosteum and/or bone is responsible. This theory was challenged by Wheeler's[2] report of a case which at autopsy showed bone atrophy but no osteomyelitis. Wheeler rejected an inflammatory origin of osteitis pubis and pointed out its similarity to Sudeck's bone atrophy. This view was supported by Rosenberg and Vest[3] who explored the retropubic space in three cases and found no evidence of infection nor periostitis. In a previous paper this writer[4] suggested a combination of the inflammatory and trophic theories and concluded that osteitis pubis was produced by a causalgic process originating from chronic inflammation within the pelvis. To support this view, reports were given of three patients who were dramatically relieved of their symptoms following injection of novocaine solution into the anterior prostatic capsule. However, Lavalle and Ham[5] reported three cases in which biopsies from the periosteum and bone of the pubis showed subacute, inflammatory infiltration and chronic inflammation involving the bone, periosteum, and cartilage. Pseudomonas aeruginosa was cultured from the biopsied material in each case and in combination with Bacillus proteus in one case. The authors concluded that osteitis pubis was a true, inflammatory disease of the anterior pelvic girdle and not a sterile necrosis as in Sudeck's atrophy. They explained the long incubation period by the low virulence of the organisms cultured.

Pathology

The inconsistent findings in the bone pathology seem to suggest that either the inflammatory or the trophic theory must be incorrect. However, one should consider the possibility that these contradictions may be only apparent and that our present interpretation of the differences may be incorrect. Infection as an etiologic factor in osteitis pubis cannot be disputed because infection in the prevesical space exists at some time in all cases. However, as pointed out by Rosenberg and Vest and others, there is nothing to indicate a direct spread of the infection to the pubic bone, and the character of the disease differs in many ways from ordinary osteomyelitis. There is evidence that a neurogenic factor is also involved because pain and muscle spasm can be immediately, although not always permanently, relieved by novocaine infiltration of the prevesical space or by sympathetic block or by excision and drainage of the inflammatory focus in the prevesical space.[6] This view is further supported by the observation that pain and disability do not parallel the x-ray findings in the bone.

Other unusual features of osteitis pubis are the time lag of at least ten to fourteen days between the prevesical infection and the onset of osteitis and the dramatic response of the disease to ACTH and cortisone. These features suggest that an "allergic" mechanism may also be involved. Consideration of these data suggests the following as a possible sequence of events in the pathogenesis of osteitis pubis: Bacteria enter the prevesical space during or after operation or by spread of an inflammation in the vicinity. Drainage from the prevesical space is poor, and chronic inflammation develops. Local and systemic antibodies are formed as a response of the host to the invading organisms. When the circulating antibodies have reached sufficient concentration, the prevesical inflammation is suddenly activated (Arthus phenomenon). A similar time lag is observed in such diseases as glomerulonephritis and rheumatoid arthritis. This is regarded as characteristic of an allergic mechanism.

The inflamed area in the prevesical space then becomes a center of nerve irritation causing local pain, adductor spasm, and trophic changes in the affected parts. The trophic changes in the bone then predispose to secondary invasion of bacteria which, in turn, cause inflammatory changes within the bone. Bacteria could easily spread from the prevesical space to the bone through the communications between Santorini's plexus and the veins in the pelvic bone. That trophic changes may favor bacterial invasion was shown by Speransky.[7] He was able to prove that tissues affected by a neurodystrophic process may offer little resistance to organisms of low virulence, while the same organisms may be readily destroyed by healthy tissues of the same animal. Since osteitis pubis is a self-limited disease, there is reason to assume that the host eventually overcomes the invading organisms. However, local and systemic hypersensitivity will persist for some time after the organisms have been destroyed, and the allergic phenomena can be expected to continue as long as appreciable amounts of antibodies are present in the circulation. This explanation is in agreement with the fact that osteitis responds poorly to antibacterial therapy and responds well to ACTH and cortisone.

To sum up, the hypothesis is presented that osteitis pubis is caused by a combination of inflammatory-allergic and neurotrophic factors. Predomination of the inflammatory-allergic factor could account for the inflammatory changes in the bone as observed by Lavalle and Ham. The bone atrophy in Wheeler's case may have been due mainly to the trophic influence of the causalgic process, while the inflammatory factor was relatively unimportant, or it may have been the end result of a "burned-out" inflammatory process.

A point of special interest is the question of why osteitis pubis occurs so much more frequently after retropubic than after suprapubic prostatectomy. A clue was suggested by the following observations: The writer previously shortened the prevesical drain on the third postoperative day. On the fifth day there was usually scant drainage, and the prevesical drain and urethral catheter were removed. It was then noted that in many of these patients the drainage from the abdominal wound increased. Drainage was greater and more frequent in patients whose prostatic capsule had been sutured in a single layer than in those whose capsule had been sutured in two layers. Four patients were given indigo carmine intravenously on the fifth postoperative day soon after removal of the catheter. In three of them the dye later appeared on the dressings. This indicated that, five days after the operation, the capsular incision was not always completely healed so that urine (usually infected) may be forced into the prevesical space during micturition. Since drainage from this space is poor, chronic inflammation and later osteitis could develop. This mechanism probably explains the relative frequency of osteitis following retropubic prostatectomy. Bladder drainage is usually maintained longer after suprapubic prostatectomy thus allowing the prevesical space to seal off by the time the patient begins to void spontaneously.

Another example of this mechanism was in a female patient who underwent a Marshall-Marchetti operation for urinary incontinence. Postoperatively she developed urinary infection, and for several days small amounts of urine passed through the abdominal incision. Apparently the urethra had been pierced while suturing the vagina to the symphysis. The urinary infection responded promptly to antibiotics, but the patient developed osteitis pubis.

Prevention and Treatment

Contamination of the prevesical space cannot always be avoided because many patients have infected urine at the time of operation. However, osteitis pubis should be no more frequent following retropubic prostatectomy than after suprapubic operations if precautions are taken to prevent an encapsulated infection in the prevesical space. These precautions include sufficiently long drainage of the prevesical space, suturing the prostatic capsule in two layers, and leaving the urethral catheter in place until one can be reasonably sure that the capsular incision is leakproof. In the average case the prevesical drain can be removed after five days, the catheter after eight days. With the indigo carmine test no leak could be demonstrated in three patients in whom the catheter was removed eight days following surgery. If there is any doubt as to the condition of the capsular incision, the catheter is left in place a few days longer. In the writer's first 35 retropubic prostatectomies, before adoption of these precautions, there were two instances of osteitis pubis. In the 35 cases after adoption of the precautions there was no case of osteitis. This is suggestive rather than conclusive evidence since the series is small.

Theoretically, treatment of osteitis pubis should be adjusted to the stage of the disease. During the acute phase, as long as there is indication of the presence of virulent bacteria, antibacterial therapy appears to be logical, even though it may not appreciably relieve the pain. Excision and drainage of the inflammatory focus have been recommended by Cibert.[6] ACTH and cortisone during this stage might tend to spread the infection by interfering with the defense mechanism of the host. Therefore, simultaneous use of antibiotics appears advisable. The best results from hormone treatment should be expected during the chronic or "allergic" phase.

Of the seven cases of osteitis observed personally, cortisone was used in only one, the previously mentioned patient who developed the disease following an incontinence operation. The drug was used for two weeks during the chronic phase, and symptomatic relief was prompt, complete, and lasting. All other patients were seen before cortisone was available. One case following suprapubic* and two following retropubic prostatectomy* were permanently relieved by novocaine infiltration of the anterior prostatic capsule (and presumably also of the prevesical space). All three were in the chronic phase. Two cases followed radical retropubic prostatectomy. Of these one* improved after streptomycin sufficiently to be discharged from the hospital, but one year elapsed before he became entirely symptom-free. The other patient developed a stricture of the urethrovesical anastomosis which was dilated six weeks after the operation. The sound could be passed into the bladder only with difficulty, and the patient complained of pain after the procedure. A prevesical abscess formed which drained spontaneously through the previous abdominal incision. Two weeks later the patient developed osteitis pubis. The prevesical space was infiltrated with novocaine solution, but while the disease was still in the acute phase. Pain relief lasted for only two hours as could have been expected. The seventh case was that of a woman in her thirties who had had a hysterectomy two months previously. She developed pubic tenderness and adductor spasm, but x-rays showed no destruction of the pubic bone. Novocaine infiltration of the anterior wall of the urethra was followed by partial symptomatic relief. One week later she was completely relieved by sympathetic block.

Little benefit has been noted from vitamin medication, curare, and diathermy. X-ray therapy was not employed in these cases.

Summary

1. An attempt has been made to clarify the nature of osteitis pubis by trying to reconcile the conflicting views and data found in the literature.

2. It has been suggested that sufficiently prolonged prevesical and bladder drainage and suturing of the prostatic capsule in two layers may reduce the incidence of osteitis pubis following retropubic prostatectomy.

3. The principles of treatment of osteitis pubis have been outlined.

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* These cases were reported in a previous publication.[4]

Treatment of Trigger Mechanisms in Gastrointestinal Disease

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MANY patients with gastrointestinal disturbances fail to do well despite prolonged treatment, surgical as well as medical. A method of treatment is described in this paper which gives excellent results in such patients. The treatment is directed at small, hypersensitive foci, called trigger areas, which are located in the musculofascial tissue of the lower thoracic area of the back and of the abdomen.

The myofascial trigger area presents the following characteristics:

1. It is a small ($^1/_4$ to 1 inch in diameter), hypersensitive area located in the musculofascial tissue from which impulses bombard the central nervous system. A focus of irritation is set up within the nervous system from which symptoms arise.

2. Symptoms, particularly pain, are set off whenever the trigger area is irritated, as by pressure, needling, extreme heat or cold. Signs of autonomic nervous system irritation such as vasoconstriction may be present in the reference zone (the area in which symptoms are felt).

3. The pathway of the reference of pain does not follow any peripheral nerve. The pattern of the reference zone is constant for specific trigger areas in both somatic and visceral pain. A knowledge of this pattern can be used to locate the corresponding trigger areas.

4. Trigger areas may form at a distance from the original source (as in the formation of trigger areas around the shoulder in myocardial infarction) and cause distinct local disturbances, such as shoulder pain, described in 1936 by Edeiken and Wolferth.[1] (In several hundred patients with duodenal ulcer examined by the author tender areas in the muscles around the shoulder were invariably found. The not infrequent development of shoulder pain in these patients, just as in patients with myocardial infarction, may be explained by this finding.)

5. Common etiologic factors in the formation of trigger areas are trauma, skeletal infections and disease, visceral disease such as peptic ulcer and myocardial infarction, visceral infection such as dysentery and ulcerative colitis, and visceral neoplasm.

6. Trigger areas persist long after the original causative factor has disappeared and may cause symptoms which simulate or exceed the original condition. These symptoms are now functional, depending on the activity of the trigger mechanisms.

7. When the etiologic factor is one that is of continuous activity (appendicitis, neoplasm), treatment of the trigger area will be completely ineffectual.

8. Certain factors will activate existing trigger areas, the most important of which are psychic and emotional stress. Acute and chronic infections, fatigue, chilling, and trauma cause increased activity on the part of trigger mechanisms with increase or flareup of symptoms.

In a comprehensive review, based upon results of treatment in over 1,000 patients, Travell and Rinzler[2] outlined the location of commonly found trigger areas and their zones of reference. Treatment consisted of procaine infiltration of the trigger area and of ethyl chloride spray.

Kellgren[3] demonstrated a definite radiation of pain when an irritable focus was created in the muscles or ligaments around the thoracic spine by the injection of 0.3 cc. of a 6 per cent solution of saline. Lewis and Kellgren[4] were able by this procedure to produce consistently the signs and symptoms of such clinical conditions as gallbladder or renal colic, even with retraction of the testicle in the latter. The activity of these artificially created irritable foci simulates the activity of the trigger area in most respects, except that the created focus lasts but a short time, while the trigger area may persist indefinitely.

Leriche,[5] Lewis,[6,7] and Kellgren[8] reported the presence of trigger areas in musculofascial pain and especially emphasized the importance of the trigger area in prolonging "pain syndromes."

Steindler and Luck[9] described localized sources of low back pain found on palpation in the muscles of the lower back. Contact with a hypodermic needle aggravated the radiated pain, and the injection of 5 to 10 cc. of a 1 per cent solution of procaine suppressed both local tenderness and radiation of pain. Steindler[10] also demonstrated sharply defined "pressure points" in traumatic injuries, which were constant for similar injuries and responded similarly to injection.

Travell and her coworkers[2,11–18] in numerous papers have demonstrated the presence of specific trigger areas in a variety of painful conditions and have reported excellent results from treatment of such trigger areas. Gorrell[19] reported comparably good results in a large series of similar patients, emphasizing the importance of the trigger area.

Trigger areas may be instrumental in causing disturbances which simulate visceral disease and may also be factors in perpetuating symptoms of organic disease. Trinca[20] demonstrated that the barium-filled stomach could be stimulated to active peristalsis when the skin of the abdomen was irritated; also that a previously irritated area of skin on the abdominal wall would again become inflamed if the stomach were stimulated by the subject drinking a cup of tea.

Travell and her coworkers[2,21–24] pointed out the formation of trigger areas in the muscles of the chest wall in myocardial infarction and in coronary disease. Treatment of such areas gave beneficial results. Rinzler[25,26] emphasized the significance of the trigger area in chest pain, whether organic or nonorganic in origin.

Weiss and Davis[27] injected 2 per cent novocaine into tender areas present in the skin in such conditions as carcinoma of the esophagus, pneumonia, gallbladder disease, and renal colic and obtained temporary relief of otherwise intractable pain of visceral disease, another example of the interrelationship of the viscera and soma in painful disturbances.

Harman and Young[28] quote Dr. Emanuel Libman as having stated a number of years previously that many gastrointestinal symptoms were due to "neuralgia of the abdominal wall." These authors treated painful abdominal disturbances by the injection of a few minims of 0.5 to 1 per cent procaine solution into tender areas in the muscles of the abdominal wall and of the lower thoracic spine. Patients with a diagnosis of chronic appendicitis, chronic cholecystitis, gastric ulcer, renal colic, and nonspecific abdominal conditions were completely relieved after other methods had failed.

As far back as 1935, Klinger[29] noted that many serious functional disturbances in the abdominal organs were caused by "myalgia" of the abdominal muscles. He was successful in relieving these by novocaine infiltration into tender areas within those muscles.

Gutstein[30,31] treated a large number of patients with various functional gastrointestinal disturbances, obtaining consistently good results by injecting tender areas in the abdominal muscles. These patients had complaints of long duration and had shown little response to previous therapy. He noted that trigger areas may be partially responsible for symptoms in patients with such organic disease as peptic ulcer, chronic cholecystitis, and ulcerative colitis.

Others[32–35] reported similar results in patients with severe and intractable abdominal pain, as well as in conditions suggesting renal colic and angina pectoris, by injecting tender areas in the muscles of the abdomen, chest wall, and thoracic region of the back.

Ussher[36] noted that acute and prolonged abdominal symptoms such as occur in gallbladder colic, appendicitis, renal colic, and cardiospasm are related to myositis in the mid-dorsal area and that treatment of the myositis relieved these symptoms. He named this symptom complex the "viscerospinal syndrome." This relationship was also noted by Patton and Williamson,[37] who stressed its importance in the differential diagnosis of many forms of visceral disease, emphasizing that fibrositis is a condition not to be overlooked when symptoms of visceral disease are present.

Trigger areas may exert an influence upon the sympathetic nervous system, and vascular spasm may result. Travell, Berry, and Bigelow[38] showed by means of a tambour that the amplitude of pulsation in the temporal artery was markedly decreased when pressure was exerted on trigger areas in the muscles of the neck.

While most workers have used procaine infiltration as the treatment of trigger areas, ethyl chloride used as a local spray has also been found beneficial. The author has noted relief in severe abdominal pain of functional or organic origin (gallbladder colic, duodenal ulcer, dysmenorrhea), when the injection of morphine or other narcotics would ordinarily have been necessary. Travell[39] has mentioned similar results.

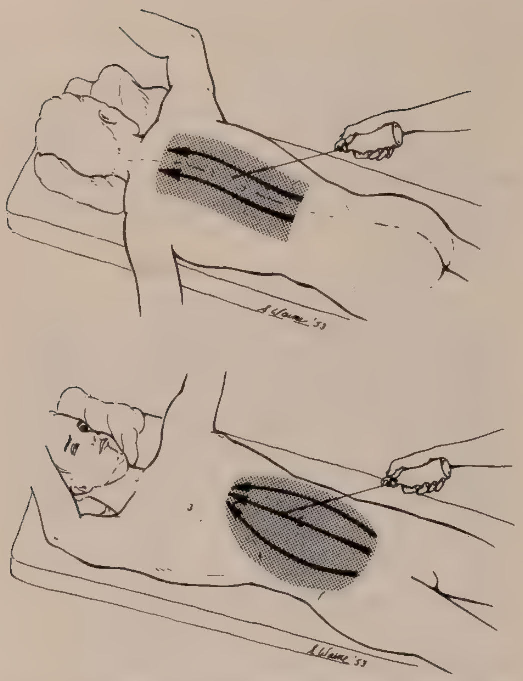
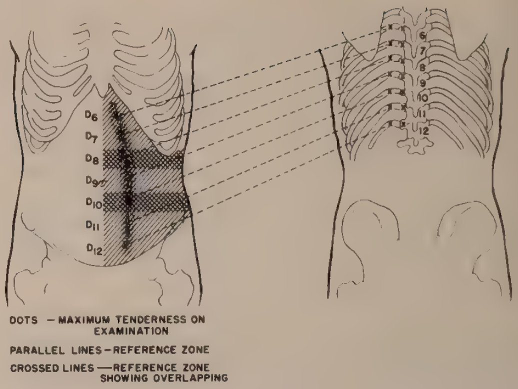


FIG. 1. Technic of ethyl chloride therapy to back (*top*) and abdomen (*bottom*).

Kraus[40] described the use of ethyl chloride as a spray for relief of pain in 1935. Travell[41] in a review of this subject noted that 13 other investigators besides herself and her coworkers also confirmed the value of ethyl chloride spray in the relief of pain of both visceral and somatic origin.

Ethyl chloride is used as a fine spray directed to the site of the trigger areas at an acute angle, the container being held 12 to 18 inches from the patient and the spray repeatedly moved slowly in one direction over this zone. This is continued until relief is obtained, care being taken not to frost the skin. If there is no relief within five minutes, the procedure may be discontinued. In patients with abdominal pain the spray is directed first at the thoracic portion of the back from below upward, starting at the midline and covering an area about 6 inches on each side of the spine (Fig. 1). The abdomen is then sprayed from below upward.

Ross,[42] Head,[43] and Mackenzie[44] held that symptoms of visceral disease may originate at a distance from their causation. They felt that painful visceral disturbances give off impulses which set up an irritable focus in the spinal cord. Excess impulses extend to peripheral nerve fibers, pain being referred to the periphery, the area from which such stimuli are ordinarily initiated.


D6
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DOTS — MAXIMUM TENDERNESS ON EXAMINATION
PARALLEL LINES — REFERENCE ZONE
CROSSED LINES — REFERENCE ZONE SHOWING OVERLAPPING

FIG. 2. Thoracic trigger areas and their zones of reference.

The trigger area is in itself an irritable focus, sending excess impulses to the nervous system and there setting up or perpetuating an irritable focus. In turn pain is felt in a "zone of reference," often at a distance from the trigger area. In time secondary trigger areas may form within this zone and also play a part in this vicious circle, occasionally assuming a major role. In patients with abdominal disturbances trigger areas in the dorsal region show many characteristics suggesting that they are primary and that those in the abdominal region are secondary (Fig. 2).

Head[45] described specific areas of referral in the skin from the various spinal cord segments. These areas are commonly called "head zones."

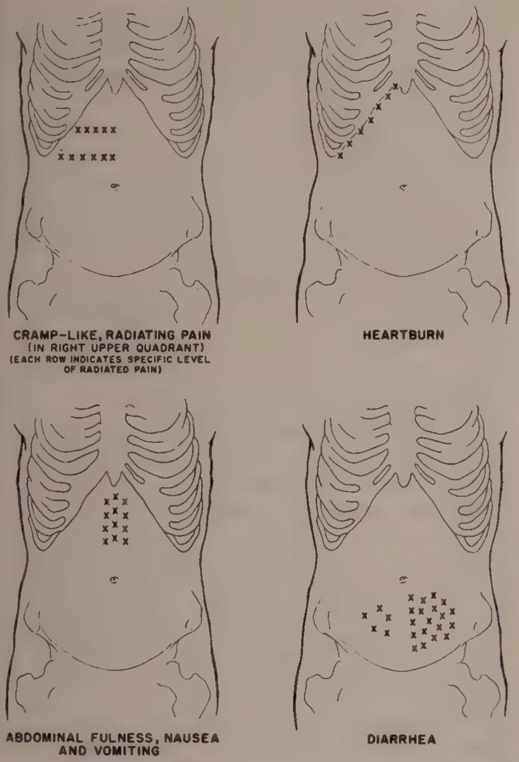
Method and Material

In hundreds of patients examined by the author over a period of several years, a consistent pattern of trigger areas was found in association with gastrointestinal disturbances. Treatment given to many patients confirmed the relationship of these areas to specific symptoms. In these patients trigger areas are present in the myofascial tissue of the lower thoracic back and of the abdomen.

Trigger areas in the dorsal region associated with abdominal pain and tenderness show the following distribution:

Abdominal Pain	Thoracic Segment
Upper	6th, 7th, 8th
Mid	8th, 9th, 10th
Lower	10th, 11th, 12th

The trigger areas in each segment are present in groups of two. The first group is approximately



CRAMP-LIKE, RADIATING PAIN (IN RIGHT UPPER QUADRANT) (EACH ROW INDICATES SPECIFIC LEVEL OF RADIATED PAIN)

HEARTBURN

ABDOMINAL FULNESS, NAUSEA AND VOMITING

DIARRHEA

Fig. 3. Patterns of trigger areas in abdominal muscles.

$\frac{1}{2}$ inch from the midline in the musculotendinous tissue over the transverse process of the vertebra and is about 1 to $1\frac{1}{2}$ inches beneath the skin. The second group is $2\frac{1}{2}$ to $3\frac{1}{2}$ inches from the midline (depending on the size of the individual) in the musculotendinous tissue over the corresponding rib and is $\frac{1}{2}$ to 1 inch beneath the surface.

The trigger area varies in size from $\frac{1}{2}$ to 1 inch in diameter. It is located by means of deep pressure which elicits tenderness that becomes increasingly sharp and severe directly over the area. The needle is inserted here, and when it comes in contact with the trigger area, the patient feels severe pain which disappears as soon as a few minims of the solution are injected. A $1\frac{1}{2}$-inch, 24-gauge needle is used, and 3 to 5 cc. of a 0.25 per cent solution of procaine hydrochloride in normal saline are injected with constant needling until no further pain is elicited.

Trigger areas present in the abdominal muscles form patterns which are the same for similar symptoms as follows (Fig. 3):

1. Localized pain: Trigger areas are present directly over the region of the pain.

2. Cramplike, radiating pain: Trigger areas are present in a linear formation laterally from the midline, corresponding to the radiation of the pain.

TABLE I.—Analysis of Diseases in 56 Patients

Diagnosis	Males	Females	Total
Organic disease			
Duodenal ulcer	18	9	27
Cholelithiasis	0	2	2
Diverticuli	1	1	2
Ulcerative colitis	1	0	1
Gastric ulcer	1	0	1
Total	21	12	33
Functional disease	9	14	23
Total	30	26	56

3. Heartburn: Trigger areas are present along the right costal margin from the xiphoid process to the angle of the ribs at the insertion of the abdominal muscles.

4. Abdominal fullness, nausea, and vomiting: Trigger areas are present in the upper abdomen along the midline.

5. Diarrhea: Trigger areas are present in the lower abdomen bilaterally but are more numerous on the left.

The abdominal trigger areas are injected in the same manner as are those in the thoracic area. A $\frac{3}{4}$ to $1\frac{1}{2}$-inch, 24-gauge needle is used, depending upon the thickness of the abdominal wall, and about 2 to 3 cc. of 0.25 per cent Pontocaine (tetracaine hydrochloride) in normal saline are injected.

One or two trigger areas may be injected at one time or as many as seven or eight, depending upon the tolerance of the patient. Patients have experienced relief when only a few abdominal trigger areas were treated and also when only a few dorsal trigger areas were treated. In many patients, however, more areas had to be injected, both dorsal and abdominal, before complete relief was obtained.

The dorsal areas are treated first. The immediate effect is a relaxation of muscle tenseness with diminution or disappearance of deep tenderness in the corresponding abdominal "head zones." Pain may be considerably relieved or abolished. Abdominal trigger areas may, however, retain considerable tenderness after the dorsal areas have been treated, and these are treated in turn.

Fifty-six patients with gastrointestinal disturbances are presented, and treatment directed at these trigger areas is described (Tables I and II). Organic disease was present in 59 per cent and functional disturbances in 41 per cent.

Table II.—Symptoms*

Symptoms	Organic Disease	Functional Disease	Total
Pain	28	12	40
Heartburn	4	2	6
Pressure and bloating	3	11	14
Vomiting	2	4	6
Diarrhea	1	1	2
Total	38	30	68

* Only the severe, outstanding symptoms are mentioned. Usually the patient had one, occasionally two such symptoms. Many other symptoms were present, but these were of relatively minor importance.

Table III.—Results of Treatment

	Results*		
	Satisfactory	Unsatisfactory	Failure
Organic disease	29	4	1
Functional disease	16	3	3
Total	45 (80%)	7 (12%)	4 (8%)

* Results were graded as follows: (1) Satisfactory—complete relief of gastrointestinal symptoms. (2) Unsatisfactory—improvement or even disappearance of the major presenting complaints but persistence of a variety of gastrointestinal symptoms, old or newly formed. The general picture is that of improvement, but because there is not complete relief, the results must be considered unsatisfactory. (3) Failure—no improvement.

Treatment was started only after a definite diagnosis had been established. A complete physical examination, x-ray study of the gastrointestinal tract, sigmoidoscopy, stool and blood studies were done routinely. In assessing the results no attention was paid to any possible percentage of improvement; either the patient was well and needed no further treatment or medication, or the result was considered unsatisfactory. Satisfactory results were obtained in 80 per cent, improvement in 12 per cent, and failure in 8 per cent (Table III).

Each patient had symptoms of considerable severity, and long-continued treatment had previously failed. No special medication or diet were prescribed. In the course of several thousand injections no complications or ill effects were noted.

Case Reports

The following case reports are presented in brief form, as illustrations.

Case 1.—A. A., a twenty-five-year-old housewife, suffered from continuous, severe, boring pain in the epigastrium of eighteen months duration. She had been treated by diet, alkali, and medication without relief. For the past twelve months she had been taking 12 to 15 tablets of Demerol daily. On numerous occasions she was admitted to the hospital as an emergency patient because of concomitant attacks of vomiting during which no medication could be taken by mouth. She was being treated for a duodenal ulcer, and surgery had been advised. X-ray study of the gastrointestinal tract showed a duodenal ulcer.

On February 17, 1951, and five days later, single trigger areas in the right upper quadrant of the abdomen were injected and ethyl chloride spray therapy given. The patient experienced complete relief and has since remained symptom-free.

Comment.—The patient was treated for a period of eighteen months for severe and incapacitating pain and attacks of vomiting. The illness had become progressively worse and had not responded to treatment. Through therapy directed at specific trigger areas, this patient felt well in a matter of days. No further Demerol was required despite the large amounts previously consumed.

Case 2.—S. S. was a sixty-seven-year-old housewife whose chief complaint was frequent, severe, burning eructations of six months duration. At first the symptoms had occurred immediately after meals, but they became progressively more frequent. X-ray studies at a hospital in Newburgh, two months before the patient was seen by the author, showed a large diverticulum, the size of a large orange, at the lower third of the esophagus. Treatment had been ineffectual, and despite the age and poor condition of the patient surgery was advised.

Over a period of four weeks six trigger areas situated in both right and left upper abdominal quadrants were treated. The symptoms were completely cleared up. Contact with the patient was maintained for several months during which time she remained symptom-free.

Comment.—Surgical removal of the diverticulum would be the treatment indicated in this type of case. The patient was a poor surgical risk, and the treatment of trigger areas was a valuable alternative method of providing relief.

Case 3.—B. B. was a fifty-six-year-old housewife who had suffered from severe abdominal pain and vomiting for more than ten years. During this period the patient was never symptom-free, although the symptoms varied from moderately severe to excruciating. No form of medical treatment had been successful. The following is a list of the major abdominal operations performed during this period as described by the patient. They were performed at the Roosevelt Hospital in New York City: "1943, abdominal operation for infection in the pelvic organs; 1944, cholecystectomy; 1945, operation again on gallbladder; 1946, operation for adhesions; 1949, abdominal operation with tube left in abdomen for one hundred and five days; 1950, operation for adhesions and repair of abdominal hernia." In 1952 she was advised to have a subtotal gastrectomy. In 1950 the patient was hospitalized at the Lahey Clinic in Boston for one month and given intensive treatment for a duodenal ulcer. She felt fairly well for the first time during her illness, but by the end of two months the symptoms recurred and were no longer influenced by the previous regime. At the time she was seen, she required large doses of codeine, as well as morphine by injection, for relief.

An x-ray study of the gastrointestinal tract in October, 1952, showed a duodenal ulcer. Stool examination revealed occult blood.

During three visits a total of eight dorsal trigger areas were treated. After the first group was treated, the patient no longer experienced pain, and after the third visit the vomiting stopped. The patient has since felt completely well and has gained considerable weight. No medication of any sort was prescribed, and the patient was on no particular dietary regime.

Comment.—Symptoms had persisted despite intensive treatment, surgical as well as medical, for a period of more than ten years. Rapid relief resulted from the treatment of trigger areas.

CASE 4.—R. B. was a twenty-year-old college student who had been completely incapacitated since he developed ulcerative colitis four months ago. He was hospitalized at the Coney Island Hospital two months before the present admission for an acute flareup of ulcerative colitis with hyperpyrexia. This responded to treatment with antibiotics to the extent that he became afebrile. He was admitted two months later because of bloody diarrhea and severe abdominal pain. At this admission the present method of treatment was instituted. Since the onset of the illness, he had lost over 80 pounds, never had formed stools, and had continuous abdominal distress. He had been under medical supervision which included psychotherapy and various forms of diet and medication. Sigmoidoscopy performed shortly before the present admission showed the presence of ulceration. Before any treatment of trigger areas was started, all medication was discontinued, and the patient was placed on the regular hospital diet.

On November 23, one week after onset of this therapy, the patient noted that the stools were formed; the abdominal distress diminished, and the appetite considerably improved. On December 20, when the patient was last treated, he felt well, had fully formed stools, and had gained 28 pounds.

A total of 33 trigger areas mostly in the left lower abdomen were injected. The patient was last reported, three months after having left the hospital, as being symptom-free.

Comment.—The patient was not in the acute invasive stage of ulcerative colitis with hyperpyrexia and other findings of bacterial invasion, as on his previous hospital admission. Treatment of this phase of ulcerative colitis should be directed toward combating the bacterial infection.

He had been going downhill steadily, and the first sign of improvement started with the treatment of specific trigger areas, an improvement that progressed rapidly until the patient felt entirely well.

CASE 5.—F. G. was a forty-five-year-old housewife. Severe pain in the lower abdomen, mostly on the left, started eleven years ago following a prolonged and difficult labor. The pain was not influenced by diet or medication, nor by bowel movements which were normal. An appendectomy in 1942, several months after the onset, failed to provide relief. In 1945 a cholecystectomy and in 1950 a hysterectomy were performed with no relief of the pain. A gastrointestinal series and barium enema shortly before treatment was started showed no evidence of organic disease.

Starting January 31, 1952, and once weekly till February 21, eight trigger areas in the left lower posterior thoracic area and one area in the left lower abdominal quadrant were injected. Improvement started immediately, and toward the end of treatment the patient became completely symptom-free for the first time since the onset of her illness.

Comment.—Despite the absence of demonstrable organic disease, this patient had symptoms which persisted unabated for eleven years. Three major surgical operations had no appreciable effect upon her complaints. The present treatment directed only at specific trigger areas gave immediate relief.

The case reports are included as examples of results obtained by utilizing the knowledge of trigger mechanisms. There is a specificity in this mechanism which makes such results understandable, and it is not inconceivable that with further study even better results may be obtained. This method was successfully employed in gastrointestinal disturbances as long ago as eighteen years, and since then many other workers have recognized the importance of trigger areas in such conditions. It is probable that this method has not received the frequent application that it warrants because the specific location of the offending areas has not been thoroughly described. In this paper such a description is given.

Conclusion

1. The subject of myofascial trigger areas is discussed and their treatment described.
2. The location of specific trigger areas is de-

scribed as they occur in patients with gastrointestinal disturbances.

3. A group of 56 patients is presented, together with the results of such treatment which gave 80 per cent successful results where previous therapy had failed.

4. Knowledge of such trigger areas is shown to be an aid in diagnosis as well as treatment.

930 OCEAN AVENUE

The author wishes to acknowledge the assistance of Stanley R. Waine who prepared the illustrations.

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Medical Society of the State of New York

ANNUAL MEETING

May 10 to 14, 1954

Hotel Statler ***New York City***

Endocrines and Emotions

WILFRED DORFMAN, M.D., BROOKLYN, NEW YORK

The rapid growth of knowledge in the many specialized fields of medicine has created many problems in its wake, not the least of which is the need for correlation of seemingly diverse disciplines of thought. This is especially true in the realm of "psychosomatic" problems where there is still an acute need for a common meeting ground for the psychiatrist and the medical man. Although the past decade has witnessed a widened appreciation of the value of a "total" or "comprehensive" approach to the patient and his dilemmas, the gaps between the psyche and the soma are still quite wide. Perhaps some of this distance can be lessened by occasional attempts to bring some of the facts together. To illustrate the difficulties, let us start with a few typical enigmas:

1. Does the onset of hyperthyroidism produce emotional difficulties solely through the action of the thyroid hormone, or does the toxic state bring forth latent personality defects? Are there specific personality factors in the hyperthyroid profile? Is psychic trauma by itself an adequate etiologic agent?

2. Hypothyroid individuals are usually apathetic and dull, exhibiting a high degree of calmness and emotional imperturbability. On occasion, however, the hypothyroid state can present as an acute psychosis. Is this solely the result of thyroid deficiency, or is it too somehow related to the premyxedema personality? Can one always expect complete reversibility of the psychosis by correction of the metabolic defect? And what of the possibility of precipitation of psychosis in some myxedematous individuals by the use of thyroid extract?

3. Patients receiving ACTH or cortisone therapy frequently show severe emotional reactions. How much of this is due to the toxic effects of these hormones? How much to potassium depletion? How much is dependent upon the emotional vulnerability of the particular individual?

4. Obesity is no longer considered to be a primary glandular problem in the best of endocrine circles and is now believed to be a "psychosomatic" disease, in which overeating is frequently correlated with dissatisfaction, boredom, frustration, depression, or anxiety. This still does not explain why obese individuals eat under stress, while stresses in the lean apparently produce anorexia. What accounts for these discrepancies?

5. Diabetes mellitus is often discovered accidentally in an individual who is particularly sensitized by heredity and obesity. Is it simply and solely the sudden acute expression of a disordered carbohydrate metabolism, or is it, too, somehow related to acute and chronic stress? Is recurrent diabetic coma merely a recurrent break in physiologic mechanisms, or are there clues which implicate the psyche?

In attempting to seek the answers to these and similar dilemmas, it might be best to turn to the hypothalamus and review some of the neuroendocrine relationships that have been definitely established.

Hypothalamus and Neuroendocrine Relationships

The hypothalamus regulates the functional activity of the pituitary gland, and the latter through its tropic hormones affects the various target glands (thyroid, gonads, adrenals). Emotions and feeling states thus show their effects in endocrine function and dysfunction. Stress, no matter if it be actual or symbolic, domestic or foreign, an errant spouse or a chained streptococcus, calls forth responses which permeate both the nervous and endocrine systems. Lesions placed in certain areas of the hypothalamus in animals[1] can thus produce genital atrophy. Electrical stimulation of the hypothalamus in the region of the tuber cinereum produces ovulation in rabbits but not after the infundibular stalk, which connects the posterior pituitary to the brain, is cut.[2] Chemical stimuli, such as Picrotoxin and Metrazol, also produce ovulation in normal animals but not after the infundibular stalk is cut. The failure to produce effects with a cut stalk implies the need for neural connections to the pituitary, but Long[3] has shown that the injection of epinephrine into the rat causes a decrease in the ascorbic acid and cholesterol content of the adrenal cortex to an extent found after the administration of ACTH. Epinephrine was ineffective when preceded by hypophysectomy, indicating that the pathway of action was not necessarily neural but could also be humoral.

The hypothalamus plays a vital role in the pathogenesis of obesity, as evidenced by the experimental production of this state by hypothalamic lesions in rats.[4] The animals developed obesity but only when they were permitted to overeat, once again demonstrating the inextricable role of caloric intake. It was also shown that these rats showed an abnormally large increase in fatty acids following the administration of glucose, indicating an abnormally rapid conversion of carbohydrate to fat. The authors felt that this was the result of feeding habits rather than the hypothalamic lesion since normal rats, trained to eat their day's ration in three hours or less, showed the same unusual increase in respiratory quotient in response to the administration of glucose. Nevertheless, Gildea and Man[5] have reported abnormally high blood levels of fatty acids and cholesterol in patients with clinical evidence of hypothalamic dysfunction.

In the treatment of obesity the recognition of these hypothalamic influences and physiologic mechanisms must be accompanied by a careful appraisal of the patient's personality and emotional needs. Food is a sedative and can temporarily at least relieve anxiety and tension. Weight reduction can often proceed smoothly and efficiently when the doctor is able to give sufficient emotional support during the period of food deprivation.[6,7] In many instances, however, dieting is accompanied by severe emotional reactions which may require a drastic modification of reduction goals. Some cannot tolerate a too intensive denial of the emotional sustenance which food, and only food, is able to supply. Obesity may thus be a protective wall against a more serious mental disturbance,[8] the penetration of which may be fraught with danger.

The use of anorexigenic drugs, such as Dexedrine and amphetamine, have been helpful in correcting this abnormal need for food through their hypothalamic action of lifting the mood of depression which so often accompanies this abnormal need for food. Strangely enough, the use of these medications in depressed individuals who are lean frequently corrects their anorexia. This is not incomprehensible when one realizes that anorexia nervosa has many characteristics which suggest that it is the opposite of obesity.[9] In the lean individual the pattern of stress leading to anorexia has apparently been laid down quite early in life, just as the pattern of stress leading to food has been the case in the obese. So the lean grow leaner, and the fat grow fatter, unless the pattern can be changed through reeducation and psychotherapy.

The Pituitary Gland

Passing from the hypothalamus to the pituitary gland may be no great feat anatomically, but it leaves quite an open gap academically in that one leaves the field of neuropsychiatry to enter endocrinology. Happily, the iron curtain that separates the two has finally been pierced so that intercommunication between these areas has been established, despite the difficulties produced by specialization and inherent language difficulties.

Hypofunction of the pituitary (panhypopituitarism, Simmond's disease, hypophyseal cachexia) is due to a partial or complete destruction of the anterior lobe of the gland. It is most commonly due to infarction following postpartum hemorrhage and is then labeled as Sheehan's disease. Other causes are syphilis, tuberculosis, cystic degeneration, and tumor. It may exist in varying degrees, dependent upon the amount of destruction of the gland. Gonadal effects include menstrual disturbances and the loss of sexual functions. The myxedema produced is difficult to differentiate from primary myxedema, except for its response to thyroid-stimulating hormone (TSH) and the frequent untoward response to excessive thyroid therapy. Adrenal insufficiency, which may be latent and subclinical, makes the patient particularly vulnerable to systemic stress. Anorexia nervosa, psychogenic in origin, is often impossible to differentiate from organic pituitary insufficiency despite the finest battery of endocrine tests. Stigmata of emotional lability and the origin of the illness in psychic conflict are often difficult to evaluate but may be the sole point of academic differentiation. So intricate is the interrelationship of mind and body that Simmond's disease may quite possibly be the physiologic response to the weight reduction and semistarvation that occurs in anorexia nervosa.[10]

In a case reported by Todd[11] depression and anxiety completely disappeared within five months after adequate substitutive therapy with oral testosterone, desoxycorticosterone acetate implantation, and thyroid. This fifty-four-year-old patient had suffered a severe postpartum hemorrhage at thirty-seven and showed signs of pituitary failure (amenorrhea, loss of pubic and axillary hair, etc.) which was thus classified as organic in origin with superimposed functional symptoms. The alleviation of the functional symptoms by replacement therapy indicates once again the correlation and integration of hormones and behavior and may incidentally reaffirm the premise that psychotherapy can be a completely unconscious procedure, both for the patient as well as the physician.

Hyperfunction of the acidophil cells of the anterior pituitary is clinically evident as gigantism or acromegaly, depending for the most part upon the age at which it strikes. Psychic changes that accompany these states may be correlated with the severity of the change in body configuration. The inevitable production of social barriers due to the feeling of being different will necessarily vary from one individual to another. There may be shyness, feelings of inferiority and depression, or, quite possibly, attempts at compensation which frequently overshoot producing aggressiveness and hostility.

The Adrenal Glands

In Cushing's syndrome caused by pituitary basophilism or more commonly by adrenal cortical hyperplasia, adenoma, or carcinoma, the effects of distortion of the body image are even more significant. It is no understatement to assume that its victims can be easily plunged into severe confusion, anxiety, and depression with the appearance of stigmata of the opposite sex. In a study of 53 proved cases of Cushing's syndrome, Starr[12] found depression to be the outstanding finding in 60 per cent. The author felt that hormonal changes might provide a chemical basis for the psychic changes seen, yet euphoria, often seen during induced adrenocortical hyperfunction with cortisone, was a rare finding. Trethowan and Cobb[13] also found depression associated with retardation to be the most frequent finding, and when retardation was absent, it was replaced by agitation and anxiety. In this series psychic changes made their appearance before the onset of marked physical changes so that distortion of the body image could not be the sole explanation. Surgical treatment or irradiation of the pituitary in relieving the adrenal hyperfunction frequently relieved the concomitant mental disturbances.[14] At times after adrenal surgery psychiatric improvement made its appearance before major changes in the physical state took place.[15]

Bleuler[16] reported that depression and anxiety were seen both in Addison's disease as well as Cushing's syndrome despite their opposite endocrine polarity. He felt that the pre-existing personality structure was the important factor in determining the psychic reaction to somatic changes.

In Addison's disease adrenal insufficiency is accompanied by marked debility and profound asthenia. Quite frequently there is much irritability. Personality alterations may be severe enough to suggest an underlying psychosis. This is especially so during an adrenal crisis.[14] It is thus evident that the disease may be missed by a "psychosomatic" orientation that is too sharply veered to the left.

This is also true for pheochromocytoma caused by a tumor of the medullary portion of the adrenal gland and characterized by frequent episodes of anxiety, tremulousness, and vasomotor instability. These attacks are produced by the discharge of noradrenalin and not by traumatic life experiences or symbolic reactivation of an Oedipus or castration complex. Attacks of uncontrollable anxiety may lead the patient to fruitless psychoanalytic investigation rather than to the surgery that is so clearly indicated. Here again the need for correlation of mind and body is apparent.

The use of cortisone and ACTH has in many instances produced neuropsychiatric sequelae. The literature is replete with comment concerning euphoria, irritability, elation, and depression observed in patients during steroid therapy. In some instances these symptoms seem related to toxic effects of the hormones. Thus, Hoefer and Glaser[17] have shown that ACTH produced clear-cut electroencephalographic changes in 13 of 15 patients. Irons[18] reported that five of 13 patients treated with ACTH for either collagen disease or chronic dermatoses became psychotic. Hench[19] reported a greater incidence of toxic effects with cortisone than with ACTH. Thorn[20] reported that frank psychoses rarely complicated the clinical picture and developed only in the treatment of those diseases known to produce organic changes in the central nervous system, thus making the role of the drug difficult to assess. Rome and Braceland[21] stressed the possibility of exaggeration of premorbid personality trends. They observed that the more severe reactions seemed to be related to the disruption of the patient's psychologic adaptation to his disease, which in turn was dependent upon the patient's personality, the psychologic meaning of the disease, and the significance of secondary gains of illness. In some cases, apparently, the desire to get well conflicts quite severely with the need (albeit unconscious) to remain ill. In certain cases a decrease in serum potassium played a predominant role in the development of psychotic symptoms since the administration of adequate corrective therapy resulted in the alleviation of these symptoms.[22] In many the use of these hormones apparently intensified the patient's manner of handling conflict, enabling one to observe less adequate defenses.[23] Patterns of behavior emerged which would ordinarily remain hidden.[24] Lidz showed that the euphorigenic effect of the hormones was secondary to the physical improvement produced and was never seen during courses of treatment which did not produce definite physical improvement.[25] In his series there was a number of patients who were highly unstable and still showed no untoward emotional reactions.

To summarize all this conflicting evidence as to the effects of steroid therapy, it is once again evident that hormones and emotions are extremely well integrated. Possibly they are too well integrated to be completely divided and separated from each other, again confirming the need for a "total or comprehensive" approach to the patient.

The Thyroid Gland

Hypofunction of the thyroid gland as seen in cretinism produces imbecility as a result of incomplete development of the brain. In myxedematous individuals the patient is usually pleasant, good-natured, and placid. There are some, however, who show marked irritability and emotional lability. Possibly these latter patients find their hypothyroid status to be in marked conflict with their basic drives and personality pattern. Myxedematous patients may exhibit psychotic manifestations, which may be due to the athyreosis itself or possibly to the precipitation of a latent personality defect with the advent of the myxedema. Asher[26] reported 14 cases of myxedema with psychotic changes and found no constant type of mental picture. There was, in general, a picture of confusion and disorientation with persecutory delusions and hallucinations. Even after adequate thyroid therapy, some remained psychotic. The possibility of organic damage in hypothyroidism has been suggested by Uyematsu[27] who found atrophic changes in the brain similar to the changes seen in arteriosclerosis and senility.

Hyperthyroidism produces an increase in irritability, overactivity, unstable emotions, and sometimes actual psychosis. Patients have been hospitalized in mental institutions with no suspicion that their primary difficulty was an overactive thyroid. It is, however, only the rare toxic thyroid patient who becomes psychotic, probably due to the existence of a severe personality defect which was accentuated by the strain of thyrotoxicosis. The psychosis may disappear with cure of the disease, as with myxedema, but in others the psychosis remains.

In consideration of the etiology of hyperthyroidism, psychic trauma are the most frequent causes. Means[28] places the incidence at 25 per cent. Bram[29] in a study of 3,343 cases placed the figure at 85 per cent. Mittelman[30] found that 90 per cent of his patients had a traumatic psychic event antecedent to the onset of their illness. The development of exophthalmic goiter two to three days after a sudden and severe fright is not a rarity in the individual especially prepared by heredity, constitutional, endocrine, and personality factors.

Bastenie[31] studied the incidence of Graves's disease in Denmark and Norway during the period of occupation by the Germans. He reported a five to sixfold increase, which after liberation fell to peacetime values. This increase was not seen in other occupied countries. In Belgium there was no increase in hyperthyroidism during enemy occupation, but there was an increase in simple goiter caused by the poor diet and ingestion of antithyroids. The author interpreted the results to signify that the half-starved individual cannot develop a full-blown thyrotoxicosis. Nevertheless, weight reduction may often act as an activating episode in the etiology of hyperthyroidism. This can occur with or without the use of thyroid medication. The weight loss itself is apparently traumatic, be it psychic or metabolic.

Personality studies of the hyperthyroid individual have been made by many.[32–36] Lidz found that the persistence of extremely immature dependent needs blocked interpersonal relationships and thus opened the way for traumatic events to precipitate the illness. He felt that events in life which would ordinarily be absorbed are overwhelming to these sensitized individuals. These patients appeared friendly, likable, and not outwardly neurotic, possibly because they had cultivated ways of being liked. It is indeed difficult to differentiate these personality traits from those seen in patients with pure neuroses, other "psychosomatic" states, or even so-called "normals." It seems more probable that the differences are quantitative, rather than qualitative with no simple profile that is applicable to individual diseases. The choice of organ or site of action, be it the thyroid, pancreas, colon, gastric mucosa, coronary artery, bronchial tree, or appetite mechanism, must of necessity be tied up with multiple factors, most of which are still unknown.

The Parathyroid Glands

In parathyroid insufficiency there may be many symptoms which point to the existence of a psychoneurotic state rather than to a serious hormonal lack since fatigue, muscular weakness, irritability, and nervousness are frequently present. In some cases epileptiform convulsions are seen, or psychotic symptoms may appear, such as marked depression, hallucinations, and the picture of "toxic delirium." The mental symptoms may disappear with the restoration of the serum calcium level to normal, but at times this mental imbalance may persist despite the restoration of chemical equilibrium. Psychoses occurring postoperatively usually develop within the first three to four months and may appear during the immediate postoperative period. Once the patient shows mental improvement, these psychic difficulties do not usually recur, although the parathyroid deficiency may relapse, suggesting that the cause may lie in a failure of adjustment to the acute chemical changes.[37] With restoration of a normal chemical level psychotic symptoms usually disappear within one to four weeks. Persistence beyond this duration may indicate primary psychiatric disease.[37] In addition to the factor of chemical imbalance, edema of the cerebrum and meninges may be a contributing factor, accounting for the occasional finding of papilledema and increased intracranial pressure.[38]

In hyperparathyroidism due to adenoma or primary hyperplasia of the parathyroids, similarly there may occur signs and symptoms that can easily be attributed to hypochondriasis and neurosis. Hypercalcemia will produce weakness, anorexia, loss of weight, and vague muscle, joint, and abdominal pains. Blood chemistry studies may reveal a high blood calcium, low blood phosphorus, and high alkaline phosphatase. This plus x-ray demonstration of decalcification may save many victims from the all too common label of being "just another neurotic." Even neurotics will die but rarely from their neurosis. In some instances the onset of uremia caused by the concomitant nephrocalcinosis that is part of the picture of hyperparathyroidism may start fairly innocuously with headache, nausea, and confusion. Advancing renal failure finally makes the diagnosis unmistakably clear.

The Gonads

The female menopause is frequently associated with vasomotor symptoms and psychic disturbances, but here too it is difficult to evaluate the respective roles that are played by ovarian deficiency and the frequently disturbed psyche. The fact that many women go through their menopause without flushes and excessive emotionalism leads one to suspect that the psychic influence is quite considerable. The menopausal effects on libido seem to follow a similar pattern since replacement therapy with estrogenic hormones does not increase the libido in menopausal women who had been frigid prior to the onset of the climacteric. The male menopause is even more nebulous as an endocrine entity, which accounts for the frequent failure of testosterone to relieve the depression and anxiety neuroses of these patients. The failure in libido which is so frequently misinterpreted as hypogonadism is apparently more rationally related to the neurosis itself. Studies of male castrates have indicated that the retention of libido is possible even after removal of the testes.[39,40] In these instances the sex hormone probably has its origin in the adrenals.[41] Similarly, in the female, surgical castration failed to diminish the libido in any of 40 patients studied by Filler and Drezner.[42] In fact, castration in the female may occasionally be followed by an increase in libido since the fear of pregnancy has finally been removed.

In true hypogonadism in either sex, hormonal treatment has regularly produced important changes in the psyche, which are not duplicated by placebo therapy.[43] It is nevertheless important to realize that the role of suggestibility may be a substantial one. When patients with partial impotence were told that their urine assays for hormone showed a normal secretion, there was noted a marked relief of subjective symptoms.[44]

Premenstrual tension is characterized by much moodiness and irritability and is intensified in highly emotional patients. It is accompanied by fluid retention in the breasts and extremities which makes it plausible that the nervous symptoms may be related to an edema of the brain. Ammonium chloride, through its diuretic action, frequently produces dramatic relief.[45]

Pseudocyesis, or false pregnancy, is characterized by amenorrhea, breast and uterine changes, abdominal enlargement, nausea and vomiting, and the sensation of fetal movement which may progress to actual labor pains. In some cases there is a softening of the cervix, classic pigmentation of the breast, and a positive pregnancy test. In all of these patients, invariably, there is evidence of emotional instability.[46] Psychic factors, acting through the hypothalamus, can apparently influence the anterior pituitary and through it the luteinizing and luteotropic hormones.

The Pancreas

In diabetes mellitus there is considerable evidence that emotions play a vital role in the onset and course of the disease. In the majority of patients the diabetic state appears in a setting of emotional conflict. This is understandable in the light of our present concept of neuroendocrine relationships since stimuli from both cerebral cortex and hypothalamus have been shown to influence the pituitary and its target glands. Injury to the hypothalamus may produce hyperglycemia and glycosuria, and pathologic studies of this area in diabetics have revealed cellular changes in the nucleus paraventricularis.[47]

Psychologic trauma alone is insufficient to produce the diabetic state; this latter event is apparently dependent upon the soil on which the trauma impinges. Normal subjects under stress may develop glycosuria without significant rise in blood sugar as a result of the vasoconstriction of peritubular arterioles with resultant decrease in the reabsorption of glucose.[48]

Studies of the life history of patients with labile diabetes have indicated the relationship which exists between significant life experiences and the onset and course of the disease.[49] The onset of diabetes after puberty, after childbirth, and at the menopause coincides with periods of increased pituitary activity where added stress may very well be the trigger mechanism which precipitates the metabolic dysfunction. The frequent identification of food with love and insecurity through unconscious mechanisms accounts for the frequent association of diabetes with obesity and the difficulties entailed in the maintenance of a reasonable dietary regime. In the matter of recurrent acidosis emotional factors may be quite significant. In a study of 12 patients who had been repeatedly readmitted in acidosis, Rosen and Lidz[50] found that all were knowingly and purposefully disrupting their regulation and consciously using their disease as a means of escape from an intolerable life situation.

In spontaneous hypoglycemia the existence of an organic lesion in the pancreas (hyperplasia, adenoma, or carcinoma) must be considered. Its etiology may also lie in diffuse hepatic disease, hypopituitary states, adrenal cortical insufficiency, hypothyroidism, or hypothalamic disease. In many cases it is due solely to functional causes. Whatever the etiology, the signs and symptoms are quite similar and include apprehension, disorientation, and confusion. If the blood sugar falls sufficiently, convulsions may appear. Rational treatment of this state requires adequate diagnosis of the causative factor since psychotherapy cannot cure an adenoma or carcinoma of the pancreas, just as surgery has never corrected a psychoneurosis.

Summary and Conclusions

1. An attempt has been made to correlate hormones and emotions.

2. Illustrative dilemmas have been presented which indicate the intricate interrelationship of the endocrines and psychic processes.

3. The role of the hypothalamus in neuroendocrine relationships has been examined.

4. Dysfunction of the various endocrine glands has been examined for the purpose of correlating endocrine dyscrasia with psychic effects, and attempts have been made to evaluate

the role of stress in the etiology of some of these diseases.

5. Although many of the dilemmas still remain unsolved, it is hoped that this attempt at correlation will decrease some of the existing gaps between mind and body.

1921 Newkirk Avenue

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Medical Joke, English Style

The *Lancet*, British medical journal, tackles the problem of *sesquipedalianism* (use of big words where little ones would do) in its January issue. With British tongue in British cheek, the *Lancet* suggests:

"Away with such useless lumber as adjectives, articles, conjunctions, and prepositions! Let's take for instance that old stage coach the *Proceedings of the Society for Experimental Biology and Medicine*, dare we suggest *Frog* as a breath saver? And would the *Journal of Pathology and Bacteriology* contemplate *Death* or entertain *Bugs* as an alternative? *Family Doctor* would soon be out of the red with a title such as *Pep*, *Zip*, or *Zest*, and the *Provincial Medical and Surgical Journal* might appear as *Doc.*

"Our senior clinical journals would take a new lease on life under names like *Ache* or *Pain*, *Cut* or *Slash*, and *Womb* or *Birth*. To the gastroenterologists we commend *Tripe* or *Guts*. Hospital administrators may be grateful for *Tape*."

In conclusion, the *Lancet* warns the potential purchaser of a medical journal titled according to modern usage to buy only at a bookdealer, lest the wrong product be forthcoming. "Don't forget, there's a world of difference between *Time* and *Tide*!"

Office Electroshock Therapy

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Office electroshock therapy has become an accepted psychiatric procedure. It is satisfactory in selected patients under adequate safeguards. In these instances it is not a greater hazard than treatment in a hospital. Private hospitals are too costly, and state hospitals cannot treat all who need it or could benefit from it. In addition, hospitalization is resented by many patients because of the stigma attached. Extramurally treated patients also have the benefit of attention and care by their relatives and the absence of a period of readjustment after discharge from the hospital. On the other hand, the delay in the start of treatments because of objection to hospitalization or because of administrative procedures after admission to a hospital may prolong the patients' sufferings and postpone their recovery.

Fetterman, Friedman, and Weil[1] stated that 50 per cent of those needing electroshock therapy can be treated on an ambulatory basis. Moriarty[2] reported that 90 per cent of his patients are being treated in the office. Most patients who have had both ambulatory and intramural electroshock treatments favor the former. Many patients remarked that the stay in a mental hospital was a depressing, painful, and humiliating experience. Furthermore, many hospitals do not have facilities for treating patients individually in private rooms. The patients, therefore, often hear or witness the preparations, the procedure, and/or the immediate sequelae of electroshock treatments such as the restlessness, screaming, or startle reaction of patients upon awakening. Many patients show reactive depressions due to hospitalization after their endogenous depression has disappeared subsequent to electroshock treatments. Such patients ruminate about the hospital atmosphere, nurses, and other patients long after the recovery from their illness.

Patients should be treated in the office only if they have constant and reliable supervision at home. The family must be willing to cooperate and to assume all responsibilities. One or two adult members of the family must accompany the patient to and from the office. Fleck[3] reported a patient who signed a partnership agreement shortly after he received an ambulatory electroshock for which he came alone to the doctor's office. Later, legal steps had to be taken to invalidate the contract on the grounds that the patient was confused at the time of signing it.

A patient should not be forced to take a treatment in the office, although he may be advised or urged to do so. The closest relative must consent to the procedure. In case a husband or a wife wants to be treated without the knowledge or consent of the other, or in spite of objections by the spouse, office electroshock must be refused because of possible medicolegal complications. Hospitalization should be recommended if a patient is extremely suicidal or homicidal, or if the past history reveals such an attempt, or if the depression is partly a reaction to the home environment.

Office electroshock enables the patients to return to work much sooner. Often patients may continue working while receiving office treatments about once a week, preferably over the week-end.

Office treatments should be refused to patients over sixty years of age in spite of the fact that those who are in good physical condition tolerate electroshock just as well as younger individuals. However, such patients must be watched more carefully for possible complications and should be permitted to rest much longer. The presence of certain physical disabilities should also contraindicate office therapy. Some of these patients, however, can be treated on an ambulatory basis in a hospital.

Most patients who suffer from a manic episode of a manic-depressive psychosis or a paranoid psychosis, and who lack insight into their illness, are unsuitable for office electroshock. Similarly, loud and disturbed patients should not be treated in an office. Often it is difficult to give adequate office electroshock to patients who need a greater number of treatments, such as in the case of paranoid schizophrenics or involu-

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tional paranoids. An initial improvement or a confusional state in such patients may lead to premature discontinuation of treatments by patients or their families.

Best suited for office electroshock is the endogenously depressed patient, such as one with a depressive episode of a manic-depressive psychosis or involutional melancholia. Such patients require only a few treatments and often improve with five or fewer treatments.[4] Commitment to a mental hospital with all its social implications can be avoided easily.

Reactive depressions in psychoneurotics, if severe enough, can be treated successfully in the office with just a few electroshocks before commencement or continuation with psychotherapy. Patients who have to be discharged prematurely from private institutions for economic reasons, as well as those who show a tendency to relapse or who need maintenance electroshock, can and should be treated in the office. Many readmissions to the hospital can thus be avoided.

All complications that occur during or following electroshock in an office can occur also in a hospital. However, it is important for medicolegal purposes to be more careful in selecting the proper patients for office treatments. Although electroshock results in surprisingly few ill-effects on the organism as a whole, pre-existing physical disease is often overstressed as contraindicative of a treatment. Nevertheless, such an attitude is advisable for office therapy because of our present prevailing conditions in regard to malpractice suits in New York State.

It is advisable to refuse office electroshock to patients who suffer from extreme hypertension (systolic blood pressure over 200 mm.), aneurysm of the aorta, recent coronary occlusion, angina pectoris, failing heart, auricular fibrillation, active pulmonary tuberculosis, recent fractures, osteoporosis, herniated disks, cerebral aneurysm, cerebrovascular accidents, active peptic ulcers, glaucoma, and ablation of the retina. However, such patients, except those with aortic or intracranial aneurysms, can be treated in the hospital, either intramurally or extramurally.

It is a known fact that hypertension is aggravated by emotional factors such as seen in psychiatric conditions. Consequently a cure of an agitated depression with a few electroshocks will be accompanied by a decrease in high blood pressure. Savitsky and the author[5] found that following electroshock most patients show an immediate rise of the blood pressure with return to pretreatment level within three to ten minutes. However, follow-up examinations revealed that in many instances the blood pressure decreased parallel with the improvement in the patient's mental condition.

A seventy-five-year-old hypertensive woman who suffered from two depressive episodes of a manic-depressive psychosis developed a sudden weakness of her left leg in May, 1950. On examination she showed weakness of the left lower extremity with increased deep tendon reflexes and a positive Babinski. A diagnosis of anterior cerebral artery occlusion was made. A relapse of the depression with agitation and self-destructive inclinations followed soon after this vascular accident. The patient was given 20 ambulatory electroshock treatments. The weakness of the left lower limb as well as the positive neurologic sign disappeared completely during treatment.

One cannot be too careful in office therapy in the presence of a history of coronary disease. Muscular exertion and sudden strain may elicit an attack of angina pectoris or a coronary occlusion in a patient with arteriosclerotic coronary vessels. A coronary occlusion may occur coincidentally, yet the treatment may be held responsible. One forty-nine-old severely depressed patient, whose physical checkup, including electrocardiogram and x-ray of the spine, was negative, was scheduled for an office treatment. Four hours before the appointment for an electroshock the patient died of a coronary occlusion.

Patients with active pulmonary tuberculosis, bone or joint disease, etc., as mentioned above, have been treated successfully with electroshock. However, I prefer to treat such patients with curare in a hospital intra- or extramurally.[5,6]

The presence of organic disease of the central nervous system does not contraindicate electroshock, as reported by Savitsky and Karliner.[7] Twenty-nine patients with various organic diseases of the central nervous system, such as multiple sclerosis, cerebrovascular accidents, epilepsy, central nervous system syphilis, head injury, and Parkinsonian syndrome, were given electroshock successfully for concomitant severe mental illness. No ill-effect on the organic disease was noted. Moreover, the improvement in function which followed the electroshock therapy was very impressive and probably due to alleviation of the mental symptoms which aggravated the patient's neurologic condition.

Most of these patients were treated ambulatorily.

Complications of office electroshock therapy are overemphasized by those who have little or no experience and underrated by those who use it indiscriminately. Complications are the same as those found in intramural electroshock; however, they are less frequent and less severe with the proper selection of patients for office treatment.

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Sustained Release Dexedrine: A Comparison of Various Preparations in the Management of Obesity

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NUMEROUS reports have indicated the effectiveness of d-amphetamine sulfate (Dexedrine) as an anorexigenic agent.[1–7] As usually prescribed, this drug is taken at intervals during the day, usually prior to mealtime. There are some disadvantages to this method of administering the medication. Some doses are frequently missed, either because the patient forgets or because he does not have the drug available at the time it should be taken. Also, since the effect of a single dose of Dexedrine disappears after a few hours, many patients complain of hunger, especially in the late afternoon.

Sustained Release Principle

A method of preparation of Dexedrine was devised in which the medication was contained in a capsule in the form of very small pellets.[8] Each pellet was individually coated. The coatings were so varied that a mixture of them would release the medication over a sustained period of time. It was hoped that such a preparation would allow the entire daily dose of the drug to be incorporated into a single capsule. The gradual disintegration of the different coatings would thus afford a continuous release of the medication, resulting in a sustained therapeutic effect.

Since the most desirable combination of dosage and pellet release time had not been evolved, three different preparations were studied. All three preparations made use of the sustained release principle, differing only in dosage and coatings. Consequently, certain data obtained in early experiments were not duplicated in subsequent studies.

Material and Methods

Patients attending the Obesity Clinic of the Welfare Island Dispensary, the outpatient department of Metropolitan Hospital, were used as subjects. Only individuals who attended the clinic regularly and who, as far as could be determined, took their medication as prescribed were included in these studies. There was no other selection of patients with the exception of individuals with edema who were all excluded.

All except three of the patients were women. Their average age was forty-one years, average height $63^1/_2$ inches, and average weight 206 pounds. The deviation of weight from standard was plus 52 per cent according to actuarial tables of standard heights and weights.

A history was taken and a physical examination done on each patient at the time of the first visit. The causes of obesity were discussed briefly, and the importance of strict dietary adherence was stressed. Each subject was then referred to the dietitian for dietary instructions. The diet was similar for all patients and remained constant throughout the periods of observations. It allowed approximately 1,000 calories a day and contained 75 Gm. of protein, 100 Gm. of carbohydrate, and 40 Gm. of fat. The diet was adequate in mineral and vitamin content. No supplements were prescribed. Patients were seen every second week.

The three forms of timed disintegration capsules of Dexedrine were designated as Formula A, Formula C, and Formula J.* Formula A contained a total of 15 mg. of Dexedrine Sulfate, Formula C 20 mg., and Formula J, 15 mg. Formula A differed from Formula J in the type and distribution of the coatings.

The sustained release preparations of Dexedrine were supplied in red capsules. Unmodified Dexedrine was supplied in 5-mg. capsules, some capsules being red and some white. Placebos were also supplied in red and white capsules.

The patient was always instructed to take a red capsule twenty to thirty minutes before breakfast and a white capsule twenty to thirty minutes before lunch and dinner. Thus, while using a sustained release preparation, the patient would take the medication (red capsule) before breakfast and a placebo (white capsule) before lunch and dinner. While using unmodified Dexedrine or a placebo, the patient would similarly take a red capsule before breakfast and a white capsule before lunch and dinner. An adequate amount of proper medication was given the patient at each visit. By using this technic the patient did not know when the medication was changed. In this way subjective psychic influences were minimized.[9,10]

Formula A, which contained 15 mg. of Dexedrine Sulfate, was compared with unmodified Dexedrine and a placebo. Patients were given these drugs in random rotation and were observed while using each for approximately six weeks, after which one of the other medications was prescribed. It was planned that each patient would be observed for a period of about six weeks while using each of the medications, thus serving as his or her own control.

TABLE I.—COMPARISON OF AVERAGED WEIGHT LOSS OBSERVED WITH ALL DRUGS*

Medication	Number of Subjects	Time Observed (Weeks)	Average Weight Loss (Pounds per Week)
Placebo	64	6.0	0.6
Unmodified Dexedrine	103†	7.1	1.2
Formula A	73	6.8	1.2
Formula C	65	6.8	1.4
Formula J	31	5.5	1.3

* The total daily dose of unmodified Dexedrine was 15 mg.; Formulas A and J contained 15 mg. of Dexedrine, and Formula C contained 20 mg. of Dexedrine.

† Includes data from 61 patients observed in the comparison study of Formula A, unmodified Dexedrine, and a placebo and 42 patients observed in the comparison study of Formula C with unmodified Dexedrine.

Many patients were lost from the study before the entire program (observations while taking each of the three medications) could be completed. Thirty-eight subjects were observed while using each of the three medications. Thirty were observed while taking each of two medications, 13 while taking Formula A and unmodified Dexedrine, ten while taking Formula A and a placebo, and seven while taking unmodified Dexedrine and a placebo. Twenty-four patients were followed while using only one medication; 12 used Formula A, three used unmodified Dexedrine, and nine used a placebo.

Statistical analysis established that the results obtained with one group using Formula A (or unmodified Dexedrine or a placebo) did not differ from the results obtained with any of the other groups on the same medication. Consequently, all the groups of Formula A, unmodified Dexedrine, and placebo were averaged to obtain the figures appearing in Table I.

Although it has been demonstrated that unmodified Dexedrine had no significant effect upon the blood pressure, pulse rate, blood count, and basal metabolic rate,[3] it was uncertain whether this would be so when a sustained therapeutic level was maintained. Consequently, the blood pressure and pulse rate were recorded for each subject at each visit, and blood counts and determinations of the basal metabolic rate were done on a representative group while on

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* All medications were made available through the courtesy of Smith, Kline & French Laboratories, Philadelphia.

TABLE II.—Averaged Laboratory and Clinical Data Obtained in the Same Subjects While Using Formula A, Unmodified Dexedrine, and a Placebo*

	Number of Subjects	Formula A	Unmodified Dexedrine	Placebo
Blood pressure	38	139/88	135/86	137/87
Pulse rate	38	83	82	82
Hemoglobin (Gm.)	19	13.5	13.9	13.6
White blood count	19	7,680	7,620	7,670
Polymorphonuclears (per cent)	19	55	53	52
Basal metabolic rate	20	+6.2	+8.5	+8.4

* The total daily dose of unmodified Dexedrine was 15 mg. Formula A contained 15 mg. of Dexedrine.

each of the medications. No significant effect on any of these measurements, in the group of patients observed while taking each of the three medications, attributable to the maintenance of a sustained therapeutic level of Dexedrine could be determined (Table II).

Formula C, which contained 20 mg. of Dexedrine Sulfate, was compared only with unmodified Dexedrine since the superiority of Dexedrine over a placebo had been established in the above experiment. The same methods as were used in evaluating Formula A were again employed. Each patient was given either Formula C or unmodified Dexedrine alternately and changed to the other after a period of observation of about six weeks. The total daily dose of unmodified Dexedrine was 15 mg. All corresponding capsules were identical in appearance as described above. The same diet was maintained.

Forty-two patients were observed while taking each of these drugs, and 23 were observed only while using Formula C.

Formula J, which contained 15 mg. of Dexedrine Sulfate, was not directly compared with other preparations since the similarity of the results obtained with unmodified Dexedrine in both of the above experiments gave an adequate and reproducible standard for comparison.

Results

The average weekly rate of weight loss was found to be similar for all of the Dexedrine preparations and about twice that observed when a placebo was used (Table I). This was undoubtedly caused by a more rigid adherence to the prescribed diet when one of the Dexedrine preparations was taken. It is probable that the anorexigenic effect of Dexedrine made adherence to the diet easier and more comfortable for the patient.

The effect of a sustained therapeutic level of Dexedrine upon the blood pressure and pulse rate was observed, as well as on the blood count and the basal metabolic rate. No significant effect upon any of these was noted, indicating that no additional hazard was introduced by the use of the sustained release principle (Table II). Since this was established in the first experiment, these determinations were not repeated in the subsequent studies.

At the time of return visits each patient was questioned regarding the appearance of any untoward symptoms. All complaints not obviously caused by other factors were recorded as a side-effect of the drug. The character and incidence of side-effects noted when a placebo was used indicates that not all the complaints recorded were actually caused by the drug. In any case the total incidence of side-effects was quite low and, with the exception of a few instances while using Formula C, never severe enough to cause discontinuance of the drug (Table III).

TABLE III.—Incidence of Side-Effects Observed in Patients with All Drugs*

	Medication				
Side-effects	Placebo (64 Patients)	Unmodified Dexedrine (103 Patients)	Formula A (73 Patients)	Formula C (65 Patients)	Formula J (31 Patients)
Epigastric distress	3	9	6	6	2
Nervousness	1	11	5	4	0
Insomnia	1	2	1	0	1
Dizziness	0	3	1	8	3
Headache	0	1	1	5	0
Palpitation	2	2	0	0	0
Constipation	0	2	0	7	3
Nausea and vomiting	0	0	0	0	1
Total†	7	30	14	30	10
Number of patients† with side-effects	6 (9%)	18 (17%)	10 (13%)	18 (28%)	5 (16%)

* The total daily dose of unmodified Dexedrine was 15 mg.; Formula A and Formula J contained 15 mg. of Dexedrine Sulfate, while Formula C contained 20 mg.

† The discrepancy between the total number of side-effects and the number of patients with side-effects is due to the fact that each of several patients had multiple side-effects.

Comment

In the application of Dexedrine for the anorexigenic effect, the sustained release principle has had some advantages over the conventional method of administration. This principle has made it easier in at least two ways for the patient to receive the full daily dose of the medication; the problem of forgotten doses, especially in the afternoon, is eliminated, and through the slow, steady absorption side-effects from larger amounts are avoided. It was also believed that by maintaining a sustained level of the drug, between-meal hunger caused by the disappearance of the effect of the drug might have been decreased.

The studies with Formula A indicated that Dexedrine in the sustained release form was as effective as unmodified Dexedrine as a depressant of appetite. That this effect was real was demonstrated by comparison with the results obtained with a placebo. The use of Formula A was without a significant effect upon the blood pressure, pulse rate, blood count, and basal metabolic rate. However, the subjective results with Formula A were not as satisfactory as had been hoped. A considerable number of patients complained of hunger in the late afternoon and evening.

In order to eliminate this, Formula C was made to contain 20 mg. of Dexedrine. This did greatly decrease the number of complaints of "between-meal hunger." However, the incidence of unpleasant side-effects was considerably increased, and in an occasional case the medication had to be discontinued. For this reason it was concluded that the total daily dose of Dexedrine thus administered should not exceed 15 mg. In order to determine the most efficient distribution of the different coatings, an assay of these various coatings to determine the time of disintegration was carried out.

Pellets were made with a radiopaque nucleus which gave well-defined contrast in abdominal roentgenograms. The time of disintegration of the various coatings was measured by counting the number of pellets remaining in films taken at regular intervals. The complete details of this study are to be reported elsewhere.[8] On the basis of the results obtained from these assays, a formula was determined which, it was thought, would give the most efficient utilization of the Dexedrine. This preparation was designated Formula J.

Formula J was administered to 31 subjects. Since almost identical results were obtained with unmodified Dexedrine in the preceding two studies, it was felt that an adequate standard for comparison was established. Consequently, this was not repeated.

The weekly rate of loss of weight obtained when Formula J was used was not significantly different from that observed with any of the other preparations of Dexedrine. The incidence of side-effects was considerably lower than that found with Formula C, and the number of subjective complaints of "between-meal hunger" was less than when Formula A was prescribed. Formula J is the preparation that is now commercially available.*

Summary and Conclusions

A method of incorporating the entire day's dosage of d-amphetamine sulfate (Dexedrine Sulfate) into a single capsule has been described. This sustained release principle allows a gradual release of the medication and thus maintains a sustained therapeutic effect throughout the day. Three preparations utilizing this principle were studied. It was found that sustained release capsules of Dexedrine are as effective an anorexigenic agent as unmodified Dexedrine, and the rate of loss of weight when either of these preparations was used was about twice that observed when a placebo was given. One of the preparations studied, Formula J, yielded maximum acceptance by the patient with a minimum of unpleasant side-effects.

We would like to express our gratitude to Miss Marjorie B. Whiting, dietitian to the Welfare Island Dispensary, for her splendid cooperation during the entire course of these studies.

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* Dexedrine Spansule, Smith, Kline & French Laboratories.

The Ballistocardiogram and the Apical Systolic Murmur

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The differentiation between organic and functional apical systolic murmurs is a practical matter which often presents serious diagnostic difficulties. The final decision usually hinges on auscultatory,[1-13] phonocardiographic,[14,15] and x-ray or fluoroscopic findings. Our purpose in this study was to evaluate the ballistocardiogram as an aid in this problem.

Method

The subjects were selected on the basis of the presence of an apical systolic murmur without other murmurs. In an active case load of about 150 patients from the Children's Cardiac Clinic, 30 patients were found who satisfied this requirement. There were 18 males and 12 females whose ages ranged from six to sixteen years (average 11.4). They fell into four groups according to the criteria of the New York Heart Association[16] as shown in Table I.

TABLE I.—Classification of 30 Patients Studied

	Number of Patients
Congenital heart disease	5
Tetralogy of Fallot	2
Interatrial septal defect	1
Interventricular septal defect	2
Rheumatic heart disease with mitral insufficiency alone	8
Potential heart disease*	8
Possible heart disease†	9

* Patients in whom no cardiac disease is discovered, but whose course should be followed by periodic examinations because of the presence or history of an etiologic factor which might cause heart disease.

† Patients with symptoms or signs referable to the heart but in whom a diagnosis of cardiac disease is uncertain.

The ballistocardiogram and lead I of the electrocardiogram were taken simultaneously on the direct-writing Twin Viso-Cardiette of the Sanborn Company with the use of a Glennite Ballistocardiogram of the John Peck Company of New York. To eliminate all possibility of prejudice the study was arranged according to a double blindfold technic. Thus, one of us (W.M.), who was responsible for the selection of patients, was unaware of the ballistocardiographic interpretation, while the remaining three investigators who were responsible for taking and interpreting the ballistocardiograms were unaware of the clinical diagnosis. Interpretation of the ballistocardiogram was done independently according to the criteria of Starr[17] and of Brown.[18] The reports of these three separate interpretations were then matched. The relationship of the various waves of the ballistocardiogram to each other and to the onset of electrical systole was determined for each group (Table II). The method of Tannenbaum, Schack, and Vesell was used.[19] The following ballistocardiographic intervals were measured: hI, HI, IJ, JK. Except for the h wave which was measured from the onset of H, all other waves were measured from their peaks. The time interval from the initial QRS wave of the electrocardiogram to the peak of each ballistic wave was also measured.

Results

Wave Pattern.—Alterations in the definiteness and repetitiveness of the ballistocardiographic pattern was found in four of the 30 patients (13 per cent). Three of the patients had congenital heart disease (tetralogy of Fallot, interatrial septal defect, and interventricular septal defect), and one had possible heart disease. The patient with the interatrial septal defect had a plateau-like prolongation of the J wave with absence of or a great decrease in amplitude of the H-I complex. The patient with the interventricular septal defect had a bizarre pattern with variation in the levels of the J and L peaks from beat to beat. This bizarre type of pattern was also found in one patient with tetralogy of Fallot. The patient with possible heart disease showed a

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TABLE II.—RELATIONSHIP OF THE VARIOUS WAVES OF THE BALLISTOCARDIOGRAM TO EACH OTHER AND TO THE ONSET OF ELECTRICAL SYSTOLE IN THE FOUR ETIOLOGIC GROUPS

Etiology of Heart Disease	Wave Intervals (Time in Seconds)											
	R-R	hI	HI	IJ	JK	KL	Qh	QH	QI	QJ	QK	QL
Congenital (5 patients)												
Minimum	0.52	0.08	0.04	0.04	0.08	0.08	0.03	0.08	0.14	0.20	0.28	0.40
Maximum	0.82	0.26	0.12	0.09	0.14	0.14	0.05	0.12	0.18	0.26	0.38	0.52
Mean	0.67	0.15	0.07	0.07	0.10	0.12	0.04	0.10	0.16	0.22	0.33	0.45
Rheumatic (8 patients)												
Minimum	0.62	0.04	0.03	0.06	0.07	0.08	0.01	0.07	0.13	0.21	0.29	0.39
Maximum	0.94	0.12	0.06	0.09	0.12	0.12	0.07	0.11	0.16	0.24	0.36	0.48
Mean	0.74	0.10	0.04	0.08	0.09	0.10	0.04	0.10	0.14	0.22	0.32	0.42
Potential (8 patients)												
Minimum	0.64	0.08	0.04	0.06	0.07	0.08	0.02	0.08	0.12	0.20	0.28	0.36
Maximum	1.08	0.14	0.06	0.09	0.12	0.16	0.08	0.12	0.18	0.27	0.38	0.53
Mean	0.84	0.11	0.05	0.08	0.08	0.10	0.05	0.10	0.14	0.23	0.32	0.43
Possible (9 patients)												
Minimum	0.51	0.10	0.04	0.04	0.08	0.08	0.00	0.08	0.14	0.18	0.28	0.37
Maximum	0.92	0.14	0.06	0.10	0.12	0.16	0.10	0.16	0.17	0.28	0.39	0.52
Mean	0.67	0.12	0.05	0.05	0.09	0.10	0.14	0.11	0.15	0.22	0.32	0.42
Summary (30 patients)												
Minimum	0.52	0.04	0.03	0.04	0.07	0.08	0.00	0.07	0.12	0.18	0.28	0.36
Maximum	1.08	0.26	0.12	0.09	0.14	0.16	0.10	0.16	0.18	0.28	0.39	0.53
Mean	0.73	0.11	0.05	0.07	0.09	0.10	0.04	0.10	0.15	0.22	0.32	0.43

marked decrease of amplitude of the I wave and large I-J, J-K, and K-L waves so that the J, L, and N peaks were of equal size.

WAVE INTERVAL.—The mean value of the various waves of the ballistocardiogram in relation to each other and to the onset of electrical systole showed no significant difference for the four groups (Table II). The following intervals were included: R-R, hI, HI, IJ, JK, KL, Qh, QH, QI, QJ, QK, and QL. When the average values for these intervals are compared in the 30 children in our series with eight normal children of the same average age, we find that the mean values are not significantly different statistically (Table III).

Comment

With respect to specific changes in the wave pattern in chronic rheumatic mitral valvular disease, Brown[18] has reported high N waves and high L waves in patients with mitral stenosis. Davis and his coworkers[21] have pointed out a distinct, although not a specific, deformity in pure mitral stenosis. This abnormality "consists of a presystolic headward wave, often broad and rounded, sometimes sharply inscribed and highly variable which is followed by a more constant footward deflection which precedes the I, and follows the electrocardiographic Q by 0.10 second. This footward wave, which is later than the normal G deforms the H wave, decreasing its amplitude or totally eliminating it. The I wave is characteristically distorted, and its inscription delayed. The distortion of the I ranges from clearly defined 'doubling,' that is, with the interfering anomaly and normal I separately inscribed, to fusion of these two footward waves with a wide slurred I resulting." In eight patients in their series with clinical mitral insufficiency, one patient had a record which resembled the mitral stenotic pattern. Four patients showed an intermittently "doubled" I wave, but their mean Q-I interval was not significantly different from that in the controls.

In congenital heart disease the most specific pattern is found in coarctation of the aorta where the K wave may terminate well above the baseline in fully developed cases. Frankel and Rothermich[22] described a pattern in interventricular septal defect which consisted of a broadening of the J peak with a plateau-like effect of the initial portion of the J-K slope. The L peak was very well developed, and there was a splitting of the K-L slope.

The wave intervals in our series of normal children and those with apical systolic murmurs did not show any significant difference. These wave intervals also agreed closely with those of the 23 male subjects with ages of eighteen to thirty-eight years reported by Tannenbaum, Schack, and Vesell[19] who used an electromagnetic instrument (Table III). Both our results and those of Tannenbaum *et al.* are at some variance with regard to time intervals from the measurements of Jones and Goulder[20] and Davis *et al.*[21] Jones and Goulder using a critically damped, low-frequency apparatus measured their wave inter-

TABLE III.—Relationship of the Mean of the Various Waves of the Ballistocardiogram to Each Other and to the Onset of Electrical Systole

	Wave Interval (Time in Seconds)											
Authors and Instrument Used	R-R	hI	HI	IJ	JK	KL	Qh	QH	QI	QJ	QK	QL
Rosenfeld *et al.*—piezoelectric[a]												
Mean	0.74	0.11	0.05	0.07	0.09	0.11	0.04	0.10	0.15	0.23	0.32	0.43
Standard deviation	±0.137	±0.022	±0.017	±0.014	±0.018	±0.024	±0.023	±0.017	±0.017	±0.021	±0.104	±0.150
Rosenfeld *et al.*—piezoelectric[b]												
Mean	0.77	0.09	0.05	0.08	0.09	0.09	0.05	0.10	0.14	0.22	0.30	0.39
Standard deviation	±0.158	±0.017	±0.005	±0.016	±0.014	±0.010	±0.014	±0.013	±0.013	±0.019	±0.136	±0.159
Tannenbaum *et al.*—electromagnetic[c]												
Mean	0.74	0.11	0.05	0.06	0.09	0.09	0.04	0.09	0.14	0.21	0.30	0.37
Standard deviation	±0.13	±0.018	±0.014	±0.01	±0.015	±0.019	±0.018	±0.019	±0.019	±0.023	±0.027	±0.042
Jones and Goulder—low frequency, critically damped[d]												
Mean	...	...	0.082	0.160	0.204	...	...	0.089	0.169	0.329	0.533	...
Standard deviation	...	...	±0.011	±0.011	±0.021	...	...	±0.013	±0.013	±0.022	±0.029	...
Davis, *et al.*—high frequency[e]												
Mean	...	...	...	...	...	...	...	0.112	0.175	0.245	0.334	...

[a] Sampling: 30 children with apical systolic murmurs, ages 6 to 16 years (average 11.4 years).
[b] Sampling: 8 normal children, ages 6 to 13 years (average 10 years).
[c] Sampling: 23 normal males, ages 18 to 38 years.
[d] Sampling: 25 normal subjects, ages 17 to 37 years.
[e] 18 normal females, ages 30 to 40 years.

val in 25 normal young adults with ages ranging from seventeen to thirty-seven years. Davis *et al.*[21] used a high-frequency instrument of the Starr-type bed ballistocardiograph and measured the wave intervals in 18 normal females of ages thirty to forty years. The discrepancy in these figures cannot be accounted for on the basis of the use of a velocity or displacement instrument since Tannenbaum's series,[19] Jones and Goulder's series,[20] and Davis' series[21] were all done with velocity instruments. One variation in instrumentation in these reports lies in the use of a direct body pickup,[19] compared to table instruments with an indirect body pickup.[20,21]

The low incidence of ballistocardiographic abnormalities in our studies and the occurrence of these abnormalities for the most part in diseases in which the diagnosis can be established by other methods indicate that the ballistocardiogram is of little value as a diagnostic device in the patient with an apical systolic murmur.

Summary and Conclusion

1. The wave patterns of the ballistocardiograms of 30 children, from six to sixteen years of age, with apical systolic murmurs due to congenital, rheumatic mitral insufficiency alone, potential, and possible heart disease were found to be abnormal in only four instances (13 per cent). The average wave intervals (hI, HI, IJ, JK, Qh, QH, QI, QJ, and QK) in each etiologic group did not differ from the average for the entire series or from a group of eight normal children.

2. The high incidence of normal ballistocardiograms in these patients would indicate that this device is not a useful aid in the differentiation of the organic from the physiologic apical systolic murmur.

3. A tabulation and comparison of wave intervals by different ballistocardiographic instruments in children and adults is included.

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A Simple Procedure for Pleural Fluid Aspiration in the Acutely Ill Patient

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PLEURAL effusions are frequently encountered as manifestations of either pleural, pulmonary, or extrapulmonary disease. Aspiration of pleural fluid may be indicated for therapeutic purposes. Moreover, the physical, chemical, cytologic, and bacteriologic features of the fluid serve as aids in the diagnosis of the basic disease causing its formation.

Our experience is essentially in agreement with that of Tinney and Olson,[1] Engelhardt and Wilson,[2] and Sahn, Leichtling, and Bass[3] that pleural fluid in patients seen in general hospital practice, particularly in patients over the age of forty, is caused chiefly by primary bronchogenic or metastatic malignancy, congestive heart failure, and pulmonary infarction. Aspiration of the fluid tends to alleviate the dyspnea, adds much to the comfort of the patient, and in some cases may be a lifesaving measure. However, these patients are usually very ill, weak, dyspneic, and often febrile and cannot withstand a prolonged or traumatic procedure.

The usual procedure of aspirating fluid by means of a syringe and a threeway stopcock has many disadvantages. Aspiration is performed with the patient sitting in the upright position. The procedure is cumbersome, time-consuming, and fraught with technical difficulties. The repeated tugging on the syringe is tiring to both patient and physician. Trauma to the pulmonary structures by repeated manipulation of the aspirating needle, leakage of air into the pleural space resulting in hydropneumothorax, and delayed expansion of the lung are frequent complications of this technic. The use of a potaine apparatus, on the other hand, results in sudden large pressure changes within the pleural space due to excessively rapid fluid removal.

Braverman[4] advocates aspiration of fluid with the patient in the lateral recumbent position with the side to be aspirated dependent. In our experience this method has no advantage over the sitting or reclining position or with the patient propped against the head rest of the bed. The lateral recumbent position is particularly tiring to the weak, ill, and dyspneic patient. Beach[5] suggests the use of the usual blood donor set for thoracentesis. He recommends this method as particularly applicable to the aspiration of serous effusions. This method, however,

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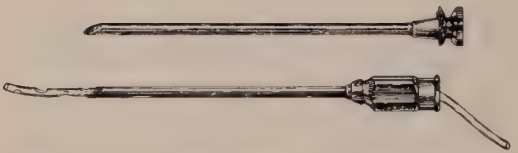

FIG. 1. A 14-gauge, thin-walled needle and stylet. The plastic tubing is within the lumen of the needle; its proximal end is fenestrated to facilitate drainage.

has the same disadvantages as the use of the potaine aspirator.

All the methods listed above have in common the additional risk that the needle remains in the chest during the entire procedure and may traumatize the re-expanding lung.

An attempt was made to devise a simple and safe method of thoracentesis that would (1) produce minimum discomfort to the patient, (2) insure effective removal of sufficient quantities of pleural fluid at an optimum rate of flow, (3) not be time-consuming, (4) avoid leakage of air resulting in hydropneumothorax, and (5) afford the least possible chance of contaminating the pleural space. The technic we adopted for thoracentesis utilizes vinyl plastic* or polyethylene tubing (PE-160).† The clot adhesion coefficient of these tubings is very low. Fibrin, therefore, will not stick to its inner surface and block the flow of fluid. Although it is pliable, the tubing is sufficiently rigid to remain patent under all conditions that may be encountered clinically. The rate of flow of fluid is gradual, constant, and continuous.

The patient is allowed to remain propped comfortably against the head rest of the bed. The skin area is prepared in the usual manner with a sterilizing solution and draped with sterile towels. The chosen site is then infiltrated with 1 per cent procaine solution. The usual site of puncture is two intercostal spaces above the costophrenic sulcus in the posterior axillary line. A 14-gauge, thin-walled needle (14T with a solid style*) is introduced into the pleural space (Fig. 1). The stylet is withdrawn, and approximately 6 to 8 inches of the previously prepared tubing (6 feet in length) is threaded through the needle and advanced into the pleural space. The needle is then withdrawn and the skin puncture immediately sealed with adhesive tape. Caution must be taken never to withdraw the tubing while it is still in the lumen of the needle, lest the tubing be sheared off on the sharp needle point and drop into the pleural cavity. The plastic tubing has an inside diameter of 1.5 mm., is pliable, and will not traumatize lung parenchyma. The distal end of the tubing is threaded through a number 9 rubber stopper through which two 3-inch lengths of $^{1}/_{4}$-inch glass tubing has been placed. The stopper fits into a 2,000-ml. flask. The tubing should be of sufficient length to reach to the bottom of the flask. It is sealed with adhesive tape or paraffin to the glass tubing to make the connection airtight. Lowering the flask to the floor causes the flow of pleural fluid to commence promptly. If a greater negative pressure is desired than that afforded by gravity, the second glass tube which acts as a vent for the displaced air from the flask may be attached to a suction apparatus (Fig. 2).

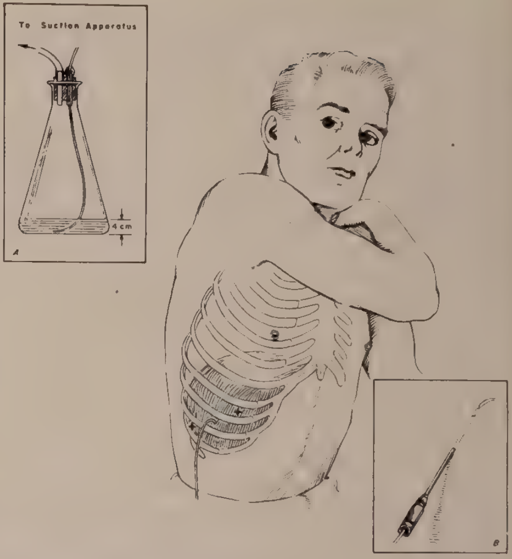

FIG. 2. Diagrammatic illustration of a patient with the tubing in position for aspiration of pleural fluid. (*Upper insert*) 2,000-ml. flask with attachments ready for use. (*Lower insert*) Tubing threaded through the needle within the pleural space.

Bronfin, Liebler, and Katz[6] suggested the use of the vinyl plastic tubing for abdominal paracentesis. Preparation of the vinyl plastic tubing is carried out as suggested by these authors. Three or four small holes are cut in the proximal end of the plastic tube to facilitate fluid drainage. The plastic tubing may be sterilized by autoclaving. However, it tends to become brittle after repeated autoclaving. Therefore, we keep a supply of prepared lengths of tubing in Zephiran chloride solution. The tubing is rinsed in sterile distilled water or normal saline prior to its use.

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* Becton, Dickinson and Co., Rutherford, New Jersey.
† Clay-Adams Co., Inc., New York City.

Once the plastic tubing is in place and fixed to the chest wall, the patient rests comfortably. Depending on the nature and quantity of fluid the tube may be kept in place for many hours or even as long as several days. Drainage is gradual with imperceptible traction on the mediastinal structures. The rate of flow is about 400 to 600 cc. per hour and constant. Once the system is set in operation, it requires little attention from the medical and nursing staff. Drainage bottles are changed when indicated. Air leakage into the pleural space is minimal, and expansion of the lung is, therefore, rapidly obtained. Because of the flexibility and pliability of the vinyl plastic tubing, trauma to the lung is negligible. With expansion of the lung the tube bends without kinking and gravitates to the costophrenic sulcus, thus assuring complete drainage of fluid over a period of several hours.

Chest roentgenograms may be taken when indicated with the tube in situ. Antibiotics and débridement agents, such as streptokinase, streptodornase, or Tryptar, may be injected intrapleurally through the tubing. By this procedure purulent as well as thin serous exudates may be aspirated. Thick tenacious exudates are thinned out, according to the principles outlined by Tillett and Sherry[7] and Reiser, Patton, and Roettig,[8] and continuously aspirated through the plastic tubing. When termination of the thoracentesis is desired, the tubing is withdrawn from the pleural cavity, and the puncture site is covered with a small sterile dressing.

In our series of cases we have not encountered any significant adverse reactions to this procedure of pleural fluid aspiration. Minimal pneumothorax has occasionally been observed, but this was generally less than usually seen with the conventional methods of aspiration.

Conclusions

1. A simple and effective method for thoracentesis utilizing closed suction drainage through plastic or polyethylene tubing has been described.
2. This technic has been found particularly applicable to patients who are very ill, dyspneic, and in weakened state, i.e., cases with pleural metastasis, bronchogenic carcinoma, congestive heart failure, advanced tuberculosis, and pulmonary infarction.
3. This method is also useful when fluid drainage and irrigation of pleural space with antibiotics and débridement agents are desired.
4. The advantages inherent in this method of pleural fluid aspiration have been outlined.

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Slow, Progressive, Nonpainful Loss of Vision in Adults

One of the common mistakes in diagnosis is with reference to those cases in which there is a slow, progressive, nonpainful loss of vision in adults. All too often we see patients who have been told that they have a cataract, and, when they cannot see to get about, they should have an operation, who in fact have chronic glaucoma. When they present themselves for operation, it becomes our painful duty to tell them that their vision has failed as a result of glaucoma, and that it cannot be restored by any means. They often ask, "Suppose I would have come sooner? Would it have made any difference?" . . . and to be truthful we have to say "Yes."

We must remember that even when the lens is grossly opaque and the diagnosis seems certain, the increased pressure of glaucoma may also be present, and through damage of the nerve, may be causing loss of vision and visual field, that cannot be restored. The chief thing to remember is that when there is a slow, progressive, nonpainful loss of vision in adults over forty years of age, we must be suspicious of glaucoma until we have proved otherwise. J. JEWITT JUDD, M. D.—*Nebraska Medical Journal, November, 1953*

A Report on Antibacterial Substances

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During the past decade at least ten agents have been described for therapy of clinical infections, and commencing with penicillin, most have proved reasonably safe when administered to the human. Unfortunately, information about and recognition of their modes of action, indications and contraindications for their administration, and their potential for producing untoward side-effects in the host have lagged behind clinical usage. Although certain infections, notably tuberculosis, have diminished in number and are both less morbid and mortal because of specific antimicrobial therapy, bacterial infections as a whole still occur in significant numbers, and some continue to be serious community problems. This is true despite the increasing amounts of drugs being manufactured and prescribed. For example, in 1951 more than 6,000,000 pounds of sulfonamides, 600,000 pounds of penicillin, and 600,000 pounds of the other nine or ten commonly used antibacterial compounds were manufactured.[1] The total represents approximately 100 Gm. of drug per year for every man, woman, and child in the United States and manifestly suggests that too many drugs are being needlessly prescribed. Apparently, the usual indications for their use have been extended. It seems warranted, therefore, to review certain pertinent facts about antimicrobial agents and their action in the human, to re-emphasize general principles of drug-host-organism relationships, and to clarify some recent misleading concern about their toxicity in the human. Perhaps such a report may aid the physician to employ each or many in a more sensible and understanding fashion.

General Principles of Human Infection and Their Specific Therapy

Mode of Action.—The sole beneficial action exerted by antimicrobial agents within the host is interruption of the pathogenicity of bacteria involved in the infection, and only in a deleterious way do they directly affect the host per se.[2] This action is not necessarily synonymous with sterilization, however, for no agent so far described can possibly eradicate all invading bacteria in the human. In general, efficacy of an antibacterial agent is determined by the number of organisms it kills in an infected area. Each of the presently available ones kills at varying speeds and to a different degree; all interrupt to some extent the pathogenic career of an organism in an infection. Penicillin, streptomycin, polymyxin B, bacitracin, and probably isoniazid, when exposed to multiplying bacteria, which state is the sine qua non of an infection, eradicate the largest number of susceptible microorganisms and thus interrupt pathogenicity to the greatest degree.[1] The sulfonamides, Terramycin, aureomycin, chloramphenicol, and probably erythromycin act against a broader spectrum of organisms but are less bactericidal and less rapid in action against any single species of susceptible organisms and are labelled bacteriostatic.[1,3,4] Other drugs, not fitting into either the bactericidal or static groups, exert deleterious action against growth of certain organisms but are, relatively speaking, impotent, e.g., carbomycin (Magnamycin), and they perhaps should be labelled "bacterosthenic" agents.[1]

Sensitivity of Organisms.—The second important principle of proper antibacterial therapy concerns dosage of drug. Although most strains and species of bacteria have clear and well-known patterns of susceptibility to their antagonists and although many are susceptible to more than one, an infection cannot be treated adequately unless the causative organism is identified and its susceptibility to one or more drugs recognized. Amounts of drug needed to interrupt pathogenicity of an infecting microorganism can be measured easily in vitro by a number of laboratory procedures which can be done simply by trained laboratorians. The measured in vitro susceptibility indicates the amount of drug needed to produce maximal alteration of growth upon direct exposure.[2] Of a necessity this amount must be concentrated in vivo at the site of infection.

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Serum concentrations following a single dose of drug can also be easily determined. Generally, the serum level is a good indication that adequate concentrations are being attained at the site of inflammation, but as is shown in Table I, concentrations within individual tissues vary significantly. Consequently, serum concentrations equal to the in vitro level of sensitivity may not necessarily indicate that sufficient therapy is being given.

Organisms must be in a state of active multiplication to produce an infection. Most antibacterial agents are effective only against reproducing bacteria, and so they are best used when an infection is progressive. To provide the host with sufficient amounts of the drug, thus promoting the desired anti-infectious effect, serum and tissue levels of at least the in vitro measured susceptibility are needed, and usually it is safer to provide the patient with greater amounts. On the other hand, appreciably smaller doses of drug are required to prevent organisms in a quiescent state from remultiplying rapidly. Consequently, dosage schedules of antibacterial drugs for strictly prophylactic reasons need not include amounts that will produce serum concentrations equal to the measured susceptibility level; indeed, small quantities will prevent active multiplication of bacteria and thus avert an infection.

Host Response.—Each of the ten agents listed has been shown to be useful in the management of human infections, yet each demonstrates wide in vitro differences in potency. The apparent paradox is not disparate in fact. The infected host generally needs only a modicum of aid to control invading microorganisms prior to the development of his clinical remission. The assistance is, for the most part, needed during the short interval between onset of infection and his own elaboration of humoral and cellular defenses, such as increased numbers of white blood cells and antibodies, which in the over-all course of the infection are essential for eventual cure.[2] If the host is capable of defending himself by production of effective antibodies, therapy even with weak drugs is sufficient. On the other hand, certain individuals cannot be depended upon to generate sufficient defenses to control the infection early in its course, e.g., the cirrhotic or the aged with some chronic debilitating disease. In such instances the best therapy for an infection is delivered by an agent or a combination of them that is known to kill the most organisms in the most rapid manner. For example, in vitro tests usually indicate that alpha streptococci causing subacute bacterial endocarditis are sensitive to three or four of the commonly used agents, and presumably these might be equally efficacious, therefore, in the therapy of that infection. In all cases of subacute bacterial endocarditis, however, penicillin is the agent of choice for therapy, either alone or with streptomycin, for in the face of notably poor humoral and cellular defenses by the host no other material singly or in combination with another can control growth of alpha streptococci for a sufficiently long period and to a great enough degree to permit healing. Cures with all other treatments are uncommon and unexpected. Similarly, for the same reason, penicillin is the best agent for therapy of pneumococcal pneumonia in a cirrhotic; it kills more pneumococci, and it does so faster than other agents in the individual who needs extra help because of his associated disease.

Location of Lesion and Organisms Within It.—The fourth premise for the understanding of proper prescription of antimicrobial agents for therapy of human infections is knowledge of the type and location of inflammation concerned, as well as location of the invading microorganisms within that area. Antibacterial drugs affect growth of organisms only when directly exposed to them, and there are often body barriers preventing easy exposure.[5] For example, organisms within an abscess having a thick, avascular, fibrotic wall remain more or less unexposed with the routine administration of an agent. The physician is faced with the problem of so administering a drug that it penetrates to the place where the organisms are causing disease, and no standardized regimen of therapy will suffice to accomplish this. The usual acute infection is the least complicated to treat; active inflammation is characterized by increased vascularity in the area, superficially located organisms, and no interfering fibrosis. The difficult problem of location and type of pathology interfering with drug-organism exposure occurs most often in infections of more indolent nature and/or when the infection is in a tissue which has a poor blood supply.

Table I depicts the relative concentrations of penicillin reaching various body tissues. It is obvious that an infection due to a penicillin-susceptible organism in the kidney is controlled

TABLE I.—APPROXIMATE TISSUE CONCENTRATIONS OF PENICILLIN FOLLOWING SINGLE INJECTION OF 500,000 UNITS CRYSTALLINE POTASSIUM PENICILLIN G

Tissue	After 1 Hour (Units per Cc. or Gm.)	After 3 Hours (Units per Cc. or Gm.)
Kidney	17.5	Trace
Intestine	9.7	0
Lung	8.9	Trace
Buccal mucosa	6.6	0
Skin	6.0	Trace
Liver	4.7	Trace
Heart	2.4	Trace
Muscle	1.9	Trace
Central nervous system tissues	0 to Trace	0
Bone marrow	0	0

with smaller dosages of penicillin than the same infection located in bone or brain. Figure 1 demonstrates the same phenomenon graphically. Amounts of penicillin insufficient to control the growth of the invading organism in vitro will not affect beneficially a clinical infection. In the presence of a known body barrier preventing adequate drug-organism exposure with dosages which produce serum levels no higher than the level of in vitro susceptibility, one simple alternative to effective therapy is to increase total dosage to overcome it.

In certain bacterial infections the invading microorganisms multiply and cause disease within the host's cell wall. Notable among these are tularemia, brucellosis, chronic tuberculosis, and typhoid fever.[5] It is difficult to interrupt pathogenicity of organisms so located because most antibacterial materials do not penetrate cell wall. Consequently, the essential design of a therapeutic regimen for these infections is the maintenance of an effective concentration about the infected cells for long periods, thus preventing spread of organisms from one cell to another. For cure of such an infection, the host must eradicate the organisms by his own defenses; "specific" drug treatment almost becomes prophylactic. Viral infections also fall into this category, and like the bacterial diseases listed, they generally fail to respond promptly to drug therapy.[6]

To date, isoniazid is the only agent known to penetrate the cell wall and to exert its antituberculous activity therein without doing undue damage to the host cell itself. Until new agents are discovered which have this same property, therapy for infections in which the pathogenic microorganisms are intracellular are and will continue to be unsatisfactory.

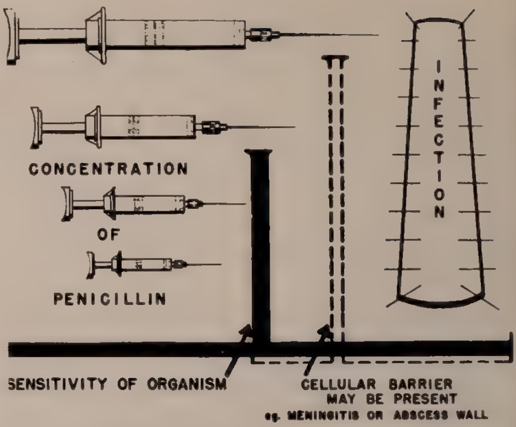

FIG. 1. Factors influencing the effectiveness of penicillin.

PHARMACOLOGIC PROPERTIES OF DRUGS—TOXICITY.—The aim of treating any infection is to prevent further growth of organism, thus allowing clinical remission of the infection and preventing relapse or complications. This must be accomplished without significant associated damage to the host himself. In order that precision in outlining a therapeutic regimen be achieved, certain features of pharmacologic properties of the agent administered must be recognized. Speed of absorption, distribution of drug into various body tissues, rate of excretion, and toxicity to normal host cells are among them. As is true with sensitivity of various strains and species of bacteria, information about pharmacologic properties of the ten agents in humans has been well circulated by commercial houses manufacturing them and has been described in detail in many medical journals. Unless such information is known, proper size of individual dose, a sensible interval between doses, and duration of treatment cannot be prescribed. For example, there are many different preparations of penicillin. When administered to the human, each produces varying heights of serum concentrations; Table II describes five of these preparations. Bicillin, being quite insoluble upon parenteral administration, is unsuitable for therapy of acute infections; indeed, unless given twice daily, it would supply the patient so little active penicillin that even the most susceptible organisms would not be affected. On the other hand, because of its insolubility and, therefore, prolonged absorption over periods of days, it becomes a most valued material for prophylaxis against infections caused by streptococci and gonococci. Similarly, preparations of procaine or dibenzyl amine penicillin administered once or

TABLE II.—PENICILLIN PREPARATIONS WITH DELAYED ABSORPTION OR PROLONGED BLOOD LEVELS

Bis-di-benzyl ethylene diamine di penicillin G (Bicillin, Benzethacil)—Extremely insoluble, long absorptive period (7 days), low serum levels when given parenterally.
Procaine penicillin in water or with aluminum monostearate—Delayed absorption (1 to 4 days) and low serum levels when given parenterally. Some commercial preparations contain small amounts of soluble penicillin, added to promote high initial blood levels.
Dibenzyl amine penicillin G—Slow absorption, moderate serum levels, approximately like those of procaine penicillin suspended in water.
Crystalline potassium penicillin G suspended in coconut oil (Cilloral)—Oil changes pattern of gastrointestinal absorption, delaying time of peak serum concentration and prolonging total effective levels.
P-di-n-propyl sulfanyl benzoic acid (Benemid)—Slows excretion of penicillin through kidneys, thus elevating and prolonging serum levels.

twice daily provide satisfactory concentrations of penicillin for therapy of infections caused by susceptible organisms, e.g., beta hemolytic streptococci, but are of no value in treatment of bacteria partially resistant to penicillin, such as the nonhemolytic streptococci.

As another example of the importance of knowing pharmacologic properties, the contraindications to the use of an orally administered drug are listed as follows:

1. Presence of ineffective and/or inactive intestinal peristalsis, e.g., ileus, nausea, vomiting, severe diarrhea.
2. Fulminating infections, e.g., staphylococcal sepsis.
3. Infections caused by organisms partially resistant to the drug, e.g., enterococcal endocarditis.
4. Infections located in sequestered sites, e.g., meningitis, endocarditis, osteomyelitis.

If the stomach or intestinal tract is not functioning properly, drug deposited therein cannot be absorbed and, therefore, is unavailable for antibacterial activity elsewhere. The other listed reasons for not using antibacterial agents by mouth concerns degree of absorption. Practically speaking, for the infections described, insufficient amounts are attained in serum and tissue to control serious or isolated infections, even under ideal or maximal dosage because there is an appreciable difference between amounts absorbed from parenteral and intestinal routes. In these instances parenteral administration is mandatory to assure best absorption and utilization at the required area. Contrariwise, in an infection caused by an organism quite susceptible to the agent, the oral route is simple and preferable.

Untoward side-effects upon human cells, exclusive of allergic phenomena, may develop with administration of any antibacterial agent to the human.[7] Streptomycin, polymyxin, and bacitracin are predictably nephrotoxic, the last two more so than the first. In programming a treatment regimen which might include more than a two-week course of streptomycin, routine investigation of the urine is a needed protection against the development of unnecessary tubular damage. Polymyxin and bacitracin give rise to a similar type of damage within a few days in most instances so that long term therapy with them is always impracticable. Aureomycin, Terramycin, and chloramphenicol so alter the bacterial flora of the lower intestinal tract upon oral administration that untoward effects upon liver function, absorption, and bowel function can be anticipated.[8,9] These toxic effects may have to be endured in order that an infection be controlled, but in each such instance it is the physician's responsibility to assure the patient that the benefit derived exceeds the exposure to the dangers of specific therapy.

COMMENT.—These general principles of practical administration of antimicrobial agents to humans must be recognized: rate of absorption, distribution to the needed area of inflammation, degree of absorption into the area of infection so that proper drug-organism exposure is achieved, speed of action against the organism, degree of killing effect. Finally, for the appropriate treatment of any infection the infecting organism must be identified, the agent which is most active in interrupting its pathogenicity must be chosen for use, and the time-dosage relationship known. Otherwise therapy for infection remains in the realm of guesswork, and this is unwarranted.

Causes of Treatment Failures in Management of Infections

Failure of an infection to respond properly to a well-designed regimen of antibacterial therapy occurs infrequently. The event is generally signalled by a clear group of symptoms and signs. In acute infections fever initially falling by crisis gradually rises after the fourth day. The clinical picture slowly changes from improvement to worsening, and physical signs become manifestly worse. Organisms reappear in the secretions from the inflamed area usually between ninety-six and one hundred and twenty hours, and purulent complications become evident after the seventh day.

TABLE III.—Known Infections Which Require at Least Two Antimicrobial Agents for Best Management

Tuberculosis—streptomycin and para-aminosalicylic acid or isoniazid.
Brucellosis—streptomycin and aureomycin or Terramycin.
Subacute enterococcal endocarditis—penicillin and streptomycin.
Pneumonia due to Klebsiella—penicillin and streptomycin or streptomycin with either Terramycin or sulfonamide.
Serious infections due to Pseudomonas—polymixin B and Terramycin.
Penicillin-resistant staphylococci—bacitracin, massive doses penicillin and streptomycin, perhaps rarely aureomycin, Terramycin, erythromycin, and Magnamycin.
Mixed infections:
  Peritonitis—penicillin and streptomycin.
  Lung—dependent upon organism isolated; broad-spectrum agent.
  Urinary tract—dependent upon organism isolated; broad spectrum agent.

Explanation for treatment failure is often difficult but can usually be explained at least in retrospect by the neglect of one of the principles just elucidated. Final arrest and eradication of infecting microorganisms must be accomplished by the host's own defenses, cellular and humoral. If he is incapable of organizing these, clinical failure of drug therapy can be expected. If the invading bacteria produce sufficient tissue damage and necrosis prior to therapy or if the host cannot replace functioning tissue previously damaged by the infection, response to therapy is inadequate or slow or both. Improper prescription of the antibacterial agent or the failure to produce adequate concentrations of the drug at the site of inflammation to exert a maximal inhibiting effect often leads to a temporary, although impressive, clinical remission which will not be maintained. Finally, and fortunately rarely, as organisms are exposed to an antagonist, a certain few resist the inhibiting effect and become capable of reproducing despite its presence, and there emerges from the area organisms resistant even to increasing concentrations of agent.

Measures to avoid these common causes of treatment failure are often successful, and certain technics can be utilized. Using the synergistic antibacterial effect of combined drugs, notably penicillin and streptomycin, increasing daily dosage of a single drug or changing its route of administration, substituting another agent when resistance is observed with the first, and aiding the host nonspecifically with diet, transfusions, electrolytes, and other supportive therapy are all indicated procedures. Only one point deserves minor emphasis. Because organisms developing resistance to one agent frequently are also resistant to another in the same class, the substitution for one drug by certain others may be fruitless. In general, for example, failure of therapy with Terramycin suggests that the administration of aureomycin, tetracycline, and/or chloramphenicol would also be inadequate.[10]

Use of Two or More Antimicrobial Agents in Combination

In the face of high pressure promotion for their sale and despite confusion in medical reporting about synergism and antagonism between and among drugs, there are clear purposes for combining two antibacterial agents in the treatment of single infections.[11–13] Some of these deserve comment (Table III). Beyond these, however, there are many reasons for avoiding combinations of agents, and they too require discussion.

The most logical indication for the simultaneous administration of two or more drugs is the presence of an infection in which there are mixed organisms, some susceptible to one drug, others to another. Peritonitis, urinary tract infections, and infections associated with chronic pulmonary disease such as bronchitis and bronchiectasis are the common examples. Prescription of the correct agents depends entirely upon the organisms isolated from such infections. The achievement of a good end result for most of the infections listed in Table III is expected with the combination of penicillin and streptomycin, which grouping offers both rapid action and wide bacterial spectral activity. Clinical experience, on the other hand, is narrow with respect to other combinations and in other difficult infections, and experience with them deserves broadening.

Certain organisms upon exposure to two antagonists do not emerge resistant to either one. This is true whether or not the single drugs are equally potent against the organism. It is for this reason that streptomycin, the stronger material, and para-aminosalicylic acid (PAS) or isoniazid must be used together in the long-term management of tuberculous infections. Explanation for the ability of two drugs to delay the development of strains resistant to either drug is impossible.

There are at least five species of organisms commonly causing human infections which are partially resistant to most all effective antibacterial agents but which are inhibited to a significant degree by a combination of drugs (Table III). These infections are caused by Brucella, Pseudomonas, fecal or other enterococci, Klebsiella, and some staphylococci. Therapy for infections in

TABLE IV.—Common Complications Following Use of Antimicrobial Agents

- Allergic
  - Fever
  - Rashes
  - Contact dermatitis
  - Angioneurotic edema
- Oral
  - Ulcerative stomatitis
  - Cheilosis
  - "Black tongue"—monilial thrush (most common after topical use of lozenges and troches)
- Intestinal
  - Nausea, vomiting, and diarrhea
  - Proctitis and pruritis ani
  - Fatty deposition in liver—hepatosis
  - Disturbances in absorption and vitamin deficiency

TABLE V.—Serious Complications Following Use of Antimicrobial Agents

- Hypersensitivity phenomena
  - Anaphylaxis
  - Serum sickness
  - Periarteritis nodosa (?)
- Effects upon blood-forming organs
  - Thrombocytopenic purpura
  - Bone marrow depression (chloramphenicol, sulfonamides)
- Neurologic defects
  - Peripheral neuritis
  - Encephalitis (sulfonamides and intrathecal use of penicillin and streptomycin)
  - Eighth cranial nerve palsy (streptomycin)
- Enterocolitis caused by Staphylococcus aureus

TABLE VI.—Undesirable Bacteriologic Effects Following Use of Antimicrobial Agents

- Superinfections caused by
  - Proteus
  - Staphylococcus aureus
  - Pseudomonas
  - Fungi
- Emergence of drug-resistant strains, single and crossed
- Substitution of Monilia for normal fecal flora

the human caused by them should, therefore, include two drugs.[11–13] Although it is not possible to determine the best combined therapy for each of these infections, the most common regimens are indicated in Table III. Moderate amounts of streptomycin (1 to 1.5 Gm. daily) and either aureomycin or Terramycin (1.5 to 2 Gm. daily) are needed for brucellosis. Massive therapy with penicillin (in excess of 5,000,000 units daily) and large amounts of streptomycin (1.5 to 2 Gm.) are required for endocarditis caused by streptococci partially resistant (above 1.0 unit per cc.) to penicillin. If the laboratory suggests that Klebsiella are sensitive to less than 12.5 units penicillin per cc., a combination of streptomycin (2 Gm. daily) and penicillin (±10,000,000 units daily) will eradicate most of the organisms. If the Klebsiella are totally resistant to penicillin, a combination of streptomycin with either Terramycin or aureomycin or a sulfonamide offers best therapy.[13] It has recently been shown that Terramycin in moderate dosage (2 Gm. daily) with small amounts of polymyxin B (50 mg. daily) will control effectively pseudomonal infections.[12] These examples must suffice to cover the indications for prescription of two drugs for the treatment of a single infection.

There are decisive grounds for avoiding the administration of two antibacterial agents in the absence of clear-cut indications. With combined therapy hypersensitivity phenomenon develop at least twice as often, not at the standard rate; the simultaneous occurrence of organisms becoming resistant to two agents is not justified, and more complete alterations in the normal symbiotic and parasitic relations between host and organisms come about unnecessarily. A sudden shift from a predominantly gram-positive bacterial population in the throat or tracheal bronchial tree to gram-negative ones lends itself to the development of strange syndromes, often untreatable with any presently available antibiotic.[14] Finally, there are occasions when one agent interferes with the action of another. There is evidence, for example, that the addition of aureomycin, and presumably Terramycin, to the penicillin therapy of pneumococcal meningitis actually reduces the patient's chance for recovery.[11] Similarly, chloramphenicol antagonizes the effectiveness of penicillin against fecal streptococci.[3,4] It is obviously impossible to describe in full the precise indications for single drug therapy in contrast to combined treatment. Generally, it is true that unless there are specific reasons for the use of two agents in a single infection, therapy with one agent is safer, more sensible, and as effective. By using this as a principle, interference phenomena and other unwanted side-effects are averted.

Complications of Antimicrobial Therapy

During the past two or three years an increasing number of medical papers have been devoted to describing certain complications arising in the human and in society as a result of the widespread prescription of antimicrobial agents (Tables IV, V, and VI). Perhaps this shift from strictly clinical reports about efficacies of the many drugs presently available is desirable. Certainly most of them attract attention to biologic phenomena which have been predicted for many years by early workers in the field, and their natural occurrence needs re-emphasis. There are three important separate untoward side-effects with the unlimited use of antibacterial agents in the human which deserve some comment; the others are well known and will not, therefore, be redescribed:

1. The development of serious hypersensitivity states, the worst of which is death from anaphylaxis (Table V).

2. The development of hepatic and intestinal dysfunction which frequently occurs with the oral administration of so-called broad-spectrum drugs such as aureomycin (chlortetracycline) and Terramycin (oxytetracycline) (Table IV).[8,9]

3. The emergence of strains of bacteria, initially susceptible to one or more antimicrobial agents, which become totally resistant to them (Tables V and VI). The most significant and common change has been observed with hemolytic staphylococci, variety aureus, the majority of which strains are now penicillin resistant.[15-17]

Sudden death from anaphylaxis following the parenteral administration of penicillin is being reported with increasing frequency. In most cases acute hypersensitivity phenomena can be avoided; the accident occurs only in those previously known to have had an allergic reaction to penicillin and whose prior sensitizing exposure was long removed from the shocking dose. It rarely if ever develops with the oral route of administering penicillin, and indeed many believe that some, if not all, of the penicillin must be given intravenously to produce the anaphylaxis. It should be emphasized that the incidence of hypersensitivity reactions from penicillin has not changed (1 to 2 per cent), but greater numbers of people have had previous exposure to it and, therefore, the number of cases is growing. The salt or carrying materials are usually less capable of producing acute reactions than penicillin itself.

Studies upon liver function following the administration of broad-spectrum antibiotics point to the inevitable conclusion that the resulting fatty deposition is probably deleterious to the health of the host.[8,9] The condition is easily reversed, however, following cessation of drug, and as far as can be determined, no long-term defect from the experience persists. In some ways the event does explain disturbances in absorption and the development of gastrointestinal lesions which simulate vitamin deficient states. Although the associated changes in fecal flora might on the surface be considered the background cause of these events, such is not the case, and at this time no real explanation can be proffered for the development of intestinal changes.[8,9] With their development no specific antidotes are reliable for the control of nausea, vomiting, diarrhea, stomatitis, proctitis, and flatulence except the discontinuance of the drug or drugs which were responsible for their development.

There is some misinformation about the incidence of penicillin-resistant staphylococcal infections. Although it is evident that there are increasing numbers of staphylococci resistant to penicillin in the population as a whole and in a hospital population in particular, there is no information that there is an increased number of infections, serious or simple, caused by these organisms.[18] The mechanisms responsible for their increasing numbers cannot be described totally, and methods to avoid their presence in a community are not, therefore, known. The problem is receiving wide study, and until answers are available, there are certain procedures which can be accomplished to reduce the seriousness of an infection caused by penicillin-resistant staphylococci. The occurrence of staphylococcal scarlet fever, non-pus-producing cellulitis of throat or extremities, and the extraordinary syndrome of ulcerocolitis, each developing during the administration of broad-spectrum antibacterial agents for other reasons, is best treated by stopping that therapy. This allows re-establishment of the normal flora in the mouth, bowel, and skin, following which staphylococci disappear. Although on the surface a seemingly paradoxic regimen, it is certainly true that in most instances improvement follows.

Primary infections caused by staphylococci resistant to penicillin must, of course, be treated. Bacitracin usually is most effective. Given locally it can be administered safely for long periods. The nephrotoxicity associated with its parenteral usage must on occasion be endured if the infection warrants it, although dosages above 100,000 units daily are to be avoided if possible. For short periods erythromycin can also be given. Unfortunately, unless the infection is promptly controlled, the staphylococci become resistant to it rapidly, and little long-term effect (more than four or five days) can be anticipated with its use.[19] Some staphylococci develop only a partial resistance to penicillin. When the laboratory evidence for this is conclusive and if the organisms do not produce excessive amounts of penicillinase, generally easily determined in the laboratory, large doses of penicillin (in excess of

5,000,000 units daily), "Benemid" to prolong its activity, and streptomycin may be the combined therapy of choice. There is also recent evidence that combinations of broad-spectrum agents such as erythromycin and Terramycin have a moderately deterring effect upon the growth of staphylococci. In severe and otherwise untreatable infections a trial of such combinations is in order.

To summarize, three features of the problem of penicillin-resistant staphylococci must be re-emphasized. There is no evidence that there are now increasing numbers of infections caused by them, although they are present in greater incidence in the population and thus become a potentially serious problem for the future. When they produce a clinical disease picture in a patient already receiving antibacterial therapy, paradoxically enough the first therapy is cessation of all therapy. As a primary infection which deserves specific drug treatment, bacitracin, erythromycin, large doses of penicillin and streptomycin, and large doses of erythromycin with another broad-spectrum agent can be tried with some hope for control.

Undifferentiated Upper Respiratory Tract Infections

It can be estimated that the commonest group of infections treated with antibacterial agents is that associated with inflammation of the respiratory tree with and without pneumonitis. Since the vast majority of these infections are of viral etiology and since none of the presently available materials have antiviral activity, it is safe to postulate that little good is accomplished with them, and indeed more harm than good is enjoyed by the patient.[6] The best that can be said for the usual prescription of penicillin or Terramycin or aureomycin to the patient with an undifferentiated respiratory infection is that secondary bacterial contaminants are presumably prevented. Such is probably not often the case, however, for it has not been observed that secondary bacterial infections commonly develop in the patient with a viral infection. The presence in sputum produced by the patient after the third or fourth day of infection of such organisms as Hemophilus influenza does in no sense indicate a bacterial infection caused by them. There certainly is no evidence that the use of any antibacterial agent, regardless of dose, has altered beneficially the course of a viral respiratory infection. Clinical course including fever, cough, and sputum production are unaffected either in their duration or severity during the course. In those with pneumonia x-ray clearing is not hurried because of antibacterial treatment. Because the disease is commonest in young adults and because there is a negligible mortality rate associated with the infection (unaffected incidentally since the introduction of the sulfonamides), the best that any therapy can be expected to do is shorten the course of the disease and/or to lighten symptoms during it. Antibacterial therapy does neither.

Yet antibacterial therapy continues to be prescribed for most viral infections. Although such prescription is illogical and associated with a stated risk of unwarranted side-reactions from the treatment, the importunities of the patient and his family apparently exercise greater influence than a sensible decision by the physician.

Prophylactic Use of Antibacterial Substances

Prevention of infection is an important part of a physician's responsibility. Because presently available antibacterial agents do not cover the gamut of all bacteria (notably Proteus and certain exotic organisms) nor do they have any activity against most viruses, fungi, and other higher forms of pathogenic organisms, it is not yet possible to prevent all infections, and perhaps this is good. It would be a most different, even unique, population who existed in an infection-free society. On the other hand, there are now clear-cut indications for the use of antibacterial substances to prevent certain infections in a prejudiced portion of the population. Recurrent attacks of beta hemolytic streptococcal sore throats in an individual with rheumatic fever are essential in order to avoid further heart damage. Gonorrhea can be prevented by the judicious use of small amounts of penicillin. Burns are managed better with associated antibacterial protection. Large bowel open surgery is made safer by preparation of bowel by Neomycin preoperatively.

These situations offer clear advantages to long and short-term prophylaxis, and undoubtedly there are other similar worth-while indications. But common usage of antibacterial agents to prevent something vague has extended well beyond these specifics, and their use cannot only be questioned but actually condemned. The good accomplished cannot be weighed equally with the damage incurred, for nature will not long be frustrated.

Newer Agents

Two new materials have been described recently, tetracycline and erythromycin.[10,20] Tetracycline has precisely the same antibacterial spectrum as aureomycin and Terramycin; indeed, chemical formulas for each are remarkably alike. Its singular advantage is that there are fewer gastrointestinal side-effects associated with its oral administration. For specific infections its dosage is the same and its activity apparently identical with its two chemical brothers. It again is emphasized that chloramphenicol, aureomycin, Terramycin, and now tetracycline do not represent different therapies for infections; rather the use of a second is merely replacement of the first. If one fails, all probably will.

Erythromycin is active only against gram-positive organisms. Its activity is probably comparable to that of aureomycin, but it is not as potent against susceptible species as penicillin. Organisms rapidly become resistant to it, and its place in therapy probably will be limited.[19,20]

Summary

A general reorganization of present thinking about the usefulness of antibacterial substances has been presented. Actually no new information is described; an attempt has been made only to re-emphasize and to restate certain principles of their activity in the human host. The obvious overprescription of all antimicrobial agents lends itself to the decision that such reiteration of fact is needed. Three facts deserve final mention:

1. Irrespective of infecting microorganism and regardless of the potency of any single antibacterial agent, final cure of any human infection can only be achieved by the full cooperation of the host himself in his proper elaboration of effective humoral and cellular defenses. A drug by the pound will do no more than cause a temporary clinical remission of an infection in a human who is incapable of defending himself.

2. All presently available antimicrobial agents are active only upon their direct exposure to the organisms causing the infection. They do not repair tissue or act as symptomatic drugs. Their usefulness in the human is terminated when the organisms are so inhibited in their growth that they are no longer pathogenic. The trick of prescription then is for the physician to design treatment in such a way that the agent arrives at and within the site of the inflammation where the organisms are located in active concentration and is kept there for sufficient length of time that maximal drug-organism exposure is accomplished.

3. Antibacterial agents are not antiviral or antifungal agents, and indeed the presently available ones do not cover the gamut of all potentially pathogenic microbacteria. All infections cannot, therefore, be treated or prevented. Indications for their use are clear. Present overusage fails to place these indications in proper perspective.

Finally, the physician must of necessity, as he does with every other drug, prescribe antibiotics to accomplish more good than harm. He can only do this by recognizing the infecting microorganism and which drug is most efficacious in altering its pathogenic propensities in the human. Otherwise, all antibacterial therapy is guesswork which, of course, is neither wise therapy nor safe therapy.

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Diuretic Potency of a New Organic Mercurial, CT-464 (Dicurin)

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It is now apparent that mercaptomerin is as potent as Mercuhydrin, mersalyl, Salyrgan, and the others.[1,2] It has a markedly decreased cardiotoxicity in animals,[3] but its real value lies in its practical use by the subcutaneous route. Gold,[1] however, has recently noted that 25 per cent of patients receiving mercaptomerin have developed "troublesome" local reactions. He further states that this figure is comparable to that seen with subcutaneous Mercuhydrin. It is thus apparent that the primary need for a potent mercurial for administration by the subcutaneous route still continues.

The mode of action of all mercurials is probably the same.[4,5] A specific, reversible interference in renal tubular physiology is probably caused by the mercuric ion. Despite this, however, the equivalent potency of any new mercurial must be established before it is explored for its efficacy and nontoxicity by the subcutaneous route.

In most clinical studies the diuretic potency is analyzed on the basis of the induced weight reduction and/or the increase in urinary volume. The self-evident errors in such analyses necessitate large numbers of patients and trials. Another approach [6,7] is to note the increase in sodium and/or chloride diuresis induced by the mercurial. However, before utilizing this latter thesis in a small number of patients, many factors must be controlled, as was attempted in this series.

The present study is an attempt to evaluate a new diuretic used in a small number of patients and thereby to estimate its potency in reference to one of the more commonly used mercurial diuretics. CT-464 (Dicurin)* was investigated in animals by Robbins and Chen.[8] It is similar to mersalyl U.S.P. except that the methoxy group was substituted by a hydroxy-ethoxy group and then combined with a procaine radical. Theophylline was then added to facilitate absorption and to decrease local toxicity. It forms a stable solution. In animals its potency equals mersalyl, but it has a relatively decreased acute toxicity, and a lessened local irritability on intradermal injection. It may thus prove to be another drug suitable for subcutaneous injections.

Material and Methods

Sixteen hospitalized patients were used in this study. Ten were edematous, and eight were in congestive failure; one had cirrhosis with ascites, and one had pleural effusion of unknown etiology. Six nonedematous, normal subjects also received the mercurial. All cases were placed on a diet containing 34.8 mEq. of sodium. Their daily fluid intake was maintained between 1,500 to 3,000 ml. since it has been shown that the water output, of itself, does influence the net loss of sodium and, more importantly, potassium.[9] The patients were not dehydrated. No patient with electrolyte imbalance or deficiency was used since "mercurial resistance" is frequently related to such states.[10]

The patients were kept for several days on this fixed regime, and then for two days, daily water and salt intake, urine volume, sodium and potassium excretion, weight, hematocrit, and serum nonprotein nitrogen were recorded. On the third day 2 ml. (74 mg. of mercury) of mercurial were administered subcutaneously. The determinations noted above were again recorded for the next two days. All patients received single subcutaneous injections of the mercurial to be studied, with four patients in the above group receiving five injections of mercaptomerin for purposes of comparison. Six of the edematous patients were on longstanding maintenance dosages of digitalis.

Laboratory methods included the determination of the sodium and potassium values by the Universal Internal Standard Flame Photometer, the chloride values by the modified method of Sendroy, the carbon dioxide combining power by

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* Hydrothroxin Procaine with theophylline, supplied by Lilly Pharmaceuticals.

TABLE I.—DIURETIC POTENCY OF DICURIN

	Edema (10 Patients)				Normals (6 Patients)			
	Control	Diuretic	Significance*	Ratio of Increase of Diuretic Day Over Control	Control	Diuretic	Significance	Ratio of Increase of Diuretic Day Over Control
Weight loss (pounds)	0.5 ± 0.3	1.8 ± 0.4	P = 0.02	...	0.85 ± 0.25	0.69 ± 0.45		...
Intake (cc.)	2,008 ± 160	2,017 ± 224		...	2,460 ± 148	2,527 ± 332		...
Output (cc.)	1,438 ± 198	2,142 ± 210	P = 0.02	...	2,064 ± 29	2,681 ± 360		
24-hour total urinary output								
Sodium (mEq.)	38.4 ± 7.4	132 ± 18	P = <0.01	6.1 ± 1.7	56.9 ± 11.3	138.5 ± 19.5	P = <0.01	2.8 ± 0.6
Chloride (mEq.)	50.7 ± 14.0	155.6 ± 21	P = <0.01	4.8 ± 1.3	52.5 ± 9.0	145.0 ± 19.3	P = <0.01	3.11 ± 0.7
Potassium (mEq.)	47.6 ± 7.1	65.7 ± 11.7		1.37 ± 0.3	66	62		0.97

* Blank under "Significance" indicative of no statistical difference.

TABLE II.—COMPARATIVE POTENCY IN SAME PATIENTS

	Dicurin	Mercaptomerin
Number of patients	5	5
Weight loss (pounds)	1.07	1.16
Increase in output (cc.)	815	479
24-hour total urinary output of sodium (mEq.)		
Control	51.7	41.1
Dicurin	140.1	117.6
Ratio of increase of sodium, diuretic day over control	6.15	6.16

the Van Slyke technic, and the nonprotein nitrogen by the Folin-Wu method.

Results

As noted in Table I, there was a sixfold increase in sodium and a fivefold increase in chloride loss in those patients with edema as compared to less than a threefold loss in the normal. The potassium excretion was not significantly affected in either group, although the trend toward an increase may be a result of the increased urinary volume.

Table II notes the comparative results of Dicurin and mercaptomerin. The sodium diuresis, which is statistically significant for both, is almost identical for both drugs. No attempts to correlate the speed of onset or the peak of action were made. The discrepancy between the increase in urine output and weight loss for the two drugs again emphasizes the inherent difficulties of using weight loss as a criteria for potency in a small series.

Incidentally in this report of 45 subcutaneous injections of 2 cc. of Dicurin to date, only two local reactions have been noted. These consisted of two nontender ecchymoses in two patients.

Comment

This sixfold sodium diuresis, in general, agrees with the figures recorded by others[11] in patients on a low-salt diet. The 700-cc. increase in urinary volume and fivefold increase in chloride excretion are somewhat less than those recorded by Grossman[7], who observed that 2 cc. of mercaptomerin subcutaneously resulted in an increase of over 1,000 cc. in urinary volume and a tenfold increase in chloruresis. Thus, although our emphasis was primarily on sodium excretion, the two drugs seemed equivalent in other respects as well. In another study, Moyer[6] noted on studying Mercuhydrin and three new mercurials a 1.78-Gm. increase in sodium excretion following the intramuscular injection of 1 cc. of Mercuhydrin. Using 2 cc. of Dicurin, we obtained a mean increase of 2.16 Gm. in sodium excretion.

It is of interest that on bed rest and salt restriction alone, those patients in congestive failure were noted frequently to have a day of maximum weight loss soon after the above regime was started. This loss averaged 2.0 ± 0.4 pounds. Since neither of the mercurials tested herein produced as great a weight loss, one must re-emphasize that potency should not be measured from weight loss alone in bedridden patients on a restricted diet. The bed rest and diet restriction may in part account for the marked discrepancy in weight loss that occurred in our normals after a mercurial injection as compared to the study of Lyons *et al.* in ambulant students.[12]

It is noteworthy that the very complete study done by Best *et al.*[13] indicates that the local toxicity of Dicurin is approximately equivalent to that of mercaptomerin. Our series with reference to number of injections is too small to make any statement altering their well-conceived comments and conclusions. However, from the point of electrolyte excretion, we can add more emphatically that the potencies of Dicurin and mercaptomerin are probably equivalent.

Summary

1. Dicurin has a potency about equal to that of mercaptomerin and probably to that of other commonly used mercurial diuretics.

2. Following Dicurin administration, edematous patients on a 34.8 mEq. sodium diet, bed rest, and a 2-L. fluid intake have a sixfold increase in sodium excretion. This is presumptively true of all the organic mercurials of the same mercuric ion content.

Technical assistance by Miss Mary Schwenderman and Miss Miriam Oot, B.S., is gratefully acknowledged.

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Orchids for Medicine

Henry Spencer, salesman for a florist, had often thought of medicine as a career. Dr. Edgar McPeak of Washington, D.C., had occasionally wondered if his hobby of growing orchids might be coaxed into paying off. The two men met when Spencer, described by a friend as "the sort of fellow who probably, when he was six seconds old, tried to swing a business deal with the doctor who delivered him" sold some orchid plants to Dr. McPeak.

In 1949 the young salesman quit his job and enrolled in the Medical College of Virginia. During his years as a student he earned some $20,000 selling orchids by mail. While still at school he and Dr. McPeak bought several acres of land in Kensington, Maryland, just outside of Washington, and erected a 162-foot greenhouse. They are now incorporated as Kensington Orchids with Dr. McPeak as president and Dr. Spencer as treasurer.

"Neither of us wants to make a career out of orchids," Dr. Spencer says. "We're perfectly satisfied with a well-paying hobby."

Their hobby has been estimated to be worth $100,000.

—*Medical Economics, February, 1954*

Cornell Conferences on Therapy

DEPARTMENTS OF PHARMACOLOGY AND MEDICINE OF THE
CORNELL UNIVERSITY MEDICAL COLLEGE AND NEW YORK HOSPITAL

These are stenographic reports, which have been edited, of conferences by members of the Departments of Pharmacology and of Medicine of Cornell University Medical College and New York Hospital, with collaboration of other departments and institutions. The questions and discussions involve participation by members of the staff of the college and hospital, students, and visitors. A selected group of these conferences is published in an annual volume, *Cornell Conferences on Therapy*, by the Macmillan Company.

The Medical Treatment of Peptic Ulcer

Dr. George Reader: The conference today concerns the medical treatment of peptic ulcer. Dr. Thomas P. Almy of our staff will open the discussion on this important subject.

Dr. Thomas P. Almy: It would probably be fatuous to start with the statement that peptic ulcer is a common disease. About ten million Americans, according to the best estimates, have or will have it during their lifetime. It results in few deaths but in great disability, not only in terms of the numbers of people involved but also from the fact that it hinders the most productive years of people who would usually play active and responsible roles in society. There is much agreement about the general measures of therapy which we apply in this condition, but the end results are not good. We must face the fact that about 80 per cent of patients who are started on medical therapy will have recurrences of the disease. How can we improve this situation?

I think, before we get down to details, that we will have to consider certain facts regarding the disease and its natural history. First of all, we must remember that the term peptic ulcer includes several diseases of which the more common are duodenal ulcer and gastric ulcer. These two differ physiologically, anatomically, and particularly in problems of differential diagnosis. But since duodenal lesions are the more common and the more controversial, I think we should talk from here on about duodenal ulcer.

Second, let us remember that duodenal ulcer is an extremely chronic disease. A few years ago a gastroenterostomy was performed in this hospital on a man who had had his duodenal ulcer for fifty years. Even this is not a record, and it is common for us to see patients with a history of ten, twenty, or more years duration. Therefore, we have to consider not only acute problems but the future. Most of the time this disease is asymptomatic. But at variable intervals pain, bleeding, and other symptoms occur which are associated either with the recurrence of an active ulcer or with the enlargement of a previously existing lesion. With time these episodes generally become progressively more severe and disabling.

There is a third point. The absence of symptoms does not prove the absence of an ulcer. It has been our experience that after the patient is started on therapy, the size of the ulcer crater diminishes rapidly. Soon the patient is without symptoms, often within a few days or a week. But for a considerable period thereafter one can demonstrate an ulcer by x-ray in the average case, even though symptoms have ceased. The patient is usually willing to quit therapy at that point. Eventually the crater is no longer visible, and then most doctors are willing to quit. But the x-ray cannot detect a tiny lesion; there must be a threshold below which it is invisible, and it is obvious that the process of healing requires a longer time than the period of symptoms or the period of recognizable ulcer.

So this is some of the natural history of the disease that we must take into account. Now, what shall our goal be in therapy? Shall it be merely the relief of symptoms? Shall it be the anatomic healing of the ulcer, which will take longer? Or shall we assume responsibility for the prevention of recurrences, the elimination of the disease as a whole? To put these matters in proper perspective, let us think of the problem in comparison with pulmonary tuberculosis. At one time it was common for patients with tuberculosis to be treated just because they had a cough. When the cough disappeared, the treatment was considered successful. Later it became obvious that it was necessary not only to eliminate the cough but to arrest the disease process within the lung, and since then, of course, we have accepted as our responsibility the permanent arrest of the disease process and the prevention of recurrences. Duodenal ulcer is admittedly a somewhat less serious condition, but it can disable people over long periods of time. I believe that the major difficulty in medical therapy has been the failure to deal with the proper dimensions of the problem, failure to consider that this illness must be treated in its asymptomatic phases and that plans must be made to prevent recurrences.

The methods to be used may be properly organized in the light of current concepts of the etiology of the disease. We think of peptic ulcer as a psychosomatic phenomenon, a reaction to some stressful life situation. An individual reacts to this situation, or to his interpretation of it, with an integrated defensive pattern largely involving the autonomic nervous system and the gastrointestinal tract. Only in a secondary fashion do the things he eats influence the result of this process, although most patients, and unfortunately many doctors, think the diet is the prime aspect of therapy. We try to attack the etiology of the disease and attempt to modify or improve the patient's life situation. Hospitalization itself is an example of that modification. Efforts to help the patient find a new job or to get away on a vacation are other instances. In simple ways the patient must be helped to look upon life in a different manner, to find a way of expressing his hostile feeling. We suggest, for example, that they channel hostility into physical exercise, into something which enables them to attack a symbol of their resentment. Lest you think all this rather occult, I would like to mention a cartoon I saw in the lay press which in an absurdity symbolized our aims. A woman was seated before a doctor's desk, and the doctor was saying, "Your husband is a sick man, Mrs. Fravel. Do you think you can keep your big yap shut for a few days?"

Having done what you can for the life situation and the patient's attitude toward it, what can be done about the overactivity of the autonomic motor nerves to the stomach, which are cholinergic and are inhibited by anticholinergic drugs? The classic drug of this type is atropine, and the most effective inhibitor available at present is methantheline bromide, or Banthine. You can damage the end organ by surgery, diminish the capacity of the stomach to secrete hydrochloric acid by removing most of it. The surgeon may also interrupt the autonomic nervous system by vagotomy. It is also possible to damage the end organ by intensive x-ray therapy over the fundus of the stomach. Finally, we can remove the ancillary stimuli to ulcer formation. We cut down on coffee and alcohol, which are potent stimulants of gastric secretion, and on condiments and other irritating foods.

All this is what we like to call antietiologic therapy. We have attempted at each step to interfere with the development of the state of hypersecretion in the stomach. But there is another important phase which should be called physiologic therapy, the adaptation of the individual to this state of hypersecretion and hypermotility of the stomach. This is the familiar program of diet and alkali therapy. Its sole importance is constant buffering of the gastric acid, because only in a highly acid medium will peptic digestion occur. So the regularity and frequency of feedings and the dosage of alkaline medication is the crux of the problem. It is much more important that a person eat six times a day than that he eat pureed vegetables, and I feel there is absolutely no place for a "three-feeding" diet in treatment. It is obviously important to continue this protective program long after the symptoms are gone and the ulcer is healed. In practical terms in our clinic this means that the patient gets six feedings daily for six months after the symptoms have disappeared and the x-ray no longer shows a crater. This provides a longer period of medical supervision during which there is a possibility of altering the basic conflicts of the individual and establishing what has been called the "ulcer life" as desirable in the mind of the patient.

Six feedings a day for six months sounds like a lot to many ulcer patients and their doctors, yet by comparison with a year of bed rest for a minimal lesion of pulmonary tuberculosis it seems not too much to ask. Plans can be laid at the same time to deal with the threat of recurrences. These can be anticipated in certain situations of stress which are uncovered in this prolonged period of management. The patient can learn to avoid these situations or to adapt to them by ventilating his feelings freely to others, by punching the bag, or by indulging in other outlets for his feelings when they develop. He can learn to recognize his feelings of tension and accept them as an adequate signal to resume an ulcer regimen of diet and alkali. In this way we think he can protect his stomach in a physiologic manner against the hypersecretion which comes with feelings of sustained hostility. But in plain terms the prevention of ulcer recurrences can only be accomplished with a patient who, like a cooperative patient with pulmonary tuberculosis, will accept some lasting modification of his life plan.

Dr. Reader: Thank you, Dr. Almy.

Dr. Glenn, I know you don't operate on all the ulcer patients you see; you carry some along on medical therapy. Could you tell us if your management differs from that outlined by Dr. Almy?

Dr. Frank Glenn: Why no, I don't think it does. As a matter of fact, Dr. Almy and I have several patients whom we treat jointly. When I say "jointly," I mean that we treat the complications as they arise. We have one patient at present whom we have observed together for quite some period. His ulcer symptoms were intractable. His pain was very severe. He violated all the admonitions that Dr. Almy has outlined. Even with hospital treatment and everything else that we thought would help, he failed to respond. Knowing full well that he was a good candidate for a marginal ulcer, we did a gastric resection. As a result, that patient did very well for a period of time. Then, seeking to go back to his old designs of life, which were demanding indeed, he developed a marginal ulcer. No patient can be operated upon for ulcer and discharged as cured without need of a continuing medical regimen. If a patient does not adhere to the philosophy embodied in Dr. Almy's statements, he is a candidate for future trouble. Whether or not he develops a marginal ulcer or just has mild symptoms of indigestion is beside the point. The fact is that that man had and still has an ulcer diathesis. Until we can attack the basic cause of ulcer and not work on the periphery as we surgeons do, and as the medical people do too, we are bound to have a disease that will last as long as life produces the stimuli that may precipitate an ulcer.

Dr. Walter Modell: Of 100 patients with peptic ulcer presenting themselves for medical treatment, about how many will end up having an operation?

Dr. Almy: Well, the answer depends very much on the interests of the doctors involved and on the attitude of the patients.

Dr. Modell: I mean taking doctors the way they are.

Dr. Almy: I think probably more people should have the operation than actually do. I would guess that perhaps a quarter of all patients with peptic ulcer would, under average circumstances, wind up having the operation.

Dr. Modell: May I ask you another question? What would happen if the ideal situation prevailed: the doctor had the right interest, the patient the capacity for the cooperation you would like, and so on. How many would then be operated on?

Dr. Almy: I really could not answer that, Dr. Modell. Therapy would certainly be easier.

Dr. Reader: Dr. Almy has indicated that some of these patients ought to have operation earlier, or perhaps more of them should have operations. Do most patients with ulcer go too long before they come to operation? Is there advantage in early operation?

Dr. Glenn: No, I don't think that there is any particular merit in operating after a limited period of conservative treatment. I believe that we operate on approximately 15 per cent of the patients who come through the outpatient department with the diagnosis of peptic ulcer. Many are handled medically and completely relieved of symptoms on an ambulatory basis. Then there is a group of patients who do not do well under those circumstances. But they come into the hospital, and on the hospital regimen they do well. They not only do well at the time, but they learn to sustain relief by adhering to the rules and medications which are prescribed for them. Then there is a group of patients whose symptoms are not relieved by any medical means.

Now, when is surgery indicated? The answer depends upon the situation. Let me illustrate. If there is a perforation, there is no question.

That is an emergency situation, and the patient deserves operation, even though it is not definitive surgery. Bleeding is a more controversial indication. If a patient bleeds a little, he certainly can be managed medically, and we do so in a great many cases. When hemorrhage becomes massive or recurs, then surgery should be done. Obstruction due to scarring of the duodenum is a direct indication for surgery. The great controversial group is that which includes patients with pain. How much pain must a man have before he should be subjected to operation? Is it pain that annoys him or pain that renders him unable to earn his living? Here the decision is difficult, and I cannot give a flat answer.

The attitude that therapy must be either medical or surgical is, I think, wrong in itself. Our general policy has been to treat all patients medically, and when that fails, then we proceed to surgery. That holds for the patient who has recurrent or persistent pain. Likewise, it is seldom that we operate upon a patient for bleeding at the first hospital admission unless he has had massive bleeding or a number of previous hemorrhages or falls in the older age groups that are likely to bleed again, possibly exsanguinating.

Dr. Reader: Dr. Brethwaite was to have been here. Yesterday, he mentioned that he is inclined to believe that pyloric canal ulcers are in a separate category in which operation should not be delayed. After a short trial of therapy such a patient should come to operation. Do either of you have a comment on that?

Dr. Almy: I think Dr. Brethwaite together with Dr. Weintraub has studied the best series of pyloric ulcers in this country. They have distinguished pyloric from other nearby ulcers and shown that they generally do not respond well to medical therapy, while they have consistently done well following gastrectomy. I think that is a special case, and when a typical pyloric canal ulcer is identified, we should not waste too much time with medical therapy.

Dr. Glenn: I think there are certain other categories that probably should not be allowed to go too long, particularly the ulcer on the posterior wall of the duodenum with a crater that may be in the vicinity of the pancreatic or duodenal artery. If an ulcer such as that persists, even without marked symptoms, it should be operated. How do you feel about that, Dr. Almy?

Dr. Almy: I would be influenced by the size of the ulcer and the degree of roentgenologic success from medical treatment before deciding on operation.

Visitor: I want to ask Dr. Almy whether he uses any different medical treatment for gastric ulcer as against duodenal ulcer?

Dr. Almy: No, I would not say so. The problem there is to be certain of the differential diagnosis and to lean over backwards to avoid mistaking a carcinoma for a benign ulcer.

Dr. Modell: Do you think Co Tui's plan of feeding has any status now?

Dr. Almy: One could easily be opinionated on that. In general, though, I think you will find very few people still using protein hydrolysates and very few claiming good results from their use. They have been shown to have buffer value but not significantly greater than any whole protein. Because of this and because of their high cost and unpleasant taste, I think they have generally been abandoned.

Dr. Reader: By "whole protein" I assume you mean red meat?

Dr. Almy: I have no objections to meat if the budget will stand it, but protein-enriched milk drinks are the most useful whole-protein feedings.

Dr. Modell: Do you think it possible that the intense distaste for the protein hydrolysates had something to do with the good results originally claimed, in that gastric secretion was paralyzed?

Dr. Almy: I think that quite possible.

Visitor: Occasionally I read in the popular press of doctors recommending elimination of diets, urging the patients to get out and have a good time instead. I think that really the suggestion is to get rid of the patient's dependence on the diet and to reorganize his life. What do you think of that? Do patients become dependent on the ulcer diet and feel they are bound to have symptoms if they break it?

Dr. Almy: There has been an unfortunate overemphasis on dietary aspects so far as restrictions on types of food are concerned. Many patients come to regard the diet itself, and all the people who tell them to stick to a diet, with a certain amount of resentment. The diet becomes the reason why they cannot enjoy themselves with friends or feel self-confident at a dinner party. Thus a certain amount of harm is done. Actually there is virtually no evidence to indicate that any but slight restriction on the quality of the diet, the nature of the food, has any great value in the healing of an ulcer. The concessions that we ought to ask the patients to make are in other spheres, those of coffee, alcohol, and overwork.

Dr. Reader: What foods other than coffee, alcohol, and hot dogs with mustard do you forbid the patients?

Dr. Almy: That is practically the list, that is, coffee, alcohol, and condiments.

Dr. Modell: Not tobacco?

Dr. Almy: That is something else. May I talk a minute about tobacco?

Dr. Reader: Yes.

Dr. Almy: Several years ago, not many because I have not been active very long in this work, I summarized the literature on the effects of tobacco smoking upon gastric ulcer. There were a few papers which indicated that smoking induced hyperactivity of the stomach and therefore might be undesirable for a patient with ulcer. The majority of them, however, indicated quite the opposite. I have repeatedly verified this by asking groups of students whether they did not get relief from hunger pains with a cigaret. I personally think there is nothing to validate the notion that taking a patient away from smoking improves his chances of getting rid of an ulcer. Against that you frequently have the statement from people for whose opinions I have the highest regard that "I have never seen a person get rid of an ulcer if he would not give up smoking." What does that mean? It means that the more cooperative patients, the ones who took the advice of these physicians seriously, got rid of their ulcers. The others did not. Cooperative patients with ulcers, won't have ulcers very long, because they are the people who get well. The people who come to a doctor and are told flatly not to smoke very frequently get mad at that doctor every time they reach into their pocket for a cigaret and find it isn't there. That sets up an attitude of hostility between patient and physician which is about the most destructive thing that can happen in ulcer therapy. In my opinion, to avoid that hostility is worth whatever risk there might be in permitting a patient to smoke.

Dr. John Rudolph Langstadt: What dosage of Banthine do you employ? Does its use accompany the six feedings a day diet for the full six months or for how long?

Dr. Almy: I think the exact role of Banthine in treatment is still debatable. Certain things are clear. It is dangerous to depend upon Banthine alone. It will relieve pain at times when acid irritation is still present. It gives the patient a false sense of security and causes him to abandon the long-term view which we try to foster. We usually do not use it except in the acute phases of illness and in more chronic patients who have not responded readily to the diet and alkali regimen. In general, since Banthine merely resists the storms of impulses over the autonomic nervous system and is not an impervious barrier to these impulses, we feel it is more useful at night when these impulses are fewer. It is a very convenient way of handling night secretion, much more so than using the old intragastric drip or waking the patient three or four times a night for a feeding. So we have been inclined to give these patients 100 mg. at bedtime and, if the mouth is not slightly dry when they wake up in the morning, to give them more than that. If necessary we give 100 mg. at six-hour intervals during the day, but generally it is less well-tolerated during the day because of the side-effects and is less effective because of the antagonistic influences.

A number of other compounds are appearing which are chemically similar to Banthine and have comparable anticholinergic properties. These are marketed under the names of Prantal, Antronyl, and Probanthine.

Dr. Glenn: Would Dr. Almy comment on the use of atropine or belladonna?

Dr. Almy: I think first we should decide that we want a pharmacologic action as well as a placebo effect. Tincture of belladonna is a lovely placebo, and in doses of 5 to 20 drops is precisely that. It has no detectable effect on the human stomach in small doses. In larger amounts, sufficient to produce a marked dryness of the mouth, either belladonna or atropine will have a desirable anticholinergic effect and is useful. At the present time I think unquestionably the same effect is more readily achieved by Banthine and with a lower intensity of side-actions. Banthine is more expensive, and that is actually the only reason why it should not be considered superior to atropine itself.

Dr. Reader: Now, Dr. Almy, how about the use of alkali? What do you use, and when do you administer it?

Dr. Almy: Well, we, like most people, are sold on the nonabsorbable or poorly absorbable alkalis and feel that the salts of calcium, aluminum, and magnesium are as good as one can get for this purpose. It has been claimed recently that calcium carbonate is superior chemically and in terms of patient acceptance. I think it is inferior, and clinically at least the aluminum hydroxide or phosphate gels and magnesium trisilicate are certainly satisfactory.

The time for using these agents is most important and frequently misunderstood. We have even seen patients interrupted during their meals while in the hospital to receive their dose of alkali, precisely at the moment when they don't need it because they have another buffer in the stomach. The alkali should be given midway between the feedings, and that is really the chief advice one can give.

Dr. Reader: What amount of alkali do you use? Also, do you prefer the liquid preparations to tablets, and if so how much liquid is necessary to achieve proper buffering?

Dr. Almy: I don't think a liquid is necessarily superior to tablets, if one uses a readily friable tablet which the patient will chew. That means rather large tablets in the case of most of the poorly absorbable alkalis. In general, a 0.6-Gm. tablet is equivalent to a teaspoonful of the liquid form of these compounds, and we use two tablets or two teaspoonfuls at a time.

Dr. Modell: Have you had any experience with the anionic exchange resins?

Dr. Almy: Just enough to be able to say that few patients would prefer them to the alkalis. They have theoretic advantages in that they have absolutely no acid rebound and are good buffers. But the matters of taste and cost make them second choice to the compounds I have mentioned.

Dr. Reader: You seem very thoughtful, Dr. Burkhardt. What is on your mind?

Dr. Edward A. Burkhardt: I was thinking about the cartoon Dr. Almy mentioned earlier. It reminded me of one showing a woman purchasing a toy while the salesman was saying, "This is to prepare your child for the world of tomorrow. No matter how he puts it together, he is wrong." So maybe we should prepare our patients for the world of tomorrow so that they will be a little better able to accept it.

I think the greatest number of failures that have come to me over the years from other doctors have been due to a lack of attention to timing. I think we should sit down with patients and inquire as to exactly when they have breakfast and lunch and then write out the exact times to take the antacid medication, an hour after each meal. It is so important not to just hand them the medicine and say, "Take it after meals."

The matter of following through for six months is also most important. It is essential to educate the person during that period, or being without pain, he will gradually drift away. A great many cannot be held for that length of time. Some twenty years ago Dr. Weintraub told me that most ulcer cases had symptoms for at least six months prior to diagnosis. That has always intrigued me, and I have found that it almost invariably holds true. Therefore, if it takes six months to produce the typical crater, under the best therapy it certainly should take six months to get rid of it.

Dr. Reader: Dr. Almy, how about the use of barbiturates in your patients? Can you dim the impact of the world of today with sedative drugs?

Dr. Almy: I just mentioned them for the sake of completeness. I feel that we do relatively little good with sedatives in these people.

Dr. Reader: However, don't you use them?

Dr. Almy: Sometimes, but not routinely.

Visitor: You have emphasized the psychiatric-psychologic factors. Are there any series of cases where extensive psychotherapy, analysis, or something of that nature has relieved this chronic pattern of ulcer formation? Would you recommend expensive psychiatric treatment?

Dr. Almy: Hoping that there are no psychoanalysts present, I have never heard of any analyst who treated a significant series, certainly not an unselected series. The only controlled study that I know of is one going on here, in which the aim of psychotherapy is much less than most psychiatrists would consider essential. So we don't have any satisfactory answer, and I personally don't think we are ever going to find a satisfactory one to your question.

Dr. Kirby A. Martin: Here is a question I would like to ask the physiologists. Given a patient who has had pain morning, noon, and night, you ask him to come in without breakfast for an x-ray examination. I would say a good 95 per cent of those will have no pain, although they have gone without food or medication since the night before. How is that?

Dr. Reader: I don't see any physiologists present. Dr. Almy, could you answer that?

Dr. Almy: I think Dr. Palmer of Chicago

has the answer. He has been intubating people's stomachs, normal people and those with duodenal ulcers, at 9 P.M., and collecting gastric secretions until 7 or 9 A.M. He found by separating the juices on an hourly basis that the normal individual would promptly shut off his acid secretion during the night. The patient with a very bad duodenal ulcer wouldn't shut it off at all, and the person with a moderately bad ulcer secreted intermittently. At any rate the minimum point of activity was on rising in the morning. We are actually surprised to see a person with any but a very severe ulcer who has pain on arising; secretion is at the minimum then.

DR. SIDNEY ROTHBARD: Do you employ gastric aspiration as a therapeutic measure at all?

DR. ALMY: Occasionally in an acutely ill individual who cannot be otherwise managed. Perhaps we use it less than we might. We do it quite regularly in people with some degree of obstruction. They get a great deal of relief from bedtime aspiration, and we get a lot of information.

DR. ROTHBARD: Can you teach them to do it by themselves?

DR. ALMY: It can be done, but if a man is that badly off, you had better take care of him before you send him home. He might better be operated on if he needs that much attention.

DR. ROTHBARD: A second question, which may have been mentioned before. The problem of vagotomy often comes up. I wonder if you or Dr. Glenn might say a word on that score.

DR. ALMY: I think Dr. Holman could do a much better job than I.

DR. CRANSTON W. HOLMAN: There is such a great difference of opinion about this operation. I think most clinics on the east coast, and certainly we here, reserve vagotomy for patients who either have marginal ulcer or are in the group of younger patients. We know that any type of operative procedure is not as a rule attended by long-term good results if the patient is under thirty years of age. So anything we can do that will not mutilate the stomach is probably a wise procedure, and in the young person vagotomy should always be considered if an operative procedure is indicated. Of course Dragstedt, George Crile, and others believe that it is absolutely essential to combine vagotomy with gastroenterostomy. This is probably correct. That is the least traumatizing procedure we can do. If the patient has a marginal ulcer, a vagotomy may be useful unless we find by x-ray that there has been an inadequate amount of stomach removed. I think probably the better procedure then is a secondary resection.

VISITOR: Would you give ACTH or cortisone to an ulcer patient?

DR. ALMY: No. There are reports in the literature of people who have had no previous history of ulcer but who developed some major complication, hemorrhage or perforation, during cortisone or ACTH therapy. In these patients chronic duodenal ulcers were found to be present with acute exacerbations apparently due to the hormonal therapy. It is interesting that Seymour Gray and his associates have recently found a possible cause for this. They have found that the pepsin content and the concentration of hydrochloric acid in the gastric juice rise very markedly under ACTH therapy. This is perhaps the reason why these patients with latent ulcers go bad during such therapy.

Summary

DR. FRANK C. FERGUSON, JR.: The management of peptic ulcer has become both simpler and more complicated. Many of the traditional rules have been cast aside or minimized in importance during this discussion and may well be eliminated. But it has been urged that doctors assume the more difficult obligation of removing the cause of peptic ulceration and work to prevent recurrences of the disease. The principle has been emphasized that gastrointestinal ulcers result from the impact of life's stresses upon an individual's personality and that this situation lasts for life. The doctor must change permanently the patient's way of life to remove all stresses possible and educate the patient to live with those remaining, continuing these manipulations even when the ulcer is asymptomatic. Oviously this must be on an individual basis and has been described only in general terms in this conference. This is certainly the only way in which recurrences can be prevented. Other forms of treatment which have been recommended are elimination of certain gastric stimulants and the use of frequent feedings and alkalis to buffer gastric acidity, possibly vagal blocking drugs and surgery in special circumstances.

CASE REPORTS

Untoward Reactions from Phenylbutazone

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In the comparatively short time since its introduction in this country, phenylbutazone has been shown to be an excellent remedy for the relief of various forms of arthritis, acute bursitis and tendinitis, and allied fibromuscular disorders. It was reported that in the preliminary testing no serious toxic effects had been encountered, specifically no white blood cell disturbances. Minor toxic reactions, such as nausea, abdominal discomfort, vertigo, and reactivation of latent peptic ulcer were mentioned.[1] One member of a local group who had been given the material for prerelease trial stated in an informal discussion and later paper that in a fairly extensive series of cases there had been no instance of leukocyte derangement.[2] Since these original reports, however, cases of agranulocytosis, one with fatality, have been recorded by several writers.[3-9]

To emphasize the fact that the use of this drug may be fraught with great danger, this is a report, from a rather limited personal experience, of four cases of untoward reactions: one of neutropenia, two of gastrointestinal bleeding, and one of herpetiform mouth lesions.

Case Reports

Case 1.—B. C., a seventy-three-year-old white woman, had been under treatment for several years for hypertension and angina of effort. There were no significant changes in the electrocardiogram. Blood glucose and urea nitrogen were normal, as were several blood counts. Renal function, as determined by dilution and concentration test and urine examinations, was normal. It is perhaps of some significance that she had intermittent urticaria for a week in August, 1952, the cause of which was not determined. In February, 1953, she began to complain of severe pains in the upper back and across the shoulders and in both lower extremities with no specific joint localization. Since salicylates and other therapy gave no relief, on March 5 treatment was begun with phenylbutazone, 200 mg. four times a day. On March 12 she reported that her pain was greatly relieved but that because of nausea she reduced the dosage to 200 mg. three times a day. Blood examination showed hemoglobin 14 Gm. (Sahli), red blood cells 4,000,000, and white blood cells 6,200 with a normal differential count.

On March 17 she was seen at home because of sore throat and fever. The throat was very red, tongue coated, temperature 103 F., anterior cervical and submaxillary lymph nodes enlarged and tender; the lungs were clear, and there was no splenomegaly. Next day, the patient seemed worse. She was prostrated and unable to retain food or fluids. The throat was markedly injected with a few small areas of beginning ulceration; a diffuse erythematous, scarlatiniform eruption was present. Blood count showed hemoglobin 13 Gm.; red cells 4,000,000; white cells 2,000; polymorphonuclear cells 9 per cent, all immature; lymphocytes 70 per cent; myelocytes 12 per cent; monocytes 9 per cent. Penicillin was continued in dosage of 600,000 units twice daily, and glucose in saline was administered intravenously.

After a few days of this very toxic condition, the patient's condition began to improve. Fever subsided, she was able to retain fluids and some food, the throat cleared, and the rash disappeared. On March 21 blood study revealed hemoglobin 13 Gm., red cells 3,800,000, white cells 5,000, polymorphonuclear cells 52 per cent, lymphocytes 46 per cent, monocytes 2 per cent.

Case 2.—A. R., a sixty-year-old white man, had pain across the back of the left shoulder for many years, diagnosed as fibrositis. He was otherwise in excellent health with no history of any significant previous illness or other complaints. Physical examination showed no abnormalities other than tenderness in the left suprascapular area. In mid-October, 1952, he began taking phenylbutazone, 200 mg. three times a day. In a short time there was marked amelioration of his pain. Weekly blood counts were normal.

On November 8, while visiting, he suddenly felt very weak and dizzy and perspired profusely but, after resting a while, was able to drive home. When seen later that evening, he did not seem ill. His blood pressure was 120/80, his usual blood pressure, and pulse rate 88. There were no positive findings on examination.

Next morning, he passed a large tarry stool which gave a positive benzidine reaction for blood, but he had no other complaints. The stool was black, but formed, for the next few days. There was no change in pulse rate or blood pressure. Blood count showed hemoglobin 12 Gm., red blood cells 3,800,000, white blood cells 5,700, polymorphonuclears 70 per cent, lymphocytes 28 per cent, monocytes and eosinophils each 1 per cent. Bleeding time and coagulation time were normal, and there was no evidence of increased capillary fragility. He was kept in bed on frequent small feedings of gelatin in water with additional increments of food as it was apparent that there was no further bleeding. X-ray study on November 19 revealed a normal gastrointestinal tract.

Case 3.—P. F., a white woman, seventy years old, had been under treatment for ten years for hypertensive cardiovascular disease. She also had frequent episodes of pain due to osteoarthritis in various joints. On March 9, because of severe pain in the left shoulder, treatment with phenylbutazone, 200 mg. three times a day, was begun. On March 16 she reported marked improvement in her pain. Blood count was normal. Two days later, she was seen at home because of sudden weakness, perspiration, and abdominal cramps. She had had five small bowel movements, each black and tarry. Abdominal and rectal examination were normal, and black feces on the glove gave a positive benzidine reaction. There was no change in pulse rate or blood pressure. Hemoglobin was 12.5 Gm., red blood cells 3,780,000, and white cells 8,000 with normal differential. Bleeding and coagulation times and tourniquet test were normal. Subsequent gastrointestinal x-ray examination revealed no pathology.

Case 4.—A. P., a seventy-four-year-old white woman, who had been under treatment for many years for hypertensive cardiovascular disease and auricular fibrillation, began to complain of pain in the left hip and thigh in December, 1952. X-ray showed definite osteoarthritic changes. On January 20, 1953, administration of phenylbutazone, 200 mg. three times a day, was started. Four days later, she complained of painful sores in the mouth. Examination showed a number of herpetiform lesions 2 to 5 mm. in size, a few of which were beginning to break open. Medication was promptly stopped, and although there was no fever and blood count was normal, she was given bacitracin lozenges and intramuscular penicillin. In two days the oral mucosa was well healed.

Comment

All authors who have reported cases of agranulocytosis or neutropenia associated with the use of phenylbutazone have commented on the chemical similarity of the drug to amidopyrine with its benzamine type of linkage. That the reaction is due to a specific inhibition of bone marrow activity rather than to a hypersensitivity of the patient seems to be borne out by the definite maturation arrest of the myeloid elements in the cases where bone marrow studies were performed.[5,8,9]

Strazza[10] postulates that the depression of leukocyte count is caused by a direct action on the bone marrow that results when a high concentration of phenylbutazone is maintained in the body. In the case herein reported (Case 1), after the first three days the patient had been on a dosage of 400 mg. daily, as he recommends, so that it would seem that neutropenia may occur, even with the smaller doses he cautions one to use. That being so, it would appear that myeloid depression is an ever imminent danger.

In the cases of gastrointestinal bleeding there appears to be no satisfactory explanation for such occurrence. Although cases of reactivation of preexisting ulcer are not uncommon, in neither case here reported was there any history of such lesion, nor was there x-ray evidence after the hemorrhage. Granirer[11] has reported a similar case. He raises the possibility that there may be some damage to the adrenals, which in turn may be associated with ulcerative lesions of the upper digestive tract. Since there was no evidence of disturbance of the clotting mechanism in these cases, it is possible that acute, rapidly healing ulcers may have been the cause of their bleeding. It is also possible that there may have been interference with liver activity and consequent prothrombin elaboration, but since that etiology was not considered at the time, hepatic function tests and prothrombin estimations were not made.

Summary

One case of neutropenia, two of gastrointestinal bleeding, and one of oral lesions following use of phenylbutazone are presented.

It is emphasized that while phenylbutazone is a most valuable drug for the relief of arthritis and associated musculoskeletal disorders, it may also be a most dangerous agent, and its use entails watchfulness on the part of the physician.

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Remission in Chronic Myelocytic Leukemia During Folic Acid Therapy

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STUDIES on the folic acid content of the leukocytes in both normal and leukemic subjects indicate that the white blood cells of patients with leukemia contain significantly higher amounts of folic acid than those of normal persons.[1] Heinle and Welch[2] administered folic acid to three patients with chronic myelocytic leukemia and observed a rapid hematologic and clinical relapse in all three cases. The folic acid was withdrawn from one patient on two occasions resulting in hematologic improvement each time. Farber *et al.*[3] observed an "acceleration phenomenon" in the leukemic process of children with acute leukemia treated with folic acid conjugates. The foregoing studies suggested that larger amounts of folic acid are required for the metabolism of leukemic cells than for normal cells. This in turn suggested a logical basis for the use of folic acid antagonists in the treatment of leukemia, namely, through interference with folic acid metabolism of leukemic cells.

The following report illustrates a case of chronic myelocytic leukemia treated with folic acid with resulting hematologic and clinical improvement and subsequent relapse following withdrawal of folic acid and administration of vitamin B_{12}.

Case Report

F. F., a sixty-year-old white female, was a known case of chronic myelocytic leukemia since 1946. The diagnosis was established by the findings of anemia; 102,000 leukocytes per cu. mm.; a differential count of 34 per cent segmented neutrophils, 35 per cent nonsegmented neutrophils, 7 per cent metamyelocytes; hypercellular bone marrow with increase in myeloid elements; hepatosplenomegaly; and radiologic changes in the bones compatible with leukemia. In March, 1947, she received total body irradiation of 125 r without any appreciable effect on the leukocyte count or the size of the liver and spleen. The following month 150 r were administered to the spleen. The spleen regressed until it was no longer palpable; the liver was only slightly enlarged, and white blood cells fell to 16,000 per cu. mm. Eighteen months later the spleen was enlarged 3 cm. below the left costal border, and leukocytes rose to 55,000 per cu. mm. After three weeks of futile treatment with 300 mg. of Teropterin orally daily, this medication was discontinued. Administration of 100 r and subsequently 200 r to the spleen in April and November, 1948, were ineffective.

On February 2, 1949, the patient was given 20 mg. of folic acid daily by mouth. At that time the hemoglobin was 10 Gm. and the leukocytes 200,000 per cu. mm. The spleen was enlarged 4 cm. below the left costal margin. The liver was palpated 3 cm. below the right costal margin. There was no significant lymphadenopathy. Her chief complaints were weakness and easy fatigability. Medication was continued to June 30, 1949. The leukocytes fell to 152,000 per cu. mm. The hemoglobin remained stationary. There was no change in the differential count. The liver decreased in size and was palpated only 1 cm. below the right costal margin. The size of the spleen and lymph nodes remained unchanged. The dose of folic acid was increased to 40 mg. daily until October 6, 1949. The blood picture was unchanged, but the spleen increased in size and was palpated 7 cm. below the left costal margin. There was no change in the size of the liver or lymph nodes. Folic acid was increased to 100 mg. daily and continued to May 4, 1950. The white blood cells gradually fell to 29,000 per cu mm., and the hemoglobin rose to 13.0 Gm. (Fig. 1). There was no significant change in the differential count. The size of the spleen decreased and was palpated 3 cm. below the left costal margin. The liver and lymph nodes remained unchanged.

On April 13, 1950, the patient began to complain of paresthesias of the toes of both feet. Neurologic examination was negative. The symptoms of weakness and easy fatigability had completely disappeared, but because of the development of paresthesias, the folic acid was discontinued on May 25, 1950, and the patient was treated with 30 micrograms of vitamin B_{12} intramuscularly weekly. There was a gradual rise of the leukocytes to 130,000 per cu. mm. and a fall of the hemoglobin to 11 Gm. during the following five months of therapy. There was no significant change in the differential. The size of the spleen increased to 7 cm. and the liver to 3 cm. below the costal margins. The lymph nodes remained unchanged. The paresthesias continued without improvement, and there was no alteration in the neurologic findings.

Comment

Although we are unable to explain the hematologic and clinical improvement in the foregoing case following the administration of folic acid and the

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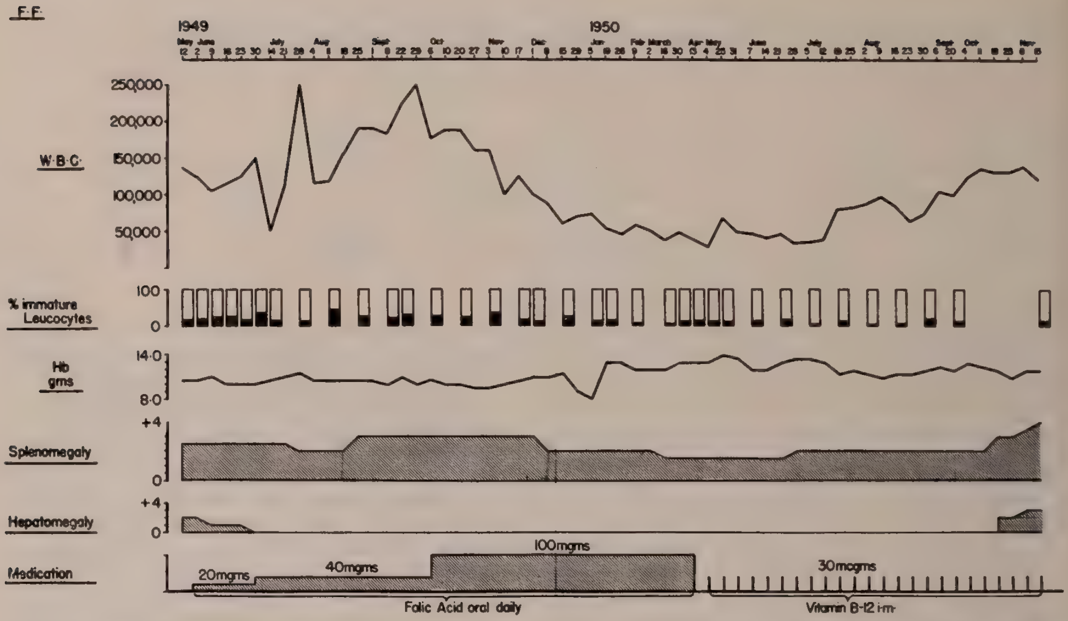

FIG. 1. Hematologic and clinical data on a patient with chronic myelocytic leukemia treated with folic acid. Improvement was observed while the patient received the drug. Relapse occurred after folic acid was discontinued.

subsequent relapse after treatment with vitamin B_{12}, we believe that the case clearly illustrates that folic acid does not result in an "acceleration phenomenon" or aggravation of the leukemic process as observed by other investigators. The possibility exists, therefore, that the folic acid antagonists produce remissions in leukemia, not through interference with folic acid metabolism, but through other metabolic pathways. There is no clinical evidence that vitamin B_{12} will produce a relapse in leukemia.

Another significant feature is the neurologic symptoms which developed while the patient received folic acid therapy. There is ample evidence that persons with pernicious anemia develop neurologic disease following the administration of folic acid.[4-8] There are also reports of macrocytic anemia of gastrointestinal origin in which neurologic sequelae developed following folic acid therapy.[9,10] On the other hand, folic acid has been given to normal individuals and to patients with various types of anemia other than pernicious anemia without the development of neurologic symptoms.[11] It is interesting to note that this patient's symptoms did not improve after the administration of vitamin B_{12}.

It has been the experience of one of us (L.M.M.) that patients who develop neurologic symptoms following the administration of folic acid over a long period of time may not improve following the subsequent administration of vitamin B_{12}.

Summary

1. A patient with chronic myelocytic leukemia treated with large doses of folic acid is presented. Both clinical and hematologic improvement followed. Relapse occurred upon withdrawal of folic acid and subsequent administration of vitamin B_{12}.

2. These observations refute the previous reports that folic acid always has a deleterious effect on leukemia.

3. While under treatment with folic acid, the patient developed neurologic symptoms which did not improve following treatment with vitamin B_{12}.

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Phlegmasia Cerulea Dolens Complicated by Pulmonary Embolism

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PHLEGMASIA cerulea dolens was first reported in 1929 by Tremoliers and Veran.[1] In a survey of the literature, DeBakey and Ochsner[2] in 1948 found only 32 such cases, to which they added one of their own. Two years later Perlow *et al.*[3] reported one case and found five additional cases in the literature which had not been included in the 1948 review. However, a survey of the recent literature would indicate that this condition is much more common than previously supposed.

Sixty-four cases have been observed in addition to the one reported herein, bringing the total recognized to at least sixty-five. Veal *et al.*[4] reported 11 cases of acute massive thrombosis, five of which followed ligation of the inferior vena cava. In 1950 Young and Derbyshire[5] reported a case which developed in pregnancy following an emergency appendectomy. This was successfully treated by inferior vena cava ligation. Another case so treated with success was discussed by Miles.[6] In 1952 a death resulting from such an acute thrombotic process was reported by Grant and Deddish.[7] Two additional cases were disclosed in the report of Ellis and Windham.[8] These were treated by superficial femoral vein ligation with success in one case. Haimovici[9] reviewed the literature in 1950 adding two of his own cases. Dr. John L. Madden[10] has had personal experience with three cases (not reported as yet). All these survived the disease, two of them being treated by ligation of the inferior vena cava. The most recent cases reported were two by Halligan, Costello, and Lewis.[11] These survived with conservative treatment.

Clinically, phlegmasia cerulea dolens is a disease entity which is characterized by a sudden severe pain in a part of a lower extremity, quickly spreading to involve the entire limb. It is associated with marked edema of the foot, leg, and thigh and, in the case reported here, spreads over the abdominal wall as high as the umbilicus and up the back to the lower costal border. Severe cyanosis, swelling, and purpuric areas develop early, producing a most alarming picture. The patient complains of numbness. Frequently these local changes are accompanied by evidence of peripheral circulatory collapse and even death. In those less profoundly affected, the disease follows the usual course of thrombosis in the femoral and iliac veins with gradual subsidence of the swelling, discoloration, and the gradual return of sensation, warmth, and peripheral pulsations.

The case reported here is of interest not only because of its rarity but also for the following reasons: (1) The first evidence of thrombotic disease was ushered in with signs of pulmonary infarction; (2) after apparent recovery from the typical picture of phlegmasia cerulea dolens, multiple pulmonary infarcts developed several weeks later; (3) dramatic response followed ligation of inferior vena cava; and (4) Dilantin Sodium was effective in controlling the exacerbations of ulcerative colitis.

Case Report

J. D., a twenty-nine-year-old, married female, had had ulcerative colitis for the past fifteen years, during which time the condition had been under fairly good control, interrupted by the usual relapses, with a bland diet regimen which excluded milk products. The administration of such absorbing substances as Metamucil and Turicum proved useful. However, sodium laurel sulfate and cortisone were of no benefit.

On December 19, 1952, the patient suffered a serious exacerbation of her ailment with about 60 bowel discharges daily. She lost 18 pounds in one week. It was decided to administer Dilantin Sodium to control the bowel discharges because we had had good results with this drug in previous cases. With doses of $1^1/_2$ grains three times daily, the patient rapidly improved, and in three days the frequency of her bowel discharges was normal.

On December 23 she had a sudden pain in the left chest. Examination revealed pleural rub and diminished breath sounds. Her temperature was 103 F. Infarction was suspected. Her lower extremities showed absolutely no signs of phlebitis, no Homans' sign, and no tenderness over any of deep or superficial veins. She was given procaine penicillin 600,000 units twice a day. The following day she had some vague discomfort in the lower abdomen and pelvis but no leg signs.

On December 25, when she arose from bed to go to the bathroom, she experienced a sudden feeling of pain and fullness and noted swelling in the right lower extremity; by the time she had returned to her bed, the leg was swollen to about twice the normal size and very painful and a dusky blue in color. On December 25 she was admitted to the Manhasset Medical Center Hospital. By now she had definite signs of infarction in the left chest. The leg was extremely painful, and numerous petechiae were noted. The swelling now extended up over the abdomen as far as the umbilicus and up the back almost to the costal region. There were numerous visible veins over the upper thigh and lower abdomen. She appeared in definite peripheral circulatory failure.

The leg was moderately elevated, and the patient was started on intravenous procaine, 1 Gm. to 1.000

cc. saline, and this was increased to 2 Gm. twice a day in Polysal as soon as it was determined that she did not react unfavorably to it. She received 30 cc. daily of adrenal cortex intravenously divided into three doses, and she also was given penicillin and streptomycin daily. The leg presented a picture of impending gangrene, especially the toes which were greatly swollen and on which small blisters appeared. Dicumarol was not given because of the ulcerative colitis.

By January 5 the patient's condition had stabilized, and by January 15 she had improved enough to be sent home by ambulance. Her temperature had come down to 99.6 F. from a high of 104.5 F. The leg was still greatly swollen, and she wore an elastic stocking and remained in bed. Her colitis remained under relatively good control, and the Dilantin was continued. She was having some formed stools for the first time in ten years. The color of the limb continued to improve and she was fairly comfortable.

On February 7, 1953, twenty-two days after her hospital discharge, she had a sudden episode of infarction in the right lower lung, which was repeated the next day. She developed great difficulty in breathing and was readmitted to the hospital. Within an hour after readmission to the hospital she developed three further episodes of infarction; her condition became critical, and she was extremely dyspneic. It was decided, therefore, to ligate the vena cava. She was so dyspneic and had so much pain that it was necessary to do an intercostal nerve block with procaine at the posterior angle of ribs before she could lie down on the table. Even then, it was possible to get her into only a semirecumbent position.

Through an oblique lumbar muscle-splitting incision, the inferior vena cava was exposed retroperitoneally and doubly ligated in continuity with silk. The wound was quickly closed, and she was returned to bed in poor condition and placed semirecumbent in an oxygen tent.

Temperature on admission was 105 F. It gradually subsided and by the fifth postoperative day was down to 101 F. Her chest pain eased, but she had considerable difficulty raising thick tenacious sputum. She was then given a respiratory detergent continuously with oxygen by aerosol. Very shortly thereafter, she began to expectorate large quantities of thin mucus, interspersed with thick plugs. Chest x-rays disclosed clouding of the lower half of the right lung field and some pleural effusion. On thoracentesis, however, minimal fluid was obtained. The x-rays also revealed an old scar in the left lung field from previous infarct.

She improved rapidly after administration of respiratory detergents. Postoperatively there was no increase in swelling in right lower extremity, but the left leg swelled to approximately twice normal size. Improvement continued; she was kept in bed until February 23. On February 24 she was allowed up with elastic stockings. After ambulation the swelling began to diminish, and she was discharged February 26, 1953.

Her progress at home has been favorable. Her chest signs have practically disappeared with no cough or dyspnea. She has minimal swelling of both legs and wears her usual shoes. Her bowel discharges have remained at two or three daily, and she has some formed stools.

Summary

A case of phlegmasia cerulea dolens complicated by pulmonary embolism is reported with a review of the literature. Recurrence of multiple pulmonary infarction necessitated ligation of the inferior vena cava after which there was marked improvement. The beneficial effects of respiratory detergents in thinning the bronchial secretions and of Dilantin Sodium in managing the ulcerative colitis are described.

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When no new thoughts fill the mind, when no new horizons beckon, when life is in the past and not in the future—you are on the way to uselessness.—DR. FREDERICK K. STAMM

The Surgical Treatment of Prolapse of the Gastric Mucosa into the Duodenum

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PROLAPSE of the gastric mucosa into the duodenum is being recognized with increasing frequency by most radiologists and clinicians. The characteristic roentgenographic appearance and the protean symptomatology of this lesion have been emphasized by the excellent review of Feldman *et al.*[1] and also by that of Kaplan and Shepard.[2] There is at this juncture, however, a divergence of opinion as to the proper operative procedure to be employed in those patients whose complaints have proved refractory to medical management. Surgery has been advised in the form of simple resection of the redundant mucosa, gastrotomy, Heineke-Mikulicz pyloroplasty, gastroenterostomy, gastric resection, mucosal resection and pyloroplasty, mucosal resection and gastroenterostomy, and pyloric closure combined with gastroenterostomy.

This communication proposes to review the histories of two patients with gastric mucosal prolapse, one recurrent after local mucosal resection, who came to operation at the hands of the author. In both instances it was felt that partial gastrectomy was the procedure of choice, offering as it does the most certain insurance of permanent relief.

Case Reports

CASE 1.—M. A., a forty-nine-year-old male, complained of intermittent epigastric pain of six years duration. Although periodic, the pain had become increasingly severe in the past two years. Food, milk, alkalis, and vagolytic drugs were of no avail in the course of an attack. The patient had noted some diminution in the intensity of pain on assuming a supine position. There were associated frequent gaseous eructations, heartburn, nausea, asthenia, and a weight loss of 17 pounds in the preceding year. A gastrointestinal series two years previous was said to have revealed a prepyloric ulcer. There was no history of syncope, hematemesis, constipation, or tarry stools. The past medical and surgical histories were not remarkable. An appendectomy had been done twenty-six years before for acute appendicitis.

Physical examination demonstrated midline epigastric tenderness. Gastric analysis was within normal limits. A blood count revealed 4,600,000 red cells with a hemoglobin content of 14 Gm. per 100 cc. A gastrointestinal series revealed a mushroom-like filling defect in the first portion of the duodenum; gastric rugae could be traced into the defect. This was interpreted as a prolapse of the gastric mucosa. In view of the protracted history and persistence of severe upper abdominal pain despite repeated diverse medications and diets, surgical intervention was deemed advisable.

Via a right upper rectus-splitting incision, the peritoneal cavity was entered and explored systematically. The stomach was not unusual but for a boggy, doughlike mass in the pyloric area which extended into the duodenum. The mass could be reduced retrograde through the pylorus into the gastric antrum. Gastrotomy was performed and divulged a markedly redundant prepyloric mucosa which could be readily tented free of the underlying submucosa and introduced through the pylorus into the first portion of the duodenum. A partial gastric resection was done encompassing the distal two thirds of the stomach in the surgical specimen. The duodenal stump was closed and continuity reestablished by an antecolic Hofmeister type of gastrojejunostomy. The postoperative course was notable only for transient dysuria attributable to a urethral stricture.

Postoperatively the patient offered no complaints referable to the abdomen, and he continues asymptomatic some two and one-half years later on an unrestricted diet and without medication.

CASE 2.—E. K., a forty-one-year-old male, presented a three-year history of epigastric pain and associated periodic hematemesis. He had run the gamut of antispasmodic drugs, alkalis, and diets without relief. Sixteen months prior to being seen he had been operated on at another hospital for prolapsed gastric mucosa and had received the benefit of resection of the prolapsed mucosa and a Heineke-Mikulicz type pyloroplasty. He was free of complaints for six months and then experienced a progressive return of his original complaints of epigastric pain, hematemesis, and weakness. There had been a weight loss of 10 pounds in the past year. Once again with the supervention of the epigastric pain, alkalinizing medication and parasympatholytic drugs afforded no relief. The past history otherwise was not remarkable.

Examination revealed a healed midline epigastric scar beneath which was an ill-defined area of tenderness. A blood count revealed 4,200,000 red cells with a hemoglobin level of 12.5 Gm. per 100 cc. Gastric analysis revealed a relative hyperchlorhydria. A normal gallbladder was visualized on cholecystography. A gastrointestinal series showed a filling defect in the duodenal cap compatible with a prolapse of the gastric mucosa.

At operation the peritoneal cavity was entered through the former midepigastric incision, the scar being excised. The prepyloric area of the stomach was found to be bound down by dense adhesions. Lysis of the adhesions permitted inspection of the anterior serosal surface of the stomach. In the presence of the dense fibrous reaction about the pylorus, no definite intraluminal mass could be palpated. Gastrotomy, nevertheless, revealed a mobile antral mucosa with its leading edge drawn through the pyloric canal. A partial gastric resection of the Hofmeister variety was performed. Pathologic examination of the surgical specimen revealed hypertrophic gastritis with a markedly mobile antral mucosa displaying hemorrhagic infarction and associated mucosal erosions over its leading edge.

The postoperative course was free of complications, the patient being discharged symptom-free on the tenth postoperative day. When last seen eighteen months after the gastric resection, he had regained his original weight and offered no complaints.

Comment

The mechanism concerned in the pathogenesis of prolapse of the gastric mucosa is still conjectural. It probably is related to an initial excessive motility of the antral mucosa with progressive stripping away of the mucosa from the submucosa as a result of hyperperistalsis. It has been noted fluoroscopically that increased gastric peristalsis occurs in most instances of prolapse and that this in turn is the concomitant of the hypertrophic antral gastritis so frequently observed in these patients. Both the pressure of the gastric contents and this peristaltic activity serve to propel the mobile redundant antral mucosa through the pylorus into the duodenum. As the degree of prolapse increases, peristaltic activity probably becomes more forceful by reason of the development of a foreign body ball-valve effect. Spasm of the pyloric musculature, once the mucosa has prolapsed distally into the duodenum, compromises the mucosal blood supply and leads to the hemorrhagic infarction noted in the second patient with attendant hematemesis and tarry stools.

Where local resection of the offending mucosal fold is resorted to through the gastrotomy incision, the underlying mechanism for the prolapse remains intact, and recurrence is to be anticipated even in the face of the usual pyloroplasty. It would appear advisable, once diagnosis has been confirmed by gastrotomy, to resect the distal two thirds of the stomach, the mucosa of which is the site of the precedent gastritis. The procedure of partial gastrectomy with gastrojejunostomy satisfies this criterion. That a partial gastrectomy and gastroduodenostomy of the Bellroth I type would be as satisfactory awaits further investigation. The role of vagotomy in the treatment of this lesion also deserves further consideration.

Summary

Several different operative procedures have been employed in the treatment of patients with gastric mucosal prolapse refractory to medical management. Histories of two patients with this condition who came to surgery are presented in this communication. Primary gastric resection was done on one, and the second had a gastric resection after a recurrence of the prolapse following pyloroplasty and local mucosal excision. It is suggested that partial gastric resection is the procedure of choice for the relief of prolapse of the gastric mucosa.

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Dates to Remember . . .

May 10 to 14, 1954
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A Therapy for Ménière's Disease

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MÉNIÈRE'S disease is generally ascribed to hydrops of the labyrinth. Increase of the pressure of the endolymph would seem to lead to the crisis, while elimination of retained fluid would seem to lead to relief. Accordingly we are dealing with an organ (labyrinth) edema and with symptoms which are characteristic of a disturbance in that organ (dizziness, etc.). We are confronted also with an improvement in the clinical status after disappearance of the edema. Organ edema followed by symptoms, disappearance of edema followed by relief of symptoms are sequences which we met with reference to organs other than the labyrinth of the ear.[1-8] Edema of the brain seems to be the pathologic change peculiar to the migraine attack[1,2,4-7]; edema of the heart seems to come and go with angina pectoris,[1,8] etc.

For the therapy of these conditions, including Ménière's disease,[3] a dietary ("antiretentional diet") was devised which aimed at terminating the organ edema and which in fact was found to be effective therapeutically.[1-8] Guided by this concept and stimulated by the need of an alternate therapy, in subsequent studies instead of the "antiretentional diet" we used the diuretics, aminophylline and Mercuhydrin. In migraine and angina pectoris both forms of treatments were found to be equally effective.[6-8] In view of this fact it seemed to be of interest to make a trial with aminophylline and Mercuhydrin in the therapy of Ménière's disease.

Case Report

A man, thirty-nine years of age, had had attacks of dizziness and vomiting for the last three months. The attacks occurred at intervals of from three to ten days and lasted twenty-four hours. Because of difficulty of focusing which developed with the onset of the illness the patient, a commercial artist, had been unable to work more than two days of a week even in the absence of dizzy spells. Treatment with niacin was ineffective.

Except for defective hearing of the left ear the examinations showed normal conditions.

At first a therapy consisting of salt-free diet and administration of ammonium chloride was instituted. When no improvement was noted from this regimen, aminophylline tablets, 0.1 Gm. three times a day, and weekly intramuscular injections of 1 cc. of Mercuhydrin were given. This treatment was followed by almost immediate improvement. Instead of the previous twenty-four hours the attacks now sometimes lasted a few minutes but never more than five or six hours, and they were no longer accompanied by vomiting. Because of the mildness of the spells and improved focusing, during the third week of the therapy he was able to work four days instead of the previous two days out of seven, and from the fourth week on he could work almost without interruption. From the fourth week of the therapy the spells became less frequent occurring once in from two to four weeks, and from the eighth week they were not only infrequent but also shorter than before, lasting one hour only. After twelve weeks of the treatment the dizzy spells stayed away altogether, and he was able to work all the time. After four more weeks the therapy was discontinued, and except for a minor spell which occurred four months after termination of the therapy he remained well for eight months.

At this time two severe dizzy spells occurred at weekly intervals. These spells lasted for several hours but were not associated with vomiting. He had to stop working because of a sense of disturbed equilibrium which prevailed even in the absence of dizzy spells and because of inability to focus properly. A therapy identical to the one which was employed in the first instance was again begun and continued for twelve weeks. Two days later there was another crisis, but after that there occurred only one slight discomfort during the eleventh week of therapy. He was able to resume his work almost immediately, and his sense of general well-being gradually improved and returned to normal after three weeks of the treatment.

Comment

As in migraine and angina pectoris combined administration of aminophylline and Mercuhydrin was followed by relief in the case of Ménière's disease herein reported. As in migraine and angina pectoris maximal improvement was not obtained before twelve weeks of therapy, and also as in migraine and angina pectoris the remission in Ménière's disease outlasted the cessation of active therapy to an extent which was similar to the relatively prolonged remission observed in migraine. Again, similar to migraine and angina pectoris, in relapse of Ménière's disease renewal of active therapy was followed by renewed response.

Summary

Aminophylline tablets and a series of intramuscular Mercuhydrin injections were given to a patient who suffered from Ménière's disease. He improved during the therapy and subsequently remained well for eight months. Remission again followed the relapse when a second series of treatments was administered.

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Endocardial Fibroelastosis

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(*From St. Joseph Hospital, Far Rockaway*)

AN IMPORTANT clinical finding in congenital heart disease is the presence of cyanosis. Abbott[1] emphasized this finding and accordingly classified congenital malformations of the heart into three groups depending on presence or absence of cyanosis: cyanotic, cyanosis tardive, and acyanotic. Extensive anatomic and physiologic studies by Taussig[2] showed this classification to be of little practical value in the surgical approach to congenital anomalies of the heart.

Cyanosis may not only be absent in the presence of congenital heart disease, but pallor may be the most significant clinical finding. Pallor would lead one to suspect the presence of an anomalous origin of the left coronary artery from the pulmonary artery instead of from the aorta or, the condition here reported, endocardial fibroelastosis.

Gross[3] reviewed the literature and reported a series of 13 cases of endocardial fibroelastosis. His report described the presence of other abnormalities of the great vessels and heart chambers in seven of the cases. Weinberg and Himelfarb[4] reported two cases in siblings. Collier and Rosahn[5] described two cases who died in pulmonary edema.

Case Report

M. E. was born at St. Joseph's Hospital on June 7, 1952. The weak cry was attributed to the long labor since there were no other abnormal findings. Since there was no improvement in the next few days, the chest was x-rayed and showed a complete atelectasis of the left upper lobe and most of the left lower lobe. The heart and mediastinum were displaced into the left chest. The right lung was clear. Both clavicles showed fractures in the middle third. The child was placed in an oxygen tent. Repeated x-rays after three and six days showed a slight increased aeration.

The child gained poorly. On July 1 he suddenly became pale; the extremities were cold, and the respirations increased. This lasted for about two hours and gradually subsided. The next day there were two similar occurrences. The pallor and increased respirations continued at irregular intervals for the next two weeks and completely disappeared. A heart plate and an electrocardiogram were negative. The child was sent home on July 29. At home he did not gain, ate poorly, and was easily fatigued. On August 30 x-rays showed a marked, globular-shaped enlargement of the cardiac shadow, which filled the left thorax. An examination of the heart showed the rhythm to be regular, sounds of good quality, and no murmurs audible. The electrocardiogram showed inversion of the T deflection in limb lead 1, a slight inversion of T in lead 2, and inversion of T in V_5.

The baby's condition remained the same until October 7 when he suddenly became pale and dyspneic. Despite all supportive therapy the child expired the next day.

Comment

Endocardial fibroelastosis has been described in the literature and called fetal endocarditis, the etiology of which was considered inflammatory. Further study has shown the absence of inflammation and inflammatory stigmata and that one can better explain the endocardial changes on the basis of a development defect. The name, endocardial fibro-

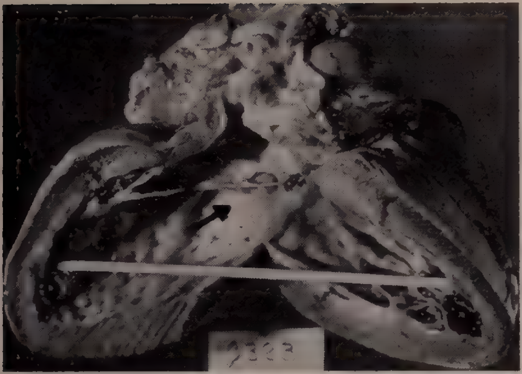

FIG. 1. Cavity of left ventricle exposed. Note shining, white, glistening appearance of mural endocardium of the left ventricle.

elastosis, would appear proper from an etiologic and pathologic viewpoint.

The endocardial surface of the left ventricle is replaced by a grayish-white, opaque membrane (Figs. 1 and 2). Microscopically, there is a great increase in the elastic fibers and collagen of the endocardial surface of the left ventricle. There are no alterations in the myocardium or valve leaflets.

The symptomatology is related to the altered pathologic physiology of the left ventricle. Wean[6] has demonstrated the intramyocardial circulation and considers the changes in the left ventricle secondary to interference with this circulation. He states that the changes in the endocardium interfere with the emptying of the arterioluminal vessels into the left ventricle because of their constriction by the firm elastic tissue. The myocardium becomes anoxemic with early dilatation and ultimate failure of the left ventricle.

Initially the child presents itself as a feeding problem and will not gain regularly. The cry may be weak, and the actions sluggish. During this period the occasional appearance of pallor may be noted. Cardiac evaluation at this time may show no murmurs, no alteration of heart sounds, and possibly a normal heart size and normal electrocardiogram. The subsequent occurrence of sudden heart failure precipitates the symptomatology and laboratory findings associated with this event.

Respirations are increased, basilar rales are present, and hepatomegaly may occur. It is at this time that pallor may be marked. The heart will now be enlarged, especially the left ventricle, and the electrocardiogram will show characteristic T-wave inversions in leads 1 and 2 and also in the precordial leads overlying the left ventricle.

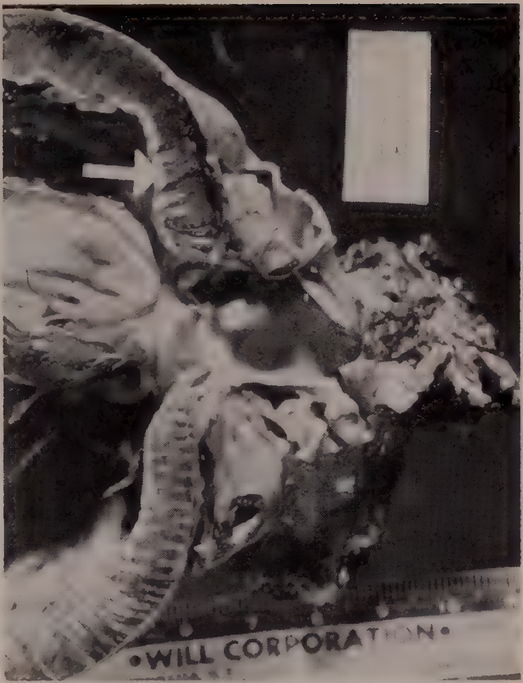

FIG. 2. Cut edge of left ventricle. Note thickened endocardial surface.

Summary

A case of endocardial fibroelastosis is presented. The difficulty of an early diagnosis is emphasized because of the absence of symptoms and signs referable to the heart. The early occurrence of pallor as a presenting symptom may aid in the diagnosis. The pallor is associated with the basic pathology, a replacement fibrosis of the endocardium with resulting myocardial ischemia, early dilatation, and failure and death. Although endocardial fibroelastosis is a rare congenital anomaly of the heart, its presence may be suspected by the appearance of pallor in the newborn and the subsequent findings of increased heart size with the electrocardiogram indicative of ischemia of the left ventricle.

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1. Abbott, M. E.: Atlas of Congenital Heart Disease, New York, American Heart Association, 1936.
2. Taussig, H. B.: Congenital Malformations of the Heart, New York, Commonwealth Fund, 1947, p. 33.
3. Gross, P.: Arch. Path. **31**: 163 (1941).
4. Weinberg, T., and Himelfarb, A. J.: Bull. Johns Hopkins Hosp. **72**: 249 (May) 1943.
5. Collier, F. C., and Rosahn, P. D.: Pediatrics **7**: 175 (Feb.) 1951.
6. Wean, J. T.: Bull. Johns Hopkins Hosp. **68**: 353 (1941).

Urachal Cyst

HALLEY H. FRIEDERWITZER, M.D., BRONX, NEW YORK

URACHAL cyst is very uncommon, but still it is occasionally present, as the following case shows. Embryologically and anatomically, the urachus is really the obliterated allantois and is present as a cord running from the summit of the bladder to the umbilicus, sometimes called the medical umbilical ligament.

Case Report

Mr. H. M., age forty, a lawyer, had noticed a lump near his umbilicus for the last thirty years and also noticed it was getting larger. As far as he could remember, it was the size of a nickel, and when he was first seen in January, 1953, it was as large as an apple outside the skin and felt even larger on deep palpation. It really appeared as a hernia, but there was no impulse on coughing and no separation of any abdominal muscle fibers. Although he never had any pain or true discomfort, he was advised to have it removed because of possible rupture of skin due to accident or exercise.

He was operated on with the following procedure: A skin incision 4 inches long was made, running horizontally from the edge of the umbilicus outward toward the anterior superior iliac, the incision going through the superficial fascia. Muscle was separated from the superficial fascia, and the cyst was located and followed down to the base. Many fibrous tissue adhesions were present, most of which were finger-dissected, the rest of the fibrous tissue being cut and doubly ligated. Some of the fibrous tissue adhered to the bladder which was then carefully dissected and doubly ligated to prevent bleeding or bladder tear. The cyst was the size of a large avocado pear with a pedicle about 6 inches long and 1 inch wide. This was also clamped, doubly ligated, and freed of adhesions. The cyst was removed in toto which is rarely done, but it was felt that it would best serve the purpose here.

The pathologic tissue report was as follows:

> *Gross Examination.*—A cystic mass, the size of an avocado pear with a thin tube attached to one end and containing sebaceous-like material was examined.
>
> *Microscopic Examination.*—Specimen consisted of a layer of thin squamous epithelium with stroma and blood vessel enclosing epithelial-like debris.
>
> *Diagnosis.*—Benign cyst, consistent with diagnosis of urachal cyst.

Postoperative follow-up was uneventful, and recuperation was rapid. No abnormalities followed, and healing of the wound was perfect.

2080 GRAND AVENUE

Make a Note . . . .

- ***148th Annual Meeting***
- ***Medical Society of the State of New York***
- ***May 10 to 14, 1954***
- ***Hotel Statler***
- ***New York City***

Woman's Auxiliary

to the MEDICAL SOCIETY OF THE STATE OF NEW YORK

A.M.A. Auxiliary Convention

It is hoped that as many doctors' wives as possible will attend the Annual Meeting of the Woman's Auxiliary to the American Medical Association in San Francisco, California, June 21 to 25, 1954.

Attendance and participation in a national convention gives one a better understanding of the needs and objectives of our people throughout the nation and helps strengthen our conviction that the best way to settle a problem, be it national, state, or local, is by sitting down and discussing it and then going to work on it. It is at the national convention that each of us realizes how important it is for all of us to unite behind medicine's positive program. Reports read there illustrate the old adage that "a chain is as strong as its weakest link."

All auxiliary members who go to San Francisco, and especially all State officers and chairmen, make a special effort to attend every session. Each state president gives a brief report of her auxiliary's activities, and each concentrates on that project which her state has attacked in a new and unique way. This proves most valuable for it limits the time available to an enumeration of new and positive projects and reduces duplication to a minimum. Public relations and legislature are nearly always discussed in round table conferences, and almost every speaker outlines in detail a new method her auxiliary has employed to solve a common problem in these important fields.

Attending a national meeting is also gratifying and stimulating. We can look forward to meeting our old friends and to the pleasure of making new ones. We have the privilege of listening to distinguished guests and enjoying the educational value of their messages.

The friendly contacts made at our national meetings are an excellent means of promoting unity of thought and purpose among us all as wives of physicians throughout the nation. In the reports given we see what our achievements have been and what our hopes for the future are. The inspirations we receive make for greater progress on our county and state levels, and the convention becomes truly a clearing house for a nation-wide exchange of ideas and gives us the opportunity to appraise the work of our auxiliary as a whole.

In addition to the business program, there will be many occasions for relaxation and diversion. You should all remember that attendance at the social events scheduled often provides excellent opportunities to hear about the problems doctors in other parts of our nation are being called upon to solve. We also learn how the local auxiliary members are helping the doctors to solve them. New situations call for new technics, and it is only by hearing from those who are facing new situations that we can learn how they are being met.

If you have time for an extended trip after the convention, you can plan to visit the Hawaiian Islands for an exciting, pleasurable holiday which has been arranged for the doctors and their wives, a grand, beautiful climax to a week of hard work in the interest of a healthier America.

Mrs. Thomas M. d'Angelo, *President*

Glaucoma Afflicts Two Out of Hundred in Older Group

The National Society for the Prevention of Blindness reports that two out of every 100 persons over forty years of age are victims of glaucoma.

Dr. Bernard Becker, of Washington University's School of Medicine, has developed a technic of diagnosis based on tonography, a method of measuring the normal outflow of watery fluids inside the eye.

As this outflow increases with the onset of glaucoma, Dr. Becker urges a combination of tonograph tracings with conventional tests to achieve an "exquisitely sensitive method for discovering the earliest cases of glaucoma."

Dr. Becker also reported an experimental method for lowering intraocular pressure in glaucomatous eyes with use of a new drug which is in effect a medical cyclodiathermy which has the advantage of being controllable and reversible. Studies are being made of possible side-effects and other contraindications to use of this drug.

CORRESPONDENCE

Medicine and Podiatry in New York State

To the Editor:

It was careless on my part not to have included in the contribution to the JOURNAL which appeared in the February 15 issue, page 536, the following abstract from my opening address to the students of the College of Chiropody, January, 1913. We have lived up to the postulates outlined at the time in cooperation with Dr. Augustus S. Downing, Assistant Commissioner for Professional Education in the New York State Department of Education, and the data may properly be construed as being of some historic value.

> It seems like a paradox that I, who have always been the exponent of higher standards in medical practice, should be officiating as the executive of a nonmedical institution which is striving to educate others than licensed practitioners of medicine to practice a branch of medicine. But the contradiction is not because of my activities in this novel field. The difficulty has been that no opportunity has been vouchsafed medical students and medical practitioners to acquire the knowledge essential to practice the specialty of minor foot lesions, and in consequence the public has had to accept the unscientific services available from chiropodists or to go on suffering. I promise to help in creating a center where these chiropody layman may be educated to recognize cause and effect. This school shall be scientific—so scientific that even medical doctors, wishing to become foot specialists, may come to these halls and gain the requisite knowledge for their purposes. The standards will be raised from time to time until the medical education imparted to students will be equivalent to that received by students at regular medical schools. I am still of the opinion that no branch of medicine should be practiced by those unlicensed as medical doctors, but the situation as to foot specialists is such that the existing gap must be closed so that time shall make the desirable changes which medical schools have thus far failed even to attempt, much less to accomplish.

MAURICE J. LEWI, M.D.,
President

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College of Podiatry
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Welcoming Young Doctors into the Professional Community

To the Editor:

I am writing as one of the newer members of the Medical Society of the State of New York, and I would greatly appreciate it if you could print the following in your "Correspondence" section.

As all young doctors find out, often with shocking suddenness, they are not always welcome professionally in the community by their older colleagues. The board-eligible doctor, especially, who takes seriously the oft-printed advice to practice in rural areas, soon finds himself taking a course in postgraduate cynicism. The bone of contention revolves around hospital privileges of a surgical nature.

Unless some way is found to welcome young doctors into the professional community, I predict that more and more will stay on with their chiefs near their training hospitals where at least they will find security and friendship. Such stubbornness about hospital privileges could ultimately result in a lopsided situation which would hardly quiet lay critics of organized medicine. Then, too, restless minds often wander off into strange ideas.

The advantages to the older practitioners of relinquishing their night and week-end burdens to newcomers are self-evident. But there are other important considerations. Sickness and disability insurance, when sold at attractive rates, can only be done so when both young and old doctors sign up. Obviously the insurance companies must depend on the health and robustness of the younger men and lose or break even on the older men. Otherwise the premiums become prohibitive. So it seems to me, by a simple welcoming process, the young doctor would feel that he is part of a family, would be able to make a start in private practice, and the older men would have an easier time of it and get sickness and disability insurance at attractive rates—and, more important, perhaps be less likely to need that insurance.

NAME WITHHELD

"Dysmentia"

To the Editor:

May I call your attention to an article which I have written and which is to be published in the *Journal of Child Psychiatry* in May, 1954, entitled "Emotional Deprivation in Infancy as a Cause of Simulated Retardation." In this article I have coined a new term, namely, "dysmentia." This term means apparent or pseudofeeble-mindedness or retardation in a child who has inherently better or normal capacities for mentation or intellectual functioning.

This new word, "dysmentia," would replace all the other combinations of terms to indicate mental defectiveness not permanent and which could be helped by therapy or understanding. It means inherently normal intellect but only functioning as defective in children who have been emotionally deprived or blocked.

This term I hope will be a contribution to end some of the confusion in the literature with reference to this subject.

IRWIN J. KLEIN, M.D.

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Effect of Aureomycin on Clotting Time of Blood

To the Editor:

It would be appreciated if the following addendum to the article by Dr. Rosenak and myself, which appeared in the January 1 JOURNAL, page 93, could be published in some future issue. I feel these additions are very necessary and important to place the work on any kind of a sound scientific basis. The material should have appeared at the end of the Methods and Procedure and Results sections of the article as follows:

Methods and Procedure

A group of four patients receiving no medication were taken as controls, and coagulation times were performed at zero, thirty, sixty, ninety, and one hundred twenty-minute intervals.

Results

As noted above, analysis of our data showed no statistically valid correlation between the time of administration of the drug and the altered coagulation time. This lack of correlation with a specific time interval, however, may be explained by factors such as variation in the rate of intravenous administration of the drug, Group IV, and variable rates of absorption of the drug from the intestinal tracts in Groups I and II. However, when the maximum change of coagulation time was t-tested against the control values, in Groups I, II, and IV there was a significance at the level of 0.05 or better.

The testing of maximum differences from control values is a statistical procedure open to some question unless suitable controls are performed. Accordingly, four control patients were studied to test whether or not data such as the above could have been obtained by variation due to the method alone. The over-all variation of the coagulation time in this group of 20 determinations of four patients receiving no drug was less than in the experimental series receiving aureomycin. There was, however, some variation in the control values. When the first, or control, determination in these four patients was t-tested against their maximum coagulation time, as was done in the other groups, no statistically significant difference was obtained ($P \gg 0.05$). This lends additional weight to the significance of the depression of the coagulation time which was observed in the aureomycin study groups.

HARRY J. SOROFF, CAPT., M.C.

Surgical Research Unit
Brooke Army Hospital
Brooke Army Medical Center
Fort Sam Houston, Texas

Treatment of Postoperative Strictures

To the Editor:

The recent article, "Treatment of Postoperative Strictures with Suppositories of Vitamin E," by Dr. Morris Ant is, in my opinion, stimulating inasmuch as it suggests that further study may prove fruitful. However, it fails completely to prove its basic premise.

Twenty cases were cited. None of these had been operated upon. Many of these had not complained of spasm. Most of them were suffering from conditions which usually clear up spontaneously with minimum treatment. Not one of these cases was reported to have had a stricture.

A case was then cited (not the author's) in which a stricture developed five weeks after an anorectal operation, and this was said to have disappeared within two weeks after the use of suppositories.

Whether this was a true stricture or merely a spasm or mucosal narrowing was not stated.

A stricture following an anorectal operation *never* occurs when careful surgery has been done and adequate follow-up care given. While further study with vitamin E and alpha tocopherol may prove helpful, the proctologist must continue to rely on careful technic to prevent strictures.

HENRY PESKIN, M.D.

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New York 21, New York

Comment by Dr. Ant

To the Editor:

Reply is made to the foregoing letter from Dr. Henry Peskin, who comments on my paper "Treatment of Postoperative Anorectal Stricture with Suppositories of Vitamin E" which appeared in the NEW YORK STATE JOURNAL OF MEDICINE on October 15, 1953, page 2376.

The comment is made that out of the total cases reported only one case of postoperative stricture is detailed, whereas one may infer from the title that the paper was dealing only with postoperative anorectal strictures. Dr. Peskin's comment is technically correct. However, the paper was stimulated by my experience with vitamin E as a metabolite of connective tissue relieving anorectal spasm from a number of causes and materialized from the demonstration that the postoperative case represented.

In his statement that the conditions cited ". . . usually clear up spontaneously with minimal treatment . . .," has Dr. Peskin overlooked the fact that these cases have had much more than "minimal treatment?"

That these were not acute, spontaneously healing conditions was indicated in the paper, one case having a duration of eight months and another of two years. Most of these have been referred by other physicians who had already tried "minimal" treatments without effect.

Dr. Peskin could hardly think that proctotomy would be contemplated for only a spasm or a mucosal narrowing. In the case cited, there had been an excessive proliferation of granulation tissue which contracted down into a stricture.

The comment that strictures never occur when careful surgery is done and adequate follow-up is given is debatable at best. Being an internist and especially interested in nutritional and metabolic problems, I know that surgical results depend not only on careful and meticulous surgery and thorough and proper after-care but also on the response of the patient's tissues to these ministrations.

MORRIS ANT, M.D.

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Brooklyn 17, New York

Cortisone in Treatment of Pruritus Ani

To the Editor:

Perhaps the author of the recent article, "Cortisone in Treatment of Pruritus Ani,"[1] was interested in conserving space when he failed to refer to earlier publications on the same subject. I know of at least four such reports, all of a more comprehensive character.[2–5] I have no objection to brevity, but I do find myself out of harmony with certain of the author's conclusions. Most proctologists have observed pruritus ani to disappear spontaneously following the removal of local lesions such as fistulas. How then can Dr. Herfort evaluate the amount of benefit derived from the administration of cortisone as early as fifteen days after a fistulectomy? In my own experience pruritus ani was cured in 35 per cent of patients simply by removal of irritant lesions, such as fistulas.[6]

In my published study[5] of 27 patients treated with the steroids for anogenital pruritus (the number has since almost doubled), I stated that the best results were obtained in individuals who had manifest inflammatory changes of the perianal skin; that little benefit was noted where the skin was normal or nearly normal; that response was generally unsatisfactory in the presence of anal lesions (fistulas, prolapsing hemorrhoids), and that cortisone and hydrocortisone administered orally or applied topically were definitely inferior to corticotropin (ACTH). In fact, I have had 18 patients who derived no relief from cortisone administered orally or little relief from hydrocortisone applied topically, but who responded very well to corticotropin injections. I cannot explain this difference

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[1] Herfort, R. A.: NEW YORK STATE J. MED. **53:** 2871 (Dec. 1) 1953.

[2] Fromer, J. L., and Cormia, F. E.: J. Invest. Dermat. **18:** 1 (Jan.) 1952.

[3] Fromer, J. L., and Smith, A. T.: Lahey Clin. Bull. **7:** 232 (Apr.) 1952.

[4] Sulzberger, M. B., *et al.*: J.A.M.A. **151:** 468 (Feb. 7) 1953.

[5] Turell, R.: *ibid.* **152:** 806 (June 27) 1953.

[6] *Idem:* Treatment in Proctology, Baltimore, Williams & Wilkins Co., 1949.

Certainly any clinician using powerful drugs must be constantly aware of their potential harmful effects. They must be given only where the indication is clear cut, where the chances of benefit are good, and their administration must be attended by all the necessary safeguards against damage to the patient. Moreover, it must be recognized that these drugs are not curative except in cutaneous conditions that resolve spontaneously but that they offer gratifying symptomatic relief and a better opportunity for the clinician to study the patient to determine causal mechanisms and to correct them fundamentally.

Robert Turell, M.D.

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New York 28, New York

Comment by Dr. Herfort

To the Editor:

May I say that the paper, "Cortisone in the Treatment of Pruritus Ani," was submitted not as a collective review of the precedent literature but as a case report presenting my own limited experience with patients with pruritus ani? I was particularly interested in the use of the drug in relation to anorectal surgery. I had had the opportunity of reading the reports of the previous dermatologic investigators listed by Dr. Turrell, with the exception of his own paper to which he referred. This latter, unfortunately, appeared in print several months after the submission of my observations for publication.

I agree with Dr. Turrell's statement that some 35 per cent of patients with secondary pruritus ani experience relief after removal of irritant lesions. The three patients with secondary pruritus mentioned in the paper, belonging to the larger residual group, unfortunately did not, and, therefore, the use of cortisone was resorted to postoperatively to afford them relief from itching. I might add that since the report of Alexander and Manheim in the *Journal of Investigative Dermatology* in October, 1953, page 223, I have used hydrocortisone ointment topically in three patients with gratifying results. The topical medication is simpler for the patient and is free of the undesirable side-effects of cortisone administered orally.

I am glad that Dr. Turrell, also, recognizes the contraindications to the use of cortisone and corticotropin as well as the systemic complications which may arise from their use. I am indebted to Dr. Turrell for his interest in my case report.

Robert A. Herfort, M.D., F.A C.S.

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Treatment of Dupuytren's Contracture by Roentgen Rays

To the Editor:

The reader of the New York State Journal of Medicine may be interested in the results of the treatment of Dupuytren's contracture by roentgen rays. This condition has aroused some interest lately, but the treatments including surgery have not been particularly successful. For about twenty-five years, Dr. Charles Glottlieb and I have treated about ten cases in various stages. Some of them showed only nodules in the palmar fascia of both hands with slight contracture. Others were in more advanced stages.

It is interesting that as far as etiology is concerned, two of our latest cases occurred in women who did an excessive amount of typing. It is certainly of importance to know that it occurs frequently among men handling heavy beer kegs for many years.

It will not be necessary to give any case history, but we must state that every case in the early stage was completely and permanently cured without exception. In those cases where strong contractures had already developed, the process was successfully arrested, but the contractures were not completely eliminated.

The method of treatment is as follows: three times a week 100 r to involved area only, for five treatments. Repeat in about ten days.

Heinrich F. Wolf, M.D.

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NECROLOGY

Herbert L. Barker, M.D., of Chatham, died on March 24 at his home. He was eighty-seven years old. Dr. Barker graduated from the Columbia University College of Physicians and Surgeons in 1893. Before his retirement in 1941, he was a consulting physician at St. John's Hospital in Long Island City. Dr. Barker was a member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Joseph Edwin Conroy, M.D., of New York City, died on March 23 in St. Clare's Hospital at the age of sixty. Dr. Conroy graduated from Fordham University School of Medicine in 1918 and served as a lieutenant in the United States Navy during World War I. He was a consulting physician at St. Clare's and Fordham Hospitals before his recent retirement.

Philip William De Garmo, M.D., of Poughkeepsie, died on March 30 in Vassar Brothers Hospital at the age of sixty-five. Dr. De Garmo received his medical degree from McGill University School of Medicine in 1913. He was a consulting ophthalmologist at the Hudson River State Hospital and a consultant for eye, ear, nose, and throat at Vassar Brothers Hospital.

Dr. De Garmo was a member of the Dutchess County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John Frederick Erdmann, M.D., died at his home in New York City on his ninetieth birthday, March 27. He graduated from Bellevue Hospital Medical College in 1887 and interned at Bellevue Hospital. Dr. Erdmann was a Diplomate of the American Board of Surgery and a Fellow of the American College of Surgeons. He was a member of the New York Academy of Medicine, the New York Surgical Society, the American Urological Association, and the American Association of Obstetricians, Gynecologists and Abdominal Surgeons.

He was a consulting surgeon at University, Correction, Gouverneur, Mount Vernon, Nyack, Nassau, Mineola, Southampton, Rockland State, Orangeburg, Central Islip, Union, Joint Diseases, Jersey City, and Greenwich Hospitals.

Dr. Erdmann operated upon President Cleveland, Enrico Caruso, and a host of the great and near-great, including a famous Lower East side gangster, Monk Eastman. In sixty-four years of surgical practice, he estimated that he had performed between 25,000 and 30,000 operations. When asked how he could manage to keep up with the revolutionary changes in surgical practice spanned by his own lifetime, Dr. Erdmann replied, "A busy surgeon has to keep up, or he won't be a busy surgeon."

Dr. Erdmann belonged also to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Esley Robert Froats, M.D., of Yonkers, died on March 23 in Yonkers Professional Hospital. He was fifty-one years old. Dr. Froats received his medical degree in 1924 from Queens University School of Medicine, Ontario, Canada. A former president of the Yonkers Academy of Medicine, Dr. Froats also belonged to the Westchester County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Ludwig Louis Jekels, M.D., of New York City, died on April 3 in his sleep at his home at the age of eighty-seven. Dr. Jekels received his medical degree from the University of Vienna in 1892. For ten years he owned and operated a sanitarium for mental diseases in Austria and then discontinued his practice to study under Dr. Sigmund Freud. He left Austria to teach in Sweden and came to this country in 1938.

Dr. Jekels was a member of the American Psychoanalytic Association and the New York Psychoanalytic Society.

Dunham Carroll Jones, M.D., of Brooklyn, died on March 24 at his home. Dr. Jones was seventy-six. He received his medical degree in 1899 from McGill University. Dr. Jones had practiced medicine in Brooklyn for over forty years.

Samuel Lubin, M.D., of Brooklyn, died on April 3 at his home from a cerebral thrombosis. He was fifty-three years old. Dr. Lubin graduated from Long Island College Hospital School of Medicine in 1923 and interned at Swedish Hospital. He was a Diplomate of the American Board of Obstetrics and Gynecology and a Fellow of the American College of Surgeons. Dr. Lubin belonged to the New York Academy of Medicine and the Brooklyn Gynecological Society. He was director of obstetrics and gynecology at both Cumberland and Swedish Hospitals, chief gynecologist at Ocean Hill Hospital, and consulting gynecologist at the Jewish Hospital for Chronic Diseases. At Cumberland Hospital he was an instructor on the faculty.

Dr. Lubin was a member and past president of the Kings County Medical Society, and also a member of the Medical Society of the State of New York and the American Medical Association.

Lawrence H. Nicargi, M.D., of Brooklyn, died on February 28 at the age of fifty-four. Dr. Nicargi received his medical degree in 1925 from the University of Tennessee. He was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Mathias Francis Snyder, M.D., of East Syracuse, died on March 4 at St. Joseph's Hospital after a short illness. He was fifty-nine years old. Dr. Snyder graduated from the Syracuse University College of Medicine in 1922. He belonged to the American Academy of General Practice and served as health officer for the Town of DeWitt and the Village of East Syracuse.

Dr. Snyder was a member of the Onondaga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Rebecca J. Tropp, M.D., of the Bronx, died of a heart attack on March 27 at the age of fifty-five while visiting a school. Dr. Tropp graduated from Long Island College Hospital School of Medicine in 1922 and interned at Metropolitan Hospital. She had been on the staff of the health division of the Board of Education for thirty years. Dr. Tropp was a member of the Bronx County Medical Society and the Medical Society of the State of New York.

MEDICAL NEWS

Westchester Academy of General Practice—The first annual scientific assembly of the Westchester Academy of General Practice will be held on May 19 at the Roger Smith Hotel, Post Road, White Plains. Registration will be held at 2 P.M. At 2:30 P.M., Dr. Harold E. B. Pardee, associate professor of clinical medicine, Cornell University Medical College, and associate attending physician, New York Hospital, will discuss "Rest Versus Activity After Myocardial Infarction"; 3:15 P.M., "Clinical Course of Hypertensive Disease," will be presented by Dr. William Goldring, associate professor of medicine, New York University of Medicine; 4 P.M., Dr. Charles K. Friedberg, attending physician, Mount Sinai Hospital, New York City, and assistant clinical professor of medicine, College of Physicians and Surgeons, Columbia University, will present a paper on "Treatment of Intractable Heart Failure."

A round table discussion with Dr. H. Tarnower, president, Westchester Heart Association, as moderator, will be held from 4:45 until 5:30, and dinner will be served from 6 to 7:30 P.M. At 8 P.M., Dr. Paul D. White, consultant in medicine, Massachusetts General Hospital, and executive director, National Advisory Heart Council, Boston, Massachusetts, will talk on "Clues in Cardiovascular Diagnosis and Treatment."

Dinner reservations and other information are available from Dr. Frederick Saunders, Elmsford.

Warren County Medical Society—The officers and committees for 1954 of the Medical Society of the County of Warren are: *President*—Dr. Lester C. Huested; *Vice-President*—Dr. William P. Simmonds; *Secretary*—Dr. Seymour Hopfan, and *Treasurer*—Dr. Norman A. Harvey.

Committees: *Blue Shield (NEMS)*—Dr. Saul Yafa, chairman, and Dr. Robert Boyle and D. L. Little; *Public Health*—Dr. Paul N. Bulova, chairman, and Drs. Arthur C. Davis and Jacques Grunblatt; *Cancer*—Dr. Morris Maslon, chairman, and Drs. Jesse S. Parker and Richard C. Batt; *Civil Defense*—Dr. James A. Glenn, chairman, and Drs. Seymour Hopfan and John E. Cunningham; *Citizens Health Education*—Dr. Robert W. Howard, chairman, and Drs. Orel Friedman and Charles Bannon; *Health-School*—Dr. Bernard Selinger, chairman, and Drs. Norman Harvey and Frederick P. Becker; *Legislative*—Dr. E. Y. Clarke, chairman, and Drs. Raymond L. Rhodes and Edward P. Ryan; *For Contacting Legislators*—Dr. H. A. Bartholomew, chairman, and Drs. Robert E. Boyle and Michael A. Mastrianni; *Medical Advisory (Liaison Committee between County Society and Lay Groups)*—Dr. Stanley L. Edmunds, chairman, and Drs. Francis X. Dever, Robert Reid, and Byron E. Howe; *Public Relations*—Dr. Maxwell Mintz, chairman, and Drs. Daniel F. O'Keefe and Dominick A. Zurlo; *Public Medical Care*—Dr. Felix Schrenk, chairman, and Drs. Richard Hughes and John N. Stark; *Workmen's Compensation*—Dr. Lester C. Huested, chairman, and Drs. Richard C. Batt, Hallam G. Young, and William P. Simmonds; *County Society-Hospital Liaison*—Dr. B. J. Singleton, chairman, and Drs. E. J. Fitzgerald and John W. Canaday; *Emergency Medical Service*—Dr. Robert Reid.

1954 Passano Foundation Award—The 1954 Passano Foundation Award will be presented on June 21 in San Francisco at the St. Francis Hotel during the week of the American Medical Association annual meeting. Dr. Walter P. Martin, the incoming president of the American Medical Association, will be one of the principal speakers at the dinner at which time Homer W. Smith, professor and chairman, Department of Physiology, New York University College of Medicine, will receive the $5,000 Passano Foundation Award.

Cancer Teaching Day—The Medical Society of Cayuga County and the Tumor Board of Cayuga County jointly sponsored a Cancer Teaching Day on April 15 at the Auburn Memorial Hospital. Drs Guy F. Robbins, John A. Finkbeiner, George T Pack, and Alexander Brunschwig were the speakers.

The Institute for the Crippled and Disabled—The third annual conference and demonstration for compensation insurers and physicians sponsored by the Institute for the Crippled and Disabled was held at the Institute on April 7. The Honorable Archie O. Dawson, Commissioner, Moreland Act Commission for the Study of Workmen's Compensation Costs, State of New York, spoke on "Rehabilitation: Its Effects in Reducing Compensation Costs."

The Academy of Psychosomatic Medicine—The first annual meeting of the Academy of Psychosomatic Medicine will be held at the Plaza Hotel in New York City, October 8 to 9, 1954. The program will be devoted to "Psychosomatic Aspects of Surgery."

Those interested in presenting papers should write to Dr. Benjamin Raginsky, 376 Redfern Avenue, Montreal, Canada, stating their special interest. The Academy is still receiving applications for fellowships and associateships which should be directed to Dr. Ethan Allan Brown, secretary, 75 Bay State Road, Boston 15, Massachusetts. New fellows will be inducted into the Academy at the October meeting in New York City.

American Congress of Physical Medicine and Rehabilitation Annual Essay Award—A prize for an essay on any subject relating to physical medicine and rehabilitation is being offered by the American Congress of Physical Medicine and Rehabilitation to stimulate interest in the field of physical medicine and rehabilitation. Open to anyone, the contest is directed primarily to medical students, interns, residents, graduate students in the preclinical sciences, and graduate students in physical medicine and rehabilitation.

The essay can be on any subject pertaining to the field of physical medicine and rehabilitation and the manuscripts must be in the office of the American Congress of Physical Medicine and Rehabilitation, 30 North Michigan Avenue, Chicago 2, not later than June 1, 1954. The essay must not have been published previously and must not exceed 5,000 words exclusive of headings, references, legends for cuts and tables, and the number of words should be stated on the title page. An original and a carbon of each manuscript must be submitted.

The award will be $200, a gold medal, a certificate of award, and an invitation to present the contribution at the thirty-second annual session of the American Congress of Physical Medicine and Rehabilitation at the Hotel Statler, Washington, D.C., September 6 to 11, 1954. Announcement of the winner will be made after the annual meeting.

Aaron Brown Memorial Lecture—The fourth annual Aaron Brown Memorial Lecture was given by Dr. William Dameshek, clinical professor of medicine, Tufts College Medical School, on April 30 at the Cornell Medical School College auditorium. Dr. Dameshek spoke on "Hypersplenism."

Meetings—Past

Legal Aspects of Medicine

A discussion of "The Medical Witness and Medical Testimony in Negligence and Malpractice Cases," was held on February 1 at the New York University College of Medicine. Dr. Maxwell H. Poppel, professor and chairman of the Department of Radiology, New York University College of Medicine, presided. The discussants were Mr. William F. Martin, counsel of the Medical Society of the State of New York; Mr. Harry A. Gair; Dr. Thomas M. d'Angelo, Malpractice Insurance and Defense Board of the Medical Society of the State of New York; Dr. Henry K. Taylor, professor of clinical radiology, New York University College of Medicine, and Mr. Delmar Karlen, professor of law, New York University School of Law.

Conference On Problem Drinking and Industry

Dr. S. Charles Franco spoke March 3 at the Hotel Biltmore at an all-day conference on alcoholism sponsored by the New York University Post-Graduate Medical School's Institute of Industrial Medicine, the University Hospital Consultation Clinic for Alcoholism, and several lay organizations.

Chemung County Medical Society

At a special meeting on March 3, the Chemung County Medical Society approved, by a vote of 24 to six, a proposed County Health Unit for Chemung County. The meeting also voted 28 to eight to advise State Senator Dutton S. Peterson that it objected to his sponsorship of a bill to license chiropractors.

Chronic Disease Conference

The Jewish Sanitarium and Hospital for Chronic Diseases, Brooklyn, held a five-day program of lectures on chronic diseases from March 8 to March 12.

At the opening session Dr. Benjamin Kramer, chief pediatrician, Brooklyn Jewish Hospital, and professor of clinical pediatrics, State University of New York, spoke on "Problems of Bone Formation and Resorption." Dr. Edward C. Reifenstein, Jr., director of biological and therapeutic research for the Schering Corporation, spoke on "Bones and Hormones."

On March 9 a pediatric seminar heard Drs. Robert Kahn, I. G. Droop, O. Schwartz, R. Janet Watson, Bernard Banjamin, R. D. Turin, Richard L. Day, Max Weinstein, Louis S. Nelson, M. T. Koven, S. G. Feuer, Robert Warren, E. T. Heffer, and Gerard Izzo. Dr. Benjamin Kramer made the summary.

The rehabilitation seminar discussed rehabilitation clinics with Dr. S. G. Feuer and his staff. There was a panel on "Rehabilitation of the Hemiplegic," with Dr. M. G. Goldner as moderator and Drs. S. G. Feuer, S. Bernstein, and I. J. Sands.

On March 10, Drs. H. Cohn, B. M. Miller, J. Saal, and J. M. Dan, presented cases for the Arthritis discussion. Then followed a panel on "Management of Chronic Rheumatoid Arthritis," with Dr. B. Rogoff as moderator and Drs. H. Wainerdi, L. Rothman, T. D. Cohn, and H. Weiner contributing.

The case presentations on March 11 were handled by Drs. J. Rubinstein, S. Losner, H. Zaerowith, K. Horn, L. Nathanson, and A. Lewitan.

"Management of Chronic Backache," with Dr. L. Nelson as moderator, was the subject of another panel discussion. Drs. L. Starr, M. Schneider, A. J. Berman, and H. Rosner took part.

March 12 ended the conference with a panel on "Recent Advances in Diagnosis and Therapy of Neuromuscular Disorders." Drs. A. M. Rabiner and B. W. Volk acted as moderators. The contributors were Drs. S. M. Aronson, A. J. Berman, N. Epstein, L. Koven, A. J. Lapovsky, A. Lewitan, and J. Scott.

New York Council of Surgeons

Dr. Arthur C. DeGraff, Samuel A. Brown professor of therapeutics, New York University, visiting physician at Bellevue Hospital, attending physician at University Hospital, and senior consultant in medicine at the Veterans Administration Hospital, spoke on "How to Use the Cardiac Glycosides," on March 16 at the Parkchester General Hospital.

Postgraduate Course at Columbia

For the first time, the American College of Physicians offered a postgraduate course in internal medicine at the Columbia-Presbyterian Medical Center, College of Physicians and Surgeons. Under the direction of Drs. Franklin M. Hanger and Robert F. Loeb, the course lasted from March 22 to March 26.

Lecture on Surgery and Diabetes

Dr. Frederick W. Williams, associate professor of clinical medicine, New York Medical College, spoke at the St. Luke's Hospital in Newburgh, March 23, on "Gangrene Infection and the Management of the Surgical Diabetic."

Antibiotic Therapy Lecture

Dr. Henry Welch, director of the Division of Antibiotics, Department of Health, Welfare, and Education, Washington, D.C., spoke at the Albany Country Club before the Albany County Medical Society on March 24. His topic was, "Recent Advances in Antibiotic Therapy."

Albany County Medical Society

The Medical Society of the County of Albany held its March 24 meeting at the Albany Country Club. Dr. Henry Welch, director of the Division of Antibiotics, U.S. Food and Drug Administration, and editor of the *Journal of Antibiotics and Chemotherapy*, spoke on "The Broad Spectrum Antibiotics, Their Values and Complications." The discussant was Dr. John J. A. Lyons.

The February 24 meeting, held at Wolferts Roost Country Club, heard Dr. William Dameshek speak on "Recent Advances in Hematology." Drs. Propp, Rider, Bucci, and Goodwin contributed to the discussion.

Douglas P. Arnold Lecture

The University of Buffalo School of Medicine sponsored the fifth annual Douglas P. Arnold Lecture on March 25 and 26, given by Dr. John Caffey, professor of clinical pediatrics at Columbia University College of Physicians and Surgeons. Dr. Caffey spoke on "Normal Variants in the Growing Skeleton: Their Diagnostic Significance," and "Traumatic Lesions in the Growing Skeleton, other than Fractures and Dislocations."

Blood Banks Association of New York State

A meeting of the Eighth District Branch blood bank directors and physicians active in the Blood Banks Association of New York State was held at the Hotel Statler Buffalo, on April 1. At the meeting an outline of the Blood Exchange Program being established and the Blood Assurance Program pilot project currently being developed in cooperation with Genesee County Medical Society and the blood banks of St. Jerome Hospital and Genesee Memorial Hospital was presented.

Blue Cross and Blue Shield Conference

The 1954 Annual Conference of Blue Cross Plans and Blue Shield Plans was held from April 4 to 8 at the Waldorf Astoria Hotel, New York City. About 400 delegates attended representing Plans in Canada, Hawaii, Puerto Rico, and all sections of the United States.

Medical Society of County of Schenectady

The Medical Society of the County of Schenectady held its regular meeting on April 6 at the Mohawk Golf Club. The speaker was Dr. Harry E. Bacon, head of the Department of Proctology at Temple University Medical School in Philadelphia, who spoke on "The Surgical Treatment of Diverticulitis."

Former A.M.A. President Speaks at College

On April 7, Dr. Louis Bauer, former president of the American Medical Association, delivered the annual Charter Day Lecture at the New York Medical College. His topic was "Medical Ethics and the World Medical Association."

Rehabilitation Conference

The Committee on Rehabilitation of the American College of Chest Physicians held its New York Regional Conference on April 9 at the Veterans Administration Hospital in Albany.

Dr. Sol M. Warren of the New York State Department of Vocational Rehabilitation began a panel discussion with a talk on "Follow-up Cases After Hospital Discharge." Another panel was held on "Common Goals in Rehabilitation of the Tuberculous."

Montgomery County Medical Society

A meeting of the Montgomery County Medical Society was held on April 13 at the Elks Club in Amsterdam. Guest speakers were: Dr. Richard Lange, head of the Isotope Laboratory, Ellis Hospital, Schenectady, and Dr. Hendrik M. Rozendaal, Radioactive Isotope Laboratory, General Electric Company, Schenectady, who discussed "Radioactive Isotopes in Diagnosis and Treatment."

Fulton County Medical Society

Dr. William B. Sherman, director, Allergy Clinic, Presbyterian-Columbia University Medical Center, was the guest speaker at the April meeting of the Fulton County Medical Center. Dr. Sherman spoke on "Asthma."

Cortland County Medical Society

"Neurologic Diagnosis" was the subject of the talk given by Dr. Stanley Batkin, assistant professor of neurology and neurosurgery, State University of New York College of Medicine at Syracuse, at the April meeting of the Cortland County Medical Society.

Nassau Pediatric Society

A scientific meeting of the Nassau Pediatric Society was held on April 12 in Garden City. Dr. John R. Cobb, attending orthopedic surgeon, Hospital for Special Surgery, New York City, discussed "Common Orthopedic Disorders in Infancy."

Delaware County Medical Society

"Pulmonary Tuberculosis: Early Diagnosis and Differential Diagnosis" was discussed by Dr. Ralph Horton, director, Homer Folks Tuberculosis Hospital, Oneonta, at a meeting of the Delaware County Medical Society on April 13.

Ontario County Medical Society

Dr. Thomas M. Frawley, assistant professor of medicine, Albany Medical College, presented a paper on "Diseases of the Adrenal Gland" at a meeting of the Ontario County Medical Society on April 13.

American Academy of General Practice of Oneida County

The Oneida County Chapter of the American Academy of General Practice presented the sixth major symposium of the 1953 to 1954 season at the regular meeting of the Utica Academy of Medicine on April 15. Dr. Harold B. Houser, instructor in medicine, Syracuse School of Medicine, discussed "General Review of Newer Antibiotics and Their Application," as part of the Symposium on Antibiotics; Dr. Frederick Fink, New York City, "Synergic Action on Antibiotics," and Dr. Joseph J. Hallett, senior dermatologist and syphilologist, Highland Hospital, Rochester, "Antibiotics From a Dermatologic Viewpoint."

Broome County Medical Society

Dr. Charles W. Lloyd, assistant professor of medicine, State University of New York College of Medicine at Syracuse, spoke to the Broome County Medical Society physicians on April 26 at the Binghamton City Hospital. Dr. Lloyd spoke on "Clinical Applications of Newer Physiological Concepts of Adrenocortical Function."

Chemung County

"Spontaneous Abortion: Causes and Management" was discussed by Dr. Albert W. Van Ness, clinical assistant professor of obstetrics, State University of New York College of Medicine at Syracuse, at a meeting of the Chemung County Chapter of the Academy of General Practice on April 28 at the Mark Twain Hotel.

On March 31, Dr. Clayton W. Greene, professor of medicine, emeritus, University of Buffalo School of Medicine, spoke to the members of the Chemung County Medical Society on "What Can We Do for Angina Pectoris and Coronary Occlusion?" This meeting was also held at the Mark Twain Hotel, Elmira, and was under the auspices of the Chemung County Chapter of the Academy of General Practice and the Chemung County Medical Society.

American Goiter Association

The American Goiter Association, headed by Dr. Merrill N. Foote, Brooklyn, held its annual meeting from April 29 to May 1 in Boston, Massachusetts. New York State doctors taking part were Drs. J. E. Rall, program committee chairman; J. B. Alpers, Jerome Robbins, John T. Godwin, and E. M. Hanbury, Jr.

Isotope Symposium

An "Isotope Symposium" was held at the Triboro Hospital on April 30. Dr. S. Allan Lough, senior physicist in charge of isotopes, Delafield

[Continued on page 1392]

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Hospital, New York City Department of Hospitals, discussed "Physical Fundamentals of Radioisotopes"; Dr. Solomon Silver, attending physician, Mount Sinai Hospital, New York City, "Radioactive Iodine in the Diagnosis of Thyroid Diseases"; Dr. Frank Borrelli, professor of radiology, New York Medical College and Flower and Fifth Avenue Hospitals, "The Treatment of Hyperthyroidism with Radioactive Iodine," and Dr. Sidney Rubenfeld, director, Radiation Therapy Department, Bellevue Hospital Center, New York City, "The Use of Radioactive Gold in Peritoneal and Pleural Effusions from Malignant Disease."

Dr. Leonard B. Goldman, director of Radiation Therapy Department, Queens Hospital Center, Jamaica, was the chairman.

Association of Medical Technologists

The seventh annual convention of the Empire State Association of Medical Technologists, Inc., was held in April in New York City. Among the speakers at the convention were: Dr. Alfred A. Angrist, professor of pathology and chairman of the Department of Pathology, Albert Einstein School of Medicine and Yeshiva University, director of Pathology, Bronx Hospital Center, who discussed "The Relationship of the Economic to the Scientific in Medical Technology"; Dr. Andrew A. Eggston, president, Medical Society of the State of New York, director of laboratories, Manhattan Eye, Ear and Throat and Mount Vernon Hospitals, who gave the welcoming address; Dr. Oscar Bodansky, chief, clinical biochemistry, Memorial Center for Cancer and Allied Diseases, professor of biochemistry, Sloan-Kettering Division, Cornell University Medical College, who discussed "Precision in the Clinical Biochemistry Laboratory"; Dr. George K. Higgins, department head of medical laboratory technology, New York City Community College of Applied Arts and Sciences, who spoke on "The Qualifications and Basic Training of Medical Laboratory Technologists"; Dr. George A. Hyman, assistant physician in charge of hematology, Francis Delafield Hospital, who discussed "Methods of Study of the Life Span of Red Cells"; Dr. Louis R. Wasserman, hematologist, Mount Sinai Hospital, New York City, assistant clinical professor of medicine, College of Physicians and Surgeons, Columbia University, who presented a paper on "The Significance of the Prolonged Coagulation Time."

Meetings—Future

New York Cancer Society

The New York Cancer Society will hold a meeting on May 4 at the New York Academy of Medicine. Dr. Harry S. N. Greene of Yale University School of Medicine will speak on "Biology Versus Morphology in the Distinction between Benign and Malignant Neoplasms," and Dr. Alexander Horava of Canada will talk on "Stress and Cancer." The discussants will be Dr. Fred W. Stewart from Memorial Center and Dr. George W. Wooley from Sloan-Kettering Institute for Cancer Research.

American Academy of Dental Medicine

The eighth annual meeting of the American Academy of Dental Medicine will be held at the Penn Sheraton Hotel, Philadelphia, Pennsylvania, May 14, 15, and 16, 1954. The subject of the meeting will be "Diagnosis and Treatment Planning."

Programs and reservations are available through Dr. William M. Greenhut, national secretary, 124 East 84th Street, New York City 28.

Bellevue Hospital Radiation Therapy Alumni Association

The annual Ira I. Kaplan Lecture will be given on May 20 at 2:30 P.M. Dr. Ira T. Nathanson, of Harvard Medical School, will speak on "Hormonal Therapy in Cancer of the Breast," with Dr. Gray H. Twombly, professor of gynecology at New York University College of Medicine, as discussant. Dr. Oscar H. Cohen, president of the Bellevue Hospital Radiation Therapy Alumni Association, invites all interested to attend at the Main Lecture Hall, New York University College of Medicine, 477 First Avenue, New York City.

Cortland County Medical Society

A talk on "Physiology and Treatment of Pulmonary Emphysema" will be given by Dr. Giles Filley, director, Department of Physiology, Trudeau-Saranac Institute, at a meeting of the Cortland County Medical Society on May 24. The meeting will be held at the Cortland County Hospital in Cortland at 8:30 P.M.

"Neurologic Diagnosis" was discussed by Dr. Stanley Batkin, assistant professor of neurology and neurosurgery, State University of New York College of Medicine at Syracuse, on April 26.

International College of Surgeons

The New York State Division of the International College of Surgeons will sponsor a meeting at St. Francis Hospital, Poughkeepsie, May 27 to 28. Dr. Max Michael Simon is general chairman, with Drs. Frank A. Gagan and C. A. Crispell as cochairmen. Dr. Gagan will also serve as chairman of the program committee with Dr. Francis R. Daniels as cochairman.

Drs. Max Thorek and Arnold S. Jackson will be speakers at the Surgical Forum, with Dr. Horace E. Ayers. The program will be directed toward everyday surgical problems with correlation of their physiologic, biochemic, and pathologic aspects. The scientific sessions will be held in the auditorium and adjacent buildings of St. Francis Hospital. Lederle Laboratories will be host at a scheduled lunch, social hour, and banquet.

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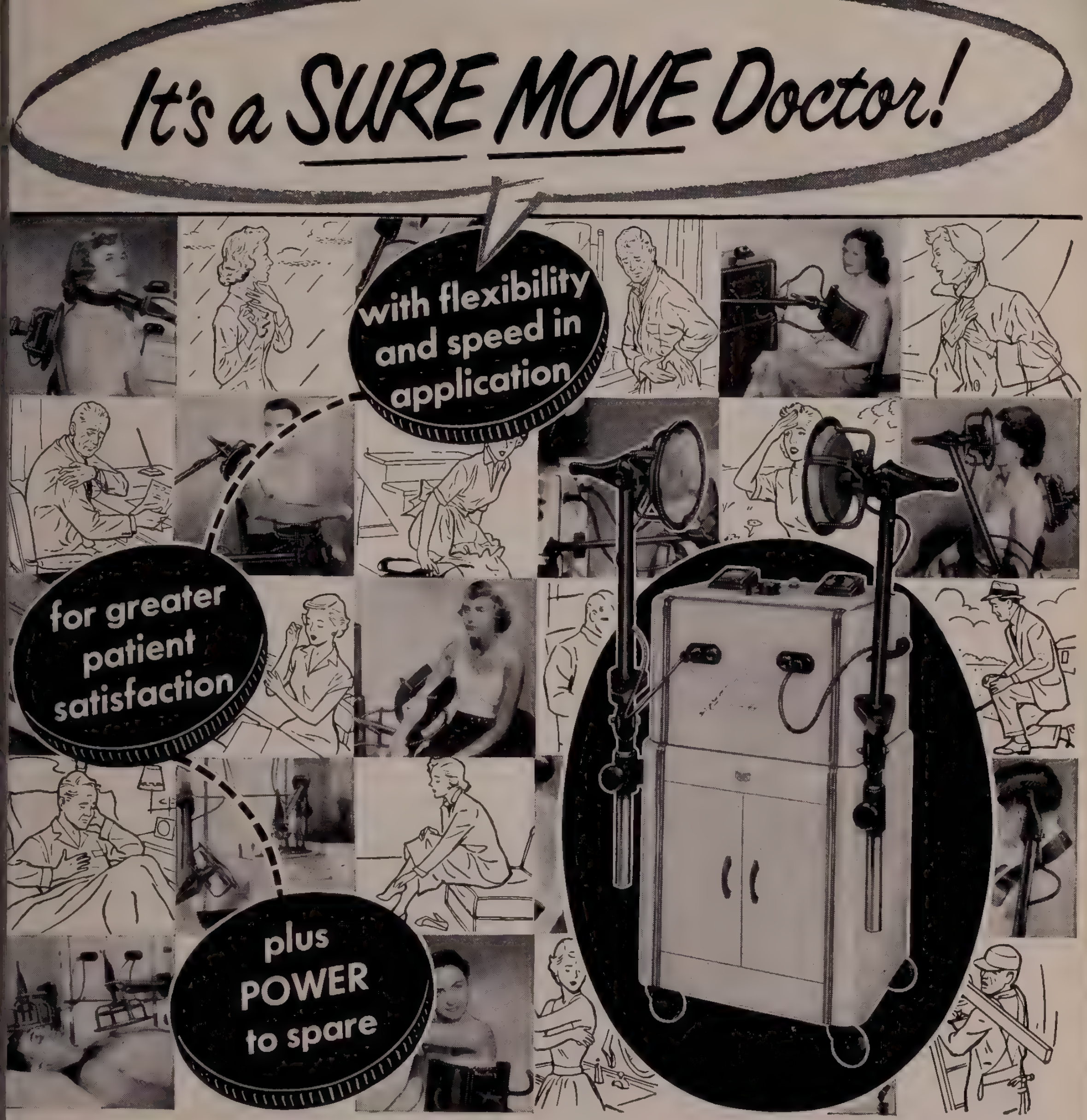
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Personalities

Honored

Drs. George R. Dempsey, Lucille C. Flood, Thomas D. McMenamin, and Scott B. Schleiermacher, by the members of the Cornwall Hospital medical staff in March at a testimonial dinner . . . Dr. William F. Jacobs, retiring medical superintendent, at a party given by the hospital personnel of Bellevue Hospital.

Awarded

Dr. Hattie E. Alexander, New York City, a citation by Goucher College, Towson, Maryland, for her treatment of meningitis and influenza . . . Dr. Samuel Z. Levine, professor of pediatrics, Cornell University Medical School, and pediatrician-in-chief, New York Hospital, the sixth annual alumni award for outstanding contributions to medicine, at the annual alumni reunion of Cornell Medical College. . .Dr. Michael Schuman, New York City, a citation by the Milah Board. . .Dr. Lyon Steine, Valley Stream, of a $1,000 M and R award for 1954.

Dr. J. Gerard Converse, professor of anesthesiology, Albany Medical College, a research grant . . . Dr. Franklin B. McKechnie, instructor in anesthesia, Albany Medical College, a grant from the United States Public Health Service, Federal Security Agency . . . Dr. Dan Mellen, president-elect of the Medical Society of the State of New York, and Dr. Carlton E. Wertz, past-president, citations by the University of Buffalo . . . Dr. Howard A. Rusk, New York City, the fourth annual award "in recognition of distinguished and devoted service in the field of health and welfare for children" from the Save the Children Federation.

Appointed

Drs. Jacob Birnbaum, A. H. Friedman, Milton Goodfriend, Walter Levy, Charles Posner, Max DeKaye, Maxwell Frank, A. A. Karan, Edward Kirsch, and Martin Steinberg as directors of the Milah Board for 1954–1955. . .Drs. Franklin Foote, William E. Ayling, George J. Righter, and Theodore J. Curphey, as members of an advisory council on school health services. . .Dr. August H. Groeschel, as associate director of New York Hospital. . .Drs. Edward L. Schwabe and Norman S. Moore to the board of visitors of Roswell Park Memorial Institute. . .Dr. Howard C. Stewart, as principal public health physician in the Division of Tuberculosis Control of the New York State Department of Health. . .Dr. John R. Whittier, as principal research scientist in psychiatry, Creedmoor Institute of Psychobiologic Studies at Creedmoor State Hospital, Queens Village.

Drs. Alfred A. Angrist, as head of the Department of Pathology, Leo M. Davidoff, as professor and chairman of Department of Surgery, and Dr. Abraham White, as head of Department of Biochemistry of Yeshiva University's Albert Einstein College of Medicine . . . Dr. John W. Ball, formerly surgeon staff member, Massachusetts General and Boston City Hospitals, as staff member, Sunmount VA Hospital, Tupper Lake . . . Dr. William R. Maurer, formerly of surgical staff, VA Hospital, Bronx, as resident surgeon, Sunmount, for six months . . . Drs. James R. Breed, R. T. Lapidus, Albert A. Rosenberg, and George Way, consultants, Northern Dutchess Health Center . . . Dr. Sue Browder, associate attending neurologist, Hospital for Special Surgery, and assistant attending neurologist, Neurological Institute, as attending psychiatrist, Blythdale, Valhalla, and medical director, Cerebral Palsy Treatment Center, U.S. Public Health Service Hospital . . . Dr. Nathaniel H. Cooper, New York City, director of health activities, Welfare and Health Council of New York City . . . Dr. Howard Craig, executive secretary of New York Academy of Medicine, as chairman of the Mayor's Advisory Council Subcommittee on Health and Hospitals . . . Dr. Arthur Fankhauser, head of the combined boards of Kings County Medical Center and director of medicine at Kings County Hospital, as president of the medical board of Caledonian Hospital, Brooklyn . . . Dr. Andrew Fleck, acting commissioner of health for Rensselaer County to permanent appointment . . . Dr. Isidor Greenwald, former member of the New York University medical faculty, as professor emeritus of chemistry at the New York University-Bellevue Medical Center . . . Dr. Robert Gutierrez, New York City, as director of the Department of Urology at Columbus Hospital . . . Dr. George William Graham, assistant director of Strong Memorial Hospital, Rochester, as director of Ellis Hospital . . . Dr. John C. Kinzley, North Tonawanda, as Niagara County coroner . . . Dr. Lawrence C. Kolb, Rochester, Minnesota, director of New York State Psychiatric Institute and professor of psychiatry in the Department of Psychiatry, Columbia University College of Physicians and Surgeons . . . Dr. Joseph A. Head, Syracuse, assistant instructor in radiology, State University College of Medicine . . . Dr. Edward R. Perl, formerly of Johns Hopkins School of Medicine, assistant professor of physiology, State University College of Medicine.

Dr. Roscoe P. Kandle, field director of the American Public Health Association, as deputy commissioner of the New York City Department of Health . . . Dr. Samuel Frant, former Deputy Commissioner of the New York City Department of Health, as consultant epidemiologist to the Chief Medical Examiner, New York City . . . Dr. Perrin H. Long, professor and chairman of the Department of Internal Medicine, State University College of Medicine, to Brigadier General, Medical Corps, United States Army Reserve . . . Dr. William B. McCafferty, Schenectady, resident anesthesiologist, Ellis Hospital . . . Dr. Basil C. MacLean, former president of the American Hospital Association, as New York City Commissioner of Hospitals . . . Dr. Thomas D. Pemrick, Troy, general surgeon for crippled children's program, Rensselaer County

[Continued on page 1396]

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1. Rev. Gastroenterology 20:744 (Oct.) 1953; abstract in J. A. M. A., 153:1580 (Dec. 26) 1953.

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Health Department... Dr. John B. Plass, Poughkeepsie, superintendent, Samuel W. and Nettie Bowne Hospital.

Dr. Hugh Luckey, director, Cornell Medical Division of the Bellevue Hospital Center, as Dean of Cornell University Medical College... Dr. Alexander H. Rosenthal, clinical associate professor of obstetrics and gynecology at State University Medical Center, Brooklyn, as chief of Division of Obstetrics and Gynecology, Long Island Jewish Hospital... Dr. Sylvan N. Surks, chief of Division of Anesthesiology at Long Island Jewish Hospital . . . Dr. Herbert C. Yeckel, clinical professor emeritus of medicine, Syracuse University School of Medicine, as full-time medical examiner, VA clinic, Syracuse.

Elected

Dr. Roy Duckworth, president; Dr. Walter Brown, vice-president, and Dr. Maynard G. Priestman, secretary-treasurer, of the Westchester Radiological Society. . .Dr. Louis H. Bauer, chairman of United Medical Service.

Dr. Joseph L. Abrahamson, as president, Morton H. Hand, vice-president, and David M. Engelhardt, secretary-treasurer, of Brooklyn Psychiatric Society ... Drs. M. Riemer and Julius Nelson, to executive committee of Brooklyn Psychiatric Society for one year, and Drs. Nathan Beckenstein and Matthew Brody for two years, with Drs. Sam Parker and David M. Engelhardt on the coordinating committee... Dr. E. W. Briggs, Jr., as president of Jones Memorial medical staff, with Dr. A. J. Junker, vice-president, and Dr. John Glosser, secretary-treasurer... Dr. Louis Dlugasch, re-elected president of the medical board of Beth David Hospital . . . Dr. Oswald R. Jones, president of the medical board of St. Luke's Hospital... Dr. Nicholas I. Klimow, Johnson City, re-elected for third consecutive year as chief of staff of Wilson Memorial Hospital... Dr. Marshall W. Quandt, Waterford, president of the medical staff of Leonard Hospital, with Dr. C. E. Davis, vice-president, and Dr. Mario J. Cuoco, secretary-treasurer... Dr. Floyd Breed, vice-president of Wilson Memorial, and Dr. Francis X. Haines, secretary... Dr. Peter B. Riley, president of the medical staff of Amsterdam City Hospital, with Dr. Peter J. Lucas, vice-president, and Dr. Fred F. Pipito re-elected secretary... Dr. Howard A. Rusk, president of the American-Korean Foundation... Dr. C. D. Silver, re-elected chief of staff of Physicians Hospital in Plattsburg... Dr. Maurice L. Tainter, trustee of Rensselaer Polytechnic Institute... Dr. T. Campbell Thompson, New York City, president of the American Academy of Orthopedic Surgeons.

Speakers

Dr. Hilde Bruch, at thirty-first annual meeting of American Orthopsychiatric Association in New York City in March. . .Dr. Martin Cherkasky, director of Montefiore Hospital, New York City, at the National Conference on Care of the Long-term Patient in Chicago, in March.

Dr. Alvan L. Barach, clinical professor of medicine, College of Physicians and Surgeons of Columbia University, at the Buffalo Academy of Medicine in April . . . Dr. Conrad Berens, director of the Ophthalmological Foundation, at the forty-eighth annual meeting of the Lighthouse . . . Dr. Donald A. Covalt, clinical director of rehabilitation and physical medicine, New York University Medical School, as moderator of the panel discussion on rehabilitation problems at a forum sponsored by the Woman's Medical College of Pennsylvania in March. . . Dr. Louise Despert, associate professor of clinical psychiatry, Cornell Medical College, at a meeting sponsored by the League for Emotionally Disturbed Children in April in New York City.

Dr. Thomas F. Frawley at the sixth annual scientific assembly of the American Academy of General Practice in Cleveland in March. . .Dr. Joseph L. Goldman at the American Medical Association annual meeting in June in San Francisco. . .Dr. Paul H. Hoch, New York State Psychiatric Institute, to the staff of the Veterans Administration Hospital, Northport, Long Island, in March. . .Dr. Mary E. Mercer, assistant professor of clinical pediatrics in psychiatry, Cornell University Medical Center and New York Hospital, at Hunter College in March. . . Dr. Arnold Z. Pfeffer, assistant clinical professor, psychiatry, New York University College of Medicine, physician-in-charge, Consultation Clinic for Alcoholism, University Hospital, New York City, at the Yale University Summer School of Alcohol Studies July 5 to July 29.

Dr. Howard A. Rusk, director of the New York University-Bellevue Medical Center's Institute of Physical Medicine and Rehabilitation, at the meeting of the American Academy of General Practice in Cleveland in March. . . Dr. Clara Thompson, executive director of the William Alanson White Institute of Psychiatry, Psychoanalysis, and Psychology, at the Brooklyn State Hospital Psychiatric Forum in March. . .Dr. Hans Selye, professor and director of the Institute of Medicine and Experimental Surgery, University of Montreal, at the annual lecture of the Eta Chapter of Phi Lambda Kappa fraternity of New York University College of Medicine in April.

New Offices

Dr. Benjamin Antin, formerly of New York City, general practice in Yorktown . . . Dr. Alexander R. Penn, U.S. Army Medical Corps, general practice in Dexter with Dr. Harold C. Livingston. . .Dr. John S. Puzauskas, formerly with the U.S. Navy Medical Corps, general practice in Oswego.

Dr. Aaron Davis, formerly of Plattsburg, general practice at Mooers. . .Dr. M. Thomas Donato, Salamanca, an additional office in Allegany. . .Dr. A. S. D'Eloia, radiology in Ossining. . .Dr. John C. Roberts, formerly of Lancaster, Pennsylvania, general practice with Dr. Robert L. Bowerham in Copake in July. . .Dr. George Tempel, Keeseville, radiology in Plattsburg.

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NEWS FROM THE MEDICAL SCHOOLS

Editor's Note: With this issue, the Journal *inaugurates a monthly department devoted to a round-up of news contributed by the medical schools in New York State.*

State University of New York College of Medicine at New York City

Appointments

Major new appointments to the Faculty of the State University College of Medicine in Brooklyn for the fiscal year beginning April 1, 1954, include the following:

Dr. Edward Solomons, obstetrician and gynecologist of Dr. Steevens Hospital, Dublin, Ireland, has been named full professor of obstetrics and gynecology with a concurrent appointment as full-time chief of obstetrics and gynecology at Maimonides Hospital, with which the College has a teaching affiliation. Dr. Solomons had previously served as visiting professor of obstetrics and gynecology at the College during the month of October, 1953.

Dr. Max Michael, Jr., associate professor of medicine at Emory University, Atlanta, Georgia, and chief of medical services at the Atlanta V.A. Hospital, has been named full professor of medicine with a concurrent appointment as full-time chief of medical services at Maimonides.

Dr. Abraham M. Rabiner, who up to the present has been clinical professor in the Department of Neurology and Neurosurgery, has been named part-time professor and head of a new Division of Neurology under the Department of Surgery. Dr. E. Jefferson Browder, who has been serving as professor and chairman of the combined Department of Neurology and Neurosurgery, will continue as part-time chairman of the separate Department of Neurosurgery.

Dean Jean A. Curran has been named as the College's first professor of the history of medicine. In addition to his regular duties as Dean, Dr. Curran plans, in his new capacity, to work with the faculty and students in developing "the historical perspective essential to an understanding of the progress of medicine."

Dr. Silvio Weidman, associate professor in physiology at the University of Berne, Switzerland, will succeed Dr. Frans Fleyntjens, adjunct professor and acting chief of the Department of Neurology at Brussels University Hospital, as visiting professor of physiology for the period September 1, 1954, to August 31, 1955.

Dr. Benton Davis King, assistant chief of anesthesia at the Brooke Army Hospital, Fort Sam Houston, Texas, has been appointed associate professor of anesthesia.

Jean Redman Oliver Lecture

Dr. Paul Klemperer, pathologist to the Mount Sinai Hospital and professor of pathology at the Columbia University College of Physicians and Surgeons, delivered the second annual Jean Redman Oliver Lecture at the College on March 9. His subject was "Some Aspects of Collagen Diseases."

Grant for Study of Retrolental Fibroplasia

A grant of $3,000 to the Department of Pediatrics for research in retrolental fibroplasia was made in March by the Association for the Aid of Crippled Children. The Department's research will be addressed to the problem of determining by instrumental means when an infant's blood is supersaturated with oxygen. It is also hoped that this work will shed light on the question of what is the smallest amount of oxygen which is needed to sustain life.

Anniversaries

The month of April marked two anniversaries in the recent history of the College. April 5 was the fourth anniversary of the College's merger with the State University of New York. Previous to 1950 it had been a private institution under the name, Long Island College of Medicine. April 9 witnessed the passage of one year since ground was broken for the College's new Basic Sciences Building at a new site on Clarkson Avenue opposite the Kings County Hospital in Brooklyn. Construction has been moving rapidly forward, and it is expected that the building will be opened sometime in 1956.

State University of New York College of Medicine at Syracuse

Dr. Joe Vincent Meigs, clinical professor of gynecology at Harvard University School of Medicine, presented the annual George Birney Broad lecture in gynecology March 9. His topic was "The Treat-

[Continued on page 1400]

For every woman presenting classic menopausal **hot flushes,** there is another who exhibits symptoms which are equally distressing but less clearly defined. For example, insomnia, easy fatigability, **headaches** may also be symptoms of declining ovarian function, but frequently are not so recognized because they occur long before and even years after menstruation ceases. When such is the case, the patient may be expected to **respond** to estrogen therapy. **"Premarin"** (complete equine estrogen-complex) produces not only prompt symptomatic relief but also imparts a gratifying **"sense of well-being."** It has no odor . . . imparts no odor. "Premarin"® estrogenic substances (water-soluble), also known as conjugated estrogens (equine), is supplied in tablet and liquid form.

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[Continued from page 1398]

ment of Carcinoma of the Cervix: the Result of an Experience of Thirty-five Years."

Marion W. Sheahan, director of the division of nursing services of the National League for Nursing, spoke on "What the Nursing Profession Is Doing About Nursing" at the Public Health-Public Health Nursing Convocation on March 17.

Major General Paul R. Hawley, director of the American College of Surgeons, gave the annual Alpha Omega Alpha lecture March 30. His subject was "Government and Medicine, Present and Future Relationships." Dr. Paul A. Bunn, associate professor of medicine, Dr. Jay Tepperman, professor of experimental medicine, and Lewis Schiffer, Paul Rodensky, Angelo Ciliberti, and Erwin Hoffman, students, were initiated into AOA at a dinner preceding the lecture.

Dr. William H. Bergstrom, instructor in pediatrics, was named a Markle Scholar by the John and Mary Markle Foundation. The College will receive a total of $30,000 over a five-year period to support Dr. Bergstrom's academic progress.

Razing of Yates Castle was scheduled to begin April 1 to make way for a five and one-half million dollar expansion of the Basic Sciences Building.

BOOKS RECEIVED

(*The following books were received during the month of February, 1954*)

An Rh-Hr Syllabus. The Types and Their Applications. By Alexander S. Wiener, M.D. Octavo of 82 pages, illustrated. New York, Grune & Stratton, 1954. Cloth, $3.75. (Modern Medical Monographs, #9.)

Rh-Hr Blood Types. Applications in Clinical and Legal Medicine and Anthropology. Selected Articles in Immuno Hematology. By Alexander S. Wiener, M.D. Quarto of 763 pages, illustrated. New York, Grune & Stratton, 1954. Cloth, $11.50.

"Sismanoglion." Archives of Tuberculosis. Vol. 9, 1953. Edited for the Sismanoglion Tuberculosis Institute by Savas Papaemmanuel, M.D., Director General. Octavo. 258 pages, illustrated, and 117 pages, English translation. Athens, Greece, Sismanoglion Tuberculosis Institute [1954].

Rat Quality, a Consideration of Heredity, Diet and Disease. Proceedings of the Symposium held at Columbia University, College of Physicians and Surgeons, New York, New York, January 31, 1952. W. E. Heston, Ph.D., G. E. Jay, Jr., H. Kaunitz, M.D., and H. P. Morris, Ph.D., *et al.*, Contributors. Octavo of 138 pages, illustrated. New York, National Vitamin Foundation, 1953. Paper, $2.50.

Administrative Medicine, Transactions of the First Conference March 9, 10, and 11, 1953, New York, N. Y. Edited by George S. Stevenson, M.D. Octavo of 176 pages, illustrated. New York, Josiah Macy, Jr. Foundation, 1953. Cloth, $3.00.

Clinical Endocrinology. By Karl E. Paschkis, M.D., Abraham E. Rakoff, M.D., and Abraham Cantarow, M.D. Octavo of 830 pages, illustrated. New York, Paul B. Hoeber, 1954. Cloth, $16.

Clinical Orthoptics. Diagnosis and Treatment. By Mary Everist Kramer, Certified Orthoptist. Edited by Ronald Atmore Cox, M.D., Wade Hampton Miller, M.D., and Louisa Wells Kramer, Certified Orthoptist. Second edition. Octavo of 531 pages, illustrated. St. Louis, C. V. Mosby Co., 1953. Cloth, $12.50.

Connective Tissues, Transactions of the Fourth Conference, February 18, 19, and 20, 1953, Princeton, N. J. Edited by Charles Ragan, M.D. Octavo of 197 pages, illustrated. New York, Josiah Macy, Jr. Foundation, 1953. Cloth, $3.75.

Abraham Trembley of Geneva, Scientist and Philosopher, 1710–1784. By John R. Baker, D.Sc. Octavo of 259 pages, illustrated. London, Edward Arnold (New York, St. Martin's Press), 1952. Cloth, $7.50.

Music Therapy. Edited by Edward Podolsky, M.D. Octavo of 335 pages, illustrated. New York, Philosophical Library, 1954. Cloth, $6.00.

Dermatologic Medications. By Marguerite Rush Lerner, M.D., and Aaron Bunsen Lerner, M.D. Duodecimo of 183 pages, illustrated. Chicago, Year Book Publishers, 1954. Cloth, $3.50.

Physiology of the Eye. Vol. II. Vision. By Arthur Linksz, M.D. Quarto of 869 pages, illustrated. New York, Grune & Stratton, 1952. Cloth, $19.

You and Your Health. By Edwin P. Jordan, M.D. Octavo of 296 pages. New York, G. P. Putnam's Sons, 1954. Cloth, $3.95.

The Allergic Child. By Harry Swartz, M.D. Octavo of 297 pages. New York, Coward-McCann, 1954. Cloth, $3.95.

Doctors, People, and Government. By James

[Continued on page 1402]

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(1) Perlmutter, M.: Metabolism 2: 81, 1953; (2) Jones, G. E. S., and Delfs, E.: J.A.M.A. 146: 1212, 1951; (3) Man, E. B., et al.: J. Clin. Investig. 30: 137, 1951.

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[Continued from page 1400]

Howard Means, M.D. Duodecimo of 206 pages. Boston, Little, Brown & Co., 1953. Cloth, $3.50.

Abstracts on Military and Aviation Ophthalmology and Visual Sciences. By Conrad Berens, M.D., and L. Benjamin Sheppard, M.D. Volumes I [1900–1940] and II [1941–1945] of a three-volume set. Octavo 529 pages; 425 pages. Washington, Biological Sciences Foundation, 1953. Cloth, $20 each volume.

Handbook on Diseases of Children Including Dietetics & the Common Fevers. By Bruce Williamson, M.D. Seventh edition. Duodecimo of 467 pages, illustrated. Edinburgh, E. & S. Livingstone (Baltimore, Williams & Wilkins Co.), 1953. Cloth, $5.00.

The Thyroid. A Physiological, Pathological, Clinical and Surgical Study. By T. Levitt, F.R.C.S. (Eng.). Octavo of 606 pages, illustrated. Edinburgh, E. & S. Livingstone (Baltimore, Williams & Wilkins Co.), 1954. Cloth, $20.

Thoracic Surgery. By Richard H. Sweet, M.D. Illustrations by Jorge Rodriguez Arroyo, M.D. Second edition. Octavo of 381 pages, illustrated. Philadelphia, W. B. Saunders Co., 1954. Cloth, $10.

1954 Medical Progress. A Review of Medical Advances During 1953. Edited by Morris Fishbein, M.D. Octavo of 345 pages. New York, Blakiston Co., 1954. Cloth, $5.00.

Atlas of Exfoliative Cytology. By George N. Papanicolaou, M.D. Quarto. v.p. Illustrated. Cambridge, Massachusetts, Published for the Commonwealth Fund by Harvard University Press, 1954. Limp cloth, $18.

Cold Injury. Transactions of the Second Conference, November 20 and 21, 1952, New York, N. Y. Edited by M. Irené Ferrer, M.D. Octavo of 242 pages, illustrated. New York, Josiah Macy, Jr. Foundation, 1954. Cloth, $4.00.

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BOOKS REVIEWED

A Modern Practice of Obstetrics. By D. M. Stern, M.B. (Eng.), and C. W. F. Burnett, M.D. Line Drawings by Susan M. Robinson. Quarto of 248 pages, illustrated. London, Bailliere, Tindall & Cox (Baltimore, Williams & Wilkins Co.), 1952. Cloth, $7.00.

A concise and excellent textbook which represents the practice of obstetrics at the West Middlesex Hospital in London, England. Its merit lies in its simplicity, since rare conditions are but little mentioned and philosophies and theories of practice are not discussed. Of great interest are the quotations from Shakespeare which head each chapter.—Charles A. Gordon

Current Problems in Psychiatric Diagnosis. Edited by Paul H. Hoch, M.D., and Joseph Zubin, Ph.D. The Proceedings of the Forty-First Annual Meeting of the American Psychopathological Association, Held in Philadelphia, Pennsylvania, June, 1951. Octavo of 291 pages. New York, Grune & Stratton, 1953. Cloth, $5.50.

This volume contains the proceedings of the forty-first annual meeting of the American Psychopathological Association held in Philadelphia, Pennsylvania, June, 1951. The editors, outstanding members of the New York State Psychiatric Institute, have carefully arranged the various papers in this symposium so that pertinent problems of diagnosis, etiology, prognosis, and therapy are critically investigated and evaluated. Commendable emphasis is placed upon the need of better diagnostic criteria and procedures. The outcome of therapy and its relation to the perpetual need of seeking out etiologic factors, be they psychogenic, physiodynamic, biochemical, or sociologic, is kept in the foreground as the core of psychopathologic consideration. The deficiency in prognostic studies is regretted but new efforts along this line seem promising. Each participant made an essential contribution toward the integration of the role of psychopathology in furthering the tetrad of interrelationships of diagnosis, etiology, prognosis, and therapy currently challenging the various workers in this field.

This is a *must* book for all those concerned with current problems in psychopathology.—Frederick L. Patry

Holt Pediatrics. By L. Emmett Holt, Jr., M.D., and Rustin McIntosh, M.D. Twelfth edition.

[Continued on page 1404]

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[Continued from page 1403]

Octavo of 1,485 pages, illustrated. New York, Appleton-Century-Crofts, 1953. Cloth, $15.

During the past twenty-five years there have appeared in this country many excellent volumes and sets of volumes dealing with infancy and childhood. One or two have been suitable as textbooks for undergraduate medical students. Medicine in all of its phases has advanced so rapidly during the past decade that within a few years a single volume almost becomes obsolete.

Here again, the authors have painstakingly presented an ideal textbook for the undergraduate medical student. About 75 have contributed chapters, yet the singleness of purpose and continuity of make-up would make it appear as if it were written by one person.

New areas are added. A regrouping of subjects to allow modern concepts of certain diseases to fit into a distinct pattern makes the text more compact.

All in all, the book is beautifully done and probably is the best single book obtainable today dealing with infants and children.—THURMAN B. GIVAN

Curare and Anti-Curare Agents. By K. R. Unna, D. Bovet, W. D. M. Paton, *et al.* Octavo of 240 pages, illustrated. New York, New York Academy of Sciences, 1951. Paper, $4.00. (V 54, Art. 3, of the *Annals of the New York Academy of Sciences.*)

Curare and Anti-Curare Agents of the *Annals of the New York Academy of Sciences* is a soft-cover book packed with hard facts both clinical and experimental of the pharmacologic activities of these drugs. This treatise provides an extensive bibliography to the researcher, a thorough clinical evaluation to the clinician, and a good over-all coverage of the subject for the student. The New York Academy of Sciences deserves congratulations for its initiation of this material collection, which should serve as a beacon for the exploration of many more medical subjects. It is concise and all inclusive.—IRVING M. PALLIN

Ballistocardiography. The Application of the Direct Ballistocardiograph to Clinical Medicine. By William Dock, M.D., Harry Mandelbaum, M.D., and Robert A. Mandelbaum, M.D. Octavo of 293 pages, illustrated. St. Louis, C. V. Mosby Co., 1953. Cloth, $9.50.

This new work by Dock and the Mandelbaums, among the pioneers in the clinical use of the ballistocardiograph, will be a welcome addition to the literature on the subject. It is the best work on the subject to date. The theoretic basis of ballistocardiography is discussed lucidly, and the clinical section is handled with suitable and judicious restraint. In short, this volume is highly recommended.—MILTON PLOTZ

A Bibilography of the World Literature on Blood Pressure, 1920–1950. Edited by Ernest K. Koller and Jacob Katz. [In three volumes.] Vol. I, Authors and Titles. Vol. II, Author Index and

Title Index. Vol. III, Abstracts. Quarto. N.p. Boston, the Commonwealth of Massachusetts, 1952. Paper, $5.00 set.

This bibliography and index of modern literature on hypertension is an offshoot from various phases in current investigations into the epidemiology of essential hypertension and stems from work being done at Columbia University by the Division of Epidemiology of the School of Public Health and the Bureau of Applied Social Research. The work is sponsored by the State of Massachusetts through the Research Commission on Hypertension. This commission was established in 1949 by the Legislature of Massachusetts, "to make an investigation and study relative to high blood pressure with a view to providing means for the control thereof."

The *Bibliography* consists of three parts. Volume 1 contains an alphabetical listing by senior authors of about 17,000 titles including articles in professional journals, symposium reports, textbooks, and monographs. Volume 2 is an index of coauthors and titles comprising Volume 1. Volume 3 contains 1,500 abstracts of titles from Volume 1.

The *Bibliography* was compiled from standard medical reference works. In addition, unpublished files of the Armed Forces Medical Library were consulted to provide greater coverage. It is an excellent publication, well done, and a valuable contribution to the study of hypertension.—Wesley Draper

Treatment of Mental Disorders. By Leo Alexander, M.D. Quarto of 507 pages, illustrated. Philadelphia, W. B. Saunders Co., 1953. Cloth, $10.

This is the first edition of a somewhat new approach to neuropsychiatry. Instead of considering nervous and mental disorders as a group of diagnostic categories, which are traditionally discussed, the author makes capital of the fact that the great advances in psychiatry in the past generation have been therapeutic. His novel method is the discussion of various physical, chemical, and psychologic therapeutic methods, and their specific application in a variety of clinical conditions. This makes the book an extremely valuable résumé of the clinical literature, as well as therapeutic methods, and it can be used with profit by students, residents, and specialists.

Alexander is to be complimented for the thoroughness of the material and the excellent bibliographic organization.—Sam Parker

Bailey's Text-Book of Histology. Revised by Philip E. Smith, Sc.D., and Wilfred M. Copenhaver, Ph.D. With the assistance of Dorothy D. Johnson, Ph.D. Thirteenth edition. Octavo of 775 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $9.00.

The authors have again produced a textbook for the use of first year students of medicine and dentistry. The chapters have been rewritten where newer

[Continued on page 1406]

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The volume is a must for students and a valuable aid to doctors for reference.—NATHAN REIBSTEIN

The Living Brain. By W. Grey Walter, Sc.D. Octavo of 311 pages, illustrated. New York, W. W. Norton Co., 1953. Cloth, $3.95.

The author, an experienced electrophysiologist, has compressed into a small book his many thoughts and experiences dealing with the field of brain function. An attempt is made to describe simply an admittedly extremely complicated mechanism.

The first part of the book deals with phylogeny of brain development. The second to the sixth chapters describe nervous system activity in comparison with automatic devices engineered in the laboratory. This latter section finally ends with descriptions of gadgets mimicking brain activity. The sixth and seventh chapters dealing with thought and learning processes rely on psychologic as well as electrical explanations and deal in abstractions and possibilities by chance. The eighth and ninth chapters attempt to correlate psychologic and physical phenomena with electroencephalographic patterns obtained in the laboratory. The book concludes with predictions of future brain development.

The book makes for interesting reading. The author's statement that the book is for general reading is somewhat misleading. Because of the author's vast knowledge in the field of electrophysiology, highly technical terms are inadvertently employed and sweeping conclusions made from what would appear to the average intelligent adult to be limited facts. However, much food for thought can be gleaned from this book by those interested in the application of electrophysiology of the brain. It is recommended for reading by those versed in the science of electroencephalography.—HARRY A. KAPLAN

Surgery of the Biliary Tract, Pancreas & Spleen. By Charles B. Puestow, M.D. Illustrated by Jessie W. Phillips. Octavo of 370 pages, illustrated. Chicago, Year Book Publishers, 1953. Cloth, $9.00. (A Handbook of Operative Surgery.)

Dr. Puestow has set up an excellent reference book and the format makes reading easy. The diagrams are simple, well laid out, and easy to understand. The subject is covered rather extensively for so small a volume and is certainly complete up to the time of its publication. As the author states, there is no bibliography, but this is not a shortcoming. Anyone seeking a detailed investigation of subjects covered by the text would necessarily have to go to the general literature. This is an excellent handbook for every one doing surgery of the biliary tract, pancreas, and spleen. It is highly recommended.—PHILLIP E. LEAR

Physiology of Exercise. By Laurence E. Morehouse, Ph.D., and Augustus T. Miller, Jr., M.D. Second edition. Octavo of 355 pages, illustrated. St. Louis, C. V. Mosby Co., 1953. Cloth, $4.75.

The physiology of exercise constitutes an important phase of medical research on which considerable work has been done by many investigators but previously without sufficient coordination of the various aspects of the study. In this excellent book an eminently successful attempt has been made to correct this shortcoming. Full attention is given to all aspects of physiologic functions in relation to exercise, and these are correlated to changes in the body chemistry and metabolism. In this second edition the authors have again made a most valuable contribution to a better understanding of the physiology of exercise.—JEROME WEISS

Peptic Ulcer, Pain Patterns, Diagnosis and Medical Treatment. By Lucian A. Smith, M.D., and Andrew B. Rivers, M.D. Including contributions by Herbert W. Schmidt, M.D., C. Allen Good, M.D., and Richard R. Ferayorni, M.D. Octavo of 576 pages, illustrated. New York, Appleton-Century-Crofts, 1953. Cloth, $12.50.

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The Medical Clinics of North America. Nationwide Number. July, 1953. Octavo. Philadelphia, W. B. Saunders Co., 1953. Published bimonthly (six numbers a year). Cloth, $18 net; paper, $15 net.

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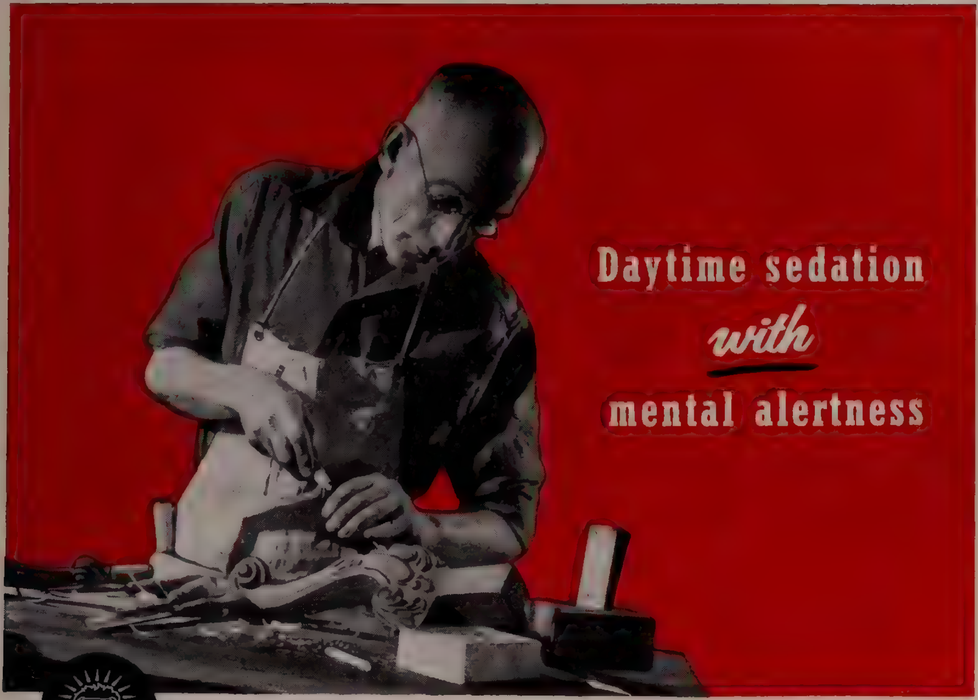

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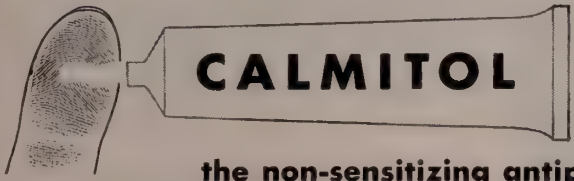

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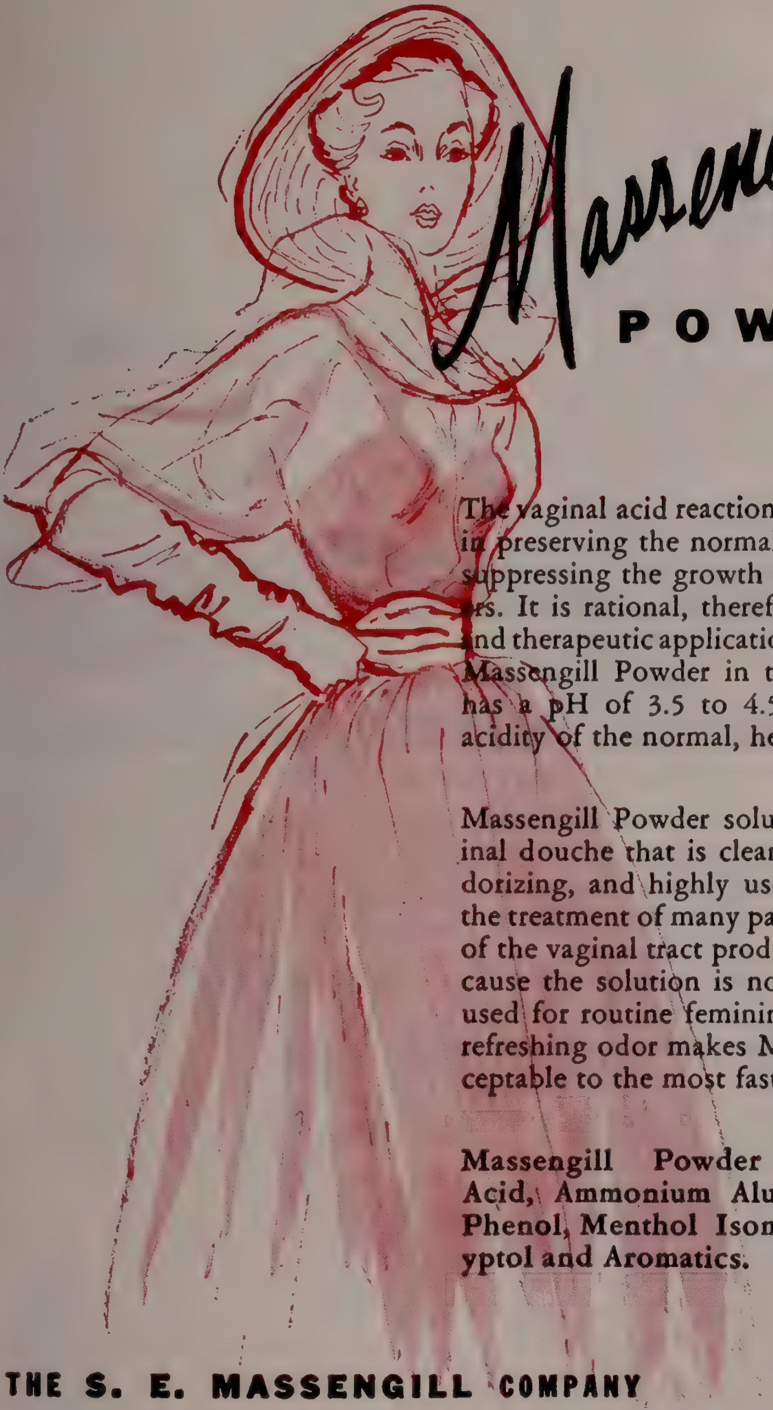

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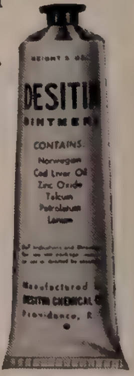

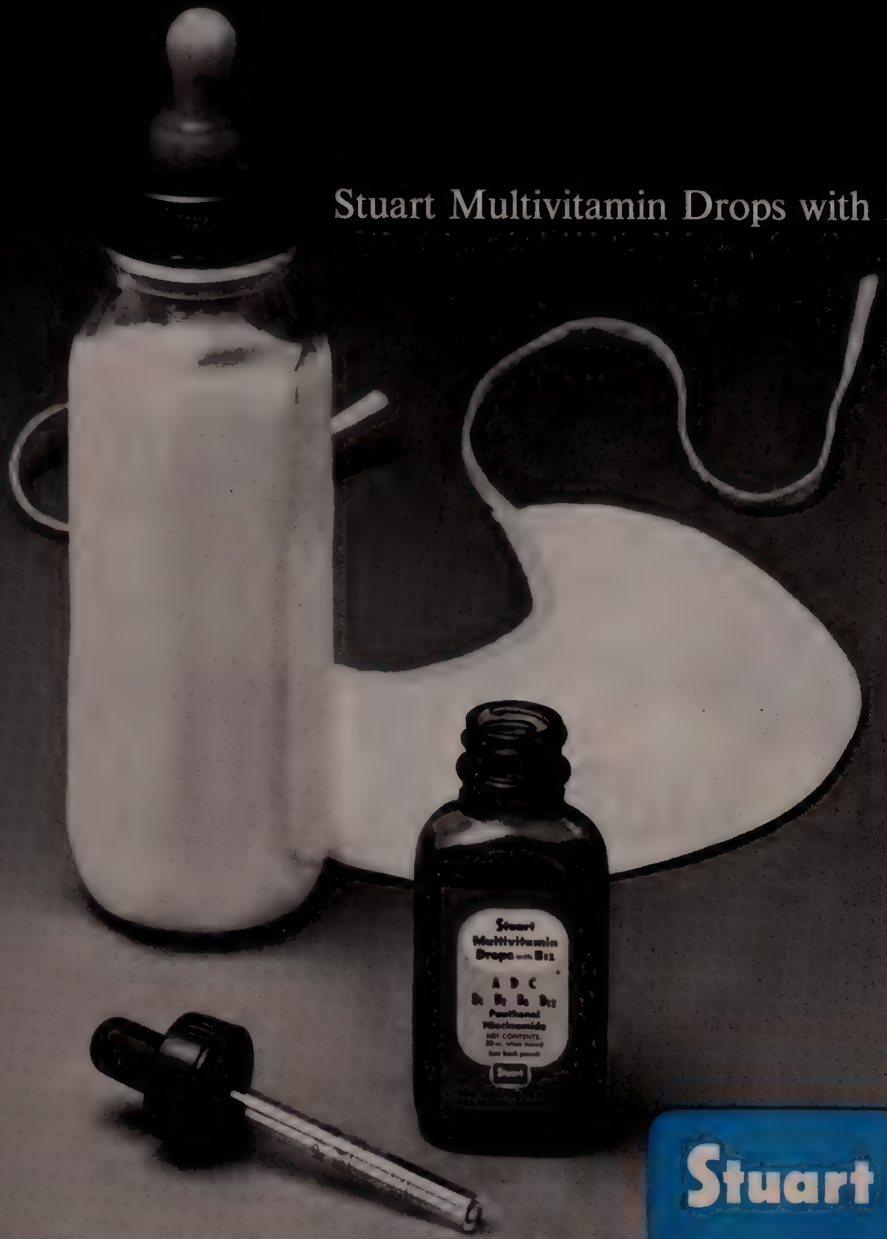
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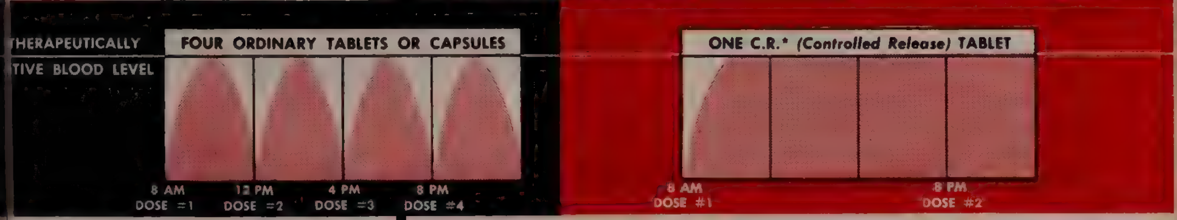

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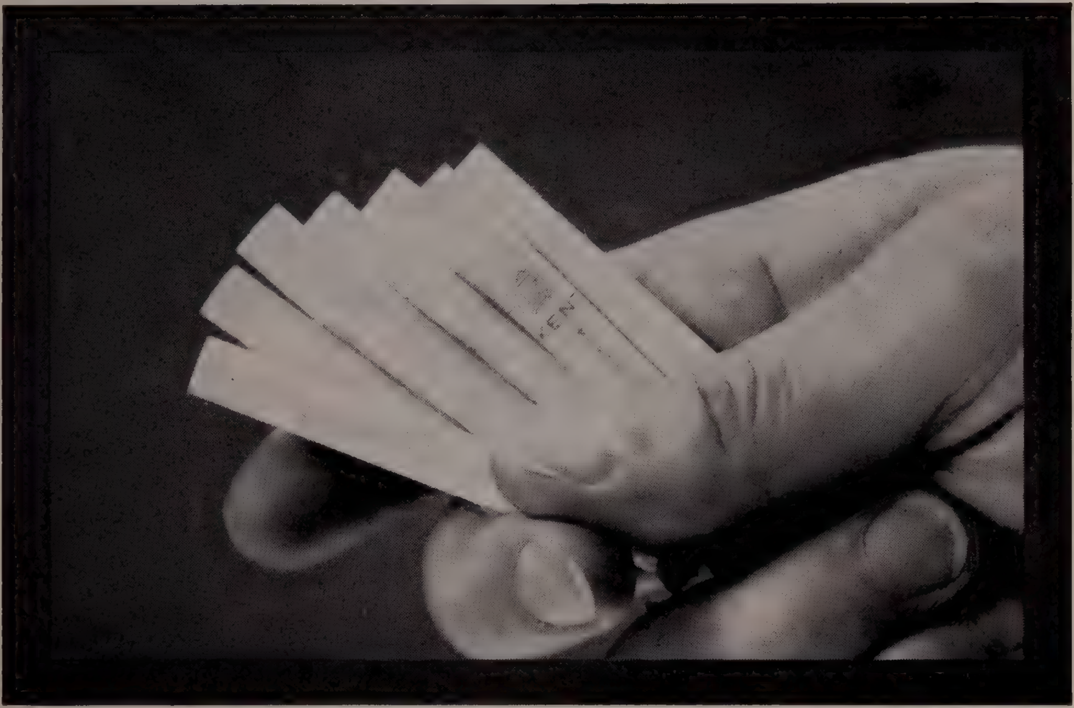

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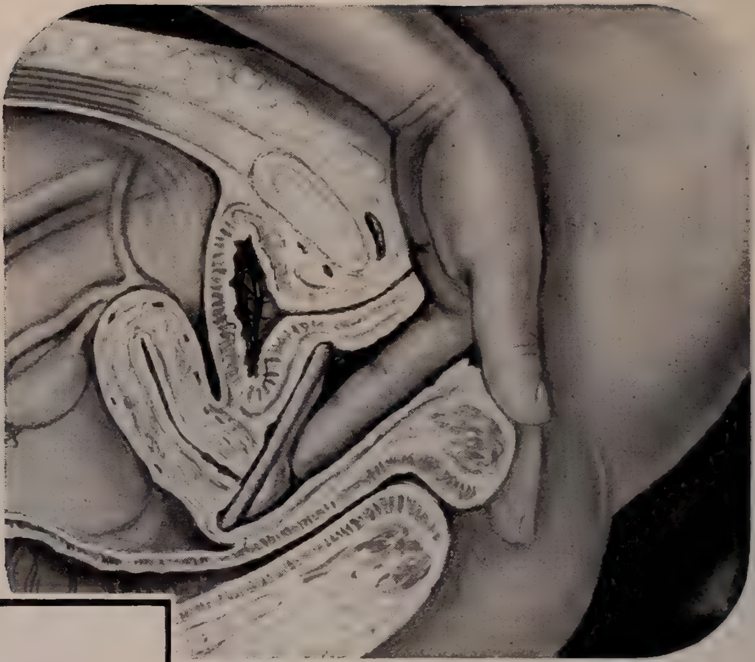

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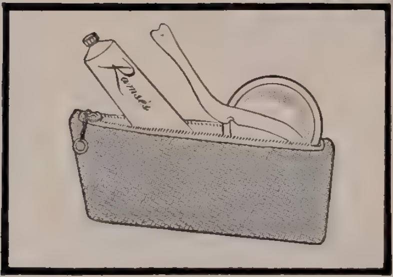

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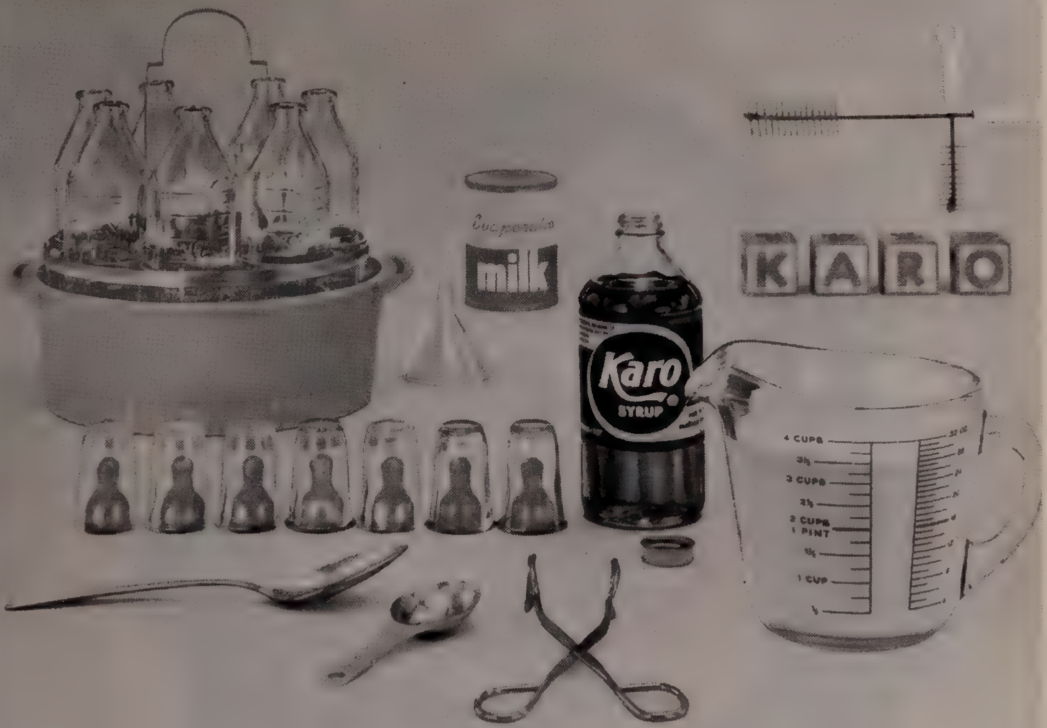

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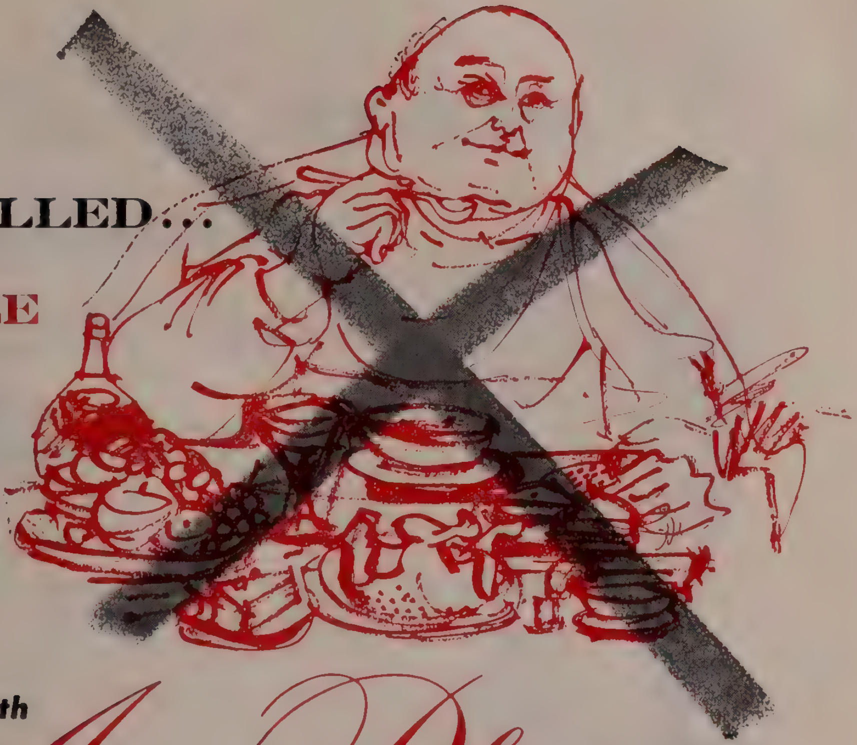

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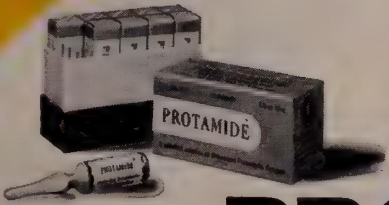

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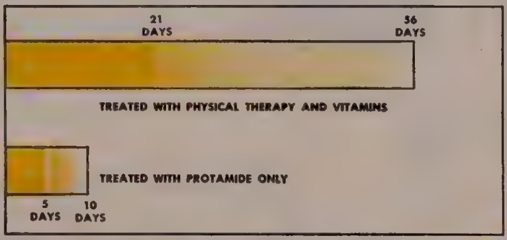

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- O'Brien, G. F. & Schweitzer, I. L.: The Med. Clinics of North America, W. B. Saunders, 1953, p. 163.
- Gauss, H.: Am. Jrl. Dig. Dis. 10:141 (1943)

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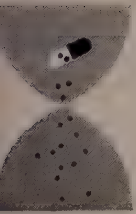

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1. Margolin, S., and Tislow, R.: Experimental and Clinical Efficacy of Trimeton and Chlor-Trimeton Maleate, Ann. Allergy 8:515, 1950.

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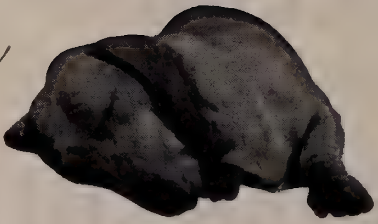

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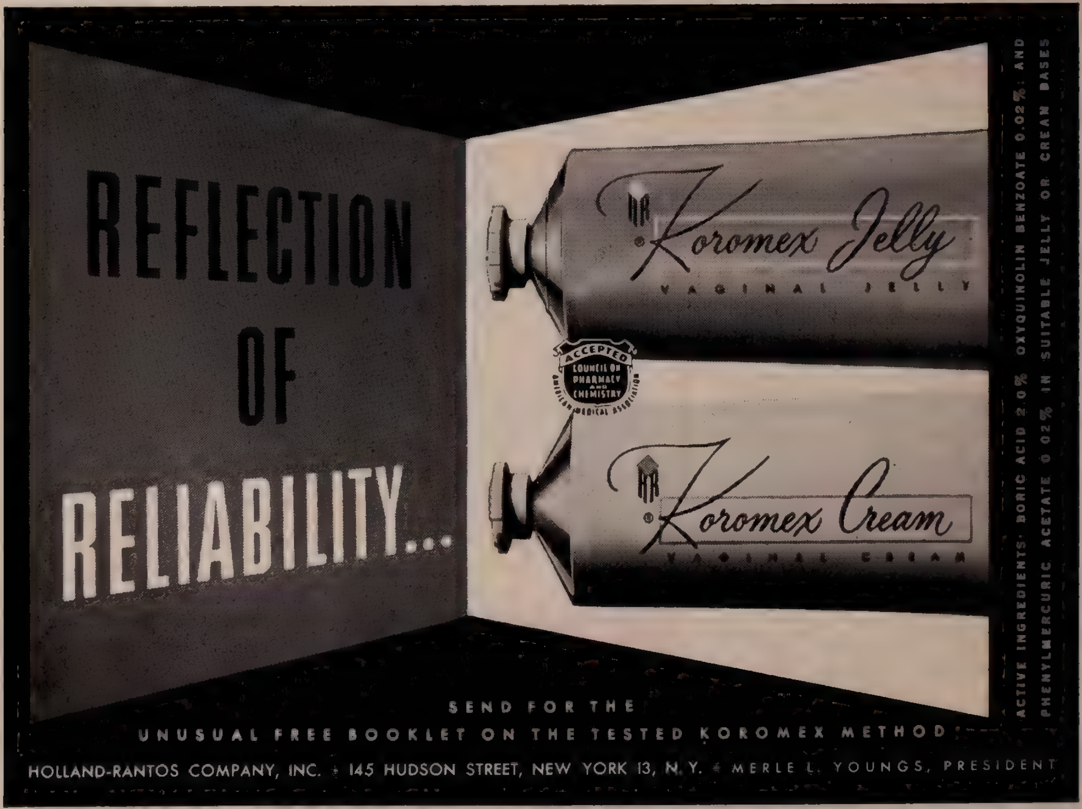
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EDITORIALS

Physicians' Services in the Welfare Program

With our highly industrial and competitive type of society, coupled with the constantly increasing average age of the population, it is to be expected that there will always be some who for social or medical reasons are unable to earn sufficient income to provide the basic requirements of modern living including medical care. In December, 1953, the number of persons receiving public assistance in New York State was 383,652. For some the insufficiency is temporary, having been precipitated by an emergency situation which is correctable; for others the requirement for assistance is long term.

A study of current relief rolls reveals that 73 per cent of the public assistance cases are associated with chronic illness or disability in the recipient or in the individual upon whom the recipient is dependent for support. On the other hand, unavailable employment, a major cause of indigency in the 1930's, is now reduced to relatively minor importance in the public welfare field.

This is a significant challenge to the medical profession. It stresses the importance of assuring that comprehensive medical services, including preventive measures, early detection of disease, and rehabilitation, are available to this large welfare population so that the ravages of disease in this group may be checked to the greatest extent possible. Medical care to the indigent must be on a broader scale than merely meeting emergencies or treating acute or chronic illnesses as they arise. The physician must accept leadership in a program directed at evaluating the potentialities of the chronically ill or disabled recipient and assuring that there are made available to him any services which will lead toward his increased self-sufficiency, social usefulness, or actual employment.

Obviously the physician is very much concerned, and rightly so, with the question of medical and governmental responsibilities in this area and particularly with the problem of remuneration for medical services extended to relief recipients. In years gone by, there was little or no provision for payments to physicians taking care of indigent persons. Most of the sick poor were treated at dispensaries, cared for by a salaried physician employed by the city or town, or, if the illness was prolonged, sent to the almshouses where medical care was quite minimal. Of course, there were many indigent patients who were fortunate enough to receive home or office care from private physicians without charge.

The pattern of providing medical care to welfare recipients in New York State has changed considerably in the last twenty years. In most areas welfare recipients requiring home or office visits may choose their physicians among any willing to care for them. These physicians are paid by the welfare department on a fee-for-service basis, and every attempt is made to allow the same physician-patient relationship as exists at higher economic levels.

The schedules of fees for home and office visits for welfare recipients are lower in many sections of the State than those being received by the private physician from self-paying patients. In most areas this has been accepted on the basis that the payable fees at least cover the physicians' expenses and that the system has come a long way since doctors received no payment whatsoever for medical service to indigents. Physicians have always reduced their charges to individual patients who could not make full payment and have recognized that public welfare agencies should not be expected to pay more than the minimum at which adequate services might reasonably be provided.

In other areas there have been expressions of dissatisfaction with the concept that welfare fees should be lower than those prevailing for self-paying patients. It has been brought out that welfare departments do not negotiate the price of a ton of coal or of a package of groceries; rather, they pay the market price without question.

It is quite true that welfare districts do not bargain with vendors of supplies required by public assistance recipients for their basic needs. However, most of these needs are predictable, and the welfare agency determines the minimal amounts of each item which are required to meet the recipients' requirements. Definite standards of assistance have been established whereby, considering the number of members in the family, their ages, and other personal characteristics, the minimal amounts required for rent, fuel, clothing, and food are calculated and form the basis for the determination of the monthly financial grant. Thus, while the price of these commodities is not controlled, the quantity permitted is rigidly restricted.

On the other hand, the welfare districts recognize that the amount and type of medical care required by a recipient can be determined only by the medical profession. While there are necessary controls in the authorization of medical care, the general rule governing such control is that of reasonableness. In addition, two thirds of the local welfare district medical programs are directed by medical consultants, and in most of these areas the county medical societies have appointed welfare medical care committees which serve in an advisory capacity. This combination of determination by the attending physician of the amount of care required and the direction of the program by members of his own professional group is unique in the welfare field; to some extent it would appear to compensate for the rendering of services at lower fee levels.

In this regard, it is interesting to note that at the annual meeting of the Medical Society of the State of New York in May, 1953, a resolution was passed to the effect that welfare medical fees should be set at a specified percentage of the fees established for the Workmen's Compensation program. A similar principle was established jointly in 1946 by the Welfare Medical Care Committee of the Medical Society and the State Department of Social Welfare.

Undoubtedly, while there has been much improvement in the general situation, the field of welfare medical care still requires much exploration and possibly experimentation as well. It is gratifying to see the careful studies of this subject being undertaken by the Bureau of Medical Care of the State Department of Social Welfare and by the Subcommittee on Welfare Medical Care of the Medical Society's Committee on Economics. The county medical societies are urged to establish and strengthen their welfare medical care advisory committees so that local problems may be adequately studied and appropriate guidance and recommendations given to the local welfare districts. The State Department of Social Welfare is strongly urging the appointment of medical consultants by every local welfare district. Certainly this move should have the support of the local medical profession.—

I. J. B.

Summer

"Sumer ys icumen in
Lhude singe Cuccu". . .[1]

Since 1250 A.D. at least, summer has been periodically awaited by winter-bound folk, that winter which, it is said, "lingers in the lap of Spring." And if in these parts the cuckoo is not in evidence, the blue jay and more recently the cardinals make a brave attempt to "lhude singe" against the increasing competition of traffic noise, the overhead roar of planes, the blatting of radios, and the brain washing vocal torrent of the television receivers. Is it a matter for wonder that the cuckoo, perhaps with an inferiority complex, just can't compete and has given up in despair most likely? We are informed[2] that of all the cuckoos, "the three species found in America build their own nests and do not interfere with other birds." So our "lhude synging" cuckoo behaves in the best tradition of our free land and is a rugged individualist, apparently.

This does not seem to fit in with our theory that this bird may have an inferiority complex to explain why we do not hear his voice in these parts. But no matter, it's a good theory, and whether we are right or wrong on this point, still " Sumer ys icumen in," school is drawing to a close, the fishing season is upon us, poison ivy and poison oak abound to annoy the unwary, and the old swimming hole is about to have visitors.

Spring cleaning is upon us, the spring that winter's in the lap of, distracting her attention from her job of exercising a firm control of the weather in these parts. Disgraceful! There ought to be a law, seems as though. Things just run wild with the vandal winds.

And then, all of a sudden, summer's here. We know that because of the open windows which let all the carbon dioxide gas, the dirt, and dust in, all the street noises and the "lhude" voices of young Americans on holiday, and which open windows let all the radio and television yakety-yak out to disturb the community. Except where, in all fairness, the air conditioners filter out part of it at least.

---

[1] Old English Air, circa 1250.
[2] *New Concise Encyclopedia.*

So everyone is happy, the sun shines brightly, vacation time is upon us, and if the cuckoo does not migrate to these parts, well, for our part, "Lhude whystle cardinal!"

Editorial Comment

Noise. Says the *J.A.M.A.* editorially in part:[1]

> Since the advent of power-driven machinery, man has been beset with the effects of unwanted sound. There appears, however, to be a popular misconception regarding the extent of the harmful effects of noise. It is necessary first of all to distinguish between acute exposure (sharp, sudden noises) and chronic exposure (continuous or regularly intermittent noises). The undesirable effects of noise may be classified as (1) effects on efficiency, (2) effects on auditory acuity, and (3) effects on communication. Many studies have been conducted to determine these effects, often with conflicting results. . . .

Unwanted sound also arises from other sources than power-driven machinery. Our particular reference is to the sometimes hideous caterwauling, blasting, and tintinnabulation of the radio and television industry. This is in addition to the howls, creaks, and motor blooping from the streets and the propeller roar from overhead planes, tire screeches, car crashes, grinding gears, horn tooting, assorted whistles, and sirens with which our ears are assailed to make "confusion worse confounded."

As the editorial points out, there may be popular misconception regarding the harmful effects of noise, but there are few who would disagree that most of it is irritating and some of it avoidable. In the form of music regimented noise seems to be tolerable and even agreeable except, in the opinion of this writer, some of the "modern decompositions" one hears all too frequently.

> There is good evidence, however, that no permanent damage results from prolonged exposures to intensities of about 85 db. Brief exposures lasting up to one hour may cause some hearing loss if the intensity is 100 db., regardless of the frequency. Pain will follow exposures to 140 db., and rupture of the eardrum occurs at levels of 160 db. or more. . . .
>
> The problem of noise control has been approached from many angles. There are laws dealing with nuisance, and from the legal standpoint noise is a nuisance if it is excessive, unreasonable, unnecessary, or injurious to health and capable of being mitigated. Most leases have clauses concerning noises especially after 11:00 P.M. Persons employed in factories where noise cannot be eliminated are advised to wear ear plugs. Dry cotton ear plugs are practically valueless, but wax-impregnated cotton is effective, not uncomfortable to wear, and can be replaced daily, thereby eliminating the objection to rigid plugs that they are hard to keep clean. Even so, few workers like to wear ear plugs. One interesting observation was that in the presence of certain intensities the wearing of ear plugs may improve the reception of speech. To be fully effective, plugs must reduce intensity levels to less than 85 db. They are effective in sound fields up to 120 db. and are definitely inadequate in fields of 140 db. In industries where employes are constantly subjected to loud noises, serial audiograms should be obtained at regular intervals and a system of rotation to work in quieter surroundings should be in force to permit natural recuperation.
>
> Practical industrial noise control involves the cooperation of management, engineering, safety, and medical personnel. Much can be done to damp out the vibrations of heavy machines and thereby reduce their noise, but the best place to attack this phase of the problem is in the original designing of the machines.

However one considers noise, there is unquestionably too much of it, in our view.

---

[1] J.A.M.A. **154:** 411 (Jan. 30) 1954.

The Problem of Nausea and Vomiting:

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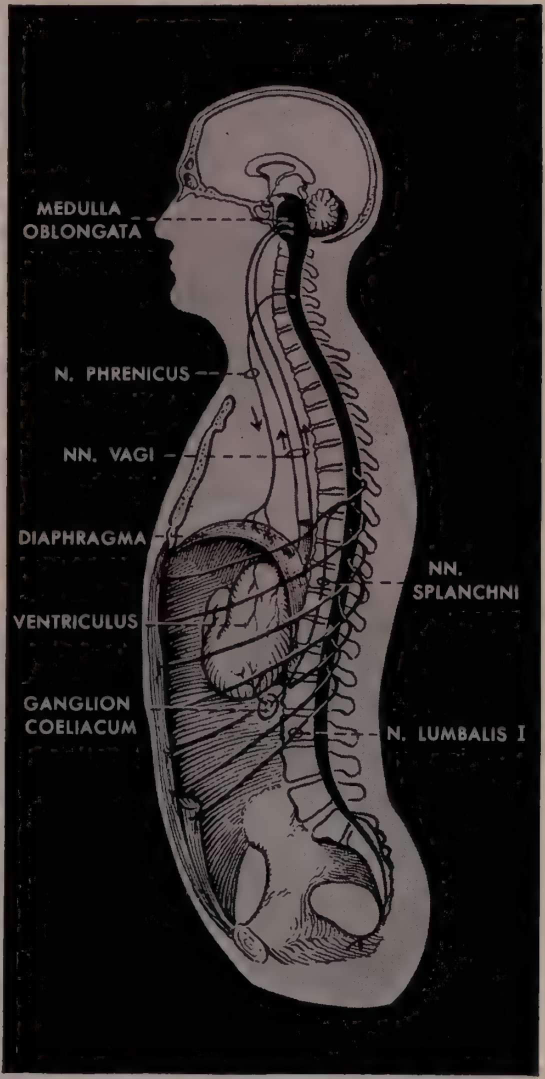
Keats[1] outlines the wide list of conditions in which Dramamine (brand of dimenhydrinate) has proved valuable as follows: "It has been well established in the control of motion sickness. It has been used effectively in the prevention and treatment of seasickness, airsickness, [in the treatment of] the nausea of pregnancy, Ménière's syndrome, . . . radiation sickness . . . and postfenestration reactions. . . . The site of action is imperfectly understood, but there is indication of an action of depressing labyrinthine function or its neural pathways, a highly selective central action, or both. Few side reactions of this drug have been noted."

The usual dose for motion sickness is 50 mg. (one tablet) taken one-half hour before departure and, if necessary, before meals for the duration of the journey. Control of nausea and vomiting of other conditions and severe motion sickness is achieved, with minimal drowsiness, by a dosage of 100 mg. every four hours.

"[Dramamine] is administered orally or rectally. . . . The same doses may be administered rectally by insertion of the tablet or other suitable form. . . ."[2]

Dramamine Liquid is particularly useful for children.

Dramamine is accepted by the Council on Pharmacy and Chemistry of the American Medical Association.



THE VOMITING REFLEX: *Vagus→ nodose ganglion→ solitary tract→ spinal cord→ cervical, thoracic and lumbar nerves to diaphragm, cardiac sphincter, stomach, abdominal and pelvic musculature. (After Krieg, W. J. S.: Functional Neuroanatomy, ed. 2, New York, The Blakiston Company, Inc., 1953, p. 104.)*

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SCIENTIFIC ARTICLES

Hyperparathyroidism

ROSS E. HOBLER, M.D., F.A.C.S., ELMIRA, NEW YORK

No more fascinating story in the field of medicine exists than that of the discovery of the clinical entity, hyperparathyroidism, and the subsequent solution of the problem of cure. The rarity of the condition is one of the factors that stimulates interest in the subject, for only 616 cases have been reported in the literature. The enormity of the pathologic changes and their amazing reversal upon removal of a small tumor or adenoma which may be less than a gram in weight cannot help but produce an awesome respect in the physician who is fortunate enough to encounter and treat one of these patients.

Fuller Albright of the Massachusetts General Hospital has presented the full history of hyperparathyroidism,[1] pointing out that the diagnostic facts were correlated and proved almost simultaneously by two groups, one in Europe and one in this country, each working with a different approach to the problem. The existence of parathyroid glands was unknown until 1880 when Sandstrom[2] of Sweden described their location and named them.

In 1891 Von Recklinghausen[3] described the autopsy bone findings of osteitis fibrosa cystica, but there was no knowledge of the cause of the condition. Erdheim[4] in 1906 discovered that calcium was not laid down in the teeth of rats whose parathyroid glands had been destroyed. This finding led to continued research on such related bone disease as osteomalacia with its compensatory hypertrophy of the parathyroid glands. The enlarged parathyroid found in cases of osteitis fibrosa cystica was incorrectly thought to be compensatory hypertrophy until Mandl[5] in 1925 proved the true nature of the enlarged gland, that is, adenoma, which was the cause of the condition. It is interesting, however, that Mandl first tried parathyroid extract and then transplanted the four parathyroids from an accident victim before the continuing downhill course of the patient led him to operate and remove the adenoma which he found. The dramatic recovery of the patient settled any arguments as to the adenoma being the cause of osteitis fibrosa cystica and not a compensatory hypertrophy.

In America laboratory research had investigated the physiologic role of calcium, had isolated potent parathyroid extract, and through its use on animals had discovered what the condition of hyperparathyroidism might do to a patient, even though no clinical patient was even known. When a patient named Captain Martell, who suffered from loss of bone structure, fractures, and decalcification, came under scrutiny of some of these American investigators, he was recognized as a case of hyperparathyroidism at a time when Mandl's work was not yet known to the world. Martell was operated on six times, and no tumor was found. Finally, in a seventh operation Edward Churchill split the sternum and found the elusive tumor in the mediastinum, thereby reaching the same conclusion that Mandl had. Thus the European group, working from autopsy and pathologic material, came up with the same answer as the American group, who were really physiologic chemists and not pathologists at all.

Pathology

The pathologic findings in primary hyperparathyroidism are extremely variable. Woolner, Keating, and Black[6] reported a detailed study of 140 cases of primary hyperparathyroidism seen at the Mayo Clinic up to December 31, 1951.

The solitary adenomas grossly have a characteristic yellow-brown appearance, darker than the normal parathyroid, and are usually homogeneous but may be cystic. In this series the

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Presented at the Third Annual Clinical Day sponsored by the Rochester Regional Hospital Council, Elmira, May 27, 1953.

TABLE I.—Pathologic Findings in 140 Cases[6]

Pathologic Finding	Cases	Per Cent
Single adenoma	115	82.1
Multiple adenomas	6	4.3
Primary Wasserhelle (water clear) hyperplasia	12	8.5
Multiple tumors of endocrine glands, including parathyroid, pancreatic islets, and pituitary	5	3.6
Carcinoma of the parathyroid	2	1.5
	140	100.0

largest adenoma measured 6 by 6 by 5 cm. and weighed 101 Gm., obviously large enough to be palpable preoperatively. The average weight in 80 of the recorded cases was 3.4 Gm. The smallest hyperfunctioning adenoma was approximately 6 mm. in diameter and weighed only 25 mg. Generally, however, there is a relationship between the size of the adenoma and the severity of the disease so that well-advanced disease with renal calculi, bony changes, and marked blood chemistry findings will usually be associated with an adenoma that is larger, probably because it has had time to grow to a reasonable size.

There are various types of cells found in adenomas referred to as chief cells, transitional water clear cells, water clear or Wasserhelle cells, and pale oxyphil cells. The adenomas may be of one type or a mixture of all types. No specific relationship has been proved between cell type and the type of disease response, i.e., bone cysts or renal calculi. It does appear that the chief cells and Wasserhelle type cells produce much more severe disease than the oxyphil type.

Parathyroid adenomas occur much more frequently in females, the ratio to males being at three to one. The maximum incidence by age is in the third and fourth decades of life, but numerous cases have been reported in the second decade, indicating a possible relationship to puberty.

Pathologic Physiology

The disease processes and the symptoms produced are the result of (1) abnormal mobilization of calcium from the body stores, i.e., from the bones, (2) the transportation of the excessive amounts of calcium, and (3) the excretion of the calcium from the body, primarily by the kidneys.

Parathyroid hormone controls the level of calcium and inorganic phosphate ions in the bloodstream. When excessive amounts of the hormone are liberated by an adenoma or by a hyperplasia of one or all the glands or when the hormone is parenterally injected, calcium is withdrawn from the bones to give high blood calcium levels and an increase in the calcium excretion by the urine. The withdrawal from the skeleton may be generalized, producing the condition of osteoporosis, or it may result in localized withdrawal resulting in cystic decalcified areas (osteitis fibrosa cystica). There is no explanation why the different types of decalcification occur. Serum alkaline phosphatase determinations are elevated in the cystic form of the disease, and the amount of elevation of the alkaline phosphatase is directly proportional to the degree of cystic change. The phosphatase values are usually not elevated in the osteoporotic patient or in the patient who shows no bony changes but has renal symptoms resulting from faulty excretion of the calcium.

The transportation of the mobilized calcium results in elevated calcium levels in the blood, and the values usually are found between 11 and 17 mg. per 100 cc., whereas normal values are recognized as 9 to 11 mg. per 100 cc. The blood phosphorus level is frequently depressed below the normal of 3 to 4 mg. per 100 cc., but this change is not so constant as the calcium elevation.

The power of the kidneys to excrete the increased amounts of calcium may be severely taxed. When the calcium is being excreted, the excessive amounts in the urine are easily detectable by the Sulkowitch test, although this test may also be found positive in other conditions. The excessive urine calcium leads to the precipitation and formation of calculi. It is estimated that 10 per cent of all patients with renal calculi have hyperparathyroidism. If the precipitation of calcium occurs in the tubules of the kidney, calcium casts are formed. Furthermore, precipitation may occur within the kidney parenchyma, and renal calcification may progress to a fatal state before the diagnosis is made. One of the cases to be reported today represents such a state. As the calcium blocks and impairs the kidney, retention of other substances occurs, so that the blood levels of nonprotein nitrogen, phosphates, and chlorides rise; the urine has a low specific gravity; polydipsia and polyuria become prominent clinical symptoms, and renal failure with uremia may become fatal.

Norris[7] in his excellent review of the subject in

1947 analyzed 322 reported cases and found the following incidence of pathologic changes:

Osteitis fibrosa generalisata alone	59.3%
Renal lithiasis or renal calcification alone	5.3%
Associated skeletal and renal changes	31.4%
No skeletal and no renal lesions	1.5%
No record	2.5%

Symptomatology

The onset of this condition produces bizarre and ill-defined symptoms, which may easily be overlooked unless blood calcium studies are done. Norris[7] concluded in his review that the average duration of symptoms before surgery has been from five to seven years, while Albright, Aub, and Bauer[8] reported a case in which they believed the adenoma had existed for thirty-nine years.

Shelling[9] and Keyser[10] adequately classified the symptoms as follows:

- A. Hypercalcemia
  - 1. Hypotonia
  - 2. Chronic constipation
  - 3. Lassitude
  - 4. Muscle weakness
  - 5. Cardiac arrhythmia and occasional slow pulse
- B. Transportation and excretion of calcium
  - 1. Renal complications (lithiasis)
  - 2. Polyuria and polydipsia
  - 3. Enuresis, nocturia, and dysuria
- C. Skeletal system
  - 1. Pain in joints and bones
  - 2. Spontaneous fracture
  - 3. Cysts in long bones and skull
  - 4. Deformity of long bones
  - 5. Kyphosis, scoliosis, or deformity of the thorax
  - 6. Waddling gait and inability to walk.

Surgery

The only cure for primary hyperparathyroidism is surgical removal of the adenoma, single or multiple, or if the condition of primary Wasserhelle hyperplasia exists, all but 50 to 100 mg. of the hyperplastic tissue must be removed. It should be remembered that the location of an adenoma is not certain. Ten per cent of Norris' series was located abnormally, i.e., in the mediastinum, imbedded in the thyroid, or behind the esophagus. One of the lower parathyroid glands is the site of the adenoma about five times more frequently than one of the upper glands.

From these facts it is obvious that complete exploration of the neck is necessary, and all four parathyroids should be identified. If normal parathyroids exist in the neck, substernal exploration will be necessary.

Postoperative Care

A hyperfunctioning adenoma will cause a regression of normal secretory ability in the normal parathyroids. When the adenoma is removed, the function of the remaining parathyroids is often insufficient to prevent tetany, which is apt to develop on the second postoperative day and which may persist for two or three months before the remaining glands have resumed adequate function. Hence, parathyroid hormone may be necessary postoperatively. Administration of calcium gluconate, calcium lactate, dekatol, or Drisdol is also of benefit.

The bone decalcification will not be corrected for several months. Thus, if the osseous changes are severe, the patient must be protected against pathologic fractures and deformities.

Heinbecker[11] reported two cases of hyperthyroidism, one of exophthalmic type, developing about one month after removal of a parathyroid adenoma. These responded permanently to a course of iodine. Thus there is a definite relationship to other endocrine glands, and the author concluded that the depressive action of the excessive parathyroid hormone on the basophil cells of the pituitary was the cause of the postoperative alteration of thyroid activity.

Rienhoff,[12] who has reported a series of 27 cases, attempted to determine the final results of surgery. In 25 adenoma cases one case died of uncontrollable tetany immediately postoperatively, whereas nine cases died from three to eleven years after discharge, all from hypertension. Five of the nine had shown no renal complications at surgery. Rienhoff concluded that operation had not reversed all the forces set in action by the hyperparathyroidism.

Case Reports

CASE 1.—Seven months previously Mrs. A. B., age fifty-two, developed pain in the left leg, vague in nature and associated with a feeling of weakness and instability of the knee. At first stairs were difficult to manage, but recently the patient could not get off an ordinary curb, being forced to cross streets by going down adjacent, inclined driveways.

Four months before admission the patient had had two teeth pulled because of swelling of the jaw and pain in the right ear, first noticed three months previously. After the second extraction x-rays were first taken, disclosing a cyst of the mandible. This was operated and removed in another city one month before admission. It was diagnosed as a giant cell cyst.

There was no weight loss. Moderate constipation, polydipsia, and polyuria had been noted for six to seven months. Nocturia had been present for six or seven months to the extent of four or five times per night. Ankles had been swelling at night for about two weeks.

The past medical history was negative. There had been no fractures, no major surgery, and no pregnancies. Menopause had occurred six years previously and had been uneventful.

Physical examination showed a well-nourished, white female, nervous and walking with a limp in the left leg. The right side of the mandible showed considerable loss of tissue, and the incisional wound in the mouth was not healed. The thyroid was palpable but not enlarged. No other masses were found; the trachea was not deviated.

The heart was negative except for an elevated blood pressure of 200/110. The right hip area was tender but not the joint itself, and motions of the hip were limited about 40 per cent. Weight-bearing was painful. Both ankles showed pitting edema.

Laboratory tests gave the following results: red blood cells 3,340,000, hemoglobin 69 per cent, color index 1, white blood cells 7,350 with normal differential. Sedimentation rate was 20 mm. per hour. Urine showed a constantly low specific gravity of about 1.004, pituitary renal function test concentrated to 1.005, no albumin or sugar present, and Sulkowitch test repeatedly positive. Blood chemistry showed nonprotein nitrogen 30, sugar 87, chlorides 689, calcium 15, phosphorus 2, acid phosphatase 9 units, alkaline phosphatase 12 units, serum proteins 5.8, albumin 3.9, globulin 1.9. Repeated blood calcium levels were almost identical, as were phosphatase studies.

Kidney function tests with phenolsulfonphthalein revealed the following:

15 minutes	7%
30 minutes	10%
60 minutes	10%
Total	27%

Urea clearance showed 21 per cent clearance in the first specimen and 32 per cent in the second.

Electrocardiogram was negative except for positive evidence of hypercalcemia.

A mottled appearance of the left superior ramus and a circular area of increased density in the ilium were seen on x-ray of the pelvis. The rest of the x-rays gave negative results: ribs—no definite cystic destruction; skull—large area of tissue removed in left mandible, no other destruction or cysts; abdomen—no calcification; spine—no compression or destruction; barium swallow—no esophageal displacement.

Preoperative diagnosis was hyperparathyroidism.

On December 27, 1952, under endotracheal nitrous oxide-oxygen-Sodium Pentothal anesthesia the neck was systematically explored. Two nodules on the thyroid were removed and proved to be thyroid tissue by frozen section. Upper and lower thyroid poles were mobilized, and no abnormal parathyroid tissue could be visualized. The upper parathyroids were atrophic. A palpable cystic-feeling mass in the lower right pole of the thyroid, totally surrounded by the thyroid tissue, was then enucleated and on frozen section proved to be parathyroid adenoma. The tumor removed was a brownish-purple color, measured 2.2 by 1.7 by 1.3 cm., and weighed 2.8 Gm. The cellular structure was uniformly Wasserhelle cell type.

No tetany developed postoperatively although the blood calcium reached 8 mg. per cent on the third postoperative day. Parathyroid hormone was used prophylactically for six days in decreasing doses until blood calcium levels stabilized at 10 mg. per cent. Calcium gluconate was given intravenously for two days and then replaced by oral calcium gluconate with vitamin D. A high-calcium, low-phosphorus diet was used.

The wound healed well. The patient was out of bed on the day following operation and was discharged on the fourteenth postoperative day, already noticing improvement in the pain in the hip area. Within three weeks from the time of operation the patient was free of polydipsia and nocturia, and a morning urine specimen showed a 1.013 specific gravity.

One month postoperatively she could go up and down stairs freely, and hip pain had disappeared. X-rays taken one and two months postoperatively showed steady recalcification of the cystic areas of the ilium and pubic ramus.

The patient's fingernails, which had been very soft and preoperatively curved to a remarkable degree around the fingertip, rapidly regained a more normal texture and straightened out in normal growth. The color of the nails preoperatively was very striking, a rather milky bluish-white color, which would offer a completely false impression of hemoglobin level. These gradually returned to normal color, but, strangely, the change seemed to progress from the extremity of the nail backward to the nailbed.

Repeated blood calcium levels were normal. The only indication of any pluriglandular effect of the adenoma's hypersecretion was the occurrence of menopausal hot flashes of a severe nature about one month postoperatively. The patient had experienced her menopause in 1947, six years previously, with no hot flashes since that time. Oral estrogens controlled the symptoms.

A search of the Arnot-Ogden Hospital records revealed another case, which had an unsuccessful outcome.

Case 2.—E. M., a forty-one-year-old white male, was admitted following a fall at work over a chair. He was unable to get up because of pain in his pelvis.

Physical examination showed a well-nourished, healthy appearing male with tenderness over the pelvis, but showing no pain unless moved. No neck tumor was palpable. X-ray of the pelvis showed moth-eaten decalcified appearance of pelvic bones and hip, with a probable pathologic fracture of the right inferior and superior pubic rami. The skull and ribs also showed the moth-eaten appearance, as did views of the right shoulder.

On the day following admission calcium studies were taken. Blood calcium was 13.5, phosphorus 3.2, acid phosphatase 4, alkaline phosphatase 110 units. Four days later the following values were obtained: calcium 17.2, phosphorus 4, nonprotein nitrogen 30.

Five days after admission a sternal puncture was done for diagnosis and reported as hypoplasia. Two weeks after admission a section of the ninth rib was removed for pathologic study and diagnosed as osteitis fibrosa cystica—hyperparathyroidism. Five days after this procedure the patient developed abdominal pain and findings which rapidly progressed to obvious peritonitis. Coma and uremia with a nonprotein nitrogen of 150 ensued, and the patient died immediately after an abdominal exploration which disclosed a perforated cecum and peritonitis.

Autopsy Findings.—The pertinent findings were as follows:

The abdomen showed severe enteritis. Cecum and ascending colon showed a severe degree of ulcerative colitis with numerous perforations of the ulcers.

The parathyroid glands were enlarged and prominent. The right superior gland measured 1 by 1 by 0.2 cm. and lay posterior to the thyroid. The right inferior gland measured 1 by 0.7 by 4 cm. and was found in connective tissue 2 cm. below the inferior pole of the thyroid. The left superior gland measured 1 by 0.7 by 0.2 cm. and was posterior to the thyroid. The left inferior gland had become converted into a tumor mass measuring 5 by 5 by 3 cm. and was situated within the mediastinum near the manubrial notch. A pedicle 3 cm. in length carried the vessels from the thyroid capsule. The tumor was medullary in consistency and on section was brownish with numerous cystic areas.

The kidney showed many calcium deposits throughout the parenchyma and imparted a gritty sensation when sectioned.

Unfortunately only the largest parathyroid tumor mass was sectioned. This showed a mixed type of adenoma, mainly of chief cell type.

Subsequent investigation disclosed that this patient had complained of vague back and leg pains about three years prior to this admission. An x-ray film was taken of his knee at that time, and osteoporosis was present. Thus, the condition had existed for at least three years before death.

One is struck by the thought that this man was teetering on the brink of disaster because of impaired kidney function. The diagnostic rib removal pushed him over the edge, whereas had the adenoma been removed instead, he might have survived.

The pathologic findings of one definite adenoma plus at least two other enlarged glands make one suspicious that this may have been a case of multiple adenomata. Certainly if exploration of the neck had been done, frozen section of the enlarged glands and nice clinical judgment as to how much should be removed would have been necessary for a successful result.

Summary

Two cases of hyperparathyroidism from adenoma are presented. One may represent a case of multiple adenoma, whereas the other is clearly a solitary water-clear type of adenoma which had caused a rapid course.

One case emphasizes the need to investigate any bone cyst, particularly of the mandible, to determine if hyperparathyroidism exists.

Both cases, particularly the latter, illustrate the fact that severe or longstanding cases must be handled with care or kidney function will fail because minor diagnostic surgical procedures without correction of the hypercalcemia may precipitate uremia and death.

426 West Clinton Street

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Cilioretinal Vessels

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Many of the studies and observations of the ophthalmologist are of interest and of value to him and to his confreres alone. However, investigations pertaining to the vascular status of the retina are of practical importance to those in other fields of medicine. The pathology of the retinopathy of prematurity (retrolental fibroplasia) is of vital interest to the pediatrician, grading of vascular findings and arteriosclerotic changes to the internist, the phakomatoses to many men in different fields, and others too numerous to mention.

One condition, frequently present, often overlooked, and yet of real practical interest, is the presence of cilioretinal vessels.

By way of pointing out how infrequently the presence of these vessels is recognized, the following example is presented. In June, 1948, during the course of a routine eye examination the fundus of a patient presented a splendid picture of a cilioretinal artery (Fig. 1). It was suggested to several physicians nearby that they examine and describe the fundus. Not one of them recognized or, perhaps better, were aware of the vessel.

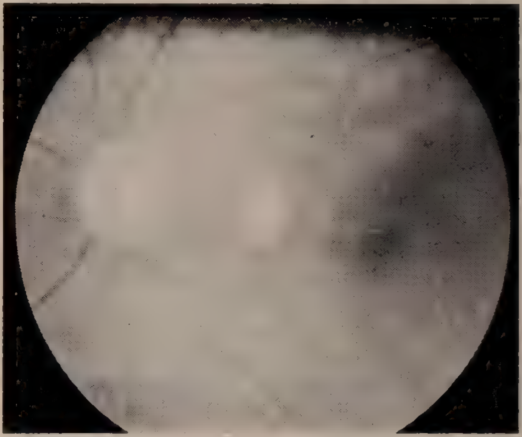

Fig. 1. Cilioretinal vessel clearly visible in fundus of eye.

A few days later the same case was presented for "fundus examination" at a staff conference. Among a large number of physicians, only one even mentioned the presence of the vessel. The fundus photograph of this eye has been shown several times since 1948, and only rarely has the cilioretinal artery, as such, been mentioned by observers.

In view of the practical clinical importance of the presence or absence of this vessel a review of the subject is presented at this time. Some years ago Jackson[1] of Wisconsin found cilioretinal arteries in about 20 per cent of 1,000 eyes examined ophthalmoscopically. Stimulated by this, the present author kept careful records on a routine series of fundus examinations since 1948. Each ophthalmoscopic examination was entered on a record sheet. This sheet noted the presence or absence of a cilioretinal vessel, the eye involved (right or left), sex, race, etc. Some 500 cases were examined and the results recorded. No worth-while conclusions of statistical validity could be drawn except that of numerical occurrence. Jackson's ratio of incidence was approximated, there being 16 per cent of eyes with this vessel. There was a slightly higher incidence, 56 per cent, of the presence of this vessel in the left eye.

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Few of the major works in anatomy describe the cilioretinal vessels. However, Saltzmann[2] gives a good description. In one case he observed the complete absence of the central artery and the substitution of two cilioretinal arteries for this vessel. He also adds that this vessel is almost always on the temporal half of the circumference of the optic nerve, and if present on the nasal side, it is associated with anomalies of the papilla.

Duane's translation of Fuchs[3] gives a good description of the artery.

Bailliart[1] was among the first to bring these vessels to the attention of the clinical ophthalmologist. Ida Mann[4] states that "the cilioretinal artery which supplies the macular region occasionally in man is developed as an enlarged anastomosis of one of the posterior ciliary arteries with a small branch of the bulb of the hyaloid artery on the disk.

The ciliary arteries forming the circle of Zinn (or Haller), penetrate to a certain extent among the nerve fibers around the point of exit of the nerve. Anastomoses of ciliary and retinal vessels occur only around the edge of the disk in man. In many of the lower animals (e.g., some carnivores) these channels enlarge and form the definitive blood supply, no true arteriocentralis retinae being developed. The occurrence of a cilioretinal artery in man may perhaps have some atavistic implication."

The arterial circle mentioned brings to one's attention the name of the anatomist and botanist, Johann Gottfried Zinn (1727–1759), who is so familiar to ophthalmologists and after whom the popular flower, the zinnia, is named. This arterial circle is also associated with the name of Albrech von Haller (1708–1777), the Swiss anatomist and physiologist who was born in Berne.

This circle of anastomotic vessels is situated in the sclera close to the origin of the lamina cribrosa and surrounds the optic nerve in a capillary ring. It is composed of branches of the short posterior ciliary arteries. These pour blood into the choroid. In a few individuals, instead of passing into the choroid, one of these extends through the optic disk (at times in the form of a loop, the convex side of which is directed toward the center of the disk). These vessels are always situated at the temporal side of the nerve head.

This vessel becomes vitally important when there is an obstruction of the central retinal artery. The part of the retina which it nourishes may continue to function, and this area is usually that of the all-important maculopapular bundle.

Occasionally a large cilioretinal vein has been observed to assume the function of a missing central vein. Cilioretinal veins are very rare. Fuchs refers to them as opticociliary veins of Elschnig. These vessels, if present, carry blood from the choroid to the central retinal vein.

If a cilioretinal artery is present and becomes occluded, the patient would be aware of a fairly large central (positive) scotoma. On the other hand, if there is occlusion of a central retinal artery and at the same time a cilioretinal artery is present and remains patent, the patient would have an area of central vision surrounded by a peripheral area of complete blindness.

It would seem wise, therefore, to note and record the presence or absence of these vessels when the fundus is examined by the ophthalmologist, internist, general practitioner, neurologist, and obstetrician, especially when examining middle-aged and older patients.

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He has a right to criticize who has a heart to help.—Abraham Lincoln

Bronchopulmonary Infection Treated with the Diethylaminoethyl Ester Hydriodide of Penicillin G

Report of 97 Cases Treated

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MANY salts of penicillin have been evaluated in an attempt to develop a long-acting repository form of penicillin which can maintain suitable therapeutic concentrations in the body. Until recently, only three—sodium, potassium, and procaine penicillin—had been accepted.

In 1948 Danish investigators added a new repository form of penicillin (the diethylaminoethyl hydriodide of penicillin G) to this list. Jensen *et al.*[1,2] found that the compound achieved higher levels in the lungs of guinea pigs than did equal doses of procaine penicillin. The new form appeared to have a direct affinity for lung tissue.

Like procaine penicillin the diethylaminoethyl hydriodide of penicillin G is a depot penicillin, but it is an ester of penicillin rather than a salt. The ester, however, has no antibiotic activity until it is hydrolyzed to produce diethylamino alcohol and free penicillin. Flippin *et al.*[3] studied the effect of this ester on animals and found that the new form of penicillin produced lung tissue levels which were significantly higher than those produced by procaine penicillin. Clinical investigations of the drug[4-8] revealed that the ester resulted in lower serum levels than procaine penicillin, but these lower serum levels correlated with lung levels that were five to eight times higher than those achieved by other penicillins. These studies also showed that the ester achieved effective sputum concentrations, whereas little or no penicillin could be found in the sputum of patients treated with procaine penicillin.

Barach *et al.*[9] confirmed these results in the treatment of 80 cases of chronic bronchopulmonary disease. Studies by Heathcote and Nassau,[10] comparing the ester with procaine and sodium penicillin, reported that although all three agents reach their maximum sputum concentration two hours after injection, a significant sputum concentration remained six hours after injection with the ester. The six-hour sputum levels obtained with procaine and sodium penicillin were negligible. These findings were further confirmed by McDonald and Thomson in Australia.[11]

Because of these reports we undertook a clinical evaluation of this antibiotic in 97 cases of acute and chronic bronchopulmonary infection. These cases were collected over a one-year period at St. Luke's Hospital in New York and consisted of two patients with lung abscess, ten with bronchitis, seven with bronchiectasis, and 78 with pneumonia. The results of the treatment are given below.

Results of Treatment

LUNG ABSCESS.—X-rays of the two patients suffering from lung abscess revealed cavities; both patients had coughs productive of large amounts of purulent sputum.

Sputum cultures in the first patient, a fifty-four-year-old male, revealed Aerobacter aerogenes, Staphylococcus albus, and Streptococcus viridans. The patient received 500,000 units of Neo-Penil* intramuscularly daily for thirty-one days combined with Gantrisin, 6 Gm. daily. The latter drug was given for twenty-eight days. When the patient was discharged on the thirty-sixth hospital day, the cavitation in his right upper lobe was completely closed.

The second patient, a seventy-two-year-old male, received Neo-Penil for eleven days, during which time he was given 16,000,000 units of the drug. However, he continued to run a low-grade fever, and x-rays failed to show improvement of the lesion. A right lower lobe lobectomy, done on the thirty-seventh hospital day, revealed a grade II squamous cell carcinoma with abscess formation of the right lower lobe.

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* Neo-Penil is the trademark of Smith, Kline & French Laboratories, Philadelphia, for the diethylaminoethyl ester hydriodide of penicillin G.

Bronchitis.—There were ten patients with acute bronchitis; they ranged in age from sixteen to eighty-six years. X-rays showed that three patients had an increase of the bronchovascular markings; five patients had a white blood cell count of over 10,000. All of these patients had a productive cough. Sputum cultures revealed Hemophilus influenzae in two patients and normal bacterial flora in the rest.

Eight patients were treated with Neo-Penil alone. Four received 500,000 units daily; four received 1,000,000 units daily. The average length of treatment was 7.4 days, the average hospital stay 11.1 days. Of the two other cases one received procaine penicillin therapy for three days and one for two days before Neo-Penil was begun; they were discharged on the seventeenth and nineteenth day, respectively.

In all patients the quantity of sputum was reduced and the cough markedly depressed in the first six days of treatment.

Bronchiectasis.—Seven patients, varying in age from forty-six to seventy years, were treated for a bronchiectasis which had been proved by either past or present Lipiodol studies. Six of these patients had x-ray evidence of pneumonic infiltration. All had a marked leukocytosis, fever, and copious amounts of purulent sputum (10 to 150 cc. a day). Five patients treated with Neo-Penil alone were given doses varying from 500,000 to 1,500,000 units daily for a period which averaged 12.5 days. The average length of hospital stay was 18.3 days. One patient did not respond to Neo-Penil therapy and returned home for further care. Another patient had been unsuccessfully treated with 600,000 units of procaine penicillin four days before Neo-Penil therapy was begun. Six of the seven patients were sputum-free at the time of discharge.

Of these seven patients four had known pathogens in their sputum; the others showed only normal flora. In the six successfully treated patients the sputum volume was significantly decreased during the first week of therapy.

Bronchopneumonia.—There were 53 bronchopneumonia patients (ranging in age from fourteen to eighty-two) treated with Neo-Penil. Fifty of these received Neo-Penil alone (500,000 to 1,000,000 units daily); three received Neo-Penil plus a second antibiotic.

Twenty-one patients had pathogenic organisms in their sputum; 32 had normal flora. Fifty-two patients had x-ray evidence of bronchopneumonia; 37 had a white count of over 10,000, and two had a complicating bronchogenic carcinoma.

The average length of treatment for the patients on Neo-Penil only was 10.5 days, the average length of hospital stay 15.1 days. The three patients who received combined therapy had penicillin-resistant organisms which failed to respond to Neo-Penil, and the second antibiotic was necessary for the complete resolution of their pneumonia. The average length of Neo-Penil therapy for these patients was eighteen days, the average length of hospital stay 27.6 days. These latter patients were considered failures.

Pneumococcus Pneumonia.—Twenty-five patients (ranging in age from twelve to eighty) were treated for pneumococcus pneumonia. All these patients had pneumococci isolated from their sputum; 23 of them showed a leukocytosis and x-ray evidence of pneumonitis, and one had a positive blood culture.

Nineteen of these patients were successfully treated with Neo-Penil (500,000 to 1,000,000 units daily) for an average of 10.5 days. The average hospital stay was 14.7 days.

The six remaining patients (all of whom had x-ray evidence of pneumonia infiltration) were treated with another antibiotic in addition to Neo-Penil, chiefly because they evidenced either marked debilitation or a complicating disease. The average length of treatment was 8.5 days, the average hospital stay 16.3 days.

All 25 patients were successfully treated.

Reactions

Recently, 14 anaphylactoid reactions to Neo-Penil (three resulting in death) have been reported by the Smith, Kline and French Laboratories.[12,13] Of the 97 patients treated in this study, three developed urticaria, and a fourth suffered a more severe reaction.

Two of the patients developed a macular pruritic rash within five days after the beginning of therapy which subsided spontaneously when the drug was stopped. The third patient, who had bronchopneumonia of the left lower lobe, developed a generalized giant urticaria and eosinophilia after eleven days of treatment. This lesion failed to respond to withdrawal of the drug and treatment with antihistamines; ACTH was required to effect complete improvement.

A fourth patient, who suffered from pneumonia and who had been given 1,000,000 units of Neo-Penil daily, appeared to be doing well until the sixth hospital day. Approximately thirty seconds after an intramuscular injection of Neo-Penil, he noted a bitter metallic taste in his mouth. Almost immediately after this he suffered a generalized, tonic, clonic seizure and loss of consciousness. His pulse became unobtainable. He responded in a few minutes to the rapid and judicious use of intravenous epinephrine and did well. On review of this case, particularly in view of the bitter metallic taste, it was assumed that Neo-Penil had been inadvertently injected into a small vein. The drug was stopped after this episode; the patient was continued on aureomycin and improved without further incident.

Summary

After briefly reviewing the literature reporting on the high lung tissue and sputum levels achieved by the use of the diethylaminoethyl hydriodide ester of penicillin G, 97 cases of bronchopulmonary infection treated with Neo-Penil have been presented. Ninety-two of these patients were successfully treated; five showed little or no improvement.

Three comparatively mild reactions to Neo-Penil and one case of anaphylactoid shock have been reported in this series.

It is suggested that Neo-Penil is a useful adjunct to the treatment of bronchopulmonary infection.

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Finds Cortisone Beneficial in Treatment of Shingles

Cortisone is useful in the treatment of severe and extensive cases of herpes zoster, commonly known as shingles, it was reported by Dr. Maxwell L. Gelfand, New York City. Use of the hormone drug in such cases shortens the acute phase of the disease, diminishes the intense pain, and reduces the incidence of complications, Dr. Gelfand wrote in the March 13 issue of the *Journal of the American Medical Association.*

Herpes zoster is an acute infectious disease of viral origin which affects the nervous system and is manifested by cold-sore-like skin blemishes and intense pain. Although it is essentially benign and followed by spontaneous recovery, the condition carries a high degree of morbidity in the elderly age group, and can cause such irreversible complications as sleeping sickness and blindness. Dr. Gelfand administered oral cortisone for twelve days to five persons suffering from severe acute herpes zoster; the patients ranged in age from thirty-two to seventy-two years.

"Dramatic relief of pain occurred within twenty-four to thirty-six hours in four of the five subjects treated," he stated. "The fifth patient, who had chronic lymphatic leukemia, failed to respond to therapy. The skin eruptions did not progress in any of the patients, nor were there any evidences of secondary infection."

Generalized Argyria

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ARGYRIA is the pigmentation resulting from deposition of silver in the corium of the skin, the mucous membranes, and tissues of internal organs. According to its nature argyria is designated as local or general; according to its origin it is occupational (industrial) or therapeutic.

In the early nineteenth century argyria was not uncommon because of the wide use of silver compounds in the treatment of diseases of the nervous system and gastrointestinal tract. When this therapy was rejected, the incidence of argyria diminished markedly. However, interest in silver therapy was revived with the introduction of colloidal silver preparations and the use of silver arsphenamine, and the incidence of argyria showed an "alarming increase."

The awakened interest in the subject is due to existing uncontrolled or indiscriminate use of naso-orally administered proprietary silver compounds with subsequent insidious development of skin pigmentation characteristic of argyria. Because of the apparent harmlessness of even marked degrees of argyria, the great majority of cases are never reported. All physicians at one time or another have probably seen cases so that the sparse statistical reviews in current medical periodicals can give only a meager picture of its prevalence. But the one who sees a victim of full-blown argyria, with its typical, generalized, bronzed blue or slate-gray skin pigmentation, must necessarily be impressed with the importance of preventing such a condition. The conspicuous and permanent discoloration may seriously interfere with pursuit of occupation and marks these people as objects of whispered comments by friends and strangers. Furthermore, the error of overlooking argyria and misinterpreting the skin pigmentation as being due to cyanosis of heart disease can be a grave one and easily avoided.

With a view to emphasizing the dangers inherent in the use of silver salts, we believe it appropriate to report the cases described below and to present briefly a review of the literature and a clinical discussion of therapeutic argyria.

Case Reports

CASE 1.—A seventy-seven-year-old spinster of Irish extraction was admitted to Kings County Hospital on October 20, 1952, presumably for a left-sided hemiplegia with associated heart failure and cyanosis. The cerebrovascular accident had occurred four weeks prior to admission, leaving the patient bedridden in the care of her seventy-year-old sister, with whom she lived in a cold water flat. Because of the patient's rapidly deteriorating course and the physical conditions in the home, she was referred for hospitalization.

Upon admission to the receiving ward the bluish, slate-gray color of the patient's skin terrified the admitting personnel, and oxygen and clergy were immediately summoned. The patient was lying flat in bed, without evidence of respiratory distress, breathing via oxygen mask. The skin of the upper trunk, and especially the face, neck, hands, and fingernails, was of bluish-gray discoloration and, in addition, had a metallic sheen. In no instance did the skin blanch on pressure, nor was there lightening of the skin color during oxygen inhalation therapy.

The history was obtained from the patient, her sister, the private physician, and the local pharmacist. The sister, who showed a light gray discoloration about the nose and mouth at first denied the use of any drugs in the home except hydrogen peroxide and white henna hair rinse. It was her impression that the patient's skin discoloration first appeared four years prior to admission; the private physician had noted it three years ago, but a diagnostic evaluation at that time failed to reveal any contributory information. Increase in intensity or spread of the discoloration was denied. The apothecary stated that the patient had been buying Neo-Silvol, eight to ten bottles yearly (2 ounces per bottle) for the past decade. The patient originally used this colloidal silver iodide preparation as nose drops for chronic sinusitis upon advice of an otorhinolaryngologist. Afterward, however, the medicament was used at the patient's own motivation, both therapeutically and prophylactically. The sister also admitted use of Neo-Silvol nose drops over a ten-year period for an occasional cold but denied previous awareness of her own skin pigmentation.

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Physical examination revealed a cachectic, elderly white woman who appeared chronically ill. She was fairly alert and responded to questions at intervals. The rectal temperature was 95 F., radial pulse 84, and blood pressure 130/80. The skin was of slate-gray color with distribution and intensity as previously mentioned. The nasal and oral mucous membranes were also discolored as were the teeth; the sclerae were gray. The neck was supple without cervical or supraclavicular adenopathy. The lungs were normal to percussion and auscultation. The heart was not enlarged to percussion, there were no murmurs, rhythm was regular, and the second aortic sound was louder than the second pulmonic sound. The abdomen was scaphoid, plastic, nontender; bowel sounds were audible; no abdominal organs were palpable, save the kidneys. There was no spinal or costovertebral angle tenderness. Pelvic examination revealed atrophic genitalia, a virginal introitus; the cervix was smooth and regular; the uterus was anteflexed and not enlarged; no adnexal organs were outlined. Rectal examination revealed fair sphincter tone; the rectum and ampulla were impacted with feces of normal color, the stool benzidine test was negative. After removal of the fecal impaction, three stony hard lymph nodes 3 to 4 cm. in size were palpable high in the rectal ampulla against the posterior pelvic wall and adherent to the latter. The extremities showed marked symmetric muscle wasting, a left wrist drop, and external rotatory wrist deformity with cellulitis and edema of the dorsal aspect of the left hand, and arthritic deformities of the fingers of the left hand. Because of the generalized muscle rigidity the tendon reflexes were difficult to elicit; flexor plantar responses were present bilaterally; there was no pedal edema.

Laboratory studies were as follows: Hematologic workup showed hemoglobin 6.8 Gm., red blood cells 3,400,000, white blood cells 20,000 with 3 bands, 87 neutrophils, 9 lymphocytes, and 1 monocyte. The red cells appeared hypochromic and microcytic; platelets were adequate; 1 normoblast was present on peripheral smear. Hematocrit was 23 per cent, reticulocyte count 0.4 per cent. Indices were as follows: mean corpuscular volume 67 cubic microns, mean corpuscular hemoglobin 20 micro-micrograms, and mean corpuscular hemoglobin concentration 29 per cent. Erythrocyte sedimentation rate was 20 mm. in one hour (Cutler), and spectroscopic studies for methemoglobin were negative.

Urinalysis was within normal limits. Stool benzidine examination of three specimens on a meat-free diet was negative.

Blood chemistry revealed blood urea nitrogen 62 mg. per cent, blood sugar 131 mg. per cent, creatinine 3 mg. per cent, total protein 5.8 Gm., albumin globulin ratio 2.8:3.0, cephalin flocculation 2 plus, carbon dioxide combining power 38 volumes per cent, chlorides and icteric index within normal limits, and Wassermann negative.

Roentgen examination of the chest showed elongation, torsion, and sclerosis of the arch of the aorta. A flat plate of the abdomen showed no unusual masses or gaseous collections. Because of the patient's debilitated condition proctoscopy and roentgen studies of the gastrointestinal tract were deferred.

Skin biopsy from the pigmented portion of the right arm showed "granular black material in the mesothelial lining of the sweat glands consistent with argyria."

The patient's course was progressively downhill, and she expired on the thirteenth hospital day. The clinical diagnoses were carcinoma of the rectosigmoid, generalized argyria, questionable old cerebrovascular accident. Causes of death were bronchopneumonia and congestive heart failure.

Autopsy Report.—Postmortem examination confirmed the presence of neoplasm and generalized argyria. Pertinent findings were as follows (microscopic sections stained with hematoxylin and eosin only):

The distribution of the skin pigmentation was as described antemortem. The skin color, however, was a chalk blue with a peculiar lack of luster. The sclerae, conjunctivae, and oral mucous membranes were gray.

On section, the muscles of the thoracic and abdominal walls presented a dull brown color. The fascial tissues, however, had a distinct silvery sheen.

The heart weighed 240 Gm. The pericardium was white and glistening, but the epicardium presented a slate-blue appearance. The endocardium of both the right and left chambers of the heart showed a diffuse silvery blue appearance, particularly about the aortic and pulmonary valves. The left ventricle measured 10 cm. and the right 3 cm. in thickness. The myocardial tissue was uniformly dirty, dull, brownish red. The subendothelial tissues of the pulmonary artery and aorta most proximally presented ill defined areas of silvery hue. The coronary arteries, although calcified, were patent throughout. Microscopically small granules of uniform size were found diffusely scattered throughout the connective tissue of the epicardium and in the intermuscular connective tissue of the myocardium, but no silver was found within the muscle fibers themselves. In focal areas of the intermyocardial connective tissue elliptoid foreign body granulomata were seen, which compressed the surrounding myocardial cells and caused necrosis of some individual contiguous cells. Granules of silver were scattered throughout the lesion (Fig. 1). The core of the granuloma was formed by granular acidophilic debris surrounded

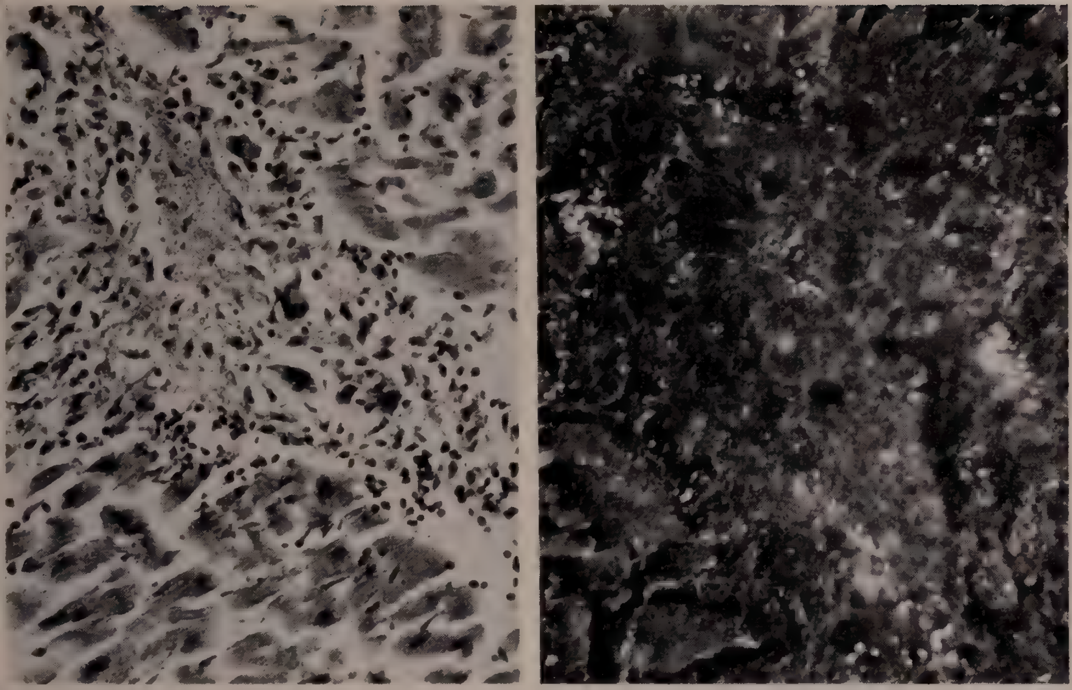

FIG. 1. (*A*) Hematoxylin and eosin stain showing a foreign body granuloma containing silver granules in the myocardium. (*B*) Darkfield of same granuloma and surrounding myocardium. Apparent variation in size of silver granules results because not all granules are in the same focal plane.

by epithelioid and foreign body giant cells which were round, oval, or irregular in shape, with acidophilic cytoplasm and multiple nuclei eccentrically distributed within the cells. A zone of lymphocytes, plasma cells, and fusiform fibroblasts with occasional small fibers of wavy collagen comprised the periphery of the granuloma. Silver granules were scattered throughout the endocardial connective tissue but without evidence of inflammatory reaction.

Each lung was distended and tense and showed scattered foci of consolidation. The right lung weighed 800 Gm.; the left weighed 600 Gm. The color was normal, and microscopic examination showed no silver granules.

In the abdominal cavity the mesentery, omentum, and serosa of the stomach and small and large intestines presented a diffuse slate-gray pigmentation. The peritoneum, however, was white, smooth, and glistening.

The liver, through its capsule, was bluish gray, weighed 1,400 Gm., and cut with increased resistance. Microscopic examination revealed granules of silver scattered through the connective tissue of Glisson's capsule as well as in the strands of fibrous tissue which form the inter- and intralobular supporting structure of the organ. The connective tissue surrounding the portal canals showed finely granular silver deposits, but none were noted in the cords of hepatic cells or in the Kupffer cells.

The spleen was bluish red in color; the weight was 70 Gm. Silver granules were found chiefly in the capsule and fibrous trabeculae and in the strands of fibrous tissue which form the sinusoids. The small and medium-sized splenic arteries also contained silver granules in their walls, particularly the intima. The walls of the arteries which make up the Malpighian corpuscles appeared studded with pigment. No intracellular pigment was noted.

The kidneys each weighed 200 Gm. and had a bluish tinge. On section the renal cortex appeared dirty brown and was well demarcated from the medulla. The renal pyramids and renal papillae were black. The remaining medullary components, including the renal pelvis, were bluish gray. Microscopic examination showed diffuse silver granule pigmentation in the connective tissue of the capsule and within the walls of the glomerular capillaries; sprinklings of silver granules were also noted in Bowman's capsule. On cross section the connective tissue surrounding the tubular epithelium appeared studded with silver granules with the heaviest deposit near the collecting tubules of the renal papillae. The tubular epithelium itself was free of the metal.

In the walls of the renal pelvis silver granules were scattered through the connective tissue of the mucosa, submucosa, and muscularis.

Both a biopsy specimen of pigmented skin and a necropsy specimen of nonpigmented skin, when immersed in photographic developer solution, turned black. Microscopic examination under low-power showed the sweat glands and sebaceous glands to be surrounded by a black ring which upon higher magnification was found to consist of discrete black granules in the membrana propria of the sweat glands and in the connective tissue sheaths about the sebaceous glands. Darkfield microscopy revealed halos of refractile, golden-white granules about the sweat glands. These granules appeared much more numerous than with direct illumination. There was no silver deposition in the epidermis.

Gross examination of the brain showed softening of the right central and posterior central gyri which extended into the corpus callosum. No silver was seen in the microscopic sections.

About the cecum there was a 5 by 6-cm., whitish-yellow, stony hard mass which was annular and constricted but did not obliterate the lumen of the cecum. The tumor was adherent to the lateral pelvic wall, and the appendix was adherent to the tumor mass. However, the appendix appeared grossly normal, and the lumen was patent throughout. There were three stony hard 3 to 4-cm. matted lymph glands which were invaded by tumor. Histologic section of the tumor mass revealed a highly anaplastic, invasive adenocarcinoma; no silver granules were noted within the tumor mass. Microscopic examination of jejunal tissue for silver revealed that the principal deposits of silver granules lay in the core of the connective tissue of the villi. Heavy silver deposition in the media of smaller blood vessels of the submucosa was also noted. The connective tissue of the muscularis and adventitia contained diffusely scattered granules of the metal. Histologic section of the colon (normal tissue) showed silver deposition in the submucosal, muscularis, and adventitial connective tissue and in the blood vessels. The nerve plexuses contained no silver.

The gallbladder, although grossly normal, showed scattered silver granules in the connective tissue of the muscularis. Silver granules were also noted in the supporting fibrous tissue of the pancreas and adrenal glands; the latter were grossly gray. The bone marrow, bone, cartilage, and the remaining tissues were not involved. Microscopic sections of bladder, genital organs, thyroid gland, lymph nodes, and stomach were not made.

Case 2.*—An eleven-year-old boy of Jewish extraction was admitted to the hospital on November 20, 1952, because of hepatosplenomegaly discovered on routine examination. He had been followed for many years because of persistent argyria. As a child, the patient had been subject to frequent upper respiratory infections and bouts of otitis media. Management had included two myringotomies and supposedly two tonsillectomies at two and three years of age. Also during this period (one to two years) the boy had received, almost daily, 1 or 2 drops of argyrol as well as frequent argyrol throat swabbings for these respiratory episodes. At age three years a bluish tint was noted to his skin, and since that time he had received no silver medicament in any form. His parents, and other observers, believed that the blue color has deepened progressively over the past eight years, was most marked in the evening, and actually varied from time to time, i.e., the color might be darker when the child was fatigued or excited. The boy had been examined carefully at least semiannually, and his last physical examination six months prior to admission showed no change.

Examination revealed a well-developed, obese, white male, in no acute distress, extremely bright, alert, cooperative, and rather acutely aware of the surrounding environment. There was a slate-blue tinge to the skin, especially over the exposed surfaces, i.e., the bridge of the nose, face, and fingernails. The mucous membranes were not involved. It was evident that the boy was emotionally disturbed over his appearance, reacting with reversion when thrown into socialization; expressing hostility toward other children manifested by a general attempt to maintain supremacy over them; very frightened and infantile in relations with adults.

The rectal temperature was 100 F., radial pulse 85, respirations 19, and blood pressure 125/70. A right internal strabismus was present, and vision in the right eye was reduced to 20/200. There was a healed perforation of the right tympanic membrane. The neck was supple without significant adenopathy. The lungs were clear. The heart was not enlarged, rhythm was regular, the sounds were of good quality, and a grade I blowing systolic murmur was heard over the apex with some transmission along the left cardiac border. The abdomen was soft. The liver was palpable four fingerbreadths below the right costal margin, firm, blunted, and perhaps slightly tender. The spleen was quite firm, with a rounded edge easily palpable 3 to 4 cm. below the left costal margin, and not tender. The genitalia were not remarkable for a young fat boy. Rectal examination revealed good sphincter tone, no masses, and small hemorrhoids in a ring around the mucosa. Neurologic examination was not remarkable.

While he was in the hospital, the hemoglobin ranged between 10.8 and 11.4 Gm.; the red cell count was 3,700,000; the white cell count ranged between 3,400 and 9,000 with essentially normal differentials. The platelet count was 80,000 per cu.

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* Courtesy of Dr. Horace L. Hodes, Mount Sinai Hospital, New York City.

mm. The erythrocyte sedimentation rate was 18 in one hour (Wintrobe). Four bone marrow studies were done from the sternum (two), iliac crest, and vertebral spine, all of which revealed an essentially normal marrow with a normal erythromyeloid ratio and no evidence of Gaucher cells. Arterial samples of blood revealed 97 per cent saturation for oxygen. Blood cultures were negative. Blood determinations for silver revealed "significant amounts." The urinalysis was normal with no bile or abnormal urobilinogen; stools for guaiac, were negative and no ova or parasites were noted. The blood urea nitrogen, total protein, albumin-globulin ratio, calcium, phosphorus, bilirubin, total cholesterol and esters were within normal limits. The alkaline phosphatase ranged between 10 and 14 Bodansky units (normal for children); the serum uric acid was 2.1 mg. per cent, the bromsulfalein retention was 23 per cent and then 15 per cent three days later (both abnormal). The thymol turbidity was 3.3 units. The prothrombin times were abnormal.

Fluoroscopy was essentially negative. Roentgen studies, including esophagram for varices and a skeletal survey, were within normal limits.

Skin biopsy taken below the left ear revealed "significant amounts of silver deposition."

The patient's course in the hospital was essentially benign except for a low-grade febrile course of 100 F. daily, with occasional spikes of 101 to 102 F. Because of the severe psychologic barrier that the patient's skin pigmentation presented, it was decided to treat the child with an ethylene diamine medicament in an attempt to remove the pigmentation (results to be published in a forthcoming paper by Dr. Hodes).

Clinical impression at the time was argyria and hepatosplenomegaly of undetermined etiology.

The remaining five cases are from the records of the Kings County Hospital over the ten-year period of 1943 to 1952. The pertinent data are summarized in Table I, and the two patients previously described are also included.

Incidence

These data closely approximate the statistics of previously reported series[1–3] with only minor exceptions. A statistically significant evaluation is impossible here because of the small number of reported cases.

In the ten years from 1943 to 1952 seven patients were seen who had generalized argyria, of which five were females and two were males. (In the 239 cases described by Hill and Pillsbury[1] the ratio of the sexes was about equal.) At the time of the initial clinical examination, the youngest person was three years of age and the oldest eighty-five years; well over 50 per cent of the patients were between the ages of forty and seventy years. The appearance of argyria in the child coincides with the statement of many writers that this was a time when argyria was likely to develop from the overzealous use of silver compounds in the treatment of upper respiratory infections of childhood.

The clinical appearance of the pigmentation, as noted by the patient or relatives, varied from one to six years after the initial use of silver with 50 per cent of the cases evident in two years. According to Hill and Pillsbury[1] data available on this point in 128 of the reported cases showed an interval of six months to twenty-five years with over 50 per cent of cases evident within three years. This finding, however, must be interpreted with caution since it is probable that the attention of the patient to the pigmentation of the skin was not attracted for some time after it had become relatively apparent.

Inquiry as to the reason for using silver disclosed that five of the seven patients employed it for diseases of the upper respiratory tract, one patient for "asthmatic attacks," and another for disturbances of the gastrointestinal tract. The latter situation constituted the most common reason for the use of silver in the latter part of the nineteenth century and the first two decades of the twentieth. Clinical evidence as to the permanence of pigmentation in argyria is rather striking in Case 2.

Pathology

It is not the purpose of this paper to go into the predisposing factors or chemical background of argyria, which is adequately discussed by Gaul and Staud,[3] Blumberg and Carey,[4] and in the monograph of Hill and Pillsbury.[1] However, the pathologic anatomy deserves comment, especially in view of the necropsy findings in our case.

According to the literature all authors who have studied microscopic sections of tissue from patients with generalized argyria agree that the deposited granules of silver show no apparent interference with the cellular function of the tissue affected, nor do deposits of silver elicit a foreign body or cellular reaction. Histologic examination of the myocardial tissue of Case 1, however, clearly shows evidence of chronic inflammation, the presence of foreign body granu-

TABLE I.—Summary of Reported Cases of Generalized Argyria

Patient	Sex	Age	Medication	Why Used	Total Dose (Unless Otherwise Stated)	Route	Time Used	Years to Appearance of Argyria	First Site Involved	Site Most Marked	Diagnosis	Age at First Examination
M. O.	F	77	Neo-Silvol	Sinusitis, chronic nasal catarrh	2,400 to 3,000 Gm.	Nose drops	10 years (1941 to 1952)	6	Sclerae, face	Face, neck, fingernails	1952—history, skin biopsy	73
D. F.	M	11	Argyrol	Frequent upper respiratory infection, tonsillitis, otitis media	Daily, frequent	Nose drops, throat swabs	1 to 2 years (1942 to 1944)	1	Face	Bridge of nose, face, fingernails	1944—history; 1952—skin biopsy	3
A. G.	F	57	Argyrol	Sinus trouble	Once daily	Nose drops	2 years (1938 to 1940)	1 to 2	Face	Scalp, ears, nose, face, upper third of neck, fingernails	1944—history	57
S. W.	F	58	Argyrol	Asthmatic attacks	Once daily	Nose drops	5 years (1940 to 1945)	2	Face	Sclerae, face, neck, fingernails	1945—history; 1951—skin biopsy	?
A. H.	F	59	Argyrol	?	?	?	1 year (?)	?	?	Face, neck	1947—history	?
W. C.	M	75	Silver nitrate	Gallbladder attacks, stomach trouble	?	Pills by mouth	2 years (1901 to 1903)	2	Face	Generalized, uniform steel gray	1946—history	42
K. L.	F	85	Silver nitrate	Sinusitis	?	Nose instillations	1 year (1936 to 1937)	?	?	Face, neck	1949—skin biopsy	85

lomata containing silver granules with necrosis of contiguous myocardial muscle fibers (Fig. 1).

Although the cardiac muscle may seem grossly discolored, the dirty, dull, brownish-red color may be due to brown atrophy of the heart such as occurs in severe inanition and chronic wasting diseases as carcinoma. In brown atrophy, however, the heart is usually decreased in size, which is not the case here. Further gross inspection of the myocardium revealed firm ventricular walls with scattered areas of linear fibrosis or chronic myocarditis. The term myocardial fibrosis indicates, here, what is found in the heart, a condition of scarring with few or no signs of inflammation. What is called chronic interstitial myocarditis resolves itself largely into a question of myocardial scars. The problem, then, is to determine the antecedent factor responsible for the scars. Here there are two main possibilities: atherosclerotic narrowing of coronary arteries and old inflammatory and necrotic foci of argyrogranulomata. Histologic examination indicates that both pathologic entities have probably been contributory.

Our necropsy findings conform with the data described in the literature as regards:

1. Sites of deposition of silver in various organs and relative involvement of various tissues. According to Hill and Pillsbury, frequently involved tissues are skin, connective tissue, blood vessels, kidney glomeruli, choroid plexus, thyroid, bone marrow, pancreas, liver, spleen, ovaries, and testes. Minimally or never involved tissues include adrenals, lungs, dura mater, bone, cartilage, muscle, and nervous tissue. In our case the adrenal glands were diffusely infiltrated with silver granules; there was no evidence of silver in the bone marrow. The apparent affinity of silver for connective tissue framework and the vascular bed is well illustrated.
2. The conspicuous absence of silver in epithelial tissue.
3. Intracellular silver pigmentation was not present in these necropsy findings.
4. Size and location of silver granules in the skin. There was no appreciable variation in size or location of the granules of silver in the specimens of skin removed for examination. Pigmented and nonpigmented skin showed the same histologic picture.

Diagnosis

The diagnosis of argyria is ideally based upon a history of protracted use of silver medication, typical skin discoloration, and a skin biopsy studied by direct and darkfield illumination for the demonstration of silver granules. Physicochemical methods for identifying silver are discussed elsewhere.[3,4]

The color of generalized argyria, while variously described in shades of gray and blue, does not vary with the source of silver absorbed. Exposure to light produces more marked discoloration of the skin in exposed areas. The face, neck, dorsal surfaces of the hands, and fingernails are generally most markedly involved; the oral mucous membranes not as deeply. The initial site of discoloration is usually the face, particularly the forehead, tip of the nose, or nasolabial folds. The scalp may be discolored, and the hair can become steel gray in color. On the trunk the color gradually diminishes below the neck, but in severe cases (Case 1) the thorax and abdomen may be involved. Argyria localis of the female genital tract is well documented in the literature.[5]

Differential Diagnosis

While a well-marked and typical case of argyria can hardly be mistaken for any other condition, occasional difficulties in arriving at a diagnosis may be encountered, particularly in cases with altered hemoglobin pigmentation resulting from (1) cyanosis in cardiovascular and pulmonary disease, (2) methemoglobinemia and sulfhemoglobinemia (enterogenous cyanosis), or (3) polycythemia vera.

Argyria pigmentation of the skin and mucous membranes may simulate cyanosis remarkably. Levine and Smith[6] reported five cases of argyria erroneously diagnosed as cyanosis due to heart disease. The cyanosis resulting from an increase in reduced hemoglobin may vary from a deep purplish hue of strangulation to the heliotrope cyanosis noted in certain types of pneumonia with many intermediate tints, in contrast to the slate-gray or blue-gray hue of argyria with its metallic sheen.[7] Cyanosis is variable, particularly after exercise, while the color of argyria is never significantly altered. Cyanosis blanches on pressure; argyria does not. Cyanosis will decrease with oxygen inhalation therapy; argyria will show no change.

In methemoglobinemia the color of both skin and mucous membrane is chocolate brown and, when intense, may be bluish black. In sulfhemoglobinemia the color is lead or mauve blue, and evidence of intravascular hemolysis may be found. Argyria or argyremia is not associated with red blood cell destruction. Oxalated or clotted blood samples are strikingly chocolate to mauve lavender in these conditions, while the blood in patients with argyria or argyremia is of normal color.[8] Spectroscopic examination of the blood will verify the presence of sulfhemoglobin and methemoglobin. When the skin is examined histologically, no unusual pigmentation is noted.

In polycythemia vera the cyanosis is typically reddish blue, most marked on the face and ears; there is significant increase in the red cell mass with an increased blood viscosity. Argyria or argyremia provokes no change in the total red cell mass.

Excessive melanin pigmentation may be confused with argyria in such conditions as the melanotic neoplasms, Addison's disease, ochronosis (which is related to melanosis), and hemochromatosis (in which melanin and the iron-containing pigment hemosiderin are concerned with the changes in the color of the skin). Malignant melanoma may cause a diffuse and marked melanin pigmentation of the skin which may be indistinguishable from that of argyria. However, the discoloration is not accentuated on the portions of the body usually exposed to light, and marked involvement of the mucous membranes takes place.[9]

In Addison's disease the pigmentation is of a dirty, smokey nature, the color varying in intermediate tints of brown, while in argyria a bluish tinge is ordinarily present. As in the case of argyria, the pigmentation is most marked on exposed portions of the body, but in Addison's disease there is excessive discoloration of the genitalia, about the areolae of the breasts, on the extensor surfaces of the body, and over pressure points. In involved areas in argyria the pigmentation is uniform, while in Addison's disease large and small, distinct macules may be seen. Bluish-black discoloration on the lips, gums, and buccal mucosa is more common in Addison's disease. In well-developed cases of Addison's disease the clinical syndrome of asthenia, hypotension, disturbance in gastrointestinal function, and weight loss is characteristic.[8] On histologic examination of the skin, yellow or brown (not black), fine granules of melanin are seen in the basal and dendritic cells of the epidermis, as well as coarser granules in the chromatophores of the corium. This is in contrast to the histologic picture of argyria. Furthermore, granules of melanin are not refractile under darkfield examination.[2] Other physical and laboratory findings of adrenocortical insufficiency are well known and need no discussion here.

Ochronosis[10] is a pigmentary disorder which is related to melanosis and is of two types: (1) the endogenous form, an inherited anomaly of aromatic amino acid metabolism associated with alkaptonuria, and (2) the exogenous form resulting from poisoning with phenol, benzene, dinitrophenol, paradichlorobenzene, aniline, and epinephrine. All these, whether instilled, inhaled, or ingested, tend to form phenol derivatives in their intermediary metabolism which, in a slightly alkaline pH of the body fluids, polymerize into yellow-brown or ochre pigment. The endogenous type excretes homogentisic acid in the urine, which then turns black on standing as a result of alkaptonuria formation. After many years, as a result of oxidative action of tyrosinase, there is a deposition of pigment similar to melanin in cartilage, the eye, and, to a lesser extent, in the corium of the skin. Clinically, ochronosis is first recognized by a bluish discoloration of the ears and, occasionally, of the nose, cheeks, and hands (knuckles) from the optical effect of pigment deep below the epidermal layer of the skin. This dermal pigmentation may be confused with argyria, but it is never so prominent a feature as is pigmentation of cartilage. Failure of the ears to transilluminate light, due to pigmentation of cartilage, is diagnostic of ochronosis. Also diagnostic is pigmentation and osteoarthritis of the spine and large joints.

In hemochromatosis[11] a bronzing of the skin occurs which is midway between the skin color in Addison's disease and the slate-gray of argyria. Hemofuscin, an iron-free pigment, although usually present in hemochromatosis, is not highly important in causing skin pigmentation. Melanin and hemosiderin cause the changes in the color of the skin. Hemosiderin may cause a bluish-black or slate color which is occasionally generalized but is always more marked on the face and neck, the extensor surfaces of the extremities, and usually the genitalia. When both pigments are present, melanin modifies the color and blends the slate gray of hemosiderin with brown to give a bronzed appearance.[12] Physical and laboratory findings include cirrhosis with hepatosplenomegaly, diabetes mellitus, and possible other endocrine involvement. In argyria the granules of silver are much smaller and more uniform in size than those of hemosiderin or melanin, and these latter pigments are not refractile on darkfield examination.

Generalized pigmentation of the skin resembling that of argyria may be seen following the introduction of various other metals such as bismuth (bismuthia), mercury (hydrargyria), and gold (chrysiasis). Generalized skin discoloration due to bismuth is rare, in spite of its previous use in syphilotherapy, but has been described.[13] The skin assumes a deep blue-gray color, and the conjunctivae and oral mucous membranes are also discolored. As in argyria the pigmentation is accentuated on the exposed skin surfaces. The two metals can be differentiated spectrographically.

Face creams and powders containing mercury or mercury and bismuth may produce a brownish-gray or slate-gray discoloration of the skin, usually of the face and neck and limited to the areas where the material is applied, with accentuation in skin folds.[14,15] This type of pigmentation is purely of local origin; biopsy material shows mercurial deposits in the epithelium and/or corium.[16]

Pigmentation due to gold is defined as "a permanent pigmentation of the skin by the parenteral use of a gold preparation and the subsequent exposure of the skin to ultraviolet radiation including sunlight."[17] Isolated cases were described in the literature during the era when gold therapy was popular for lupus erythematosus, rheumatoid arthritis, chronic pulmonary tuberculosis, and cancer.[6] The discoloration is usually limited to the exposed portions of the body: the face, neck, arms, hands, and sclerae. The mucosa of the mouth is usually not stained. Predominant deposition in the upper corium accounts for the characteristic gray-blue hue of the skin. A latent period of one month to five years may elapse before the discoloration makes its appearance, and then it is permanent.[17] It is difficult, therefore, to differentiate skin pigmentation due to gold from that due to silver unless special chemical studies are made. Since gold is almost always given by intravenous injection and silver much less frequently by this route, the history of ingestion would be highly suggestive of argyria in most cases.

Treatment and Control

The medicaments used in the treatment of argyria have yet to be proved conclusively successful. Yandell[18] in 1872 was the first in American literature to report lightening of the skin color by the use of potassium iodide and mercury vapor. This form of therapy was used by others without success.[19] Subsequently, in 1914, methanamine (hexymethylamine, which slowly releases formaldehyde in an acid medium)[20,21] was used with but mediocre results. Also, photographic solutions such as sodium thiosulfate (hypo) and a mixture of potassium ferricyanide and sodium thiosulfate (Farmer's reducer) have been employed. The former has yielded poor to negative results; the latter mixture injected intradermally through a platinum needle has removed skin discoloration locally from the skin about the lips, nose, and chin without significantly decreasing the amount of deposited silver as determined spectroscopically. Furthermore this procedure requires as many as 200 painful injections over at least a two-month period.[19,22] More recently, in 1949, BAL (2,3-dimercaptopropanol)[23,24] was used and found to be ineffective. Currently, an ethylene diamine compound is being given a trial.[25]

It appears then that the only effective measures for treating and controlling argyria are preventive, and awareness of physicians and the public to the hazards which accompany the indiscriminate use of silver preparations must be stressed.

Summary

Seven cases of generalized argyria due to indiscriminate use of naso-orally administered silver salts are reported.

According to clinical data the individual with generalized argyria is usually forty to seventy years of age; has used silver nitrate, mild protein silver (argyrol), or Neo-Silvol for gastrointestinal disturbances or diseases of the upper respiratory tract constantly or intermittently for two to three years; and has shown color changes in the skin two to three years, on an average, after the use of silver salts was begun.

Argyria must be distinguished from diseases with altered hemoglobin pigmentation, particularly cyanosis of cardiac and pulmonary disease, diseases with excessive melanin pigmentation, and generalized pigmentation following introduction of various metals.

The skin in argyria presents a characteristic and easily recognized microscopic picture. Recognition of granules of silver under darkfield illumination is the method of choice in the study of biopsy specimens. The histologic picture is the same whether the skin removed for examination is pigmented or nonpigmented; there is no appreciable variation in the size or location of the granules of silver.

Silver is deposited in the majority of structures in the body in argyria. That the involved organs do not show pathologic alteration, i.e., foreign body or cellular reaction, is disputed by the finding of foreign body granulomata containing silver granules in the heart of a necropsied patient.

No medication is yet available for the treatment of argyria. The only effective measures for controlling argyria are preventive, and physicians and the public must be aware of the hazards which accompany the indiscriminate use of silver compounds.

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Speeding Office Routine

The February issue of *Medical Economics* contains a few valuable suggestions for increasing the efficiency and speeding the routine of a medical office. Here are nine simple tips:

1. Every morning, instead of tackling a helter-skelter pile of letters, circulars, and periodicals, have your secretary arrange them in order of importance. Telegrams and appointment reminders go on top, personal mail in the second layer, routine mail in the third, advertisements and periodicals on the bottom.
2. Memo pads, with enough carbons so that everyone concerned will have a copy, leave no question of what's to be done and who is to do it.
3. Make it a rule that, whenever called, your secretary will arrive equipped with notebook and pencil. She then won't have to double back for them if you want to give instructions or dictate.
4. In ordering printed forms, don't ask to have "19–" printed in the dateline. It takes a typist longer to line up such a form in her machine than to type the entire date.
5. Stamp pads that are closed and turned upside down at day's end will be re-inked and ready for use in the morning.
6. Your Girl Friday can cut down on needless trips between desk and filing cabinet if she does all her filing at once, with the help of a portable shelf. The shelf is made to hook over an open file drawer, provides that much-needed place to put things down.
7. When folding oversized reports for filing, fold the printed side out. This makes it possible to identify the paper without unfolding it.
8. Your office should have a list of all frequently called telephone numbers. Include doctors you work with, nursing agencies, hospitals and clinics, pharmacies, and the like. A complete list saves time not only for you but also for patients who request information.
9. While you're out of the office, be sure a record is kept of each incoming telephone message. This record should be available for ready reference when you call in. It should include date, time of day, gist of the message, and whether caller will call back.

Urethane Plus Triethylene Melamine Therapy in Human Cancer Cases

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THE recent literature includes several reports on the use of combinations of cancer chemotherapeutic agents in the treatment of experimental tumors.[1,2] Among the combinations studied was urethane and nitrogen mustard (HN_2) or the analogous compound, triethylene melamine (TEM). The findings indicated that in some instances the beneficial effects of combined therapy exceeded that obtained with either agent alone. Such increased antitumor activity might apparently occur without any appreciable increase in toxicity to the host. In a study of the effect of urethane, TEM, and combinations of these two agents on the in vitro dehydrogenase activity of human cancer tissue, we found that in many instances a greater inhibition was produced by the combination of these two agents than with either agent alone.[3] The above in vivo and in vitro findings suggested that the chemotherapeutic combination of urethane and HN_2 or TEM might be of value in human cancer cases. This paper is an initial report of the effects of such therapy on diverse types of human cancer.

Material and Methods

In order to permit a better evaluation of the effects of treatment, most of the cases chosen were of the type which ordinarily would not be affected by either urethane or nitrogen mustard alone, i.e., carcinomas and several lymphomas which were known to be resistant to x-ray and/or nitrogen mustard therapy.

The carcinoma cases studied were in an advanced state, as evidenced by widespread involvement, and in many instances had been unsuccessfully treated with x-ray therapy. In the main the urethane was administered as an infusion of 500 ml. of 5 per cent glucose in water containing 2 to 4 Gm. of urethane. The TEM* was administered either orally or intravenously. The individual dosage used was either 2.5 or 5 mg., usually administered on alternate days. While some variation in dosage was used, we feel that 24 Gm. of urethane and 12.5 mg. of TEM given over an eight-day period constitutes an adequate course of therapy and will result in therapeutic benefit in sensitive tumors with minimal attendant toxicity to the host. In four of the cases nitrogen mustard (HN_2) was employed instead of TEM. In these instances the HN_2 was injected into the tubing of the urethane infusion. The HN_2 dosage was in the conventional range, 0.1 mg. per Kg. body weight.

Results

The pertinent findings in the cases studied are indicated in Table I. The subjective and objective therapeutic responses observed have been listed as good, fair, and poor. A good response is taken to mean that decided benefit was apparent within a few weeks of completing the therapy.

Wide variations in the effects of therapy were observed, ranging from dramatic regressions of tumor masses to an inexorable progression of the disease. However, it should be pointed out that since the cases in this series were carcinomas and radioresistant lymphomas (two of the lymphoma cases were also resistant to HN_2 therapy), one would not ordinarily expect any benefit from treatment with either urethane or TEM alone. Despite this, definite evidence of tumor regression was obtained in some of the cases. In 11 of the 15 cases studied there was excellent objective evidence of benefit associated with therapy, and in two additional cases there was some benefit of a lesser degree. However, it should be mentioned that in the majority of cases reactivation of the disease was manifest within four months after the time of maximal clinical improvement. In three cases a second course of treatment was given after the recurrence of signs and symptoms which has been

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* The TEM was generously supplied by the Lederle Laboratories Division of the American Cyanamid Corporation through the courtesy of Dr. J. M. Ruegsegger.

TABLE I.—Results of Therapy

	Total Dose				Response		
Cancer Type	Urethane (Gm.)	HN_2 or TEM (Mg.)	Duration of Dosage (Days)	Toxicity	Subjective	Objective	Remarks
Breast							
S. S.	16	20	8	None apparent	Fair	Fair	Diminution in chest pain and pleural effusion
V. S.	24	12.5	8	Transient leukopenia	Fair	Good	Decrease in size of liver metastases, diminution of pleural effusion
A. K.	24	12.5	9	None apparent	Good	Good	Relief of pain, increased ambulation, decreased dyspnea
E. G.	24	12.5	8	None apparent	Good	Good	Regression of tumor masses
E. S.	24	12.5	8	None apparent	Fair	Good	Regression of tumor masses
Hodgkin's disease							
I. L.*	20	32-H	4	Toxic death†	?	Good	Rapid regression of tumor masses followed by toxic type death (see text)
J. W.	24	10	8	None apparent	Good	Good	Rapid resolution of spiking temperature and toxicity
Lung							
P. DeF.	21	30-H	7	Transient leukopenia	Fair	Fair	Clearing of sensorium, cessation of hemoptysis
P. G.	24	28-H	8	Transient leukopenia	Poor	Poor	....
A. S.*	29	28-H	8	None apparent	Good	Good	Rapid regression of obstructive edema and decrease in tumor nodules (see text)
Lymphosarcoma							
R. H.*	30	20	10	Toxic death†	Good	Good	Marked necrosis of tumor masses followed by toxic death (see text)
C. L.	24	12.5	9	None apparent	Good	Good	Regression of lymphadenopathy
Ovary							
R. D.	36	20	14	None apparent	Good	Good	(See text)
Stomach							
E. D'O.	24	22.5	8	None apparent	Poor	Poor	....
M. S.	24	12.5	8	None apparent	Good	Good	Regression of abdominal tumor masses

* Previously treated with x-ray therapy.
† Associated with rapid tumor regression.

alleviated by the initial treatment. Although definite improvement in status occurred, the responses were not as impressive as those observed after the first course of treatment.

The following protocols are presented to indicate the nature of some of the objective beneficial changes noted coincident to combined chemotherapy.

Case 1.—R. D., a forty-four-year-old female, was admitted to the Flower and Fifth Avenue Hospitals in September, 1952, suffering from an inoperable seroanaplastic carcinoma of the ovary. Large abdominal tumor masses were easily palpable through the abdominal wall, and a left-sided pleural effusion was producing dyspnea and chest pain. On September 4 she was started on intravenous therapy with urethane plus TEM. This was continued as a daily infusion until September 18, by which time she had received a total of 36 Gm. of urethane and 20 mg. of TEM. Associated with the treatment there was a gradual improvement in her status, and she was discharged on September 29. When seen on October 21, the abdominal masses were no longer palpable, and the pleural effusion had been reabsorbed. A blood count taken at this time revealed no evidence of leukopenia, thrombocytopenia, or anemia. The remission of symptomatic and objective complaints lasted for approximately three months, at which time recurrence of abdominal tumor masses and pleural effusion was noted.

In this case the therapy was associated with decided although temporary benefit without any detectable toxicity.

Case 2.—A. S., a sixty-two-year-old male, was admitted to the Flower and Fifth Avenue Hospitals on January 5, 1953. He was known to be suffering from an anaplastic carcinoma of the lung and had previously received x-ray therapy to the chest with symptomatic but no objective benefit. Physical examination revealed hepatomegaly extending almost to the iliac crest with a dominant liver nodule just lateral to the epigastrium. In addition, there was 4 plus pitting edema of both legs and ascites.

On January 7 he was started on daily urethane infusions. On four alternate days, 7 mg. of HN_2 were injected into the tubing of the infusion. The

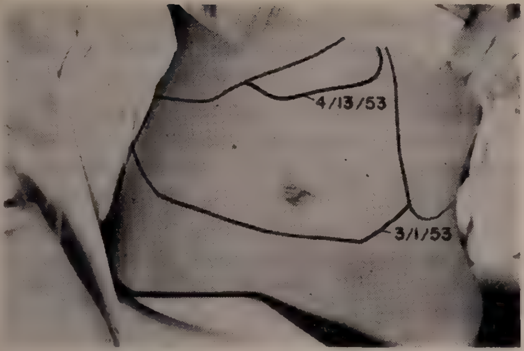

FIG. 1. *Case 3*—Breast carcinoma metastatic to the liver, treated with urethane and TEM. Note the change in degree of hepatomegaly.

total dosage was 29 Gm. of urethane and 28 mg. of HN_2 administered over an eight-day period.

Within three days of completing therapy the edema of the legs decreased, and the abdomen became softer. He was discharged on January 20 with no evidence of edema of the legs. The liver had decreased to approximately one-half its pretreatment size, and the prominent tumor nodule was no longer palpable. Although his abdominal pain had decreased, it was not completely gone. Repeated peripheral blood counts revealed no tendency toward leukopenia, anemia, or thrombocytopenia at the time of discharge.

In this case there was decided objective and subjective improvement without evidence of attendant toxicity to the host.

CASE 3.—V. S., a thirty-nine-year-old white female, had a radical mastectomy performed in 1950 for carcinoma of the left breast. She was apparently well until December, 1952, when she developed a left-sided pleural effusion which required repeated paracentesis. At this time she also noted progressive enlargement of the liver. When seen in February, 1953, the liver was nodular and enlarged, extending into the pelvis. On March 1 she was started on infusions of urethane and TEM. She received eight daily infusions containing a total of 24 Gm. of urethane and 12.5 mg. of TEM. Within a week of completing this therapy the liver had undergone definite diminution in size. The magnitude of this change during the subsequent month is depicted in Fig. 1.

Associated with the tumor regression the patient developed diarrhea and hyperpyrexia, although no evidence of hepatocellular damage was observed. Leukopenia and thrombocytopenia were transient, and no hemorrhagic episodes were encountered.

Toxicity

The tendency of HN_2, TEM, and urethane to produce leukopenia and pancytopenia is well known and constitutes the major hazard in the use of these agents. This action is most marked with TEM and least with urethane.

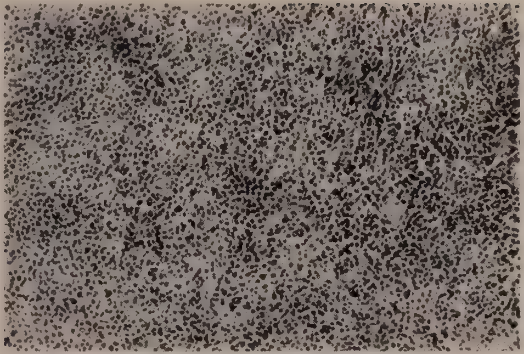

FIG. 2. *Case 4*—Reticulum cell lymphosarcoma, pretreatment biopsy.

In the present study we have observed two major types of reaction of the host to the administration of the urethane plus TEM or HN_2: (1) no apparent toxicity or moderate transient leukopenia with or without tumor regression and (2) rapid tumor regression with death of the patient in a shocklike fashion but without any evidence of pancytopenia or hemorrhagic diathesis (two cases).

The following protocol is presented to illustrate the latter type of toxic reaction.

CASE 4.—R. H., a sixty-year-old male, was admitted to the Flower and Fifth Avenue Hospitals in April, 1952, suffering from a reticulum cell lymphosarcoma. The disease had first been diagnosed in the early part of 1951, and he had received radiation therapy with good results. In January, 1952, there was a recurrence of generalized lymphadenopathy. X-ray therapy given at this time was not effective in altering the course of the disease.

In May, 1952, he received HN_2 therapy without benefit. Approximately one month after the HN_2 therapy, he received treatment consisting of 30 Gm. of urethane and 20 mg. of TEM administered over a ten-day period. At the time of completion of this treatment he expired suddenly. Autopsy examination revealed extensive generalized lymphosarcoma but no anatomic cause of death. The lymph nodes removed at autopsy showed marked evidence of necrosis of a diffuse type with extensive tumor giant cell formation (Figs. 2 and 3). No evidence of bone marrow toxicity was found.

In this case there was a rapid tumor necrosis associated with the therapy without anatomic evidence of toxicity to the tissues of the host.

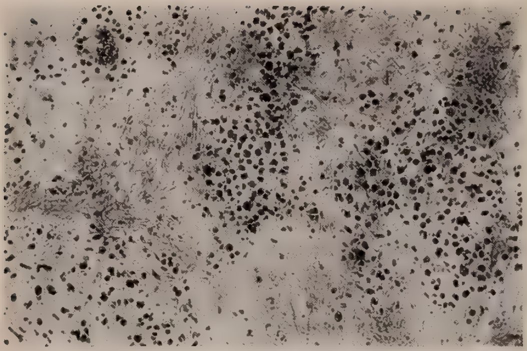

FIG. 3. *Case 4*—Reticulum cell lymphosarcoma after treatment with urethane and TEM. Note massive cytonecrosis and cellular gigantism.

The possibility that this death was due to the sudden release of tumor degradation products must be considered.

Comment

That nitrogen mustard compounds may potentiate the action of radiation therapy has been previously suggested, and in view of the radiomimetic action of urethane it might be suspected that a synergistic action of urethane and nitrogen mustard compounds would take place. As indicated above, such findings have been observed in animals bearing experimental tumors and are suggested by our in vitro measurements. The present findings indicate that some human tumors may be inhibited by the combination of urethane plus TEM or HN_2. Such an action may occur despite the fact that no benefit would be expected from the action of either agent employed singly. However, it should be emphasized that such effects were not found uniformly. Furthermore, the remissions so induced were of a temporary nature. Additional studies will be needed to evaluate the general applicability of such procedures to the problem of palliation in cases of disseminated human cancer, as well as in regard to the toxicity of such procedures.

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Periodic Medical Examination of Business Executives Urged

The health of America's business executives is one of the country's greatest assets and should be protected by periodic medical examinations, it was stated in the current *Archives of Industrial Hygiene and Occupational Medicine*, published by the American Medical Association. Studies have disclosed that upon examination approximately 60 per cent of the business executives have one or more significant abnormality, many of them correctable, according to Dr. George M. Saunders, New York City. Dr. Saunders is the medical director of the Socony-Vacuum Oil Company and co-chairman of the American Petroleum Institute, Medical Advisory Committee.

He pointed out that there are about 2,500,000 executives or managers among the country's 50,000,000 labor force, adding: "The value of health programs to the individuals and to business is unquestioned. Better health means better morale, greater efficiency, and a longer useful life. During the last half century, America has grown from an agricultural country to the greatest industrial nation that the world has ever known. It seems obvious that the physical as well as the mental health of those responsible for directing our industrial machinery may have a profound effect on its success or failure."

There are special stresses and strains which are exerted on the executive and which demand peculiar qualities of resistance for survival, Dr. Saunders stated. As a result, executives are prone not only to the same health problems as the daily paid workers, but also to special problems caused by their positions.

The most important feature of executive health programs is the system of careful, periodic health inventories which are made to assess the physiologic and emotional condition with special reference to the demands of the job, according to Dr. Saunders. These inventories should be a part of any selection program for promotion. Thus, it may be possible to save a man from overpromotion, thereby protecting not only his health, but also the interest of the company and the stockholders.

Of the defects of function or structure that have been found in about 60 per cent of the business executives receiving periodic health examinations, the most prevalent were obesity, gastric distress, anxiety and tension states, heart disease, and cancer. Forty per cent of the executives stated that they did not know such abnormal conditions existed.

Bilateral Sudden Deafness

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SUDDEN deafness is probably one of the most terrifying experiences. A vivid description of such a catastrophe can be found in the story of Dr. Norman Bethune,[1] a Canadian surgeon, who suddenly became completely deaf during an operation at the front with the guerilla fighters in the Japanese-Chinese war. He put down the scalpel, took off his gown, and left the operation room, ordering his assistant to finish the operation. I quote the author, describing his feeling:

> "He was deeply scared. He was listening for the singing of the birds, the sound of the wind. But in his ears there was only a satanic pounding, as if the blood was coursing through his head with the roar of a distant river. He asked himself: Would he never hear more music, no more voices of friends, no more sounds of fields, bugle calls, laughter? Was he to live in the inner jingling of his body? He tried to picture his future in a world of silence. How would he continue with his work? He saw himself in the operating room like a bird in a cage."

The cause of this case of sudden bilateral deafness was very probably a temporary angiospasm of the supplying vessels of the labyrinth. Dr. Bethune, a man of forty-nine years, down to 100 pounds at this time, suffering from malnutrition, vitamin deficiency, and secondary anemia, was emotionally disturbed, and so all predispositions for a vascular disorder were present. Evidence of a temporary angiospasm was the fact that on the next morning his hearing returned in his left ear.

However, when a patient with sudden deafness consults his doctor, the physician is often at a loss to find an explanation for the sudden attack, and the etiology frequently remains obscure. Such sudden deafness may be unilateral or bilateral. This condition must not be confused with Ménière's syndrome. In sudden deafness there is only one attack, the impairment is frequently permanent, and the vestibular apparatus is usually far less involved than in Ménière's syndrome.

Lindsay[2] reports 16 cases of sudden unilateral deafness with or without vestibular symptoms. Twelve of them were of uncertain origin. Although the author points out that a vascular accident in the labyrinth has commonly been the explanation in cases like these, it seems to him improbable that in young people such vascular disorder should occur. A vasomotor disturbance has been suggested as the etiologic factor in such cases. Lindsay is of the opinion that a toxic neuritis resulting from some respiratory virus infection would provide a favorable explanation for these 12 cases of indefinite etiology. However, he furnished no evidence for this theory.

Edmund Fowler[3] analyzes 26 cases of sudden deafness of unknown etiology. Most of his and Lindsay's patients were young people under forty. He also considers 34 cases from the literature, the above-mentioned cases of Lindsay, and 18 cases of sudden unilateral deafness, reported by Helmer Rasmussen.[4] In all these cases there was evidence of acoustic nerve neuritis or degeneration of unknown origin. Fowler does not assume a toxic neuritis but believes that the degeneration of the nerve was probably caused primarily by anoxia and ischemia, most likely due to vascular spasm, which leads to sludging of blood, congestion, leakage from the capillaries, and local metabolic deficiencies.

Such vascular spasm may be induced by many factors including emotional episodes. Only six of Fowler's 26 cases developed bilateral deafness. With three exceptions there was always a history of emotional episodes sometime before or immediately preceding the sudden deafness. Emotional episodes affect, as Fowler believes, the neurovascular mechanism through the autonomous nervous system and lead to vasomotor disorders.

Fowler believes that thrombosis or embolism in the internal auditory artery or one of its branches presupposes a vascular lesion like arteriosclerosis, endarteritis obliterans, or endocarditis as primary cause. In younger people sudden deafness may be caused by an angiospasm of the supplying vessels. In the latter case he recommends intravenous injection of 500 cc. of 0.1 per cent novocaine solution by drop method in order to wash out the sludge in the vessels and to relieve the angiospasm by the vasodilator effect of novocaine.

Schuhknecht[5] studied 17 cases of auditory damage following blows to the head. Deafness also followed injuries without any clinical or roentgenologic evidence of fracture of the temporal bone. The hearing loss was of the nerve type and most severe for the high tones, particularly the 4,096-cycle frequency. He quotes studies of Brunner, Stenger, and Wittmack who have shown that hemorrhage occurs into the perilymphatic spaces in animals subjected to head blows. On the other hand, de Kleyn[6] is of the opinion that sudden bilateral deafness is due to a circumscribed lesion in the central nervous system, possibly caused by vascular disturbances in the brain.

Halsberg and Horton[7] assume as cause of sudden deafness which occurs in middle and old age: hemorrhage into the labyrinth, thrombosis of the auditory artery, and involvement of the hearing centers in the brain stem or temporal lobe. They recommend as therapy in such cases daily intravenous injections of histamine for twelve days. The technic is described in their treatment of Ménière's syndrome; 2.75 mg. histamine phosphate in 250 cc. of normal saline solution are injected by drop method at the rate of 50 to 60 drops per minute. The whole amount is injected within one hour and a half.

Another not uncommon cause of sudden deafness is late syphilis. Loch[8] states, "Sudden onset and rapid progression of a definite perception deafness that cannot be explained by the patient's age or other factors is often significant for late syphilis."

However, all these authors did not consider the possibility of a psychogenic origin in spite of the observation that emotional trauma may be closely related to the onset of sudden deafness. Psychogenic deafness happens far more often than was formerly believed. Muck[9,10] reported after World War I that a number of cases of so-called concussion deafness following shell explosions were of psychogenic origin. This finding was confirmed by the English authors Colledge[11] and Hurst[12] *et al.* The advanced insight into psychologic dynamics after World War II brought to light many similar cases.

Martin[13] reported on 500 patients admitted within two years to the Army's rehabilitation center for the deaf at Hoff General Hospital in Santa Barbara, California. Of these 500 cases 36 were cases of blast injury. Seventeen patients were chosen for narcosynthesis. The author concludes that 38 per cent of his cases are of psychogenic origin or present organic deafness with a functional overlay.

Semenow,[14] reporting on the same material, describes the details of the narcosynthesis procedure used for diagnosis as well as for treatment. The technic consisted of slow intravenous injection of 0.2 to 0.8 Gm. Sodium Penthothal in a 2.5 per cent solution. The patient counts backwards from 100, and when he becomes drowsy and confused in counting, the injection is discontinued. Then the therapist talks to the patient in an ordinary tone of voice, gradually lowering the voice to a whisper. If the case is one of psychogenic deafness, the patient hears well, and the end effect is often an essential improvement.

The same author cites the following significant symptoms for psychogenic deafness: obscure or sudden onset of perceptive deafness; complete absence of hearing in both ears; total absence of hearing in one ear, severe deafness in the other one; flat audiograms; variation of audiograms and tuning fork tests; disproportion between hearing tests; normal vestibular responses; bilateral deafness, pathology only in one ear; history of severe shock or emotional distress precedent to the onset; sudden improvement in hearing, and other signs of neurosis.

Truex[15] studied psychogenic deafness in 4,000 soldiers at Deshon General Hospital in Butler, Pennsylvania, at the rehabilitation center for the deaf. He found that psychogenic deafness occurred frequently in soldiers who had been under severe stress.

Hardy[16] considers the conversion symptom of psychogenic deafness as an involuntary emotional conflict at the unconscious level. He believes that the psychogenic overlay on organic disease is the most common type of psychogenic hearing involvement. According to him, Army and Navy reports suggest an incidence of 10 to 20 per cent of psychogenic deafness.

Following are the histories and findings in two cases of sudden bilateral deafness.

Case Reports

Case 1.—R. W., a twenty-eight-year-old Negro

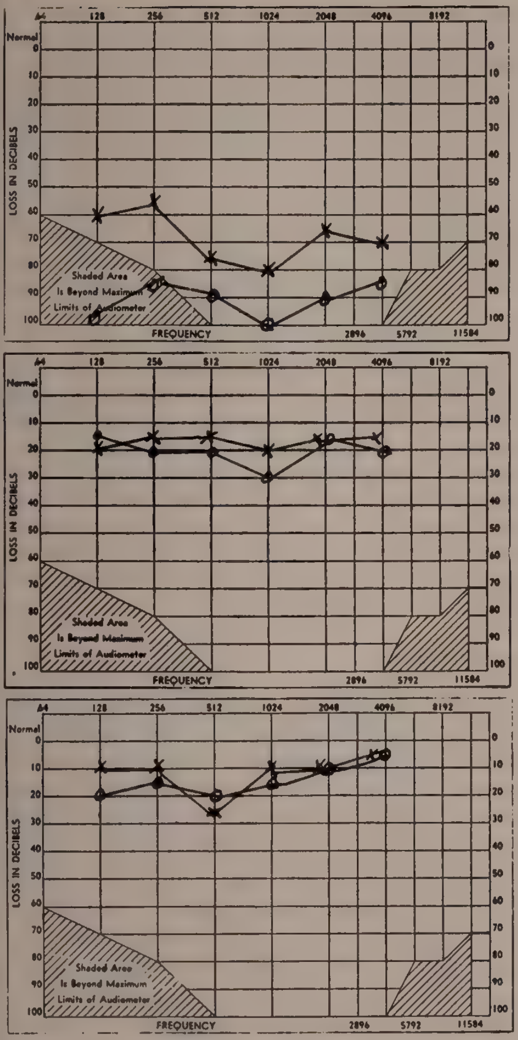

Fig. 1. *Case 1*—Audiograms done on September 12 and 27, 1952 (*top and middle*) and on March 27, 1953 (*bottom*). [Left ear (x), right ear (o)]

seaman, on first admission revealed far-advanced tuberculosis with positive sputum. First consultation was on September 11, 1952. The patient complained of a sudden attack of dizziness which had occurred the previous night in the bathroom. Simultaneously he had become completely deaf.

Laboratory findings were as follows: hemoglobin 13.2 Gm., red blood cells 5,000,000, and white blood cells 9,100. Urine analysis was negative. There was no clinical evidence of arteriosclerosis.

The drums were normal. A more exact examination could only be done on the next day at the ear, nose, and throat clinic. There was no history of emotional trauma. Under these conditions the sudden onset of bilateral deafness in a man of twenty-eight years suggested the tentative diagnosis of late syphilis as the etiologic factor in spite of the negative Mazzini test. Penicillin, 600,000 units, was administered at once. When the patient was seen the next day, a slight but definite improvement was noted. Meanwhile, we had learned from a report from Harlem Hospital that the Wassermann test had recently been 4 plus. The audiogram showed very marked loss in the low and high frequencies. Caloric test with 25 cc. of tap water did not give evidence of any essential involvement of the vestibular apparatus. Such improvement after penicillin treatment and the formerly positive Wassermann seemed to be sufficient evidence for the specific etiology of the sudden deafness.

The audiograms showed that he had practically recovered his full hearing (Fig. 1). The slight loss in the last audiogram may have existed before the attack. Nerve deafness due to late syphilis usually has a poor prognosis unless treatment is started early. The fact that this patient was given treatment within twenty-four hours after the attack may explain the favorable result. The last audiogram was taken at patient's readmission after a left upper lobectomy in Metropolitan Hospital with excellent result.

Case 2.—G. W., forty-nine-year-old white, male employe of the sanatorium, was first seen on January 30, 1953. The night before he was seen, the patient had had a slight accident. The hospital grounds were covered with snow, and the patient had slipped on an icy road and fallen on his face and forehead. At the same moment he became completely deaf in both ears.

Examination showed the drums normal bilaterally. A very loud voice was not heard left and right *ad concham*. X-ray picture showed no evidence of fracture. There was only a slight, round erosion $^1/_2$ inch in diameter on his forehead. Blood pressure was 150/90. Patient had been healthy until the accident, and there were no signs of blood dyscrasia, arteriosclerosis, or other disease of the cardiovascular system. There was no history of a specific emotional trauma, but the patient was known to be unstable and was later discharged from hospital employment because of his alcoholic habits.

Tuning fork test on January 29, 1953, showed shortened bone conduction and positive Rinne; c4 was not heard at all by bone conduction and only four seconds by air conduction. The audiogram of January 31 showed a minor loss in the low and a severe loss in the high frequencies (Fig. 2). Later tuning fork tests and audiograms changed frequently.

Since there was no roentgenologic evidence of fracture of the temporal bones or any other bones of the skull, a hemorrhage into the labyrinth appeared to be improbable, although, as mentioned, the studies of Brunner, Stenger, and Wittmack

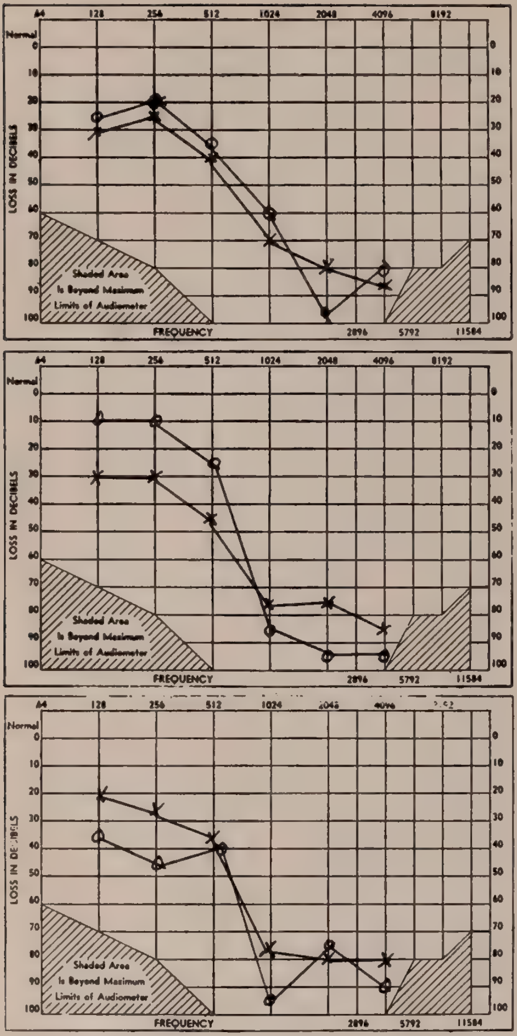

FIG. 2. *Case 2*—Audiograms done on January 1, 1953 (*top*), February 20 (*middle*), and April 17 (*bottom*). Note the variations in the audiograms. [Left ear (x), right ear (o)]

proved that in animals subjected to head blows without any evidence of fracture of the temporal bone, hemorrhage may occur into the perilymphatic spaces. Caloric tests gave no evidence of involvement of the vestibular apparatus.

In a case of hemorrhage both ears would probably not have been equally involved. There also would have been a disturbance of the vestibular apparatus. Thus a tentative diagnosis was made of angiospasm of the supplying vessels of the labyrinth. Therapy consisted in the administration of nicotinic acid, 100 mg. three times daily, as a vasodilator. Later the patient received several intravenous injections of 500 cc. of 0.1 per cent novocaine solution.

However, the treatment was not very effective. The patient stated his hearing in the left ear was much better, but the audiograms, tuning fork tests, and hearing tests for voice and whispering differed so much from each other that gradually one became convinced that the bilateral deafness in this case was of psychogenic character. Symptoms of dizziness and ringing in the ears following the accident had disappeared after a few days. According to the patient his hearing changed frequently, being sometimes better, sometimes worse. I saw him once when he was drunk and spoke intentionally to him in a low voice. He understood me very well.

This whole pattern of sudden deafness which could not be explained by the slight accident, the variation in hearing, the different audiograms and tuning fork tests, which by no means corresponded to his hearing, and the fact that he heard much better when he was drunk and his unconscious defenses were weakened appeared to be so characteristic of psychogenic deafness that a trial with narcosynthesis was planned. However, at this point the patient was discharged because of frequent absenteeism due to his alcoholism.

Summary

Recent literature on sudden deafness has been reviewed. The etiology of an attack of sudden deafness is not always clear. As possible causes the following have been reported: intralabyrinthine hemorrhage due to arteriosclerosis or blood dyscrasia, lesions of the central nervous system, toxic neuritis, late syphilis, and vasomotor disturbances, producing an angiospasm of the supplying vessels of the labyrinth. The possibility of perilymphatic hemorrhage following trauma without fracture which has been demonstrated in animals must also be considered. The importance of the psychogenic factor in the development of sudden deafness has recently been stressed.

Two cases of sudden bilateral deafness have been reported with diagnostic findings and therapeutic management. The first case was probably due to late syphilis, and the second case was most likely of psychogenic origin.

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Eight Fatal Anaphylactic Reactions to Penicillin

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IN THE course of the investigation of sudden deaths conducted by the Office of the Chief Medical Examiner of the City of New York, we have encountered eight instances of sudden death following the injection of penicillin. All but two cases have been autopsied and the tissues examined microscopically. A search was also made at the site of injection to determine whether any of the drug had entered the bloodstream. In none of the cases was there any penetration of a vessel by the needle used to inject the penicillin. A review of the types of penicillin used in these cases and a discussion with Dr. Sheppard Siegel[1] of other penicillin reactions, not necessarily fatal, led to the certain conclusion that it was not one type of penicillin, nor even the procaine radical incorporated in the penicillin, but rather the penicillin per se which was the sensitizing agent and thus the responsible agent for subsequent reactions.

With shocking rapidity the literature[2–5] is beginning to abound with reports of near fatal and fatal reactions. In fact, the cases which we are reporting cover a span of about two years but occurring with a greater frequency in the second year. The acceleration in the number of fatal cases is indicative of the ever-mounting importance of the problem of penicillin sensitivity with its corollary that discrimination must be exercised in the use of this drug. One cannot help but admit that there is indiscriminate application of all antibiotics, but since penicillin was available much before the others, the opportunity for its more widespread use and consequent production of sensitization was much greater. That reactions to penicillin occur after use by other than the injection route is now an established fact. Even use of the drug by mouth may lead to sensitization.

Therefore, the conclusion we have reached from the cases we have investigated is that no parenteral use of penicillin should be undertaken without first having asked the patient or his or her family about any previous use of penicillin and its after-effects, and, second, the patient should be questioned as to any history of allergy. It is not sufficient to ask whether there has been a "reaction" following the use of the drug since "reaction" may not have sufficient meaning to the patient or family. It should rather be asked whether the patient had ever experienced an eruption, rash, swollen joints, shortness of breath, or blotching of the skin following the use of penicillin. A positive answer or even a suggestive positive answer to such questioning should contraindicate the use of penicillin in any form. Furthermore, as will be noted in Case 5, the presence of asthmatic symptoms at a time when the use of penicillin is contemplated should also serve as a contraindication to its use. Although it is suggested by Feinberg *et al.*[5] that in the event of an interval of a few days between administrations of penicillin, a skin test should be done, we should rather, on the basis of our experience, either omit using penicillin or change to another antibiotic when there is the slightest suspicion of sensitivity. Only in the presence of positive bacteriologic laboratory proof that the organism is sensitive only to penicillin would it be advisable to skin test under the above-mentioned conditions.

The almost complete uniformity of these cases permits their presentation in as brief form as possible, omitting all extraneous details and factors.

Case Reports

Case 1.—N. S., age forty, white male, developed a facial cellulitis with beginning abscess formation for which he called a physician. An injection of 400,000 units of procaine penicillin and penicillin O was given, and within thirty seconds the patient developed severe respiratory distress. The physician administered coramine, adrenalin, and caffeine and finally performed a tracheotomy. By the time the tracheotomy was completed, however, the patient was dead. In the patient's past history it was discovered that he had received penicillin on five occasions, two of which were suspensions in oil and the last three were aqueous procaine penicillin suspensions. Following these latter three injections he had developed moderate skin reactions. He had also been treated for hay fever. In the course of his livelihood he occasionally handled penicillin powder. Each time he did this, he had developed pruritis and lacrimation. An autopsy was not performed.

Case 2.—H. R., an eighteen-month-old white female, became ill at about 9 P.M. with fever and rhinitis. The following morning the fever had reached 104 F. (rectal). The child's physician stated that the patient presented an erysipeloid blotch on one cheek, fever, and a few scattered fine pulmonary rales. He administered 300,000 units of Crysticillin (Squibb) intramuscularly into the buttock. As the physician was leaving the home, the child suddenly developed severe respiratory distress and died in a few minutes. An autopsy revealed intense congestion of all viscera. Microscopic examination of the lungs revealed a few scattered areas of focal pneumonitis and an intense hemorrhagic state. The remaining organs were not remarkable microscopically. This child had never had penicillin previously.

Case 3.—R. G., a twenty-eight-year-old Negro female, a registered nurse, reported for duty complaining of a cold. She suspended 400,000 units of penicillin G and O in a vial and asked a colleague to inject it into the left deltoid muscle. As she was washing the syringe, she suddenly cried out that she was burning, ripped her clothing, and went into severe respiratory distress. Oxygen, coramine, adrenalin, and artificial respiration failed to revive her. An autopsy performed a few hours after death revealed intense congestion of all the viscera, especially of the lungs. Microscopy revealed no changes beyond severe hemorrhagic congestion, most prominent in the lungs. It was learned that she had taken penicillin previously and had developed a mild skin eruption.

Case 4.—J. K., age thirty-eight, a Negro male, visited his physician one week prior to his death because of a skin eruption. He had received an injection of 300,000 units of procaine penicillin and was told to return if not improved. Not having improved, he returned a week later and was given another injection of penicillin. Within a minute he developed severe respiratory distress and died. Autopsy revealed widespread severe visceral congestion with a few scattered hemorrhagic blebs in the lungs. Microscopic examination of the tissues showed intense congestion of all viscera, especially the lungs.

Case 5.—R. M., age thirty-eight, white female, reported to a physician's office complaining of a sore throat. Examination revealed a mildly injected pharynx, no fever, but copious pulmonary wheezing. Procaine penicillin, 300,000 units, was injected into the left deltoid whereupon the patient went into profound shock. Adrenalin and artificial respiration were administered but to no avail. Autopsy revealed intense visceral congestion, especially in the lungs. Microscopically the only significant finding was multiple, small hemorrhagic foci in the lungs, most concentrated in the region of the smallest bronchioles.

Case 6.—R. D., age thirty-one, Negro male, returned home from work one evening and complained to a friend, a practical nurse, that he was suffering from a cold. About two weeks before this she had given him an injection of penicillin for a "cold," and a few days later he had developed lacrimation, swollen lips, and some respiratory wheezing. However, since he appeared to have been "cured" of his first cold by penicillin, she gave him another injection of 300,000 units of "Crysticillin." Almost immediately he developed severe respiratory distress, arose from bed, and tried to go to the lavatory. As he reached the lavatory, he collapsed and died. Autopsy revealed marked visceral congestion. Microscopy revealed only widespread focal hemorrhage in the lungs and mild bronchitis and bronchiolitis.

CASE 7.—K. H., age thirty-two, white female, reported to a physician with mild symptoms of an upper respiratory infection. Because of a previous, longstanding, chronic, suppurative otitis media she had received frequent injections of penicillin with no apparent ill-effect. At this last visit, however, when the physician gave her 300,000 units of procaine penicillin, she promptly developed respiratory distress and died in a few minutes despite the immediate administration of numerous powerful stimulants. An autopsy was not performed.

CASE 8.—J. G., age twenty-three, a negro female, had been under treatment for lues and gonorrhea with large amounts of penicillin in oil. During the last visit she received her usual dose of 300,000 units of penicillin in sesame oil following which she went into profound shock. The treatment occurred in a city health department clinic where immediate measures were taken to counteract the shock, in spite of which she expired in less than five minutes. Autopsy revealed intense visceral congestion. Microscopy was not significant.

Summary

Eight cases of fatal anaphylaxis following the administration of penicillin have been presented. No one type of penicillin was the sensitizing antigen, but because of the diversity of the types used in these cases, one can only conclude that the penicillin per se is the antigen. In view of the accelerated rate of the occurrence of these cases, one is forced to sound a note of warning that the administration of penicillin in any form or by any route must be preceded by a careful inquiry into the past history of the patient with respect to previous use of penicillin or the existence of an allergic state of any type. The restriction of the use of penicillin to necessary instances and an inquiry as noted above will tend to prevent the tragedies herein reported.

1143 BUSHWICK AVENUE

These cases were presented with the permission of Dr. Thomas A. Gonzales, Chief Medical Examiner of the City of New York. We wish to express our appreciation to Drs. E. Santora, E. Nidish, and F. Melomo, colleagues in the Office of the Chief Medical Examiner, for their cooperation in the study of these cases.

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Effect of Deafness on Personality

A progressive hearing loss may have a progressively serious effect on the central nervous system and, in some instances, may even contribute to severe illness and a shortened span of life, according to a New York City otologist, Dr. Edmund Prince Fowler, a consultant to the American Hearing Aid Association. He believes that continuing nervous stresses and frustrations are frequently important factors in certain types of chronic deafness.

"It is a well-known fact that nervous strain causes many bodily disturbances, due to the close relation of the nervous system to the vital organs and glands which control the body functions." Dr. Fowler pointed out that straining to catch conversations keeps the person with defective hearing in a constant state of tension which, in some cases, leads to further nervous exhaustion and irritability. He added this also may hold true for those who converse with the hard of hearing—friends, relatives, and business acquaintances.

"If deafness came overnight, the individual would be so shocked by its obvious effects that he would immediately take necessary corrective steps. Instead, deafness usually progresses so slowly over a long period of time that it is difficult for the individual to realize how much of his hearing he has lost, or how it has affected him."

A person needs a hearing aid if his hearing loss in the speech range is 30 decibels or greater in his better ear. The average normal ear usually hears sounds that range from 10 to about 130 decibels, or from the lowest note on a large organ to the sound of a nearby jet engine. Every hard of hearing person hears—and fails to hear—differently. Some fail to hear low tones properly; others miss the higher ones. Only a properly given audiometric test can determine an individual's exact type of loss and help ascertain whether he needs a hearing aid.—*News Bureau, American Hearing Aid Association*

Accidental Perforation of the Uterus

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Accidental perforation of the uterus is not uncommon, yet the literature on the subject is meager. The author's interest in the subject of perforation dates back many years when the childless young wife of a colleague was subjected to hysterectomy because of an accidental perforation that occurred in the course of a curettage for incomplete abortion.

While the curet[1] is the instrument most often responsible for perforation, the accident may also be caused by the sound and the cervical dilator.[2] In one of my cases perforation took place where the only instrument introduced into the uterine cavity was a cotton-tipped applicator as recommended by the elder Crossen.[3]

Caldwell[4] postulates that intramural fibroids may contribute to accidental perforation because of the peculiar distribution of the tissue layers about the tumor.

Frank[5] stated that the consequences and dangers of uterine injuries are more often the result of injuries to neighboring organs with resulting peritonitis and hemorrhage rather than bleeding and infection due to the uterine tear. The most serious injuries are produced by grasping instruments.

Not all perforations are preventable. It often occurs when the operator foresees the possibility of perforation and is most careful in his technic. It may occur in uteri that are paper thin, as is the case in early pregnancy and in uteri that are small and hard and frequently referred to as fibrotic. One must be just as perforation conscious in this latter type of uterus as in the soft pregnant uterus.

I have had the unfortunate experience of perforating some uteri in young women in the course of curettage performed for either incomplete abortion or for the determination of the cause for irregular bleeding. It has never been found necessary to perform a hysterectomy in these cases, and all of them recovered without incident.

One should realize that the uterus has been perforated when the sound or curet enters for a distance exceeding the known or estimated length of the uterine cavity without meeting resistance. When this occurs, the instrument is described, in the gynecologist's vernacular as "disappearing." One must not lull himself into a sense of false security by attempting to explain the "disappearance" as due to relaxation of the uterus induced by the anesthetic. I have had one such experience where the anesthetist vigorously maintained that uterine muscle relaxation adequately explained the length to which the instrument reached, but laparotomy disclosed perforation.

I was very much interested in the structural causes that underlie perforation, and I had an opportunity of actually seeing the perforation in five cases and studying the extirpated uteri in three cases.

Case Reports

Case 1.—Miss E. B., age thirty-five, gave a history of irregular bleeding for some months but had entered the hospital for a cholecystectomy. Before her discharge a diagnostic curettage was performed, in the course of which the curet had "disappeared." All manipulation was immediately suspended and the patient returned to bed. Within twenty-four hours the temperature rose to above 105 F., and intra-abdominal injury was suspected. Laparotomy disclosed a small perforation in a small, hard uterus at about the middle of the fundus. This was readily closed with one chromic suture. No other intra-abdominal injury was present. This occurred in the preantibiotic era. The convalescence was stormy, but the patient left the hospital fully recovered.

Case 2.—Mrs. S. S., age forty-four, was admitted to the hospital because of the presence of a cystorectocele and a prolapse of the uterus. A curettage was performed before commencing the interposition operation, and perforation was diagnosed. All intrauterine manipulation was discontinued, and the interposition operation begun. The uterus was exposed, and a tiny perforation was seen on the fundal margin in the region of the left cornu. Since there was no reason to suspect malignancy, the perforation was closed and the interposition completed. Convalescence was uneventful.

Case 3.—Mrs. R. K., age fifty-four, stated that her menopause had commenced at the age of forty-nine and that for the last six months she had noted vaginal staining. Examination revealed a small, hard, dextroverted uterus, with an atrophic cervix. A diagnostic curettage was commenced in the course of which it was felt that perforation had occurred. A laparotomy revealed a small perforation at about the center of the fundus. Since malignancy of the corpus could not be ruled out at the time, it was deemed best to remove the uterus, and accordingly a total hysterectomy and a bilateral salpingo-oophorectomy were performed. Convalescence was uneventful.

Pathologic Report.—An abstract of the pathologist's (Dr. Alfred Angrist) report was as follows: Specimen consisted of a totally resected uterus, measuring about 6 cm. in length. On inspection a small hemorrhagic area was found at the fundus, with a definite puncture wound. On section, the uterine cavity showed an irregular perforation through the fundus. Included were two tubes and two ovaries showing considerable atrophy.

Microscopic examination: The curettings showed merely blood. Section through the cervix showed considerable fibrosis. Uterus showed markedly atrophic muscle bundles with extensive intervening fibrosis. The endometrium showed considerable atrophy. Section through the fundus showed that part of the muscle to be distorted by a hemorrhagic border, which extended from the depth through the serosa. The tubes showed fibrosis, and the ovaries showed atrophy and fibrosis.

Case 4.—Mrs. R. S., age sixty, had noted vaginal bleeding for the last two months. The menopause had occurred about four years prior to admission. She was not taking any hormone preparations either orally or by injection.

Vaginal examination revealed a moderate cystorectocele, a small, apparently atrophied uterus, and a small, hard, lacerated cervix from the canal of which there protruded a small, triangular polyp, which bled on contact. In the course of this procedure perforation was diagnosed, and a vaginal hysterectomy with repair of the cystorectocele was performed.

Pathologic Report.—An abstract of the pathologist's (Dr. Joseph C. Ehrlich) report follows: Specimen consisted of a totally resected uterus. It measured 7 cm. from the external os to the tip of the fundus, 5 cm. at its greatest width, and 2 cm. in thickness. The consistency of the muscle of the uterine walls appeared softer than normal. Vessels in the outer third appeared markedly thickened and projected above the cut surface. The endometrium was thin, smooth, shiny, and angry red in color with several hemorrhagic flecks. There were no endometrial polyps or fibromyomata in the myometrium. An applicator stick was passed through the tract of a puncture-perforation, said to have been caused by a uterine sound. The endometrial opening of the perforation was present in the fundal crease about 2 mm. mesial to the opening of the fallopian tube on the right side. The gentlest pressure in passing a probe into a pocket in the fundal crease 2 mm. mesial to the opening of the left tube resulted in the perforation of the uterine wall.

Microscopic examination: Section of endometrium revealed atrophy of glands and stroma. The myometrium appeared atrophic. There was an increase in connective tissue, and the branches of the uterine artery were markedly sclerotic and tortuous. Section of each cornua revealed the intramural portion of the tube to be intact. Sclerotic and tortuous branches of the uterine arteries were noted. The tract of the perforation contained some fresh tissue debris and blood.

Case 5.—Mrs. J. S., age sixty-nine, noted some vaginal bleeding five days before admission. Menopause occurred twenty-nine years ago. A diagnostic curettage was planned, and since there was an associated cystorectocele and a prolapse of the uterus, a vaginal plastic operation was contemplated in addition. In the course of the curettage perforation was diagnosed, and it was deemed best to inspect the abdominal cavity and to resect the uterus and adnexae

Pathologic Report.—An abstract of Dr. Ehrlich's report was as follows: Specimen consisted of a resected uterus, measuring 4 by 3 by 2 cm. in greatest dimensions. The serosa was slightly thickened. The myometrium measured 1.0 to 1.5 cm. in thickness. It was pinkish white in color and rather soft in consistency. A fresh traumatic perforation, said to have been produced by a uterine sound, was present at approximately the center of the posterior wall. The perforation was irregular in outline and about 0.5 cm. in diameter. There was no blood clot adherent to the serosal surface of the perforation, but some fresh blood was found along the tract. The endometrium was red and congested and contained several pinhead-sized, glistening, grayish cysts.

Microscopic examination: Section of the endometrium revealed atrophy with occasional cystic dilatation of the glands as seen in senile uteri. Myometrium showed some atrophy of muscle, increase of connective tissue, and also marked tortuosity with calcification of the branches of the uterine artery. In the section of the perforation there was an irregular separation of the muscle bundles by the trauma. Numerous tortuous, thickened, and calcified branches of the uterine artery were present in this region.

Comment

Taussig[1] quoted many authorities of the past generation who advocated immediate laparotomy and hysterectomy in cases of uterine perforation. The mortality in these cases was high. I have never had to sacrifice the uterus of a woman in the child-bearing period, and I know of conceptions and normal deliveries in some of these patients. In older women in whom perforation occurred, I did perform hysterectomy, but in these instances it was done because of the prophylactic value of the procedure.

The prognosis is good, provided all manipulations are discontinued immediately after the occurrence of perforation. The most serious consequences, such as infectious peritonitis and curettage of abdominal viscera and structures, may follow if curettage is persisted in after perforation. Grave complications are especially likely to occur if a grasping instrument, such as an ovum or placental forceps, is employed. Most of the tragic cases are reported in instances of criminal abortion, and in this group the mortality was high in the preantibiotic days and is probably significant even now.

If the operator feels certain that there has been no injury to the intra-abdominal structures, conservative treatment consisting of the administration of antibiotics and careful observation is all that is required. However, should there be any doubt as to the integrity of the intra-abdominal structures, exploratory laparotomy is indicated, especially if the patient exhibits evidences of shock or hemorrhage.

In the case of the postmenopausal patient, I feel that if perforation has taken place after some endometrium has been obtained and it arouses no suspicion of malignancy, she can be treated in a manner similar to that accorded a younger woman while awaiting the pathologist's report. Should the report fail to reveal the presence of malignancy, conservative treatment may be continued.

Where perforation has occurred in women past the menopause before any endometrial tissue has been obtained, I would be inclined to perform a vaginal hysterectomy, provided there is no suspicion of intra-abdominal injury, her general condition indicates no unusual operative risk, and a cytology smear and cervical biopsy taken shortly before operation showed no evidence of malignancy. In these cases the extirpated uterus should be opened and immediately examined by the pathologist. Should malignancy of the corpus be found, the adnexae and generous portions of the parametria and vaginal vault should be resected.

As regards management of the uterus, I believe that in the good risk older woman, hysterectomy is the procedure of choice because of its prophylactic nature, whereas in the younger woman repair of the perforation is preferable.

The three extirpated uteri that were studied in this series showed marked muscle atrophy, fibrosis, and marked arterial sclerosis. Whether any one of these factors or any combination of them was responsible for the ease with which perforation took place merits experimentation and study by pathologists interested in gynecologic pathology.

Conclusion

The possibility of accidental perforation should be anticipated and, when it occurs, should be recognized and treated in accordance with the pathology produced, bearing in mind the desiderata of the different age groups. In the majority of instances it is not necessary to remove the uterus.

1882 GRAND CONCOURSE

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A strong will, a settled purpose, an invincible determination, can accomplish almost anything.
—THOMAS FULLER

Aramine, A New Vasopressor Agent

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IN ORDER to determine the effects in humans of Aramine, a new vasopressor agent, the drug was studied in comparison with three other commonly used vasopressor agents, and the results are reported here.

Aramine (levo 1-(m-hydroxyphenyl)-2-amino-1-propanol) has been extensively investigated in animals.[1] Employing the epinephrine-pressor ratio, which compares a given drug with epinephrine by weight, it was found that Aramine was required in a ratio of 18:1 for an equivalent blood pressure rise. The magnitude and duration of action indicated that Aramine "combines the high order of pressor effect of the monophenolic compounds with the duration of action of amines most refractory to elimination."

Method

It was necessary to determine the minimal effective dose of Aramine in humans, and for this purpose the minimal effective dose was defined as the least amount which would produce a blood pressure rise large enough to be definitely attributed to the action of the drug itself and not to any extraneous influences. It was felt that a rise in systolic blood pressure of approximately 50 mm. Hg would satisfy this requirement. Three subjects with "normal" cardiovascular systems according to the common criteria were selected. The usual resting blood pressure, electrocardiogram, and ballistocardiogram (Dock electromagnetic type) were determined and found normal. A total of 100 cc. of normal saline was given by intravenous infusion at a rate of 160 drops per minute in each instance as a control measure to demonstrate that this volume of saline by itself produced no change in blood pressure. Having determined that this was true, the same volume of saline containing varying amounts of Aramine was given at the same rate of administration until the minimal effective dose was found. This dosage was then verified during the course of the comparison study in which eight subjects were used.

For the comparison study eight subjects were selected as above, and their normal resting blood pressures, electrocardiogram, and ballistocardiogram were recorded. Again, 100 cc. of normal saline were infused intravenously at a rate of 160 drops per minute, followed by 100 cc. of normal saline containing the drug to be tested. The blood pressure was recorded at one-minute intervals and the electrocardiogram and ballistocardiogram at five-minute intervals from the start of the saline infusion until all three had returned to normal. In this manner, Aramine,* 1-epinephrine,† Neo-Synephrine, and nor-epinephrine (Levophed) were compared.

Results

It was found that 2.5 mg. of Aramine in 100 cc. of saline given at a rate of 160 drops per minute was the minimal effective dose, as defined above. This dosage was determined by random trial in three subjects and was then used in the eight subjects employed in the comparison study.

In the comparison study the epinephrine-pressor ratios of the various drugs tested were employed insofar as was practical.[1] Aramine has a ratio of 18:1, and Neo-Synephrine has a ratio of 10:1. Approximating these ratios, the following dosages were used:

Aramine	2.5 mg.
Neo-Synephrine	1.5 mg.
1-Epinephrine	0.15 mg.

Referring to nor-epinephrine, Grollman[2] states, "The naturally occurring levorotatory isomer is 1.64 times as active as a pressor compound than 1-epinephrine. . . " With these figures in mind and since the dosage of 1-epinephrine used was 0.15 mg., a dosage of 0.08 mg. of nor-epinephrine was originally given. This dosage, used in four subjects, was accompanied by marked side-reactions and precipitous rises in blood pressure to

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* Aramine was kindly supplied by Sharp and Dohme, Inc., Glenolden, Pennsylvania.

† 1-Epinephrine was kindly supplied by the Gold Leaf Pharmacal Co., Inc., New Rochelle, New York.

TABLE I.—Comparison of the Average Effect of the Four Drugs Tested

	Decreased Pulse Rate (Beats per Minute)	Increased Blood Pressure (Mm. Hg) Systolic	Diastolic	Duration of Effect (Minutes)
Nor-epinephrine	34	64	26	3.5
Epinephrine	4	34	4	5.2
Neo-Synephrine	36	48	25	6.3
Aramine	34	48	19	17.0

well over 200 systolic so that no reasonable comparison with the other drugs could be made. Accordingly, a dosage of 0.04 mg. was used in the comparative study.

The results were tabulated as follows: change in systolic blood pressure, change in diastolic blood pressure, change in cardiac rate, electrocardiographic changes, ballistocardiographic changes, and duration of action after completion of administration (Table I).

Epinephrine caused an average rise in systolic blood pressure of 34 mm. Hg, the low being 22 mm. Hg and the high 70 mm. Hg. Diastolic blood pressure was increased an average of 4 mm. Hg, the high being 14 mm. Hg and the low being a decrease of 20 mm. Hg. A decrease in diastolic blood pressure occurred in two subjects in whom epinephrine was used, but occurred in no other instance, either with epinephrine or the other three drugs. Four of the eight subjects had a decrease in heart rate, one showed no change, and three others had an increase in rate of 10, 15, and 27 per minute over the baseline rates. The average was a decrease of 4 per minute. A variety of changes was noted in the electrocardiogram; three subjects exhibited multiple auricular premature contractions, one developed definite depression of the S-T segment in the standard leads, and one subject showed an increase in the amplitude of the QRS complex in all leads with a tendency to inversion of the electrical axis. The ballistocardiogram showed a definite tendency toward abnormal configuration (grade II to III) with an increase in amplitude in five of eight subjects. The effect of epinephrine was maintained an average of 5.2 minutes after completion of the infusion with a low of three minutes and a high of seven minutes.

Neo-Synephrine caused an average increase in systolic blood pressure of 48 mm. Hg with a high of 70 mm. Hg and a low of 24 mm. Hg. The average increase in diastolic blood pressure was 25 mm. Hg with a high of 34 mm. Hg and a low of 12 mm. Hg. Slowing of the heart rate was noted in all subjects, the average decrease being 36 per minute with a range from 24 to 55. Electrocardiographic changes, other than change in rate, were noted in only one subject. This subject developed a Wenchebach phenomenon, returning to normal five minutes after the completion of the infusion. The ballistocardiogram, on the other hand, became abnormal in each instance (grade III to IV). The effect of Neo-Synephrine lasted an average of 6.3 minutes after completion of the infusion, the range being five to ten minutes.

Nor-epinephrine caused the most marked and rapid rise in blood pressure. Even using the reduced dosage of 0.04 mg., it was necessary to decrease the infusion rate from 160 drops per minute to 100 drops per minute in every subject in order to control adequately the precipitous rise in blood pressure. The average rise in systolic pressure was 64 mm. Hg with a high of 100 mm. Hg and a low of 34 mm. Hg. The diastolic blood pressure rose an average of 26 mm. Hg with a high of 42 mm. Hg and a low of 12 mm. Hg. Slowing of the heart rate was again noted in all subjects, the average decrease being 34 per minute with a range of from 56 to 13. No other electrocardiographic changes were noted. The ballistocardiograph became abnormal in every subject (grade III to IV), but the changes were of wide variety and no definite trend could be distinguished. The pressor effect of nor-epinephrine lasted an average of 3.5 minutes after completion of the infusion, the range being from three to five minutes.

Aramine caused an average increase in systolic blood pressure of 48 mm. Hg with a high of 70 mm. Hg and a low of 18 mm. Hg. The diastolic pressure was increased in every subject, the average being 19 mm. Hg with a high of 26 mm. Hg and a low of 14 mm. Hg. The heart rate was slowed in each subject, the average being a decrease of 34 per minute, with a range of minus 64 to minus 18. No other electrocardiographic changes were noted. As with the other drugs, the ballistocardiogram became abnormal in each instance (grade II to IV). The pressor effect lasted an average of seventeen minutes after the completion of the infusion, the range being six to thirty-one minutes.

Comment

The reactions to the pressor agents used varied from subject to subject. However, it was noted that the individual subject reacted similarly to each of the drugs, i.e., a subject whose blood pressure rose quickly with one drug would also have a quick rise with the other three. From this study it would appear that nor-epinephrine is a more potent drug by weight than has been acknowledged; it is perhaps more accurate to describe it as being almost four times as active as 1-epinephrine.

In the actual comparison between the four drugs tested, it was noted that 1-epinephrine was the most variable in its response from subject to subject. It should be pointed out that it was the only drug which occasionally caused a decrease in diastolic pressure and an increase in heart rate. Nor-epinephrine was the most difficult to control during its administration because of the rapidity with which the rise in blood pressure occurred. In one instance, in which the blood pressure was being maintained at 160 mm. Hg systolic, it suddenly rose to 250 mm. Hg systolic in less time than it took to tighten the clamp on the infusion tubing.

Aramine and nor-epinephrine caused no electrocardiographic changes other than decreased heart rate, while Neo-Synephrine produced a Wenchebach phenomenon in one subject and 1-epinephrine produced pathologic variations in five of eight subjects tested. The ballistocardiogram, on the other hand, became abnormal in every subject with each drug tested. The significance of this finding is obscure.

The duration of action of Aramine after completion of the infusion was approximately three times that of Neo-Synephrine, three and one-half times that of 1-epinephrine, and four and one-half times that of nor-epinephrine. This would seem to be a desirable characteristic in a drug meant to maintain blood pressure. It is suggested, therefore, that further clinical trial with Aramine in patients with various shock states should be carried out.

Summary

The use of Aramine in subjects with normal cardiovascular systems is reported in comparison with 1-epinephrine, Neo-Synephrine, and nor-epinephrine. Aramine was found to compare favorably as a pressor agent with the other compounds tested and, in addition, had a more sustained effect.

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Medicine's Outlook for 1954 Given by A.M.A. President

A year of greater scientific achievement and continued improvement in medical care has been predicted for 1954 by Dr. Edward J. McCormick, Toledo, president of the American Medical Association.

Research workers in our great universities and laboratories have labored untiringly to master nature and harness its laws for the benefit of all mankind, Dr. McCormick stated. By pooling their physical, chemical, and biologic knowledge and know-how during 1953, they have removed a few more dark continents of ignorance along the advancing fronts of medical science. These research teams, dedicated to the preservation of life in the fight against such diseases as cancer, infantile paralysis, and heart disease, have made recent contributions that are truly great triumphs in the conquest of disease.

Dr. McCormick urged the nation's physicians to adopt the following program for the year:

1. To continue to bring the best medical service possible to *all* of the people in the United States.
2. To make available full medical service to all rural areas and to alleviate the problem of physician distribution.
3. To solve the problem of indigent medical care and chronic illness through the efforts of the medical profession, as this is not a function of the Federal government.
4. To become an integral part of the community and to engage in all civic activities and other non-medical enterprises that will accrue to the benefit of the community.
5. To reread the Oath of Hippocrates and the Principles of Medical Ethics of the American Medical Association.

Dr. McCormick ended his message by stating that so long as doctors continue to carry on their practices "in accordance with fundamental moral principles, the problems of the profession which sometimes seem insurmountable will be solved in a relatively short time."—*J.A.M.A., January 2, 1954*

Mephobarbital in the Treatment of Hyperhidrosis

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SCANLON[1] has reported on the successful treatment of two cases of excessive sweating with mephobarbital (Mebaral). The dose was 0.032 Gm. three times daily, and in each case hyperhidrosis was reduced to the point where the patient could lead a normal, comfortable life.

Scanlon has suggested that the effectiveness of mephobarbital lies in its ability to reduce adequately the activity of the diencephalon when employed in an amount below the hypnotic or anesthetic level. Such a presumption is predicated on the basis of the following known facts:

1. Sweating of cat's footpads occurs when the anterior hypothalamic nuclei are experimentally heated.[2]
2. The diencephalon has long been suspect in abnormal vasomotor and sudomotor activity.[3]
3. Clinical,[4] chemical,[5] and physiologic[6] evidence shows that the various barbiturates have a selective site of action in the cerebrospinal axis[7]; they do not all act alike on the same nervous structures and seem to act predominantly on structures other than the cortex.
4. Anxiety may be a prominent clinical symptom in hypothalamic lesions.[8]
5. Mephobarbital produces more tranquillity and less narcosis in anxiety states than other sedatives.[9]

Inasmuch as hyperhidrosis is a resultant feature of anxiety, it does not seem unreasonable to assume that mephobarbital works through the medium of the diencephalon.

The efficacy of mephobarbital was studied in a series of 99 patients with hyperhidrosis selected for their psychoneuroses of the anxiety and tension state. In every case one of the outstanding symptoms was excessive sweating. Of this series, 52 were clinic patients, and 47 were private patients. The oral dose was uniformly 0.032 Gm. three times daily after meals. Excellent control of hyperhidrosis was obtained in 91 cases (almost 92 per cent), doubtful results in one case, no change in six cases, and increased sweating in one case.

Summary

Successful treatment of hyperhidrosis in 91 patients of a series of 99 cases with 0.032 Gm. mephobarbital three times daily is reported.

It is recommended that mephobarbital be administered in those cases of excessive sweating where emotional factors play an important role.

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It is not the greatness of a man's means that makes him independent so much as the smallness of his wants.—WILLIAM COBBETT

CLINICOPATHOLOGIC CONFERENCE

STATE UNIVERSITY OF NEW YORK COLLEGE OF MEDICINE AT NEW YORK CITY
AND THE MEDICAL AND PATHOLOGICAL SERVICES, UNIVERSITY DIVISION,
KINGS COUNTY HOSPITAL, BROOKLYN, NEW YORK

Conducted by PERRIN H. LONG, M.D.

MARCH 12, 1953

Case History

H. A. was a forty-nine-year-old, single, white bookkeeper who entered Kings County Hospital at 4:40 P.M. on December 6, 1952, because "I have had a severe pain in my belly since last night." History was obtained from a reliable patient and a reliable niece.

Present Illness.—This patient was in apparent good health until two years ago, when upon returning from work as a bookkeeper he experienced a severe nosebleed. He went to a local hospital where the bleeding was controlled, and the patient was told for the first time that his blood pressure was elevated. It was 180 at that time and subsequently varied from 160 to 180.

A few weeks after this episode of epistaxis, the patient experienced severe crushing pain in his precordial region, which radiated down his left arm. He was hospitalized and told, after an electrocardiogram was taken, that he had a definite heart attack. The patient developed some fluid in "both lungs." This was not tapped, and the patient was treated with mercurials, daily digitalis, and a low-salt diet. The patient adhered to this regimen for the next two years.

The patient did very well; he returned to work as a bookkeeper until July, 1952. At that time he experienced the sudden onset of pain in the left side of his abdomen for which he was admitted to a local hospital. He remained at the hospital for one day, after which this pain subsided. The patient was treated with additional digitalis and aminophylline at that time. The patient claimed his abdominal pains were very similar in nature to his present illness.

The patient did fairly well until the night before admission. After eating a light supper of pot cheese and milk, he took the subway home. He then felt an empty feeling in his stomach. After climbing the two flights of stairs at his home, he was slightly short of breath. He coughed a few times and then experienced the sudden onset of severe pain in his left middle abdomen. This was "crampy" in nature. He soon started to vomit some clear and then some light green material. The patient then fell asleep and was awakened at 3:00 A.M. with further accentuation of the left abdominal pain and vomiting. The patient had three bowel movements during the night, all of which were difficult to start but then the remainder of the movement was easy. When the severe pain did not subside in the morning and the patient continued to have nausea, his physician was called. He gave the patient "an injection," and when this gave no relief, the patient was sent to Kings County Hospital.

Past History.—There had been no previous operations and no previous medical illness other than the above.

Family History.—The patient's father had died of "dropsy" in his late fifties; his mother, age ninety, was alive and in a tuberculosis hospital. One brother died of Parkinson's disease, colitis, and carcinoma of unknown origin, and another brother died of a heart attack in his fifties.

Social History.—The patient was a heavy drinker up until two years ago when he completely abstained (confirmed by his niece). He was an occasional smoker.

Review of Symptoms.—Symptoms were remarkable only in that the patient lost 30 pounds in the last year, which he attributed to his "salt-free diet."

Physical Examination on Admission.—The patient was a well-nourished male who was in acute distress. Temperature was 98 F., respirations 32, pulse 140 and regular, and blood pressure 130/80. He found no comfort in any position he took. He was alert and oriented and complained of agonizing, diffuse abdominal pain.

His head was symmetric, and there was no evidence of injury. The pupils were miotic and reacted to light and accommodation. Sclerae were clear; extraocular movement was normal. The fundi showed slight arteriolar narrowing but no hemorrhages or exudates. The canals and drums of the ears were normal, and there was no obstruction or discharge in the nose. The tongue protruded in the midline and was slightly dry; there was no inflammation. The teeth were not remarkable.

The trachea was in the midline; the thyroid was not felt, there were no nodes and no obvious venous distention. There were a few shotty left axillary nodes.

The chest showed rapid breathing but was otherwise clear to percussion and auscultation. The heart rate was rapid; rhythm appeared regular. Point of maximal impulse was in the fifth interspace in the midclavicular line. There was questionable diastolic gallop.

There was some venous stasis in the subcutaneous tissue of the flanks of the abdomen. There was slight spasm of the abdominal wall and moderate tenderness, especially in the left middle quadrant. The liver, spleen, and kidneys were not felt or percussed, but examination was difficult. The bowel sounds were slightly decreased in intensity and frequency.

Genitalia were normal. Rectal examination showed no masses. The prostate was normal in size and shape. Brown feces flecked with blood were on the examining finger.

The extremities showed no edema; pulsations were felt in both radial, carotid, and femoral arteries.

Cranial nerves were intact. Reflexes were physiologic. The plantar response was down. Pinprick was felt equally on both sides. Vibration was felt in both lateral malleoli.

Laboratory Tests on Admission.—Hemoglobin was 14.8 Gm., and white blood cells numbered 25,750 with 95 per cent polymorphonuclears, mature forms; 3 per cent lymphocytes; 2 per cent monocytes; no atypical forms. Platelets appeared adequate. Sedimentation rate was 10 mm. in one hour.

Catheterized urine specimen showed specific gravity 1.020, albumin 4 plus, sugar 2 plus, acetone negative, bile negative, urobilinogen positive at 1:3; 10 to 15 red blood cells and an occasional white blood cell per high power field were visible on microscopic examination of centrifuged specimen. Guiaic test of stool was 4 plus.

Electrocardiogram showed a supraventricular tachycardia of 150 with left axis deviation and probable left ventricular enlargement. There was no evidence of a recent myocardial infarct. The QT interval was within normal limits. Carotid sinus pressure and eyeball pressure did not slow the heart rate.

Course in Hospital.—An emergency consultation was called. The surgeon's note read as follows: "Abdomen is apparently benign at this time. The abdomen shows no distention. Venous stasis markings are present over the abdomen. The liver is palpable on deep inspiration. There is no rebound or referred tenderness. There is severe tenderness on deep pressure just lateral to the margin of the left rectus muscle. No masses are felt. CVA not tender. Rectal examination reveals some skin tags and probable hemorrhoids, no masses. Normal colored feces on glove. No emergency surgery recommended."

An emergency flat plate of the abdomen was taken. It showed distended loops of bowel, probably a reflex ileus pattern. No air was noted under diaphragm in the upright chest film.

At 12 MIDNIGHT on December 6, the patient's pain was more severe, especially in the left middle quadrant. The blood pressure was 105/?. There was now marked distention of the abdomen, and the venous stasis was now over the entire abdomen. At 1:00 P.M. the emergency serum amylase was 0. The blood urea nitrogen was 36. The temperature was 100.2 F. The patient was then seen again by the surgeons. He was in extremis and had agonizing pain but was still coherent and able to answer questions. The abdomen was now tense, distended, and tender in all quadrants. Bowel sounds were absent. He suddenly vomited about 1/2 glass of bright red blood.

The patient was continued on oxygen by nasal catheter, Wagensteen suction (which returned some gross blood), and a catheter was placed in the bladder (only 15 cc. of urine were obtained). He was given streptomycin, penicillin, and 1/4 grain of morphine.

The patient continued to writhe in pain. Three pints of blood were given, and when the blood pressure could not be maintained, Levophed was added to no avail. At 4:00 A.M. on December 7 the temperature was 102.2 F., no blood pressure obtained, and the femoral pulse was 160 and thready.

The patient continued to writhe in pain unrelieved by morphine. He was fairly coherent and somewhat responsive until his sudden demise at 5:30 A.M. on December 7.

Discussion

CHAIRMAN LONG: This patient is Mr. H. A. and will be discussed by Dr. Dock.

DR. WILLIAM DOCK: In renal or even metabolic disorders we see acute abdominal pain. In porphyrias and diabetic acidosis the presenting complaint is often abdominal pain so this symptom does not lead to any specific diagnostic path. This patient had known for two years he was a hypertensive. Only shortly after he discovered he was hypertensive, he had an attack which sounds quite characteristic of myocardial infarction, and as we learn later, a brother only a few years later is said to have died of a heart attack. I think it is reasonable to believe this is a hypertensive patient who had one episode of myocardial infarction. As is not uncommon in hypertensives, immediately after his myocardial infarction he developed congestive failure, which was successfully treated with mercurials, digitalis, and low-salt diet. He had been on that sort of a regimen and was still on it at the time the abdominal pain occurred.

It turns out this was not the first bout of abdominal pain. About six months previously he had had a similar pain, severe enough so that he went to a hospital, but the pain subsided after one day. They treated his congestive failure at that time, and he went home again and back to work. One bout of pain in the left side in a hypertensive could be anything from renal colic on down.

The night before admission he went up some stairs. He felt a little odd to begin with, and after coughing he had a sudden onset of severe pain in the left middle abdomen. This patient's abdomen is not divided up into quadrants but into hexants or some other Greek or Latin word because he has an upper, middle, and lower quadrant on each side. I suppose this means that the pain was just to the left of the navel, and the pain was crampy. That means it came and went at the beginning. This could be trouble from an acute episode of some sort of colic, and he might have gotten an attack of colic after coughing. Renal colic might come on after coughing, which might shake things up and drop a stone down. It does not sound quite right. I wonder if with the coughing he could have broken something, developed a hernia for example. He went back to sleep in spite of the pain. Then it got worse and worse and woke him up very early in the morning, and he had some bowel movements which were a little uncomfortable, and then things quieted down enough for him to get to sleep. Then they got a doctor who gave him a hypodermic and sent him into the hospital. Obviously his pain was very severe.

Among the pains that one might think of, severe enough to bring a man this age into the hospital, are things like acute renal colic, perforation of a diverticulum or an ulcer, and acute pancreatitis. Because this patient was a hypertensive and had had myocardial infarction, one might think of either rupture of a vessel or embolic accident, so there are a whole series of possibilities that come to mind when this patient entered the hospital with the story we have just been over. We also have the story that his brother died of a heart attack in his fifties, which fits pretty well with the patient's having had a myocardial infarction.

This patient was said to have been a pretty steady drinker but gave it up at the time he had the myocardial infarction. We had a patient on the ward the other day, all of whose symptoms dated from his giving up drinking. This patient gave up drinking and apparently didn't feel much better or much worse afterwards. He had not been much of a smoker in the past. I don't know that it would have any bearing on his pain, whether he smoked or not. He lost a good deal of weight in the last year, and he blamed that on his low-salt diet. That presumably means that he stayed quite strictly on this diet.

The other possibility is, of course, that he had some chronic disease like carcinoma of the pancreas which was giving him a little indigestion and making him lose weight, and now we have an acute bout of trouble associated with that chronic abdominal disease.

When he came in, he was afebrile. He was breathing very fast, and his pulse was very rapid indeed. The blood pressure was down to a normal but not shock level, and he had agonizing, diffuse abdominal pain. There aren't very many things that give you agonizing abdominal pain. The pain with peritonitis (after the first hour or so of rupture of the viscus, when the pain may be agonizing) quiets down soon. When we think of agonizing pain, we think of either renal colic or colic due to obstruction of bowel, due to vigorous peristalsis, or of some sort of a dissection of the blood vessel or leak around the blood vessel so the coats are split. This does produce pain of a most intense and steady type, which is as severe as any we see, the pain of a dissecting aneurysm. Since this man was nearly fifty and hypertensive, the chance of dissecting aneurysm is better than it would be in somebody who is younger and normotensive, and we must consider the possibility that this man has a dissecting aneurysm which apparently was dissecting below the diaphragm. That is very unusual with dissecting aneurysm. They usually begin to dissect in the thorax, so that the pain goes into the back and shoulders as well as being abdominal.

Another possibility is that his circulation to his bowel was cut off either by dissection or by an embolic accident, that he had an ischemic bowel, which also may produce agonizing pain.

On the physical examination there is not very much here that helps us any way except that we hear he had a questionable diastolic gallop. If you can hear a gallop with a pulse rate of 140, your hearing is extremely acute. It is very difficult to recognize gallop at rates above 120, but in this patient it may be that he did have a gallop as the result of injury to his heart simultaneous with the onset of this pain. It seems most unlikely that the abdominal pain to the left of the navel could be due to a fresh episode of myocardial infarction. They say that there was some venous stasis in the subcutaneous tissue of the flanks of the abdomen. This is a most extraordinary statement. I don't know what this means, whether it means they saw venous patterns or whether the skin looked bluer than usual. In either case the fact that bilaterally something curious was seen about the color of the abdomen would make you wonder whether he had had a dissection with spreading ecchymosis, but then the time was not long enough for blood to reach the skin. It takes time for blood to diffuse around, and usually with retroperitoneal bleeding the blood does not get out in the subcutaneous tissue and back. It is more likely to appear in the groins as discoloration of a bruise, and it takes days to get there. Could his vena cava have been blocked by a dissecting aneurysm with retroperitoneal hematoma? Well, if it was, the venous engorgement should have involved his legs as well as the back if the vena cava was compressed. I don't know what to make of that statement. His abdomen was somewhat but not strikingly tender. The bowel sounds were slightly decreased.

If he had an embolic accident, he did not go into complete paralytic ileus. If he had acute pancreatitis, he had not developed the severe grade of paralytic ileus that usually supervenes shortly. This also occurs with blockage of the main mesenteric artery or several smaller branches. It is noted that none of the pulses coming out of his trunk were altered in any way. Of course, in relation to diagnosis of dissecting aneurysm, which must have been in the mind of the examiner when this note was made, it is very important that his carotid, subclavian, and femoral arteries were not blocked because in dissecting aneurysm any one of those may be blocked. When the dissection occurs only below the diaphragm, you would expect that possibly the femoral pulses might be lost. The dissection in the aorta can involve only half of the wall. If the anterior half of the wall is involved, the celiac axis gets blocked quickly, and the patient soon has paralytic ileus and shock; I don't recall having seen this story of venous stasis as the result of that kind of a dissection. It could occur only with a big hematoma.

We find, very shortly, that he had no neurologic changes, that he had a very high white count, which could go with any one of these abdominal catastrophes, or a myocardial infarction, and he had a normal hemoglobin level. He cannot have formed a huge hematoma, say a liter of hematoma, which it would take to compress the vena cava, and not have the hemoglobin drop a little bit. But it may be that he had become dehydrated simultaneously with his hemorrhage, and the net result then is to maintain the hemoglobin level as the patient goes into shock with retroperitoneal hemorrhage.

He had severe proteinuria. We don't know whether the kidneys had been investigated when he had the onset of hypertension, but here we know only that with acute severe illness proteinuria was very marked, and he was still able to concentrate to 1.020. He also had a little sugar which can occur with a myocardial infarction, or with a retroperitoneal hemorrhage, or with acute pancreatitis. He had no evidence of any acidosis. After they centrifuged the urine, they found a few red cells and white cells which does not help us very much in this case. He did not have gross hematuria so that the urine does need to be centrifuged to find the red cells, and since he was a hypertensive, this doesn't add anything except that he may already have had renal disease.

His eyegrounds showed apparently nothing striking, and we would be surprised to see a lot of red cells in the urine from hypertension without some hemorrhages and exudate in the eyegrounds, so it may turn out later that these red cells have some significance, but it is difficult to believe from his story that the patient could have had renal colic and red cells from renal colic. The whole story seems to be much too catastrophic for that simple explanation, and the fact that this man presumably comes up to a clinicopathologic conference because of an exit rather than an operation makes colic most unlikely.

The pulse rate of 150 shows that shock was probably developing. In this man there was no evidence that he had a recent myocardial infarction. With the severe tachycardia the ST segment can be displaced by myocardial ischemia without infarction. They did not slow the rate by raising the vagus tone. The surgeons were also struck by venous stasis markings present over the abdomen, front and back. Were these veins you could see, Dr. Strober?

Dr. Murray Strober: What we saw was very difficult to describe. Four different observers could not give an accurate description, but apparently this man had dilatation of the venules of the skin so that it was a very ecchymotic-like appearance and blanched on pressure but was not diffuse.

Dr. Dock: The bright purple, little veins in the skin, the kind that appear very soon with obstruction of the vena cava?

Dr. Strober: This appearance was very progressive and was fulminating.

Dr. Dock: So these were suffusions or dilated venules in the dermis itself, and not the larger, pale blue, deeply placed veins?

Dr. Strober: Yes.

Dr. Dock: The very superficial venules appeared as though trying to develop collaterals around the blocked vena cava.

They found dilated loops of bowel which we would expect if he was getting paralytic ileus. That would not help in deciding whether there was retroperitoneal hemorrhage or rupture of a viscus; with any of those or obstruction of the bowel we would expect paralytic ileus to appear pretty soon.

This agonizing pain continued. His blood pressure began to fall. The ileus became more marked, and as Dr. Strober told us, these brilliant, purple, minute venules were becoming more and more obvious in his skin so that it looked now as though something was going wrong retroperitoneally that blocked the vena cava at the same time he had paralytic ileus, which suggests that the celiac axis had been closed off by the dissecting aneurysm. His blood urea was scarcely elevated at all, we note, which means that the hypertension had not damaged his kidneys much. Interruption of renal function by this acute illness had not been of sufficient duration to cause any striking change.

They saw some flecks of blood when they did rectal examination, and he began to vomit up some bright red blood. If he had the celiac axis blocked, he would have developed the sort of hyperemia that you get in the gut when its circulation is obstructed and passive hyperemia occurs and the mucosa begins to break down, so that multiple bleeding could occur without there being any real ulceration. With the Wangensteen suction they got a good deal of blood, which you can get of course from the duodenum or stomach if it is undergoing infarction as the result of closing the main vessel.

The pain continued, and the patient is described as writhing, which is a characteristic description for people suffering from dissecting aneurysm. He died quite suddenly. If he had simple bowel obstruction, if he had renal colic, or if he had acute pancreatitis, it is not likely that the course would have gone as rapidly as this. So I have no choice at all here except to make the diagnosis that the man had the dissecting aneurysm beginning presumably below the diaphragm, cutting off the circulation to the celiac axis, but not the femoral arteries, and probably rupturing in the retroperitoneal space with hematoma developing there. The sudden death is the result of increased leakage, perhaps even into the peritoneal cavity if the hematoma had dissected through.

When we make that sort of diagnosis, which is quite hopeless, we wonder if there is a possibility that we have missed the one similar disorder for which there is therapy, that is aneurysm of the renal arteries, right and left. More have been reported on the right. These occur not in people with syphilis but those who give a story much like this. The important thing is that if a renal artery leaks and you know it, you can go in, take out the kidney, repair the leak, and save the patient's life. In this case you would have to make the diagnosis of renal aneurysm which leaked severely. That is very much rarer than aortic dissection.

How would we go about making the diagnosis? The first thing I would think would be to put in a cystoscope and give Indigo Carmine. You might see spurts coming from the right ureter and not the other. If the spurts were not coming from the side where the pain was, you would feel that it is possible that the man either has renal colic in the early stages of his disease or that he has some interference with the circulation to one kidney alone. Then, if you were a bold fellow, you could stick a large needle into his aorta and inject radiopaque material and visualize the circulation in that region. This is done all the time on the urologic services now from Portugal to New Zealand as well as here in this city. The reported morbidity has been very low as the result of these direct injections, which are made in the abdominal aorta below the diaphragm, and the visualization is very good. If the patient had a dissecting aneurysm, you might see the celiac axis did not get any radiopaque material in it. If he had an aneurysm of the left or right renal artery, you might see quite clearly the evidences in the x-ray film that this was not aortic disease but was unilateral and presumably amenable to surgical correction if carried out in time. So that here I think you have the choice between the extremely rare condition, aneurysm of the renal artery with rupture, and the much more common dissecting aneurysm. The fact that he had one bout of left-sided pain of short duration a few months before would fit in better with aneurysm of renal artery than dissection. It would be odd to have a little dissection giving only one day's discomfort.

One other thing that we must mention is the possibility that he had simple arteriosclerosis of the aorta, and this is not dissection at all but perforation of an ulcerated atheromatous lesion. That may occur in little progressive bouts; you might have a little pain, and the hematoma seals itself off. Then later there is progressive hemorrhage. I guess that this is a dissecting aneurysm of the aorta, mainly below the diaphragm, and that death was due to infarction of practically the entire gastrointestinal tract.

How many people think this man has something as nice as aneurysm of the renal artery, which we might have cured? Are there any urologists that want to bet on that?

Dr. Joseph M. Pisani: Is that possible for them to be the initial step?

Dr. Dock: The initial what?

Dr. Pisani: To have taken place initially and go on to the dissecting aneurysm?

Dr. Dock: You mean an aneurysm of the renal artery?

Dr. Pisani: Then a subsequent aortic dissection.

Dr. Dock: It is possible that the pain six months before was a small bout of dissection, and then things were quiet for six months followed by a second one.

How many people think this is a dissecting aneuryms? (*Many so indicated.*) I gather many men on the ward thought that. That seems to be fairly popular. Does anybody think you can die this fast from acute pancreatitis? Does anybody want to diagnose it as that? (*Two people.*)

Dr. Jerome H. Zins: He may have a so-called Gray-Turner syndrome which is associated with acute pancreatitis.

Dr. Dock: Do you think the man would have died so soon? It could be.

Dr. Strober: The serum amylase was 0.

Dr. Dock: I am not sure that was back in time for us to know this while we were seeing him.

Dr. Monroe E. Alenick: I wonder if in view of the fact that this patient was a known hypertensive and had had a previous myocardial infarction, if this could not be a mesenteric thrombosis?

Dr. Dock: It could be, or it could be a mesenteric embolus from mural thrombus. You would like to put your money on left-sided pain due to thrombosis in the arteriosclerotic mesenteric artery or perhaps to an embolus.

Dr. John F. O'Connor: Would you rule out a splenic infarct?

Dr. Dock: This could have been a splenic infarct with rupture. It would have to have been a rupture for him to die. Splenic infarcts occasionally do rupture. There you think again of a mural thrombus as the cause of the embolic disease which caused the splenic infarction and rupture. That is a possible diagnosis.

Dr. John F. Kurtzke: He might have a splenic vein thrombosis with later extension to the portal vein.

Dr. Dock: The obstruction of the portal vein I don't believe would give him this sort of venous pattern, but obstruction of the vena cava might. The disease that might cause him to die so rapidly is Chiari's syndrome due to the hepatic vein thromboses. In that condition shock comes on quickly, with a marked hemoconcentration because the red cells get concentrated as the fluid is trapped.

Dr. Kurtzke: Left-sided abdominal pain in the beginning which sort of favors this.

Dr. Dock: You think this likely? I don't think anybody dies from splenic or portal vein thrombosis as fast as this man died. I am quite sure their pain is never as severe as this. This writhing in agony is quite different from what you see with any sort of splenic or renal infarction.

Chairman Long: Dr. Harrington will demonstrate the x-rays.

Dr. Leo Harrington: Bedside roentgenograms were unsatisfactory and reported as such in the x-ray report. Thereafter, more adequate studies were done.

There was definite evidence of free air under the diaphragm. There was free air under the left, a gas bubble, and a small detected area of air under the right diaphragm. The amount of fluid in the stomach appeared to be somewhat large. Somebody was on the alert to demonstrate the possibility of free air, and with the patient on the left side, the fluid level within the stomach was visualized as well as free air under the right diaphragm.

We have a few films of the intestinal tract which show distention of the large and small bowel. The x-ray evidence was definite for perforation of a hollow abdominal viscus, and the dilatation of the bowel was consistent with the peritonitis, occasionally a superimposed spastic type of peritonitis which gives us obstruction. In consideration of the viscus statistically we looked for ruptured ulcer of the stomach and duodenum, also possible rupture or perforated appendix or diverticulum. With the story given to us with the left upper quadrant pain, we thought of the possibility of perforations. I call your attention to the amount of gas in the stomach and the amount of fluid present. We wondered whether or not the perforations were duodenal rather than gastric. That is pure speculation because this patient could have a sealing over. In those cases the patient gets better. On the other hand, if we say this patient probably had a ruptured gastric ulcer, we think of perforation of the pancreas. We think of the possibility of acute ulcer, acute abscess under the left diaphragm. At the present time I see no indication of such from the x-ray viewpoint. This man definitely had free air in the abdomen consistent with perforated viscus, dilatation of the bowel.

Dr. Dock: These were taken later, none at admission?

Dr. Harrington: Removed to the ward by a member of the x-ray department.

Chairman Long: Would you like to comment now that we have seen the x-rays?

Dr. Dock: I would have been quite sure there was no air under the diaphragm. Also, I do not use facts available after the patient died. It would never have occurred to me that a patient with a ruptured peptic ulcer would writhe in pain with all the morphine this man had for twenty-four hours and would have curious discoloration of venules in the skin. If this was due to a perforated ulcer, he must have had hemorrhage and died of blood loss because he would not have died that quickly from peritonitis. He might have died from shock in a day or two with peritonitis. It certainly would be extraordinary to die so fast without extensive gastrointestinal hemorrhage at the same time as the perforation. I am still not sure this man did not have perforation of viscus secondary to mesenteric thrombosis.

Dr. Strober: I would like to clarify the x-rays. The patient had an initial bedside flat plate and upright chest. We were not sure whether there was air under the diaphragm, and the surgical resident and I moved the patient to the x-ray department and took another upright lateral and upright chest which we interpreted as being negative for free air under the diaphragm.

Dr. Dock: I realize the surgeon had gone over the possibility of perforation and, on the evidence, decided there was none, and I knew the films were taken. So he had a little air at that time which might have come from his stomach.

There was a huge air bubble still present in the stomach at the time and just a little air above it, which is a striking finding. I am still not convinced that this is a perforated peptic ulcer, but I am willing to learn.

CHAIRMAN LONG: It might be worth while to record that the surgical consultant reported that the abdomen was benign.

If there are no other comments, we will ask Dr. Siegel to present the pathologic findings.

Pathologic Report

DR. HENRY SIEGEL: The basic lesion that this man had was arteriosclerosis. It was touch and go as to which organ was the first one to fail. Dr. Smith will present the gross findings.

DR. JOANNE SMITH: The body was that of a well-developed and well-nourished, middle-aged white male, 5 feet 6 inches in height, and weighing approximately 180 pounds. The peritoneal cavity contained about 25 cc. of dark red liquid blood. The entire large and small bowel was dark red and distended with gas and liquid. There was no exudate on the peritoneum. The distal portion of the esophagus revealed a small acute superficial ulcer. The mucosa of the stomach was severely congested and hemorrhagic. The stomach contained approximately 200 cc. of dark red, liquid blood. The small and large intestines except the sigmoid colon and the rectum were dark red-brown and contained several hundred cc. of dark red, liquid blood and gas. The mucosa was red, and, in addition, there were a few small gas bubbles scattered throughout the mucosa of the small intestine. The wall of the small bowel was somewhat friable. The rectum contained grayish-tan feces. Each kidney weighed 150 Gm. The surfaces of the kidneys were faintly granular and revealed a few retention cysts measuring up to 3 cm. The interlobular, arcuate, and intralobular arteries were quite prominent.

The heart was enlarged and weighed 680 Gm. The right auricular appendage contained a small red thrombus. The myocardium was thickened except in the apical portion of the septum where it was thinned and almost completely fibrosed. The subendocardium revealed many distinct areas of fibrosis. The coronary arteries revealed an extensive arteriosclerotic process with calcification and in places the lumen was barely discernible. The aorta presented an extensive degree of atherosclerosis with calcification and ulceration. The major branches of the aorta also revealed a marked degree of arteriosclerosis, particularly the mesenteric arteries. These arteries were traced in their entirety, and no distinct point of occlusion could be found. The mesenteric veins were normal.

DR. HENRY SIEGEL: Microscopic section showed a scar of the kidney due to arteriosclerosis. The surface was depressed. The area was extremely fibrosed and the parenchymatous structures atrophied. Adjacent to this scarred area was normal kidney tissue. The arcuate vessel that subtended the scarred area showed tremendous thickening of the wall, principally because of an intimal connective tissue proliferation. The extensive sclerosis of the intralobular and afferent arterioles which was present can be correlated to the hypertension that affected the patient.

In the liver the same arteriosclerotic process was observed in the branches of the hepatic artery. A moderate degree of fatty change was present, and some of these vacuoles were rather large. These large vacuoles or cysts may be interpreted as those about which Hartcroft is writing at the present time, as explaining the histogenesis of cirrhosis in the alcoholic patient.

The lung had markedly thickened alveolar septa and many hemosiderin-laden macrophages, diagnostic of chronic passive congestion. The pulmonary artery showed the same arteriosclerotic process noted in other arteries.

Multiple sections of the heart revealed an extensive subendocardial fibrosis. The wall of the coronary artery at many points was quite thickened, and the lumen was almost completely occluded. That the thickening was due to intimal fibrosis was quite evident. The thickening of the walls of the coronary vessels was in some places a combination of both the intimal connective tissue proliferation and the atheromatous type of arteriosclerosis.

In the outer half of the myocardium was present a moderate degree of interstitial myocardial fibrosis, and in the inner half was present an extensive, dense, compact, acellular, fibrous tissue. This represented an old myocardial infarct.

Sections of several branches of the coronary arteries demonstrated old recanalized thrombi. A section of a coronary artery within the myocardium showed the marked connective tissue proliferation.

This is the type of arteriosclerosis that affects the intraparenchymatous blood vessels. Section of the right auricular appendage contained a thrombus.

Dr. Dock: Right or left?

Dr. Siegel: Right. The large bowel showed thrombus in the vessel within the muscle. At one point it was adherent to the vessel wall. A blood vessel in the wall of the stomach was tremendously thickened. The thickening was of the same type found in the liver, in the lung, in the kidney, and in the blood vessels within the myocardium. The superficial layer of the mucosa was congested and hemorrhagic throughout the stomach. The adrenal and stomach in another section also presented the same marked thickening of the vessels. Section of a vessel in the duodenum likewise demonstrated the same type of intimal connective tissue proliferation.

Section of the aorta presented a typical arteriosclerotic plaque.

Histologic examination of the large bowel illustrated the extensive hemorrhage, necrosis, and congestion of the mucosa. The mucosa was ulcerated very superficially, and there was severe engorgement of the vessels. Section of the colon showed the vessels to be tremendously engorged, and margination of the leukocytes was present, an indication of a slowing of the bloodstream. There was a hemorrhage into the mucosa associated with a superficial ulceration.

Massive infarction of the small intestine was seen. The entire small bowel was completely necrotic. Small gas bubbles were noted in the mucosa of the small bowel. Within these areas many bacterial colonies were seen. These colonies were probably instrumental in producing the gas bubbles noted in the mucosa.

In summary this patient had generalized arteriosclerosis. The anatomic findings were marked generalized arteriosclerosis of the aorta, its major branches, and the smaller arteries; occlusive mesenteric arteriosclerosis; extensive hemorrhagic infarction of the small intestine; occlusive coronary arteriosclerosis; healed myocardial infarct of the intraventricular septum; mural thrombus of the right auricle; marked myocardial fibrosis principally subendocardial; myocardial hypertrophy; focal pericardial fibrosis; chronic passive congestion of the lungs, liver, spleen, and kidneys; arterio- and arteriolonephrosclerosis, and acute ulcerative focal esophagitis. The latter is part of the picture of shock. An incidental finding was a fatty liver. This may be related to the patient's alcoholism. The cause of death was generalized arteriosclerosis, occlusive mesenteric arteriosclerosis, and infarct of the small intestine.

To summarize the clinical pathologic correlation, this patient presented himself with a nosebleed. At that time hypertension was found. The kidneys revealed arteriolosclerosis. About a month later he had his heart attack. A healed myocardial infarct was found. Later, about six months before his present hospitalization, he had a bout of abdominal pain. The nature of this pain was of the same character that forced him to enter the hospital at a later date. Probably at that time he had occlusive mesenteric arteriosclerosis. About twenty-four hours before admission he experienced the same type of abdominal pain, but this time it was more severe. When he was admitted, he probably had an early infarct of the small bowel. Twelve hours later when he died, the severe pain, shock, and intestinal hemorrhage were undoubtedly due to the infarct of the small intestine.

In conclusion this man's basic lesion was arteriosclerosis. This lesion was generalized and affected almost every organ in his body. At one time the kidney spoke up. At another time the heart spoke up, but the gastrointestinal tract had the last word.

Chairman Long: May we not permit Dr. Dock to speak up?

Summary

Dr. Dock: This is a very instructive case in many points. In the first place, the fact that he did not have pain above the diaphragm was very much against the diagnosis that I put my money on. With a pain all in the abdomen the problem was whether he had an ulcerative lesion of his aorta, the sort of lesion that ulcerates and ruptures and gives hematomas. Looking back on it, I think that was a better guess than the dissecting aneurysm.

To begin with, usually the patients with that disorder don't have initial intermittent pain as this man had. Most of the patients that have infarction of the gastrointestinal tract with severe mesenteric arteriosclerosis have indigestion, so-called abdominal angina, for months before their final episode. This man then is quite extraordinary in that the fatal infarct was preceded by only one bout six months before the fatal episode. That is most unusual. Most of the people we see with thrombosis of the mesenteric arteries and diffuse, severe arteriosclerosis are women over sixty who had indigestion for anywhere from four to five years and had many gastrointestinal series, all of which showed nothing. So this is a most instructive example of severe mesenteric arteriosclerosis in a relatively young man who didn't have the usual amount of chronic indigestion. In addition, there was free air in his abdomen, not very much free air for a perforated viscus but still enough for the diagnosis to be made. But this is the sort of problem where the pathologist needs to know in advance in order to look for the evidence. Doing autopsies is not so simple as carrying out a Rokitansky procedure. In this case it was, of course, quite important when the peritoneal cavity was opened to have noticed how much air there was under pressure. When the patients have been allowed to get to room temperature and additional gas is formed postmortem, of course all you can say postmortem is that there was free air. In this case it was not noticed during the autopsy that there was more than the usual amount of postmortem air. Was there some fibrinous exudate over the intestinal serosa?

Dr. Siegel: There was not.

Dr. Dock: So he did not have twenty-four hours of peritonitis presumably. That is an extraordinary thing. It is one reason the pathologists did not look for perforation and did not look for a specific point of perforation, which must have been very small indeed. They did not find it.

How would you look for it in a patient like this if you had the films properly interpreted before the autopsy? The only way to look is to take out everything en bloc and tie the two exits. Before putting the ligature on the esophagus you insert a tube, and you force air in and you put all of this under water, and where the bubbles come out—it is just like an inner tube—that is where the leak is. This saves the pathologist a great deal of looking around in a patient who had an infarct of the bowel if he wants to find the tiny hole. If he cannot demonstrate a hole with the hole under pressure from within, then the hole was negligible, and the air must have come from the effects of bacteria in the peritoneal cavity. That is what you thought more likely.

Dr. Siegel: Probably.

Dr. Dock: So it is a very interesting case where the surgeon fortunately was not led to intervene because he did not see the air that was there, and the patient was spared the troubles of an emergency laparotomy which of course would have done no good.

Dr. Strober: Dr. Dock, in the April, 1950, *New England Journal of Medicine* Burman and Russell from Syracuse described a syndrome of abdominal angina in several cases with severe mesenteric atherosclerosis who had the type of recurrent, crampy pains usually worse after eating. I wonder if it would be possible to postulate that perhaps in July this man had some edema of his atherosclerosis or atherosclerotic plaques in his mesenterics and beginning infarction which was relieved by mercurial, oxygen, digitalis therapy which he had at that time.

Dr. Dock: It is almost certain that he had a mild bout of mesenteric thrombosis and established his collateral and got straightened out in one day. The thing that is so extraordinary about this patient is that unlike those in the series reported from Syracuse, or the cases that turned up in the Massachusetts General over the last thirty years, or a case at the Brooklyn Hospital a few years ago, he had only one bout of pain for one day with this diffuse severe mesenteric arteriosclerosis. Most of the patients have had hundreds of episodes of pain, sometimes after each meal, for weeks before the final episode occurs. This case is, I think, of particular interest because there is only one bout for one day (which could have been renal colic because it was left-sided), and there was none of the usual indigestion that goes with severe mesenteric arteriosclerosis.

Dr. Siegel: Dr. Dock, you have given some thought to arteriosclerosis. What do you think was the course of events in this particular case? Was there only one basic lesion, namely, generalized arteriosclerosis, with the arteriolonephrosclerosis being part of the arteriosclerotic process and hypertension developing subsequently? Or do you believe that there are two basic lesions, namely, arteriosclerosis and hypertension, and the arteriolosclerosis of the kidney developing secondary to the hypertension?

Dr. Dock: I don't see how you can settle that very well. It is odd that the renal disease was so severe with so little retinal disease. That is not a common finding. Apparently middle-sized arteries in the kidney and elsewhere were involved, and I think the fat stains will show lipid everywhere where there is thickening of the intima. This is not very different from the disease you get in rabbits when you feed cholesterol. There you start with an animal with normal blood vessels, often a young animal, and in a relatively short time you can have a terrible looking set of pipes. Dr. Hueper produced similar lesions by giving polyvinyl alcohol, a macromolecule, intravenously. He got arterial thickening down to very small arterial sizes but rarely in arterioles.

Dr. Siegel: We did not do any fat stains, but I am sure we would have found some fat. Vacuolated macrophages were not present.

Dr. Harrington: I would like to emphasize the free air in the peritoneal cavity. In the vast majority of cases that are surgical this is a rare disease. The presence of gas in the peritoneal cases, in a number of cases that I have seen proved, was not a factor. If we have air in the peritoneal cavity, I would like to know if Dr. Siegel thinks it is similar to the situation in pneumatosis intestinales in which air from the bowel lumen leaks air into the peritoneal cavity?

Dr. Siegel: It is quite possible that some of the bacteria that produced gas in the mucosa were also present in the peritoneal cavity. I would like to elaborate on Dr. Dock's remarks. He suggested looking for a perforation by tying off both ends of the bowel and immersing it in water. Bubbles of air would point toward the perforation. That is not absolute proof of a perforation because an infarcted intestine is friable, and the mere handling of the tissue may result in a fracture of the wall. I always confirm the diagnosis of a perforation by examining a histologic slide of the area. The presence of inflammatory cells localized to the area would furnish additional proof. However, a lack of inflammatory cells would be no argument against antemortem perforation since a patient in a terminal state with a perforation of the bowel may not react as readily to injury as one who is not terminal.

Chairman Long: Thank you very much.

Medical Progress Moves Backward in China

Despite claims of health progress, the Chinese communist government is actually going backward as far as medicine is concerned, according to an article by Dr. Leslie G. Kilborn, former dean of the College of Medical Sciences in the West China Union University. The article appears in the April issue of the *Journal of Medical Education.*

Doctors are compelled to diagnose not only the disease but the status of the patient. This, as Dr. Kilborn points out, repudiates every tradition of medical ethics and makes the medical profession an instrument of enforcement of official policy.

In government insistence on adoption of the theory of "tissue therapy," the Chinese communists reject the spirit of scientific research. They officially proclaimed that this theory, which, according to Dr. Kilborn, was based on insufficiently controlled evidence, be put into use all over China. The disturbing elements in this "are that a government official 'clearly' indicated the direction to be taken and the acceptance by a group of medical specialists and practitioners of 'findings'. . . .and their publication without any evidence of control or attempt at statistical analysis of the reported 'results'."

Lowered standards in medical education in China today have come about through the shortening of the curriculum and through the policy of "emphasizing quantity not quality." The standard medical curriculum was reduced to five years, including premedical instruction and internship. Actually, this reduction was even more drastic because at least one fifth of that time was spent in required political courses and compulsory attendance at mass meetings.

Entrance requirements for medical schools were changed so that those students who were "politically unreliable" could not enter no matter how brilliant their former record was, and the quantity emphasis was achieved by giving each of the students in a group of six the average examination mark of the group. The groups, of course, were chosen so that good and mediocre students were represented, and the average grade was almost certain to be above the passing mark.

Dr. Kilborn cites as the only item on the credit side of medicine in the new China the enthusiasm which has been engendered for service to the common man. Even this becomes a hollow gain when it is realized that the "pernicious definition of the common man excludes a portion of the population."

CASE REPORTS

Tetanus

Report of Two Cases with Recovery

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(*From the Medical Services of Meadowbrook and Mercy Hospitals*)

ALTHOUGH the current literature contains a number of reports[1–5] of recent advances in the treatment of tetanus, there is still a very significant mortality from this disease. A review[6] of 105 cases seen at the Vanderbilt Hospital over a twenty-three year period through 1948 reported a mortality of 46.6 per cent, while Smathers and Weed[7] found a gross mortality of 59.5 per cent in 82 cases collected from three Detroit Hospitals. In view of the significant mortality found in two of the largest published series, we feel that the successful outcome of our two cases warrants their report, with emphasis on the use of larger doses of antitoxin, barbiturates, and tolserol than currently advocated.

The basic principles of modern therapy have been ably summarized by Diaz-Rivera *et al.*[8] as follows: (1) neutralization of the free toxin with tetanus antitoxin, (2) elimination of the source of toxin by débridement of all accessible portals of entry or by the administration of antibiotics, (3) prevention of convulsions or severe muscle spasms by the use of sedatives, anesthetics, or such muscle relaxants as curare and tolserol, (4) maintenance of proper nutrition, and (5) prevention and therapy of pulmonary complications. Using these very adequate methods of treatment, Diaz-Rivera reported a gross mortality of 23.5 per cent.

Among the more important steps to be considered in an attempt to lower the mortality in addition to the methods outlined above should be the initiation of universal immunization and the early institution of therapy in all suspected cases. Many deaths due to tetanus might have been prevented if antitoxin were given before a lethal dose of toxin was fixed in the central nervous system. McGuinness[9] in a review of recent immunization procedures states that tetanus toxoid provides one of the most effective immunizing agents yet developed and concludes that everyone should be actively immunized against tetanus. He also advises that tetanus antitoxin (1,500 to 3,000 units) be used after penetrating and dirty wounds in nonimmunized persons. Antitoxin should also be administered in addition to toxoid if more than four years have elapsed since the last dose of toxoid. Observation of these procedures would definitely decrease both the incidence and mortality of tetanus.

Tetanus is a toxemia due to infection of wounded or otherwise infected tissue by Clostridium tetani, which, in contrast to the gas bacillus, is not an invasive organism.[10] The infection remains strictly localized in the area of the wound, and frequently the volume of infected tissue is very small even in a fatal case. Although the exact route the toxin takes from the site of inoculation to the cells of the central nervous system has been disputed, Abel *et al.*[11] have presented convincing evidence to show that it travels through the bloodstream. Thus, even the most innocent appearing wound far removed from the cells of the central nervous system may prove to be the focus of a serious or fatal infection. Both our cases are illustrative of this problem since neither had ever been immunized against tetanus and both had apparently trivial wounds for which they had not sought medical care and, therefore, antitoxin was not used until the onset of acute symptoms.

Case Reports

CASE 1.—T. B., a thirty-eight-year-old, white female, was admitted to Mercy Hospital on October 13, 1952, with a diagnosis of tetanus. Four days before admission she had first noted a pain in the left shoulder, which later spread to involve the right side. She attributed this to having driven in an open car, but when the pain increased in severity, her neck became stiff, and there was some difficulty in chewing food, she sought medical attention.

The patient was first seen by one of us (P.E.M.) at her home. Examination revealed slight neck stiffness and slightly hyperactive deep reflexes.

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TABLE I.—TOTAL DAILY DOSAGES OF TOLSEROL* AND TETANUS ANTITOXIN

Hospital Day	Total Daily Dosage of Tolserol† (Cc.) Case 1	Total Daily Dosage of Tolserol† (Cc.) Case 2	Daily Dosage of Tetanus Antitoxin (Intravenous) Case 1	Daily Dosage of Tetanus Antitoxin (Intravenous) Case 2	Daily Dosage of Tetanus Antitoxin (Intramuscular) Case 1	Daily Dosage of Tetanus Antitoxin (Intramuscular) Case 2
1	...	395	....	40,000 every 3 hours	6,000**	40,000 every 3 hours
2	100	195	100,000	50,000 every 3 hours	4,500**	40,000 every 3 hours
3	350	230	100,000	100,000	50,000	50,000
4	400	185	100.000	100,000	50,000	50,000
5	250	75	100,000	100,000	50,000	50,000
6	100	135	100,000	100,000	50,000	50,000
7	...	130	100,000	100,000	50,000	50,000
8				100,000		50,000
9				100,000		50,000
10				100,000		50,000
11				100,000		50,000
12				100,000		50,000
13				100,000		50,000
14				100,000		75,000
15						75,000
16						75,000
17						75,000
18						75,000
19						75,000

* Dosage of tolserol is given in cubic centimeters of the 2 per cent solution of intravenous tolserol.

† Given in divided doses of from 30 to 50 cc. at approximately two to four-hour intervals.

** Small, frequent doses in an attempt to prevent marked reaction.

The jaws could be opened about 2 cm. During the neurologic examination an apparently healed wound was noticed on the left heel, and with further questioning the patient recalled that on about September 1, six weeks previously, she was walking barefoot in the country and stepped on a dog bone which broke, puncturing her heel. While it was sore and the irritation persisted for a month, she felt that this was quite natural because of the type and location of the wound and merely cared for it herself. At no time had she been given any tetanus injections.

On admission to the hospital, the patient, a well-developed and well-nourished white female, was acutely ill. There was marked muscular spasm throughout and nuchal rigidity as a result of the contracted musculature. The back and extremities were stiff. Risus sardonicus was present. The knee jerks were hyperactive. The heart rate was 120, temperature 99.2 F., respirations 16, and blood pressure 124/82.

A diagnosis of tetanus was made, and a skin test with horse serum gave a doubtful positive reaction so treatment with small doses of tetanus antitoxin was instituted. However, by next morning her condition had become so much worse that it was decided to give her large amounts of the antitoxin both intravenously and intramuscularly with adrenalin on hand in the event any reaction occurred. The dosage and intervals of administration of the antitoxin are depicted in Table I.

In addition, the patient received large doses of tolserol intravenously. This was administered by means of an intravenous drip, 50 cc. (1 Gm.) being administered every two hours. It required about twenty minutes for each dose of tolserol to be given. In order to eliminate the necessity for numerous venipunctures, a continuous slow glucose-saline infusion was set up, and the large volumes of antitoxin, tolserol, and other intravenous medication were given through another container hooked up with the glucose-saline by means of a Y tube. Screw clamps were easily adjusted to keep a flow of fluid from either side and maintain an open pathway into the vein.

At first a few doses of tubocurarine were administered also, but the action was too transient and it was discontinued. Large amounts of barbiturates were also needed for sedation and as a muscle relaxant (Fig. 1).

On October 15, 1952, under Sodium Pentothal anesthesia, an operation was performed on the left heel by Dr. Charles Basile. An elliptic incision was made, excising the scar down to the fascia. A culture was made from the operative wound, and organisms having the cultural and morphologic characteristics of Cl. tetani were obtained.

Treatment with antitoxin, tolserol, and barbiturate was continued, and penicillin was added to take care of any living organisms that might have been disseminated as a result of the operation. The patient gradually improved and on the fourth day in the hospital had lost her muscle spasm and was able to take some food by mouth. By the sixth hospital day she had improved to a great degree. The muscular spasms and rigidity were greatly reduced.

On the seventh hospital day a generalized urticarial erythematous rash and fever with a temperature of 104 F. appeared. This was evidently due to serum reaction. All medication was discontinued, and an antihistamine was given. Thereafter the patient made an uneventful recovery.

CASE 2.—B. M., a fifteen-year-old, white girl, was admitted to Meadowbrook Hospital on the night of October 24, with a presumptive diagnosis of tetanus which was made that evening by the local physician, at which time she received 20,000 units of tetanus antitoxin intramuscularly with 600,000 units of penicillin.

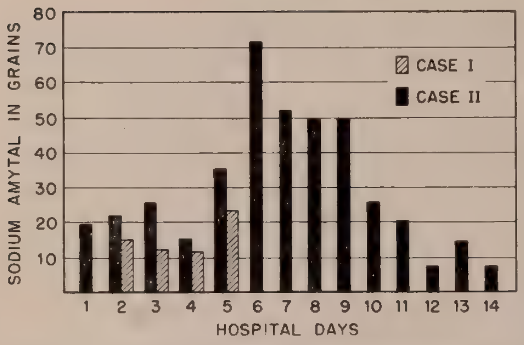

FIG. 1. Total daily dosage of Sodium Amytal intravenously.

The present illness began about six days before admission when her family noted that the patient had become very irritable and restless. This was followed in a few days by the onset of nonlocalized back pains which increased in severity. For the two days preceding admission the patient had complained about increasing difficulty in eating solid foods, and her mother noticed that she was unable to open her mouth more than $^{1}/_{2}$ inch. At this time neither the patient nor the family could contribute any history concerning trauma or wound which might have served as a focus or portal of entry for the spores. The one positive fact in the recent history was that the girl was an avid equestrienne and went riding almost daily.

On physical examination the patient was a well-developed and well-nourished girl, who appeared apprehensive and flushed, although not acutely ill. She was very restless and unable to lie quietly in bed. The most striking feature was the trismus of the jaw with inability to open her mouth more than $^{1}/_{4}$ inch. The temperature was 98.6 F., pulse 88 and regular, respirations 16, and blood pressure 120/70. The pupils were round, regular, and equal and reacted to light and accommodation. The fundi were within normal limits. Trismus of the jaw was present with marked limitation of motion as noted above. The neck was supple. The chest was clear to percussion and auscultation. The heart sounds were of good quality. No thrills or murmurs were noted. The breasts were normal. The abdomen appeared slightly tender throughout; there were no scars or palpable masses. The patient was able to move all extremities equally without any apparent loss of muscle power. There was no loss of pain or position sense. All motion caused severe nonlocalized back pain and marked irritability. There were no abnormal reflexes; the deep reflexes were equal and within physiologic limits. There was no apparent focus or portal of entry noted at this time.

Early the following morning when therapy was instituted, the patient appeared more critically ill. Her temperature had risen to 102 F., and she had become stuporous, very irritable, and restless. She complained almost continuously of severe back pain and difficulty in breathing. At this time she was unable to open her mouth at all.

The treatment consisted of large intravenous and intramuscular doses of tetanus antitoxin, intravenous Sodium Amytal and tolserol, and large amounts of penicillin. The dosages used are outlined in Fig. 1 and Table I. Because of the inability to take any nourishment by mouth, continuous intravenous fluids were given by means of a polyethylene tube inserted into an ankle vein. It soon appeared that the symptoms were best controlled by alternating doses of tolserol and Sodium Amytal, the exact amount and frequency of each depending on the response to the previous dose.

After the fourth day when there was no apparent improvement in the patient's condition, it was felt imperative to locate any possible focus of entry which might prove to be a source of liberation of fresh toxin. On close scrutiny a small hematoma was observed at the base of the left big toe from which a small amount of serosanguinous material was expressed. This was sent for smear and culture and reported on the morning of October 31 as positive for spore-bearing organisms but too few to identify as Cl. tetani. That afternoon the entire nail was removed under local anesthesia and the nail-bed irrigated hourly with hydrogen peroxide and tetanus antitoxin applied every other hour. Following the removal of the source of infection the patient began to improve slowly but steadily. On November 3 she was well enough to take small amounts of juice by mouth. The temperature gradually returned to normal. A sudden elevation occurred on November 8 due to phlebitis of the vein in which the cutdown was running. At this time her condition was so much improved that the polyethylene tube was removed, and the phlebitis rapidly cleared. She was taking adequate nourishment by mouth.

The patient was discharged on November 21 without any residuals and completely asymptomatic. At no time was there any evidence of an allergic reaction to the tremendous amounts of serum used, the only prophylaxis against which was 50 mg. of Pyribenzamine three times daily.

Comment

Although our observations were limited to only two cases, evaluation of their management convinced us that the use of large doses of barbiturates and tetanus antitoxin, after the focus had been explored, contributed significantly to their recovery. This feeling is not in complete accord with others[7] who stress the dangers of intravenous barbiturates and advocate only limited doses of antitoxin. In Case 2, the more critically ill, we used as much as 71 grains of intravenous Sodium Amytal in one day, given in divided doses, without any evidence of respiratory embarrassment. Each dose was adjusted according to the patient's complaints and state of consciousness in an attempt to keep the patient well sedated and comfortable but not narcotized. This enabled us to control the severe muscle spasms with smaller doses of tolserol, and the combination proved very effective in preventing exhaustion and respiratory embarrassment.

In addition to the use of Amytal and tolserol intravenously, our cases received large amounts of antitoxin both intramuscularly and intravenously. The doses used were well above those commonly recommended (Table I). Case 2 never exhibited any evidence of hypersensitivity, while Case 1 developed skin manifestations of a serum reaction after the seventh day, and therapy was discontinued without any other ill effects. We felt justified in using these large doses since we were never positive that we had completely eradicated the focus of infection and, therefore, had no way of knowing what the blood level of free toxin was at any time. The extensive work of Abel[12,13] has established certain facts concerning time of death from a known dose of toxin in laboratory animals. He found that when more than a lethal dose was given, the actual time of death was determined in each case by the absolute amount of toxin that was irretrievably fixed in the various organs, which occurred in about five hours. Further work convinced him that the animals could still be saved if somewhat less than a lethal dose of toxin had been fixed in the central nervous system, even though definite symptoms of descending tetanus had appeared, provided large doses of antitoxin were started at that time. This therapy also served to protect those cases where a hidden focus continued to feed toxin into the bloodstream. Even though the initial dose of toxin was not fatal, without adequate protection additional increments of toxin would finally prove lethal.

Firor[14] who has contributed extensively to this subject believes that although it may seem unnecessary to give enormous doses of tetanus antiserum, since it has been shown that once a lethal dose has been altered by the central nervous system, even a million units of tetanus antitoxin would not save the animal, yet no one dealing with a human patient can tell whether the symptoms of central intoxication are due to a fraction of a lethal dose or several such doses. Therefore, it is imperative to give fairly large amounts of intravenous tetanus antitoxin. Thus, the conclusion that fairly large doses of antitoxin are indicated in such cases seems inescapable, especially when the focus has not been completely extirpated or where the clinical course of the patient does not appear favorable.

Both our cases illustrate this point and serve to establish the fact that patients will tolerate extremely large doses of antitoxin in horse serum without any serious complications. Should symptoms of sensitivity appear at the onset, it would be wise to attempt rapid desensitization. Once the patient has shown no untoward response to the initial dosages, then the recommended schedules of intravenous and intramuscular antitoxin should be maintained. Delayed sensitivity can be managed with the use of the antihistamines and corticosteroids.

Summary and Conclusions

Two patients with tetanus, who received large doses of tetanus antitoxin, barbiturates, and tolserol and recovered, are reported.

Large doses of antitoxin are indicated whenever the focus of infection has not been completely extirpated or where the clinical course of the patient does not appear favorable.

Barbiturates can be administered in unusually large amounts to patients in hyperirritable states. No alarming depression of the respiration was observed following such large doses.

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Nothing will ever be attempted if all possible objections must first be overcome.—Samuel Johnson

Visceral Schistosomiasis

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(From the Medical Service of Harlem Hospital)

THE New York City Sanitary Code makes it mandatory to report every known case of schistosomiasis. The disease is not rare, and the need for being conversant with its clinical and pathologic features is important, especially when dealing with patients who have recently emigrated to the United States from Africa, South America, or the West Indies, regions where the disease is endemic. The influx of people from Puerto Rico within recent years has been substantial. It is not uncommon to find a high incidence of parasitic infestation among them. In addition, a good many of our military personnel who have seen service in areas endemic for the disease will be found to harbor the parasites of schistosomiasis.

Inasmuch as schistosomiasis may be important in the causation of intestinal, hematosplenic, pancreatic, cardiorespiratory, and cerebral disease, a knowledge of the life cycle of the parasite will greatly aid in the understanding of the pathogenicity and clinical manifestations of the disease. A careful examination of the stool for ova will readily establish the presence of the parasite.

Schistosoma mansoni is a trematode with an asexual and sexual phase of development,[1] the latter taking place in man who is the definitive host. After its deposition in water the ovum hatches, and miracidia (ciliated larvae) escape. These enter the digestive tract of the snail where they become converted into sporocysts. After some time the sporocysts rupture and give rise to cercariae which are the larvae infective for man. Contact with fresh water containing the organism permits penetration of the skin by the cercariae. Having entered the skin, the cercariae probably follow an intravascular route and come to rest within the mesenteric veins. During the period of migration of the cercariae, there is often an acute clinical episode marked by visceral and cutaneous hemorrhages, urticaria, transient pneumonic infiltrations, and peripheral eosinophilia.[2] The flukes attain maturity within thirty to sixty days (Fig. 1).

Thereafter, ova are produced, and symptoms may occur as a result of their deposition in the tissues. The number of ova deposited influences the severity of the lesions. Identification of the species is possible by the distinctive form of ova; S. mansoni has a prominent lateral spine (Fig. 2). The female parasite discharges ova within the lumen of small blood vessels near the surface of the infected organs. The ova adhere to the endothelial lining of the vessel and stimulate endothelial proliferation. The endothelial cells surround the ovum completely and exclude it from the lumen. If the ovum is deposited near the surface of the intestinal mucosa, it is discharged through the feces. If its deposition occurs deeper in the tissues, there is an immediate inflammatory response to the ovum which acts as a foreign body. The response is at first leukocytic and eosinophilic. The granulation tissue ultimately becomes a pseudotubercle, consisting of foreign body giant cells immediately surrounding the necrotic ovum or its shell, epithelioid cells, and circular bands of connective tissue about which there also may be scattered mononuclear cells. In addition to ova deposited in the intestine, some are carried to the liver, lung, and brain. A constant deposition of ova in the liver leads to the development of a peculiar form of cirrhosis, pipestem in character, which consists of scattered, wide bands of connective tissue around the portal vessels. Hematin pigment granules are evidence of the presence of the adult worms which do not incite any other reaction (Fig. 3).

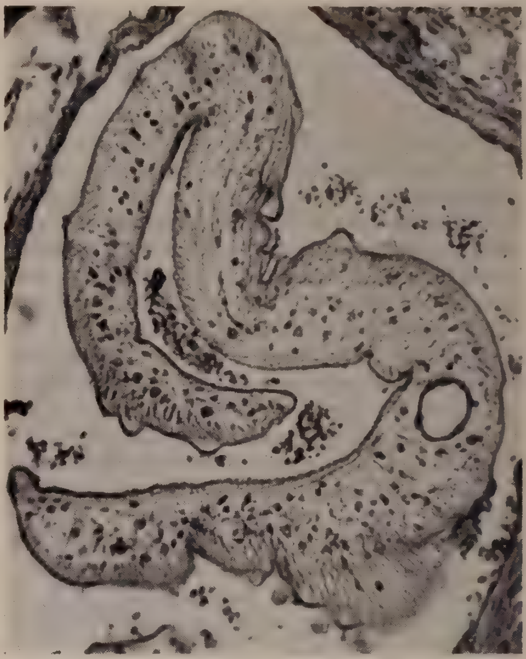

FIG. 1. Adult worm within the lumen of a vein of large bowel.

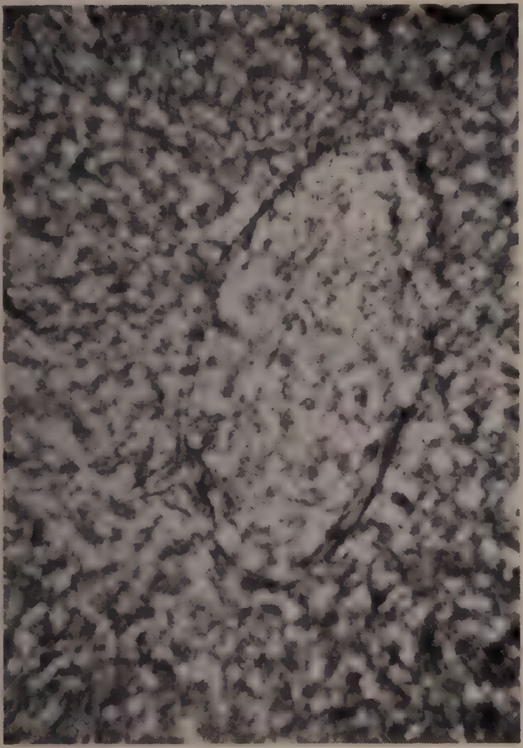

FIG. 2. Bowel contents with ovum of S. mansoni showing characteristic lateral spine.

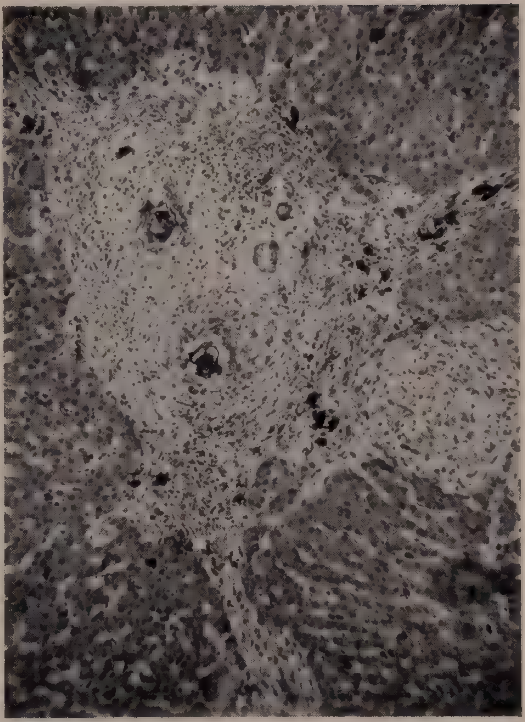

FIG. 3. Pseudotubercles in portal spaces of liver represent tissue reaction to the deposition of ova in portal veins. There is incipient fibrosis. Pigment granules are present within reticuloendothelial cells.

Occasionally, the worms may reach the pulmonary arteries through the inferior hemorrhoidal anastomosis, producing emboli of ova with formation of pseudotubercles and scattered pneumonic foci. A marked arteritis may also be present (Fig. 4).

Case Reports

L. R., a thirteen-year-old boy of Puerto Rican ancestry, entered the hospital on February 10, 1953, only several months after migrating to New York City. He was admitted via ambulance, unconscious, with a history of having collapsed while in school. Because of language difficulty no further information relative to his present illness was obtainable. Consciousness was soon restored after therapy with coramine and other supportive measures.

Examination revealed a poorly developed boy of sallow complexion. The pupils were equal and reacted to light and accommodation. There was no nuchal rigidity. There were no palpable superficial nodes anywhere. The lungs were clear to percussion and auscultation. The point of maximal intensity was outside the midclavicular line, and on percussion the heart was definitely enlarged to the left. The heart rate was rapid and regular; no murmurs were heard. The liver was found to be enlarged two fingerbreadths below the costal margin in the midclavicular line. The spleen was not felt. The superficial and deep reflexes were intact, and no pathologic reflexes were elicited. The gait was normal. The fundi were not remarkable. The temperature ranged between 97 and 101 F. Respirations were moderately increased, and a slight cyanosis of the lips was noted.

Laboratory studies showed the following: Blood count—red blood cells 4,200,000 with a hemoglobin of 8.5 Gm., leukocytes 18,650 with 40 per cent polymorphonuclear leukocytes, 39 per cent lymphocytes, 20 per cent eosinophils, 11 per cent stab forms, and 9 per cent segmented forms. Blood chemistry—urea nitrogen 13 mg. per cent, creatinine 1.3 mg. per cent, and sugar 175 mg. per cent. Serology showed a positive VDRL and a Kolmer of 3 plus. Chest film revealed moderately increased hilar markings with enlargement of the cardiac silhouette. Electrocardiogram indicated a right ventricular strain and hypertrophy in the standard and V leads.

On February 25 and subsequently, the patient had seizures of syncope and clouding of consciousness. On February 27, examination of the stools by Dr. Howard Shookoff of the Division of Tropical Diseases revealed the presence of many schistosoma ova and parasites. The patient's condition was very poor with weakness and lethargy, and an attempt at a transfusion with whole blood was made. The needle was barely in the vein when the patient suddenly developed a generalized tonic convulsion and shortly thereafter lapsed into coma. Despite ther-

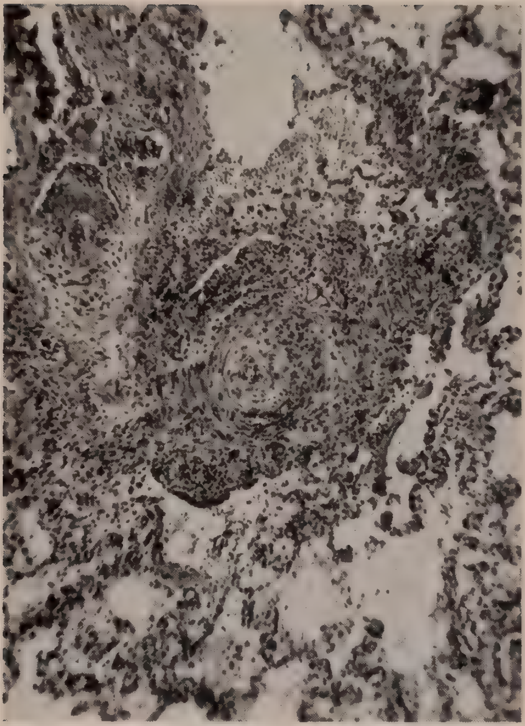

FIG. 4. Lung with arteritis (center) and pneumonic infiltration.

apy with artificial respiration, coramine, and intracardiac adrenalin, the patient expired.

POSTMORTEM FINDINGS.—The pertinent findings on gross examination were hypertrophy and dilatation of the right ventricle of the heart and flabbiness of the myocardium with serous effusion within the pericardial sac and pleural cavities. There was noted a marked pallor of the organs. Petechial hemorrhages were confined to the mucosa of the gastrointestinal tract. The liver was of a peculiar deep brown color and appeared firmer than usual. The spleen was slightly enlarged.

Microscopy.—Sections of the small and large intestines exhibited parasites in various stages of development within veins of the submucosa and muscularis (Fig. 5). Smears of the intestinal contents revealed the presence of ova (Fig. 1).

The lobular architecture of the liver appeared well preserved. A considerable increase of the periportal connective tissue was noted (Fig. 4). A number of veins in the periportal triads contained ova. The vessels were surrounded by pseudotubercles consisting of epithelioid cells, occasional giant cells, and fibroblasts. The latter were in some instances arranged in a whorl-like fashion. Dark brown, granular pigment deposits were present within reticuloendothelial cells of the liver as well as within those of the spleen. A single ovum was seen in the lumen of a vessel in the subserosa of the gallbladder with a few perivascular round cells scattered about. The changes in the pancreas resembled those in the liver. There was a marked increase in the interlobular connective tissue, and pseudotubercles were present around the intravascular ova.

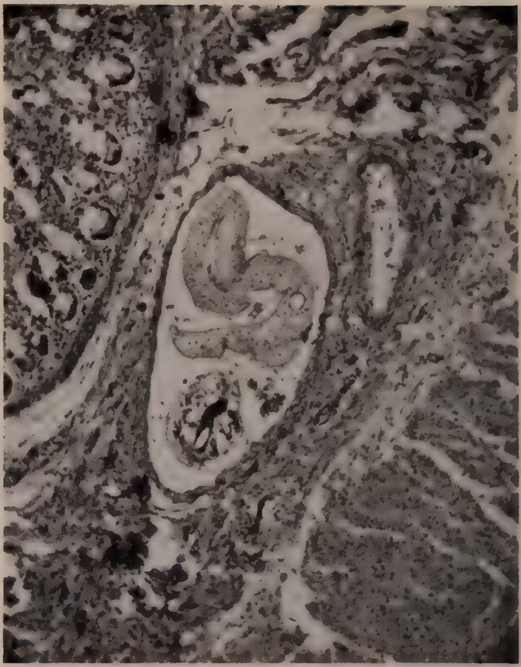

FIG. 5. Female worm and discharged ovum in vein of muscularis of large bowel. There is no inflammatory reaction noted.

The lungs showed a variety of changes (Fig. 4). These changes consisted of a marked endothelial proliferation of the arteries with complete occlusion of some of their lumina and thickening of their walls. In addition, there were focal pneumonic infiltrations adjacent to pseudotubercles, emphysema, and congestion. The heart showed edema and fragmentation of the myocardium with focal round cell cuffing of the small vessels.

Comment

The case described herein presents a number of interesting features. The multiple organ involvement with S. mansoni and the presence of ova in the vessels of the small and large intestines, as well as in the liver, pancreas, and lungs, is in our experience an uncommon occurrence. In addition, on the basis of clinical grounds, there is reason to believe that the patient also had deposits of ova in the cerebrum. Indeed, this is the first case of visceral schistosomiasis met with at this hospital, notwithstanding the high incidence of the disease among patients of Puerto Rican extraction at this institution. It is the prevailing opinion among parasitologists that S. mansoni is responsible for most cases of visceral schistosomiasis.

It appears that the large bowel bears the brunt of the damage, and ulcerative colitis not infrequently results. It is important to indicate that in some cases intestinal schistosomiasis may remain localized and produce no symptoms. The presence of ova in the stool may be purely an accidental discovery.

Although numerous ova and parasites were demonstrated in the stools and on necropsy ova were plainly visible in the vessels of the small and large intestines, the patient had no symptoms indicating intestinal schistosomiasis. Usually many of these patients will complain of intermittent diarrhea with or without bloody stools. Bercovitz[3] described the chief symptoms of S. mansoni infestation seen in Puerto Rico as consisting of varying degrees of diarrhea or bloody diarrhea.

The case under discussion also had pathologic changes in the pulmonary vessels commonly produced by this organism. The arterial walls appeared thickened, and tubercle-like structures, consisting of fibroblasts arranged in whorl-like fashion surrounded by round cells and eosinophils, were noted. This would indicate the type of granulomatous lesion produced by this disease, and the finding of ova in the pulmonary vessels leaves no doubt as to the parasitic etiology. As further evidence that the pulmonary arteries were involved, there is the clinical finding of congestive heart failure with electrocardiac evidence of right heart strain and hypertrophy, indicating obstruction of the pulmonary circulation by the ova of S. mansoni.

Miller[4] first described the pathologic changes in the pulmonary artery in a case of schistosomiasis. Since Miller's description of pulmonary schistosomiasis, others have reported cases of pulmonary arteritis due to Schistosoma ova with right ventricular enlargement which terminated in congestive heart failure. Clark and Graef[5] described a similar case of pulmonary schistosomiasis in a young man who died of congestive heart failure. The striking findings were the granulomatous lesions in relation to the pulmonary blood vessels. An important and comprehensive paper is that of Shaw and Ghareeb,[6] entitled "Pathogenesis of Pulmonary Schistosomiasis in Egypt," with special reference to Ayerza's disease. They show that in at least 33 per cent of the cases with schistosomiasis there is pulmonary involvement, and in 2 per cent of these Bilharzic lesions are the immediate cause of death. It is interesting to note that in Egypt schistosomiasis is the most common etiologic agent in the causation of Ayerza's disease.

Day[7] was of the opinion that diabetes may result from chronic pancreatitis due to schistosomiasis. Erfan[8] reported a similar case whose cure was effected by tartar emetic.

Permission for brain study was unobtainable in our case. The history of collapse and the loss of consciousness prior to admission to the hospital, in addition to the episodes of convulsive seizures while on the ward, are suggestive of cortical irritation due to the invasion of the cerebrum with S. mansoni. A number of independent papers in the literature refer to schistosomiasis of the central nervous system. Nieva[9] reports a case with epileptiform seizures and the disappearance of symptoms following treatment with antimony. Barros[10] considers such symptoms as vertigo and epileptiform seizures as due to the deposition of Bilharzic ova in the brain. He reports a case of a male, twenty-nine years of age, with attacks of vertigo and epileptiform seizures who was cured with antimony. Although there is no irrefutable proof that the case herein reported had schistosomiasis of the brain, nevertheless, the conclusion is inescapable in view of the repeated convulsions and loss of consciousness which our patient manifested during his illness.

Summary

A case of generalized schistosomiasis in a Puerto Rican boy with necropsy findings is reported. The diagnosis of schistosomiasis was established by the demonstration of the ova in the stools of the patient and the finding of parasites and ova in the vessels of the intestines, liver, gallbladder, pancreas, and lungs.

The importance of bearing this parasitic disease in mind is stressed, especially when dealing with recent arrivals of people from Puerto Rico as well as with military personnel who have served in areas endemic for the disease.

Schistosomiasis should be considered in the differential diagnosis of hepatic or gastrointestinal disease since these structures are frequently involved.

The diagnosis can be made readily by a careful examination of stool for ova and parasites.

We should like to express our appreciation to Mr. E. Entin for the photomicrographs appearing in this article.

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Immediate Reactions to Penicillin

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Reactions to penicillin fall into two broad classifications, delayed and immediate. The delayed type may be dermatitic or urticarial in nature, febrile and arthralgic, or vascular with lesions of arteritis or periarteritis. The immediate type of reaction may be anaphylactic in type or urticarial. This type of reaction is often serious and may be fatal. Deaths from anaphylactic shock caused by penicillin continue to be reported,[1,2] as well as near fatalities.[3] Kitchen and coworkers[4] suggest that the percentage of untoward reactions to penicillin is declining. This does not appear to be completely convincing and certainly offers small comfort to the physician faced with the rather awesome problem of handling a patient in anaphylactic shock caused by penicillin.

The practical problem of screening those patients who might react immediately to penicillin is great. The history of an allergic background is of no help since reactions occur frequently in patients with no previous history of allergy. Likewise, penicillin may often be safely administered to patients with allergy and is, for example, a useful tool in the treatment of asthma. An absence of previous reactions to penicillin offers no safeguard whatsoever since immediate as well as delayed reactions occur often in people previously not troubled by reactions to penicillin. A history of previous sensitivity to penicillin does not mean that subsequent penicillin injections will produce a reaction, although obviously in such cases care and thought should precede the use of penicillin.

Scratch testing every patient prior to the use of penicillin is impractical and similarly offers no real protection since allergic reactions to penicillin occur in patients with negative skin tests.[5] The allergic reaction to penicillin, immediate or delayed, appears to be unpredictable, occurring where least expected and varying not only from patient to patient but from time to time in the same patient.

The immediate reaction to penicillin is a dangerous thing. Since there appears to be no effective way to screen patients prior to penicillin therapy, precautions should be taken and preparations made to deal with the problem should it present itself. It is likely that reactions of this type may be reduced in frequency by combinations of penicillin and an antihistamine, mixing both medications in the same syringe before injecting. This should be a routine procedure and is a practical precautionary measure requiring little effort.

The first sign of untoward reaction to penicillin should call for prompt and vigorous treatment before deep shock sets in. The immediate reaction to penicillin does not come without warning, and usually five to ten minutes elapse between the time of the injection and the appearance of severe symptoms. Within this time prompt treatment may be lifesaving. Warning signals of impending anaphylactic shock during this short latent period are the appearance of a peculiar redness of the bulbar conjunctivae, a "tingling" of the skin, and slight dizziness or faintness. The first sign of bloodshot eyes or the vaguest complaint of "tingling skin" or faintness after an injection of penicillin requires energetic treatment. Immediate placement of the patient in a horizontal position and administration of caffeine and an intravenous anti-histamine may prevent progression to deep anaphylactic shock. Adrenalin should be used with care, if at all, since these patients are in a state of impending shock.

Certainly, as an additional precaution, every patient receiving penicillin should remain in the office or within immediate distance of the physician for twenty minutes after the injection is given so that advantage may be taken of the warning signs which appear in the short latent period preceding anaphylactic shock. This gives the physician the earliest and best chance to handle the condition if it occurs.

Case Reports

The following case illustrates the appearance of warning signs and the latent period of five to ten minutes and suggests the severity of anaphylactic shock following penicillin.

Case 1.—R. B., female, forty-five years old, obese (weight 205 pounds) with known asymptomatic benign hypertension (180 to 160/110 to 90), had been treated for late latent syphilis in November, 1951, with aqueous procaine penicillin G with aluminum monostearate. She had received 15 intramuscular injections of 600,000 units, each without a reaction. In June, 1953, serologic tests showed a 2 plus Kolmer and a weakly positive VDRL. A second course of penicillin was advised. The patient received 450,000 units of aqueous procaine penicillin G with aluminum monostearate on June 26 and July 3 with no reaction.

On July 10, 1953, 450,000 units were administered. In five minutes the patient who had returned to the waiting room complained of faintness and weakness. On her return to the examining room, a peculiar redness of the bulbar conjunctivae was noted. She collapsed to the floor, frothed at the mouth, vomited partially digested food, and eliminated rectally. Breathing was stertorous, slow, and shallow. No rhonchi were heard on auscultation of the chest. The patient was perspiring profusely, and her skin was cold. Blood pressure was unobtainable, and the patient appeared to be in extremis. Seven and a half grains of caffeine and 10 mg. chlorprophenpyridamine (Chlor-Trimeton) were given intramuscularly. In four minutes blood pressure was 100/60, and patient appeared to be rallying. At this time she was able to respond to command. Blood pressure gradually rose; after fifteen minutes it was 120/90, and in a half hour, the patient, feeling much better, was transported to her home. She complained of generalized pruritis for six days after this episode. Subsequent skin test with procaine proved negative. Skin test with 0.1 cc. of a solution of 10,000 units of crystalline penicillin per cc. showed immediate, strongly positive local reaction.

Reactions are not always as severe as this, milder forms occurring more often. Since these milder, frequently unrecognized reactions do not often appear in the literature, it may explain the apparent decline in the percentage of penicillin reactions. The following case exemplifies the mild reaction. It will be noted that warning signs still appear and also that penicillin may be subsequently given without a reaction, although this is not advocated.

Case 2.—G. G., a forty-two-year-old female, was treated for latent syphilis with a course of aqueous procaine penicillin G with aluminum monostearate, 600,000 units administered three times a week. On July 1, 1953, she received the fourteenth injection of the series. She returned to the office five minutes after the injection feeling dizzy and faint. She complained of a burning sensation of the eyes and a "tingling" of the skin. She stated that people on the street thought that she was drunk. Her bulbar conjunctivae were markedly injected. After ten minutes of rest she recovered completely and returned to her home. On July 3, two days later, she received another injection of 450,000 units of aqueous procaine penicillin G with aluminum monostearate without any reaction. Neither the fifteenth nor the preceding 13 injections caused any untoward effect.

Another type of immediate reaction, acute urticaria with laryngeal edema, is illustrated in the following case. It should be noted that this third patient could have been spared a harrowing ordeal had she remained in the office for twenty minutes after the injection.

Case 3.—F. S., a twenty-five-year-old female nurse, was given aqueous procaine penicillin G with aluminum monostearate, 450,000 units, on March 6, 1953, for cervicitis. About ten minutes later, while she was in the subway, she noticed intense itching followed by a swelling of the lips and tongue with severe dyspnea and a feeling of suffocation. On her return to the hospital where she worked, an antihistamine was administered and the reaction brought under control. She had received the same dose of aqueous procaine penicillin G with aluminum monostearate previously in December, 1952, January, 1953, and on numerous other occasions without any ill effects.

It should be remarked that the three preceding cases occurred in patients with a negative history of allergy, all of whom had previously received penicillin without untoward affect.

Summary

1. Penicillin reactions of an alarming type occur without relation to prior history of allergy or prior injection of penicillin.

2. Combination of penicillin and an antihistamine is advocated to reduce frequency of reactions, both immediate and delayed.

3. Warning signs of impending anaphylactic shock are noted and treatment suggested.

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Retired Physician Acts as Shepherd of the Blind

Deprived of sight by a laboratory accident eight years ago, Dr. J. E. Kay, Brooklyn, occupies himself by playing the cello and giving theatre parties for other sightless persons. He founded an organization called the "K-Twelve" which takes a dozen blind people to see a Broadway show once a month. The doctor is careful to select plays with enough connective dialogue to make sense to his friends and avoids any show that depends too heavily upon pantomime.

Playgoing, Dr. Kay feels, "not only allows these people essential mingling with the sighted but also introduces them into a realm of sparkle. Becoming a part of this realm offers a blind person security and helps further his drive to enlarge his associations with those who can see.

"The trouble is, there are too many blind people afraid to make contact with those who can see. They either confine themselves to their own four walls or mingle exclusively with other blind people. That's what we're trying to prevent."

Dr. Kay's organization does not solicit funds or operate like a workshop. "Our sole aim is to have fun."—*New York Times, February 21, 1954*

Anemia Associated with Cold Agglutinins

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ACQUIRED hemolytic anemia associated with high titers of cold agglutinins is a well-recognized but rare disease. Stats and Wasserman[1] thoroughly reviewed the subject in 1943, delineating both clinical and laboratory criteria of the syndrome. Ferriman *et al.*[2] have recently summarized the literature concerning cases demonstrating Raynaud's phenomena.

The purpose of this report is to present two cases of acquired hemolytic anemia associated with high titers of cold hemagglutinins. The source of the cold agglutinins in each instance is unknown. The first case is of considerable interest in that the patient has had the anemia documented for ten years with symptomatology suggesting strongly that the disease has been present for the previous fourteen years, twenty-four years in all. During the past ten years the patient has been examined at intervals both at the Presbyterian Hospital and at the Thorndike Memorial Laboratories of the Boston City Hospital. The case has been previously mentioned briefly in reports by Ham, Gardner, and Wagley[3] and by Finland *et al.*[4] Our second case has been hitherto unreported and presents coexisting cold hemagglutination and cryoglobulinemia.

Case Reports

CASE 1.—H. McN., a white business woman, now aged fifty-four, was first examined at the Presbyterian Hospital in January, 1943. At that time she gave a fourteen-year history of urticaria following exposure to cold water, a six-year history of urticaria, mottled cyanosis, and discomfort of body areas exposed to cold air, and an eighteen-month history of prolonged episodes of low-grade fever, recurrent scleral icterus, dark urine, and exertional dyspnea. Shortly prior to admission she experienced passage of dark urine, vertigo, and frank syncope after swimming.

Past history included a single episode of migratory polyarthritis in 1925 which had been diagnosed as rheumatic fever. When this disease had become quiescent, tonsillectomy had been performed with subsequent exacerbation of the polyarthritis. There had been no later recurrences of rheumatic activity, however. In 1932 she had had erythema nodosum after exposure to cold water.

On admission in 1943, physical examination revealed a well-nourished, pale, slightly icteric woman. Other positive physical findings were limited to a barely palpable spleen and systolic murmurs at the apical and aortic areas of the precordium. There was no lymphadenopathy or hepatomegaly. Her rectal temperature was normal during her three-week hospitalization with the exception of a single rise to 100.4 F. In addition to the laboratory data included in Table I, there was the then unexplained finding of a "peculiar clumping of the red cells in the (blood) smear."

Three months later an intensive investigation by Dr. T. Hale Ham and coworkers at the Thorndike Memorial Laboratories of the Boston City Hospital better defined the characteristics of her anemia by the demonstration of a high titer of circulating cold hemagglutinin and of localized hemolysis in vivo when her arm was immersed in cold water. The presence of cold agglutinins well explained the clumping of erythrocytes noted at Presbyterian Hospital.

During the past ten years the patient has been evaluated at intervals, primarily at the Presbyterian Hospital. Both her urticarial response to cold and her low-grade fevers have disappeared. Physical findings have remained unchanged except that her liver and spleen have both become easily palpable. Repeated tests to demonstrate hemolysis by immersion of her arm in cold water have been invariably positive. Blood serology and Donath-Land steiner and acid hemolysin tests have been negative. Although elevation of serum bilirubin has always been detectable, there has been only mild and intermittent clinical icterus. Furthermore, her anemia has run a fluctuating course, being accentuated in the winter months (Table I). For this reason she has been advised to live in a warm climate, but for economic reasons she has continued to live in New York City. During the past year she has received vitamin B_{12} from her private physician without objective benefit.

CASE 2.—T. T., a fifty-five-year-old, Russian-born Jewish housewife, was admitted to the Presbyterian Hospital on June 21, 1951. Three days previously she had entered Monticello Hospital, Monticello, New York, with a three-week history of headaches, vertigo, nausea, vomiting, and pallor. Medication at the onset of her symptomatology had included Pyramidon 0.12 Gm.* She had noted no evidence of jaundice, dark urine, or Raynaud's or urticarial phenomena. She denied exposure to syphilis or any manifestations of the disease. At the Monticello Hospital her temperature was as high as 102.6 F. Her blood had "an extreme tend-

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* We are unaware of other cases of this type related to Pyramidon.

TABLE I.—Spontaneous Variation of Hematologic Values

Case and Date	Cold Agglutinin Titer	Red Blood Cells	Hemoglobin	Reticulocyte (Per Cent of Red Blood Cells)	Serum Bilirubin
H. M.					
January, 1943	...	3.2	8.4	11.2	1.5
April, 1943*	1:5,000	3.6	10.0	7.0	2.2
August, 1944	1:8,000	4.4	13.8	1.8	1.0
November, 1947*	1:4,000	3.4	9.9	5.7	2.6
July, 1948*	1:4,000	4.3	11.7	0.6	1.8
July, 1951	1:2,000	4.0	12.5	1.2	0.7
January, 1952	1:8,000	2.8	..	5.2	..
T. T.					
June, 1951	1:2,000	1.6	6.0	15.0	1.1
July, 1951	1:2,000	2.7	9.0	..	Trace
November, 1951	1:8,000	3.9	11.4	..	..
May, 1952	1:2,000	..	13.1	2.9	..

* Laboratory studies of this date done by Dr. T. Hale Ham and coworkers.

ency toward spontaneous autoagglutination no matter how collected." Hemogram revealed hemoglobin 4.4 Gm. per cent, red blood cells 1,200,000, and white blood cells 3,500, of which 100 per cent were mononuclear cells, mostly lymphocytes. Because of the obscure nature of her illness, she was transferred to the Presbyterian Hospital.

On admission she was a pale, obese woman in no acute distress. Rectal temperature was 100.4 F. There was no nystagmus; hearing was unimpaired. There were transient wheezes in the right chest; the heart was of normal size with soft systolic murmurs over the apex and the aortic area. There was no rash, lymphadenopathy, or hepatosplenomegaly.

Many of the laboratory data are included in Table I which demonstrates her spontaneous hematologic improvement. Donath-Landsteiner and acid hemolysin tests were negative. When her forearm was immersed in cold water for twenty minutes with a tourniquet on the upper arm to obstruct venous return, blood in the antecubital vein was grossly hemolyzed. Hemoglobinuria, however, did not ensue on release of the tourniquet. Bone marrow aspiration showed an increase of normoblastic erythropoiesis compatible with the clinical impression of hemolytic anemia. Plasma cryoglobulins were demonstrated qualitatively on admission, and two weeks later a quantitative determination showed 12 mg. per cent. Her plasma proteins by Howe fractionation were 3.6 Gm. per cent albumin and 2.9 Gm. per cent globulin. Cephalin flocculation and thymol turbidity tests were 4 plus and 3 plus, respectively. Chest roentgenogram was normal. Marked "sludging" of blood was noted on microscopic examination of the capillaries of the bulbar conjunctiva. Extensive serologic testing for syphilis during the hospital period and subsequent months led to inconclusive results. Studies included a 4 plus Mazzini and VDRL titers of 1:64 in June, 1951, 1:32 in October, 1951, and 1:16 in January, 1952. Kolmer results on the same dates were respectively anticomplementary, negative, and positive. A treponemal immobilization test in January, 1952, was negative. Mazzini on the serum of the patient's husband was negative. We believe that the positive serologic tests of the patient's serum were caused by abnormal proteins related to her acquired hemolytic anemia rather than to true syphilis. The inconsistent results of the various tests, and the decreasing VDRL titers coincident with her spontaneous hematologic improvement support this opinion.

Without specific therapy or transfusion the patient's anemia and general condition steadily improved, and she was discharged ambulatory after four weeks. The progressive improvement in her blood counts is illustrated in Table I. The white count and differential similarly reverted to normal. At follow-up clinic appointments she has complained only of mild dizziness and headache. Although cold agglutinin titers have remained elevated and immersion of her arm in cold water has continued to cause hemolysis, her anemia has virtually disappeared, together with reduction of reticulocytosis. Qualitative tests for the presence of cryoglobulins were negative in October, 1951, and positive in May, 1952. The cephalin flocculation and thymol turbidity tests have continued to be strongly positive.

Comment

In each patient reported, special studies were done to show that the cold agglutinins conformed to the criteria of Stats and Wasserman.[1] Each was found to be most active at 0 C., and agglutination could be reversed by warming. Agglutinin could be eluted by warming from cells agglutinated and washed extensively at 0 C. Both sera were active against human cells of various types, as well as against erythrocytes of other species. Serum heated to 56 C. for thirty minutes did not lose its activity, and fixation of complement during cold agglutination could not be demonstrated.

The osmotic fragility of the cells of each patient was increased, but their sera, when added to a suspension of normal donor cells, did not alter the osmotic fragility of the latter. The mechanical fragility of the erythrocytes of each patient was also above normal, this effect being more marked at 0 and 20 C. than at 37 C. Furthermore, the serum of each patient was able to increase the mechanical

TABLE II.—ERYTHROCYTE FRAGILITY DATA

	H. M.	T. T.
Osmotic Fragility		
Patient's cells	0.70 to 0.50	0.70 to 0.30
Normal cells	0.50 to 0.40	0.45 to 0.35
Sensitized cells*	0.52 to 0.30	0.45 to 0.375
Mechanical Fragility†		
Patient's cells		
0 C.	..	71.0%
20 C.	14.8%	37.0%
37 C.	8.4%	6.5%
Sensitized Cells		
20 C.*	6.7%	11.9%
37 C.*	5.0%	12.6%

* Sensitized cells are washed normal human cells type O, Rh negative, resuspended in an approximately equal volume of patient's serum.

† Method of Ham; normal in our laboratory is 0 to 5 per cent hemolysis.

fragility of normal donor cells. These effects are shown quantitatively in Table II.

The Coombs' test was performed on the blood of both patients. It is impossible to interpret this test unless cold agglutinins are thoroughly removed by washing the cells at 37 C. with saline. A weakly positive direct Coombs' test was obtained with blood from each patient which was exhaustively washed without being allowed to cool below body temperature at any time. A more strongly positive test was obtained from blood which was exposed briefly to icebox temperature before being rewarmed and washed. These results parallel those of Ferriman *et al.*[2] and suggest that the combination of cold agglutinin with red cells is not completely reversible.

The mechanism by which the acquired anemia associated with cold hemagglutination occurs is incompletely known. Cold hemolysins may or may not be present; that they are not essential is shown in these two cases. Our hypothesis is that hemolysis is produced in the periphery where erythrocytes attacked by the cold agglutinin are mechanically traumatized on being forced through capillary vessels. Many of the results obtained on the patients here presented support this concept. In each case hemolysis could be demonstrated in the cooled forearm separated by a tourniquet from the general circulation. In each case, also, it was possible to demonstrate increased mechanical fragility in vitro and to show an inverse relationship between fragility and temperature, suggesting a direct effect of the cold agglutinin. Finally, in one case agglutination of cells in a peripheral capillary was noted in vivo, while in the other the variation of the severity of anemia with the seasons suggested an important role of external temperature.

The reported experience of others is in agreement with ours. Stats[5] first called attention to the production of hemolysis by shaking cold agglutinated erythrocytes. In a patient with acquired hemolytic anemia associated with cold hemagglutination, Whittle, Lyell, and Gatman[6] have seen through a capillary microscope actual rupture of erythrocytes within the skin capillaries. Shen, Castle, and Fleming[7] found that the mechanical fragility of washed normal human erythrocytes increased concomitantly with an increase of the isoagglutinin titer of the surrounding serum.

It is, however, not explained why some patients, such as those with viral pneumonia, may reach high titers of cold agglutinin without development of anemia. In our experience it appears that clinically significant hemolytic anemia is correlated with the findings of increased mechanical fragility and of in vivo hemolysis when the patient's arm is immersed in cold water. These tests, especially the latter which is a very simple one, may serve as an important guide in the identification of other similar cases which may appear in the future.

Summary

Two cases of acquired hemolytic anemia associated with high titers of cold agglutinins, increased mechanical fragility of erythrocytes, and hemolysis produced by immersion of an arm in cold water have been presented. The anemia of one patient has run a chronic course of unusual duration; that of the other has shown a rapid and sustained spontaneous remission. Clinical features and possible mechanisms of this type of anemia have been discussed.

The authors wish to express their appreciation to Dr. T. Hale Ham for permission to include his data and to Mrs. Catherine Holavko for technical assistance.

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ADDENDUM: Since this article was submitted for publication, a third case of acquired hemolytic anemia associated with a high titer of cold agglutinins was admitted to the Presbyterian Hospital. Despite cortisone and transfusion therapy the degree of anemia remained severe. Splenectomy was followed by a fall of the cold agglutinin titer from 1:8,000 to 1:64, but there was a subsequent rise to 1:500 five weeks after surgery. Within this period hemoglobin values became normal, but further observation will be necessary to establish whether or not the titer will continue to rise and the anemia recur.

Penicillin Anaphylaxis Following Percutaneous Absorption

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Recent reports indicate an increasing experience with severe and at times fatal acute allergic reactions of the anaphylactic type to penicillin.[1-3] Although the various routes of administration in previous reports have included intranasal,[4] aerosol,[5] and oral,[6] in addition to the most commonly used intramuscular route, to the author's knowledge this is the first recorded instance of such reaction following absorption through the skin. The uniqueness of clinical circumstance of the following case merits reporting.

Case Report

The patient, a forty-three-year-old white, female nurse, employed in an adjacent office as a dental assistant, sought aid for an eruption of the hands on June 19, 1953. She presented an erythematous vesicular rash in the web spaces between the middle and ring fingers bilaterally. Her history revealed previous episodes of transient, hivelike eruption on the hands and forearms after preparing penicillin solution for local installation into tooth sockets. On one occasion she had experienced "tingling and itching" of the hands and feet after sucking a troche containing penicillin, bacitracin, sulfadiazine, and benzocaine (Sul-Pondets). In the preceding three years she recalled having received two injections of penicillin of 400,000 units each and one injection of 1,000,000 units without untoward incident. The present eruption was of ten days duration. Soothing topical medication was prescribed, and protection of the hands with rubber gloves during office work was advised.

On June 25, 1953, the finger areas were much improved. However, shortly before her visit she had been withdrawing penicillin solution from a vial without the protection of gloves and had noticed a beginning edema of the hands and forearms. She had taken an antihistamine which relieved the swelling. Fading, blotchy erythematous lesions could be seen on wrists and forearms. The need for protection from contact with penicillin was reemphasized.

On July 7, 1953, she was preparing a penicillin solution and had again failed to put on gloves. She had added 10 cc. of distilled water to 200,000 units of crystalline potassium penicillin G (Commercial Solvents Corporation) and, in so doing, got a few drops of the resulting solution directly upon a deep fissure located in the web space between the left middle and ring finger. In a moment there started a tingling in the left hand, spreading quickly to the right hand, the feet, the genitalia, and the top of the head. At the same time she experienced a "peculiar taste in the mouth," followed shortly by the feeling of swelling in the throat, mouth and tongue, nausea, retching, and vomiting. She made her way to the bathroom where she was found on the floor moments later in a state of collapse. Her skin was pale, cold, and clammy, her face and lips obviously swollen, and her pulse rapid and thready.

Inhalation of spirits of ammonia stimulated a sufficient return of consciousness to reveal the above story. Epinephrine 0.25 cc. of 1:1,000 solution was injected. Even before the injection, however, the patient's color and pulse were returning to normal, and she remained thereafter fully conscious with gradual recovery, while complaining of severe abdominal cramps. By evening she felt normal and the following day was well both subjectively and objectively. There was no history of previous similar attacks or other serious illness. In view of the clear-cut history and the severity of the reaction, skin testing was not advised, and the patient was strongly cautioned to avoid penicillin contact in any form.

Comment

The importance of reporting severe reactions to a commonly used medication has been repeatedly stressed. In view of the eliciting route and the small quantity of solution involved in the present instance, one may well re-emphasize the need for caution in the use of penicillin and, particularly, the need for familiarity with proper technics and concentrations before one attempts scratch or intradermal testing with this agent.

Summary

An unusual instance of anaphylaxis following percutaneous absorption of penicillin is reported.

650 Main Street

Addendum.—Since preparation of this report it has been learned from the patient that she subsequently received from an allergist an intradermal skin test to a "very dilute" test solution of penicillin resulting in another severe, sudden, constitutional reaction similar to the one described.

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Bilateral Beaded Calcification of the Vasa Deferentia

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CALCIFICATION of the seminal tract is a relatively rare entity. Although more attention has been focused upon this condition in recent years, a careful review of the literature reveals a total of only 96 reported cases, covering the period 1830 to 1953.

Until Chetwood's report in 1913,[1] diagnosis was based solely upon autopsy findings. This author described calcification of the seminal vesicles encountered during a combined prostatovesiculectomy. Twenty-three of the total cases described involved vasa, ampullae, and seminal vesicles, or varied combinations of these organs. Seventy-three cases involved one or both vasa: 12 cases were bilateral, 3 left-sided, and 2 right-sided; in the remaining 56 cases the side was not specified. Calcification in the seminal vesicles is perhaps not analogous to calcification within the vas since these two structures serve different functions, and the former are more frequently the seat of chronic infection.

Etiology

Two basic types are generally described, inflammatory and noninflammatory. In the former category tuberculosis, repeated Neisserian infections, and recurrent nonspecific lower urinary tract inflammatory processes are responsible factors. The second group occurs apparently in conjunction with the arteriosclerotic changes of advanced age.

We believe that a third category is in order, namely, in association with diabetic arteriosclerosis. Neither Lowsley and Riaboff[2] in 1942 nor Shea and Schwartz[3] in 1947 include this factor in their articles. Wilson and Marks[4] in 1951 were the first to draw attention to diabetes mellitus as an etiologic agent. The findings of Marks and Ham[5] in 1942 of six diabetics among nine cases of vasal calcification gave added impetus to Wilson and Marks's survey of Joslins' series of diabetics.

Narins and Oppenheimer[6] have reported bilateral beading of the vas deferens associated with Paget's disease of the bone but observed no biochemical relationship between the two processes.

Age limits vary from fourteen to eighty-one, but over one third of Lowsley's cases were past sixty.

Pathology

The first pathologic report was that of Duplay[7] in 1855, describing ampullar changes. Guelliot[8] in 1883 reported bilateral vasal and vesicular calcification, while Wilson and Marks[4] in 1951 again studied the vasa. The classifications of Chiari[9] and George[10] ably describe the group differences.

Grossly the calcified tissue is a hard mass, sometimes of bonelike consistency. Microscopically, the distinctions are notable. In the inflammatory group partial thrombosis of the deferential vessels is produced by calcified and coagulated masses; partial obliteration of the lumen is caused by connective tissue containing the calcific masses. A penetration of this process from the vasal wall inwards occurs; in some areas the epithelium remains intact, while in others it is displaced or absent.

In the noninflammatory category the lumen of the vas is normal in size. The epithelium is well preserved with an intact mucosal layer. The infiltration of calcium salts and sclerotic change are confined exclusively to the tunica muscularis.

Diagnosis and Treatment

In the greater proportion of cases no symptoms are noted. If a small calculus is present in the lumen of the vas, spermatic colic and hematuria may ensue. Infertility may initiate urologic investigation.

Diagnosis is based on roentgenographic findings[11,12] and confirmed by vasography. Calcification of the ductus deferens within the inguinal canal forms double parallel lines crossing the shadow of the obturator foramen in an oblique line running downward and medially. Shadows cast by a calcified internal pudendal artery pursue the same course for a short distance. The course of the vas within the pelvis is unlike that of any artery in the male but similar to that of the ovarian artery in the female. In the differential diagnosis both ureteral and vesical calculi are considered. On rectal palpation ampullar calcification may be confused with extension of prostatic carcinoma.

Therapy is directed toward the predominant seminal tract disorder or to an associated diabetic status. In the rare instance of an impacted vasal calculus, vasolithotomy or vasectomy may be performed.

The outlook is generally good following adequate local therapy. With an associated tuberculosis of the lower urinary tract, generalized arteriosclerosis, or diabetes, the prognosis is guarded because of the systemic pathology.

Case Report

T. S., a forty-five-year-old white male, was first seen on February 21, 1952. At this time he complained of a morning urethral discharge and nocturia of one month duration.

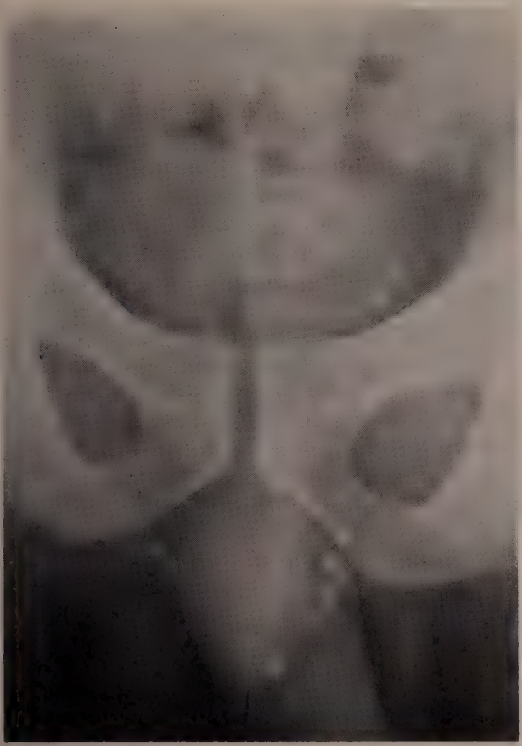

FIG. 1. Plain film demonstrating bilateral beaded vasal calcification.

His pertinent past history included an episode of acute gonorrheal urethritis in 1935, treated with anterior urethral instillations of Protargol and later soundings. A urethral stricture developed, for which further urethral dilatations and prostatic massages had been administered during the period 1936 to 1945. In 1946 a nonspecific urethral discharge occurred, which was treated at yet another institution with penicillin, fever therapy, and endoscopic urethral fulguration. Despite these measures the urethral discharge recurred intermittently.

Physical examination revealed a muscular white male in no acute distress. No pathology of the head, cervical, or thoracic areas was noted. Blood pressure was 130/82. No palpable abdominal masses were present, nor was any costovertebral tenderness elicited. A minimal scoliosis with concavity toward the right was noted.

The external genitalia were those of a normal male. A small drop of mucoid, glairy material was noted at the external urethral meatus. On palpating the left hemiscrotum, the left vas was found to be thickened and irregularly beaded as far as it could be traced, to the external inguinal ring. This finding was not observed on the right side. Neither testis nor epididymis of either side was indurated or enlarged. On rectal palpation of the prostate, the gland was grade 1 to 1$^1/_2$ in size, movable, boggy in consistency, and contained no nodules or indurated areas. The right seminal vesicle was moderately distended but soft, movable, and minimally tender.

A gram-stained smear of the urethral discharge revealed numerous leukocytes and small numbers of gram-positive cocci. A two-glass test denoted a few comma-shaped shreds in the first and none in the second glass.

A profuse amount of secretion produced on prostatic massage contained 10 to 15 white blood cells per microscopic high power field. A number 24 French, latex, olivary-tipped catheter was easily passed to the bladder, and no residual urine was obtained. No pathologic elements were demonstrated on urinalysis, and a urine culture was reported as "no growth of organisms" on February 23, 1952.

Following this initial examination the patient delayed further investigation until June, 1952. At that time urethral discharge was no longer present. Preliminary roentgenographic studies of the abdomen and pelvis revealed a moderate left rotary scoliosis of the lumbar spine. Both kidneys appeared normal in size, shape, and position. Multiple beadlike calcifications were present bilaterally along the courses of the vasa deferentia, more marked on the left (Fig. 1).

Excretion urography (sodium iodomethamate, 20 cc. of 50 per cent solution) denoted early filling of the pelvicalyceal components but was insufficient for proper delineation. The vesical outline appeared roughened and serrated. Prior to cystoscopy and retrograde pyelography a radiographic and medical survey of the pulmonary system revealed no abnormalities. Although a Mantoux test was reported as 2 plus (positive), both urine cultures and smears were negative for acid-fast organisms, as were examinations of gastric washings. Blood urea nitrogen was reported as 11.1 mg. per cent and blood sugar 100 mg. per cent.

Cystoscopy in October, 1952, revealed minimal vesical trabeculation, a low-grade cystitis, early median bar formation, and a well-dilated annular stricture in the bulbomembranous portion of the urethra. Retrograde pyelograms were devoid of abnormality, and both smears and six-week cultures of the separate renal urines were reported as negative for acid-fast organisms.

Laboratory reports during the period surveyed follow: On April 24, 1953, fasting blood sugar was 100 mg. per cent, plasma cholesterol 200 mg. per cent, plasma phospholipids 90 mg. per cent. On June 4, 1953, plasma protein was reported as 6.35 Gm. per cent, serum albumin 5.3 Gm. per cent, serum globulin 1.05 Gm., serum acid phosphatase 1.5 Gutman units, serum alkaline phosphatase 7 King-Armstrong units, serum calcium 11.3 mg. per cent, and plasma phosphorus 4 mg. per cent.

Seminal fluid examination on June 5, 1953, revealed the following: quantity 3.5 cc.; color yellowish-gray; viscosity high; pH 7.5; motility of sperm at thirty minutes 20 per cent, at two hours zero; total sperm count 350,000 or 100,000 per cc.; liquefaction complete in thirty-five minutes. Wet smear specimens contained 10 to 20 white blood cells and 3 red blood cells per microscopic high power field. Dried, stained smears (Farris[13]) contained 65 to 70 per cent abnormal forms.

With a bland diet regimen, interdiction of alcohol, courses of prostatic massage, and interval urethral dilatations, all symptomatology was ameliorated. Prostatic secretion on June 16, 1953, contained 5 to 10 white blood cells per microscopic high power field.

Summary

1. The definition, pathogenesis, symptomatology, diagnostic aspects, therapeutic considerations, and prognosis of vasal calcification are discussed.
2. The ninety-seventh reported case is presented.
3. The importance of a comprehensive urologic and medical investigation is emphasized.
4. The incidence of this disorder will probably be noted more frequently; diabetics should undergo detailed studies.
5. The effect of this condition upon fertility has not been fully evaluated. The first reported seminal fluid examination in one of these individuals is described.

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Modern Medical Therapy Offers Hope for Alcoholic

In recent years there has been an increasing awareness that alcoholism is a serious medical problem affecting several million persons in the United States. The introduction of new drugs, the advance of psychiatric knowledge and technics, and the advent of Alcoholics Anonymous have caused the change in the attitude that formerly surrounded this affliction.

There is not now, and probably never will be, any simple method of turning an alcoholic into a nonalcoholic. As in any chronic illness, a period of long, hard work must be contemplated. The acute alcoholic state is a crisis in the course of chronic alcoholism. It is the period of uncontrolled drinking which interferes with a person's ability to function effectively. Most destructive acts and consequences usually occur during this period of drinking, which may last from a day or two to several months. When successfully managed, this phase of alcoholic disease offers an excellent opportunity for orientation of the patient to the real nature of his illness and to begin the over-all, long-range program necessary for its alleviation and the patient's rehabilitation.

The ideal place for treatment of the acutely alcoholic patient is a hospital. Hospitalization allows the physician complete control over the patient, it is particularly helpful in the abrupt withdrawal of alcohol, and it removes the patient from home situations which may have been instrumental in bringing about the acute drinking episode.

The first step in rehabilitation should be the correction of existing abnormalities of fluid balance, salt and nutritional deficiencies, and coexisting diseases. Symptoms associated with acute alcoholic intoxication, such as marked hyperexcitability, restlessness, and nausea or vomiting, also should be controlled.

The management of acute alcoholic intoxication has been radically changed by the introduction of such adrenal steroid hormones as aqueous extracts of the adrenal gland and corticotropin. Although the exact relationship of such hormones to alcoholism has not been conclusively demonstrated, their use may present striking and rapid improvement in such cases.

Marked tremor, tension feelings, and psychomotor hyperactivity symptoms may be significant features of the immediate postalcoholic state. These symptoms are very disturbing to the patient and are the most important cause of immediate resumption of drinking. Therefore, it is of the utmost importance that every effort be made to relieve them, and that the patient be kept under control until they have sufficiently disappeared.—*J.A.M.A., November 7, 1953*

SPECIAL ARTICLES

The Validity of Cause of Death as Given on Death Certificates with Special Reference to Geriatric Mortality

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MORTALITY statistics for the Westchester County Health District are routinely compiled separately by age and by cause of death. In assembling data concerning geriatrics in terms of the District, it appeared desirable to correlate cause of death with age for the older age groups. This was done by tabulating the certificates of recorded deaths for 1951 by ten-year groups beginning with age forty to forty-nine. The following comments are based on this tabulation.

Cause of death can of course be a very controversial subject. Elaborate classifications have been drawn up and revised from time to time with such attention to minutiae as to make them almost meaningless for all practical purposes. Even if such diversification were warranted on nosologic grounds, the perusal of a batch of death certificates should convince anyone of the futility of attempting to assign cause of death on such a complicated basis.

The principal difficulty in a study of mortality data, however, is of a more fundamental nature, having to do with the reliability of the opinion of the medical attendant as to the actual cause of death. This is subject to error not only through mistakes in clinical diagnosis but also from difficulty in evaluating the roles played by two or more major pathologic conditions from which the patient may have suffered. The latter problem, which is frequently met in geriatric medicine, would not necessarily be correctly solved even through postmortem examination.

Furthermore, in completing death certificates a debatable point arises as to what is meant by cause of death. If an individual is hit by a train or fatally burned, the physical factor involved in the death is self-evident. On the other hand, should a patient with cancer be operated on and die within a matter of a few days when the life expectancy prior to operation might have been estimated at least in months, should the death be ascribed to the cancer or to the operation? It might be argued that since the operation was performed because of the cancer, the death should be attributed to the latter since the patient would probably have died from the cancer sooner or later anyway. This is not basing mortality statistics on actual cause of death, however, but is confusing them with morbidity statistics. If operative interference results in the death of the patient, the death should be so ascribed.

Examples of principal cause of death of questionable validity follow: *chronic, ulcerative colitis* of fifteen years duration for a fifty-eight-year-old female with death occurring two days after operation for colectomy; *acute heart failure* for a sixty-year-old male the day following operation for ischiorectal abscess; *carcinoma of rectum* of two years duration for a seventy-seven-year-old male with pulmonary embolism occurring four days after operation; *bile peritonitis* developing five days after operation for cholelithiasis; *pulmonary edema* of two days duration for a sixty-eight-year-old female with an accompanying arteriosclerotic heart disease; *lobar pneumonia* of one day duration for a ninety-year-old female with an accompanying arteriosclerotic myocarditis; *cerebrovascular accident* for a seventy-three-year-old male two days postoperatively; *coronary occlusion of two years duration* for a forty-six-year-old male with diabetes.

As has been mentioned previously, not only may the diagnosis be in doubt, but, especially in older individuals suffering from chronic illness, more than one major pathologic condition may be present, thus further obscuring the issue. While it may not always be possible, even with an autopsy, to determine which of two or more diseases was the actual cause of death, the odds are not as great as they would be without a postmortem examination. After the manual tabulation of the death certificates for 1951 had gotten under way, it occurred to us that information relative to numbers of autopsies and place of death would be of some interest. These items were therefore included for the last half of the year. It was found that of 1,394 deaths 230 or 17 per cent had been followed by an autopsy. The number of deaths occurring in a hospital was 632 or 45 per cent.

As has been so aptly expressed by Maxcy, "the soundness of inferences drawn from biostatistical material can never exceed the level of accuracy of the original data." The figures that follow, are, there-

TABLE I.—LEADING CAUSES OF DEATH AT AGES OVER 39 YEARS (WESTCHESTER COUNTY HEALTH DISTRICT, 1951)

	Age					Sex		Total	
Cause	40 to 49	50 to 59	60 to 69	70 to 79	80 and Over	Male	Female	Number	Per Cent Total Over 39 Years
Heart disease	57	155	294	280	207	536	457	993	34.2
Cancer	62	139	176	166	64	296	311	607	20.9
Cerebral vascular lesions	19	50	89	122	76	152	204	356	12.3
Arteriosclerosis, general	1	5	29	92	150	123	154	277	9.5
Accidents	10	18	17	16	28	50	39	89	3.1
Operations	8	8	23	16	10	41	24	65	2.2
Hypertension	4	9	23	17	9	19	43	62	2.1
Nephritis	7	20	7	20	7	33	28	61	2.1
Pneumonia	1	7	8	19	25	28	32	60	2.1
Diabetes	3	2	19	6	9	17	22	39	1.3
Tuberculosis	11	13	7	5	2	27	11	38	1.3
Total	183	426	692	759	587	1,322	1,325	2,647	91.2
Total deaths over 39 years	217	485	745	825	631	1,480	1,423	2,903	100
Per cent	7.5	16.7	25.7	28.4	21.7			100	

fore, presented with certain reservations and primarily as the basis for comments on the statistical study of geriatric mortality (Table I).

Our tabulation included 2,903 death certificates for individuals over thirty-nine years of age. Ten certificates could not be classified because the cause of death was withheld pending laboratory examination and not subsequently filled in on the office copy or else was too indefinite. A few liberties were taken with the vital statistician's choice of cause of death where multiple diseases were listed, but in the main the official opinion was followed. The one rather wide divergence, and an admittedly debatable one, already alluded to has to do with those patients operated on shortly before death. Unless related information suggested that the patient's condition was most critical, as, let us say, with a strangulated hernia or acute appendicitis and immediate operation necessary as a lifesaving measure, the death was attributed to the operation. There were 65 such cases representing 2.2 per cent of the total tabulated deaths with almost twice as many in males as in females.

Sixty-eight different causes of death were listed, some of them being consolidations of subdivided or closely related diseased conditions. For example, all types of nephritis were put under the one common heading (61) as were also the anemias (7), and gastric and duodenal ulcers (16) were tabulated together. Because of the small numbers involved only those causes of death which each accounted for at least 1 per cent of total deaths over thirty-nine years were tabulated in detail.

The only variations of any note between the foregoing list and the usual order for all ages are the introduction of operations as a cause of death and the appearance of hypertension at such a high level of frequency. The latter rating is due to a higher evaluation placed on this condition as a cause of death than is usually accorded it.

Heart disease was tabulated by type for deaths occurring during the last half of the year. Of 457 deaths attributed to this cause, 47 per cent were recorded as due to coronary pathology, 37 per cent to arteriosclerosis, 9 per cent to hypertension, and 7 per cent to rheumatic damage. Thus, on the basis of this small sample, when we speak of heart disease, we really mean vascular disease to the extent of 84 per cent. "Cardiovascular" is a misleading term since it infers a localization of vascular pathology in the cardiac vessels which need not be the case and probably seldom is. "Cardiovascular-renal" is even a less satisfactory scrapbasket. If it means anything, it must refer to an underlying, more or less generalized vascular pathology which should be so stated.

Indeed, unless one takes the absurdly extreme position that we all die of heart disease since the heart always stops at death, one may well question how many of the deaths attributed to heart disease are actually due to disease of that organ per se. There would not of course be any question about such conditions as bacterial endocarditis, congenital defects, or residual damage from a previous attack of rheumatic fever. However, when we come to such generalized conditions as atherosclerosis and arteriosclerosis, which, although they may exert their most lethal effect on the heart, may involve the whole efferent vascular system, or with cor pulmonale, hypertensive cardiovascular disease, and thyrotoxic heart disease, all of which are secondary to pathologic conditions outside the heart, such a classification not only exaggerates the importance of the heart as a cause of death but serves, in many cases, to obscure the real etiologic factor or factors.

Tables such as that here presented serve to illustrate the preponderance of deaths actually due to disease of the blood vessels. If we combine 84 per cent of the deaths attributed to heart disease with those from cerebrovascular accidents and from arteriosclerosis, we obtain a total of 1,467 such deaths which is approximately 50 per cent of all deaths over thirty-nine years of age. The great killer is obviously our blood vessels rather than our hearts. If we could relieve or postpone vascular disease, the heart would, to that extent, take care of itself. When professional people speak of heart disease, they no doubt have this preponderant etiologic factor in mind. To the laity, however, the emphasis placed on heart disease as a cause of death could be and probably is very misleading.

Variations among age groups and between sexes for each of the causes of death listed in the foregoing table appear to be those customarily encountered. Only in the age group forty to forty-nine years is so-called heart disease credited with fewer deaths than some other cause which in this instance is cancer. As would be expected, arteriosclerosis gradually increases with advancing age to occupy second place as cause of death at age eighty years and over. Deaths from cerebrovascular diseases were most numerous at age seventy to seventy-nine years. It is interesting to note that although so-called heart disease, cerebral vascular lesions, and arteriosclerosis, individually, vary considerably between the two sexes, their totals by sex (male 811, female 815) are practically the same. This suggests a common basis in vascular pathology that manifests itself differently in the two sexes.

The marked increase in the number of individuals reaching old age has been heartening. Thus far, however, very little has been accomplished in extending the upper limits of human life. Until we gain greater knowledge concerning the prevention or amelioration of the chronic, degenerative diseases, and more especially atherosclerosis and arteriosclerosis, the outlook along this line will not be very promising. Much remains to be done, however, and can be done in middle age and early old age in attempting to arrest or slow the progress of chronic disabling disease, in rehabilitating physically incapacitated individuals, and in rendering the remaining years of old age more comfortable and satisfying.

Syphilis Control in Upstate New York

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Reported cases of both syphilis and gonorrhea in upstate New York increased in 1953 for the first time since 1946. This increase is not alarming, nor is it the purpose of this report to detract from the amazing gains of the past few years in the control of these diseases. It is important, however, to recognize facts which bar complacency about recent findings. Since syphilis is of major importance from a public health point of view, the following facts about its control in upstate New York should be known:

1. The number of syphilis cases reported for the first time in upstate New York in 1953 was 3,633, an increase of 5.6 per cent over the number of cases reported in 1952.
2. The decline of reported early syphilis continued in 1953 when only 64 cases in the primary or secondary stage and 94 asymptomatic cases of less than one year duration were reported. This represents a reduction of 37 per cent for primary and secondary syphilis and of 12 per cent for early latent syphilis from the 1952 reports.
3. Newly reported cases of late syphilis increased from 2,999 in 1952 to 3,257 in 1953, an increase in rates per 100,000 population from 41.4 in 1952 to 44.1 in 1953.
4. White patients composed 53 per cent of the reported late syphilis, and the highest number of whites in any one decade of age was in the group over sixty years of age. Similar findings occurred in 1952 and 1951. Late syphilis in nonwhites is diagnosed earlier than in whites. The largest number of nonwhites with late syphilis reported in any one decade of age has been between twenty-five and thirty-five years of age for the past ten years or more.
5. Congenital syphilis was reported for the first time in 161 individuals in 1953: 15 were of less than one year of age; nine were between one and ten years, and 137 were of more than ten years of age. Investigation showed that at least five of the infants reported as having congenital syphilis were probably not syphilitic, but there was an increase of three known infantile congenital syphilis cases in 1953 over the seven reported in 1952.

The chief cause for concern in the foregoing facts is the lateness with which syphilis is diagnosed in the great majority of cases. The disabling effects of late syphilis, when they occur, are costly to the individual and to the public. In spite of marked decreases since 1939, the present drain on public funds for the care of patients institutionalized because of syphilis is still great. According to the most recent available statistics, late syphilis was responsible for admissions to New York State Hospitals in a rate of 1.7 per 100,000 population in 1952. In 1939 the rate was 7.2, but the rate of 1.7 is too high. The late manifestations of syphilis can now be prevented in practically 100 per cent of cases if penicillin is given prior to the development of late signs and symptoms which usually require ten or more years to develop. Most of the patients now hospitalized because of late syphilis were infected fifteen or more years before the disease was diagnosed, and there is little hope of remedying this situation as long as syphilis is reported for the first time each year in more than 500 individuals over sixty years of age in upstate New York.

The fact that only 1.8 per cent of the total syphilis reported in upstate New York in 1953 was in the primary or secondary stage suggests that the true incidence of newly acquired syphilis was greater than reports indicate. In the entire nation in 1953, 5.4 per cent of the total syphilis was in the primary or secondary stage. To what extent syphilis is acquired without demonstrable early lesions is unknown, but obviously in upstate New York many patients have either failed to seek medical aid when early lesions occurred or have failed to note lesions. It is unlikely that this finding will be changed significantly in the near future. Therefore, if syphilis is to be discovered before late manifestations occur, the diagnosis must be made largely by serologic testing of asymptomatic patients. This means that such testing must be continued, especially in sections of the population where syphilis is most prevalent.

Because of the reduction in funds for venereal diseases, the New York State Laboratories are no longer prepared to do free routine pre-employment serologic tests for syphilis for all companies, but such tests will be made for every individual where there is the slightest suspicion of syphilis, regardless of the purpose for which the individual is being examined. Knowledge of the habits of a patient is often sufficient for taking blood for serologic tests for syphilis. If further increases in the prevalence of syphilis are to be avoided, the index of suspicion of syphilis must be kept at a high level.

The diagnosis and treatment of syphilis now depend on the alertness of private physicians more than at any time since 1936 when intensive control programs were started in upstate New York. This is true because it has become economically unsound to continue most of the specialized syphilis clinics formerly supported by public funds. Indigent patients with syphilis must be diagnosed and treated. In most counties of the State, fees to physicians are available for this purpose, and local health departments are prepared to give all possible assistance to private physicians and other medical agencies. Epidemiologic investigations of all early cases continue to be the responsibility of health departments, and they will be made promptly and confidentially as soon as reports of the cases are received.

Assuming that the diagnoses of congenital syphilis first reported in individuals over ten years of age are correct, it is obvious that syphilis was missed in many babies in upstate New York in past years. How many infantile cases were missed in 1953 is unknown, but the occurrence of ten reported cases is disturbing since most of the mothers of these babies had at least some prenatal care. Had these mothers received four or five injections of 1,200,000 units of procaine penicillin in oil and aluminum monostearate at daily or less frequent intervals, infection of the fetus would have been prevented, or if the fetus was already infected, the fetal syphilis in all probability would have been cured.

Press Conferences Can Be a Headache

To hold or not to hold a press conference, with or without refreshments, is, and always will be, a burning question in the field of medicine.

The A.M.A. has steadfastly held to a policy of holding just as few press conferences as necessary, feeling that a well-written story placed in the hands of the science reporter accomplishes far more than is usually accomplished at a quickly-called press conference attended by news people or writers who often are foreign to the workings of the medical profession, medical science, or medical economics.

This is borne out in a recent study by a Columbia University student taking a course in publicity. The student learned that city editors in the New York metropolitan area alone are invited to assign a reporter to cover an average of 308 cocktail parties a week, all of them labeled as "press conferences." On some days, the Commodore Hotel in New York City reports as many as 20 press conferences running simultaneously within its walls. Leading the pack on average for any week is the Waldorf-Astoria, with 50 cocktail parties and/or press conferences a week. The Savoy-Plaza held 30 cocktail party-press conferences during February, with the month of December usually running between 80 to 100, most of them during the holidays.

One can see that with such a volume of invitations received by newspapers each day, a story has to be mighty important or it never reaches the light of the printed page.—*Secretary's Letter, A.M.A.*

Beard's Legal Responsibility in Old Age
Its Possible Relationship to Sir William Osler's "Fixed Period" Address

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EDITOR'S NOTE: Contributions to the medical history of our State have commonly been published in small and out of the way journals and have missed their purpose because of a limited audience. Dr. Milton S. Lloyd's recent contribution on early records of the Richmond County Medical Society was originally published in the bulletin of that Society and had, therefore, not come to the attention of the membership of the State Society. For the same reason the following piece is reprinted from *The Academy Bookman* (volume 8, number 3, 1950) by permission of the Friends of the Rare Book Room of the New York Academy of Medicine, Inc. One is reminded vividly of the tragic misinterpretation of Sir William Osler's remarks by the newspapers of this country and cannot help but feel that there are still forces at work that delight in belittling the earnest efforts of physicians in magazines and daily papers. An often overlooked fact which bears on Sir William Osler's attitude toward old age is that his own mother lived to reach the century mark.

SEVERAL years ago in the course of accumulating material for studies in the medical history of old age, I came upon a slender volume containing a lecture before the Medico-Legal Society in March, 1873, by Dr. George M. Beard of New York, entitled *Legal Responsibility in Old Age, based on Researches into the Relation of Age to Work.*[1] The author's stated aim was to consider his topic under three main headings, namely, the effect of old age on the faculties, the impairment of men's responsibilities by the changes in the mental faculties resulting from age, and the best means of bringing the effects of age on the mental faculties to the attention of courts of justice. Beard studied "the law of the relation of age to work" by carefully scrutinizing the biographies of distinguished men and women of every historic period. He designated the decades of life with the names of metals according to their productiveness. Thus the golden decade was between thirty and forty years, the silver between forty and fifty years, the bronze between twenty and thirty years, and the iron between fifty and sixty years. He concluded that "70 per cent of the work of the world is done before forty-five, and 80 per cent before fifty. . . . The best period of fifteen years is between thirty and forty-five. The advantage of the bronze over the iron decade—of twenty and thirty over fifty and sixty—is very striking and will cause surprise." I was at once struck by the similarity of Beard's views with those of Sir William Osler as expressed in his *Fixed Period* address, and made a note on my Beard reference card, "Did Osler ever read this?"

The answer to this almost forgotten query came about a year ago when I had progressed in my reading to the early days of the twentieth century. Sir James Crichton-Browne (1840–1938), the distinguished neurologist, published in 1905 two addresses, *The Prevention of Senility and a Sanitary Outlook.*[2] The first of these was delivered July 20, 1905, before the Preventive Medicine Section of the London Congress of the Royal Institute of Health, almost exactly five months later than the *Fixed Period* address. In this lecture Sir James takes to task those who wish to do away with chronic invalids and all others who do not contribute to society. In making his points he indulges in several obviously sarcastic comments. He quickly makes sure, however, that listeners do not misunderstand his meaning.

> "Now I hope I shall not, like my friend Professor Osler, be identified with the views I am quoting in derision, and be denounced as an advocate of an atrocious short way with social dissenters or noncomformists. Professor Osler, as you doubtless know, with happy irony quoted from Anthony Trollope's novel, *The Fixed Period,* the suggestion of a college into which, at sixty years of age, men should retire for a year of contemplation before peaceful departure by chloroform; and by those who cannot see a joke that is not of elephantine dimensions he was saddled with this suggestion as a solemn expression of his own matured professional judgment, and had to defend himself against egregious attacks.
>
> "But while the Professor was merely playful in his reference to sexagenarian immolation, he was serious in his treatment of old age generally, and dealt with it in a manner which I cannot but regard as somewhat unjust. He maintained unjestingly, and following closely in the footsteps of the late Dr. George M. Beard of New York, that the effective moving vitalizing work of the world has been done between the ages of twenty-five and forty, and that above the latter age men are comparatively useless."

With my own suspicions thus strengthened by the evidence of a contemporary writer, I determined to pursue the possible relationship to the best of my ability. The Cushing biography contained no reference to Beard. Study of the catalogue of the Osler Library revealed no copy of Beard's book. Rereading the *Fixed Period* speech, I discovered two significant statements, "The comparative uselessness of men above forty years of age," and the following: "The effective, moving, vitalizing work of the world is done between the ages of twenty-five and forty. These fifteen golden years of plenty, the anabolic or constructive period in which there is always a balance in the mental bank and the credit is still good."[3] Both Osler and Beard speak of a "golden" period and of a productive fifteen years, but Osler's period runs from twenty-five to forty while Beard's extends from thirty to forty-five. The basic similarity of thought is evident and is further revealed in Osler's belief that the old are to be blamed for a large proportion of the evils of the world, and in Beard's statement that "men have not been supposed to be capable of governing others until their own brains have begun to degenerate and the fires of youth have spent half their force."

So much for the positive evidence. When I appealed to my good friend Archibald Malloch, who had never before failed me in a moment of bewilderment, he gently turned me over to Dr. W. W. Francis, curator of the Osler Library at the McGill University Medical School, who was most helpful and cooperative. In his recent paper, "Osler and the Reporters," Dr. Francis had printed for the first time a note of Sir William Osler, which he planned to accompany the original typescript of the *Fixed Period,* designated to be given to the Army Medical Library after his death.[4] This account of the address is of great interest as it differs materially from the Cushing version. For the present purpose only the following lines bear on our topic: ". . . I had always had the idea—and talked about it very much—that after forty no very great work was done. *From Montaigne I think I got it.* Then Anthony Trollope's novel, *The Fixed Period,* and a contemplation of the burdens, mistakes, and calamities of old age had made me pick upon sixty as the age when a man should get out of harness."

Beard's book was published in 1874 when Osler, twenty-four years of age, returning from his studies abroad, was given his first appointment at McGill, a period when we may assume without straining that he read everything that came along in the way of current medical literature. Since Beard's book had provoked wide discussion, he may very well have read it, impressed the contents upon his memory, and, as all of us do habitually, may in the course of the next thirty years have forgotten completely the source of these views, although he usually had an uncanny memory for his sources. That is precisely where we must now leave this fascinating question of the relationship of Beard's *Legal Responsibility in Old Age* to Osler's *Fixed Period* address, since no other positive evidence is as yet available to prove the tricks of memory.

To end this discussion at this point without some remarks on George Miller Beard (1839–1889) himself would be a gross injustice to the memory of a truly great New York physician. In his short lifetime Beard proved himself a highly original, courageous thinker whose range of interest and whose contributions to medicine and science are truly amazing. Excellent biographic material is available.[5,6] Tributes by his collaborator and friend Dr. A. D. Rockwell, as well as by a young man whom he befriended, Dr. Charles L. Dana, give us an excellent picture of his character.[7,8] He practiced neurology and made many studies of hypnosis and the psychoneuroses, generally being given credit for introducing the term "neurasthenia."[9] With Rockwell he produced a standard text on the medical uses of electricity widely read and translated[10] and at one time did experimental work with Thomas A. Edison. His study of the Salem witchcraft of 1692 was the first to characterize the accusing girls as "hysterics."[11] He published a study of Guiteau who murdered President Garfield proving that the unfortunate criminal was insane, a viewpoint exactly opposite to current public opinion.[12] He investigated and published on hay fever, seasickness, and the use of bromides in the therapy thereof.[13] He was very much interested in the nature of errors of observation and stressed their legal significance in the use of the evidence of eye witnesses.[14] His study of legal responsibility in old age covers a far wider field than I have thus far indicated. It deplores the degradation of expert testimony by lawyers and advocated a system whereby independent authorities would be appointed by judges. He questions the competence of elderly judges. In emphasizing the decline of mental power in old age, he realizes that he is running counter to long-cherished views:

> ". . . I am not unaware that this essay in the facts and views it presents, so to speak, takes up arms against the human race—that it attacks principles which are hoary with years and treasured as heirlooms in the hearts of men; that it seeks to undermine doctrines that are sweeter than life, dear as heaven, and in defense of which many have joyfully gone down to die . . ."[1]

This brief note on a possible source for the much debated *Fixed Period* address has, if nothing else, renewed an interest in the extraordinary talents of George Miller Beard, whose brilliant approaches to the problems of neurology, psychiatry, and psychology richly deserve the attention of more competent students of these fields of endeavor. If Sir William Osler was really indebted to Beard, we can truthfully say that he chose a wise mentor.

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Treatment of Poison Ivy

A somewhat hopeful note in the treatment of dermatitis from contact with poison ivy or poison oak through the use of hydrocortisone, a hormone drug, has been sounded by Drs. Leon Goldman and Robert H. Preston, Cincinnati. Hydrocortisone in tablet or ointment form was given to 47 persons suffering from poison ivy reactions with "much improvement" resulting in 36 cases, the doctors reported in the April 17 issue of the *J.A.M.A.*

The doctors stated that they found hydrocortisone 66 to 100 per cent more effective in such cases other than hormone drugs which have been used, and that treatment with hydrocortisone should begin as soon as possible after contact with the plants. Side reactions to the drug were mild, they added.

"Dermatitis from poison ivy or from poison oak is still a common form of seasonal dermatitis in many portions of the country," Drs. Goldman and Preston pointed out. "For the hypersensitive person, the skin reactions may be severe and may recur even with repeated episodes during a single season. Secondary complication, especially extensive pus producing infection, may give rise to serious internal involvement.

MINUTES OF THE COUNCIL

The following is a summary of the Minutes of the March, 1954, meeting of the Council of the Medical Society of the State of New York.

The Council met March 11, 1954, from 9:10 A.M. to 12:50 P.M. at the Manhattan Club, Madison Square, New York City. Dr. Andrew A. Eggston, president, presided.

Secretary's Report

Executive Committee.—Dr. Anderton reported that the Executive Committee considered the result of a resolution which was submitted to the Council a few months ago from Broome County. The resolution advocated that no unemployment benefits be paid to females who are twenty-eight weeks or more pregnant or during the period of eight weeks after delivery of their child, and that this policy be standardized throughout the State so that no discrimination will be shown one patient over another.

The Council referred this to the Public Health and Education Committee which reported to the Council a recommendation that it be "endorsed with enthusiasm."

The Secretary wrote to Mr. Milton Loysen, executive director of the Division of Placement and Unemployment Insurance of the State Department of Labor. He sent back a very courteous and explanatory letter which, in substance, says it is impossible to do what the Broome County Society wants, on account of the law. That was submitted to Dr. Curphey's committee and was returned with the suggestion that the Workmen's Compensation Bureau be requested to consider the matter.

Your secretary took it upon himself to request Dr. Kaliski for his opinion. He wrote his usual erudite consideration from an almost legal standpoint and thoroughly agreed with the State government department.

It was, therefore, recommended by the Executive Committee, first, that this Council rescind its approval of the Broome County Medical Society's aforesaid resolution.

> After discussion the Council *voted* to rescind its approval.

It was also recommended that this matter, including all the material, be returned to the Broome County Medical Society with an explanation.

> It *was voted* that this recommendation be approved.

> It *was voted* that the Executive Committee report be approved.

Dues Remission.—Upon recommendation of the Executive Committee, the Council voted to remit annual State dues of one member for 1950, 1951, and 1952, four members for 1953, and 11 members for 1954 because of illness; of two members for 1953 and 35 members for 1954 because of service in the armed forces; and of two members for 1954 for reasons of financial hardship. It was also voted to request remission of American Medical Association dues of one member for 1950, 1951, and 1952, six members for 1953, and 40 members for 1954 and to request exemption from further payment of American Medical Association dues of 13 members who are more than seventy years of age. Upon recommendation of the Executive Committee, the Council also voted to rescind its remission in February, 1954, of 1954 annual State dues of Dr. John F. Fairbairn, Jr., of Erie County, because of military service. Dr. Fairbairn was released from service in September, 1953.

General.—Dr. Anderton reported: "On November 12, 1953, the Council referred a request from Dr. Frank E. Wilson, director of the Washington office of the American Medical Association, to Mr. William F. Martin, counsel. The request was that our Society send word to each New York State representative and senator that we favor the United States of America withdrawing from the International Labor Organization. In June, 1953, the House of Delegates of the American Medical Association voted to favor such withdrawal. Mr. Martin found no objection to our complying with Dr. Wilson's request. Therefore, your secretary has so written at the direction of the Executive Committee.

"Preparations for the annual meeting are progressing on schedule. Much appreciation is due your officers and chairmen of committees, board, and commission for their reports. Judging from titles of papers and descriptions of scientific exhibits it is evident that the meeting will be of outstanding interest and educational value.

"Since your last meeting your secretary has attended meetings of the following committees: Legislation, Definition of Unprofessional Conduct, Public Health and Education, and Blood Banks, in New York City. He has attended the Coordinating Council on Nursing Problems, with Drs. Joseph A. Geis and Theodore Rousselot, and the Executive Committee of the Legislation Committee in Albany, and a hearing of the Moreland Act Commission on workmen's compensation costs in New York City. There are also scheduled, the day before the Council meets, a JOURNAL advertising conference and meetings of the Publication, Office Administration and Policies, and Executive Committees.

"Your attention is called to a report of the Council on Medical Service of the American Medical Association, 'Medical Care for the Indigent in New York State.' It is on pages 612 to 614 of the February 13, 1954, *Journal of the American Medical Association*, vol. 154, No. 7. Your secretary hopes you will instruct him to express the Society's commendation to the Council on Medical Service."

The secretary's report *was approved.*

The Treasurer's report was accepted.

Reports of Committees

Blood Banks Commission.—Dr. Dan Mellen, chairman, stated: "The Blood Banks as a new project is going along in a normal manner. We have over 200 individual members and over 100 institutional members.

"The Commission asked me to present the following recommendation, after which I hope Dr. Kenney will have something to say.

"At its March meeting the Commission recommended to the Council and Trustees of the Medical Society of the State of New York that an additional $12,000 be made available 'with the provision that any portion of this amount would be advanced to the Association as the need arises.' This request was in accordance with the over-all amount of starting capital approved by the Commission in 1952. The amount advanced was a loan so that the Association may reach a point of organization where it is self-sustaining. After this objective has been attained, the total starting capital advanced by the State Medical Society will be amortized and repaid over a period of years."

Dr. Kenney stated: "We have made considerable progress during the first four or five months. There have been almost insurmountable jobs, but we have reached a point now where we are on the verge of going into actual operation.

"There are two facets to our program. One is the clearing house, the blood exchange program; the other, the blood assurance program. It has been my feeling that the clearing house should take precedence and come into existence before we proceed with the assurance program. The difficulties in launching the clearing house have been great, and because of the mandate to push the pilot projects from Genesee County, the blood assurance program there is progressing at a greater speed than is the clearing house. However, the work in the last two months has brought the clearing house to the point where it can function. Our remaining obstacle is to obtain approval for the blood banks which are members of the Association actually to participate in the clearing house program.

"To that end we held a meeting in New York a week ago to which we invited over 40 directors of local blood banks. Thirty-one appeared. We obtained an almost unanimous consent from those gentlemen to participate. One delay will be to obtain approval of hospital administrators or trustees. In the meantime we authorized the clearing house to start, and we hope within the next week or ten days it will be operating.

"It would be apropos to put into the record the basic functions of this clearing house. The clearing house has four primary functions: (1) to allow blood banks requiring various types of blood to obtain them from other banks which have such blood in surplus supply, (2) to assist in the use of surplus blood before it is outdated, (3) to allow relatives and friends of patients to be bled anywhere in the State in order to facilitate replacement, and (4) to maintain a State-wide inventory of available blood so that in event of major catastrophe a supply of blood would be quickly made available to the stricken area. Those four principles are what we look to accomplish through the blood exchange program.

"The blood assurance program is a means of obtaining donors. We are not a blood bank. We are an organization to coordinate all blood activities throughout the State. It is our fundamental concept that the clearing house functions are in no way, nor is the Blood Banks Association in any way, to supplant the prerogatives of any individual blood bank. Each bank is to remain autonomous. If you will sell that one principle, it will go a long way toward correcting misunderstandings that have cropped up. I have already contacted the president of the Seventh District Branch, and I hope to clarify things in a short time.

"We are going to circulate a brochure which will outline in detail what I am saying here, within a few weeks. We have been fortunate in having the brochure financed through the generosity of the Ciba Pharmaceutical Company. We should be very grateful.

"We have an excellent scientific program for the morning of Thursday of the Convention week.

"The Genesee project is progressing rapidly. The bleeding will begin on March 22, and all organizational committees, both at the local and State levels, are in liaison. Dr. Jenks and others in the Batavia area and Dr. Young are all working with the blood banks and with the community and civilian organizations. They are optimistic. The first donors will be members of the Genesee County Medical Society. The second week the National Guard will be the donors, and then we have a whole list of organizations which will follow.

"The snag that has developed is taking care of surplus blood. We are making every effort to slow the bleeding so it will be coordinated with our ability to secure commitments for its reception. I have been very much encouraged because I just received a telephone message from Mr. Messinger in Buffalo and also a memorandum from the State office. Through the efforts of the men in the metropolitan area we hope to obtain many local banks to help us in the allocation of surplus blood.

"Regarding the request for the additional appropriation I would like to say that the original $12,000 that was allocated to the Blood Banks as a loan we have tried to spend with prudence. Over the period of six months we have spent approximately $6,000. The time ahead, with establishment of the bank, the demands of the clearing house, the blood assurance program, and its expansion, will bring an increase in the demand for funds. Therefore, we felt it was time to ask for another loan. We do not expect to use it immediately, but we would like to have it available when needed."

It *was voted* that the Council recommend to the Trustees that an additional loan of $12,000 be made available to Blood Banks Association of New York State "with the provision that any portion would be advanced to the Association as the need arises."

Constitution and Bylaws.—Dr. Frederick W. Williams, chairman, reported: "The amendments to the constitution and bylaws of the Medical Society of the County of Wayne have been processed by the secretary, the counsel, and your committee. We move the approval of these amendments."

Approval *was voted.*

Convention.—Dr. Thomas M. d'Angelo, chairman, moved that the Section on Ophthalmology and Otolaryngology be divided by the Council into two separate sections. He stated that it has been customary for the ophthalmologists and the otolaryngologists to present separate scientific programs at the annual meeting.

After discussion it *was voted* that this division be approved.

The Council approved Dr. d'Angelo's proposal to distribute a questionnaire at the annual meeting as a means by which members may indicate their opinions and desires with respect to the program and other phases of the convention.

After discussion the Council *approved* a request that tape recordings be made of certain scientific programs at the 1954 annual meeting.

After discussion the Council approved and referred to the Board of Trustees Dr. d'Angelo's suggestion that the Languild Convention Service be employed for the convenience of members and their wives attending the 1954 meeting. This service will contact members before they come to New York and will make arrangements for entertainment and for restaurant and hotel reservations. They will maintain a desk at the Statler where they will be ready to supply information regarding restaurants, amusements, and shops.

The report as a whole *was approved.*

Economics.—Dr. Renato J. Azzari, chairman, presented the following report of the Bureau of Medical Care Insurance, George P. Farrell, Director:

"Your director spoke before the Woman's Auxiliary to the Medical Society of the County of Kings, February 9, 1954, and the Woman's Auxiliary to the Medical Society of the County of Columbia on February 16, 1954. His topic at both meetings was 'The Different Philosophy of Medical Care Plans Operating Under Article IX-c of the Insurance Law.'

"The Council voted at its February 11, 1954, meeting to refer to the Bureau of Medical Care Insurance 'to take up with our Blue Shield Plans' a certain bill introduced in the New York State legislature, which would allow podiatrists to be recompensed by Blue Shield Plans for certain work on human feet. The bill was Senate Intro. 1121.

"On February 9, 1954, your director, at the request of Dr. Carlton E. Wertz, chairman of the Subcommittee on Medical Expense Insurance, sent a copy of Senate Intro. 1121 to Blue Shield Plan presidents in New York State, with a letter stating Dr. Wertz's disapproval of the bill.

"February 16, 1954, at Dr. Wertz's request, the plan presidents and members of the Subcommittee on Medical Expense Insurance were advised of the action taken by the Council at its February 11, 1954, meeting and the action taken by the Legislation Committee at its February 12, 1954, meeting, disapproving the bill. Subcommittee members were requested to report immediately to Dr. Wertz their feelings about this bill, so that he could advise Dr. Harold Smith, Executive Officer of the State Society."

Dr. Azzari stated: "I think no other comment is needed at this time, but I should like to have for the record the opposition of the chairman of this subcommittee to the Podiatry Bill in either its compulsory or permissive form. I move approval."

It *was voted* to approve the report.

Hospital and Professional Relations.—Dr. Harold F. Brown, chairman, reported that an invitation had been sent to the New York State Hospital Association to meet with the committee. The invitation was acknowledged, and the president of the Association, Mr. Clark, referred the matter to Dr. Anthony J. J. Rourke, chairman of their Committee on Professional Relations.

Dr. Brown also reported that a letter had been received from St. Francis Hospital in the Bronx regarding the employment of residents in anesthesia. He stated that action by his committee would await the receipt of further information which had been requested from the hospital.

Legislation.—Dr. James Greenough, chairman, reported: "On February 12, 1954, there was a meeting of the Committee on Legislation. Present, in addition to 13 members of the committee, were Drs. Eggston, Anderton, Winslow, Dorman, Smith, and Kaliski and Messrs. Beasley, Tracy, Martin, Byrnes, and Farrell.

"Some 30 bills were discussed. Action was taken as follows: S. 2505 to prevent the practice of medicine by hospitals, S. 772 to allow free choice of physician in medical indemnity expense plans, S. 1254 to allow municipal employes choice of indemnity plan, and S. 1644 the injunction bill were strongly approved, and the Legislation Bureau was instructed to consider these bills as the most important in this year's legislative program."

Approval *was voted* for this part of the report.

"Approved were amendments to S. 11 establishing community health boards which already has passed; S. 239 to include physicians in the New York City

Fire Department in pension plans; S. 786 limiting the delay of certain physiotherapists to register; S. 905 to prohibit the practice of optometry by corporations; S. 1291 extending malpractice protection to interns and residents in municipal hospitals; S. 1345 placing arbitration of workmen's compensation bills in the county of the physician instead of the county of the claimant; S. 1346 eliminating the medical practice committees in workmen's compensation; S. 1356 allowing proration of medical fees by medical indemnity expense plans; S. 1479 creating a commission to study licensure in the healing arts; and S. 1789 including mental and nervous disorders in the definition of medical practice. Most are our own bills."

This portion of the report *was adopted.*

"Opposed were S. 265, A. 188, and A. 995 extending medical insurance to State employes (since there was no free choice of plan or physician); S. 281 allowing physicians to free clinics $2,500 additional income tax exemption; A. 452 to license x-ray technicians (and it was recommended to the Council to encourage the New York State Roentgen Ray Society to form a technicians' society granting certificates similar to those of the pathology technicians); S. 629 alteration of the workmen's compensation law in relation to payment of medical and hospital fees (as unworkable and probably unconstitutional); A. 1381 making it compulsory to include podiatrists in medical indemnity expense plans; A. 1390 to allow dispensing of spheric eyeglasses in retail stores; S. 1325 to include medical and hospital fees in disability benefits; and S. 1466 the chiropractic bill."

This portion of the report *was adopted.*

"No action was taken on A. 1231 another bill to allow free choice of indemnity plan; S. 514 establishing a consumers' bureau; S. 631 to allow physiotherapists to practice for six months while waiting to take the licensing examination; A. 1230 similar to S. 772 free choice of physician; S. 809 to allow free choice of disability plan; A. 1233 proration of fees in any case (and to refer this to the House of Delegates in the annual report for further study and directive).

"You should disassociate this from proration of fees in indemnity cases. This was a bill to prorate bills in any medical case, and we felt that we could not take any action but that the House of Delegates should have it brought to their attention.

"No action was taken on S. 981 to allow sale of patent medicines in other than drug stores until similar bills are introduced, and S. 1408 to make illegal practice of medicine a felony."

This portion also *was adopted.*

"The executive officer and the legislative counsel have been following directives of the committee. Conferences have been held with them by your chairman.

"On March 1, 1954, your chairman and executive officer attended a hearing in Albany before the Joint Insurance Committee with many other members of the Society. Dr. Ingegno of Kings, Dr. Heyd of United Medical Service, and Mr. Potter, executive secretary of the Medical Society of the County of New York, presented arguments in favor of the Bauer-Bannigan Bill, Senate Intro. 772, Assembly Intro. 731, to allow free choice of physician in medical expense indemnity plans."

After discussion it *was voted* that the Council send a letter signed by its members to the Rules Committee of the Assembly, supporting the Bauer-Bannigan Bill.

Dr. Eggston stated: "To carry out the above action, our secretary has promptly written the following, to be signed. I thought we should read it instead of having everybody stop to do so before he signed:

'To the Chairman of the Rules Committee of the Assembly of the New York State Legislature.

'Dear Sir:

'We, the members of the Council of the Medical Society of the State of New York, have today unanimously voted to urge your Committee's favorable action on Assembly Introductory Bill No. 731, Mr. Bannigan. We represent more than 23,000 physicians in New York State.

'Yours respectfully,'

then signed with your address."

The letter was then signed by the Council members.

Dr. Greenough continued: "Dr Anderton attended a meeting of the executive committee of the Legislation Committee in Albany on March 4, 1954. The situation of the ten Society bills was thoroughly reviewed.

"The first order of business was a review of the Society-sponsored bills: S. 772, Bauer; A. 731, Bannigan, to amend Section 250 of the Insurance Law to allow free choice of physician under medical expense indemnity plans; S. 1254, Condon; A. 2027, Dwyer, to amend Section 250 of the Insurance Law to allow free choice of medical expense indemnity plan when the State or a subdivision pays part or all of the premium; and S. 2505, Milmoe, A. 2856, Pino, to amend the general business law to prohibit employment of physicians or surgeons by hospitals on salary to diagnose and treat patients for charge or fee.

"S. 1587, MacDonald, A. 2025, Curto, is an amendment to subdivision 3, Section 4210 of the Public Health Law liberalizing the obtaining of permission for autopsies. We were prepared to introduce an amendment similar to the Wisconsin law as directed by the House of Delegates. Earlier in the session we discovered that the New York Hospital Association was prepared to introduce a similar amendment. It appeared good policy to cooperate, and after securing some alterations in their proposed amendment, although we were not wholly satisfied, we agreed to cooperate. Unfortunately, their draft contains matter which is opposed by the undertakers and the public. There is little chance of passage. Having cooperated with the hospitals, we are now introducing our own amendment through the Rules Committee, and we hope this draft will not have opposition and that the Hospital Association will reciprocate by aiding us.

"S. 1291, McCaffrey, A. 2039, Kapelman, amends Section 50-d of the General Municipal Law to include resident physicians and interns under municipal liability for malpractice. As originally written, this included deaths, but the State Council of Mayors objected on the basis of cost. It has been amended by deletion of damages for death, and we hope to obtain its passage.

"S. 1654, Metcalf, amends Section 6513 of the Education Law to permit injunction proceedings against violators of the law. The status of this bill is uncertain.

"S. 1789, Greenberg, amends Subdivision 4, Section 6501, of the Education Law to include diagnosis and treatment of mental and nervous disorders in the definition of practice of medicine. There has been a violent protest from ministers, counsellors, and psychologists against this bill as depriving them of any function of psychologic counseling. The Education Department is opposed to the bill as difficult to administer. It will probably not come out of committee. However, as a result of its introduction, the ground has been prepared for a comprehensive study to define and limit the fields of psychiatry, psychology, and counseling. If followed up, legislative action could be obtained next year satisfactory to all groups and of the type which will eliminate quackery.

"S. 1356, Brydges, A. 1654, Brady, amends paragraph (f), Subdivision 2, Section 6514, of the Education Law to allow proration of fees from a medical expense indemnity corporation among the physicians rendering care. This has passed both houses and will go to the Governor as a ten or thirty-day bill. That is the only successful thing I have to report. We will endeavor to obtain the Governor's signature.

"S. 1345, Donovan, A. 2105, McDonnell, amends subdivision 2, Section 13g of the Workmen's Compensation Law altering the place of arbitration from the county where the claimant resides to the county in which the doctor resides. There is hope that this bill will be passed.

"S. 1346, Donovan, A. 2104, McDonnell, amends Section 13b of the Workmen's Compensation Law to abolish the Medical Practice Committee in counties with population over one million and restore the function to the county medical societies. This bill will probably die in committee because it is controversial; it is opposed to the policy of the administration, which includes plans to extend the Medical Practice Committee to the entire State. As a result of the Moreland Commission's investigation, the entire Workmen's Compensation Law may be rewritten next year.

"The committee heard Mr. Jones, counsel for the State Nursing Association, in regard to S. 1556, Brydges, A. 1823, Austin, to provide 50 state scholarships for advanced nursing education; and S. 1557, Brydges, A. 1922, TenEyck, to establish 500 State scholarships for basic nursing training. There appears little likelihood that these bills will come out of committee as the Budget Director states there is not sufficient money to finance this program.

"The Pharmaceutical Association has asked us to oppose S. 2585, Pierce, A. 3089, Waters, amending Subdivision 2 of Section 6815 of the Education Law to permit the sale of proprietary medicines meeting Federal food, drug, and cosmetic requirements in other than drugstores. There appears to be little chance of this bill moving out of Committee. Under these circumstances, although we would like to help the pharmacists, it was decided to take no action unless the bills started to move. In this event we would oppose them. Dr. Smith was instructed to notify the Pharmaceutical Association of our action."

This portion of the report *was adopted.*

Dr. Greenough continued: "Much work has been done by the Legislation Bureau, the committee, and the counsel in regard to S. 1121, Anderson, A. 1386, Wilson, which would compel medical expense indemnity plans to pay podiatrists for treatment they were allowed to do and for which a fee is provided. The State Society opposed these bills which would compel Blue Shield plans to include podiatrists. The podiatrists have amended these bills to make them permissive instead of compulsory. Your committee decided not to oppose such amended bills.

"May I say that was done after a great deal of discussion. Dr. Smith wrote to Dr. Wertz, Mr. Farrell, and various other people who are interested in this question. Our opposition to the podiatrists has been on compulsion, as you will remember at the last meeting. When they amended it to say they *could* be included, we have no more reason for opposition. It was felt that this left it in such a situation that if the Blue Shield plans wanted to take it up, they could, but if they did not want to take it up, they did not have to and how we could oppose that we did not see."

After discussion this portion of the report *was approved.*

Dr. Greenough, continuing his report, stated: S. 11, Mitchell, A. 4, Russo, amending the Mental Hygiene Law to establish community mental health services, has become law. The administration has promised to amend the law as proposed by the State Society at this session. At the time of our meeting we could not obtain information in regard to the wording but were told that the amendments would be introduced shortly after March 8.

"S. 1456, Peterson, A. 1738, Noonan, the chiropractic bill, should not come out of committee. It is controversial and opposed by the Education Department as being impossible of administration. We are, however, watching it carefully.

"S. 1915, Milmoe, A. 1390, Brady, allowing retail stores to sell spheric lens eyeglasses, was opposed last year, and we are opposing it again. There seems to be little chance of its passage.

"S. 2057, Hatfield, to amend the Workmen's Compensation Law to permit employers and carriers to recommend rehabilitation treatment to claimants, was opposed as too indefinite.

"The committee then went over the bills which had been introduced since the Legislation Committee meeting on February 12, 1954. The following were picked out as actionable:

"S. 1833, A. 1917, Mrs. Strong, changing the requirements for the Commissioner of Mental Hygiene and to include at least five years spent as administrative head of a public mental institution. It was felt that this requirement would limit appointment to members of the mental hygiene department and thus limit the Governor's choice materially. This point will be discussed with the administration by Dr. Smith.

"S. 1642, Condon, A. 2014, Wilson, changes the State board of examiners in physiotherapy from physicians to physiotherapists. The committee voted to oppose this bill strongly.

"The committee took no action on A. 1768, a bill which I referred to before, introduced by Mr. Rabin, to create a temporary State commission to study the medical practice act.

"We, ourselves, are studying the medical practice act. It would seem that a long range study of the entire subject should be continued before a State commission took it up.

"The committee finally discussed a suggestion that the Executive Committee, with Dr. Smith and Mr. Beasley, be prepared to be in session during the next meeting of the House of Delegates. Each resolution involving possible legislative action would be noted and the reference committee to which it is sent. We would meet to discuss the resolutions, especially as to history, feasibility, and likelihood of passage and advise the appropriate reference committee.

The Council *voted* to approve this plan.

It *was voted* to adopt the report as a whole as amended.

Dr. Greenough stated that the Attorney General's Office was considering a decision in regard to the legality of hospitals practicing medicine. He suggested that in order to avoid premature publication of such an opinion, Dr. Eggston be requested to write a letter to Mr. Robert C. Killough, Jr., of the State Education Department, informing him that this Society, through its special committee on hospital and professional relations, has extended an invitation to the New York State Hospital Association to engage in joint discussions of the subject.

After discussion it *was voted* that such letter be written.

Medical Licensure and Medical Service.—*Rural Medical Service Subcommittee*—Dr. Denver M. Vickers, chairman, stated: "This is for information. Last week I attended the meeting of the Council on Rural Medicine of the American Medical Association. The first part of the meeting was for doctors only. One of the big problems in rural medicine throughout the country is the prepayment medical care plan. It has been difficult to sell Blue Cross and Blue Shield to the farmers. I was pleased to bring to them some of the information that George Farrell gave me on the plans and the results we have had in New York State, where there is a fairly large percentage of farmers enrolled in Blue Cross and Blue Shield.

"The remainder of the program was open to doctors, health officers, social workers, nutrition specialists, insurance officials, masters of granges and farm bureaus, and a number from some of the western universities. In general, we have heard more and more about the doctors being interested in community affairs, and it seemed very appropriate that physicians brought to this group some very representative farm groups. With transportation as it is today, rural medicine cannot be defined as accurately as it used to be. People are moving into the country, and some doctors who practice in the city go to the country. It was also brought out the reverse is true; many patients who could be cared for adequately by rural practitioners drive into the city.

"They showed us a talking movie on 'Just Us Girls.' It is the story of a rural hospital in Colorado which was hit by the lack of nursing personnel, and the director interested the high school girls. The film will be available for anybody having a similar problem. The film was produced largely by the Colorado Blue Cross and Blue Shield.

"There was another story of a little hospital in South Dakota which was organized by the community, a 25-bed hospital. It only cost $50,000. Without any Federal help, they got together, and some farmers dug the cellar, some masons did the mason work. They had to buy essential materials, but the movie showed what a small community can do.

"Dr. McCormick, president of the American Medical Association, spoke of the shortage of doctors in rural communities as being not a real shortage of physicians, but occasionally being a difficulty in distribution."

Nursing Education.—Dr. Joseph A. Geis, chairman, reported: "On February 23 your committee met with the Coordinating Council on Nursing Problems. At that time they elected officers for another year. As the Council was started originally, and Dr. Dickson of this organization was the original president, and continued for four years representing the physicians, and as Miss Manley from the Nurses Association was president for the last three years, this time we elected a man from the Hospital Association.

"Several things were taken up, but the main question was a change of name. The American Medical Association, the American Hospital Association, and the national nursing associations have formed a Commission on Improvement of the Care of the Patient, and they requested that this be brought down to a state level, and then from there to a local level. This Coordinating Council has in the past several years been doing this same type of work. As a result of a letter that came to each one of the State organizations and had been referred to the members of the Coordinating Council by their organizations, it was voted, if we could obtain the approval of our parent bodies, to change the name of our Coordinating Council to the Commission for Improvement of the Care of the Patient. We would then be the state organization and continue what we had already started in setting up bodies on a local level. The parent organizations are asked for approval of the change of name. There is no change of objective. We will meet next month. Therefore I am requesting permission to report that the Medical Society of the State of New York is in favor of this change of name."

It *was voted* that the report be accepted and that the change of name be approved.

Office Administration and Policies.—Dr. John J. Masterson, chairman, reported that at the meeting of the Office Administration and Policies Committee on March 10, 1954, various personnel matters were approved.

It *was voted* to approve the report.

Publication.—Dr. Masterson, chairman, reported: "At the meeting of the Publication Committee on March 10, 1954, it was decided to include a listing of the Union Health Center in the 1955 *Directory*.

"It was decided to print once a month in the JOURNAL changes in doctors' telephone numbers and addresses.

"There was discussion of the motion passed at the previous meeting regarding the use of standard colors in the JOURNAL. It was the sense of the meeting that this motion be tabled and that, before any commitments were made, the matter be studied from the financial aspect. It was decided that the business manager be prepared to provide such a study at the September meeting of the Committee.

"It was decided to approve the use of color in the editorial section of the JOURNAL.

"It was decided to approve the plan of having a member of the staff assist Miss Lewis at the Annual Meeting in connection with resolutions.

"Dr. Redway reported that Albany Medical College will provide material for an early issue of the JOURNAL.

"It was moved, seconded, and passed to approve the printing of corrections of 1953 *Directory* errors in the JOURNAL. It was noted that there were only 45 errors in the entire book, which I think speaks well for the good work of the *Directory* staff in preparing the volume."

After discussion it *was voted* that the report be approved.

Planning Committee for Medical Policies.—Dr. Peter J. Di Natale, chairman, presented the annual report of the committee, which appeared in the April 15, 1954, JOURNAL.

The report *was approved*.

Public Health and Education.—Dr. Theodore J. Curphey, chairman, reported that he had attended four meetings and had arranged 17 postgraduate lectures in eight counties.

He gave a short report of the discussion relating to postgraduate education at the Annual Congress on Medical Education and Licensure in Chicago on February 8. On the basis of a survey of information obtained from interviews with 200 physicians and 5,400 replies to 18,000 questionnaires sent to physicians, it was stated that general practitioners are more interested in such courses than are specialists, that most of the men who take them have been out of medical school ten to fifteen years, that definite objectives should be kept in view when planning courses, that refresher courses emphasizing the practical side of medicine are needed, and that medical schools should play a larger role in postgraduate education. It was also stated that participative courses, particularly round table discussions, and didactic courses should be offered and that instruction should be presented in intermittent courses of the circuit type by traveling teams of physicians. Several other methods of postgraduate education were reported on. They included early morning medical television programs on the regular channels, three-day, midweek courses offered in the daytime, home study courses in subjects adapted to such presentation, and tape recordings of summaries of current literature.

Dr. Curphey stated that although the weather made it necessary to cancel the meeting of the Executive Committee of the Citizens' Health Council called for February 18, those members who were able to reach Auburn held an informal meeting and in the evening attended a panel discussion of child guidance and youth counseling sponsored by the Cayuga County Health Association, the Council on Social Agencies, and the Citizens' Health Council. Dr. Carlton E. Wertz was a panel member.

Dr. Curphey again presented the resolution of the Colorado State Medical Society relative to safety engineering in motor cars, which was tabled by the Council at its February meeting. After discussion, Dr. Curphey stated he would include this resolution as part of his supplementary report so that it could be considered by a reference committee in the House of Delegates.

He reported unanimous approval by the Subcommittee on School Health of a resolution, originating in the New York State Academy of General Practice, which was presented to the Council at its February meeting. The resolution suggests a four-year term of office for part-time school medical inspectors or physicians and calls for the establishment of standards for the qualifications and salary of such physicians. The Council endorsed the resolution and instructed that copies be sent to the Commissioner of Education, the New York State School Physicians Association, and the Chancellor of the Board of Regents.

Dr. Curphey stated that an interim report of the *ad hoc* committee to study the laws of the State with respect to the practice of laboratory medicine would be presented.

He transmitted a request of the State Health Department for the support of this Society for polio vaccine trials to be undertaken this spring among children of the first, second, and third grades in public schools.

After discussion it *was voted* that the Medical Society of the State of New York support the program of polio vaccine trials in this State.

Upon recommendation of the joint meeting of the committee and representatives of the State Health Department, as reported by Dr. Curphey, the Council voted to approve proposed administrative changes in the department's upstate premature infant care program.

Dr. Curphey stated that at this joint meeting the Health Department representatives reported that the department wishes to have incorporated in the Sanitary Code a provision specifically prohibiting health officers from public release of information referring to communicable disease reports, particularly with respect to venereal disease, tuberculosis, and crippled children. He also stated that the committee had approved proposals by the Health Department to combine report cards on cerebral palsy, communicable disease, venereal disease, and cancer into one form and to conduct a sampling survey of about 3,000 births last year to determine how well the supplemental medical information asked on the new type of birth certificate is being filled in. It was agreed at the joint meeting to recommend to the Council approval of the proposed study of lung cancer by the case history method on the part of the State Health Department. At that meeting, also, Dr. Levin reported a proposal to follow up Selective Service rejectees in this State by calling to their attention the existence of any condition which should be treated by a physician. The assent of the Washington Office of Selective Service has been procured if a satisfactory method can be worked out. It was suggested by Dr. Givan that the physician, when known, should be informed of the condition as well. It was decided that after the details were worked out, we recommend to the Council approval of the plan.

It was voted to adopt the report.

Dr. Curphey then requested the Council's permission to include a paper by Dr. Murray Steele in the annual meeting program. Since Dr. Steele is not a member of this Society, his inclusion in the program conflicts with the regulations of the Convention Committee.

Dr. Anderton stated that since Dr. Steele's paper had been accepted some time ago for presentation at the annual meeting, its deletion from the program would now seem discourteous. He emphasized the statement that its inclusion should not be regarded as establishing a precedent and that the Convention Committee next year ought to be carefully instructed again, as they are each year and were this year, in regard to not having papers by New Yorkers who are not members of the State Society.

After discussion it *was voted* to adopt the report as a whole.

Public Relations.—Dr. Floyd S. Winslow, chairman, presented the following report: "Since the last Council meeting progress has been made in developing a guide for cooperation between the medical profession and the radio, press, and television.

"In cooperation with the Subcommittee on Codes of Cooperation, the Public and Professional Relations Bureau arranged two meetings which were held on February 12 at the Hotel Biltmore, New York City. The first, in the morning, was attended by the subcommittee members: Drs. John McClintock, chairman; John D. Naples and Henry Fineberg; your chairman; Mr. Miebach, and invited guests. The purpose was to discuss the revised version of the proposed code and to make plans for the conference with representatives of the various communication fields scheduled for the afternoon.

"This second meeting was attended by about 30 leaders of radio, press, and television and representatives of this society. Led by Dr. McClintock, who acted as chairman, the participants spent about two and one half hours debating the 11-page 'Guide for Cooperation.' The consensus was that a great deal of progress had been made towards a working agreement. As a result of this meeting, plans have been made to hold additional conferences with smaller segments of the information media, such as radio and television people, reporters, magazine writers, and other groups.

"Following the shipment of the first four of the 12-pamphlet series on medical economic subjects and the publication of descriptions in the *Newsletter*, requests have come from various parts of the nation asking for copies. Some were from Florida State Medical Association, Connecticut State Medical Association, Santa Clara County Medical Society (California), Hartford County Medical Association (Connecticut), Kentucky State Medical Association, Missouri State Medical Association, Academy of Medicine of Cincinnati, American Academy of General Practice, *Medical Economics*, State University of New York College of Medicine, and the American Medical Association.

"At the time this report was written, 35 county medical societies had requested more than one million copies of the pamphlets. Since 31 societies had placed orders at the time of the last report, this means an increase of four during the month.

"Representatives of the Bureau attended several meetings of the Society's Council Committees. Among these were the Legislation Committee February 12, and the Public Health and Education Committee February 25. Mr. Miebach also was present at the Eastern Regional Legislative Conference conducted by the American Medical Association, February 13, in New York City.

"News releases were mailed announcing postgraduate lectures scheduled to be held in Broome, Chemung, Ontario, Suffolk, and Sullivan Counties.

"There were two mailings to county society public relations chairmen. The first contained a booklet entitled 'Guide to Membership,' prepared by the Hartford (Connecticut) Medical Association acquainting its members with the organization's services. The second included 'What You Should Know About Your Mediation Committee of the Medical Society of the County of Erie' (New York) and an outline of a public relations program entitled 'The Public Relations of County Medical Societies' published by the Illinois State Medical Society.

"Continuing its policy of cooperation with other groups, the Bureau assisted the Chamber of Commerce of the State of New York which requested information on the subject of free choice of physician in the doctor-patient relationship.

"Assistance also was given to the Woman's Auxiliary in reviewing *Distaff* copy, composing and distributing letters to various chairmen and preparing materials for several projects.

"As a means of developing public interest in speakers bureaus maintained by county medical societies, the Speakers Service is working on a new leaflet, which will explain the purpose and functions of these groups.

"The field representatives, Mr. Messinger, Mr. Tracey, and Mr. Walsh, are making a survey of all public relations activities being conducted by county medical societies. For this purpose, the Bureau has prepared a nine-page check-list containing some 18 fields in which societies can be active. The field men also are distributing a 'Target for Today,' containing a list of basic public relations projects, such as emergency service, which all societies should be conducting. The 'Target' also enumerates 20 supplemental projects, such as medical forums cosponsored with newspapers, which county societies might wish to undertake."

It *was voted* to adopt the report.

Veterans Administration, Liaison with.—Dr. Herbert H. Bauckus, chairman, stated: "I would like to report that I have conferred with Coordinator O'Kane and with the head of the American Legion in the Bronx, Dr. George Schwartz. I discussed with Dr. Schwartz the proposition of veteran care from the standpoint of how Legion members feel about it. What I am coming to is that you recall last year the House of Delegates passed a resolution stating that if there were any reduction in the veteran care because of lack of funds, that reduction should first apply to the nonservice-connected case. We went as far as that, and the House of Delegates approved that resolution, and it was sent to the American Medical Association. At its annual meeting the American Medical Association received several resolutions on the subject, and they finally made the recommendation that you have had discussed here, that we oppose care by the Veterans Administration to nonservice-connected cases except temporarily psychiatry and tuberculosis."

It *was voted* that the report be received.

Dr. Bauckus stated: "I believe that this subject should be presented before the House of Delegates so that they may have a better understanding about the wishes of the American Medical Association and what our own desires are."

Dr. Eggston suggested that Dr. Bauckus initiate a resolution in the House of Delegates crystallizing what he wants done.

Woman's Auxiliary.—Dr. Edward T. Wentworth, chairman, stated: "The women are busy carrying out the plans which have been approved. There is a little work being done in planning for the next State fair exhibit. This is an informational report only."

Workmen's Compensation.—Dr. Gerald D. Dorman, chairman, reported: "This Workmen's Compensation report is mostly for information. We had an all day meeting of the Advisory Board with Miss Mary Donlon on March 3. Commissioner Dawson was there, and there was a discussion of change in procedure in handling the cases before the Compensation Boards to try and expedite the process and to try to cut down the number of hearings that each case would have to have. Miss Mary Donlon particularly requested the cooperation of the doctors in appearing when they were called and in dispatching their reports promptly, so that the hearings would not have to be put off. Postponement tends to increase the calendars and increase the number of cases. They are going to have preliminary hearings where they can and schedule cases for trial only when all of the facts are in and the case can be closed.

"Miss Mary Donlon did state on the rehabilitation problem that she considers that rehabilitation starts with diagnosis and first treatment of a case and that it continues until the patient is restored to full health. She also admitted that the stand which the director of our Compensation Bureau has held, that no new legislation is needed in order to implement the care of cases in rehabilitation, is true. In view of the question of rehabilitation, it is something that perhaps should be considered by the Council as to whether there should be a subcommittee to define rehabilitation and clear up the vagueness which at present exists. This is not purely a matter of compensation medicine because rehabilitation goes far beyond compensation medicine, but we are going to be in a position where sooner or later we are going to have to define the field of rehabilitation perhaps a little more closely than to say it starts with the first diagnosis of the patient, although we may agree that in the over-all view of rehabilitation that is a fair point at which it must start.

"Tomorrow noon, the director of compensation, the chairman of your compensation committee, Secretary Anderton, and, I hope, President Eggston are going to meet with Commissioner Archie Dawson and his counsel for an informal luncheon, not because we have any particular items that we have to take up, but in order to get better acquainted and look over the situation and see if there are any points on which we should clarify matters.

"I move acceptance of this report."

The report *was accepted*.

New Business

It *was voted* that Dr. John H. Iselin, Jr., Dr. Anderton's assistant, be invited to attend Council meetings.

NECROLOGY

Anthony Bonsignore, M.D., of Brooklyn, died of a cerebral hemorrhage at his home on March 19. He was seventy-five years old. Dr. Bonsignore was born and educated in Italy, receiving his medical degree from Catania Medical College in 1905. After serving as an attaché of the Italian Consulate in New York City, Dr. Bonsignore began the practice of medicine in this country in 1908.

Clayton Milo Brown, M.D., of Buffalo, died on March 19 at the age of eighty-two. He graduated from the University of Buffalo School of Medicine in 1896 and studied in Vienna for a year in 1907.

Dr. Brown was a Diplomate of the American Board of Otolaryngology and a Fellow of the American College of Surgeons. He was a member of the American Academy of Ophthalmology and Otolaryngology, the American Laryngological, Rhinological, and Otological Society, and the Buffalo Academy of Medicine.

Dr. Brown was consulting otolaryngologist at the Millard Fillmore and Buffalo General Hospitals and consulting rhinolaryngologist at Children's Hospital.

He belonged to the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Earl C. Chester, M.D., of New York City, died suddenly on April 12 while working in the garden of his summer home at Croton Falls. Dr. Chester was fifty-two. He received his medical degree from the medical school of the University of Oklahoma in 1928 and interned at Neurological Institute.

Dr. Chester was a Diplomate of the American Board of Psychiatry and Neurology and belonged to the Association for Research in Nervous and Mental Diseases, and the New York Neurological Society. He was associate attending neurologist at Presbyterian and Vanderbilt Clinic, attending neurologist at St. Elizabeth's Hospital, consulting neurologist at St. Barnabas Hospital, and attending speech aphasia neurologist and psychiatrist at the Veterans Administration Hospital in the Bronx.

Dr. Chester was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Samuel Cotler, M.D. of New York City, died on January 18 at the age of forty-eight. Dr. Cotler graduated from New York Homeopathic Medical School in 1931. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Archibald Irving Cullen, M.D., of Altamont, died on April 3 at the age of seventy-four. Dr. Cullen graduated from Albany Medical College in 1903. He was a member of the Albany County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Carl Greenfeld, M.D., of New York City and Long Beach, died on February 16 at Beth Israel Hospital of heart disease. Dr. Greenfeld was forty-five years old. He received his medical degree from the University of Vienna in 1934 and was assistant adjunct in orthopedics at the Beth Israel Hospital. Dr. Greenfeld served in World War II. He was a member of the New York County Medical Society and the Medical Society of the State of New York.

Le Grand H. Hardy, M.D., fifty-nine years old, of New York City, died of a heart ailment on April 14. Dr. Hardy graduated from Columbia University College of Physicians and Surgeons in 1921. He was a Diplomate of the American Board of Ophthalmology and a Fellow of the American College of Surgeons. Dr. Hardy belonged to the American Academy of Ophthalmologists and Otolaryngologists, the American Ophthalmological Society, the New York Ophthalmology Society, the New York Academy of Medicine, and the Association for Research in Ophthalmology, Inc.

During World War II he served with the Office of Scientific Research and Development. His most recent publication was a final report on "The Geometry of Binocular Space Penetration," prepared for the United States Navy.

Dr. Hardy was an associate attending surgeon in ophthalmology at Presbyterian Hospital and clinical professor of ophthalmology at Columbia University College of Physicians and Surgeons. He also belonged to the New York County Medical Society and the Medical Society of the State of New York.

Cyril Joseph Julian, M.D., of Staten Island, died of a heart ailment at his home on April 17. He was forty-five years old. Dr. Julian graduated from Georgetown University School of Medicine in 1934 and interned at St. Mary's Hospital, Brooklyn. He was an associate attending physician at St. Vincent's Hospital and served in the United States Army Medical Corps in World War II. Dr. Julian belonged to the Richmond County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Adolphe Letellier, M.D., of Seneca Falls, died following a heart attack on April 19. Dr. Letellier was eighty years old. He received his medical degree from Queen's University in Ontario, Canada, in 1897. He was a member of the Geneva Academy of Medicine and, before his retirement seven years ago, was on the staff of the Seneca Falls Hospital. Dr. Letellier was one of the oldest members of the Seneca County Medical Society and held several offices during his years of practice. In addition, he belonged to the Medical Society of the State of New York and the American Medical Association.

Paul Eugene Loewenstein, M.D., of Gloversville, died on March 19 following a stroke. He was sixty-three years old. Dr. Loewenstein received his medical degree from the University of Wurzburg Medical School in 1914. He came to this country in 1936.

Dr. Loewenstein was a member of the American Academy of General Practice and the American Rheumatism Association. He served as assistant attending physician and attending physician in general practice at the Nathan Littauer Hospital.

Dr. Loewenstein belonged to the Fulton County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Thomas F. Mylod, M.D., of Brooklyn, died at the age of eighty-three on April 14. Dr. Mylod graduated from the Columbia University College of Physicians and Surgeons in 1894 and interned at St. Mary's Hospital, Brooklyn. He formerly served as attending physician at the House of Good Shepherd. Earlier in his career he had been a health department inspector assigned to contagious diseases. Dr. Mylod had been retired for several years.

Albert William Page, M.D., of Scarsdale, died of heart disease on April 17 at the age of seventy-six. Dr. Page graduated from Columbia University College of Physicians and Surgeons in 1902 and interned at St. Vincent's Hospital. Before his retirement two years ago, Dr. Page had been on the staff of the White Plains and St. Agnes Hospitals. He was a member of the Westchester County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Isadore Samuel Ruben, M.D., of Buffalo, died on April 18 at the age of seventy-two. Dr. Ruben came to this country from Russia when he was fifteen and worked as a pharmacist before entering the University of Buffalo School of Medicine. He graduated in 1920. Dr. Ruben belonged to the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Saul Schlegman, M.D., of White Plains, died of a heart attack on April 11. He was sixty-nine years old. Dr. Schlegman graduated from Cornell University Medical College in 1909 and had studied in Vienna with Dr. Bela Schick.

Dr. Schlegman was an attending pediatrician at the White Plains Hospital. He belonged to the Westchester County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

William Stanton, M.D., of Webster and Machias, died at the age of eighty-six on March 20. Dr. Stanton graduated from the University of Buffalo School of Medicine in 1889. He had been retired since 1947.

Emma Elizabeth Walker, M.D., of New York City, died at the age of ninety on April 16. Dr. Walker received her medical degree from Johns Hopkins University in 1898. She was a member of the New York Academy of Medicine and formerly served as an assistant attending surgeon at the Hospital for Special Surgery.

Dr. Walker belonged to the New York Women's Medical Association, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

George David Wolf, M.D., of New York City, died of a heart attack at his home at the age of sixty-nine. He graduated from New York University and Bellevue Hospital Medical School in 1913.

Dr. Wolf was a Diplomate of the American Board of Otolaryngologists and belonged to the New York Academy of Medicine. He was an adjunct otolaryngologist at the Flower and Fifth Avenue Hospitals, and from 1942 through 1948 was assistant clinical professor of otolaryngology at New York Medical College.

Dr. Wolf was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Freedom is placed in jeopardy more by those who will not exercise it than by those who will not permit it.—Rev. Edwin McNeill Poteat

THE MONTH IN WASHINGTON

These spring days are growing into weeks that really count in Congress. Unless a bill deals with an emergency, it had better be well on its way through committees by now, or its chances of enactment will fade rapidly as summer approaches.

For good or evil, a large amount of health legislation is well advanced, and if Congress holds to an average pace, several bills affecting the medical profession are likely to become law in the next month or so. Here is the situation in brief:

Medical Deductions.—Legislation to increase the amount deducted from taxable income for medical expenses is a part of the omnibus tax revision bill which cleared the House early and by a wide margin but ran into some delay on the Senate side. This bill, with the medical deduction liberalization intact, should reach the White House in plenty of time.

Hill-Burton Expansion.—A move to make important changes in this bill developed in the Senate Labor and Welfare Committee after the House had passed its version with some amendments. American Hospital Association proposed that the rather complicated House legislation be scrapped and instead that the Hill-Burton Act be amended to (1) include rehabilitation centers and nursing homes and (2) place a high priority on hospitals for the chronically ill. The A.H.A. idea immediately attracted support in and out of the committee. The new approach suggested by A.H.A. meant inevitable, but probably not fatal, delays.

Reinsurance.—This proposal, once hailed as the keystone of the Eisenhower administration's health program, continued to encounter opposition. At one stage, of all the national associations to testify on reinsurance, only American Hospital Association was giving it unqualified support. American Medical Association, the U.S. Chamber of Commerce, and national spokesmen for the insurance industry took about the same position: (1) reinsurance alone cannot make uninsurable risks insurable and (2) the threat of Federal control of medicine is inherent in any program that would bring the Federal government in such close contact with medical practice. Dr. David B. Allman, representing the A.M.A. at the House hearings, emphasized that the Association would welcome and cooperate in any movement carrying real promise of promoting voluntary health insurance.

Health Grants.—This is an administration plan to do away with the present categorical grants for identified projects, such as venereal disease control, and to substitute funds earmarked for three general purposes: (1) to maintain present programs, (2) to initiate new programs or to expand existing ones, and (3) to finance public or private experimental or pilot programs of national or regional significance. In both committees the question was whether to group the first and second type grants together, with the state health authorities deciding how to divide up the Federal money among old and new projects. Funds for the third type grant, experimental, would be completely controlled by the surgeon general. One suggestion is to require approval of the state health officer for any experimental (type three) grant in his state. Another is to eliminate the third type grants altogether, letting the National Institutes of Health handle public health as well as other medical research grants.

Social Security.—American Medical Association, American Dental Association, and a number of other national groups are fighting vigorously to prevent compulsory extension of Old Age and Survivors Insurance to physicians, dentists, and most other self-employed. Instead, they want the privilege of deferring income tax payments on that part of earnings placed in restricted annuities, the Jenkins-Keogh plan. A.M.A. also feels that there is no need for the bill's provision that pension rights be frozen during periods when the worker has been medically determined to be disabled. A better suggestion, the Association maintains, is to base pension rates on the ten best working years, thus virtually eliminating the need for the controversial medical examinations. Prospects are good that social security will be extended, either with or without these changes.

Vocational Rehabilitation.—Generally, Senate witnesses favor the administration's proposal to expand the Federal-state programs, providing U.S. grants are not cut. However, with no House bill introduced as of this writing, there is some doubt that even if the Senate clears the measure, the House can find time to deal with it.

Doctor Draft Amendment.—This bill, an outgrowth of the Peress case, swept through the Senate without objection. It may be law by the time this is published. It would amend the Doctor Draft act to permit the services to keep on duty as an enlisted man, assigned to professional tasks, anyone called under the Doctor Draft act whose loyalty is questioned. Defense Department has promised to investigate such cases immediately, so that the man can be cleared promptly and offered a commission or discharged. The discharge would state that action was taken on loyalty grounds.

Prepared by the Washington Office of the American Medical Association, Washington, D.C.

BOOKS RECEIVED

(The following books were received during the month of March, 1954)

Auditory Disorders in Children. A Manual for Differential Diagnosis. By Helmer R. Myklebust. Octavo of 367 pages. New York, Grune and Stratton, 1954. Cloth, $6.00.

The Medical Clinics of North America. Nationwide Number. March, 1954. Octavo. Illustrated. Philadelphia, W. B. Saunders Co., 1954. Published Bimonthly (six numbers a year). Cloth, $18 net; Paper, $15 net.

Third Annual Report on Stress. By Hans Selye, M.D., and Alexander Horava, M.D. Octavo of 637 pages, illustrated. Montreal, Acta, Inc., 1953. Cloth, $10.

The Mechanism of Inflammation. An International Symposium. Edited by G. Jasmin, M.D., and A. Robert, M.D. Octavo of 308 pages, illustrated. Montreal, Acta, Inc., 1953. Cloth, $8.50.

Thoughts About Life. By Felix Friedberg. Octavo of 40 pages. New York, Philosophical Library, 1954. Cloth, $2.50.

"Acta Phytotherapeutica," January 1954. Octavo of 20 pages. Keizersgracht 714, Amsterdam-C, [The Netherlands], E. F. Steinmetz, 1954. Ten issues a year, monthly, except August and September, $5.25 per year.

Practical Electrocardiography. By Henry J. L. Marriott, M.D. Illustrated by Marcie Ethridge Perry. Octavo of 171 pages, illustrated. Baltimore, Williams & Wilkins Co., 1954. Cloth, $5.00.

Nerve Impulse. Transactions of the Fourth Conference, March 4, 5 and 6, 1953, Princeton, N.J. Edited by David Nachmansohn, M.D. Octavo of 224 pages, illustrated. New York, Josiah Macy, Jr. Foundation, 1954. Cloth, $4.00.

Psychosomatic Case Book. By Roy R. Grinker, M.D., and Fred P. Robbins, M.D. Octavo of 346 pages. New York, Blakiston Co., 1954. Cloth, $6.50.

An Introduction to Pathology and Bacteriology for Medical Students in the Tropics. By the late E. C. Smith, M.D. Revised by R. Kirk, M.D. Second edition. Octavo of 390 pages, illustrated. New York, Staples Press, 1953. Cloth, $9.00.

Lectures on the Thyroid. By J. H. Means, M.D. Octavo of 113 pages, illustrated. Cambridge, Harvard University Press, 1954. Cloth, $3.00.

The Jealous Child. By Edward Podolsky, M.D. Octavo of 147 pages. New York, Philosophical Library, 1954. Cloth, $3.75.

The Dynamics of Virus and Rickettsial Infections. International Symposium. Edited by Frank W. Hartman, M.D., Frank L. Horsfall, Jr., M.D., and John G. Kidd, M.D. Octavo of 461 pages, illustrated. New York, Blakiston Co., 1954. Cloth, $7.50.

Reconstructive Surgery of the Eyelids. By Wendell L. Hughes, M.D. Second Edition. Quarto of 260 pages, illustrated. St. Louis, C. V. Mosby Co., 1954. Cloth, $8.50.

The Hepatic Circulation and Portal Hypertension. By Charles G. Child, III, M.D., and eleven collaborators. Octavo of 444 pages, illustrated. Philadelphia, W.B. Saunders Co., 1954. Cloth, $12.

Mayo Clinic Diet Manual. By the Committee on Dietetics of the Mayo Clinic. Second edition. Octavo of 247 pages, illustrated. Philadelphia, W. B. Saunders Co., 1954. Paper, $5.50.

Manual of Clinical Mycology. By Norman F. Conant, Ph.D., David Tillerson Smith, M.D., Roger Denio Baker, M.D., Jasper Lamar Callaway, M.D., and Donald Stover Martin, M.D. Second edition, Duodecimo of 456 pages, illustrated. Philadelphia, W. B. Saunders Co., 1954. Cloth, $6.50.

Anatomy for Surgeons: Volume 1. The Head and Neck. By W. Henry Hollinshead, Ph.D. Quarto of 560 pages, illustrated. New York, A. Hoeber-Harper Book, 1954. Cloth, $10.

Energy Metabolism and Nutrition. By Prof. Raymond W. Swift and Prof. Cyrus E. French. Octavo of 264 pages, illustrated. Washington, D.C., Scarecrow Press, 1954. Cloth, $5.75.

Cardiovascular Surgery. By Gerald H. Pratt, M.D. Octavo of 843 pages, illustrated. Philadelphia, Lea & Febiger, 1954. Cloth, $15.

You and Your Allergic Skin. By Herman Hirshfield, M.D. Octavo of 24 pages. New York, Nelson House, 1954. Paper, 25 cents.

The Uncommon Heart Diseases. By Nathaniel E. Reich, M.D. Octavo of 516 pages, illustrated. Springfield, Charles C Thomas, 1954. Cloth, $10.50.

Problems of Consciousness. Transactions of the Fourth Conference March 29, 30 and 31, 1953, Princeton, N. J. Edited by Harold A. Abramson, M.D. Octavo of 177 pages, illustrated. New York, Josiah Macy, Jr. Foundation, 1953. Cloth, $3.25.

The Billroth I Gastric Resection. With Particular Reference to the Surgery of Peptic Ulcer. By Hor-

[Continued on page 1544]

facts

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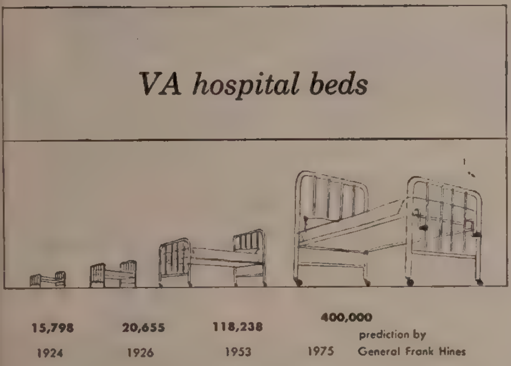
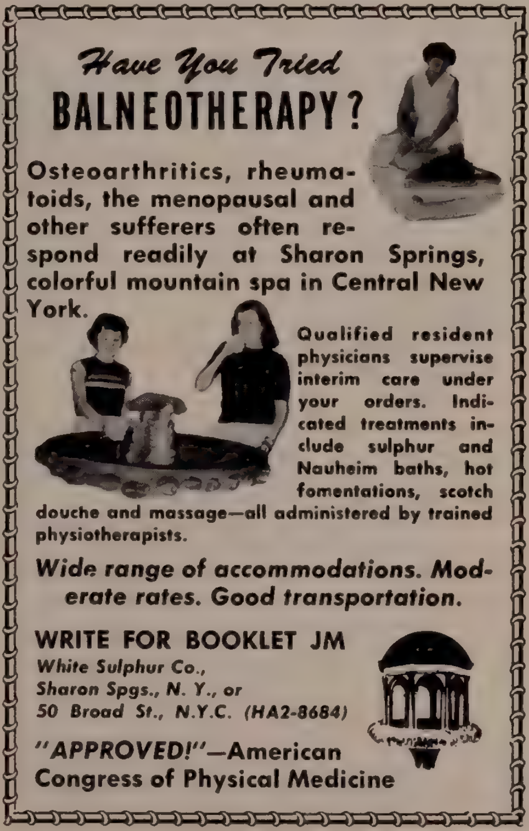
- O'Brien, G. F. & Schweitzer, I. L.: The Med. Clinics of North America, W. B. Saunders, 1953, p. 163.
- Gauss, H.: Am. Jrl. Dig. Dis. 10:141 (1943)

In Viewing the VA Medical Program . . .



Former VA Administrator Frank Hines estimated that by 1975 under existing VA medical legislation, approximately 400,000 hospital beds will be needed. Yet medical authorities are convinced the VA cannot attract sufficient medical personnel to staff more than 120,000 beds. The VA now maintains three times the number of beds needed for treatment of service-connected cases.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***"APPROVED!"*—American Congress of Physical Medicine**

[Continued from page 1542]

ace G. Moore, Jr., M.D., and Henry N. Harkins, M.D. Quarto of 175 pages, illustrated. Boston, Little, Brown and Co., 1954. Cloth, $7.50.

Current Therapy, 1954. Latest Approved Methods of Treatment for the Practicing Physician. Edited by Howard F. Conn, M.D. Consulting Editors, M. Edward Davis, M.D., Vincent J. Derbes, M.D., Garfield G. Duncan, M.D., Hugh J. Jewett, M.D., *et al.* Quarto of 898 pages. Philadelphia, W. B. Saunders Co., 1954. Cloth, $11.

MEDICAL NEWS

Blood Banks Association of New York State—The clearinghouse of the Blood Banks Association of New York State was activated on April 19 with 19 banks participating. The program has been developed to facilitate the exchange of rare blood types and reduce outdating of surplus blood, and the scope will be extended gradually among the approximately 100 blood banks throughout the State which belong to the Association.

Initial blood banks and their directors are: *Albany*—Bender Blood Bank, Dr. Benjamin Norris; *New York City*—Beth Israel Hospital, Dr. Leon N. Sussman; New York University-Bellevue Medical Center, Dr. Lester J. Unger; Blood Transfusion Association, Dr. Jacob Geiger; French Hospital, Dr. Cyril Solomon; Lenox Hill Hospital, Dr. Jacob Geiger; St. Vincent's Hospital, Dr. George T. Hoffman; *Batavia*—Genesee Memorial Hospital, Dr. Joseph Tannenberg, and St. Jerome Hospital, Dr. David B. Johnson; *Buffalo*—Children's Hospital, Dr. Erwin Neter; *Binghamton*—Broome County Blood Center, Dr. Walter C. Nelson; *Bronx*—Montefiore Hospital, Dr. John Gruhn; *Mount Vernon*—Mount Vernon Hospital, Dr. J. G. Sharnoff; *Brooklyn*—Norwegian Lutheran Hospital, Dr. Erling S. Wedding, and St. Mary's Hospital, Dr. William Moitrier; *Nyack*—Nyack Hospital, Dr. Dorothea E. G. Worcester; *Poughkeepsie*—St. Francis Hospital, Dr. Joseph D. Gioia, and Vassar Brothers Hospital, Dr. M. L. Dreyfuss.

Distribution of Gamma Globulin—The following procedures governing distribution of gamma globulin have been transmitted to the Public Health Service by the Office of Defense Mobilization:

"1. Forty-five per cent of the supply of gamma globulin available for the prophylaxis of poliomyelitis will be set aside for the States and Territories in accordance with each State's proportionate share of the national aggregate number of reported poliomyelitis cases during the five-year period 1949 to 1953. Issuances to a State or Territory will be made upon request by the State or Territorial Health Officer.

"2. Forty-five per cent of the supply of gamma globulin available for the prophylaxis of poliomyelitis will be set aside for the States and Territories in accordance with each State's proportionate share of the total population (1950) under age fifteen in counties which had annual crude poliomyelitis attack rates (based on 20 or more cases) at least 4 times the national poliomyelitis crude attack rate during any of the years 1949 to 1953. The population of a county will be included in this computation for each instance of such experience during the five-year period. Adjustments will be made for those areas participating in the vaccine field trial. Issuance to a State or Territory will be made upon request of the State or Territorial Health Officer.

"3. Ten per cent of the supply of gamma globulin available for the prophylaxis of poliomyelitis will be held as a contingency reserve for issuance to State and Territorial Health Officers on special request."

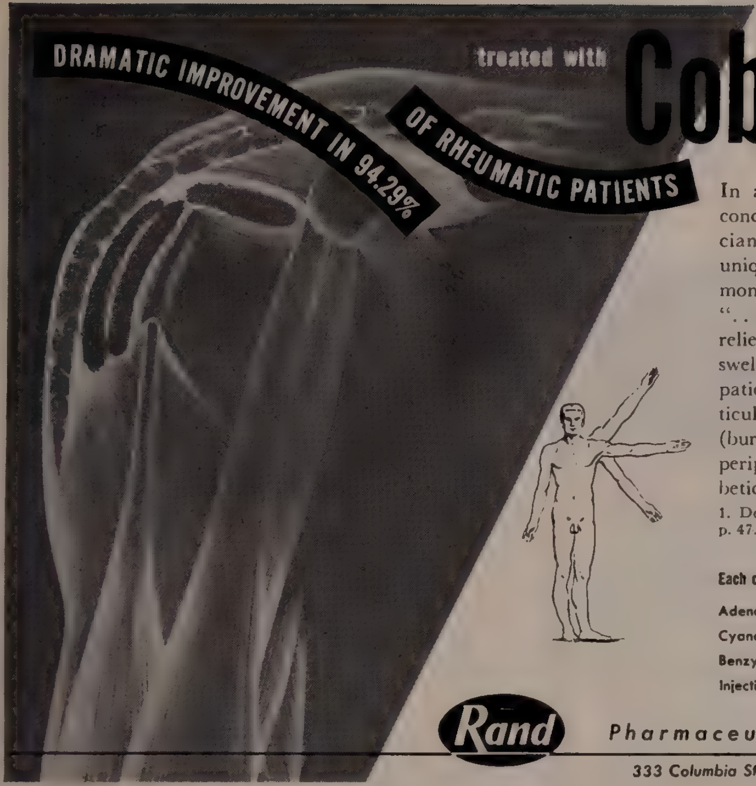
Poliomyelitis gamma globulin is being kept separately and is being issued separately from the gamma globulin furnished for the prophylaxis of measles and infectious hepatitis.

The first allotment of gamma globulin for use against polio became available to all State health departments on April 7. The second allotment will be ready for distribution on or about June 1. State health departments have been instructed to submit requests for gamma globulin for use against polio to: Division of Civilian Health Requirements, Public Health Service, Department of Health, Education, and Welfare, Washington 25. D.C.

Hill-Burton Grants—The status of all Hill-Burton Grants in New York State, as of March 31, 1954, is as follows: hospitals completed and in operation—65 projects at a total cost of $54,908,711, including Federal contribution of $16,719,891, and supplying 3,367 additional beds; under construction are 9 projects at a total cost of $40,425,275, including Federal contribution of $5,712,324, and designed to supply 908 additional beds; approved but not yet under construction are 8 projects at a total cost of $15,826,690, including $3,674,099 Federal contribution and designed to supply 949 additional beds.

American Medical Education Foundation—New York State doctors who contributed to the American Medical Education Foundation during the month of

[Continued on page 1546]



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[1] De Lucia and Strosberg, Med. Times 82:1, p. 47. 1954.

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[Continued from page 1544]

March were as follows: *Akron*—Dr. R. G. Stanbury; *Alexander*—Dr. John Cathie; *Amsterdam*—Dr. Norbert Fethke; *Angola*—Dr. L. R. Sanborn; *Arkport*—Dr. Paul Wolfgruber; *Astoria*—Drs. Peter Baselice and N. Iannotti; *Avoca*—Dr. William O. Jackson; *Baldwinsville*—Drs. James H. Bennett, C. A. Hebblethwaite, Henry W. Kaessler, and Robert G. Wedemeyer; *Ballston Lake*—Dr. Wilbur S. Rose; *Batavia*—Drs. Alfred George, David Johnson, Joseph Krawczyk, Robert Jenks, Paul Maloney, Biagio S. Mansueto, Peter J. Di Natale, and Joseph Tannenberg; *Bath*—Drs. Arthur P. Darling, Vroman S. Higby, J. F. Kenzie, James J. Sanford, Spencer Z. Selleck, and Ernest P. Smith; *Bayside*—Drs. Ignaz Handl and Dudley Leibowitz; *Belfast*—Dr. Dorothy Grey; *Berlin*—Dr. William Elliott; *Binghamton*—Drs. Robert E. Ahearn, Charles M. Allaben, Rolland C. Bates, F. A. Baumann, A. H. Fotouhi, Vincent G. Hammond, Harry H. Levy, Manuel M. Monserrate, Ben L. Matthews, Charles H. McElwee, Harold W. McNitt, Charles L. Pope, Matthew H. Paushter, and Henry L. Tobin.

Also: *Bronx*—Drs. P. R. Borchardt, H. N. Ballot, H. J. Barrow, J. M. Berger, H. Friedman, Isidore Fischer, R. Gilbert, S. Ginsburg, M. A. Goldberg, C. M. Kapp, H. C. Kelley, R. Koblenz, Marcus D. Kogel, E. J. Komora, H. S. Kramer, S. Lechner, Edward Levy, C. Mandel, M. J. Markham, Aaron Merker, Louis H. Merker, C. A. Scrofano, M. A. Senikowich, Leopold Tabatznik, M. Terragni, Dr. H. A. Whan, and F. W. Williams; *Bronxville*—Drs. Hugh Branigan, Violet L. Kiel, Joseph E. King, Colgate Phillips, James A. Ramsay, Arthur T. Rowe, William J. Sullivan, and Waring Willis.

Also: *Brooklyn*—Drs. M. A. Baker, Ralph Blumberg, Edwin J. Foley, John A. Fallon, Fred Feldman, and Jacob R. Handelsman; *Brooktondale*—Dr. Mary Tinker; *Buffalo*—Drs. M. G. Abbott, I. Adler, T. Alexander, K. M. Alford, J. Ambrusko, J. C. Brady, Baxter C. Brown, Elwyn S. Brown, H. F. Brown, F. J. Brylski, R. J. Buckley, J. Burstein, E. D. Babbage, R. W. Baetz, C. A. Bauda, A. L. Bennett, C. F. Banas, M. S. Blick, M. A. Block, R. A. Caputi, J. V. Carr, S. V. Cavaretta, M. Cheplove, G. A. Cohn, V. S. Cotroneo, P. B. Cotter, J. E. Cryst, B. J. Dolan, P. Dooley, W. D. Dugan, D. O. Duszynski, L. Duszynski, E. H. DeKleine, G. L. Eckhert, W. J. Edgecomb, E. G. Eschner, P. A. Fernbach, W. G. Fischer, T. C. Flemming, R. S. Fletcher, J. T. Gabbey, M. C. Gian, J. J. Glauber, L. H. Golden, G. W. Grace, C. J. Graf, N. F. Graser, C. J. Grenauer, J. G. Grotz, F. J. Gustina, H. Hosmer, H. W. Hale, Jr., E. G. Healy, H. H. Higgs, Harold B. Johnson, H. E. Joyce, H. N. Kenwell, R. S. Kibler, S. Kimball, N. E. Klendshoj, M. M. Konczakowski, N. Kutzman, C. G. Jenczeski, J. I. Lampert, G. H. Leak, J. Levy, M. H. Lipsitz, L. M. Lockie, E. J. Lyons, F. J. Montrose, B. F. Morgan, H. M. Murphy, J. MacManus, C. A. March, G. Marcy, G. M. Masotti, G. J. Matusak, H. J. McGee, Jr., E. T. McGroder, D. R. McKay, F. Meyers, E. Milch, J. D. Naples, S. R. Narins, T. H. Noehren, T. J. O'Brien, Robert W. O'Connor, F. W. O'Donnell, G. F. O'Grady, B. E. Obletz, E. D. Osborne, H. K. Palanker, J. D. Persse, A. C. Rekate, L.

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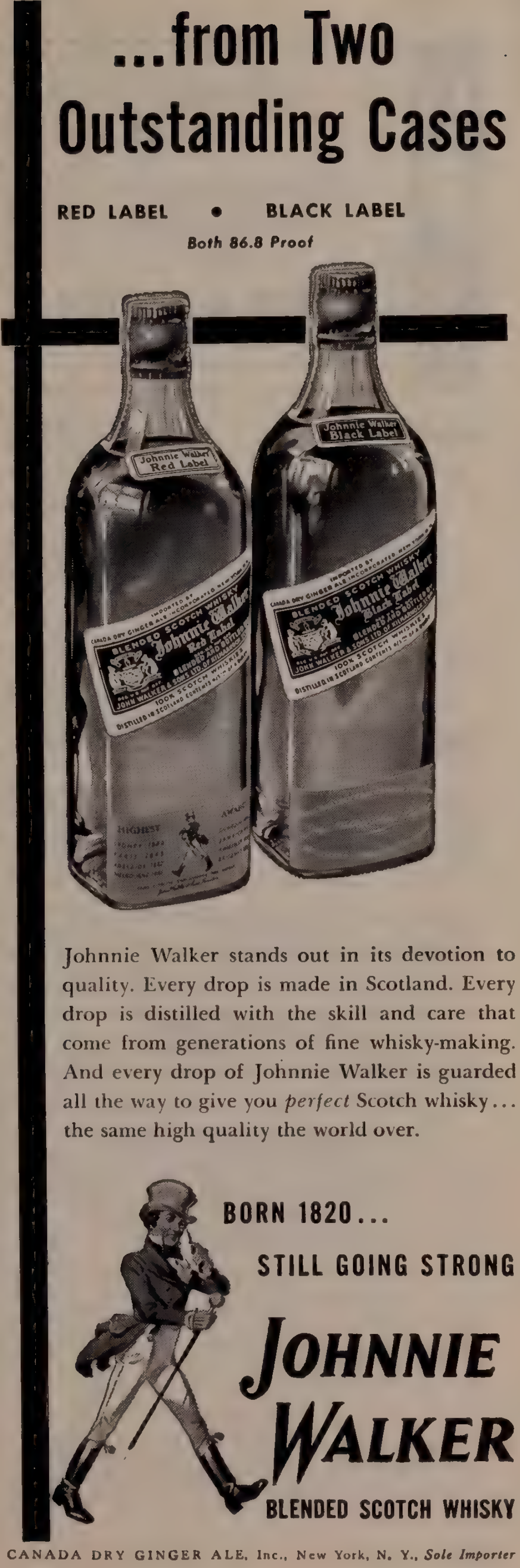

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Nutrition Institute—Under the auspices of the New York State Department of Health, Syracuse University will hold a Nutrition Institute, June 21 to July 3, worth three hours of graduate credit for the benefit of physicians and others interested in this field. Dr. Anne Bourquin, College of Home Economics, Syracuse University, Syracuse 10, will furnish more information.

Meetings—Future

Geneva Academy of Medicine

"Problems of Premature Births" will be discussed by Drs. Alfred J. Vignec and Alan F. Guttmacher at the May 17 meeting of the Geneva Academy of Medicine. Dr. Vignec is medical director of the New York Foundling Hospital and clinical professor of pediatrics, New York University College of Medicine, and Dr. Guttmacher is director of obstetrics and gynecology, Mt. Sinai Hospital, as well as clinical professor of obstetrics and gynecology at Columbia University College of Physicians and Surgeons.

International Academy of Proctology

Gold, silver, and bronze awards and certificates to the three most outstanding world proctologists will be presented each year beginning with the 1955 annual meeting by the International Academy of Proctology. It has also been announced that three three-year fellowships in coloproctology amounting to $1,000, $900, and $800 will be awarded annually to three outstanding medical institutions. The 1954 award will be presented to the Jersey City Medical Center in the east, one of the medical centers in Chicago for the midwest, and a California institution for the far west fellowship.

The fifty-third annual meeting of the American Proctologic Society will be held at the Hotel Statler, Los Angeles, June 2 to 5, 1954. Physicians desiring to attend the meeting should write to the secretary, Dr. Stuart T. Ross, 131 Fulton Avenue, Hempstead, New York.

American Neurological Association

The seventy-ninth Annual Meeting of the American Neurological Association will be held at the Hotel Claridge, Atlantic City, New Jersey, from June 14 to 16.

Pan American Association of Ophthalmology

The third Interim Congress of the Pan American Association of Ophthalmology will be held in São Paulo, Brazil, June 17 to 21. Meeting concurrently in Brazil will be the Eighth Brazilian Congress of Ophthalmology and the Nineteenth International Congress of Oto-Neuro-Ophthalmology. All sessions will be translated into English, Spanish, and Portuguese.

Chest Disease Symposium for GP's

The third annual symposium on, "Tuberculosis and Other Chronic Pulmonary Diseases for General

Practitioners" will be held at Saranac Lake from July 12 through 16. It is approved by the American Academy of General Practice for twenty-six hours of formal credit. Registration fee is $40 for A.A.G.P. members and $50 for nonmembers.

Included in the course will be discussions of the diagnosis and treatment of nontuberculous pneumonias, pulmonary cancer, lung abcesses, fungus diseases, bronchiectasis, sarcoid, cystic disease, emphysema, and the pneumoconioses.

Complete information concerning this program can be obtained from Dr. Richard P. Bellaire, Chest Disease Symposium, P.O. Box 2, Saranac Lake.

Personalities

Awarded

Dr. Harry Stack Sullivan, author and teacher, posthumously, Dr. O. Arnold Kilpatrick, director, Hudson River State Hospital, and Dr. Nolan D. C. Lewis, director, New York State Physiatric Institute, the Adolf Meyer Memorial Awards for meritorious work in the field, by the Association for Improvement of Mental Hospitals.

Appointed

Dr. Russell L. Cecil, emeritus professor, Cornell University Medical College, and consultant to New York Hospital and Bellevue Hospital, as medical director of the Arthritis and Rheumatism Foundation, in April . . . Dr. Curtis F. Culp, former director of the medical service division of the National Foundation for Infantile Paralysis, to the staff of United Cerebral Palsy as director of medical field services . . . Dr. A. M. Decker, chief surgeon, Veterans Administration Hospital, Sunmount, as assistant professor of thoracic surgery, Medical College of Virginia, Richmond, Virginia . . . Dr. John Bell, as acting chief surgeon of the Veterans Administration Hospital, Sunmount . . . Drs. Thomas M. Rivers, Rockefeller Institute, Thurman B. Givan, Brooklyn, and Tyree C. Waytt, Syracuse, as members of an Advisory Committee on Poliomyelitis Prevention to work with the State Health Department in planning for use of gamma globulin and poliomyelitis vaccine.

Speakers

Dr. Herman E. Hilleboe, New York State Health Commissioner and president-elect of the American Public Health Association, at a symposium on "The Control of the Environment for the Health of Man which concluded a two-day program in celebration of the opening of the Federal Government's Robert A. Taft Sanitary Engineering Center in Cincinnati, on April 9.

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1. Meller, R. L., and Resch, J. A.: *Bull. Univ. Minnesota Hosp.*, 20:78, Oct. 8, 1948.
2. Meller, R. L., and Resch, J. A.: *Postgrad. Med.*, 6:452, Dec., 1949.

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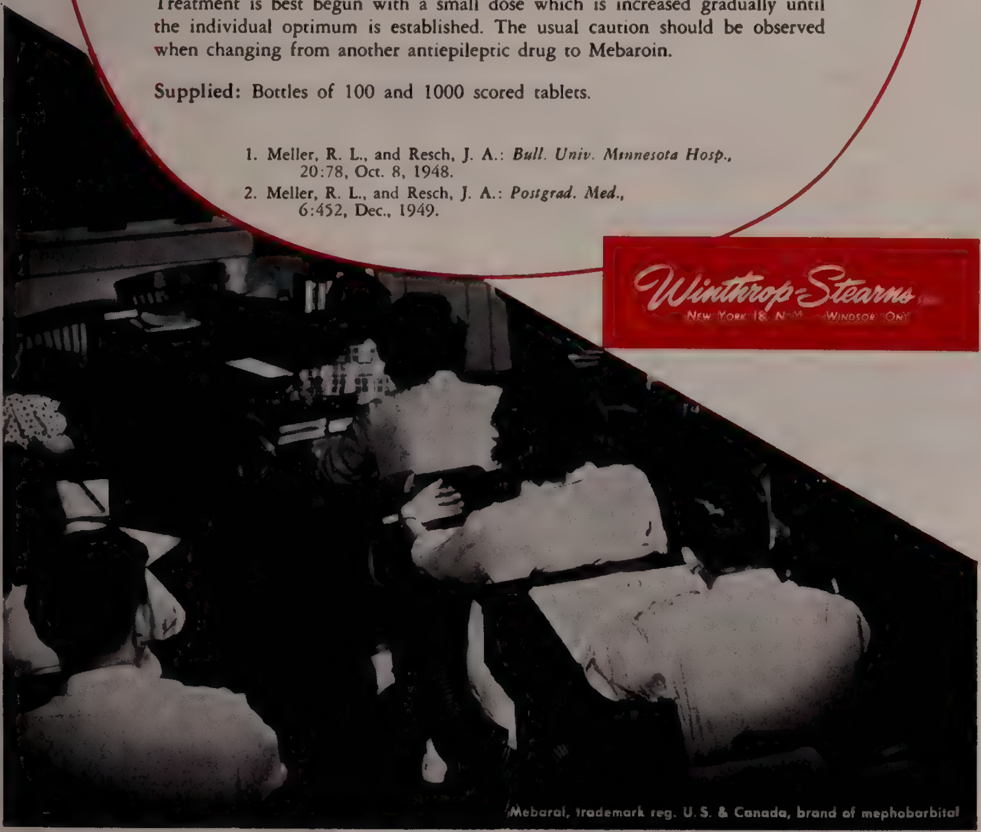

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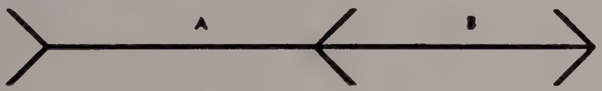

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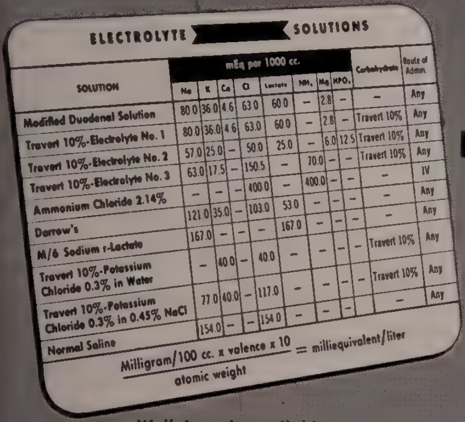

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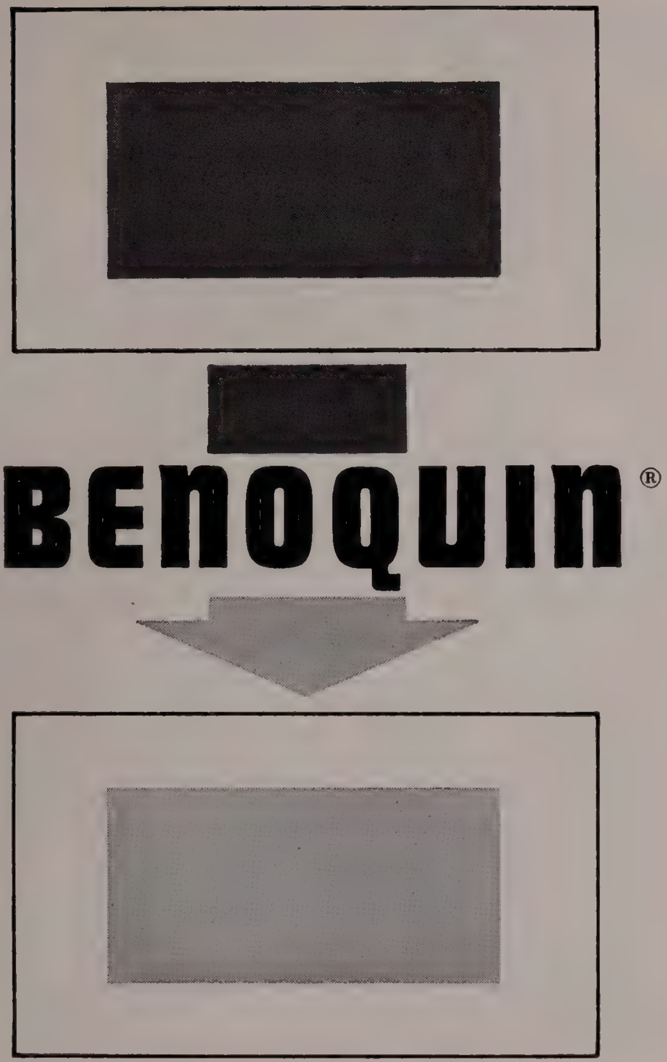

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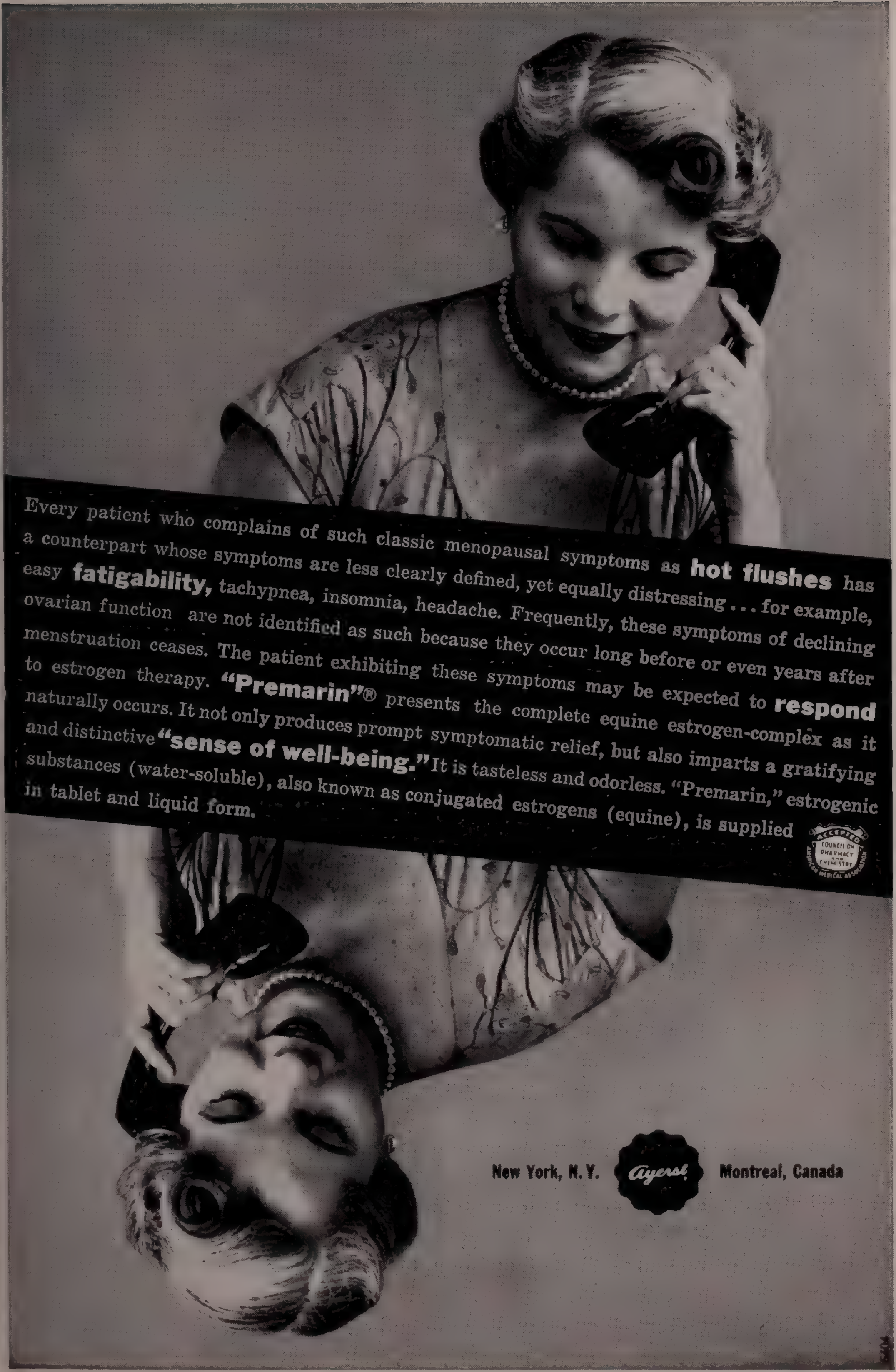

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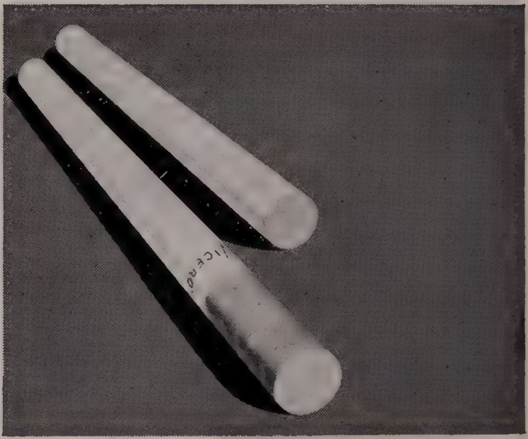

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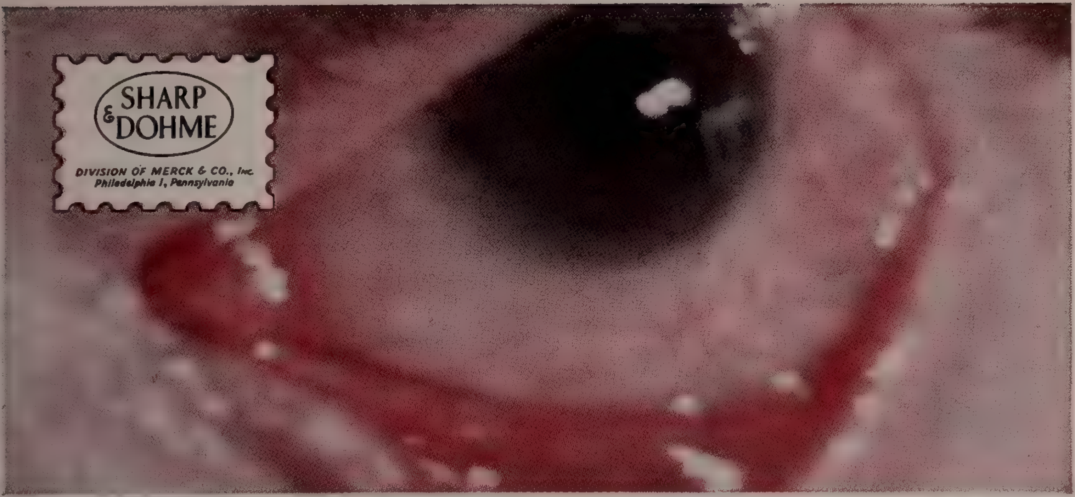

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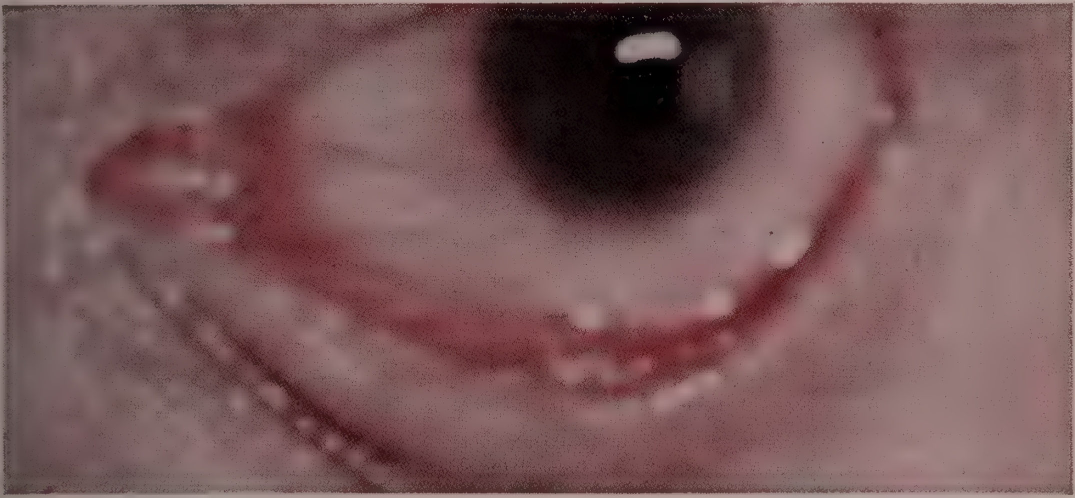

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1. Silbert, N. E.: Ann. Allergy *10:*328-334 (May-June) 1952

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and the 60-10-70 basic diet

Patients can lose weight and maintain a restricted diet, in comfort, without undesirable side effects . . .

EXCESSIVE DESIRE FOR FOOD

Obedrin offers the full anorexigenic value of Methamphetamine to curb the desire for food, while counteracting mood depression. Patient cooperation is made easier.

NERVOUS TENSION

To avoid excitation and insomnia, Pentobarbital is the ideal daytime sedative. It counteracts overstimulation by Methamphetamine, but does not diminish the anorexigenic action.

VITAMIN DEFICIENCIES

Obedrin tablets contain adequate amounts of vitamins B_1 and B_2 to supplement the 60-10-70 Basic Diet, but not enough to stimulate the appetite.

EXCESSIVE TISSUE FLUIDS

Large doses of Ascorbic Acid aid in the mobilization of fluids, so often an obstacle in obesity.

BULK NOT NECESSARY

The 60-10-70 Basic Diet provides enough roughage, so artificial bulk is unnecessary. The hazards of impaction caused by "bulk" producers is obviated.

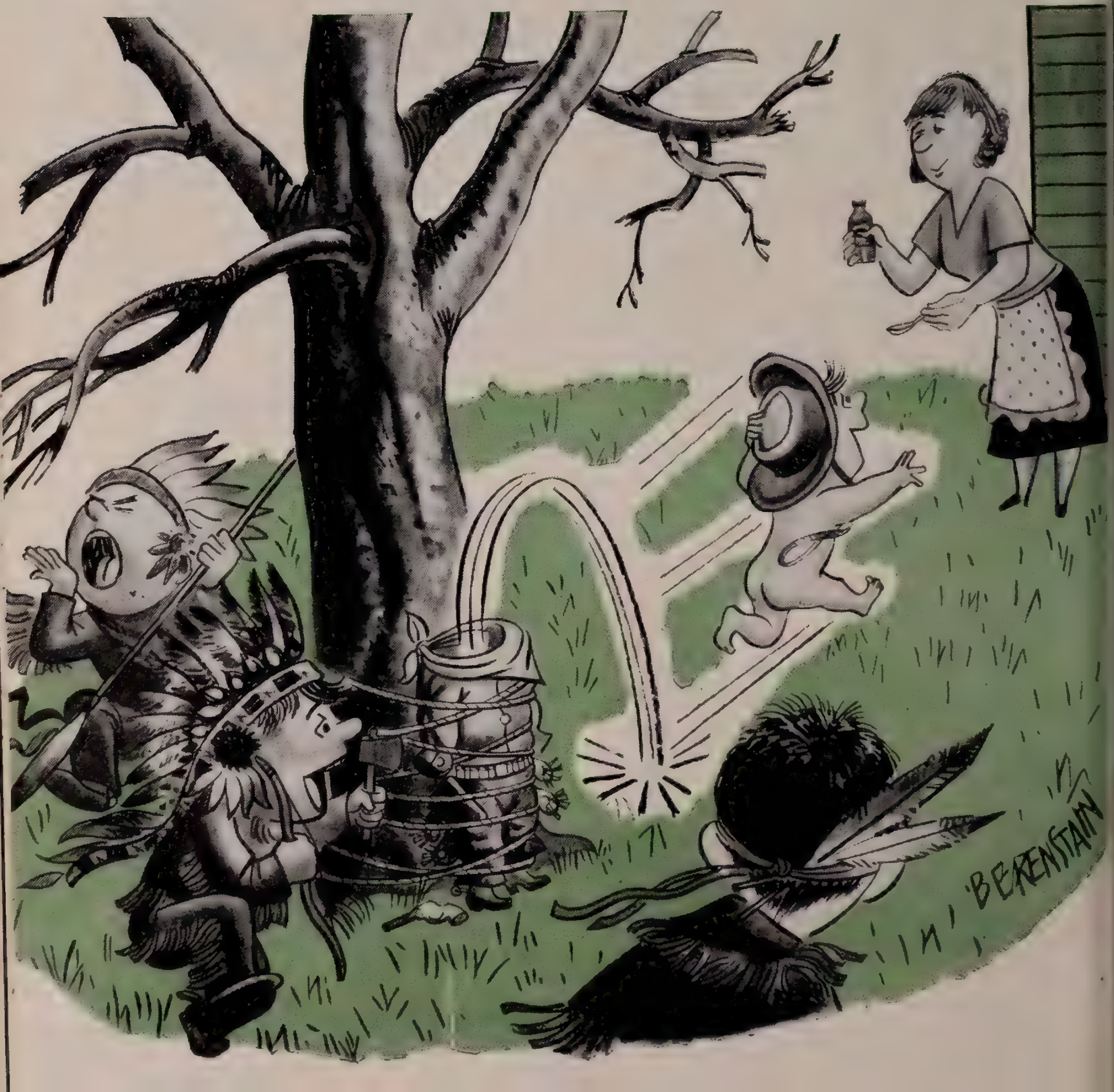
Write For
60-10-70 Diet
Pads, Weight Charts
And Professional
Sample Of
Obedrin

Each tablet contains:

Semoxydrine HCl (Methamphetamine HCl)	5 mg.
Pentobarbital	20 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	0.5 mg.
Riboflavin	1 mg.
Niacin	5 mg.

S. E. MASSENGILL CO.
Bristol, Tennessee

He's heard the call for


BERENSTAIN

VI-DAYLIN®

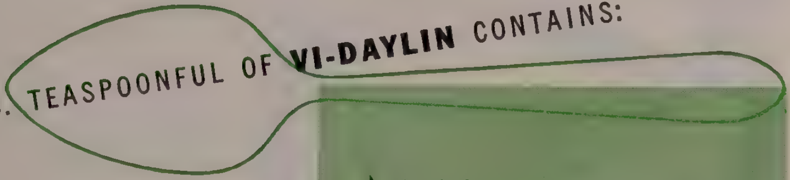
(HOMOGENIZED MIXTURE OF VITAMINS A, D, B_1, B_2, B_{12}, C AND NICOTINAMIDE, ABBOTT)

No matter that he's getting a full day's supply of *seven* important vitamins, including body-building B_{12}. To him VI-DAYLIN is lemon-candy treat all the way.

VI-DAYLIN needs no pre-mixing, no droppers, no refrigeration. Mother can pour it as is—serve it with milk, cereals or juices—and store it where she wishes.

For kids—and for grown-ups who dislike tablets and capsules—you'll find VI-DAYLIN tops among liquid multivitamins. Prescribe it in the economical pint-size bottle. There's more than enough for the next three months.

Abbott



EACH DELICIOUS 5-CC. TEASPOONFUL OF **VI-DAYLIN** CONTAINS:

▶ Vitamin A (synthetic)	3000 U.S.P. units
Vitamin D	800 U.S.P. units
Thiamine Hydrochloride	1.5 mg.
Riboflavin	1.2 mg.
▶ Vitamin B_{12} Activity	3 mcg.
Ascorbic Acid	40 mg.
Nicotinamide	10 mg.

armatinic *activated*

comprehensive antianemia therapy

armatinic *activated*

a fresh response,
vigorous improvement

armatinic® *activated*

Vitamin B_{12} plus essential
hematopoietic activators

Each Armatinic Activated capsulette contains:

Ferrous Sulfate Exsiccated	200 mg.
Vitamin B_{12}	10 mcg.
Folic Acid	1 mg.
Vitamin C	50 mg.
Liver Fraction 2, N.F. with Duodenum (containing Intrinsic Factor)	350 mg.

Bottles of 100 and 1000.

Also available: **Armatinic Liquid**

THE ARMOUR LABORATORIES
A DIVISION OF ARMOUR & COMPANY · CHICAGO 11, ILL.

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For rapid hemoglobin regeneration—

A NEW HEMATINIC DROP PREPARATION

Neozyme Drops contains in therapeutic proportions the simultaneous availability of all the biocatalysts necessary for maximal hemoglobin synthesis and more effective hemopoiesis.

It is most stable, completely miscible with water, milk or fruit juices. Specially suited for administration to younger patients.

Outstanding clinical advantages:

1. Pleasantly flavored
2. Most utilizable
3. Balanced all-purpose hematinic
4. *Absolutely non-constipating*
5. Less apt to darken the fecal excretion

NEOZYME DROPS

—A Non-Constipating Hemapoietic Combination for Macrocytic and Microcytic Anemias

Each cc contains:

Iron Citropyrophosphate *(equivalent to 10 mg. iron)*	95 mg.
Vitamin B_{12} U.S.P.	15 mcg.
Folic Acid	0.25 mg.
Liver Fraction #1	100 mg.

Dosage: INFANTS: 3 to 5 drops daily.
CHILDREN (2 to 5 years old): 0.5cc daily.
ADULTS: 1cc daily.

Supplied: In 30cc bottles with calibrated dropper.

Write for physicians' samples for clinical trial.

BARROWS
CHEMICAL COMPANY, INC.
Biochemicals *Manufacturing Chemists* *Pharmaceuticals*
42 LISPENARD STREET • NEW YORK 13, N. Y.

LORZINEX®

A VAGINAL CLEANSING AGENT

that is different!
that is efficient!

LORZINEX solutions cleanse at the *acid pH of 4* (normal to the vagina) and efficiently disperse mucus debris[1]. Inclusion of a zinc salt in the formula promotes astringency. Lactose (a good nutrient for Doederlein bacilli) is added to further establish the physiological flora.

Contains: The newly discovered trichomonacidal synthetic wetting agent —*Sodium Lauryl Sulfate.*

For: EFFICIENT CLEANSING at Acid pH
DISPERSION OF MUCUS DEBRIS
TRICHOMONACIDAL ACTION
ANTIFUNGAL ACTION
ASTRINGENCY

LORZINEX is recommended (before administration of therapeutic agents) as an aid in—

MONILIASIS OF THE VAGINA
VAGINAL TRICHOMONIASIS

Highly Effective . . .
Unusually Economical

(1) Lawrence, E. D., W. J. Surg., Ob. & Gyn., 58, 236-7, 1950.

Samples and literature sent on request

Pharmaceutical Division
WALLACE & TIERNAN
BELLEVILLE 9, NEW JERSEY, U. S. A.
W&T

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AN EFFECTIVE
TRANQUILIZER-ANTIHYPERTENSIVE,
ESPECIALLY IN MILD, LABILE
ESSENTIAL HYPERTENSION....

Serpasil T.M.
(RESERPINE CIBA)

A pure crystalline alkaloid of rauwolfia root isolated and introduced by CIBA

Virtually every patient with essential hypertension can benefit from the tranquilizing, bradycrotic and mild antihypertensive effects of Serpasil therapy.

*

Mg. per mg., Serpasil has a therapeutic effectiveness ratio of approximately 1000 to 1 compared with the whole root.

*

Tablets, 0.25 mg. (scored)
and 0.1 mg.

C I B A
SUMMIT, N. J.

2/2019M

THE CLIFTON SPRINGS SANITARIUM AND CLINIC

CLIFTON SPRINGS, NEW YORK

Hospital and Clinic Building

Sanitarium Main Building

THE CLINIC

Medical sections for the care of metabolic and cardiovascular diseases, arthritic, psychoneuroses, gastroenterology, pediatrics and hematology, as well as general diagnosis are available. Surgical sections are available for general surgery and the various surgical specialties. Sections for diagnostic and therapeutic Radiology as well as Pathology are maintained.

The clinic is general and maintains competent medical, surgical and laboratory staffs. All types of general medical and surgical cases are received for diagnosis and treatment. Recognized forms of physiotherapy are provided. There is an excellent dietetic service. No cases of active pulmonary tuberculosis, contagious disease, epilepsy, or insanity are accepted.

THE SANITARIUM

REST, RELAXATION, MEDICAL CARE

The Sanitarium has all the atmosphere of a fine hotel with individual rooms and tasteful decorations. A special feature is made of occupational therapy of all kinds with competent staff and facilities. Other features are large cheerful solarium, billiard room, complete gymnasium, complete bath and massage department. The spacious grounds include a nine-hole golf course. All the sanitarium facilities are open to patients. Modern medical equipment and superb location offer the combined advantages of a medical center and rural Spa.

Illustrated booklet mailed to physicians on request.

Address all Communications to B. A. Watson, M.D., Superintendent
Clifton Springs, New York, Phone: 3

THE CLIFTON SPRINGS SANITARIUM AND CLINIC

when his need is greatest... **postoperatively**

Severe or rapid depletion of water-soluble vitamins is effectively and optimally countered by ASF—Anti-Stress Formula. Fulfilling the recommendations of the Committee on Therapeutic Nutrition, National Research Council, ASF supplies the critical vitamin needs of the patient during periods of physiological stress.

Each ASF Capsule contains:

Thiamine Mononitrate	10 mg.
Riboflavin	10 mg.
Niacinamide	100 mg.
Pyridoxine Hydrochloride	2 mg.
Calcium Pantothenate	20 mg.
Ascorbic Acid	300 mg.
Vitamin B_{12} Activity	4 mcg.
Folic Acid	1.5 mg.
Menadione (vitamin K analog)	2 mg.

Dosage: 2 capsules daily in severe pathologic conditions; 1 capsule daily when convalescence is established.

Supplied: bottles of 30 and 100.

*Trademark

stress

New **ASF*** *(Anti-Stress Formula)*

BASIC PHARMACEUTICALS FOR NEEDS BASIC TO MEDICINE
536 Lake Shore Drive, Chicago 11, Illinois

ROERIG Rx

eliminate

intravenous

aminophylline!

TABLETS

AL·AMPHYLLINE

aminophylline-colloidal aluminum hydroxide-magnesium trisilicate compound

Intravenous Results With New Oral Compound—And Without Gastric Irritation.

AL-AMPHYLLINE, a new development of the Raymer Medical and Research Departments, presents aminophylline in a new oral dosage form that produces blood levels comparable to those attained with parenterally administered aminophylline, with the further advantage that these levels are sustained over many hours. In addition, AL-AMPHYLLINE does not cause gastric irritation.

The colloidal aluminum hydroxide and the exceptional purity of the aminophylline contained in AL-AMPHYLLINE Tablets are responsible for the fact that AL-AMPHYLLINE Tablets are so well tolerated. Magnesium trisilicate is also included in the formula, to prevent possible constipation.

Since AL-AMPHYLLINE Tablets are uncoated, aminophylline absorption is rapid, producing satisfactory blood levels within an hour (see table below).

Aminophylline Blood Levels — mg./100 cc. Plasma
(Aminophylline dosage was 0.5 Gm. in each case)

Aminophylline Preparation	1 hour	3 hours	6 hours
AL-AMPHYLLINE TABLETS (4)	1.78	1.65	1.35
AL-AMPHYLLINE TABLETS (4)	1.67	1.84	1.26
AL-AMPHYLLINE TABLETS (4)	1.18	1.54	1.19
AL-AMPHYLLINE TABLETS (4)	0.90	1.16	0.91
Intravenous Aminophylline (0.5 Gm.)	1.33	0.84	—
Intravenous Aminophylline (0.5 Gm.)[1]	1.60	1.30	0.70
Aminophylline Suppository (0.5 Gm.)	0.11	0.22	0.38
Aminophylline Suppository (0.5 Gm.)	0.26	0.51	1.09

RAYMER

RAYMER PHARMACAL COMPANY
Jasper & Willard Streets
Philadelphia 34, Pa.

[1] J. Pharmacol. Exper Therap., 100:309, 1950.

For use in all conditions where aminophylline is indicated. *Dosage Range:* 1 to 4 tablets as required. *Supplied:* bottles of 100, 500 and 1,000 tablets. *Formula:* Aminophylline, 125 mg.; Colloidal Aluminum Hydroxide, 150 mg.; Magnesium Trisilicate, 250 mg. *Also available:* AL-AMPHYLLINE with Phenobarbital (15 mg. per yellow tablet), bottles of 100.

serving the medical profession for a third of a century.

→ *notable improvement reported** in

90%

of patients with

arthritis and bursitis

Gentamin

tablets

recent studies* cite rapid relief from pain, swelling and fever—**with complete freedom from side effects**

Each Gentamin tablet contains:

Sodium Gentisate	2½ gr. (160 mg.)
Salicylamide	2½ gr. (160 mg.)

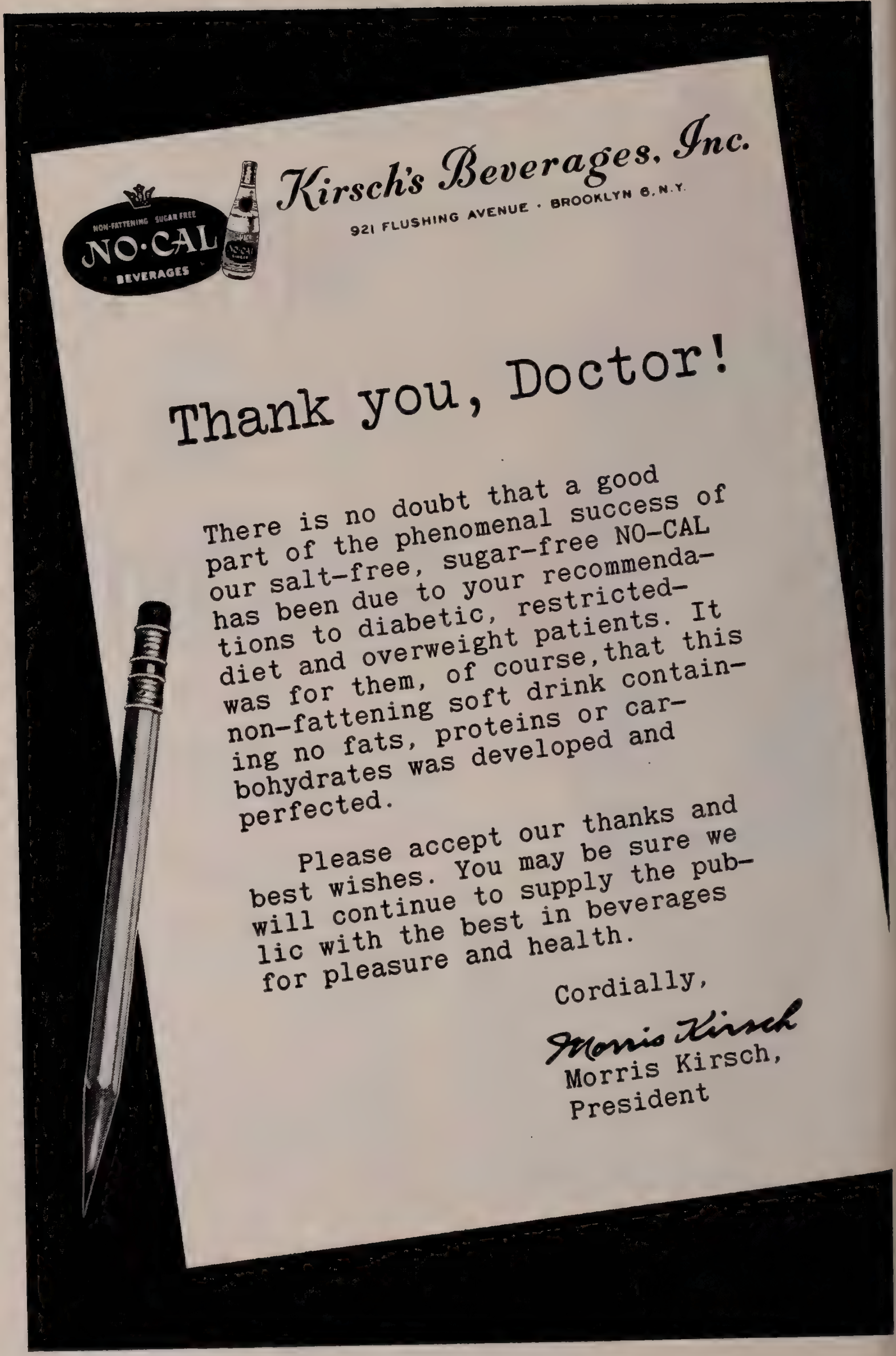
Bottles of 100 Tablets

Rely on Gentamin Tablets for safer, faster, more effective relief from the distress of rheumatic and arthritic disorders. Well tolerated, even when given over long periods of time, complementary gentisate and salicylate rapidly allay pain, spasm, fever and swelling . . . to permit greater range and ease of motion . . . Also highly efficacious for relief of bursitis, neuralgias, myalgias and neuritis.

samples and literature* yours for the asking.

APC STANDARD OF QUALITY

AMERICAN PHARMACEUTICAL COMPANY
Manufacturing Chemists New York 54, N. Y.
Over 37 years of service to the medical profession.



NON-FATTENING SUGAR FREE
NO·CAL
BEVERAGES

Kirsch's Beverages, Inc.
921 FLUSHING AVENUE · BROOKLYN 6, N.Y.

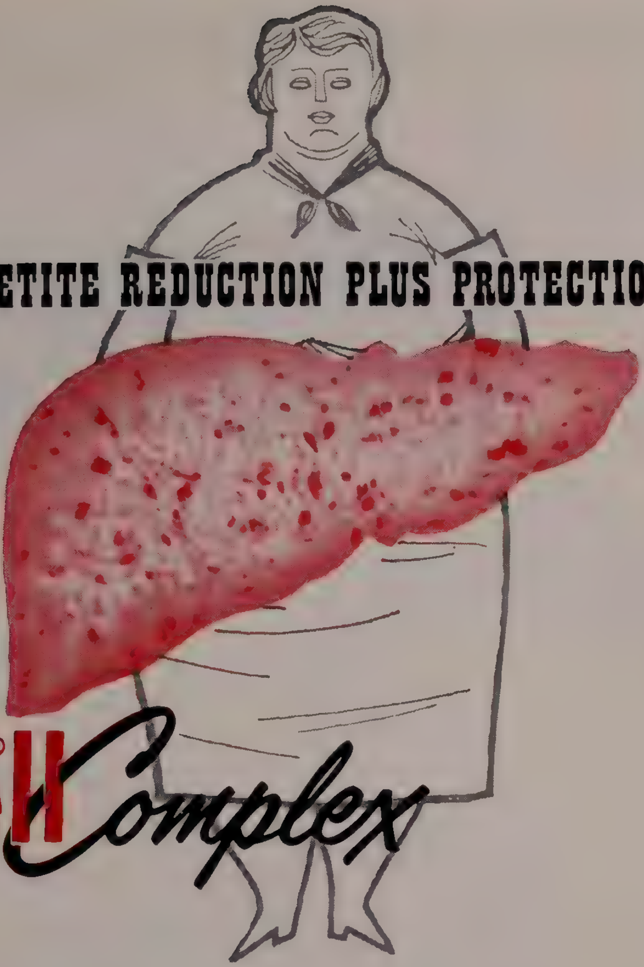
Thank you, Doctor!

There is no doubt that a good part of the phenomenal success of our salt-free, sugar-free NO-CAL has been due to your recommendations to diabetic, restricted-diet and overweight patients. It was for them, of course, that this non-fattening soft drink containing no fats, proteins or carbohydrates was developed and perfected.

Please accept our thanks and best wishes. You may be sure we will continue to supply the public with the best in beverages for pleasure and health.

Cordially,

Morris Kirsch
Morris Kirsch,
President



in the grossly obese **APPETITE REDUCTION PLUS PROTECTION**

Obocell® Complex

In treating the grossly obese, consider the important three-way protection of Obocell Complex:

1. **Protection against hunger pangs**
2. **Protection for the damaged liver**
3. **Support for co-enzymes**

Each Obocell Complex Capsule supplies:

d-Amphetamine Phosphate (dibasic)	5 mg.
Nicel*	100 mg.
Choline Bitartrate	200 mg.
Inositol	60 mg.
Thiamine Mononitrate	0.8 mg.
Riboflavin	1.2 mg.
Niacinamide	8 mg.

*Irwin-Neisler's Brand of High Viscosity Methylcellulose

Bottles of 50 and 500

A definite relationship exists between gross obesity and liver damage. Zelman[1] reports on 20 cases of gross obesity. All cases showed both *laboratory* and *histologic* evidence of liver damage.

Obocell Complex not only provides protection against liver damage but also suppresses the appetite, satisfies bulk hunger, and supplies important vitamins. Hence, it provides three-way protection for your heavily overweight patient.

1. Zelman, S.: Arch. Int. Med. 90:141, 1952.

IRWIN, NEISLER & COMPANY
DECATUR • ILLINOIS

Gantrisin 'Roche'

antibacterial action plus...

greater solubility

Gantrisin is a sulfonamide so soluble that there is little danger of renal blocking and little or no need for alkalinization.

high blood level

Gantrisin not only produces a high blood level but also provides a wide antibacterial spectrum.

economy

Gantrisin is a relatively economical antibacterial agent.

less sensitization

Gantrisin is a single drug—not a mixture of several compounds of fundamentally unrelated chemical structure—so that there is less likelihood of sensitization.

GANTRISIN®—brand of sulfisoxazole
(3,4-dimethyl-5-sulfanilamido-isoxazole)

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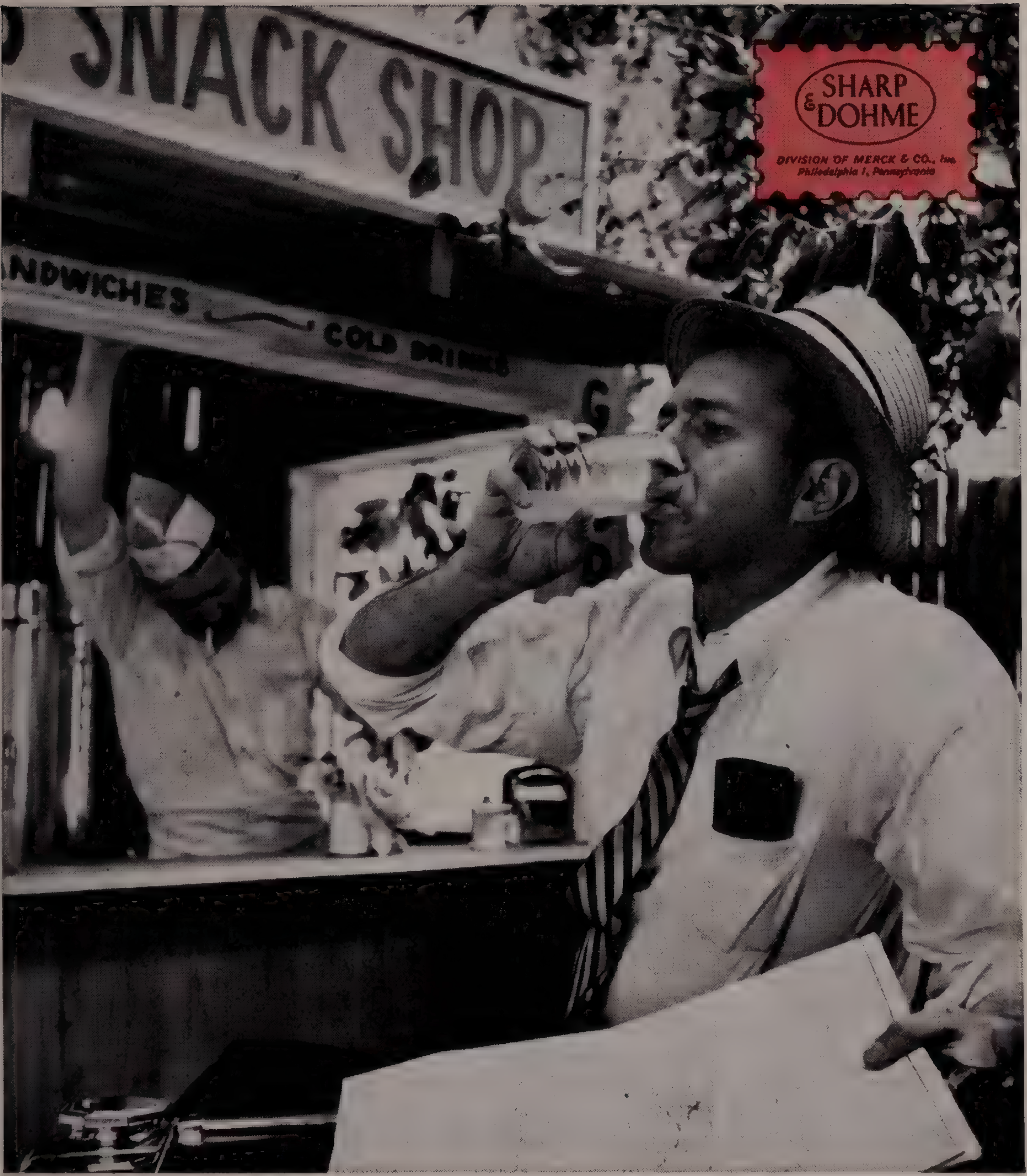
HOFFMANN-LA ROCHE INC.
Roche Park • Nutley 10 • New Jersey


SNACK SHOP
NDWICHES
COLD DRINKS
SHARP & DOHME
DIVISION OF MERCK & CO., Inc.
Philadelphia 1, Pennsylvania

PHOTOGRAPH BY PAUL RADKAI

When your patient takes the short route to diarrhea...

CREMOSUXIDINE®

SULFASUXIDINE® SUSPENSION WITH PECTIN AND KAOLIN

Summertime is vacation time—but not for food bacteria. When your patients complain of diarrhea—you can depend on pleasant-tasting, effective CREMOSUXIDINE.

This palatable suspension promptly controls specific and non-specific diarrheas. The 'Sulfasuxidine' content provides a "most satisfactory . . . intestinal antiseptic,"[1] while pectin and kaolin inactivate toxins and soothe inflamed mucosa.

Quick Information: *Adult dosage:* 1½ to 2 tablespoonfuls six times a day. *Children* and *infants* in proportion.

Reference: 1. J. A. M. A. 153:1519, (Dec. 26) 1953.

RAPID CURES

of urinary tract infections prevent permanent kidney damage

Infections of the lower urinary tract rarely remain localized for any length of time. The kidneys are often invaded rapidly unless effective treatment is instituted immediately. Hence, the choice of the first drug used may decide the fate of the kidneys.

FURADANTIN®

brand of nitrofurantoin, Eaton

Furadantin is unique, a new chemotherapeutic molecule, neither a sulfonamide nor an antibiotic.

RAPID ACTION. Within 30 minutes after the first Furadantin tablet is taken, the invaders are exposed to antibacterial urinary levels.

WIDE ANTIBACTERIAL RANGE. Furadantin is strikingly effective against a wide range of clinically important gram-negative and gram-positive bacteria, including strains notorious for high resistance.

Scored tablets of 50 mg.	Bottles of 50 and 250.
Scored tablets of 100 mg.	Bottles of 25 and 250.

THE **NITROFURANS**—
A UNIQUE CLASS
OF ANTIMICROBIALS
PRODUCTS OF
EATON RESEARCH

ACCEPTED
COUNCIL ON PHARMACY AND CHEMISTRY
AMERICAN MEDICAL ASSOCIATION

Also available: Furadantin Pediatric Suspension, containing 5 mg. of Furadantin per cc. Bottle of 4 fl. oz.

EATON
LABORATORIES
NORWICH, NEW YORK

HERE ARE FACTS ABOUT C.R.* TABLETS

C. R. Tablets provide for a pre-determined release of their active drugs, achieving the maintenance of a desired therapeutic blood level for a period of 10 to 12 hours. Manufactured under a new process, C. R. Tablets are composed of tiny granules of varying sizes which are compressed into one tablet. It is the precise combination in a C. R. Tablet of these various size granules, each encasing a portion of the active drug, which provides for a uniform, controlled release of the medication for absorption in the bloodstream over an 8 to 10 hour period.

PRINCIPAL ADVANTAGES

- *controlled uniform release of active therapeutic agent.*
- *steady absorption providing constant therapeutic blood level.*
- *reduced elimination due to absence of peak concentrations.*
- *new dosage convenience assures greater patient cooperation.*

THESE DRUGS OF CHOICE
NOW AVAILABLE
IN C.R.* TABLETS

SUSTRAMINE C.R.

Each CONTROLLED RELEASE†
Tablet provides:
1½ gr. (97 mg.) Phenobarbital
(Warning: May be habit forming.)
SUPPLIED: In bottles of 30 and 250.

SUSTASED C.R.

Each CONTROLLED RELEASE†
Tablet provides:
1/25 gr. Nitroglycerin
SUPPLIED: In bottles of 50 and 250.

Each CONTROLLED RELEASE†
Tablet provides:
10 mg. or 15 mg.
Dextro-Amphetamine-Sulfate
SUPPLIED: In bottles of 30 and 250.

SUSTABARB C.R.

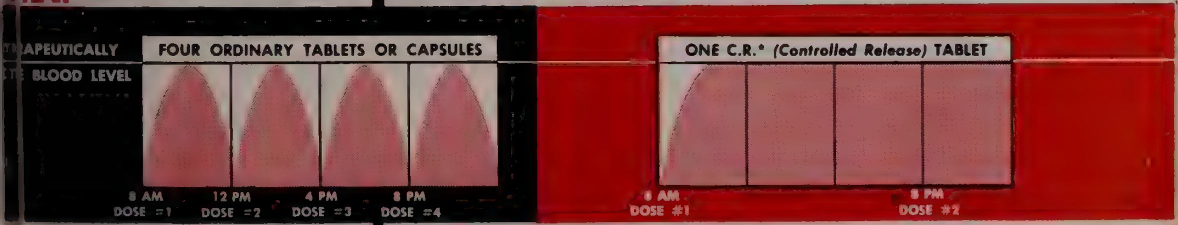
Each CONTROLLED RELEASE†
Tablet provides:

Hyoscyamine Sulfate	0.3600 mg.
Atropine Sulfate	0.0585 mg.
Hyoscine Hydrobromide	0.0210 mg.
Phenobarbital	¾ gr.

(Warning: May be habit forming.)
SUPPLIED: In bottles of 50 and 250.

NITROMED C.R.

.R.* ACTION IS EASILY DEMONSTRATED



THER DRUGS OF CHOICE AVAILABLE SOON

*T.M. Registration Applied For.
†Patent Pending

Literature and samples on request.

INTERMEDICO CORPORATION
Manufacturing Pharmaceutical Chemists
FLORAL PARK, NEW YORK

In the six months since ACHROMYCIN was first announced** at the Antibiotics Symposium of the Food & Drug Administration, this new broad-spectrum antibiotic has become a major weapon in modern medicine.

ACHROMYCIN has demonstrated notable effectiveness in a wide variety of clinical applications and the following characteristics are outstanding:

ACHROMYCIN is effective against pneumococci, staphylococci, beta hemolytic streptococci, gonococci, meningococci, *E. coli* infections, acute bronchitis and bronchiolitis, pertussis, and the atypical pneumonias, as well as virus-like and mixed organisms.

ACHROMYCIN has definitely fewer side-reactions.

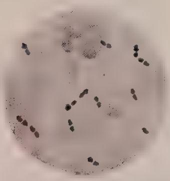
ACHROMYCIN provides more rapid diffusion in body tissues and fluids.

In solution, ACHROMYCIN maintains effective potency for a full 24-hours.

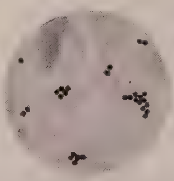
ACHRO

TETRACYCLINE HCl LEDERLE

proved effective against

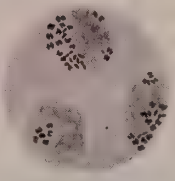


Pneumococci

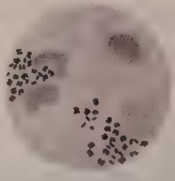


Staphylococci

Beta Hemolytic Streptococci



Gonococci



Meningococci

E. coli

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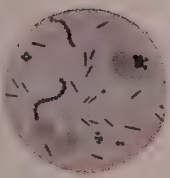
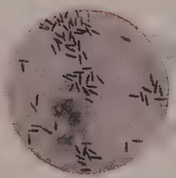
MYCIN*

Bronchiolitis
(Aspergillus)



Mixed Infections
(Staphylococci,
H. Streptococci,
Proteus Vulgaris)



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Bacillus)

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1. Weinberg, B.; Ginsberg, R., and Sorter, H.: Am. J. Digest. Dis. *20*:230, 1953.

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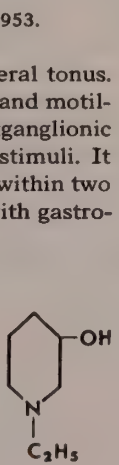

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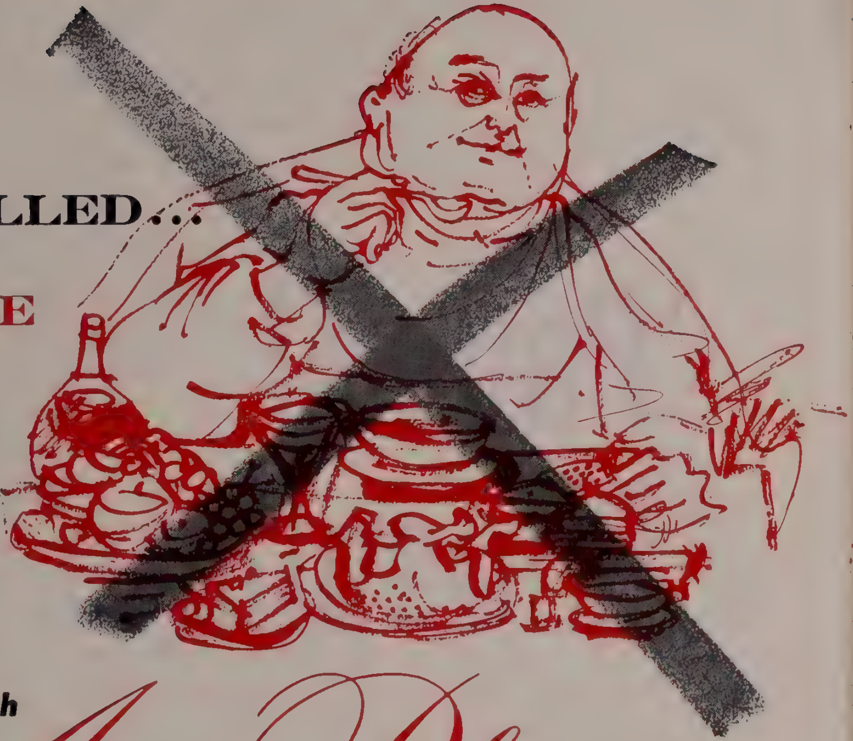

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JOURNAL OF MEDICINE

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VOLUME 54 JUNE 1, 1954 NUMBER 11

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EDITORIAL

Civil Defense in the Cold War

Again the Journal brings to the attention of the membership on page 1597 of this issue certain aspects of civil defense, with illustrations in color.

In view of the cold war and its possible developments, it is our view that increasing interest should be shown in the medical and welfare aspects of service to the people in case of emergency.

The attention of all medical personnel is invited to these articles which the editors of the Journal hope to be able to publish each month with the objective of stimulating an interest which may become increasingly vital.

The extension of hostile interests in South and Central America, the strife in the Far East, and the tension in Western Europe seem reason enough to stress the importance of these articles. Many things can happen even though no atom or hydrogen or cobalt bombs are ever used. All of these bombs combined could be less disruptive of a modern civilization than one casual, fair-sized meteorite, for example, striking this area. And who is to say that such a phenomenon may not occur at any time. It did in Arizona. It did in Siberia. Why not somewhere in New York State?

Inaugural Address

Although the Constitution and Bylaws of our State Medical Society require me to address you this morning, it is with gratitude that I appear before this august body. The honor of being president of this Society, which you have conferred upon me, is one of the highest which can be given to a member of the medical profession. From my long association with this Society in various lesser roles, I realize full well the heavy burdens the office of president places upon my shoulders. I promise to dedicate myself to the task of discharging the duties of my position to the best of my ability, hoping that I may accomplish as much as my eminent predecessor, Dr. Eggston.

It is not my intention this morning to present a detailed program involving the numerous critical problems facing the medical profession at this time. As delegates, you have come here to discuss these problems, and the time allotted to find suitable answers is scarcely adequate. My remarks, therefore, will be brief and, I hope, to the point.

At the outset, I should like to remind you that our Society's one hundred fiftieth anniversary is almost at hand. The society was organized in 1807, and its one hundred and fiftieth year will commence in 1956. While two years seems long from the point of view of time, it is a very short period to prepare for such an outstanding event. Work should be started at this session of the House to commence a program befitting the world's third largest medical society. With 23,501 members your Society today is outranked numerically only by the American Medical Association, which has 146,723 members, and the British Medical Association, which has a roster of about 68,000 members.

Down through the almost one hundred and fifty years of this Society's existence, the basic goal of our organization has been the welfare of the people. In this atomic age when more people are receiving more medical care in more hospitals than ever before in the history of the world, this fundamental principle should continue to be the basic concern of this House of Delegates in all its deliberations. No problem involving the medical profession should be solved to the detriment of the public. In approaching a solution to each of the numerous problems, which you will study, a positive rather than a negative attitude should be maintained whenever possible. Constantly bear in mind that every act of this House will be scrutinized, not only by the members of our own profession, but by the public and the press. The more constructive we are in facing modern medical economic problems, the more favorable will be the reaction of the public towards the medical profession.

Although there is no specific legislation before Congress at this time which is intended to bring about the socialization of medicine, we cannot take a lackadaisical attitude and consider the problem of government-controlled medicine as a thing of the past. We should be constantly on guard against measures which are harmless on the surface but which

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, House of Delegates, May 10, 1954.

indirectly could bring about Federal control of medicine. As citizens, we have a solemn duty to be on the alert against well-intentioned laws that might make the Federal government so all-powerful in caring for every want of the individual as to make him almost wholly dependent upon the state for his existence. As physicians, we are bound to uphold the dignity of the individual and the principle that the power freely to choose a doctor is a natural right of every citizen and not a function of the government.

This House of Delegates in all of its actions should bear in mind, therefore, that the issue of government-controlled medicine is not dead. We have a period at hand in which we can build for the future. Now is the time to take action so that we can promote good will between the medical profession and the public. It is most important that in attempting to solve our problems we try also to find a solution to the patients' problems. Whatever we can do to ease the burden of the patients' financial load will win for us friends who can be of inestimable value in a battle against socialized medicine, if such should ever occur again.

Year after year this House of Delegates meets and does an admirable job in managing the affairs of our Society. In the interim, when the House is not in session, the Council and the Board of Trustees do an equally admirable job. I should like to take this opportunity, however, to pay tribute to the numerous men and women who serve on the many Council committees of this Society. Functioning the year around as a vital part of our Medical Society organization are approximately 50 Council committees and subcommittees Approximately 320 individuals serve on these committees. Too much cannot be said for the fine spirit in which the individual committeemen give up their time and devote their experience to the problems which come before them. Selflessly they work, not only to keep medicine at its high standard, where it justly belongs, but they strive to better its position and to advance its interests wherever possible.

The various committees now functioning in this Society attempt to accomplish the greatest good for the greatest number of physicians in the Society and for the greatest portion of the public. Although problems which they have to face the year round are constantly increasing, they are, nevertheless, basically similar. Each problem may be different on the surface, but underneath there is some fundamental principle which must be discussed. To these men and women who serve on these committees, I want to offer my gratitude this morning. I hope that they will continue their fine work, which they have been carrying on for many, many years.

We hear much these days about a possible depression, recession, or a readjustment period. Without taking a gloomy outlook on the future of the State Society, I feel that we should consider our finances in view of the present situation in our country. Apparently we are going through what financial experts have called a "readjustment period" from all-out wartime activities. We should take time out to review our financial situation in view of the changing times.

No group within the structure of our Society has tried more diligently to keep financial matters on an even keel than our own Board of Trustees. They deserve the thanks of every member of the State Society and this House of Delegates for the prudent manner in which they have acted. Many times, nevertheless, the demands made upon them for services which require financial support make it most difficult for this body to spend less and yet give the doctors what they request through their delegates. In the deliberations of this House, every proposal made should be considered from the point of view of what it will cost the Society. An estimate of the cost of any procedure recommended should be thoroughly understood before monies are allocated to carry out the activity. No project should be undertaken which will endanger our financial position or make it necessary for us to go beyond our means. Whenever possible, the treasurer of the Society and the Board of Trustees should be consulted before any great financial burden is voted for.

All of us, I believe, are in agreement that the idea of purchasing a building to be used as a new home for our State Society is a splendid one. Such a move, no doubt, would be beneficial in many ways. It would provide adequate quarters, improve personnel morale, and add much to our standing in the community as well as among medical and allied groups. We should, however, devote much thought to this proposition before taking any definite action. One of the most important factors involved is the choice of the right time to take this step. A long-range view should be taken of this important matter, and the advantages and disadvantages in undertaking this project at this time should be carefully weighed.

There are so many problems facing the medical profession today that it would be impossible for me to discuss all of them this morning. These involve such matters as legislation, medical education, medical insurance, ethics, doctor-hospital-patient relationships, public relations, malpractice insurance, and numerous other current problems. In attacking them we should do our best to map a program whereby every individual member of the State Medical Society will be induced to do his part to bring the greatest benefit to the patients, to the doctors, to the hospitals, and to all other persons involved. We will not be able to find answers to all the problems at this session. We should, therefore, concentrate our efforts on the important ones and try to find satisfactory answers to the most urgent.

Medicine in this State has made tremendous scientific strides forward since the Legislature authorized the organization of our State Society by a special act passed April 4, 1806. There is no need for me to substantiate this statement, because the developments in the diagnosis and treatment of disease resulting in the lengthening of life's span are well known to all of you. . . .

Whatever you, as delegates, accomplish during the next few days will determine what action my fellow officers and I, as president, will be able to take during the next twelve months. I urge you, therefore, to bear in mind the few thoughts I have expressed this morning in developing not only a theoretically sound but, above all else, a workable program. From your record of the past, I know that you will spend long, arduous hours at the task which lies before you. May your efforts be so successful that they will achieve the ultimate goal of our Society by advancing the science and art of medicine and by promoting better health for the public.

As individual physicians, each of us is guided by our Principles of Professional Conduct which state "the prime object of the medical profession is to render service to humanity; reward or financial gain is a subordinate consideration." Each of us, I know, in his private practice tries to live up to this fundamental principle to the best of his ability. As a group working here today and for days to come in the House of Delegates, I urge you to bear in mind the same basic philosophy. In the past this House of Delegates has religiously lived up to this fundamental tenet and as a result has accomplished much good for the medical profession and the public at large. I trust that you, the members of this 1954 House of Delegates of the Medical Society of the State of New York, will adhere to this basic rule in all your actions. I feel certain that if you do, the activities of this House of Delegates will not only equal the achievements of any previous House, but will establish a record that will stand for a long time in the history of this Society.

Dan Mellen

The Doctor in CIVIL DEFENSE

Medical Defense Committee of the Medical Society of the State of New York and the Office of Medical Defense, New York State Department of Health

J. G. FRED HISS, M.D., SYRACUSE, NEW YORK, *Chairman*

Medical Defense Insignia

An enemy attack on one of our cities would result in thousands of injured persons all needing immediate medical attention. Unless we have a system for caring for these injured and this system is known by all medical workers, many will die for lack of medical care.

As has been stated many times before, there just aren't enough doctors and nurses in the State to cope with a disaster situation; therefore, it has been necessary to enroll and train many other categories of personnel to help in aid stations and hospitals. In each installation the staff will consist of from 50 to several hundred volunteers, representing 12 or more categories of personnel. Although some of these people may know each other, we may be certain that after attack every installation will have people working in it who are total strangers.

Civil Defense and the H-Bomb

"The fundamental concepts of civil defense planning have not been changed by the introduction of the hydrogen bomb." This sentence from the annual report of the New York State Civil Defense Commission to Governor Dewey was quoted by State Civil Defense Director Lieut. Gen. C. R. Huebner to the press on April 1. The quote continued, "While the damage and casualties will of course increase, and the importance of prompt and effective post-attack measures is magnified, the actions to be taken are essentially the same as in the case of an atomic blast."

At the same time General Huebner pointed out that Civil Defense "is not purported to insure a miraculous protection in the event of an attack upon our country with modern weapons of war. An enemy attack will mean war and in the course of war many people will be killed. Civil Defense is fundamentally the people, organized, trained and prepared to take positive action to cope with the effects of a hostile attack. If exposed to the effects of an atomic or hydrogen bomb, no matter where the people may be, many will be injured and will need our rapid assistance. Civil Defense gives the best assurance that the injured will receive this immediate assistance."

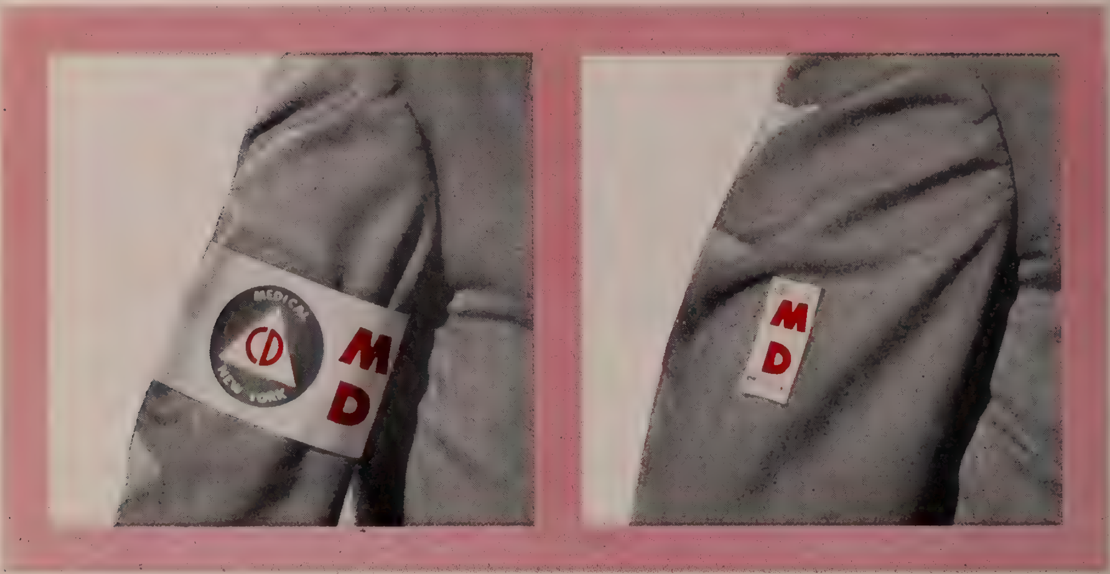
The yearly Civil Defense training demonstrations in target cities, which are directed by the New York State Civil Defense Commission, serve also as a test of present plans, and from them much has been learned. One important problem has been evident to participants—that of identifying the people with whom they were trying to work. A doctor asking a woman to help him couldn't tell whether she was a nurse, medical aide, or even another doctor—therefore, he had no idea what she could do. Nurses sometimes couldn't tell the doctors from the medical aides and didn't know whom to ask for help. Names weren't important, but it was important to know the person's category and how much previous training nonprofessionals had had.

It was obvious that, only when each worker was able to identify quickly the category and function of other workers in his installation, medical personnel could work swiftly and efficiently after an enemy attack.

EMS Insignia

As a result, the New York State Civil Defense Commission has established insignia for the various categories of personnel which will indicate at a glance their position and degree of training.

Although Civil Defense leaders realize that, in the chaos that will exist after attack, plans made



ahead of time may break down in some instances, they have attempted to work out as carefully as possible the movement of supplies and personnel, the setting up of installations, and the command of the whole operation from control centers. If preattack plans are realistic and comprehensive and if personnel are well trained to carry out these plans, the better will be the chance after attack of accomplishing the work of the Emergency Medical Service.

Furnishing insignia to all categories of medical personnel is one more assurance against postattack breakdown of the operations of Emergency Medical Service. These insignia will be important in identifying categories of personnel at assembly points in support areas and at supply and assignment depots, as well as in the individual medical installations in an attacked city. The insignia are printed on pressure-sensitive tape and are applied next to the Civil Defense emblem on the armband or badge issued by the local Civil Defense organization. They are available for issue locally before attack to all enrolled personnel. In addition, insignia are also packed with stockpiled medical supplies in the State Aid Station Outfit (SASO) for issue after attack to new volunteers and to enrolled workers unable to bring their insignia with them. In such instances, if there is no surface on which the tape will adhere, it may be pinned to the clothing in a prominent position.

Medical Training Unit

The numbers of personnel needed for postattack operations of the medical services have been based on certain ratios per physician. The medical training unit is listed below. Depending, of course, on the postattack situation, it is expected that the staff of a First Aid Station will consist of one team, that two or more teams will be used in a Secondary Aid Station, and that Improvised Emergency Hospitals will use as many teams as needed, plus additional numbers of certain personnel as the demand requires. The medical training unit is:

1	Physician
1	Executive (may be administrator, physician, medical associate, or nurse)
1	Medical Associate (dentist, veterinarian, third or fourth year medical student)
3	Nurses
1	Supply Officer (pharmacist, if possible)
40	Medical Aides (including several with specialized training as medical clerks and transport clerks)
1	Messenger Leader
8	Messengers

Following are the title, insignia, and duties after attack of each category of personnel:

MD

Physician

After attack physician includes all doctors of medicine and doctors of osteopathy who will assume direction for and administer care to the injured. If the station does not have an executive officer, a physician must also assume the duties of the executive and take charge of the administrative functions of the installation.

Medical Associate

MAS

Dentists, veterinarians, third and fourth year medical students will perform all medical procedures which they are capable of doing to help physicians care for the injured. In Secondary Aid Stations they may be used to supervise the Walking Wounded Treatment Section and care for the walking wounded. If no physician or executive officer is present, they will take over the direction of the station. As many as possible will be trained to assume these responsibilities.

MX

Medical Executive

Person trained to take charge of all the administrative functions of the installation, supervising personnel working with supplies, communications, and transportation.

Nurses

RN

All graduate professional nurses and, after attack, third and fourth year professional students.

LPN

Licensed Practical Nurses

Practical nurses will be assigned to duties that will make full use of their training.

Medical Supply Officers

MSO

Pharmacists and other personnel who have been trained to take charge of supplies in emergency medical installations.

Medical Aides

Medical aides are those volunteers trained to go out into the field, locate the injured, give them first aid, and carry them to aid stations. In aid stations and hospitals they will help doctors and nurses give emergency medical care to the injured. Some will also receive advanced training as medical clerks, as hospital aides, or in medical transportation.

MA4

Medical Aide 4th Class is

(*a*) An enrolled untrained volunteer (may have had orientation)

(b) Untrained person who volunteers after attack

MA3

Medical Aide 3rd Class has had orientation and training in first aid.

MA2

Medical Aide 2nd Class has had orientation and training in (1) first aid and (2) duties in aid stations.

MA1

Medical Aide 1st Class has had orientation and training in (1) first aid, (2) duties in aid stations, and (3) advanced training.

M
L

Messenger Leader

Person trained to take charge of and direct medical messengers in their duties. The Messenger Leader may also be the Message Chief for the installation.

Medical Messengers

Boys and girls who are trained to carry messages within and between medical installations or to other Civil Defense units; to guide or direct the walking wounded to Secondary Aid Stations; to guide or direct homeless persons to Welfare Centers; and otherwise assist in the work of the installation.

M
M

Every physician should memorize the symbols on these insignia. After enemy attack, when every minute will be important, the knowledge will help in the fight to save lives.

103rd Annual Meeting

AMERICAN MEDICAL ASSOCIATION

June 21 to 25, 1954

Palace Hotel

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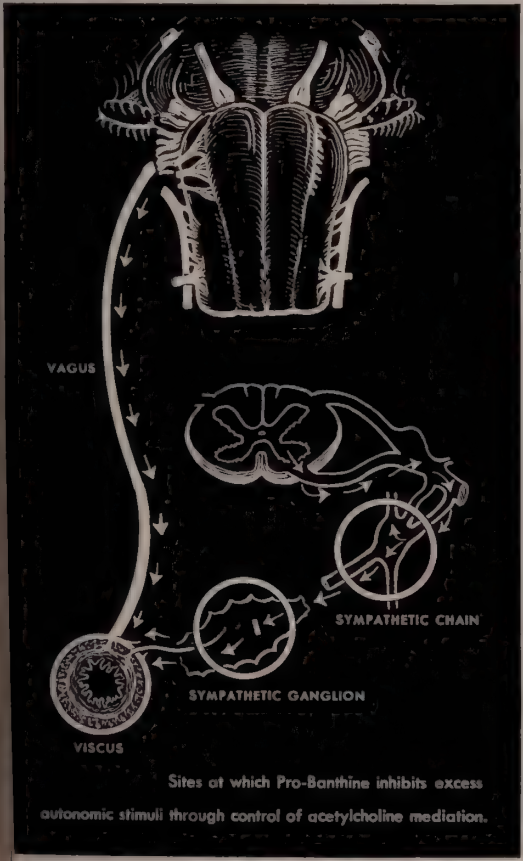
By controlling excess motility of the gastrointestinal tract, Pro-Banthine has found wide use[1] in the treatment of peptic ulcer, functional diarrheas, regional enteritis and ulcerative colitis. It is also valuable in the treatment of pylorospasm and spasm of the sphincter of Oddi.



Sites at which Pro-Banthine inhibits excess autonomic stimuli through control of acetylcholine mediation.

Roback and Beal[2] administered Pro-Banthine to a series of 156 patients during the period of a year. These authors report that the oral administration of 30 mg. of the drug "resulted in marked and prolonged inhibition of the motility of the stomach, jejunum, and colon. . . ."

Therapy with Pro-Banthine is remarkably free from reactions associated with parasympathetic inhibition. Dryness of the mouth and blurred vision are much less common with Pro-Banthine than with other potent anticholinergic agents and, if they occur, they usually are not sufficiently severe to warrant discontinuance of the drug. In Roback and Beal's[2] series of 156 patients, "Side effects were almost entirely absent in single doses of 30 or 40 mg. . . ."

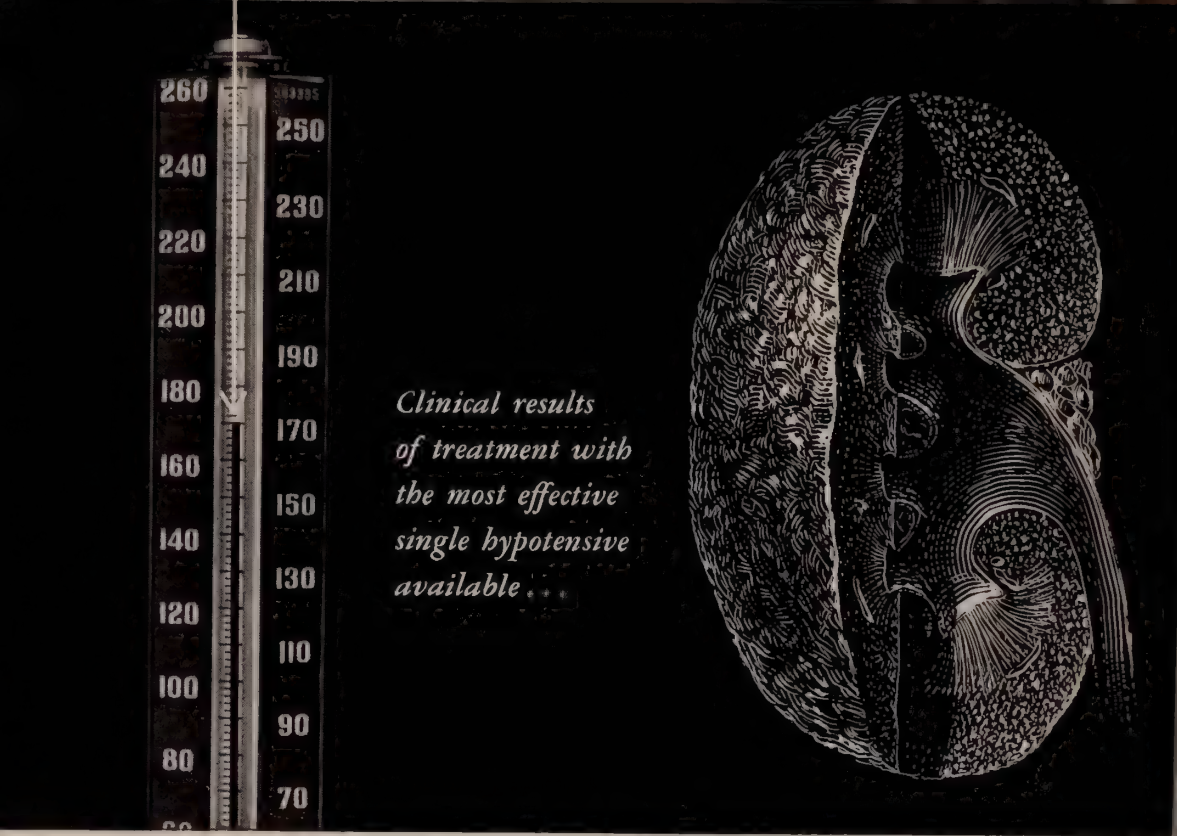
Pro-Banthine (*β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide*) is available in three dosage forms: sugar-coated tablets of 15 mg.; sugar-coated tablets of 15 mg. of Pro-Banthine with 15 mg. of phenobarbital, for use when anxiety and tension are complicating factors; ampuls of 30 mg., for more rapid effects and in instances when oral medication is impractical or impossible.

For the average patient one tablet of Pro-Banthine (15 mg.) with each meal and two tablets (30 mg.) at bedtime will be adequate. G. D. Searle & Co., Research in the Service of Medicine.

---

[1] Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

[2] Roback, R. A., and Beal, J. M.: Effect of a New Quaternary Ammonium Compound on Gastric Secretion and Gastrointestinal Motility, Gastroenterology *25*:24 (Sept.) 1953.



Improvement in 55 to 62% of patients with hypertensive kidney disease[1]

Together with significant reductions in elevated blood pressure in 80 per cent of hypertensives,[1,2] Methium therapy may produce an appreciable improvement in the associated renal symptoms when actual uremia is not present. Albuminuria and hematuria present in 48 of the 120 hexamethonium-treated patients followed by Moyer's group, improved definitely in 28 cases.[1] In addition, progressive renal failure did not continue so long as the blood pressure was controlled.

With continued management, up to or beyond a year, blood pressure may be reduced and stabilized, and cardinal symptoms arrested or reversed, without any increase in dosage.[1]

As blood pressure is reduced, and even without reduction, hypertension symptoms have regressed. Retinopathy may disappear, headache, cardiac failure and kidney function may improve.

Methium, a potent autonomic ganglionic blocking agent, reduces blood pressure by interrupting nerve impulses responsible for vasoconstriction. Because of its potency, careful use is required. Pretreatment patient-evaluation should be thorough. Special care is needed in impaired renal function, coronary disease and existing or threatened cerebral vascular accidents.

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SCIENTIFIC ARTICLES

An Investigation of the Role of Hyperinsulinism in Multiple Sclerosis

Preliminary Report

E. M. ABRAHAMSON, M.D., NEW YORK CITY

MULTIPLE sclerosis is a disease of unknown etiology. While its pathology is fairly well established, many aspects of it are still obscure, as attested by the difficulties encountered in diagnosing it. The disease differs from most afflictions of the central nervous system in that it is characterized by remissions and exacerbations that are frequently misleading. It seems quite certain that what is chiefly lost is the myelin sheathing.[1] Recovery from specific symptomatic involvement in some instances can be practically complete despite the failure of the myelin to regenerate. The axis cylinders are generally involved only in the later stages of the disease process.

During the past eighteen months, due to curious circumstances, the author was enabled to see a reasonably large number of such cases, to date 126, and he has become impressed by the singular fact that in each case it has been possible to establish evidence of functional hyperinsulinism and an ancillary hypocalcemia. This was found to be not a statistical trend but what mathematicians call "a one to one correspondence."

Case Reports

CASE 1.—On April 30, 1952, Mrs. T. M. appeared on a television program to secure help for her family. Her husband had been told that he had only a few years to live. The broadcast was seen by a member of the Marine Corps Fathers' Association. The author, as adviser to that organization, was requested to examine the ex-marine on May 14, 1952. The history, in brief, was one of repeated blackouts and increasingly profound fatigue and muscular weakness that kept him in bed or in a wheelchair. A transcript of his service health record indicated repeated diagnoses of multiple sclerosis. Examination revealed marked left upper quadrant tenderness and spasm to pressure of the left rectus abdominalis, which, as Harris has pointed out, are the only physical signs of hyperinsulinism.[2] Except for a slight ataxia, minimal nystagmus, slightly exaggerated reflexes, and bitemporal pallor, no other neurologic findings were obtained. After over twenty years experience with patients suffering from hyperinsulinism, the symptoms instantly aroused suspicion that it perhaps was a case of this disease.

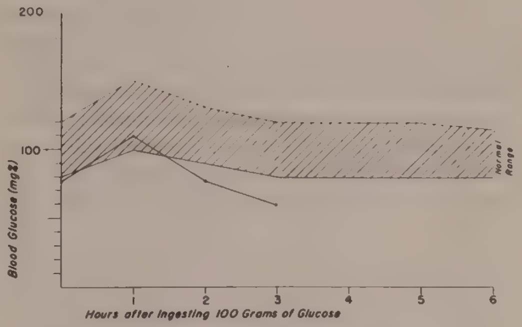

FIG. 1. Case 1—Glucose tolerance test.

Basal metabolic rate was minus 13.5 per cent, and serum calcium was 9.2 mg. per cent. Results of the glucose tolerance test are given in Fig. 1.

The patient was prescribed the Seale Harris diet[3] and was given biweekly 10-cc. intramuscular injections of Calphosan* to raise the serum calcium.[4] In the author's experience the correction of hypoglycemia is enormously accelerated by simultaneous attention to the accompanying hypocalcemia. Fabrykant and Pacella[5] have shown that these two deficiencies are usually concomitant, and proper treatment should be aimed at correction of both.

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* Calphosan was furnished by the Carlton Corp., New York City.

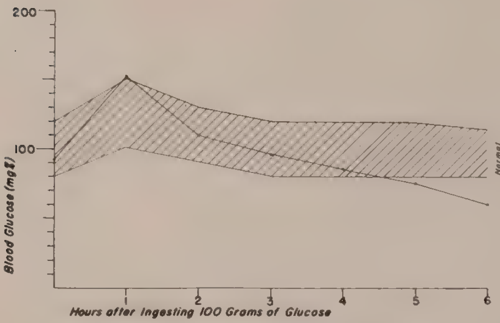

FIG. 2. Case 2—Glucose tolerance test.

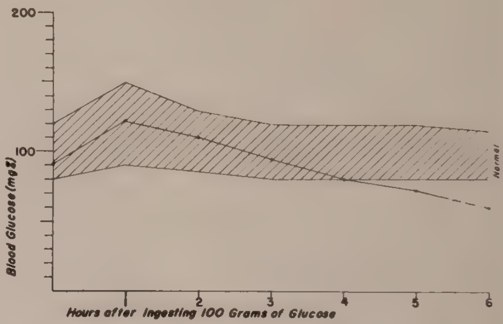

FIG. 3. Case 3—Glucose tolerance test.

Proloid ($1^1/_2$ grains a day) was also prescribed to compensate for the hypothyroidism. Within a week improvement was noticeable. He no longer had any ataxia. He abandoned the wheelchair and remained in bed only for his night's sleep.

On June 5, 1952, there was no discernible bitemporal pallor. The reflexes were only slightly hyperactive. On June 24, 1952, he returned to work at an aircraft factory—and on the night shift. He is still under observation, on a modified diet, receiving monthly injections of 10 cc. of Calphosan.

CASE 2.—W. L., a man of forty, had been at the Neurological Institute of New York and hospitalized for varying periods since 1942. At one time he was almost blind for a few days. Examination disclosed only insignificant neurologic signs, such as bitemporal pallor, a slight nystagmus, and an almost infinitesimal intention tremor of his hands. His main complaint was overwhelming fatigue.

Basal metabolic rate was minus 5 per cent, and serum calcium was 8.2 mg. per cent. Figure 2 shows results of glucose tolerance test.

These findings, together with the left upper quadrant tenderness and spasm, justified the diagnosis of hyperinsulinism. His treatment duplicated that of the first case except for the thyroid extract.

For several weeks he showed no improvement. Then, suddenly, the subjective complaints disappeared. On August 28, 1952, a complete examination showed normal reflexes. He had no nystagmus or bitemporal pallor. He felt immeasurably better and did a full day's work as a laborer.

CASE 3.—T. F. was an Army veteran of twenty-six. His multiple sclerosis started with a sudden attack of complete hemiplegia in July, 1951, which cleared up after a few days. Then he developed a bulbar paralysis that necessitated use of a mechanical respirator. On May 30, 1952, examination showed legs completely useless, extreme hyperreflexia, bitemporal pallor, and violent intention tremors of all four extremities. There seemed to be no question as to the diagnosis of multiple sclerosis.

Thomas Flanagan
June 4, 1952

FIG. 4. Case 3—Signature of patient two weeks after therapy was begun.

Laboratory studies showed the basal metabolic rate minus 7 per cent and the serum calcium 9.0 mg. per cent. Glucose tolerance test results are given in Fig. 3.

He was put on the Harris diet and Calphosan injections. By June 2, 1952, his legs remained quiet although still useless for support. On June 6, 1952, his hands were steady enough to shave himself. By June 10, 1952, he could sit up in bed without assistance and be helped to an easy chair about 10 feet from his bed. He could sit for several hours at a time watching television. All he required to negotiate the distance was enough support to keep him from losing balance. On June 14, 1952, he was able to write his name without difficulty (Fig. 4).

On July 1, 1952, the injections of Calphosan were reduced to 10 cc. once a week. Previous experience has shown that a few doses of this preparation usually suffice to raise the serum calcium level and maintain isocalcemia.[4] However, it was soon noticed that his condition seemed to remain static. While he did not lose ground, no further improvement was apparent.

It was then felt that the basal metabolic rate determination might have been erroneous. There may have been slight, hardly noticeable tremors which would keep him from basal conditions. He was given Proloid ($1^1/_2$ grains a day) without repeating the test because that would have been extremely troublesome. After a fortnight his vigor increased. However, he still showed no further improvement.

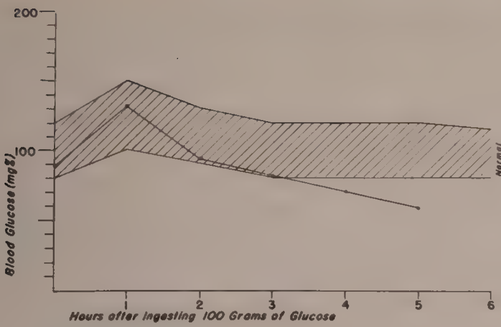

FIG. 5. Case 4—Glucose tolerance test.

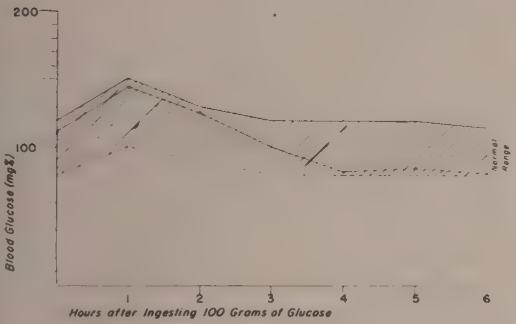

FIG. 6. Case 5—Glucose tolerance test.

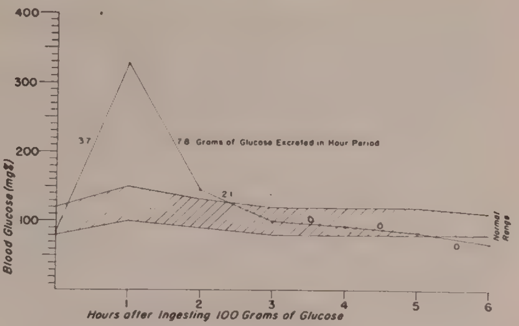

FIG. 7. Case 6—Glucose tolerance test.

On September 1, 1952, the biweekly injections of Calphosan were reinstituted. Then he noticed that "life" returned to his legs. He could feel the pressure of the floor against his feet, the "floating" sensation having vanished.

On November 16, 1952, the Calphosan injections were increased to 10 cc. on alternate days. By the first week of December, he could stand without any difficulty and could take a few steps without assistance.

CASE 4.—M. Z., a man of forty-five, was first seen on June 4, 1952. He had vague neuromuscular complaints dating back to 1936 when he had a transient blurring of vision. In October, 1950, a diagnosis of multiple sclerosis was made at the Neurological Institute. He had ataxia of all four extremities, slight intention tremors of both hands, bitemporal pallor, and a spastic gait, his feet catching on the ground because of a bilateral foot-drop. He had left upper abdominal quadrant tenderness with spasm.

The basal metabolic rate was minus 3 per cent, serum calcium 9.0 mg. per cent, and glucose tolerance test results were as shown in Fig. 5. (At the fifth hour, he had a cold sweat and his ataxia became much more pronounced.) The same treatment was prescribed.

On June 24, 1952, he no longer shuffled his feet but lifted them properly at each step. He felt a vigor he had not experienced in over fifteen years. A complete examination failed to reveal any of the stigmata of multiple sclerosis.

At the end of June, 1952, contrary to advice, he decided to go to the country over the week end. He played four sets of tennis, went for a swim and on a long hike. When he returned to the city, his symptoms returned. His gait was stumbling. He decided that he needed limbering up and submitted to the ministrations of a chiropractor. After the chiropractic "adjustments" he could barely walk. In his panic he refused any further treatment.

CASE 5.—S. S. was a fifty-four-year-old male. Multiple sclerosis was diagnosed in 1935. However, it was mild and apparently confined to his left leg which buckled under him from time to time. Examination on July 10, 1952, showed that in spite of his history, none of the classic findings was present. He had no ataxias, bitemporal pallor, or left upper abdominal quadrant tenderness and spasm.

Basal metabolic rate was minus 5 per cent, and serum calcium was 10.5 mg. per cent. Results of the glucose tolerance test are given in Fig. 6.

Failure of his blood sugar to drop into the hypoglycemic range precluded a diagnosis of hyperinsulinism. This single exception required an explanation, and it was soon forthcoming. He was re-examined and his story re-elicited. He then recalled that he had fallen from a bicycle a short time before the onset of his symptoms. He had struck his head and was unconscious for about half an hour. Obviously, he had sustained a concussion with damage to the motor area, and an upper motor neuron lesion was found that had been mistaken for multiple sclerosis.

CASE 6.—T. S., a male, age thirty-five, whose first symptom was a dizzy spell in 1941, was in good enough physical condition, however, to be in the Army from 1942 to 1945. He was discharged for disability, and the diagnosis of multiple sclerosis was made a few months later. In 1949 he was admitted to a veterans hospital where the diagnosis was confirmed. In addition, a diagnosis of diabetes mellitus was made.

Laboratory studies showed the basal metabolic rate minus 16 per cent and the serum calcium 9.0 mg. per cent. Glucose tolerance test results are given in Fig. 7.

In the treatment the diabetic factor was ignored. In the author's experience with some 30 cases of dysinsulinism, this is proper procedure. With stabilization of insulin secretion the diabetic factor takes care of itself. This case is included to show the possibility of simultaneous hyper- and hypoinsulinism, the combination being called by Harris, "dysinsulinism."[2] The patient did not remain under treatment long enough to report any results.

Other cases, in all 126, were investigated in the same fashion. In each case there was incontrovertible evidence of functional hyperinsulinism, together with serum calcium levels invariably below 9.5 mg. per 100 cc. (Any drop of serum calcium below 10 must be considered subclinically low.[4])

Comment

The author is not a neurologist but an internist primarily interested in the chemical and endocrinologic aspects of diseases. As such it is not his intention here either to expound or to disregard neurologic findings but simply to call attention to the possible etiologic role of hyperinsulinism in multiple sclerosis.

Multiple sclerosis has all the earmarks of a metabolic disorder. It is not infectious.[6] However, any infection tends to bring a fresh attack in its wake.[6] An exacerbation can be induced by severe exertion and fatigue[6] or by dietary restrictions.[7] In this respect it closely resembles hyperinsulinism.[8]

In hyperinsulinism each cell of the body is subjected to a state of glucose starvation. The normal blood glucose level is *not* the generally accepted value of 80 to 120 mg. per 100 cc. That is the normal *fasting* level, and fasting reveals its unphysiologic status by its accompanying discomforting hunger. During the active portions of the day the normal blood glucose level should be around 140 to 150 mg. per 100 cc. In hyperinsulinism that level is not attained except for very brief periods following meals.

While most tissues and organs utilize fats as well as glucose for fuel, the central nervous system is restricted to glucose.[9] Furthermore, although the central nervous system contains appreciable amounts of glycogen, it cannot utilize that as fuel. The glycogen content is remarkably constant, and the nervous system is completely dependent upon the blood glucose for alimentation.[10]

Hyperinsulinism very frequently induces vascular spasms. During periods of hypoglycemia the flow of blood and oxygen consumption of the central nervous system are reduced.[11] Vascular spasm has been indicted as a precursor of multiple sclerosis.[12] Indeed, Dicumarol has been recommended as a therapeutic measure to insure an adequate blood supply in the face of such spasm.[13]

Accordingly, diabetics should be singularly free from this disease. Joslin has reported but a single case of multiple sclerosis in his many thousands of diabetics, and that single case was complicated by a thyroidectomy which immediately preceded the onset of multiple sclerosis.[14] While we can only conjecture an explanation, the induced, at least relative, hypothyroidism can theoretically convert a case of diabetes (hypoinsulinism) into dysinsulinism, in which there are alternating periods of hyper- and hypoglycemia. The author has found dysinsulinism in *all* diabetics with such disorders as allergies,[15] rheumatic fever,[16] and peptic ulcer[17] which are characteristically accompanied by hyperinsulinism.[18]

The inside of our digestive tracts is anatomically *external* to the body. It is only after digestion, when the food has passed into the blood, that it becomes part of us. The human race has eaten about the same type of foods for many thousands of years. We are adapted to a *slow* absorption of glucose from our ingested and digested foodstuffs. The stimulus to insulin secretion is a *rise* in blood glucose. Two things have come into the human dietary in comparatively recent times, concentrated sweets and caffeine. Both cause an unphysiologically rapid rise in blood glucose which, in time, may sensitize the islands of Langerhans so that they overrespond even to normal stimuli. Overindulgence in sweets and caffeine, whether in coffee or in soft drinks, has been held to be the cause of hyperinsulinism.[2] Caffeine induces glycogenolysis by adrenal stimulation.[19] This, too, causes a rapid rise in blood sugar that ultimately may sensitize the insulin apparatus. Many of these cases reported enormous consumption of candy or caffeine-containing beverages or both over many years. In others (as also in many cases of hyperinsulinism) it was found that the initial attack was preceded by a severe, prolonged emotional stress. This may produce a state of hyperglycemia due to the excessive secretion of adrenalin. In either situation the stimulation of the insulin apparatus by the hyperglycemia might sensitize it sufficiently to induce hyperinsulinism. While this is pure conjecture, it offers sufficient basis for further investigation.

It has been shown that calcium is necessary to maintain the integrity of the channelizing of nervous impulses in their proper directions. Each cell of the central nervous system has a shell of some calcium-containing substance immediately within the limiting membrane and another within the border of the nucleus.[20] It has also been demonstrated that calcium is necessary to keep the irritability of the nervous system within limits.[21] When the Calphosan injections were reduced in these cases, there was a slowing up in improvement. The particular preparation employed provides a gradual, sustained rise in serum calcium which is preferable to that obtainable from the usual intravenous medications which furnish an enormous rise in serum calcium that, however, is excreted within a few hours.[4,22]

Diagnosis of hyperinsulinism is based upon the *six-hour* glucose tolerance test with the following to be observed: No food or smoking is permitted during the test period and ten hours preceding it. Water may be permitted. One hundred grams of thoroughly dissolved (by boiling) glucose (with lemon juice to improve the taste) are ingested. A micromethod of "true" glucose determination[23] is advocated with fingertip blood used to avoid frequent venous punctures which may produce a sufficient "stress" to affect the blood sugar. Determinations are made hourly for six hours, unless the glucose level drops below 70 before the sixth hour. Glucose levels below 70 within six hours establish the presence of hyperinsulinism. After the test, the patient is given a glass of milk to restore the glucose, and food should be ingested. The test is *not* to be repeated since it would resensitize the insulin apparatus and defeat the aim of the therapy.

The Seale Harris diet is based on four principles:[3] It is high in fat, which depresses the oversensitive islands of Langerhans.[24] The frequent feedings prevent postprandial drops in blood glucose. The carbohydrates are restricted to those that are slowly absorbed to avoid stimulation of the insulin apparatus by sudden increases in blood glucose. Caffeine must be avoided for the reasons given above.

Seale Harris Diet I

ON ARISING.—Medium orange, half grapefruit, or juice (4 ounces).

BREAKFAST.—Fruit or juice (4 ounces); 1 egg with or without 2 slices of ham or bacon; *only 1* slice of bread or toast with plenty of butter; beverage.

2 HOURS AFTER BREAKFAST.—Juice (4 ounces) or fruit.

LUNCH.—Meat, fish, cheese, or eggs; salad (large serving of tomato, lettuce, or Waldorf salad with mayonnaise or French dressing); vegetables, if desired; *only 1* slice of bread or toast with plenty of butter; dessert; beverage.

3 HOURS AFTER LUNCH.—Glass of milk.

1 HOUR BEFORE DINNER.—Juice (4 ounces) or fruit.

DINNER.—Soup, if desired (not thickened with flour); vegetables; liberal portion of meat, fish, or poultry; *only 1* slice of bread if desired; dessert; beverage.

2 TO 3 HOURS AFTER DINNER.—Glass of milk.

EVERY TWO HOURS UNTIL BEDTIME.—Juice (4 ounces), fruit, nuts (small handful), or 1/2 glass of milk.

ALLOWABLE FRUITS.—Apples, apricots, bananas, berries, grapefruit, melons, oranges, peaches, pears, pineapple, tangerines. Fruits may be cooked or raw, with or without cream but *without sugar*. Canned fruits should be packed in water, unsweetened.

ALLOWABLE VEGETABLES.—Asparagus, avocado, beets, broccoli, brussel sprouts, cabbage, cauliflower, carrots, celery, corn, turnips, cucumbers, egg plant, lima beans, onions, peas, radishes, sauerkraut, squash, string beans, tomatoes.

ALLOWABLE JUICE.—Any *unsweetened* fruit or vegetable juice (4-ounce portions) *except* grape juice or prune juice.

ALLOWABLE BEVERAGES.—Weak tea (teabag, not brewed); Postum; Sanka.

ALLOWABLE DESSERTS.—Fruit; D-Zerta or other *unsweetened* gelatine; junket (made from tablets, not the mix).

ALLOWABLE ALCOHOLIC AND SOFT DRINKS.—Club soda, dry ginger ale, No-Cal beverages (except cola), whiskeys, and other distilled liquors.

AVOID ABSOLUTELY: Sugar, honey, candy, cake, pie, pastries, custards, puddings, ice cream; caffeine—ordinary coffee, strong brewed tea, "cola" beverages; potatoes, rice, grapes, raisins, plums, figs, dates, cherries; spaghetti, macaroni, noodles; wines, cordials, sweetened cocktails, beer.

[Milk, lettuce, mushrooms, and nuts may be taken as freely as desired. Use salt sparingly. Other condiments may be taken without restriction.]

This diet must be followed to the letter. The first evidences of improvement in some cases have been a loss of the bitemporal pallor and left upper quadrant tenderness and spasm.

After satisfactory improvement, the Calphosan injections are reduced to 10 cc. once a week, and the patient is given a modified diet.

Seale Harris Diet II

BREAKFAST.—Fruit or juice (4 ounces); cereal (dry or cooked) with milk or cream and/or 1 or 2 eggs with or without two slices of ham or bacon; *only 1* slice of bread or toast with plenty of butter; beverage.

Lunch.—Meat, fish, cheese, or eggs; salad (large serving of lettuce, tomato, or Waldorf salad with mayonnaise or French dressing); buttered vegetables, if desired; *only 1* slice of bread or toast with plenty of butter; dessert; beverage.

Midafternoon.—Glass of milk.

Dinner.—Soup, if desired (not thickened with flour); liberal portion of meat, fish, or poultry; vegetables; potatoes, rice, noodles, spaghetti, or macaroni (may be eaten in moderation *only with this meal*); *only 1* slice of bread, if desired; dessert or crackers and cheese; beverage.

Bedtime.—Snack (milk, crackers and cheese, sandwich, fruit, etc.).

All vegetables and fruits are permissible. Fruit may be cooked or raw, with or without cream but *without* sugar. Canned fruits should be packed *without* sugar.

Juice.—Any *unsweetened* fruit or vegetable juice, except grape juice or prune juice.

Beverages.—Weak tea (teabag, not brewed); Postum; Sanka. May be sweetened with saccharine.

Desserts.—Fruit; D-Zerta or other *unsweetened* gelatine; junket (made from crushed tablets, not from junket mix).

Alcoholic and Soft Drinks.—Club soda, *dry* ginger ale, No-Cal beverages (except cola), whiskeys, and other distilled liquors.

AVOID ABSOLUTELY: Sugar, candy and other sweets, cake, pie, pastries, sweet custards, puddings, ice cream; caffeine—ordinary coffee, strong brewed tea, "cola" beverages; wines, cordials, cocktails, beer.

[Milk, lettuce, mushrooms, and nuts may taken as freely as desired. Use salt sparingly.]

Summary

It seems to the author that hyperinsulinism may be a sine qua non for the diagnosis of multiple sclerosis which has hitherto been subject to a 25 per cent margin of error both ways.[25] It seems advisable to explore cases of multiple sclerosis that do not respond to the dietary treatment and Calphosan for a possible pancreatic adenoma since a recent report shows an association of pancreatic adenoma with neuromuscular disorders.[26] The therapeutic response to this treatment has of course been very variable. A dozen cases already show very little sign of multiple sclerosis. However, it is too early to generalize or even to attempt any prognosis. This series of cases is offered merely as a guide to further investigation.

The conclusions are supported by the author's observation that 102 out of 160 (64 per cent) other cases of hyperinsulinism without any symptoms or other signs of multiple sclerosis also had bitemporal pallor, indicating impaired vascularity of the central nervous system. In these, as also in some of the cases of multiple sclerosis, the bitemporal pallor disappeared within a month or two after treatment had been instituted, indicating a release of the vascular spasm.

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The longer we dwell on our misfortunes, the greater is their power to harm us.—Voltaire

Stress Incontinence in Women

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THE etiology and treatment of stress incontinence in females have received major attention during the past years. The urethra and its supporting structures have been studied both from anatomic and physiologic standpoints in order to understand better the physical mechanisms of micturition and the local tissue changes which lead to incontinence.

Relaxation of the anterior vaginal wall and the supports of the floor and neck of the bladder account for the greatest number of cases of stress incontinence. Numerous surgical procedures have been devised to return these structures to their normal position with excellent results. A smaller group of women, however, suffer with this condition, and examination reveals no evidence of cystocele, urethrocele, or displacement of the bladder neck or urethra.

The purpose of this paper is to present an etiologic factor and describe a treatment for this type of stress incontinence where the pathology is intrinsic in the bladder neck and proximal urethra.

Anatomy and Physiology

On the basis of serial sections of the female urethra cut in planes at right angles, Kennedy[1] describes two distinct muscles which exercise control over the urethra. A circular smooth muscle, the sphincter, which surrounds the inner two thirds of the urethra is responsible for retaining the urine within the bladder. The second muscle he has named the muscle of micturition, and it is described as an oblique, purse-string, striated muscle. Upon contraction this muscle, whose origins are in the periosteum of the anterior medial face of the ramus of the pubis and insertions in the longitudinal muscle of the trigone, changes from oblique to circular. This in turn distorts and pulls the proximal third of the floor of the urethra under the middle third of the superior wall. At the same time the normally circular sphincter relaxes and is distorted to an elliptic shape with its long axis in the sagittal plane. With the loss of its circular shape the sphincter is unable to compress the urethra, and urine is free to run out of the bladder.

Incontinence is present in proportion to the amount of elliptic distortion of the true sphincter. Unless the sphincter can return to its normal circular shape, incontinence will be permanent.

While Kennedy[2] has been interested in the muscular layers of the urethra, Folsom[3] has demonstrated the presence of periurethral glands in 92 of 100 female urethras studied. He describes the glands as being lateral and posterior to the urethra and more numerous adjacent to the bladder.

Powell[4] describes polyps and enfolds as well as periurethral glandular hyperplasia in the upper third of the urethra.

Hencz[5] likewise demonstrates hypertrophy of the periurethral glands, and Huffman[6] finds cyst formation in the proximal third of the female urethra, which he attributes to inflammatory changes.

These cystic and hyperplastic changes about the bladder neck and in the proximal urethra are easily recognizable through a urethroscope or McCarthy panendoscope. When present, they may distort the smooth circle of mucosa at the bladder neck. In the normal female with the endoscope in midurethra, the floor of the bladder neck and trigone may be visualized. When the woman voluntarily attempts to void, the floor of the urethra, bladder neck, and trigone appear to move downward and forward. With relaxation the structures return to their normal position, and the bladder neck once again resumes its circular shape. This clinically corroborates Kennedy's findings.

Etiology

All stress incontinence is based on the failure of the sphincteric mechanism to remain completely closed when increased intra-abdominal pressure from coughing or sneezing is transmitted to the bladder. The intravesical pressure undergoes a sudden sharp increase, and the sphincter, which is slightly distorted, is unable to withstand the high momentary pressure, and a few drops or more of urine are expelled. The degree of incontinence may be in direct proportion to the amount of distortion of the sphincter.

The commonest cause of this condition is the presence of a cystocele. In these cases relaxation of the anterior vaginal wall and supports of the bladder neck and floor of the bladder usually follow obstetric trauma. Treatment of this condition is surgical and not within the scope of this paper.

Hormonal changes, trauma, neoplastic growths in the urethra or adjacent tissues, contracted muscle of micturition, periurethral adhesions, and pelvic inflammatory disease have all been considered as causes of stress incontinence.

Muellner[7] advances the theory that there may be an increased irritability of the detrusor to react to cough. Hock[8] mentions that irritation of the urethra by chronically inflamed glands at the bladder neck may cause relaxation of the external sphincter by reflex contraction of the detrusor.

In a certain number of cases of stress incontinence, I think the cause is entirely mechanical. The cysts and hyperplastic glands distort the bladder neck and proximal urethra. Their presence, elevated above and protruding from the mucosal level, may prevent normal apposition of the urethral walls. This may be sufficient to prevent the circular sphincter from completely closing and assuming its normal shape. Closure may be adequate for intravesical pressure due to normal detrusor contractions but not sufficient for the hydraulic action of a sudden increase in intra-abdominal pressure transmitted to the partially distended bladder.

Treatment

Treatment of this condition is simple. In the majority of women with bladder neck pathology as the etiologic factor, a cure can be effected in one office session.

The treatment is directed toward the cysts and polyps that mechanically prevent the sphincter from returning to its normal circular shape. The cysts and polyps are fulgurated with a ball and point electrode through the McCarthy panendoscope. Local 1 per cent Metacaine or Surfacaine jelly are usually sufficient anesthetic agents. Trilene inhalation is also useful since it is self-administered and not contraindicated by the use of the fulgurating current. Since the pathology is superficial and just submucosal, a low current is all that is necessary. The cysts are generally under tension, and a bursting noise can be heard when they are ruptured by the electrode. They are most common on the lower lateral walls but may be located in any position about the bladder neck and proximal urethra. The bases of the polyps when present should be fulgurated until the underlying tissue is smooth and regular. Any hyperplastic changes in the involved area should be touched with the ball electrode.

The bladder neck itself, where uninvolved, does not require fulguration. At the conclusion of treatment the neck should be perfectly smooth and circular. The majority of patients have complete urinary control immediately, and postoperative catheter drainage is unnecessary.

Urinary tract infection and the presence of residual bladder urine are not part of the physical findings accompanying this syndrome. Preliminary treatments such as bladder instillations, irrigations, or urethral dilatations are not necessary and only delay the eventual cure of the patient. The complaint of urinary stress incontinence requires a thorough examination of the pelvis and perineum to determine the presence of any anatomic defects or muscular weaknesses. When these anatomic changes are found to be the primary causative factor, surgical repair according to any of the numerous technics described by Kelly,[9] Kennedy,[1,2] and Aldridge[10] should be undertaken to strengthen and support the bladder neck, proximal urethra, and pelvic floor. However, when the defects do not appear sufficient to cause the incontinence, endoscopic examination of the bladder neck and urethra are imperative.

Both cystocele and bladder neck changes may coexist. There is no test, other than treatment, according to Rashbaum,[11] to differentiate which condition is the factor causing the stress incontinence. This can easily be realized since many women are examined and found to have either or both of the changes and have complete urinary control. When incontinence is present and both alterations from normal are discovered, treatment of the urinary tract may cure the condition and prevent an unnecessary operation with an unsuccessful result. If surgery has been performed without relief of the condition, cystoscopic examination, if previously omitted, should be performed. Fulguration of the bladder neck and proximal urethra, if indicated, may be successful.

TABLE I.—NINE CASES WITH NO PREVIOUS PELVIC SURGERY AND NORMAL SUPPORTS OF THE URETHRA AND BLADDER NECK

Case Number	Age	Duration of Symptoms (Years)	Pregnancy	Miscarriage	Urethral Supports	Previous Surgery	Frequency	Urgency	Nocturia	Results
1	35	2	0	0	Normal	None	0	0	0	Cured
2	44	1	0	0	Normal	None	0	0	0	Cured
3	59	4	4	0	Normal	None	2+	0	2+	Cured
4	53	3	3	0	Normal	None	2+	+	2 to 3 times	Improved
5	58	1	8	0	Normal	None	+	0	1 to 3 times	Cured
6	58	1	1	1	Normal	None	0	0	0	Cured
7	70	1	2	1	Normal	None	+	0	Once	Cured
8	56	1	1	0	Normal	None	+	0	Occasional	Cured
9	47	2	1	1	Normal	None	+	0	Occasional	Cured

Cases Studied

Careful examination and evaluation of all patients are necessary to differentiate and separate the women with true stress incontinence from those with severe urgency and frequency. Although many women with incontinence also complain of the latter symptoms, rarely are they as severe as in the patients with urgency due to a contracted bladder or inflammatory disease.

Women with total incontinence were not included in this group.

Seventeen women suffering from stress incontinence were treated by endoscopic fulguration of the cystic and hyperplastic changes at the bladder neck. Their ages ranged from thirty-five to seventy years. The average age was 53.3 years. Their case histories were analyzed and divided into three groups depending upon the presence of pelvic pathology other than the bladder neck changes and previous surgery.

The first group consisted of nine women who had no previous pelvic surgery and in whom examination revealed normal support of the urethra and bladder neck with no evidence of cystocele or urethrocele formation (Table I). Microscopic urine studies in all cases were normal. One woman in this group was unmarried, and one other woman also had no pregnancies. One of the seven remaining women had had eight deliveries, one had had four, one had had three, one had had two, and the remaining three had one each. Three of the women also had a single miscarriage.

Six of the nine women complained of mild frequency (every two to three hours), and one of the six also described mild urgency. All had a tendency to void more often than usual with the thought of keeping the bladder as empty as possible. Nocturia, however, was not a major symptom in this group. Six of the nine women slept through the night, and only one awoke to void more than once. None of the women had any residual urine. Duration of symptoms varied from one to seven years. All of the women were vague and could not pinpoint the actual onset of incontinence to any specific occurrence or time. In no case was there a sudden and definite beginning, rather just a gradual progression after which the symptoms neither progressed nor regressed.

The results of treatment in this group were excellent. Eight of the women were cured, and the ninth was greatly improved. The patient who was improved was a woman of fifty-three with three pregnancies who had had her symptoms for three years.

The second group consisted of five women who had small to moderately large cystoceles in addition to the intrinsic bladder neck pathology (Table II). None had any previous pelvic surgery. All of these women were married. All had multiple pregnancies. One had had five deliveries and two miscarriages. Two had had three deliveries. One of these women also had a miscarriage. The remaining two women had had two deliveries each.

All five women had increased frequency of urination. All five had nocturia varying from once to four times. Only one complained of moderate urgency. At the time of examination she was found to have an Escherichia coli cystitis which cleared with Gantrisin and subsequent Mandelamine therapy. Microscopic examination revealed the urine of the other four women to be normal. No woman carried any residual urine. The symptoms in this group were generally of longer duration than the first group, four to fifteen years, and the history of onset was vague.

Fulguration of the bladder neck resulted in two

TABLE II.—Five Cases With No Previous Pelvic Surgery but Cystoceles and Relaxation of the Urethral and Bladder Neck Supports

Case Number	Age	Duration of Symptoms (Years)	Pregnancy	Miscarriages	Frequency	Nocturia	Urgency	Cystocele	Results	Remarks
1	66	15	5	2	2+	3 to 4 times	0	Moderate	Unimproved	Improved by surgery
2	51	3	3	0	+	1 to 2 times	0	Small	Cured	....
3	49	10	3	1	2+	2 to 4 times	+	Large	Unimproved	Cured by surgery
4	42	6	2	0	+	2 to 3 times	0	Moderate	Unimproved	Cured by surgery
5	53	4	2	0	+	1 to 2 times	0	Moderate	Cured	....

TABLE III.—Three Cases with Previous Cystocele Repair

Case Number	Age	Duration of Symptoms (Years)	Pregnancy	Frequency	Nocturia	Previous Operations	Result of Fulguration
1	44	3	2	+	1 to 3 times	Vaginal hysterectomy; cystocele repair	Improved
2	70	15	3	+	1 to 3 times	Cystocele repair	Unimproved
3	51	2	3	+	1 to 2 times	Cystocele repair	Cured

cures and three failures. The three women who had no improvement following fulguration underwent Kelly cystocele repairs. Two women were cured and the third markedly improved. Two of the five women were saved surgical procedures and cured of their symptoms of stress incontinence by cystoscopic examination and treatment.

The third group consisted of three women who had had previous operations with excellent anatomic repair of cystoceles but who still had stress incontinence (Table III). One of the three women had had a vaginal hysterectomy in addition. All were married and had multiple pregnancies and symptoms of prolonged duration prior to surgery. Two had mild frequency and a nocturia varying from one to three times. The third had mild frequency but no nocturia. None of the three had urgency. All three were cystoscoped and fulgurated four months after their operations.

One woman was cured, one was greatly improved, and the third case resulted in a failure.

Conclusion

A limited group of women seem to have a purely mechanical factor as the causative agent for their urinary stress incontinence. Cystic changes, hyperplasia, papillae, and enfolds at the bladder neck and proximal urethra prevent normal apposition of the urethral walls and, consequently, also prevent the return of the sphincter muscle to its normal circular shape.

With very slight distortion of the sphincter the normal contractions of the detrusor muscles are not sufficient to cause incontinence. However, the hydraulic action of sudden intra-abdominal pressure upon the bladder due to coughing, sneezing, or bending, transiently raises the intravesical pressure.

Fulguration of the pathologic changes at the bladder neck will remove any mucosal irregularities and permit normal relationship of the urethral surfaces and the sphincter mechanism, thereby relieving the symptoms.

This syndrome may exist concomitantly with, although in no way dependent upon or related to, relaxation of the supports of the bladder neck.

Despite the fact that this treatment is effective in only a limited number of women, cystoscopic examination should be part of the routine study in all cases of stress incontinence.

900 Grand Concourse

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Chronic Thyrotoxic Myopathy

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THE clinical manifestations of hyperthyroidism are so variable and predominance of cardiovascular or gastrointestinal symptoms may so overshadow the remainder of the complaints that the real diagnosis is not infrequently overlooked. Neurologic manifestations of hyperthyroidism less frequently form a major part of the clinical picture. When these occur and are not accompanied by abnormal pulse rate and abnormal blood pressure readings, a difficult diagnostic problem is created. The following case report illustrates predominance of neurologic symptoms associated with unusual muscular fasciculations.

Case Report

Mr. E. J., a forty-nine year-old, white male, superintendent of highways, was admitted to the neurosurgical service of the Albany Hospital on April 13, 1951, with a chief complaint of weakness of his legs. His family history and past history were noncontributory. He had experienced a right Bell's facial paralysis three years before admission which had almost completely cleared up.

Two to three years before admission the patient had noted the onset of backache both in the thoracic and in the cervical region. There was no radiation into the limbs. About this same time there was noted the beginning of occasional cramping in the calf muscles. For approximately the same period he had complained of mild, bifrontal headache. None of these symptoms were severe, nor were they clearly recalled.

He was more definite about events of the year prior to admission. At that time he observed the onset of intolerance to heat, trembling of the hands, and excessive perspiration. He then discovered that he could not walk without fatigue and sometimes had difficulty getting up out of a chair. The cramping in his calves became more severe, but it seemed to be relieved by rest. The arms as well as the legs became weak. He complained of transient diplopia occasionally. He stated that he had trouble doing his "book work" and occasionally had difficulty thinking of the correct word to say. During the previous winter the patient had vomited frequently, but he did not associate this with his headache. He had lost 25 pounds in weight within the past twelve months. There was a tendency toward constipation for a few weeks.

The patient was a well-developed, quite nervous man with a striking tremor of both hands. The blood pressure was 140/90, the pulse rate 88, respiration 24, temperature 98 F. The skin was warm and moist and the hair normal in texture and distribution.

The usual eye signs of hyperthyroidism were absent except for lid lag, and this finding was not seen by all of the observers. The degree of proptosis measured by the Hertel Exophthalometer was 26 mm. in the right eye and 25 mm. in the left which are within normal limits. The optic fundi were normal.

The trachea was in the midline. The thyroid was soft and symmetrically enlarged, and a faint bruit could be heard over it. There was no significant lymphadenopathy. The chest was clear to percussion and auscultation. The heart was not enlarged. There was regular sinus rhythm and no murmurs. The aortic second sound was accentuated. The abdomen was soft without any tenderness to palpation, and no masses were felt. The remainder of the general physical examination revealed nothing abnormal.

Neurologic examination revealed marked tremor of both hands, trunk, and lower limbs, together with coarse fasciculations which were more pronounced in the proximal muscles of all four limbs; there was generalized muscular weakness and brisk, deep tendon reflexes. The remainder of the neurologic examination was negative except for mild, residual right-sided Bell's palsy. There was no obvious muscular atrophy.

Laboratory data were as follows: The blood sugar was 197 mg. per cent and basal metabolic rate 65 per cent. Urinalysis was normal except for a trace of albumin. Other laboratory studies including hemoglobin, hematocrit, white blood cells, serology, nonprotein nitrogen, serum protein, albumin, globulin, stool guaiac, chest and skull films, electrocardiogram, and muscle biopsy of the left vastus medialis were within normal limits. A tentative diagnosis of hyperthyroidism with thyrotoxic myopathy was made.

Because it is unusual to find widespread fasciculations in such cases, the muscular activity was

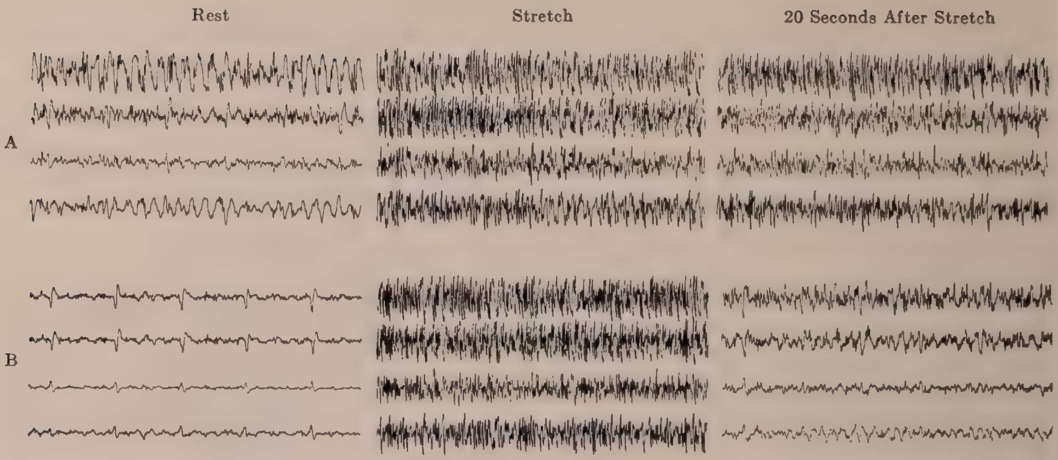

FIG. 1. Study of muscular activity on admission with ink-writing electroencephalograph; recordings made before administration of neostigmine (*A*) and after neostigmine (*B*).

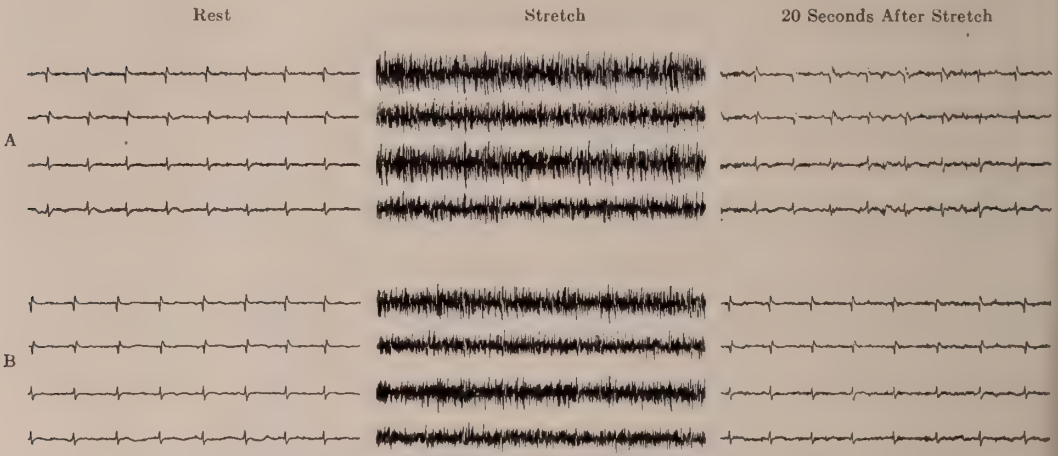

FIG. 2. Re-evaluation study three weeks later: (*A*) before neostigmine, (*B*) after neostigmine.

studied with an ink-writing electroencephalograph. Continuous recordings were made by means of surface electrodes on the distal third of the vastus medialis of the right leg and from number 25 needle electrodes introduced 3 inches apart into the corresponding muscle of the left leg. In Fig. 1A it is not possible to separate tremor from fasciculation inasmuch as both were equally coarse and seemed to correspond in time. Figure 1B indicates the effect of 1 mg. of neostigmine on the fasciculatory activity and muscle power twenty minutes after intramuscular injection. The subject was asked to hold his legs horizontal for a period of two minutes and then was allowed to dangle them at rest while seated on the edge of the bed. The record in the resting position, twenty seconds after lowering his legs, was not significantly different from that of the two-minute period with muscles on stretch. This "after-contraction" lasted for sixty to ninety seconds (Fig. 1A). It was less pronounced but still present after neostigmine (Fig. 1B).

One week after admission the patient was sent home on Tapazole (Lilly), 25 mg. daily in divided doses. He was admitted for re-evaluation three weeks later on July 8, 1951. During this interval there had been a gain of 22 pounds in weight. No tremor could be observed, although the patient complained of some subjective sensation of trembling in his trunk. His strength had returned to what he considered normal, and his general well-being was greatly improved. His pulse rate now was 84, blood pressure 122/90.

With the same technic as before, tracings were again made of the muscular activity. Figure 2 shows the pronounced improvement and the absence of changes after neostigmine. It is noteworthy that there was no "after-contraction" when the muscles were placed at rest twenty seconds after the stretch period. The reason for the disappearance of the "after-contraction" following return to normal muscle power is not clear. It suggests a possible defect in anaerobic metabolism of the muscle itself.

Bilateral subtotal thyroidectomy was carried out under general anesthesia on July 10, 1951. Histologic study of the tissue excised disclosed diffuse hyperplasia of the thyroid gland with but slight involution. The convalescent period was entirely uneventful, and he was discharged from the hospital five days later. Since operation it has been necessary to administer desiccated thyroid up to 2 grains daily.

Comment

This form of chronic thyrotoxic myopathy was clearly differentiated from the acute types and from myasthenia gravis with hyperthyroidism by Russell Brain[1] in 1938. Ross and McEachern[2] were able to find ten such cases recorded in the literature up to 1942 and added three of their own. Since their contribution a review of the literature by us to 1952 has revealed 30 more reported cases which conform to Brain's classification.

The exact point at which the alteration of nerve-muscle function occurs has not been established, but the evidence strongly suggests that the dysfunction occurs at the myoneural junction. Devic *et al.*[3] have reported histologic changes in proximity to the myoneural junction consisting of a scarcity of mitochondria in the motor end-plate. However, Sanderson and Adey[4] found their muscle biopsy negative, and so have others. Ross and McEachern reported that muscle fasciculation was not stopped by novocaine block of the peripheral nerve and, therefore, assumed that the defect was either at the myoneural junction or in muscle metabolism itself. Sanderson and Adey[4] have reported that in the electromyogram there was no change in the rate of the muscle spikes but instead a diminished duration of these spikes to two milliseconds. They found a rise to normal duration (ten milliseconds) following treatment. This, they concluded, indicated a normal conduction rate in the nerve and a defect in the muscle itself suggesting that it was "a true myopathy."

In our case the obvious effect of neostigmine on the fasciculations, demonstrated in Fig. 1B, strongly suggests that the defect in function which produced these fasciculations may lie at the myoneural junction where neostigmine produces its greatest pharmacologic action. Further study is necessary to determine the significance of the burst of fasciculatory activity occurring after the two-minute period of stretch when the muscles were again placed at rest (Fig. 1). This burst of activity, which in Fig. 1A showed a pattern identical with that of the "stretch period," lasted ninety seconds. After prostigmine in Fig. 1A, it was intermediate between rest and stretch record and lasted only sixty seconds. In Fig. 1B, after treatment of the myopathy and subjective recovery, there was no sign of this type of activity.

These records suggest that the burst of after-contraction activity, seen at the cessation of stretch and occurring at the time when subjective fatigue is greatest, may be a part of an altered fatigue mechanism. Tremor and fasciculatory activity seemed almost identical in this patient. That a somewhat analogous tremor-weakness-fatigue combination occurs in normal muscle at the end of excessive exertion is common knowledge. It is not impossible that these two types of muscle activity are produced by a phase of anaerobic metabolism in the muscle itself. In the case of the myopathy the fasciculatory activity is manifest under conditions of normal muscle use rather than only under conditions of extreme exertion. Such a prolonged effect (ninety seconds) could be better accounted for by a defect in anaerobic metabolism than by neural or myoneural mechanisms. The present data suggest, but fall far short of proving, that chronic thyrotoxic myopathy consists of two breakdowns of function, one at the myoneural junction and the other in the anaerobic metabolism of the muscle.

It seems apparent that more observers are now recognizing this form of myopathy. However, the infrequency of its diagnosis emphasizes the necessity of keeping hyperthyroidism in mind when studying a patient who has increasing weakness and chronic severe weight loss. Since correct therapy will completely cure thyrotoxic myopathy, no patient ought to be relegated to the category of the incurable, progressive primary myopathies until the chronic thyrotoxic form has been eliminated by the proper diagnostic tests.

Some of the reported cases, unfortunately, were either not followed on antithyroid treatment

TABLE I.—SUMMARY OF CASES IN LITERATURE

	Ross and McEachern[2]	Thorn and Eder[5]	Devic *et al.*[3]	Zierler[6]	Sanderson and Adey[4]
Reported total	13	5	14	10	1
Died or not followed	3	1	7	0	0
Total proved	10	4	7	10	1
Sex					
Males	9	2	0	9	1
Females	1	2	7	1	0
Age range	42 to 60	22 to 50	22 to 59	Over 40	26
Duration of symptoms	7 weeks to 3 years	2 to 7 months	2 to 24 months	2 to 14 months	4 years
Muscular weakness	10	4	7	10	1
Weight loss	10 (17 to 68 lb.)	4	7 (5 to 20 Kg.)	10 (20 to 80 lb.)	1 (21 lb.)
Muscular atrophy	9 (mostly shoulder)	4 (slightly more shoulder)	7 (mostly shoulder)	10	1 (mostly shoulder)
Tremor	8	4	4	Usual	1
Fasciculation	8	0	1	Occasional	Slight
Thyroid enlargement	6	4	7	2	1
Eye signs	6 (exophthalmos)	2 lid lag, 1 exophthalmos	4 exophthalmos	2 not marked	1 lid lag
Cardiac signs	....	2 enlargement, 1 paroxysmal auricular fibrillation	3	Frequent diminished function	1 sinus tachycardia
Cholesterol	1 of 3 low	Not low but rise with treatment	....	Not regularly low	Slightly low
Liver function	....	....	....	Slightly diminished	Cephalin flocculation negative, icteric index 31
Creatinuria	3 mild	4	2 slight	Trivial	1
Basal metabolic rate elevated before treatment	10 (+33 to +63)	4 (+33 to +60)	5 (+22 to +50)	10	1 (+98)
Testicular atrophy	....	2	....	....	Unilateral due to mumps orchitis
17-ketosteroids	....	3 low	....	....	....
Neostigmine	2 improved	No improvement	....	No improvement (3 only studied)	Improved
Therapy	10 operation	1 operation, 2 thiouracil, 1 thiobarbital	4 operation, 2 medical, 1 combined	No operation, Lugol's and/or *n*-propylthiouracil	1 operation and iodine
Results	10 recovered	4 recovered	7 improved	10 recovered	Recovery
Basal metabolic rate after treatment	....	4 normal	....	10 normal	Normal

or died before therapy was started. These patients are set apart in Table I and are not included because the diagnosis might well be questioned. It is statistically important that nearly two thirds of the patients were males. Thyrotoxicosis without myopathy is found with far greater frequency in the female. It is significant that all patients with this disorder complained of weakness, and all had weight loss. A high percentage showed muscular atrophy and tremors. All cases presented sufficient evidence to establish the correct diagnosis, although a single given case might have required considerable study.

Summary

An additional case of chronic thyrotoxic myopathy with unusual muscular fasciculations is reported. Electrical recordings of the fasciculatory activity suggest that a part of the defect may lie in the anaerobic metabolism of the muscle itself. The pertinent literature is summarized, and 33 proved cases are tabulated.

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A Survey of Tonsil and Adenoid Surgery

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NAPOLEON'S remark, "Health is necessary in war, and cannot be replaced by anything else," has not been disproved. This idea may be extended to include "Health is necessary in peace." Since the removal of tonsils and adenoids is done solely to improve health, the results of their removal should be studied. The medical literature contains numerous reports on adenotonsillar surgery, but they emanate largely from large metropolitan areas and teaching centers. The American public and medical profession are equally concerned about results elsewhere. In recent years tonsils and adenoids have not been removed when poliomyelitis is prevalent. In this region polio is present in summer and fall. As a result, adenotonsillar surgery is done in the colder months when exanthemata and upper respiratory infections are more numerous. A higher percentage of complications referable to these diseases would be expected in the most frequently performed surgical procedure. This point will be considered. In the words of a great American, "Let us look at the record."

This report covers a seven-year period from March, 1946, through June, 1953. The 1,063 cases were taken from private practice in a small city of 20,000 population (Table I). Ages varied from eleven months for adenoids only to sixty-one years for tonsils only.

TABLE I.—SUMMARY OF OPERATIONS IN 1,603 CASES

	Number of Cases
Total operations	1,063
Tonsillectomy and adenoidectomy	903
Total tonsils	1,050
Adult tonsils	147
Total adenoids	916
Adenoids only	13
General anesthesia	926
Local anesthesia	137

Procedure

The history and physical findings are recorded at the time the operation is scheduled. The physical examination is repeated in the hospital before the operation, before discharge from the hospital, and at a checkup two weeks later. The history is obtained from the referring physician, patient, and family. Routine laboratory tests include urine analysis, complete blood count, bleeding and coagulation times, and blood Wassermann on adults. When indicated, extra tests are made. They include chest x-ray, prothrombin time, platelet count, and sedimentation rate.

Public Relations.—To allay fear in children, parents are permitted, as far as hospital conditions allow, to remain with their child until the patient goes to surgery. Children are encouraged to take some cherished toy with them to the induction room. Nurses are selected to act as the child's escort on the basis of their winning ways with children.

Anesthesia.—For local cases monocaine is injected. No surface anesthesia such as cocaine or Pontocaine is used. Likewise the long-acting anesthetics are not used. General cases are inducted by intravenous Sodium Pentothal if adults and ethyl chloride if children. These agents are followed with oxygen and ether. The very excitable child is induced by rectal barbiturates and does not receive ethyl chloride.

The use of ethyl chloride may excite comment. Its rapid induction does not leave the patient with unpleasant memories. When used by a capable anesthesiologist, it gives excellent results. Our experience with rectal barbiturates has not been completely satisfactory. The adverse features are cyanosis, more capillary oozing, and a slow recovery to wakefulness during which time bleeding could go unnoticed. The number of such inductions is 18 in 926 general anesthetics.

The use of oxygen along with ether has been most satisfactory. There is no cyanosis; the patient remains pink throughout the operation; the nausea and vomiting following surgery is much decreased.

Premedication consists of atropine before general anesthesia and a barbiturate and an injection of morphine and hyoscine before local anesthesia.

Surgical Technic.—Local tonsils are removed by dissection and snare. General tonsils are removed by Daniels type instrument, and remaining tags are snared. Pus and debris squeezed from tonsils by instruments are immediately suctioned. In like manner blood is quickly suctioned. Adenoids are removed with adenotome and curet. Bleeding points in tonsil fossae are tied. Needles are not used, and pillars are not sutured. Adenoid bleeding is controlled by pressure packs. Patients remain on operating table until bleeding is under control.

Before the tonsils are removed, they are inspected and palpated for evidence of pulsating aberrant vessels, the cutting of which could produce grave difficulty. In this series a large aberrant vein, the diameter of a pencil, was once found underlying the tonsil. Fortunately, the vessel was not injured.

Postoperative Care.—All general cases go to a recovery room equipped with oxygen and suction where specially trained nurses supervise their return to consciousness. Diet is general with exception of fruit, fruit juices, and very rough hard food for ten days. Drugs include codeine orally for pain and penicillin, 1,000,000 units, by muscle at time of operation. This is given general cases in recovery room. It is naturally avoided in cases that have had penicillin reactions.

A vitamin mixture with vitamin C and iron is given for ten days. Vitamin K is used only when bleeding follows use of aspirin.

No aspirin is permitted for ten days before and ten days after operation. Gargles and lozenges are taboo. No medications are applied to operative area. Ice collars are not used. No carbonated beverages or candy suckers are allowed for ten days.

Review of Indications, Contraindications, and Complications

At this point, before statistics can be summarized, it seems fitting and proper to review the indications, contraindications, and complications of tonsil and adenoid surgery. The following list is a summary taken from standard textbooks. It also includes some obvious items we believe important for the sake of brevity and clarity.

Indications for Removal of Tonsils

1. Repeated attacks of acute tonsillitis with or without complications
2. Chronic infection in tonsils
3. Glomerular nephritis
4. Rheumatic fever
5. Systemic or focal infections
6. Otitis media with decreased hearing
7. Diphtheria carriers
8. Chronic or frequent mucopurulent upper respiratory infections
9. Failure of children to grow and gain weight

Indications for Removal of Adenoids

1. Same as above (1 through 9)
2. Obstruction to breathing and adenoid facies

Contraindications for Removal of Tonsils and Adenoids

1. Fever
2. Acute illness
3. Chronic illness, the course of which would not be helped
4. Anesthetic risks (thymolymphatic disease)
5. Untreated diabetes
6. Epidemics of exanthemata and poliomyelitis
7. Blood dyscrasia
8. Menses
9. Hypotension and hypertension

Complications

1. Hemorrhage—primary and secondary
2. Infection—local and general
3. Anesthetic accidents
4. Lung complications—foreign body, atelectasis, pneumonia, lung abscess
5. Otitis media
6. Bulbar poliomyelitis
7. Emphysema
8. Exacerbation of an existing disease
9. Hyperpyrexia

Frequently Associated Difficulties

1. Earache
2. Sore throat
3. Vomiting
4. Epistaxis
5. Virus colds

Complications

Hemorrhage.—A routine of postoperative care was instituted which included use of 1,000,000 units of penicillin and prohibition of aspirin for ten days before and ten days after operation. Results before and after institution of this regimen are given in Table II. Use of penicillin and nonuse of aspirin decreased postoperative bleeding. No patient had both primary and secondary bleeding.

Anesthetic Accidents.—Two children had breathing difficulty at induction. After resuscitation with oxygen and artificial respiration their operations were cancelled. These are not counted in the total of operations.

TABLE II.—HEMORRHAGE BEFORE AND AFTER INSTITUTION OF PENICILLIN-NO ASPIRIN REGIME

	Tonsils	Adenoids
Before regime		
Total cases	800	653
Primary hemorrhage	5	2
Secondary hemorrhage	5	3
After regime*		
Total cases	250	225
Primary hemorrhage	1	2†
Secondary hemorrhage	1	0

* Since this report was written, 108 cases have been operated. Of these two cases had primary bleeding (one tonsil area and one adenoid area), and one had secondary bleeding (adenoid area).

† These two cases had received aspirin in daily doses until hospital admission.

Lung Abscess.—A boy of fourteen had onset of cough with expectoration of blood and pus two months after tonsillectomy and adenoidectomy. A good recovery followed a right lobectomy.

Otitis Media.—There were four cases of catarrhal otitis media and four cases of acute purulent otitis media which occurred between three months and three years after operation.

Incidence of Exanthemata and Bulbar Poliomyelitis.—There was one case of rubella.

Exacerbation of Existing Disease.—An adult female of twenty-six with rheumatic fever had her tonsils removed under local anesthesia and did not receive penicillin because of drug sensitivity. She had both joint pains and erythema nodosa.

A white female of thirty-one had recurrence of pulmonary tuberculosis (four years after local tonsillectomy).

Unexplained Hyperpyrexia.—This occurred in five children and one adult. There were no cases after the use of penicillin.

Severe Soft Tissue Reaction.—In a male of thirty-five years who had a local tonsillectomy there was severe soft tissue reaction, but there were no cases after the use of penicillin.

Injuries to Cornea.—Four cases were noticed four to six hours after operation. Eyes were covered at the time of anesthesia with four layers of vaseline gauze and a towel. There may be a possibility of injury to the eyes when a child rubbed his eyes with his hands in the recovery stage. All cases healed without trouble.

Hospital Accident.—A small child left his bed and received a small, first-degree burn from a radiator. His recovery was satisfactory.

Deaths.—There were two deaths: An adult male died with periarteritis nodosa two months after tonsillectomy; diagnosis was made from postmortem studies. A boy of six years died from recurrent leukemia four months after tonsil and adenoid surgery.

Frequently Associated Difficulties

Earache without drum changes caused by referred pain from operated regions occurred in 50 per cent of the cases. Sore throat was present in all cases.

There were 50 cases of persistent vomiting; all were children who had had a general anesthetic. A possible cause was the use of water too soon after recovery. Forty-nine of these cases improved rapidly after all food and drink were stopped and 1 teaspoonful of Karo syrup was administered every half hour. One case needed an intravenous infusion of glucose and saline.

The nine cases of epistaxis were all in children. There were no cases after aspirin was stopped and penicillin was given. Virus colds occurred in 63 cases, three adults and 60 children.

Special Observations

Two cases had albuminuria before operation. An adult male was not improved, but a child did improve.

One hundred and two heart murmurs were heard prior to surgery, of which 43 were constant and 59 intermittent. The constant heart murmurs remained steady after operation but seemed to have less intensity. Hemic or functional murmurs were not heard so frequently after surgery. No cases developed an initial heart lesion after operation, and the same is true of acute nephritis.

Cases with allergy were not changed by removing tonsils or adenoids.

The 29 cases who had received treatment for rheumatic fever had a seemingly low percentage of heart murmurs (five cases). Presumption is that these definite cases had received adequate care early. Surprisingly, the heart murmurs were heard in the cases that denied attacks of acute tonsillitis and did not have cervical adenitis. In these cases pressure on the anterior tonsil pillar squeezed pus from the tonsils. At operation the tissue had a purplish hue. Consequently, it is apparent that the lack of cervical adenitis does not mean healthy tonsils.

One family of nine diphtheria carriers, including five children and four adults, were operated in this series. In six weeks throat cultures were negative for diphtheria bacilli in seven of them.

The other two had much dental caries and gingivitis. After appropriate dental care their cultures became negative. This stresses the importance of dental care before adenotonsillar surgery to remove infection and prevent lung complications. It also raises the question of whether or not recent tonsillectomy followed by bulbar poliomyelitis could be associated with neglected dental caries. A report on this point would be interesting.

A boy with Legg-Calve-Perthes' disease had tonsillectomy and adenoidectomy. He received orthopedic care before and after the operation. After a year his condition was reported satisfactory.

Summary

A survey of 1,063 cases of adenotonsillar surgery over a seven-year period shows that this type of surgery is not lacking in danger, but the good results far outnumber the poor results. The number of upper respiratory infections is not decreased in the first two months following surgery. After that time upper respiratory infections are lessened. The over-all general improvement in health decreases time lost from work and school. Parents report that an operated child gains faster and is generally much healthier than an unoperated child in the same age group.

The use of penicillin and nonuse of aspirin decrease postoperative bleeding and infective complications. Increase of infective complications after adenotonsillar surgery done in colder months of the year was not observed.

Final results indicate great attention must be given to selection of cases and that no detail in preoperative, operative, and postoperative care can be neglected. This survey proves that tonsil and adenoid surgery cannot be taken lightly. It disproves the fallacy of such remarks as: "There's nothing to it, is there, Doc? It's only a minor operation," and "Take Helen's tonsils and adenoids out Saturday morning because her first cousin Mary Lou is having hers out Saturday morning."

So, by eternal vigilance may the picture be brighter tomorrow because we studied our experience today.

All Obligated Physicians Due for Active Service by July 1, 1955

During the next fiscal year, starting next July 1, the Defense Department expects that all hospital interns and residents obligated for military service will have to be called to active duty. However, according to Assistant Secretary Berry, the demand may not be as heavy during the first half of the period, due to a backlog of 1953 medical school graduates and a small number left over from Priority I. For the men facing almost inevitable calls, Dr. Berry urges hospitals to make short-term arrangements so they "will have a means of livelihood and also the opportunity to continue their education, as well as to contribute to the needs of the hospitals," while awaiting orders the last six months of this year and the first six months of next.

National Advisory Committee to Selective Service advises that after July 1, 1955, all physicians with military obligations should obtain commissions during their internships.

This will remove them from the jurisdiction of their draft boards, and allow Defense Department to request delay in call for men the Department recommends for additional training.

This information is contained in a statement from Dr. Berry, in charge of medical and health matters for the Department of Defense. Dr. Berry also presented the results of a poll of medical school deans, who were requested to ask fourth year students the following questions: (1) If given free choice, which service would you prefer? (2) Do you prefer to serve your time immediately following internship? (3) Or following internship and one year of hospital training? (4) Or following full residency training? The results showed 27 per cent of the students preferred the Army, 37 per cent the Navy, and 36 per cent the Air Force; 39 per cent preferred service immediately following internship, 15 preferred it after two years of hospital training, and 46 per cent preferred military duty after full residency training.—*A.M.A. Washington Letter, February, 1954*

Tantalum Gauze in Hernial Surgery

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DOWN the centuries the world over surgeons have endeavored to solve the Sisyphian problems of massive and recurrent intestinal hernia. They have usually met with frustration despite technics of desperation in which multifarious devices were used and numberless reinforcing substances, such as iron filings, pins, screws, needles, cutis grafts, whole skin grafts, fascial strips, fascial transplants, floss silk, serum-proof silk, nylon, pedicled muscle, bone powder, kangaroo tendon, various stainless steel wires, stainless steel gauze, vitallium plates, and/or silver wire filigrees. The last-named proved to be inadequate owing to its irritative and incomplete absorption of silver.

Tantalum, which has the physical properties of steel, was discovered by Ekeberg in 1802 and was so named because he found it tantalizing in repeated attempts to dissolve it in mineral acids. It was first used as a dressing for severe burns. The experimental observations of Pudenz[1] confirmed the inertness of tantalum in animal tissues. Burke[2] and later Schlaepfer[3] suggested the use of tantalum as suture material in large abdominal wall defects.

Among the first, if not the first, surgeon to make skillful use of tantalum gauze was Throckmorton[4] of the Mayo Clinic. He wrote, "The application of tantalum gauze and its fibrous tissue envelope as a buttress to an inguinal canal that has failed is rational and, in my experience, satisfactory."

Douglas[5] showed that in experimental animals the implanted material was so firmly infiltrated by fibrous tissue that it was removable only by digestion of the connective tissue with proteolytic enzymes. Tantalum was totally unaffected after implantation.

Koontz[6] at first used tantalum gauze experimentally on four dogs. "In each instance," he wrote, "the defect was completely closed by the mesh, which had become covered by a very thick and tough envelope of fibrous tissue. The fibrous tissue has grown through the meshes of the gauze everywhere. . . A firmer or more thorough-going closure can hardly be imagined."

Tantalum produced little electrolytic effect on body fluids, was malleable, and of high tensile strength. It was noncorrosive and nonabsorbable. Its over-all advantages in hernial surgerv, particularly its solid anchorage, was soon demonstrated by Burke, Carney, Burch, Koontz, Throckmorton, Lamb, Douglas, and a host of others. It was shown to be well tolerated by contiguous and adjacent tissues and supremely advantageous in the correction of large thoracic wall defects, facial paralyses, and nasal deformities.

Tantalum mesh is bluish gray with a density double that of steel. It is supplied in sheets 6 by 12 inches in size and made up of 0.003-inch tantalum wire in a 50:50 mesh. It can be fashioned in any desirable form and is sterilizable. It can be left in situ permanently even in the presence of local infection. Surgical tantalum is also supplied in the form of sheet, foil, ribbon, wire, screws, and plates.

Etiology of Hernia

Abdominal wall tissue deficiencies are especially common in extremely obese persons. Fat plays an important role in the production of hernia. The abdominal contents become burdened with it. One of its effects is an increase of intra-abdominal pressure. Fat forms subperitoneal lipomas of variable size and position, which in time under severe strain protrude, the hernia apertures acting as widening wedges. It infiltrates aponeurotic and muscular structures. The inguinal canal is often found, especially in middle and advanced age, to contain an excess of extraperitoneal fat.

In the overweight individual with massive ventral hernias, the musculofascial support is infiltrated with fat and so gives inadequate mechanical support against stress and strain. Every surgeon is aware that fascial and aponeurotic structures are among the main bastions in the body. The local condition is greatly worsened if there is an inadequacy of peritoneal coverage.

Male clerical and factory workers showed a significant excess of inguinal hernia among overweight men as compared with average or underweight men.[7] The frequency of postsurgical hernia is also commonly stated to be greater in those who are overweight than in those who are not.

In recurrent hernias, where tantalum gauze is often the answer to a surgeon's prayer, the main causal factors are (1) incomplete or inefficient treatment of the sac, (2) faulty repair of the canal or ill-chosen repair, (3) faulty postsurgical management, (4) residual gap in the transversalis fascia, (5) improper selection of patients, (6) severe handling of tissues and dislocation of the spermatic cord, (7) incomplete hemostasis, (8) sepsis, and (9) chest complications.

Incisional hernias are commonly attributable to the yielding of the abdominal wall in the area of the surgical scar. Suppuration in the parietes and postsurgical straining and coughing, debility, and poorly planned incisions are among the causes.

Uses of Tantalum Gauze

In the recent past, as every surgeon knows, it was often a formidable task to obturate any abdominal wall defect greater than 7 or 8 cm. in diameter by any customary technic. This difficulty is overcome with the use of tantalum gauze.

Tantalum gauze apparently induces fibroblastic infiltration so that it serves mainly as a support on which a smooth strong layer of collagenous connective tissue is formed. This occurs despite the breakage of some wires. The connective tissue cells pass from residual living tissue into a clot, with its advance polymorphonuclear elements and monocytes. In the fibroblastic process granules and fibrils are seen, which in time form sheets of collagen, the direction of which is determined, as in bone, by stress. Collagen is without doubt the most common single organic constituent of the animal organism. The collagen fibril is stable in normal physiologic environment. Some of the characteristics of the fibrils are absence of extensibility, immunologic inertness, and resistance to digestion by enzymes. Collagen fibrils are composed of thinner fundamental units, protofibrils.

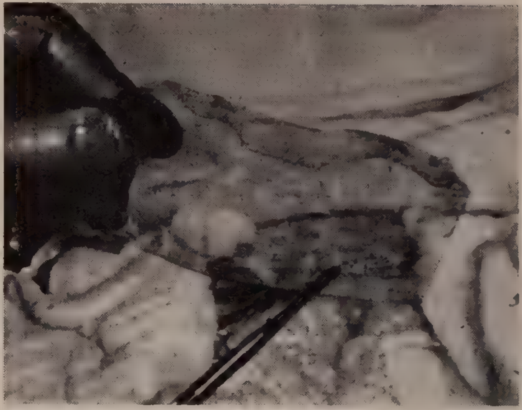

FIG. 1. Piece of tantalum mesh cut to proper size with margins folded over.

Wholly gratifying results are obtainable with tantalum gauze in epigastric, umbilical, and other direct, massive ventral hernias. In these hernias, especially in the large, high incisional ones, fascia lata strips cannot be placed effectively when the defective area is unusually wide. Then again, the strips do not stimulate fibrosis in the proved manner of tantalum gauze. In lumbar hernia, for example, this gauze can be used to obturate the muscular or fascial defect, or both, by attachment to the quadratus lumborum posteriorly, covered by the latissimus dorsi, and by attachment to the transversus abdominis anteriorly, covered by the oblique muscles. In inguinal hernia the placement of the gauze is in the defect of the transversalis fascia. It is attached to Cooper's ligament, and anterior psoas fascia, and to the posterior aspect of the internal oblique muscle. The gauze can be sutured medially to the periosteum of the pubic bone and to the edge of the rectus sheath and laterally to the shelving edge of the inguinal ligament.

Technic

There is no standard technic in the utilization of tantalum gauze in hernia surgery. The local conditions suggest the technic to be carried out. The cut edges of the implant are folded under on the four sides about 0.5 to 1 cm. (allowance being made for the fold) to permit firm attachment for sutures and to obviate fraying and exposure of the cut margins of the gauze within the tissues (Figs. 1 and 2).

It is best to place the holding sutures (braided

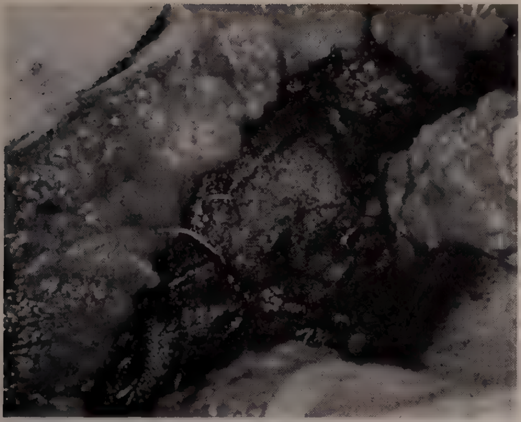

FIG. 2. Tantalum mesh sutured with tantalum wire to remnants of external oblique aponeurosis.

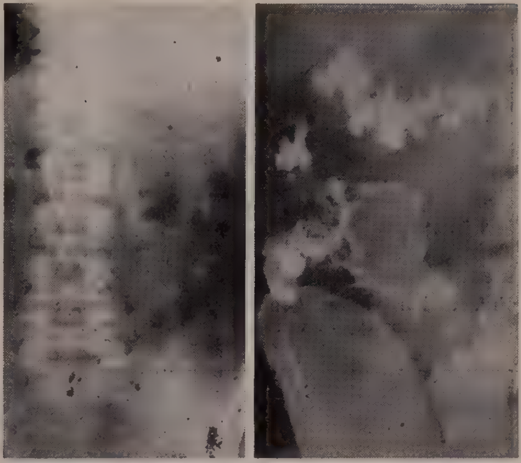

FIG. 3. X-ray of tantalum mesh in situ one year after incisional hernioplasty.

tantalum wire*) without tension in contiguous, strong fascia or aponeurosis. Braided tantalum knots (square) do not slip and are comparable to the results obtained with braided silk. Moderately fine silk may be used to suture the implant into position.

Narat and Khedroo[8] wrote that after implantation of tantalum gauze, fragmentation is usually found in nine to twelve months: "Although this process seems to have no effect on the integrity of the repair or the firmness of the surrounding tissues, unpleasant sensations may be created by the broken pieces of the mesh. A cardboard effect may be noted in the skin if the mesh is placed immediately below a thin subcutaneous fat pad. Lumps underneath the skin may be produced by bending of the mesh. If the atrophic skin frequently found over the hernial sac is sutured directly over the tantalum gauze with no intervening subcutaneous fat, slough is likely to occur."

Koontz and Kimberly[9] on roentgenographic examination a few weeks after operation noted that there was little fragmentation of tantalum gauze: "Roentgenograms . . . will show some wrinkling of the gauze and at the end of a year there is evidence of considerable wrinkling . . . and some breaks. . . . If some cracks do occur in the gauze, it makes no difference since by that time the fibrous tissue infiltrating and surrounding the gauze has so strengthened the abdominal wall that it would matter little whether the gauze was present or not." These investigators came to the conclusion that, "tantalum gauze has at least some advantage over stainless steel gauze in hernia repair. There is more fibrosis through and around tantalum gauze than is the case with stainless steel gauze" (Fig. 3).

The following technical considerations are not to be ignored:

1. The size of the selected tantalum gauze is gauged by the obvious strength of the supportive structures. The cut edges are folded for about 1 cm. This gives additive advantages in providing a smooth, nontraumatic double margin for reinforced placement by anchorage in the periosteum, if need be, or in strong white fascia.
2. The sutural strands of monofilament, 10-mil. tantalum wire, are cut "on the square knot." The ends of the suture are crossed in V fashion, the apex of which is directly above the knot.
3. The mesh can be placed over or under fascia.
4. An effectual amount of subcutaneous tissue should be left under the skin flaps which cover the tantalum.
5. The sutures should be anchored to strong structures without tension.
6. Stainless steel sutures should not be used because of the possibility of electrolytic corrosion and/or irritation.
7. Catgut should not be used.
8. Monofilament tantalum sutures are best.
9. Infection is no contraindication to use of the metal.

Table I summarizes the results obtained with tantalum gauze in various types of hernia in

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* The wire is furnished by Ethicon Suture Laboratory, Division of Johnson & Johnson, in length of 60 inches.

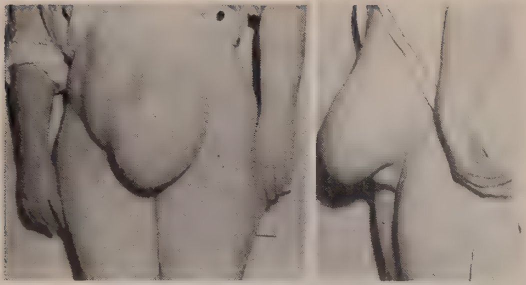

FIG. 4. Large lower abdominal incisional hernia, anterior (*left*) and lateral (*right*) views.

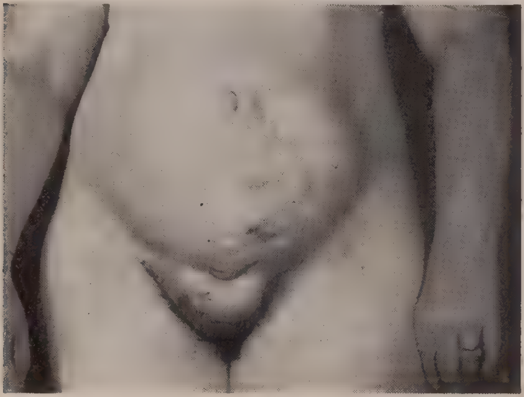

FIG. 5. Anterior view of postoperative result in Fig. 4 one year later.

TABLE I.—SUMMARY OF 49 CASES

Type of Hernia	Number of Cases	Recurrence
Incisional	35*	2 (after 2 years)
Incarcerated epigastric	2	0
Incarcerated umbilical	2	0
Direct inguinal	6	0
Indirect inguinal	1	0
Sliding	1	0
Saddle-bag	1	0
Femoral	1	0
TOTAL	49	2

* In 3 cases the tantalum was removed after one year because of the presence of a draining sinus.

49 cases. All the patients were males, and the average age was fifty-six years. Results in two other cases are demonstrated in Figs. 4 to 7.

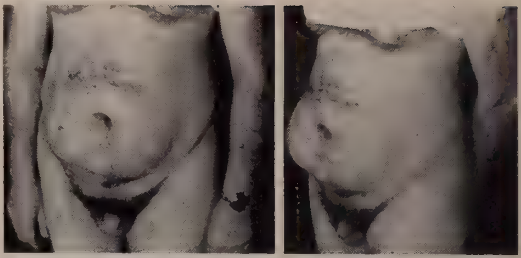

FIG. 6. Large right abdominal incisional hernia, anterior (*left*) and lateral (*right*) views.

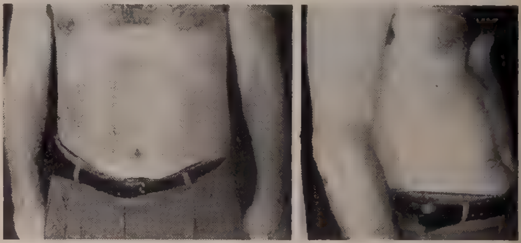

FIG. 7. Postoperative result in Fig. 6 one year later; anterior (*left*) and lateral (*right*) views.

Conclusion

In hernial surgery use of tantalum gauze in our day has largely solved the plaguey problem of recurrences of various types of hernia (massive or not) as a result of attenuated or friable abdominal musculature, senility, chronic cough, prostatic obstruction, wound infection, inept surgery, obesity, and many other factors.

41 EASTERN PARKWAY

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Keep your fears to yourself, but share your courage.—ROBERT LOUIS STEVENSON

Prevention of Superimposed Disabilities

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ADMITTEDLY the old adage, "An ounce of prevention is worth a pound of cure," is sound medical lore. Throughout his lifetime man is subjected to ailments and injuries apparently inescapable in the face of varied environmental traumas. The "struggle for survival" leaves millions of chronically ill and crippled. In the postwar years Howard Rusk stirred us to intense appreciation of rehabilitation, emphasizing treatment and training which will permit the return of the disabled to economic and social productivity despite residual physical handicaps.

Medical science still lacks the final answers to specific methods of prevention and cure of many of the chronic diseases which often lead to permanent disability. Nor has man been able to adjust to his complex environment sufficiently to avoid personal injury from accidents. In fact, with progressively increasing industrialization, mechanized transportation, and devastatingly destructive tools of warfare, the number of severe, crippling disabilities rises each year. Similarly with the amazing increase in man's life span, there has been a corresponding increase in physical disabilities resulting from chronic disease.

With the knowledge, tools, and technics currently at our disposal, many of these permanent disabilities can be either minimized or wholly avoided. Granting the apparent inevitability of varying degrees of crippling due to the nature of the basic pathology, we must recognize the frequency of superimposed secondary pathologic changes that can be avoided by the meticulous observance of intelligently planned preventive measures. Hippocrate's "Do your patient no harm" has greater implication today than when the statement was made.

The following examples taken in the main from private practice illustrate the thesis of this paper.

Case Reports

CASE 1.—A forty-one-year-old female suffering from diabetes and Parkinsonism, neither of which was severe, had a period of mental depression. Ignored by the family and lacking close medical supervision, the patient took to bed for many weeks. When seen in consultation, the patient had curled up into a comfortable "knot" with severe contractures and deformities of the joints of all the limbs. Intensive efforts to restore mobility with conservative measures failed.

CASE 2.—A thirty-five-year-old female suffered a fracture of the shaft of the humerus and severance of the radial nerve. A prominent traumatic surgeon set the fracture, repaired the nerve, and applied an airplane splint. The patient was instructed to "keep the fingers moving." Months later the insurance company referred the patient for rehabilitation. Examination showed excellent healing of the fractured bone, satisfactory recovery of function of the repaired nerve, and nearly normal mobility of the shoulder and elbow joints. However, the metacarpophalangeal and the interphalangeal joints of the hand were severely fibrosed, ankylosing, and distorting all the small joints of the hand. A jury awarded this patient a large sum on the logical deduction, emphasized by the plaintiff's attorneys, that a useless hand is a useless arm.

CASE 3.—A forty-seven-year-old male had a relatively slight residuum of a left hemiplegia. Prolonged inactivity was dictated by the cardiovascular picture. When ambulation became possible and advisable, the patient was found to have a severely "frozen" left shoulder and hand, resulting in a functionally useless arm even though the neuropathologic damage was nominal. Without the superimposed complications, this patient could have regained nearly normal function of the involved arm.

CASE 4.—A forty-three-year-old female had chronic rheumatoid arthritis subject to intermittent exacerbations. Under the guidance of her family physician the patient used heat therapy and salicylates and persevered in ambulation with the aid of a cane. A surgeon decided to clear up the patient's chronic varicosities and varicose ulcers. The patient was confined to bed for about a month. The ulcers healed most satisfactorily. Unfortunately the weeks of enforced dysfunction resulted in profound and permanent ankylosis of the ankle, knee, elbow, and shoulder joints.

CASE 5.—A seventy-four-year-old female with senile psychosis while bedfast lay comfortably curled up, progressively developing severe contractures and deformities of all the limbs. Belated physical therapy aimed at "loosening" of the affected joints proved wasteful of time and effort. The orthopedic consultant had nothing to offer. The patient whose psychosis was relatively slight is doomed to be permanently crippled. Similar cases are admittedly seen frequently in hospitals for chronic diseases, psychic or somatic.

Case 6.—A forty-six-year-old male had a dislocation of the right shoulder which was reduced and immobilized for three weeks with adhesive for the avowed purpose of preventing a recurrence. The injured joint "froze" severely, and weeks of intensive physical therapy failed to restore any useful degree of function.

In our experience we have never seen a redislocation of an acute dislocation (as distinguished from the chronic "slunk" shoulder dislocations). Therefore, judicious mobilization may be started within twenty-four hours following a dislocation without fear of causing a recurrence.

Case 7.—An eighty-two-year-old female with an intertrochanteric fracture of the left femur was ambulatory with the aid of crutches. She was referred for the treatment of severe "foot drop." The left tendoachillis was found to be rigidly contracted and the ankle joint ankylosed in equinus. The little old lady offered, "Week by week I watched the foot go down lower and lower and get stiffer and stiffer until I could not pull it up even a tiny bit. . ."

Case 8.—A seventy-four-year-old male had a simple Colles' fracture. The physician applied a cast and instructed the patient to "keep the fingers moving all day long." The patient religiously abided by the prescription wiggling the fingers incessantly. However, inappropriate and inadequate therapeutic exercises cannot possibly achieve worthwhile results. When the cast was removed, the small joints of the hand and the wrist were found to be completely and irreversibly ankylosed. This type of secondary complication following Colles' fracture is relatively common in both private and hospital practice.

Crippling Effects of Degenerative Changes

Everyone concerned with medical care can recall numerous cases similar to above wherein the superimposed secondary pathologic changes brought about crippling disabilities more devastating than those of the basic trauma or ailment. They are a most frequent occurrence where a prolonged stay in bed enforces dysfunction and/or malposition. Both of the latter lead to circulatory deficiency and stasis, degenerative changes with progressively increasing fibrosis, thickening of the joint capsules and ligaments, matting of the soft tissues, distortion of the normal relationship of the muscles and tendons with contractures and deformities of the joints, and atrophy of disuse. These maiming degenerative changes do not afflict all patients with equal severity; some are more prone to them than others. Patients with prolonged or chronic ailments, doomed to weeks and months of bed rest, are naturally more apt to show these secondary changes. However, clinical experience leads to the conviction that similar superimposed changes are equally frequent in acute, transient, and apparently minor afflictions, e.g., in the very common periarthritis or bursitis of the shoulder.

The specialist in physical therapy is more apt to see such cases since they are referred to him for rehabilitation. In the medical literature and in lectures on medical subjects, there are rather frequent cursory allusions to the potentially crippling effects of dysfunction and malposition and the necessity of anticipating and preventing these disabling complications. Thus the writer or speaker skirts the lurking enemy and then concentrates on the main theme, the primary ailment. In actual daily practice the most brilliant diagnostic skill and therapeutic approach may be wholly nullified by failure to note the stealthy encroachment of the secondary pathologic changes, so frequently irreversible and, what is more vital, so utterly unjustifiable since they are preventable.

Only a vivid appreciation of the devastating effects of this dreaded enemy can alert us to the necessity of applying timely and appropriate countermeasures. The physician, the nurse, the intern, the clinical clerk, the orderly must all be taught to anticipate and prevent secondary complications. The bedfast patient receives routine and thorough care in the various phases of personal hygiene. Equally thorough and systematic attention must be paid to the care of the inactive or malpositioned limbs and to areas of prolonged pressure. The ankles, the knees, the fingers, the elbows, and the shoulders must be examined frequently, particularly if the patient shows early signs of degenerative changes. At the first appearance of vascular stasis or deficiency, incipient stiffness of joints, persistent malposition, or atrophy of disuse, vigorous preventive countermeasures, such as appropriate heat applications, massage, and exercise, should be started with dispatch and perseverance. Inadequate or cursory therapy is not very apt to stop the inroads of degenerative pathology.

Joints Most Frequently Involved

The joints most susceptible to secondary complications are as follows:

The Ankle.—Prolonged reclining on the back is almost certain to lead to plantar flexion of the feet because of gravity and also because the calf muscles are normally stronger than their opponents, the dorsiflexors. Tight bed covers further aggravate this tendency to the "dropping" of the feet. The malposition progressively encourages shortening and thickening of the tendoachillis, resulting in various degrees of equinus deformity which is often resistive to conservative therapy. When the patient is ready for ambulation, the acquired contractures are a severe handicap to ambulation, delaying satisfactory rehabilitation for many months. Various measures have been used to prevent this deformity. Infrequently patients are seen lying in bed wearing heavy, high top boots, effective enough for the purpose but quite objectionable from the viewpoint of cosmetics and hygiene. Propping the feet against a foot board has been widely used and can be most effective if the patient is able to cooperate. Some are not; in such instances the feet may be "fixed" to the foot board with adjustable straps. This will assure good positioning of the feet, support of the large toes to prevent "toe drop," and will help avoid external rotation of the limb. The board should be placed where the patient is able to reach it with ease and comfort; a patient 5 feet tall cannot easily prop his feet against a board placed at the foot of an average size bed.

The patient should be taught to exercise the toes and the feet, if necessary with the aid of a towel or a wide bandage used as a stirrup with the aim of stretching the tendoachillis. The patient must be meticulously taught a few simple exercises and should be impressed with the importance of achieving maximum possible range of motion and then just a bit more (the principle of graduated overload). It is wise to assume that the average patient, however intelligent and cooperative, cannot perform vital corrective or preventive exercises following cursory instructions or inadequate supervision. Incidentally, these routine preventive exercises will serve to slow atrophy of disuse and may combat any tendency to circulatory deficiency or stasis. If the latter changes are prominent, heat therapy, massage, and electrotherapy are indicated.

The Knee Joint.—Prolonged immobilization of the knee, particularly following trauma or infectious arthritis, almost inevitably leads to varying degrees of ankylosis, often rapidly progressive and irreversible. Therefore, every effort should be made to limit immobilization of the knee to the absolute minimum. For example, in fractures of the pelvis or of the femur a concerted, well-planned effort should be made to keep the knee mobile and to prevent atrophy of disuse and rapid degenerative changes. Here again, physical therapy measures administered by qualified therapists are vital. If skilled aid is not available, the physician is compelled to fall back on the assistance of nurses or members of the patient's family. Heat applications, massage, and exercises consistent with the basic disability are indicated. Atrophy of disuse, which is most rapid in the muscles of the thigh, should be anticipated and thus prevented with appropriate exercises, active if possible, "muscle setting" if necessary. Indirect exercises applied to the symmetric limb or to the body in general, as far as is possible, have been shown experimentally to be most effective in slowing atrophy of disuse in an immobilized limb. The reconditioning program, so excellently developed in the armed services, is invaluable in combating atrophy of disuse.

The Shoulder Joint.—The shoulder joint is most susceptible to "freezing" following trauma or such common arthritic conditions as bursitis, periarthritis, tendinitis, fibrositis, myofascitis, etc. If at all possible, every effort should be made to keep the affected shoulder moving, even though the activity causes moderate discomfort or pain. Early and intensive use of heat therapy to keep the connective tissues pliant by flooding their abundant capillaries with blood should be followed by massage and exercise to prevent the matting of the soft tissues and thus stop any tendency to ankylosing fibrosis. These effective measures, applied knowingly and intelligently, cannot possibly do harm, yet are invaluable in preventing secondary complications. Perseverance is essential; sporadic efforts, however appropriate, cannot possibly stop the inroads of degenerative pathology. Home apparatus, such as pulleys, are relatively inexpensive, easy to set up and use, and of proved value in the mobilization of the shoulder joint.

The Elbow Joint.—The elbow joint is equally susceptible to contractures, myositis ossificans, and ankylosis. The use of immersion heat (and a good-sized pan of hot water is fully equal to a whirlpool bath for the purpose) combined with underwater exercises, started early and repeated at frequent intervals, is effective treatment. Passive exercises administered by qualified therapists are often irreplaceable in the mobilization of a "stiff" elbow. The prevalent idea that all passive exercise can do more harm than good is utterly without basis. Any therapeutic agent used without knowledge and intelligence is potentially harmful. Where indicated, passive exercise is an irreplaceable agent in the mobilization of ankylosed joints.

The Hand.—As mentioned previously, the metacarpophalangeal and the interphalangeal joints are quite susceptible to degenerative fibrotic changes when the hand and the fingers are not used. These maiming changes may come on rapidly and progress equally as fast. Since trauma of the hand compelling incidental disuse of the hand is relatively frequent, every effort must be made to keep the "knuckles" and the fingers free from restrictive casts in order to permit intensive application of physical therapeutic measures aimed at prevention of fibrosis and ankylosis. The surgeon must use his ingenuity to assure this. At the first signs of circulatory stasis or stiffness of the fingers, moist heat, massage, and suitable exercises should be started. It is not sufficient to tell the patient "keep the fingers moving" or "be sure to exercise the fingers." Time must be taken to instruct the patient in the exact mechanics of the specific exercises indicated. The patient must be taught to carry the joints through the fullest range possible and then constantly add the slight additional "overload" of tension which stretches fiber-matted tissues and increases function.

Compression of small rubber balls is a widely used remedy for stiffened fingers. A bit of close study will convince the physician that this approach to mobilization of fingers is utterly illogical since the bulk of the compressed ball serves to prevent effective flexion of the fingers. A far more logical method is to use a small slab of foam rubber or plastic molding putty.

Summary

A great number of patients annually are permanently and severely disabled by secondary, superimposed pathologic changes brought on by dysfunction and malposition. Many of these disabilities can be greatly minimized or wholly prevented by alert nursing and timely and intensive physical therapy. Vivid appreciation of this should lead to greater emphasis on preventive rehabilitation in the training of physicians, nurses, and therapists.

A paper on preventive rehabilitation might well include discussion of methods of anticipating and preventing bed sores, damage to peripheral nerves from compression by casts or restricting bandages, acute phlebitis, renal calculi, etc. However, there has been a great deal of discussion of these secondary complications in the medical literature. It is the writer's hope that by concentrating on the potentially crippling effects of preventable degenerative changes in and about the joints of the body, the profession can be alerted to the necessity for prophylactic measures.

Cost of Mental Illness

Dr. Newton Bigelow, New York State Commissioner of Mental Hygiene, states that mental illness costs more than all other illnesses combined. One person in every ten . . . or one family out of every four . . . will be affected by mental illness and the total mental institution population of New York State grows approximately 3,000 each year.

To meet the needs of the people of the State for more beds and better mental care, Governor Dewey has recommended, and the Legislature approved, a $350,000,000 bond issue. This measure will go before the voters in the 1954 fall elections.

Spontaneous Myocardial Rupture

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THE term cardiac rupture denotes a complete, acquired defect through the muscular wall of one or more cardiac chambers. It includes perforation of the interventricular or interauricular septa. It does not include incomplete myocardial tears or rupture of the coronary arteries, veins, cardiac valves, papillary muscles, chordae tendineae, or aorta. Contrary to general belief, cardiac rupture secondary to recent myocardial infarction is not a pathologic curiosity, the incidence being about 9 per cent in all cases dying of acute myocardial infarction.

Schlesinger and his group[1] in Boston have published a recent paper in which they give the results of their studies of spontaneous myocardial rupture and also a comprehensive review of the literature on this subject. In their series of 20 cases of rupture, collected over a period of fourteen years, the ruptures were limited to the left ventricle and to the interventricular septum. They were variable in size and shape on both epicardial and endocardial surfaces. In all these ruptured hearts they found (1) a fresh coronary artery occlusion, (2) a recent myocardial infarction, (3) a myocardial infarct which was transmural (that is, it extended across the wall from endocardial to epicardial surface in one or more places), (4) a myocardial infarct which was poorly if at all supplied with collateral vessels, and (5) a myocardial infarct in which fibrosis was entirely absent in at least one area. This pathologic picture they termed the pathologic substrate for rupture. Further observations from both the rupture and control series showed that acute myocardial infarctions change in extent continuously for some time after their inception, with simultaneous repair of old areas and involvement of new sites. Rupture occurred through the areas of more recent spread at the junction of the most recently infarcted muscle and the histologically normal myocardium.

Clinical observations prior to death by rupture gave the information (1) that the rupture developed between the second and twenty-first day of the acute myocardial infarction, most frequently within the fourth to eleventh day, (2) that hypertension was frequently present and persisted during the period of infarction, and (3) that unusual effort occurred frequently within twenty-four hours prior to rupture. By the term "unusual effort" bedpan activity was not meant, but effort in patients psychotic or sufficiently disturbed to require restraints or heavy sedation, in patients refusing to stay in bed, and in those having strenuous diagnostic procedures before the diagnosis of infarction had been made. There was a history of previous congestive failure in one patient only, and no patient had a history of an old infarction. Age, leukocytosis, fever, previous angina pectoris, electrocardiographic pattern, and drugs bore no relation to the occurrence of rupture.

It was found by comparison with a control series that the necessary conditions, both pathologic and clinical, must be present before rupture will occur. Hearts that show the pathologic substrate for rupture may not perforate unless hypertension or excessive effort occurs during acute infarction; conversely, hypertension and excessive effort do not produce rupture if the pathologic substrate is absent.

Rupture has been reported to occur through old infarcts and through myocardial aneurysms, but this is exceedingly uncommon. Rupture of the atria and the right ventricle does occur but is rare. Rupture occurs relatively more frequently in women who have had an acute myocardial infarction, this being the only manifestation of coronary disease in which the usual male preponderance does not obtain.

In general, the data and conclusions from other sources are in accord with Schlesinger's findings. Segall and Sharp,[2] however, present one case of interventricular septal rupture and one case of papillary muscle rupture, noting that their two patients did not have persistent hypertension or unusual effort prior to rupture. They conclude that their observations in this regard "confirm the view that rupture of any part of the myocardium is apt to be independent of . . . physical exertion."

An antemortem diagnosis of ventricular wall rupture has rarely been made because death from cardiac tamponade is sudden. In this regard, however, Lampesis, Crandall, and King[3] present a case of a sixty-four-year-old man who ruptured his left ventricle on the second day following the onset of the myocardial infarction. Hemopericardium resulted, but the patient survived for three weeks. Antemortem diagnosis was made by x-ray and by diagnostic pericardial tap. No murmur or friction rub was heard at any time. In this case the patient did not have previous hypertension or unusual effort. The rupture was 2 mm. in length.

In the case of interventricular septal ruptures,[4] the diagnosis can frequently be suspected because of the appearance of a new, loud, high-pitched systolic murmur with the maximal intensity at the left border of the sternum. This murmur is accompanied by a thrill in over 50 per cent of the cases. The onset of right ventricular failure is common with death being postponed for days to, rarely, years. Interventricular septal rupture can be differentiated from papillary muscle rupture. In papillary muscle rupture the systolic murmur is maximal at the apex, a thrill is never found, and the clinical picture is one of left ventricular failure with pulmonary edema, and death, usually occurring in a matter of hours or days.[5]

To compare our experience with the reported experiences of others, we reviewed the cases of spontaneous myocardial rupture coming to autopsy in the St. Joseph's and Arnot-Ogden Memorial Hospitals, which have a combined bed capacity of about 450 beds. A search of the records of both hospitals during the past five years disclosed a total of six autopsied cases and one based on clinical diagnosis only. All but one occurred, oddly enough, over a nine-month period from April, 1952, to December, 1952.

One case was that of a seventy-year-old man with rupture of a left ventricular aneurysm. The aneurysm was the result of an old coronary occlusion. This patient was admitted with the diagnoses of acute bronchitis, chronic bronchiectasis, and pulmonary emphysema. He ruptured two days after admission. He was on bed rest and did not have hypertension. Autopsy showed a pinpoint perforation of the aneurysm and no fresh coronary occlusion or recent myocardial infarction. As was pointed out before, Schlesinger claims this occurrence to be exceedingly uncommon.

Four cases had spontaneous rupture of the left ventricle, three of the anterior wall and one of the posterior wall, during the course of acute infarction. (In Schlesinger's cases, six were anterior and nine were posterior.) Two of the cases were men, and the other two were women. The men were aged fifty-seven and seventy-five and the women fifty-nine and sixty-five. The time of rupture was from twenty hours to fifteen days following the onset of the acute infarction. Three patients had persistent hypertension, and one had hypertension on admission only. The latter, however, experienced unusual effort within twenty-four hours of rupture; only one of the other three patients with persistent high blood pressure had unusual effort in addition. All these four cases showed the pathologic substrate, the presence of a fresh coronary artery occlusion, a recent myocardial infarction, a tear occurring at the junction of the recently infarcted and the normal tissue, and fibrosis absent in at least one area. The size of the rupture varied from 2 mm. to 3 cm.

The remaining two cases had myocardial infarction with interventricular septal ruptures, both diagnosed antemortem on the basis of the occurrence of a systolic murmur together with sudden changes in symptoms and other physical signs. Both were males, one aged seventy-three and the other seventy-five. Only one had persistent hypertension, and neither experienced unusual effort within twenty-four hours of rupture. The one with the persistent hypertension ruptured on the fifth day of his infarction and survived for two days after the rupture. He came to autopsy and showed the typical pathologic substrate. The rupture was 7 mm. The other case ruptured on the fifth day of his infarction and survived for nine days after the rupture, but this diagnosis had to remain clinical only since permission for autopsy was denied.

It can be seen from the above analysis that the clinical and pathologic observations in our small group of cases are in accord with the findings of Schlesinger and others. As Schlesinger states, it may be that more attention should be given to measures for the reduction of arterial hypertension and the avoidance of effort in patients during acute myocardial infarction. It is also important from the standpoint of prognosis to be able to make an antemortem diagnosis of interventricular septal rupture and to differentiate it from other causes of systolic murmur during acute infarctions: the murmur of mitral insufficiency due to cardiac failure and dilation of the ventricle, that of pericardial friction rub, and the murmur of papillary muscle rupture. The treatment of interventricular septal rupture is the same as for acute myocardial infarction and for the cardiac failure which usually ensues.

Summary

Six cases of myocardial rupture proved by autopsy and one case with clinical diagnosis only have been presented. In general, the clinical and pathologic observations are in agreement with those described by Schlesinger and his group. The main conclusions are that persistent hypertension and/or unusual effort may predispose to myocardial rupture during the course of an acute myocardial infarction when they are combined with the pathologic substrate. The latter term denotes a fresh coronary occlusion, a recent myocardial infarction, at least one area where fibrosis is absent, a transmural infarction, and the tear occurring at the junction of the histologically normal tissue and the most recently infarcted tissue. It has also been pointed out that the diagnosis of interventricular septal rupture may be made antemortem and that it may be differentiated from papillary muscle rupture.

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The Treatment of Soft Tissue Infections with an Aureomycin-Triple Sulfonamide Combination

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Sound and effective treatment of infections involving the soft tissues of man has been made possible by the use of antibiotic agents. Many clinical reports[1-6] attest to their value in this field. However, the field of therapy is never static, and improvements of established agents or the development of new ones is continually sought. In an effort to reduce the effective dosage of aureomycin and because it is apparent that organisms responsible for this type of infection (mainly gram-positive cocci) are becoming increasingly resistant to the common antibiotics, agents designed to potentiate the activity of aureomycin were combined with it. After it was demonstrated in the laboratory[7] that sulfadiazine, sulfamethazine, and sulfamerazine in equal proportions did aid the effectiveness of aureomycin, the drug mixture was investigated clinically. The first such study[8] showed in the treatment of acute gonorrhea that when combined with the three sulfonamides only half as much aureomycin was needed to produce the same cure rate as when the antibiotic was used by itself. In this series of 70 cases no drug toxicity was noted. As a further consideration of some import in reduced antibiotic dosage, it was pointed out that decreased cost to the patient probably would result.

The success achieved in the treatment of gonorrhea called for further investigation of this drug combination. This paper reports our experiences with 55 cases of soft tissue infections, subdivided according to diagnosis as shown in Table I.

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* Deceased.

The Lederle Laboratories Division, American Cyanamid Company, Pearl River, New York, aided this study in part by a grant-in-aid and also furnished the drug mixture.

TABLE I.—SUMMARY OF CASES TREATED WITH AUREOMYCIN-TRIPLE SULFONAMIDES

Diagnosis	Number of Cases
Cellulitis with and without lymphangitis	15
Abscesses (finger, leg, arm, neck, etc.)	11
Infected ulcers of the leg or foot	5
Traumatic cases (15)	
Human bite of hand or finger	6
Lacerations (hand, foot, elbow, etc.)	9
Miscellaneous cases (9)	
Infected ingrown toenail	3
Infected amputation stump	1
Tenosynovitis of finger	2
Infected sebaceous cyst	1
Impetigo	1
Infected second-degree burn	1
Total	55

TABLE II.—RELATIVE INCIDENCE OF MICROORGANISMS CULTURED FROM 47 CASES PRIOR TO TREATMENT

Organism	Number of Times Isolated
Micrococcus pyogenes, variety aureus	19
Micrococcus pyogenes, variety albus	18
Microaerophilic Micrococcus species	4
Beta hemolytic streptococcus	12
Alpha hemolytic streptococcus	6
Nonhemolytic streptococcus	9
Anaerobic streptococcus	4
Diphtheroids	5
Bacillus subtilis	2
Clostridium species	1
Pseudomonas species	8
Proteus species	3
Aerobacter aerogenes	5
Paracolon bacillus	2
Number of cases negative	4

Method of Study

Each patient in this series had come to the hospital for treatment of an acute infection in most cases. Many of the patients were febrile, and all showed signs of inflammation of the body area involved. Most of the patients had received no previous treatment with antibiotics or chemotherapeutic agents. On admission to the hospital cultures for bacteriologic study were obtained from all but eight cases before the institution of therapy. The cultures were obtained either by direct swab of an open area or by aspirating fluid from a closed process. This material was cultured immediately in fluid thioglycollate broth, after which further procedures were carried out as necessary to identify the specific infecting organisms. Also on admission the usual supportive care was ordered for each patient. Surgery of infected wounds, such as incision and drainage, was performed as indicated and was done as soon as feasible.

Medication with aureomycin-triple sulfonamides was started as soon as the patient had been allocated to a ward and cultures taken. With but one or two exceptions the dosage given was one tablet four times daily. Four tablets represented 0.5 Gm. of aureomycin per day and 0.668 Gm. of each of the three sulfonamides per day. Also 5 grains of sodium bicarbonate were given with each tablet in order to maintain an alkaline reaction in the urinary tract.

Therapy was continued until resolution of the infection occurred or until in some cases the patient left the hospital voluntarily without the consent of the attending physician. The duration of treatment varied from two and one-half days to twenty-six days, the average being five or six days. In general, follow-up bacteriologic cultures could not be obtained during treatment because of the absence of culturable material.

Results

Various microorganisms were isolated from these wounds before treatment, with gram-positive cocci predominating. The relative incidence of bacteria cultured from these wounds before treatment is shown in Table II. Cultures were not obtained from eight cases. Most of the Micrococcus pyogenes, variety aureus (Staphylococcus aureus), were coagulase positive. Many of the wounds presented a polymicrobic flora, but a few yielded pure cultures. Usually not more than three species were found initially. As stated previously, follow-up cultures were not obtained from most patients. However, the speed of resolution of most of these cases gave evidence of the effective control of the infecting organisms.

Clinically, these infections were brought under rapid control through the use of the drug mixture with but few exceptions. The acute signs of infection (temperature, inflammation, and tenderness) usually disappeared within forty-eight hours. In general, the clinical response was equivalent to that obtained in an earlier study with 1 Gm. of oral aureomycin daily.[2] No signs of toxicity were observed which, as far as we could determine, could be attributed to the use of the drug combination. Diarrhea did not occur during the period of the use of this mixture. A summary of the salient aspects of these cases is presented in Table III.

It is obvious from this table that most of these infections responded rapidly with little or no surgery needed. Medication was usually con-

TABLE III.—SUMMARY OF CASES TREATED WITH AUREOMYCIN-TRIPLE SULFONAMIDES

Diagnosis	Number of Cases	Average Number of Days Treated	Operations	Response
Cellulitis	15	7	None 12, minor surgery 3	Rapid 11 Gradual 4
Abscesses	11	6	None 3, incision and drainage 8	Rapid 11
Ulcers	5	$9^{1}/_{2}$	None	Rapid 1 Gradual 4
Human bites	6	6	None	Rapid 5 Gradual 1
Lacerations	9	$5^{1}/_{2}$	None	Rapid 8 Gradual 1
Miscellaneous cases	9	$5^{1}/_{2}$	None 3, incision and drainage 3, minor surgery 2, amputation 1	Rapid 7 Gradual 2

tinued for two or three days after the acute signs of infection had subsided. Except for the ulcers, which were mostly chronic in nature and which responded slowly, the average medication time was around six days. The dosage schedule was one tablet four times daily except in children, in which case $^{1}/_{2}$ tablet was given four times daily.

Comment

The combination of aureomycin with triple sulfas has yielded a mixture which is the therapeutic equivalent of double the dosage of aureomycin given alone, at least in the treatment of acute gonorrhea[8] and soft tissue infections. Its value in other infections is being studied.

There can be no doubt that the sulfonamides potentiate the activity of aureomycin in vivo when employed against gonococci and gram-positive cocci. Whether this will hold true for infections caused by other microorganisms remains to be seen. The point is, however, that the mixture enables the effective treatment of certain infections with half the daily dosage of aureomycin used alone. This lowered dosage will not only reduce consumer cost but also undoubtedly will decrease the number of side-reactions to aureomycin.

It is interesting to speculate on the value this combination may have in combating microorganisms resistant to single therapy. Welch[9] has reviewed the problem of resistance in the genus Micrococcus (Staphylococcus), and here certainly benefits would be welcome, especially in view of the fact that micrococcic enteritis may follow antibiotic treatment as a serious complication.[10]

Summary

The effective treatment of 55 soft tissue infections was accomplished through the use of an aureomycin-triple sulfonamide mixture. The average daily dose of the antibiotic as contained in the mixture was 0.5 Gm. Clinical results were equally as good as those obtained in an earlier study with a daily dose of 1 Gm. of aureomycin used alone.

No signs of toxicity appeared which could be attributed to the use of the drug mixture. Diarrhea did not occur in any patient.

The full potentialities of this therapeutic combination can be determined only by further study, both laboratory and clinical.

This drug combination is available commercially in tablet form only. For soft tissue infections in adults the recommended dosage is one tablet four times daily until the acute signs of infection have disappeared plus dosage for an additional day or two. With each tablet 5 grains of sodium bicarbonate should be administered to maintain an alkaline urine. Each tablet contains 125 mg. of aureomycin and 167 mg. of each of the three sulfonamides, as supplied by the manufacturer.

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Our luxuries are always masquerading as necessities.—AMBROSE BIERCE

Hydrops at the Umbo

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Hydrops at the umbo is an entity characterized by a localized collection of fluid between the layers of the tympanic membrane in its central area. The resulting picture is a bleb at the umbo. This disturbance was very rarely seen in the past and then only as an incidental finding. It was almost universally ignored, probably because of the absence of symptoms, since the first definitive description of this condition did not appear in the literature until 1952, when Wible[1] published his paper, "The Umbo in Secretory Otitis Media."

Wible[1] made the following statements:

> "It is the purpose of this paper to direct attention to a frequently observed change seen at the umbo in cases of secretory otitis media. Many instances have been encountered in which annoying conductive type hearing losses have persisted for weeks after an apparent subsidence of the physical findings associated with a catarrhal otitis. The Eustachian tube would inflate readily and clearly. The drumhead showed the usual varying degrees of retraction, but one departure from the normal was noted; the spatulated end, so-called, of the handle of the malleus seemed much larger, or the appearance of this area was that of a collection of fluid medial to the dermal layer. The size of this fluid collection varied from 2 to 5 mm. in diameter, the larger ones showing at times a visible fluid level. . .
>
> "The picture was frequently bilateral. In some cases as those where no fluid level was seen, the application of Bonain's solution (equal parts of cocaine, menthol, and phenol) to the end of the malleus handle brought relief almost immediately. It was concluded that this fixed the fluid as being subdermal-external to the substantia propria. By the simple process of osmosis the fluid was removed. In other cases a small incision was made radially from the end of the handle of the malleus with aspiration of the fluid. In these instances the exudate was believed to be more medial, probably submucosal. It is felt that these collections of exudate do not usually involve the substantia propria but lie either external or medial to this fibrous layer. It is accepted that in due course of time the fluid is absorbed with possibly negligible increase in fibrous components at the umbo."

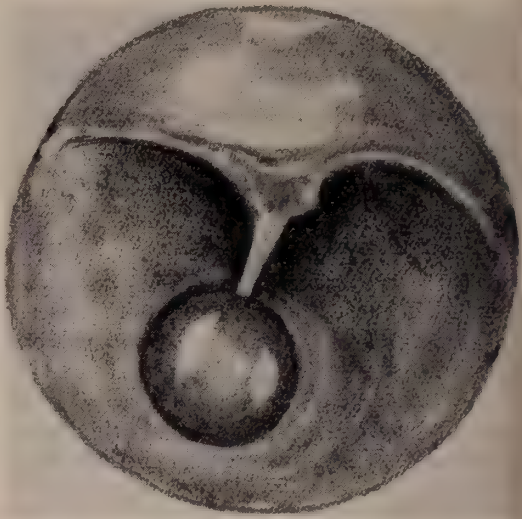

FIG. 1. Hydrops at the umbo. There is a central bleb caused by a collection of fluid between the layers of the tympanic membrane. The cone of light is absent, but the light is reflected on the bleb itself. In the other patients the cone of light was present, but it was distorted.

Wible[1] found no discussion of this disturbance in the recent literature. Although he sees this umbo picture frequently, in my experience it had been a rare finding until recently. In the past eighteen months, however, five such cases have been observed. This is startling when one considers that fewer cases were seen previously in more than a decade of active otolaryngologic practice (including military service) in the eastern and midwestern states and the United Kingdom. It is very possible that this myringopathy is becoming more prevalent.

Case Reports

CASE 1.—A forty-four-year-old white female housewife was first seen on December 31, 1952, with the complaints of pain and fullness in her right ear

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Presented in part at the Annual Clinic Day Meeting of the Eastern New York Eye, Ear, Nose and Throat Association, Albany, November 5, 1953.

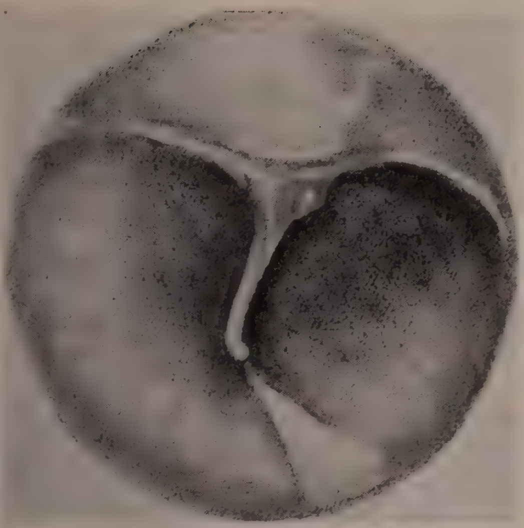

FIG. 2. Normal tympanic membrane.

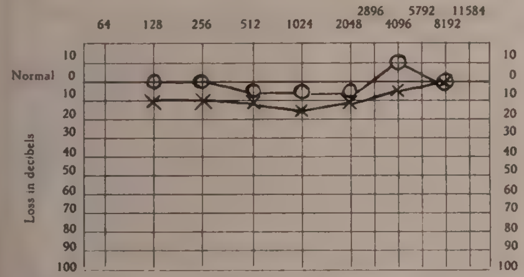

FIG. 3. Audiogram done on December 31, 1952, when right tympanic membrane showed hydrops at the umbo. [Left ear (×), right ear (O)]

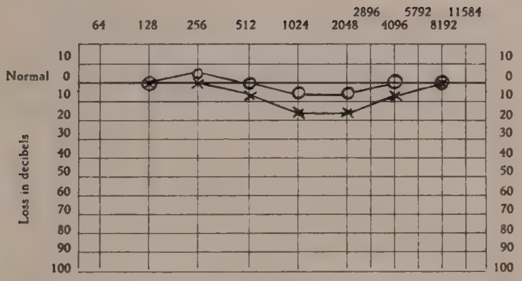

FIG. 4. Audiogram done on January 7, 1953, when both tympanic membranes showed hydrops at the umbo. [Left ear (×), right ear (O)]

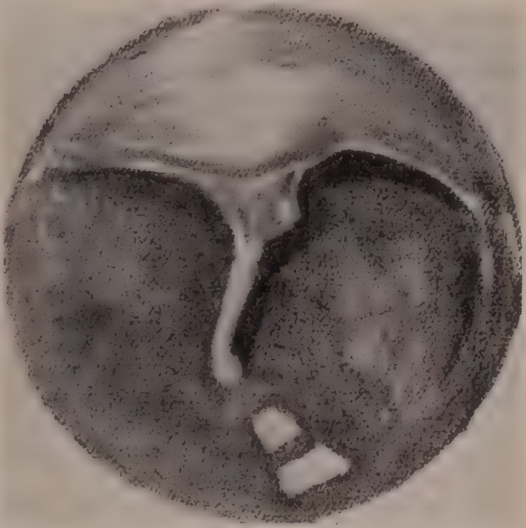

FIG. 5. The tympanic membrane after dispersal of the fluid in the bleb by pressure with a cotton-tipped applicator. The bleb has disappeared. There is a cone of light, but it is split into two distinct sectors. The pars tensa is slightly thickened.

and aching of the right side of her face of two days duration. At the onset, examination by her family physician had revealed no evidence of inflammation of the external canal or tympanic membrane. He had prescribed nose drops, Auralgan, heat, and salicylates. She had never had any ear trouble until one month before when both her ears had been stuffy for about two days. Examination revealed a good nasal airway, good transillumination of the sinuses, and small, inactive tonsils. The right tympanic membrane showed a bleb in the region of the umbo (Fig. 1). The remainder of the drumhead and the tympanic cavity appeared normal (Fig. 2). The left ear appeared normal. An audiogram revealed a slight loss in the left ear (the uninvolved ear) and the hearing in the right ear was within normal limits (Fig. 3). She was advised to continue the same treatment.

She complained of more severe pain on the right side of her face and jaw on January 2, 1953. The left ear, about which she had not complained previously, now felt stuffy. Her head felt full and tight, and her voice sounded muffled. At this time the bleb on the right side was smaller, but there was a well-defined bleb on the left tympanic membrane. Treatment with an antihistaminic drug was started, and Demerol tablets were prescribed because of the severe pain. The Auralgan drops, which had been used only on the right side, were now to be used in both ears.

By January 7, 1953, she felt much improved, but the blebs were still present on both tympanic membranes. At this time the ear drops were discontinued. An audiogram revealed no significant change in her hearing (Fig. 4).

She had no complaints on January 12, 1953. Examination revealed identical whitish blebs about 3.5 mm. in diameter around the umbo of each tympanic membrane. The normal cone of light was absent, but the light was reflected on the bleb. Moderate pressure was applied to the region of the right umbo with a cotton-tipped applicator which

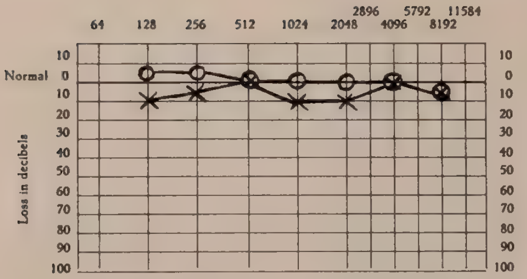

FIG. 6. Audiogram done on January 20, 1953, one week after pressure treatment of hydrops at the umbo. [Left ear (×), right ear (O)]

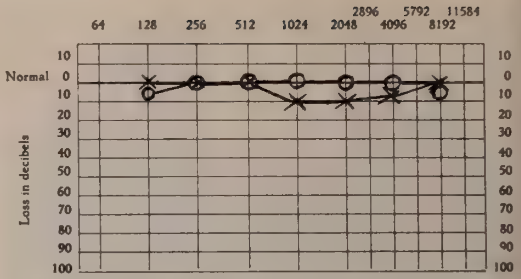

FIG. 7. Audiogram done on February 10, 1953, four weeks after the disappearance of the blebs. [Left ear (×), right ear (O)]

had been saturated with 5 per cent cocaine. The bleb disappeared. The cone of light, which now could be seen, was split into two sectors (Fig. 5). The posterior-inferior quadrant appeared thicker than the remainder of the tympanic membrane. The left side was not manipulated but was used as a control. On the following day (January 13) there was no recurrence of the bleb on the right side, but the bleb was still present on the left. The left tympanic membrane was then touched with an applicator saturated with alcohol. The result was exactly the same as that obtained on the right side.

A week later, on January 20, 1953, the patient had no complaints referable to her ears. Examination revealed that both tympanic membranes were slightly thickened with a split in the cone of light. There was little change in the audiogram from those which had been taken previously (Fig. 6).

The tympanic membrane on February 10, 1953, appeared the same as on the previous visit. She had no complaints. The audiogram showed no significant change (Fig. 7).

CASE 2.—A sixty-year-old white female with a history of hypertension was seen on October 16, 1951, with the complaints of discomfort and noises in both ears of one week duration. Examination of the right tympanic membrane revealed a bleb in the region of the umbo. The left tympanic membrane appeared thickened in the region of the umbo, but no definite bleb was seen. The mucous membrane of the nose and pharynx appeared reddened, and a small polyp was visualized in the left posterior ethmoid area. Nose drops, heat, and Auralgan were prescribed, and the patient was advised to return in one week. She failed to return, however, and no follow-up was obtained.

CASE 3.—A thirteen-year-old white female was first seen on October 16, 1952, with a complaint of pain in the right ear of several days duration. Examination revealed that both tympanic membranes were slightly retracted but were otherwise normal. The mucous membrane of the nose appeared pale and boggy, but it shrank down well after being sprayed with a vasoconstrictor. The tonsils were enlarged. There was a moderate amount of adenoid tissue in the vault of the nasopharynx and in both fossae of Rosenmuller. Both eustachian tubes were inflated and were found to be patent. Nose drops and an antihistaminic drug were prescribed, and she was advised to return in two weeks.

On November 1, 1952, she returned with the history of having had a "cold." Her nasal mucous membrane was pale and boggy and had a typical allergic appearance. Both tympanic membrane showed blebs around the umbo. Although her head felt stuffy, she did not complain about her ears. Auralgan drops were prescribed for both ears. When she returned two weeks later (November 15, 1952), both tympanic membranes appeared retracted, but the blebs had completely disappeared.

CASE 4.—A six-year-old white female was first seen on March 17, 1952, with a complaint of pain in the left ear. The left tympanic membrane showed a bleb at the umbo, and the right tympanic membrane appeared thickened. The pharynx was injected, and the cervical lymph glands were enlarged and tender bilaterally. The treatment prescribed was oral penicillin and Auralgan drops for the left ear. Three days later (March 20, 1952) blebs were seen at the umbo in both ears. She did not complain of pain, however. Her next visit was on March 25, 1952, at which time the fluid in the blebs was almost completely absorbed.

On April 29, 1952, she returned for a checkup, and although she did not complain about her ears, a definite secretory otitis media was present in the right ear. There was no evidence of a bleb at the umbo in either ear.

CASE 5.—A nine-year-old white female was examined on March 18, 1952, at which time both tympanic membranes appeared normal. A tonsillectomy and adenoidectomy were performed on April 7, 1952, and the postoperative course was uneventful. At the time of the postoperative visit on April 15, 1953, the right eardrum showed a bleb at the umbo. There were no symptoms referable to the ear. No treatment was prescribed. When she was examined again on May 6, 1953, the bleb had completely disappeared, and the eardrum appeared normal.

Comment

A definite clinical entity has been observed in which there is a localized collection of fluid 3 to 4 mm. in diameter between the layers of the tympanic membrane at the umbo. The tympanic membrane is composed of three layers: (1) an external or cutaneous layer, (2) a middle or fibrous layer, and (3) an internal or mucous membrane layer. The fibrous layer consists of an outer stratum of radially disposed fibers, which diverge from the malleus toward the periphery of the membrane, and an inner stratum of circular fibers concentrically arranged and best developed near the periphery of the membrane. According to Piersol[2] the circular fibers are absent at the umbo. Gray[3] and Kerrison[4] state that the circular fibers are very sparsely distributed toward the center of the membrane. The deficiency of the circular fibers in this area may make this a weak point where separation of the layers of the drumhead could occur, especially since this area has a rich blood and lymphatic supply.

Piersol[2] gives the following description of the vascular supply: "The blood-vessels of the tympanic membrane include arteries arranged as an outer and inner set, separated by the fibrous layer. Each of these sets form a plexus of vessels with a large branch extending downwards along the malleus-handle and another around the periphery of the membrane, these two branches being connected by numerous radiating twigs. Perforating vessels connect the two sets of arteries, especially along the malleus-handle and the periphery of the membrane. The veins are most numerous at the handle of the malleus and periphery of the membrane and communicate with those of the external meatus and tympanic cavity. The lymphatics are arranged similarly to the blood vessels in two sets, one under the skin and the other under the mucous membrane, which communicate freely with each other."

Politzer[5] states that, "In the centre of the membrana tympani the arteries and veins communicate with the peripheral vascular zone by means of numerous radiating branches."

The fluid could be either a transudate from the capillary bed or an accumulation of lymph. It is conceivable that the lesion results either from local noxious stimuli or from interference with the arterial supply or venous and lymphatic drainage at a point quite distant from the tympanic membrane. The size of the locule or bleb may be limited by the circular fibers which are peripheral to the umbo. This would place the fluid between the radiating fibers and the mucous layer.

Etiology.—The etiology of this condition is obscure. In Case 4 hydrops at the umbo preceded the occurrence of secretory otitis media by several weeks. A definite relationship between these two conditions appears to have been present in this patient. The ears of the other patients showed no evidence of acute or chronic infection or secretory otitis media. Although one patient had a nasal polyp and another had an allergic appearing nasal mucous membrane, there certainly is not enough evidence to attribute this condition to allergy. In one instance the bleb appeared while the patient was on antihistamine therapy. Since the blebs were present before the ear drops were used, the local medication can be eliminated as a possible cause.

Signs and Symptoms.—The tympanic membrane can show this specific pathologic change without the patient being aware of it. The symptoms that can direct attention to the ear are stuffiness, pain, tinnitus, and autophony. In Case 1 the cause of the severe pain was not determined. In this same patient it was observed that the audiogram was not significantly influenced by the presence or absence of the bleb, nor did the audiogram vary with the subjective complaints of the patient. Except for the loculated fluid at the umbo and the absence of the cone of light, the tympanic membrane and cavity appeared normal. In the other patients the cone of light was present, but it was not intact. No fluid level was seen in any of the blebs.

Treatment.—Spontaneous resorption of the fluid can occur. Local medication probably does not influence this significantly. It was effectively demonstrated that pressure on the bleb will cause the fluid to disperse between the layers of the tympanic membrane. The medication used on the applicator is of no importance. This procedure resulted in a drumhead that was slightly thickened and a cone of light broken into two distinct sectors. This treatment did not alter the hearing, however, and the patient was symptom-free both before and after it was carried out. The fluid did not reaccumulate.

Where the collection of fluid is large enough to cause a visible fluid level in the bleb, incision and release of the fluid, as practiced by Wible,[1] would seem to be a logical procedure.

Summary and Conclusions

The case histories of five patients with the umbo picture described by Wible[1] have been presented. This entity has been named hydrops at the umbo. Its etiology is obscure. A localized collection of fluid is found between the layers of the tympanic membrane in an area where the circular fibers are deficient and the vascular and lymph supply is rich. Symptoms complained of were stuffiness, pain, tinnitus, and autophony. The audiogram may be normal. Spontaneous resorption of the fluid can occur. In one patient treatment by pressure on the blebs caused their disappearance.

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The drawings used in this article were prepared by Mr. Paul Knapp.

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Addendum: During the six months since this paper was submitted for publication, the diagnosis of hydrops at the umbo has been made in seven more patients. It is apparent, therefore, that this is not a rare condition.

The Nose and Throat in Relation to Pulmonary Disease

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The purpose of this discussion is to point out that certain symptoms encountered by the chest physician may be caused by disease in the upper respiratory tract. Those who specialize in thoracic diseases are faced with such symptoms as cough, hemoptysis, excessive expectoration, etc., that may or may not have their origin in the chest. Frequently, persons are treated for lung disease, e.g., tuberculosis, bronchiectasis, and bronchitis, when in reality the symptoms are due to abnormalities in the nose and throat. Of course, the opposite is also true—the otolaryngologist will treat these same symptoms when they really originate in the lung. Here, we wish to emphasize that an examination of the nose and throat by a competent otolaryngologist and by x-ray films, when necessary, are important in investigating cough, hemoptysis, and other symptoms.

Cough

Infections anywhere in the upper respiratory tract may produce cough. The infection may extend downward to cause inflammation and irritation of the trachea and bronchi. On the other hand, sometimes we feel that the cough is a reflex one due to the infection in the nose or throat. Since the mucous membrane of the upper respiratory tract is continuous with that of the bronchi, an infection in one area travels readily to the other.

There are certain sensitive areas in the nose which, when irritated by mucus, congestion, or fumes, by pressure of enlarged turbinates, and by contacts with a deviated septum, sometimes cause a reflex type of cough. The treatment of this is accomplished by removing the cause of the nasal irritation. In some instances the mucus and congestion may be caused by allergy and sometimes by infection. Enlarged turbinates may be reduced in size either by cauterization or by par-

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tial resection. Pressure contacts of a deviated septum are treated by performing submucous resection of the nasal septum.

Infection in the nose and especially in the sinuses may produce postnasal discharge of mucopurulent material and irritate the throat enough to cause cough. Sinusitis may be acute or chronic. To alleviate the condition the sinuses must be treated. Sometimes this is done by nasal shrinkage, by irrigation, by antibiotics, and sometimes by more radical means. The more radical methods of treatment consist of various operative procedures designed to promote drainage of purulent material from the sinuses or to remove infected mucous membrane that lines the sinuses. The type of operative procedure is governed by extent and degree of involvement.

We frequently hear the term, postnasal drip. Such a postnasal discharge may readily irritate the pharynx or hypopharynx and produce cough. The discharge may consist of mucus, pus, or mucopurulent exudate. If it is purulent or mucopurulent, it is probably due to sinusitis as mentioned above. Such an exudate may drip into the trachea and cause enough infection there to produce tracheitis or bronchitis and cough. On the other hand, nonpurulent mucous secretion may produce these same symptoms. This may come from a deviated septum which is a source of chronic irritation to the mucous membrane of the nose. The treatment is to straighten the septum. But nasal obstruction of any kind may be the source of cough. Hypertrophic turbinates may result from chronic infection or from longstanding allergic rhinitis or vasomotor rhinitis. Such hypertrophy may be treated by cauterization of the turbinate. The subsequent scarring produces shrinkage and relief of the obstruction. Where allergic rhinitis is suspected, the cause of the hypersensitivity should be determined and appropriate treatment given. In cases of vasomotor rhinitis other than those due to hypersensitivity there may be other systemic causes as diabetes, ovarian dysfunction, menopause, fibroid uterus, emotional upsets, etc. It is true that postnasal drip which long ago was called catarrh is a common complaint, but when one is seeking the cause of cough and it has its origin in postnasal discharge, the answer may be difficult to attain.

In children we frequently find that enlarged or infected adenoids and tonsils will produce cough, and the latter is immediately relieved by their removal. We know too that excessive infected nasopharyngeal lymphoid tissue that has regrown may be a cause of cough. We find that removal of this regrowth of tissue either by surgery or by radiation therapy will give the desired results. However, we also know that such regrowth of tissue is frequently due to allergy, and this must be investigated at the same time. Of course, these children may be suffering from bacterial sensitivity with the source of infection in adenoid tissue so that treatment of this tissue removes the offender.

Obstruction in the nasopharynx by adenoid tissue in children may give mouth breathing, and the dryness so produced may cause irritating cough.

At times there are lateral lines of lymphoid tissue behind the posterior pillars of the pharynx which, when enlarged and inflamed, may cause irritation. These may require either removal or cauterization.

Enlarged lingual tonsils, especially when infected, cause a sense of irritation and lump in the throat creating cough. This may be especially marked when a patient is in a reclining position The enlargement and infection of lingual lymphoid tissue may be brought about by chronic sinus disease and its postnasal discharge. The tissue is treated by cauterization or removal, as well as eradication of the infection in the sinuses.

Irritating fumes that are present in certain occupations may cause inflammation of the mucous membrane of the upper respiratory tract. The subsequent nasal obstruction and postnasal discharge may cause cough.

Excessive smoking is a great offender. The inflammation so produced in the pharynx and larynx as well as the trachea may cause the symptom of cough. Alcoholism, acute or chronic, causes congestion of the mucous membrane of the pharynx and larynx. An elongated uvula that rests on the base of the tongue may be the cause of annoying cough.

In motor or sensory paralysis of the pharynx and larynx, there may be aspiration of food or fluid with subsequent cough. In the same way esophageal stenosis or pharyngeal diverticulum may cause overflow of material into the larynx.

Tumor, benign or malignant, situated in the vestibule of the larynx or the pyriform sinus or elsewhere in the hypopharyngeal region may create cough either by irritation or aspiration.

One of the great considerations is allergy. In addition to nasal obstruction it may cause congestion of the pharynx, nasopharynx, and hypopharyngeal lymphoid tissue enough to give an irritating sensation. We find frequently that after an upper respiratory infection, cough persists. This is sometimes due to allergic type of reaction in the upper respiratory tract and is amenable to antihistamine therapy as well as intranasal shrinkage.

Incidentally, cough is sometimes due to cerumen in the ears by a reflex stimulation along Arnold's nerve or to an external otitis or to a foreign body in the ear canal.

Therefore, in persistent coughs one should look to the upper respiratory tract. If the cause is not found in the lung, one may find it in the nose or throat, and by proper treatment the symptom will be removed.

Hemoptysis

Expectoration of blood is the next symptom the origin of which is sometimes difficult to determine. A person with hemoptysis usually has an examination including x-ray film of the chest, but in the absence of positive finding the upper respiratory tract should be considered as a possible source.

Varices in the postnasal space, the pharynx, or at the base of the tongue may rupture and produce hemoptysis. The varices themselves may cause some irritation and on coughing may bleed. The condition is frequently aggravated by acute or subacute infections.

Benign or malignant tumors of the nasopharynx, pharynx, base of the tongue, or larynx may be a source of bleeding. In fact, such bleeding may be the initial symptom of a tumor in the upper respiratory tract.

We frequently are able to trace blood-spitting to bleeding gums, especially in some people who have a tendency to exert suction on their gums. We must also keep in mind the possibility of telangiectasis.

In the absence of positive findings in the upper respiratory tract or the chest, bronchoscopy is imperative.

Expectoration

It is often difficult to determine whether expectoration of purulent or mucopurulent material comes from the upper respiratory tract or lungs. It may be postnasal drip that strikes the larynx and is coughed up. This exudate may accumulate at night either around the larynx or in the trachea and create coughing in the morning. Again, one must examine the upper respiratory tract, especially the sinuses and the nose, for infection and abnormalities in order to discover the origin of the postnasal drip.

Fetid Odor

This may occur with or without expectoration and cough and may be due to purulent sinusitis partially caused by anaerobic organisms. This is especially true when an apical abscess of a tooth extends into the maxillary sinus. Sometimes an infection of the antrum occurs at the time a tooth is extracted. The antral wall may be broken during the extraction, and the infection may extend to the mucous membrane of the sinus. This type of sinusitis produces discharge of extremely foul odor, and drainage and aeration of the sinus is necessary for cure.

Lingual lymphoid tissue may harbor infection which gives a foul odor to the breath. Such lingual tonsils require removal, although occasionally they may be treated by cauterization.

Ozena, an atrophic condition of the mucous membrane of the nose with crusting and stagnant secretion, causes a fetid odor. Poor dental hygiene and mycotic infection in the lymphoid tissue of the pharynx, faucial tonsils, and lingual tonsils may give a foul odor to the breath.

Dyspnea and Wheeze

Dyspnea is often confused with nasal obstruction. A person will say that he cannot breathe or that he cannot "catch his breath," and what he really means is that there is some obstruction to the air passage in the nasal cavity. Here a careful history is important.

A wheeze that is heard in the chest may be due to laryngeal obstruction from such cause as tumor, unilateral or bilateral paralysis of the vocal cord, edema, or cicatricial stenosis following trauma of the larynx. In children congenital stridor due to infantile type of larynx or congenital web or foreign body must be considered. Therefore, laryngeal examination is indicated in some cases of wheeze.

Sinobronchitis

There are some conditions of the lungs that are directly related to diseases of the upper respiratory tract, for example, the syndrome of sinobronchitis. Infection of the sinuses either acts as a focus for the disease in the bronchi or may involve the bronchi by direct extension of the infection along the mucous membrane. Then, too, the bronchi may be inflamed by pus dropping into the trachea from the nasopharynx. As long as sinusitis is present, infection will persist in the bronchi.

In persons subject to recurring attacks of bronchitis, the cause frequently is found to be infection in the upper respiratory tract, especially the sinuses. Occasionally we obtain a history of acute nasopharyngitis which is followed by bronchitis, and no significant amount of sinusitis can be demonstrated. In order to prevent these upper respiratory infections the use of autogenous or stock vaccine may increase resistance to infection so that the recurrences may not be as severe or as frequent.

Infection in the adenoids, tonsils, lingual tonsils, and lateral lines of lymphoid tissue may also extend to the bronchi. These sources of infection must be eradicated to cure the chronic or recurring bronchitis.

Bronchiectasis

The relationship of sinusitis to bronchiectasis is a controversial subject. There are those who feel that chronic sinus infection produces the conditions that lead to bronchiectasis. Others contend that sinusitis accompanies the bronchiectasis, and the same causative factor applies to both. It is said that this causative factor may be allergy, especially sensitivity to bacteria. There are many instances of bronchiectasis where sinus infection cannot be demonstrated, and certainly sinusitis is not necessarily accompanied by bronchiectasis. Frequently, however, proper treatment of the sinuses will help to alleviate some of the discomforting symptoms of bronchiectasis, and this should be undertaken if it can be done conservatively. It follows, too, that if there is bacterial allergy in the presence of purulent sinusitis, the latter may be the source of the infection, and its treatment may help the bronchiectasis. We must consider, also, that purulent exudate that is aspirated may produce bronchial obstruction which, when it exists for some time, may be the causative factor in bronchiectasis.

Asthma

Some cases of asthma are due to sensitivity to infection in the upper respiratory tract. In children tonsils and adenoids may act as a focus of infection, and on their removal the asthma may be cured. Unfortunately, however, we see asthmatic children who have had tonsillectomy and adenoidectomy, but in some there is regrowth of adenoid tissue. With the removal of this regrowth or with treatment by radiation, the adenoid tissue shrinks, and the infection in it subsides with subsequent relief of the asthma.

In adults sinus infection frequently acts as a focus for asthma. We often find a suppurative process in one or more of the sinuses or polyps in the nose. Some believe in radical procedures in dealing with the sinuses since they feel that the lining mucous membrane harbors infection. We are inclined to be more conservative and believe in eradicating infection only in the sinuses involved where pus and abscess formation in the mucous membrane can be demonstrated. Polyps that have their origin in one or more sinuses also require operative procedures. Allergic individuals may have swelling of the mucous membrane of the sinuses as well as the membrane of the nose or of the bronchi. But this membrane in the sinus may not harbor infection, and, therefore, its operative removal will not improve the condition. It merely tends to create chronic nasal invalids. Therefore, treatment of sinuses as conservatively as possible, determined by their infected state at the time of examination and by x-ray, is advocated.

Operative procedures may range from simple removal of nasal polyps or the straightening of deviated septa that prevent proper drainage of the sinuses to radical procedures on the sinuses as indicated. We must keep in mind also that such operative procedures may aggravate asthma. Therefore, great care must be taken in choosing the case that requires operation.

Summary

The otolaryngologist can be of great aid to the internist and chest specialist in investigating symptoms such as cough, hemoptysis, expectoration, fetid odor, etc. Certain diseases of the lungs and bronchi have their origin in pathology in the upper respiratory tract, and treatment of the latter will help to eradicate these diseases.

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An Evaluation of Stigmonene Bromide as a Corroborative Test in Early Pregnancy

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INVESTIGATION into the nature of the mechanism of menstrual bleeding suggests that hyperemia of the endometrium prior to the cyclic flow is due to the vasodilating action of acetylcholine released by estrogen.[1] Hechter, Lev, and Soskin[2] have demonstrated that the action of the estrogen-liberated acetylcholine can be inhibited by atropine, indicating affection of uterine hyperemia by the parasympathetic nervous system. The link between uterine hyperemia and the parasympathetic system may explain in many instances, i.e., physical, mental, or emotional stress, an inadequate "vascular responsiveness" of the uterine tissues. That psychic influences do play an important role in the causation of functional amenorrhea has been noted by Marwill.[3]

Soskin, Wachtel, and Hechter[4] were of the opinion that a physostigmine-like compound would overcome poor vascular response by potentiating the stimulating effect of acetylcholine through inactivation of the enzyme cholinesterase. They have demonstrated clinically the elicitation of the cyclic flow in certain instances of delayed menstruation with the administration of a parasympathomimetic or cholinergic compound, and, moreover, such treatment does not interfere with or disturb the course of an existing normal intrauterine pregnancy. Many clinicians have since confirmed their findings.

The prompt re-establishment of menstruation in nonpregnant women and the lack of eliciting the same response in pregnancy is the basis for the use of cholinergics in the treatment of simple delayed menstruation and as an aid in the diagnosis of early pregnancy.

Kaiser[5] questions this hypothesis of Soskin and his associates on the basis of his own investigation. Moreover, he points to the extensive studies of Bartelmez[6] and others which show that menstruation in primates is preceded by a period of ischemia and regression and not by hyperemia as claimed by Soskin. Nevertheless, he states that the great mass of enthusiastic clinical reports cannot be ignored and there is reason to believe that the drug has some effect in the human being.

As a therapeutic agent in simple delayed menstruation, the cholinergic drugs are effective only in those women whose previous menstrual histories have been regular and who are not of menopausal age. Furthermore, the accuracy of this test is also affected by endocrine disturbances, postpartum delay, ectopic pregnancy, and organic diseases.

These postulations prompted the present investigation of the clinical usefulness and safety of the new cholinergic agent, Stigmonene Bromide,* in the treatment of simple delayed menstruation and/or as a diagnostic measure for early pregnancy.

Evidence indicates that Stigmonene Bromide (1-benzyl-3-(dimethylcarbamyloxy)-pyridinium bromide), a synthetic alkaloid-like salt of the quaternary pyridinium series, acts as an inhibitor of the enzyme cholinesterase.[7] It is less toxic than the presently known compounds of the physostigmine group, and clinically it was found to be devoid of side-effects in therapeutic doses.[8–12] Signs or symptoms indicating any adverse effect upon gestation were not observed.[13,14]

Clinical Material and Procedure

Ninety-eight patients who visited the Gynecology Clinic of St. Vincent's Hospital and who complained of being amenorrheic were chosen for the study. Although the selection of these women was governed by the aforementioned requirements, 21 did not conform to the established criteria considered essential for accuracy. Of this number, in addition to the absence of menses, symptoms of early menopause or endocrine dysfunction were observed and signs of other organic disease noted. However, the results obtained in this particular group are included in the report to emphasize the importance of observing the limitations of the test.

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* Stigmonene Bromide employed in this study was supplied through the courtesy of Warner-Chilcott Laboratories Division, New York City.

TABLE I.—Patients Who Conformed to Requirements of Stigmonene Test

	Pregnant	Nonpregnant
Number of cases	69	8
Age range	15 to 45	21 to 39
Average days overdue	28.4	43.2
Pregnancy confirmed clinically	69	0
Uterine bleeding		
Absent	69	0
Present	0	8
Aschheim-Zondek reaction		
Positive	57*	2
Negative	10	5†

* Two Aschheim-Zondek tests not done.

† One animal died.

The diagnosis of each participant was based upon a carefully taken history, physical examination, and palpable pelvic findings. With the exception of two cases, the Aschheim-Zondek test (Friedman modification) for pregnancy was performed for each individual. The duration of the amenorrhea was calculated in days from the expected day of menstruation to the date on which the first dose was administered. Each patient received an intramuscular injection of 1 cc. of a 1:1,000 solution (1 mg.) of Stigmonene on each of three successive days.

The occurrence of the elicited uterine bleeding was computed in hours from the last Stigmonene injection given. If the cyclic flow ensued after the first or second injection, further treatment was discontinued. The continued absence of the menses after the third and last injection was presumed to be indicative of pregnancy. All women were acquainted with the possible manifestations of the treatment and advised to report the start of the flow or any symptoms experienced.

Results

A total of 77 patients conformed to the requirements of the Stigmonene test (Table I). They received 1 mg. of Stigmonene intramuscularly on each of one to three successive days. The drug did not evoke uterine bleeding in 69 women. Their ages ranged from fifteen to forty-five, and their average number of days overdue was 28.4. Because Stigmonene did not elicit bleeding, they were considered to be gravid. The gravidity was in every instance subsequently confirmed by clinical manifestations.

Two episodes of bleeding did occur.

Case 32.—W. S., a twenty-two-year-old, white, married female, reported to the outpatient's department complaining of amenorrhea of thirteen days duration. Examination revealed the patient to be gravid 1, para 0, with a uterus approximately eight weeks in size. Aschheim-Zondek test was negative. The cervix was soft, blue, and markedly eroded. Exactly ten days after the first of the three injections was administered, the patient returned with a complaint of bleeding. Re-examination revealed a bleeding point from the erosion on posterior lip of cervix. Interrogation of the patient further revealed that the bleeding occurred immediately after intercourse. In this instance the bleeding was definitely not related to the administration of the cholinergic drug. The Aschheim-Zondek test was repeated the following month and was found to be positive. The patient went on to deliver a full-term baby following an otherwise uncomplicated gestation.

Case 97.—M. L., a Puerto Rican female, aged thirty, gave a history of being sixty days overdue. Patient was gravid 5, para 4. Pelvic examination found her to be eight weeks pregnant. Aschheim-Zondek was positive. Eleven days after the third injection of Stigmonene, patient was hospitalized because of uterine bleeding. This terminated in a spontaneous complete abortion. Only after close questioning did the patient reveal that she had been spotting prior to the administration of the first Stigmonene injection. Again, it can be fairly assumed that the injection of Stigmonene was not the responsible factor in this instance of bleeding.

It may be said that in this group of 69 gravid patients, who met the requirements for the Stigmonene test and who received 1 mg. of the drug in the customary manner, Stigmonene proved to be accurate in every instance.

The Aschheim-Zondek test (Friedman modification) was concurrently performed for all but two of the 69 gravid women. It was interpreted as negative in ten instances, representing an inaccuracy of 14.5 per cent. This is extraordinarily high. Furthermore, in five cases it was necessary to repeat the Aschheim-Zondek test in order to reconcile the results with those obtained from a single course of three Stigmonene injections. It has been our experience that many clinic patients, owing to language difficulty or for other reasons, may not accurately follow instructions in obtaining urine for the Aschheim-Zondek test. Stigmonene was tolerated well, and no ill effects upon gestation were observed.

The remaining eight amenorrheic women in this group of 77 were not pregnant clinically. They ranged in ages from twenty-one to thirty-nine years. The average number of days overdue was 43.2. Uterine bleeding was evoked in every instance within six to ninety-six hours after the last injection of 1 mg. of Stigmonene.

TABLE II.—PATIENTS WHO DID NOT MEET STIGMONENE TEST REQUIREMENTS

	Pregnant	Nonpregnant
Number of cases	6	15
Age range	20 to 43	18 to 44
Average days overdue	43.8	47.4
Pregnancy confirmed clinically	6	0
Uterine bleeding		
Absent	6	9
Present	0	6*
Aschheim-Zondek reaction		
Positive	5	1
Negative	1	13†

* In from 3 to 19 days after last injection.
† One Aschheim-Zondek test unsatisfactory.

The reported Aschheim-Zondek test (Friedman modification) was incorrectly interpreted in two cases, although these patients were overdue thirty-eight and nineteen days, respectively.

In view of the small number of cases in this latter group, it is not possible to draw any valid conclusions or make any comparisons of the therapeutic efficacy of Stigmonene in the treatment of simple delayed menstruation.

As previously stated, 21 of the participants in this study did not meet the standards for the Stigmonene test. Their cyclic periods were irregular; they were obese or of menopausal age or showed signs or symptoms of endocrine imbalance or pelvic pathology. The results obtained are summarized in Table II.

In this group of 21, six patients were found clinically to be pregnant and 15 nonpregnant. The pregnancy of these six women was confirmed by the Stigmonene test in all instances. The three Stigmonene injections administered in the customary manner did not evoke bleeding, thus corroborating the clinically established gravidity. The Aschheim-Zondek test, performed concurrently, was reported in three instances as being positive and in one case negative.

Of the 15 nonpregnant women in this group of 21 patients, six responded with bleeding. In nine cases no flow was elicited. The onset of menstruation in these six patients occurred anywhere from three to nineteen days after the third and last injection of Stigmonene. Generally speaking, bleeding that occurs more than eight days after the administration of the third and last injection is not believed to be due to the action of the drug. Decker[14] confirmed this hypothesis when he showed that all patients in his series responded with bleeding within eight days, irrespective of the strength of the dosage administered.

The Aschheim-Zondek test in this group of 15 nonpregnant females was interpreted erroneously in one case only and in another instance was reported as unsatisfactory.

Disregard of the established requirements for the Stigmonene test is thus vividly illustrated by the poor results obtained in these 15 cases.

No untoward reactions attributable to the drug were observed.

Summary and Conclusions

1. The background on the use of cholinergic drugs in amenorrheic women is reviewed.
2. The absence of endocrine disturbances, organic pelvic lesions, menopausal symptoms, or systemic disorders forms the basic criteria for inclusion of patients in this routine pregnancy test under investigation.
3. In no instance in the group of 69 pregnant women who conformed to the criteria hitherto established, was there an occurrence of uterine bleeding following the administration of Stigmonene on three successive days.
4. In every instance in the group of eight nonpregnant patients who fit the criteria, menses was induced.
5. In the group of 21 patients who did not conform to the requirements, the six pregnant women confirmed the Stigmonene pregnancy test. However, no conclusions could be drawn from the remaining 15 nonpregnant patients in this group since no accurate results were obtained.
6. In no instance did administration of Stigmonene Bromide interfere with normal gestation.
7. There were no side-effects observed following the 291 injections of Stigmonene.

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The Occurrence and Control of Ringworm of the Scalp in the United States

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A SURVEY of the extent of the present occurrence of ringworm of the scalp due to Microsporon audouini and of the methods employed in handling and controlling the disease by the health departments of the individual states in the United States and of some of our largest cities indicates that at this moment this problem is not generally regarded as one of immediate urgency. The epidemic of the middle and late 1940's has largely subsided, and in only a few states, among which are Florida, Illinois, Michigan, Minnesota, North Dakota, and Washington, are sufficient cases being reported currently to cause any real concern.

We have no specific therapy as yet for this disease, and until we do, we may continue to expect new outbreaks from time to time. The experience gained during the epidemic outbreaks might well, therefore, be used now to help prevent future epidemics by developing a greater uniformity in methods of control.

Methods of Control

Methods of control are by no means uniform at present. Some states issue no specific regulations or directives at all. Some follow the recommendations of the American Public Health Association[1] which outline certain preventive measures and recommend that "infected children should be excluded from school until recovery." Many states now permit school attendance if under treatment, some requiring the use of a cap or protective head covering, some not insisting on even this precaution. Some states require that the disease be reported to the state health department; some require reporting only to the local health or school authorities. Increasing numbers of states are leaving control measures up to the local health or school authorities.

Very few reliable figures are available covering the numbers of cases occurring throughout the United States during the last few years, such figures being available for the most part only from those states having an unusually high incidence of the disease.

The accompanying tabulation of the practices of the various states regarding reporting and control and also the present incidence of the disease shows clearly the lack of uniformity in handling, reporting, and control (Table I).

It is obvious that the current recommendations of the A.P.H.A. are not in accord either with the thinking or the practice of those at present engaged in the control of the disease throughout the country. Some modification is both desirable and necessary. The position taken by the City of New Orleans, Louisiana, that infected ". . . children are considered and deemed offenders of the Communicable Diseases Section of the Health Code, and under such section are excluded from attending school while so infected" seems rather harsh. On the other hand, the new directive of the Department of Health of the City of New York, executive order number 575 under Commissioner of Health, New York Department of Health, may err in not going far enough in controlling the disease.

Most dermatologists will agree with the opinion expressed in this directive that ringworm of the scalp is a mild disease which is ultimately self-curative, causes no complications and no deaths, and has no effect on the future growth of the hair. It is primarily a cosmetically objectionable condition and one to which a certain stigma is attached because parents have come to regard it as a condition associated with bad hygiene. Although physicians in the public health services may see more of it in underprivileged families, it is no respecter of persons and in our present school systems can be just as readily transmitted to children of families of ample, or not so ample, means.

Excluding children from school has a profound and harmful effect upon them and their education. It also throws unnecessary financial and

TABLE I.—State Control of Ringworm of Scalp

State	Disease Reportable	Number of Cases	Control Measures
Alabama	No	No figures available	"Control measures are local responsibility."
Arizona	No	No figures available	Only requirement that "physician report an 'unusually high incidence' of the disease."
Arkansas	No	No figures available	"We have issued no directives with regard to its treatment, and have no uniform policy with regard to exclusion or inclusion in school."
California	No	No figures available	No official regulations. Follow closely A.P.H.A. recommendations, but permit school attendance under treatment, and suggest use of stocking cap.
Los Angeles	......	......	Control fairly strict. Children excluded from school till diagnosis and treatment established, then may attend school if head shaved and shampooed regularly and a cap worn.
Colorado	Yes	No tabulations made routinely. Reportable only as a nuisance disease	"Infected children may attend school if under adequate medical supervision."
Connecticut	Yes, since 1947	1948— 92 1949—156 1950— 79 1951—66 1952—77 1953—12 (3 months)	Minimum requirements: "Exclusion from school until recovery, or the instituting of control measures at the discretion of the local health officer."
Delaware	Yes	No figures available	"We permit infected children to attend school provided they are under the care of a physician and the supervision of a school or public health nurse."
Florida	Yes, but "not very well reported."	1948—1 1949—1 1950—6 1951—6 1952—50 1953—61 (January through April)	"Infected children should be excluded from school until under treatment. Concurrent disinfection of all towels, washcloths, head coverings, and all toilet articles is required."
Georgia	Not since 1952	No figures available	"No published directives." "The State Health Department does not recommend that infected children be excluded from school," but does recommend some type of close-fitting head covering for duration of infection.
Idaho	No	No figures available	"Affected children excluded from school until treatment is considered adequate." Recommend that cap be worn at all times.
Illinois	Yes, since July 1, 1945	1945—1,399 1946—1,891 1947—2,543 1948—2,728 1949—1,740 1950—1,406 1951— 528 1952— 565	"Children permitted to attend school provided that they are under adequate treatment." Cap no longer necessary since "it was felt that the cap was an agent of further spread, if not properly disinfected, and the wearing thereof attached an unfair stigma to the child."
Chicago	......	......	Follows state recommendations and practices.
Indiana	Only to local health officer	1948—159 1949—153 1950—130 1951—20 1952—15 (Reports sporadic, not complete)	Control in hands of local physicians, "some permit school attendance with certain precautions—others do not." Generally a cap must be worn. Indiana has an excellent education and control program on ringworm of the scalp, based largely on the recommendations of Dr. Louis Schwartz.
Indianapolis	......	Few cases currently	Children excluded from school till Wood's light negative.
Iowa	To local health departments and school authorities	No figures available	Follow A.P.H.A. recommendations. Children excluded from school and must wear cap.
Kansas	Yes, but generally as ringworm	1951—288 1952—158	"Patients excluded from school unless under treatment by a physician and school attendance approved."
Kentucky	Yes	1948— 56 1949—821 1950—160 1951—239 1952—176	Children permitted to attend scoool if receiving adequate treatment, and if hair kept closely cut, and if cap is worn.
Louisiana	No	No figures available	Control in hands of local health departments and school authorities.
New Orleans	......	......	"Children are considered and deemed offenders of the Communicable Diseases Section of the Health Code, and under such section are excluded from attending school while so infected."
Maine	No	Few during past few years	No specific regulations at present. "We did not require prolonged absence from school."
Maryland	No	No figures available	Exclusion not required. "Infected children, when undergoing treatment and wearing a cap, may be permitted to attend school at the discretion of the local Health Officer."
Massachusetts	No	No figures available	"If the scalp is heavily infected, the child should be excluded from school, or segregated until the condition is under control." Cap must be worn during treatment. "Universal exclusion from school not practical."

TABLE I.—STATE CONTROL OF RINGWORM OF SCALP

State	Disease Reportable	Number of Cases	Control Measures
Boston	......	......	"Children not permitted to attend school. . . . Some children who are receiving adequate treatment are allowed to continue in school with certain precautions."
Michigan	Yes	1948—1,555 1949—1,751 1950—1,425 1951—1,284 1952—1,329 1953— 463 (to April 22)	Infected children may attend school without special precautions provided they are under medical care. No caps needed. "We have always felt in Michigan that the use of caps is unwarranted."
Detroit	......	......	As in state generally.
Minnesota	Yes, since 1945	1945—805 1946—198 1947— 59 1948— 60 1949— 15 1950— 22 1951— 28 1952—168 1953— 31 (to April 2)	"Children are permitted to attend school provided they wear a cap and are under adequate medical treatment."
Mississippi	No	"Apparently it is relatively infrequent in this state."	"No specific directions or instructions to our public health personnel for handling the problem when it does occur in an area."
Missouri	Yes	No figures available	"Regulations state that infected children are to be excluded from school," but "In actual practice it is generally agreed between physicians and school authorities that children will be permitted to attend school provided they are under medical treatment."
Montana	Yes, since just recently	No figures available	Children permitted to attend school after isolation period of 7 days to allow time to get under treatment. After that may return to school, if under treatment, and if cap is worn.
Nebraska	Yes	No figures available	Children excluded from school during communicable stage. Regulations now being revised; new regulations may neither require reporting nor exclusion from school, provided they are under active treatment of a physician. State regulations are minimums. Local authorities may adopt more rigid regulations if they feel they are necessary.
Nevada	......	No figures available	List of reportable diseases in process of revision. No data at present.
New Hampshire	......	......	In hands of Dr. Otis Jillson, Mary Hitchcock Memorial Hospital, Hanover. "Children restricted from general school."
New Jersey	No	No figures available	Recommendations follow A.P.H.A. methods of control.
New Mexico	Not according to New Mexico regulations but have kept figures since 1948	1948—6 1949—5 1950—1 1951—2 1952—1	Children excluded from school.
New York State	No	No figures available	Control in hands of local health officers and school authorities.
New York City	To school health authorities	No figures available	School attendance permitted if under treatment. "No special precautions or restrictions should be exercised."
North Carolina	No	No figures available	At discretion of local health officers.
North Dakota	Yes	Epidemic in 1952 with over 450 cases in one city alone. "35 reports have been received from outside this epidemic area"	Under jurisdiction of local health departments. "In general, children have been allowed to continue their schooling if they are under proper supervision and treatment. . . . In some instances infected children are allowed to attend school; in others they are prohibited. . . . Scalp Ringworm of the Microsporon Audouini nature has been one of the most difficult public health control programs we have experienced in recent years. . . . (Several reports of neurotoxic reaction following the use of 'Asterol')."
Ohio	No	No figures available	In hands of local health departments, boards of education, or individual school health service "In recent years there has been an increased tendency to permit infected children to attend school provided they are under treatment" and that educational programs for parents and children are carried on. "This is one of the minor nuisance diseases of a self-limited character."
Oklahoma	Yes	No figures, but quite rare	"If caused by M. audouini, we ask that the child be kept out of school until healed." If by any other type of Microsporon, school attendance permitted if under treatment.

TABLE I.—STATE CONTROL OF RINGWORM OF SCALP

	Disease Reportable	Number of Cases	Control Measures
Oregon	Yes	118 definitely in 1952, but probably more	Children excluded from school until under adequate medical care for 7 days. May attend school thereafter provided treatment is continued and cap is worn.
Pennsylvania	No	No figures available	Children admitted to school if under treatment.
Philadelphia	......	......	Children admitted to school if under treatment.
Rhode Island	No	No figures available	No state directives. "Most of the communities in the state allow infected children to attend school if they are under treatment and have a protective hair covering."
South Carolina	No	No figures available	"No rigid rules," children are permitted to attend school if under treatment.
South Dakota	No	No figures available	No state directives. "Infected children are excluded from school until they present certificate from doctor indicating that it is safe for them to be in attendance."
Tennessee	No	No figures but "we know of two outbreaks which have occurred in Tennessee within the last 12 months"	Local health officers and school authorities exclude from school any child "suffering from or presumably infected," until physician feels that transmission of the disease is no longer possible.
Texas	No	No figures available	School attendance not permitted until recovered or noninfectious.
Houston	......	......	School attendance permitted if under treatment. Cap must be worn at all times.
Utah	Yes, since 1946	1948— 42 1949—130 1950— 31 1951—55 1952—29	"Infected children should be excluded from school except in the case of children under adequate treatment whose attendance is recommended by both the attending physician and the local health officer."
Vermont	No	No figures available	Children with suspected ringworm of the scalp are excluded from school until ordered to return by the local health officer . . . a snugly fitting paper cap should be worn continually."
Virginia	No	No figures available	School attendance not permitted in accordance with A.P.H.A. recommendations. However, regulations are modified in some instances to permit school attendance if under treatment and if a stocking cap or other type of head covering is worn.
Washington	Yes, by schools and institutions	1949— 963 1950— 897 1951— 888 1952—1,068	Children excluded from school "until a minimum of one week of treatment has been administered; provided that treatment be continued persistently thereafter" until cured. Tight-fitting caps must be worn, outer clothing must be kept separate from that of noninfected children.
West Virginia	No	No figures available but there have been some distinct epidemics in schools in the past few years but no widespread epidemics	Similar to those promulgated by the A.P.H.A.
Wisconsin	No	No figures available	No data.
Wyoming	Yes	1948—0 1949—1 1950—1 1951— 1 1952— 2 1953—25 (to May 4)	Exactly as recommended by A.P.H.A.
[American Public Health Association]	Recommended reporting to health department and school authorities	......	Recommend "infected children should be excluded from school until recovery. In institutions the infected should be separated from healthy children." Stocking cap or other head covering to be used.

administrative burdens upon the school authorities without achieving any essential control. Children who are excluded from school may not continue to receive adequate treatment but will still play with other children both within and without their own family groups.

If, on the other hand, infected children are permitted to attend school, essential treatment can be supervised and maintained. Also the education of the children, and the education of their parents in the cause and treatment of the disease, which is such an integral part of any control system, can be instituted. Let us not forget also that an enlightened approach to this whole question will have a tremendously healthy effect, not only on affected children and their parents but also in allaying the apprehensions of parents of noninfected children.

However, as long as we consider ringworm of the scalp in children a contagious disease, certain control measures are required to prevent a spread of this condition to epidemic proportions in certain municipalities.

We offer the following suggestions for control of ringworm of the scalp due to M. audouini:

1. All cases recognized by the family physician, school doctor, or school nurse during ordinary health examinations or as a result of a survey by means of suitably filtered ultraviolet light and proved by microscopic examination or culture to be due to M. audouini should be reported to the school authorities.
2. Upon the discovery of a clinical case of ringworm of the scalp due to M. audouini, all children in that classroom should be inspected by means of Wood's light.
3. If the condition exists in two or more classrooms, all children in the school who are under fifteen years of age should be inspected by means of Wood's light, and local health authorities should be advised so that all children under fifteen years of age with whom infected children may come into contact, either in homes or elsewhere, may be inspected by Wood's light.
4. Infected children shall be required to undergo treatment immediately, and parents shall be given instructions in control and hygienic measures helpful in preventing spread of the disease.
5. Children shall be permitted to attend school without the wearing of a cap or without other restrictions, provided that the school doctor or nurse is satisfied that the child is under proper treatment, preferably by a dermatologist or a physician experienced in the treatment of the condition, and that parents are complying with directives regarding cleanliness and control.
6. Unusually high incidence of the disease should be reported to the state health department which should then be prepared to assist in controlling the spread of the condition by special training of school nurses and essential local educational measures.
7. The carrier question (cases still positive after one year of treatment) has to be considered and means found to deal with such problems.

Adoption of such recommendations would place the responsibility for early measures of control on the local health and school authorities. The recommendation that an unusually high incidence of the disease be reported to the state health department would alert this department to the necessity of instituting intensive methods of control similar to those developed and used by Dr. Schwartz and his associates in coping with the epidemic outbreaks in Hagerstown, Maryland, and other areas in 1944–1945.[2]

Treatment

Unfortunately, there is no specific treatment at present for ringworm of the scalp due to M. audouini. There seems to be no question on the part of dermatologists that x-ray epilation is the best method. However, the therapeutic dose is administered solely for the sake of depilating the scalp hair without any biologic effect on the fungi. Even if we can cure almost 50 per cent of the cases within three weeks after the x-ray epilation, Lewis, Dougherty, and Standish[3] stressed again recently the fact that "x-ray epilation is a delicate procedure and should be done only under close and expert dermatologic supervision by adequately trained personnel. Permanent alopecia may result from errors in technic. In large communities, where such skilled personnel is available, a long time is required to administer roentgen rays treatment to all known infected cases." General experience, confirmed in our cases, is that even after epilation topical treatment was still necessary for several weeks, even months. And what do we do with the remaining 15 to 20 per cent of cases we do not cure with this method, which needs such technical perfection that a momentary movement of the patient or the slightest diversion of the x-ray beam or the overshielding of the margins of the radiated fields decides between success and failure of such a hazardous measure, in what is said to be such a negligible disorder?

It has long been recognized that infections due to M. audouini will produce spontaneous cure during the time of puberty. For this reason some authors have tried therapy with local hormonal applications in younger children, where puberty was a long way off. Livingood and Pillsbury[4] in 1944 reported that certain cases of tinea capitis will recover spontaneously in from 25 to 70 per cent according to the inflammatory reaction of the case.

During the past few years, especially since the war, a number of drugs have been investigated which are said to be potent fungistatic agents if locally applied. Among these are propionic acid, undecylenic acid and its copper[5–7] and zinc salts, salicylanilide, dinitrophenol, and others. Niedelman[8] is of the opinion that, "Before resorting to x-ray therapy, a trial with local medication for a period of at least two months is justifiable." Lewis, Cawthon, and Hopper[9] feel that in approximately 40 per cent of cases a cure may be accomplished after three months treatment by local therapy, "particularly if the program is carried out vigorously with massage and manual epilation."

Report of 40 Cases

A severe outbreak of ringworm among the children at the Pediatric Division of Seaview Hospital, Staten Island, and the measures taken to combat it are reported since they offer a comparative study of the efficiency of several of the most widely used skin fungicides. This study also indicates the limited reliance which can be placed on x-ray epilation if the specific technical machinery is not constantly available.

The period covered by this report ran from July 1, 1951, when the first cases were reported, till June, 1952. The total number of cases was 40, all males. The causative organism in all cases was shown by culture to be M. audouini.

Throughout the duration of treatment all children were kept in a special tinea capitis ward, isolated from children in other parts of the hospital. Special facilities and extra help were allotted for a three-month period.

The hair was clipped weekly, and heads were thoroughly washed daily. White linen caps were worn continuously day and night.

The drugs used in this series were Decupryl Liquid, Furaspor Cream, and Asterol Tincture.* Decupryl liquid is a solution of copper undecylenate, undecylenic acid with a wetting agent, aerosol, in a solvent liquid base containing isopropanol and tetrachloroethylene. Furaspor is a cream base containing 1 per cent of nitrofurfuryl methyl ether. Asterol Tincture is a 5 per cent solution of the hydrochloride of 2-dimethylamino - 6 - (beta - diethylamino ethoxy)-benzothiazole in 70 per cent isopropanol. This preparation was introduced at a later date.

Only such cases are reported here as negative which were negative at the end of the three-month period and remained negative during a further observation period of two months.

Nineteen cases were started on Decupryl, 18 cases on Furaspor. Both were applied twice daily. Wood's light readings were taken weekly in the morning following scalp cleansing prior to the morning application of the drug. Asterol was used on a series of 12 cases, including some of those not showing response to Furaspor. Results with all three drugs are shown in Table II.

TABLE II.—RESULTS OF TREATMENT WITH DECUPRYL, FURASPOR, AND ASTEROL

	Number of Cases Negative	Per Cent
Decupryl (19 cases)		
First month	6	31.6
Second month	8	42.0
Third month	10	52.5
Furaspor (18 cases)		
First month	1	5.5
Second month	3	16.6
Third month	4	22.2
Asterol (12 cases)		
First month	0	0
Second month	0	0
Third month	4	$33\frac{1}{3}$

The results with Decupryl were in our opinion sufficiently encouraging to warrant perseverance with the same drug for a further period in the nine cases still positive at the end of the first twelve weeks of treatment. As a result five additional cases were rendered negative within ten more weeks and remained so. The others did not respond.

We might add here that the comparatively poor results with Furaspor Cream by no means speak against the effectiveness of this preparation in other conditions. It is not meant to be a potent fungistatic agent. It is probable that the ointment base was difficult to apply to the shaved heads and did not have the spreading qualities of softer ointment bases. In this connection it is interesting to note that Kligman[10] found that a simple ointment base may be almost as effective (63 per cent in three months) as a fungistatic ointment if applied with the same technical skill and interested insistence. Perhaps it is erroneous to consider one preparation superior to the next since some infections with M. audouini are said to be eventually self-limited.

In our series the liquid preparations seem to be more effective than the one with cream base, Decupryl more than Asterol. However, we had no side-effects from Asterol.†

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* Our thanks are due to Hoffmann-La Roche, Inc. (Asterol), Eaton Laboratories, Inc. (Furaspor), and to Crookes Laboratories, Inc. (Decupryl Liquid) for supplying the materials used in the study at Seaview Hospital.

† We had occasion to treat one dog, heavily infected with Trichophyton canis, with Asterol. It was a long-haired dog which, being a valuable show animal, could not be shaved. Although much of the hair had fallen out in big patches, it took about two months of intensive treatment until the dog was free of infection, after which the hair grew in rather rapidly. Although the animal was almost bathed in Asterol to bring the preparation in contact with the skin, no adverse symptoms were noted.

In February, 1952, 15 cases, including all which have not responded to topical treatment, were sent to Bellevue Hospital for x-ray therapy.

After about four weeks in three cases and after six to eight weeks in the remaining 12 cases, all surface hair was apparently gone, but not one case had become Wood's light negative. Mild topical therapy was instituted, but at the end of four months after x-ray epilation or after one full year of continuous supervised treatment three cases were still positive.

Such cases probably constitute the focal point of spread from which new infections emanate.

Although according to the executive order number 575 from the office of the New York City Commissioner of Health "Ringworm of the scalp is a mild disease, which causes few local and no constitutional symptoms, no complications and no death," to the affected child and the family it offers enough psychologic and clinical problems to warrant serious consideration of the "carrier question" and its elimination to make a spread of epidemic proportions unlikely in the future.

Summary

1 A survey of incidence of ringworm of the scalp due to M. audouini is presented with data concerning present methods of control throughout the United States.

2. Recommendations are made for more uniform and practical methods of control.

3. Treatment is discussed and some data regarding the experiences of the authors in controlling an outbreak at Seaview Hospital, Pediatric Division, Staten Island, New York, are presented.

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Classification of Journal Subscribers

For the interest of our readers, the following breakdown of subscribers to the NEW YORK STATE JOURNAL OF MEDICINE is presented. These figures are as of March 31, 1954.

Classification	*New York State*	*Out of State*	*Foreign*	*Total*
Hospitals	48	48	5	101
Members	23,187	385	13	23,585
Other Doctors	41	42	19	102
Schools	11	48	17	76
Medical Societies	1	11	2	14
Libraries	7	17	14	38
Social Service and Government	32	41	11	84
Insurance Companies	6	0	0	6
Pharmacists	6	3	2	11
Medical Supply Houses	10	23	6	39
Miscellaneous	81	26	30	137
TOTALS	23,430	644	119	24,193

Use of Lanatoside C (Cedilanid) in Cardiac Arrythmias and Congestive Failure

AARON WEISBERG, M.D., F.A.C.P., BROOKLYN, NEW YORK

Rapid digitalization is often required in cases of congestive heart failure. In such instances proper management requires the use of a cardiotonic agent which possesses a rapid onset of action, a wide margin of safety and tolerance and can be administered intravenously. This paper discusses the usefulness of lanatoside C* as such an agent.

Schultz[1] employed lanatoside C in patients with common arrhythmias and observed that this was a safe, rapidly acting and rapidly excreted cardiac glycoside and that it was less toxic than digitoxin. Hrenoff[2] made similar observations in cases of hypertension and arteriosclerosis associated with either mild or advanced stages of decompensation. Fahr and LaDue[3] found that the rapid elimination of this chemically pure and stable glycoside necessitated a higher oral maintenance dose in patients with auricular fibrillation associated with heart failure, but when compensated, these patients required somewhat smaller maintenance doses. Although it is strongly advised that cardiac glycosides not be administered to any patient having taken digitalis within the preceding ten days, Ray and LaDue[4] found no toxic manifestations resulting from intravenous injections of lanatoside C in patients so treated and who had erroneously denied previous digitalis therapy. From a study of 62 patients in congestive failure of varying etiologies, they concluded that usually it is reasonably safe and of therapeutic benefit to give 0.4 to 0.8 mg. of lanatoside C intravenously to patients who develop congestive heart failure even while taking maintenance doses of 0.1 to 0.3 Gm. of folia digitalis. They also showed that the mere finding of digitalis effect in the electrocardiogram is apparently not proof that the patient is receiving adequate therapeutic doses of the drug.

Sokolow and Chamberlain[5] and Scholder[6] also reported on the advantages of lanatoside C. Tandowsky[7] found that the average time required for the development of maximal RS-T segment changes following the administration of 1.6 mg. of lanatoside C intravenously was twenty-seven and one-half minutes. Following the administration of 16 grains of digitalis purpurea by mouth, it took six hours and fifteen minutes for the same changes to take place. In a study of rapid digitalization, Evans, Dick, and Evans[8] observed that (1) strophanthin did not produce the consistent results obtained with digitalis preparations, (2) digitaline nativelle by mouth was somewhat inconstant in action, and (3) a comparison of results obtained with intravenous and oral administration of the latter did not support the contention of Gold *et al.* that this glycoside is completely absorbed when taken orally. They showed that lanatoside C (Cedilanid) in a dose of 1.5 mg. intravenously was most effective. Stead, Warren, and Brannon[9] found that lanatoside C produced a rise in cardiac output, an increase in stroke volume, a rise in systolic and mean arterial pressure, and a fall in atrial pressure and peripheral resistance. The increase in cardiac output occurred in patients with normal rhythm, paroxysmal auricular tachycardia, and auricular fibrillation. Increase in cardiac output was accompanied by a rise in mean and systolic arterial pressures. In 1950 Kaufman and Poliakoff[10] reported the beneficial use of lanatoside C in congestive heart failure with massive edema.

Case Reports

The writer has personally studied and administered lanatoside C in over 100 cases of various cardiac arrhythmias dating back to 1941; the following representative cases were chosen to point out some of the effects obtainable with proper administration of lanatoside C.

Case 1.—J. H., forty-two-year-old white female, was seen in December, 1947, because of dyspnea, palpitation, and cough. She gave a past history of rheumatic heart disease for which she had been under treatment receiving a maintenance dose of digitalis, 1 cat unit a day. She also required frequent injections of Mercuhydrin.

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* Lanatoside C is available under the trade name Cedilanid.

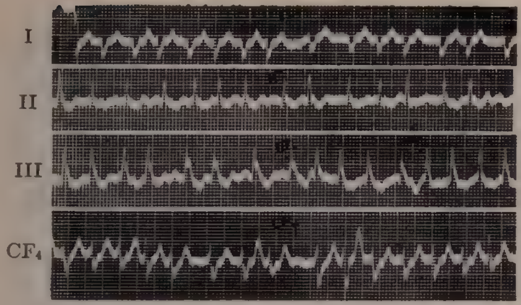

FIG. 1. *Case 1*—Auricular fibrillation with a ventricular rate of 120 to 180 per minute, right axis deviation, and myocardial damage.

Her appearance was that of an acutely ill person. She was dyspneic even while sitting down. There was some cyanosis of the lips and nailbeds as well as venous distention of the neck veins. Chest findings revealed a markedly visible apical impulse about 9.0 cm. to the left of the mid-sternal line. Diastolic and systolic murmurs were present at the mitral area. The second pulmonic sound was accentuated; heart sounds were of fair quality, total irregularity; rate varied from 120 to 180 per minute. There was a pulse deficit of 100. Blood pressure was 90/70. Lungs revealed crepitant rales at both bases; abdomen was soft, liver two fingerbreadths below right costal margin; spleen and kidneys were not felt. Extremities revealed a 2 plus pitting edema. An electrocardiogram taken on December 22, 1947, revealed auricular fibrillation, ventricular rate 120 to 180; right axis deviation; marked myocardial damage (Fig. 1).

Because of the critical condition of the patient, she was given 4 cc. of lanatoside C* intravenously and her apical rate observed. After fifteen minutes her apical rate had slowed to 120 per minute; the pulse deficit had decreased to 40, and her color as well as her general condition began to improve. At the end of forty-five minutes her rate had slowed to 110 per minute, at which time another 2 cc. of lanatoside C were given. Thirty minutes later her ventricular rate was 90 with no pulse deficit. The patient was taken home and maintained on digitaline nativelle 0.2 mg. daily.

CASE 2.—L. M., age forty-four, a white female, had a history of cardiac disease for the past fifteen years for which she had taken digitalis on and off. Her physician was called to see her because of severe palpitation and dyspnea. His diagnosis was rheumatic heart disease with a mitral stenosis and auricular fibrillation, rate 140, rales at bases. Morphine sulfate, $^1/_4$ grain, was administered, and Mercuhydrin, 2 cc. intramuscularly, and digitalization with digitaline nativelle were begun. Several hours later she became more dyspneic. Blood pressure fell from 110/70 to 90/70, cardiac rate persisted, and patient appeared acutely ill.

At consultation the findings were essentially the same as mentioned. Heart rate varied from 130 to 160; pulse deficit was about 50 to 60; patient was cold and clammy. An electrocardiogram revealed auricular fibrillation, myocardial damage, and some digitalis effect (Fig. 2). On the basis of the opinion that this patient was in failure and knowing that during such states patients may require larger amounts of digitalis, even though previously digitalized, 4 cc. of lanatoside C were given intravenously. Electrocardiograms were repeated at two-minute intervals (Fig. 3). There was some slowing of the rate after twenty minutes, but because the patient felt slightly better and showed no toxic effects to lanatoside C, another 4 cc. were given slowly. An electrocardiogram eight minutes after the second 4 cc. was given revealed slowing of the rate to 72 to 92; pulse deficit was markedly diminished, and patient showed a general feeling of well-being. The rate at the end of three hours had slowed to 62 with no pulse deficit. No further digitalis was given for forty-eight hours, and then the patient was maintained with Digilanid, 0.33 mg. twice a day.

Patient is still under observation. She is well compensated, fibrillating with a rate of 70, and no pulse deficit is present. She is maintained on Digilanid, 0.33 mg. daily, and requires Mercuhydrin about every two months.

CASE 3.—A. G., age forty-two years, white male,

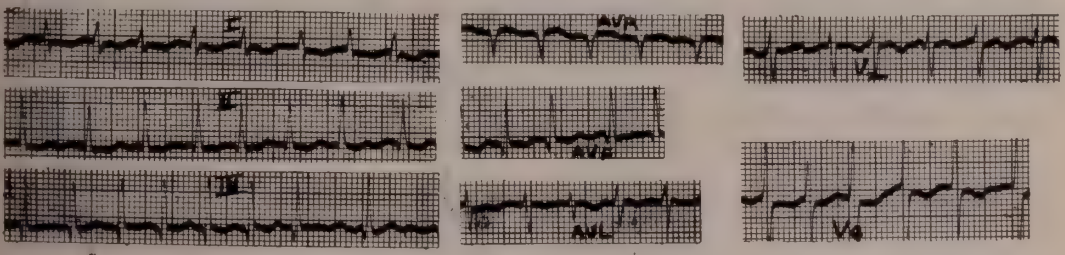

FIG. 2. *Case 2*—Before administration of lanatoside C. Electrocardiogram reveals auricular fibrillation and myocardial damage.

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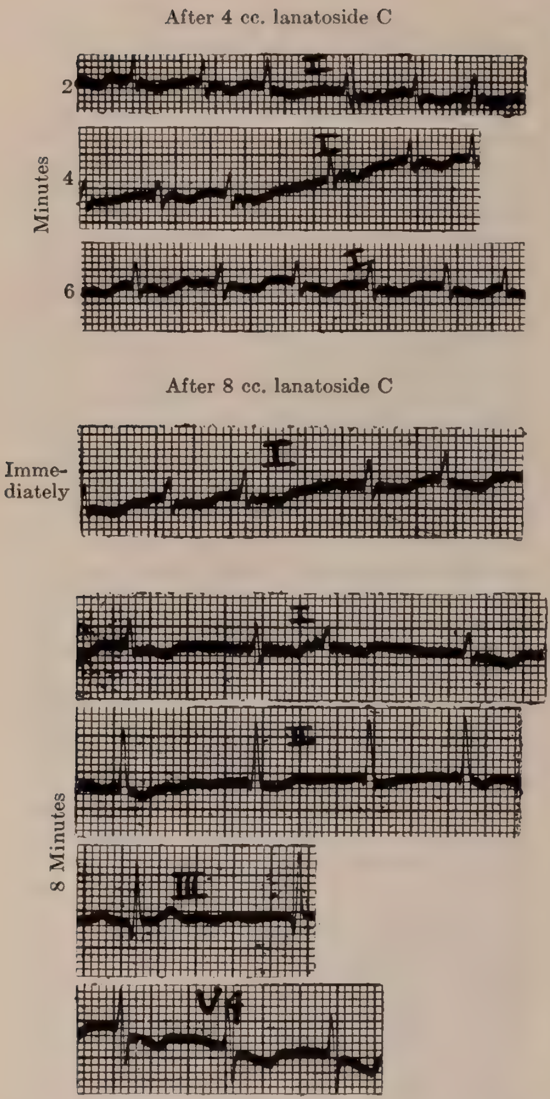
[*] Each 4 cc. of Cedilanid (Sandoz) contains lanatoside C, 0.8 mg.


After 4 cc. lanatoside C

After 8 cc. lanatoside C

FIG. 3. *Case 2*—Effects of intravenous administration of lanatoside C, 4 cc. (8 mg.) and 8 cc. (1.6 mg.), respectively. Marked slowing in rate is noted after administration of a total of 8 cc. of lanatoside C.

was seen on June 19, 1952. He came to the office complaining of dyspnea, palpitation, and precordial pain. He gave no relevant past history except that at the age of twenty a physician told him he had enlargement of the heart. He had no symptoms up until two years ago following the death of his wife. Since then, he had had palpitation, dyspnea, cough, and weakness. Patient went to several physicians and had received various medications for his condition.

This patient appeared to be chronically ill. There were visible pulsations of the temporal, brachial, and femoral arteries. Eyegrounds revealed angiosclerosis. Chest showed visible hypertrophy of the heart. The apical impulse was diffuse in the sixth left interspace about 2.0 cm. to the left of the nipple line. There appeared to be some systolic retraction of the interspaces. Heart sounds were of good quality, forceful at the apex; there was a loud diastolic and relatively short systolic murmur. A loud diastolic murmur was present at the aortic area. Rhythm was regular, and rate was 100. Blood pressure was 210/120. Lungs revealed crepitant rales at both bases. There was slight pitting edema of both lower extremities. Fluoroscopy revealed no mediastinal, diaphragmatic, or rib pathology. Both lung fields were well aerated. The heart was markedly enlarged and assumed the appearance of a duck-shaped heart. The enlargement was predominantly left ventricular, but there was left auricular and right ventricular enlargement as well. The retrocardiac space was diminished and the esophagus displaced posteriorly. An electrocardiogram taken on June 19, 1952, revealed a rate of 100, auricular as well as ventricular; P waves were notched and increased in voltage; QRS voltage increased; QRS 0.11 second. There was evidence of marked left ventricular hypertrophy and strain. There was an occasional ventricular premature contraction, and some of the P waves appeared to be what Katz terms a prefibrillatory P wave (Fig. 4). A diagnosis of rheumatic heart disease with mitral stenosis and insufficiency, aortic insufficiency, and congestive heart failure was made.

Because of the marked dyspnea, it was deemed advisable to give this patient 4 cc. of lanatoside C intravenously (Fig. 5). There was no appreciable change in cardiac rate, but the patient felt subjectively better. Complete digitalization was accomplished by administering Digilanid orally, 0.33 mg. three times a day for three days and then twice a day. The patient was again seen in five days during which time his rate was 80. He felt greatly improved. At present he is maintained and well controlled on Digilanid, 0.33 mg. daily, and also quinidine, 3 grains twice a day. The latter was necessary because the patient developed short runs of ventricular tachycardia.

CASE 4.—B. A., age seventy, white female, was admitted on September 13, 1952, with uremia and heart failure. She was in a state of extremis. Heart rate was rapid, total irregularity; blood pressure 160/100; rales at both bases and orthopnea were present. Electrocardiogram revealed rate 150 to 160, auricular fibrillation, and myocardial damage (Fig. 6). She was given 4 cc. lanatoside C intravenously, and tracings were taken at five-minute intervals (Fig. 7). Ten minutes after 4 cc. of lanatoside C given intravenously, patient was comfortable and dyspnea markedly decreased. The electrocardiogram showed moderate slowing of the ventricular rate. She

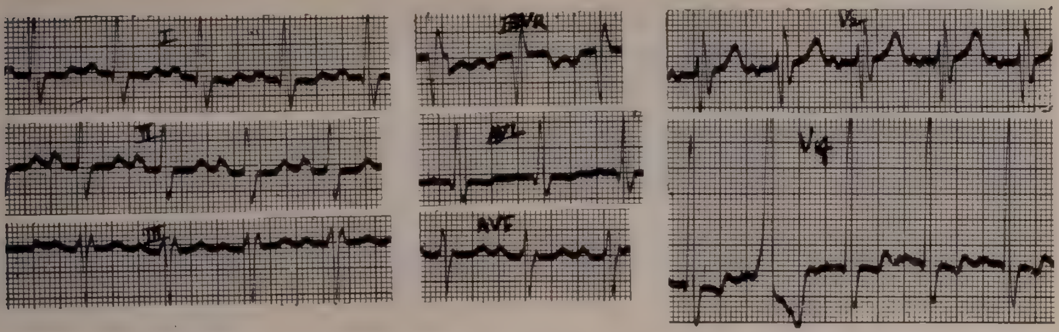

I
II
III
aVR
aVL
aVF
V5
V4

FIG. 4. *Case 3*—Marked left ventricular hypertrophy and strain in a case of rheumatic heart disease with mitral stenosis and insufficiency and aortic insufficiency. Note the notching of the P waves in leads I and II.

got along well for several weeks, but her urea nitrogen began mounting. She eventually died in uremia. During her period of rally her myocardium held up well under Digoxin 0.25 mg. twice a day orally after she was brought under control with intravenous lanatoside C.

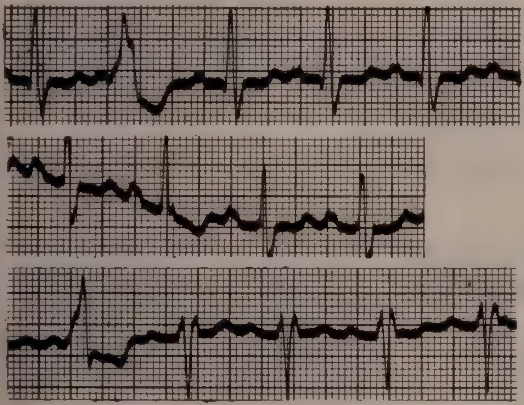


FIG. 5. *Case 3*—Results eight minutes after the administration of 4 cc. lanatoside C.

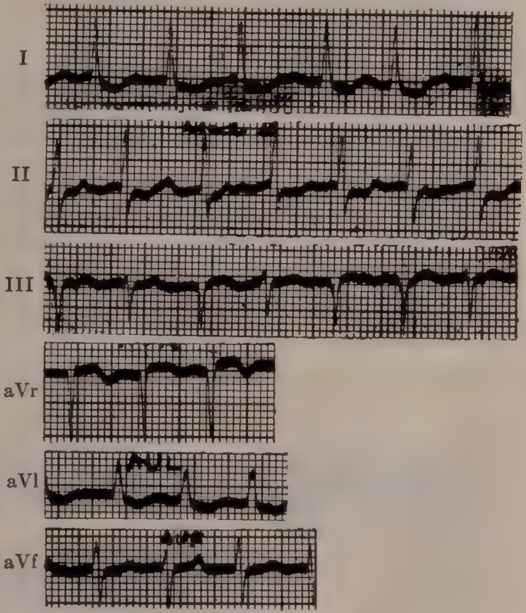

I
II
III
aVr
aVl
aVf

FIG. 6. *Case 4*—Auricular fibrillation before administration of lanatoside C.

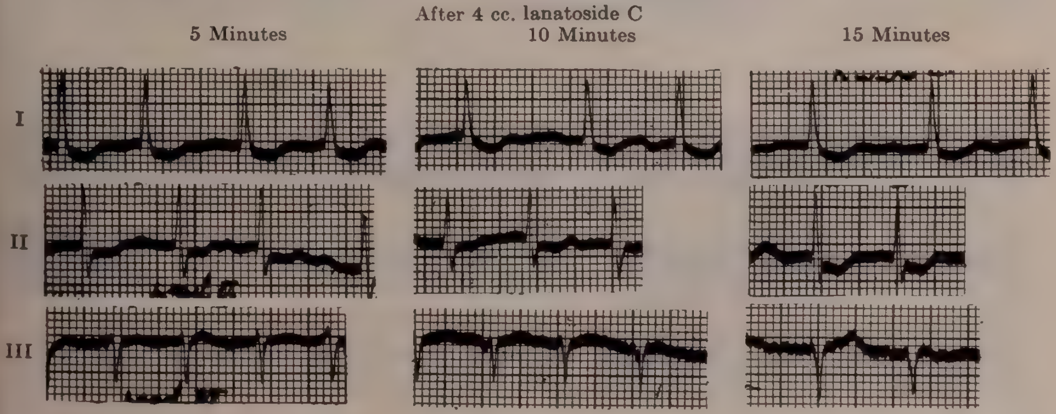

After 4 cc. lanatoside C
5 Minutes
10 Minutes
15 Minutes
I
II
III

FIG. 7. *Case 4*—Results after 4 cc. (8 mg.) lanatoside C intravenously. Note response to drug fifteen minutes after administration.

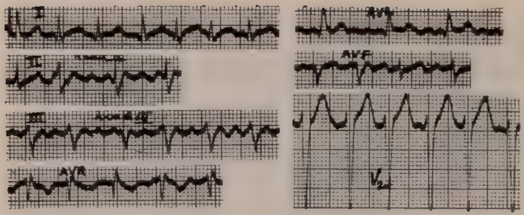


FIG. 8. *Case 5*—Patent interventricular septum with auricular fibrillation and congestive failure.

CASE 5.—E. S., age fifty-nine, white male, was first seen in February, 1950, at which time he gave a history of having had a murmur as far back as he could remember. He was complaining of palpitation and a dull pain in his precordial area with a feeling of tension.

Physical examination at this time revealed significant findings referable to the heart only. Patient had a systolic thrill over the apex. There was a to-and-fro murmur heard over the entire precordium. However, it was best heard in the third interspace to the left of the sternum. The lungs were clear. There was no evidence of decompensation. A clinical diagnosis of an intraventricular septal defect was made on a congenital basis, and the patient was treated symptomatically.

He got along well until January, 1953, at which time he suddenly developed severe palpitation. During this episode he felt very weak and appeared to be in mild congestive heart failure. His heart sounds were of poor quality with total irregularity; murmurs were present as previously described, and there were some rales at both bases. No peripheral edema was present. An electrocardiogram was taken and revealed the following: The patient had a coarse fibrillation with a ventricular rate varying between 120 and 160; pulse deficit of 60 beats per minute was present. Blood pressure was 100/70. The remainder of the electrocardiogram did not reveal anything of note. There was no evidence of any acute myocardial insult (Fig. 8).

Because of the apparent dyspnea and discomfort which the patient had, it was deemed advisable to give 4 cc. of lanatoside C intravenously, and periodic electrocardiograms were taken (Fig. 9). Ten minutes after the administration of the drug, the patient showed an appreciable slowing of the heart. Fifteen minutes later, the ventricular rate varied between 75 and 115 beats per minute. An additional 2 cc. of lanatoside C were administered. Five minutes after the administration of a total of 6 cc. and approximately thirty minutes from the time lanatoside C was first administered, the ventricular rate became 92 per minute. The patient felt relatively comfortable, no longer had dyspnea, and his blood

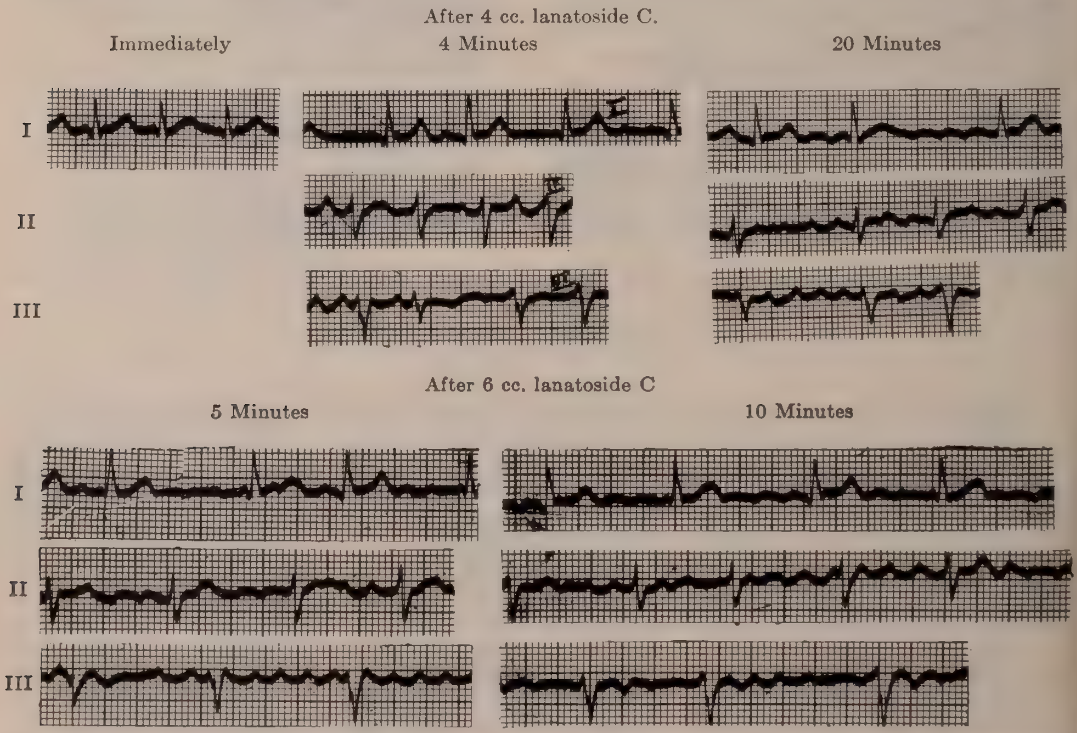

After 4 cc. lanatoside C.
Immediately
4 Minutes
20 Minutes
After 6 cc. lanatoside C
5 Minutes
10 Minutes

FIG. 9. *Case 5*—Results after administration of 4 cc. and a total of 6 cc. of lanatoside C. Note the rapid effect of the drug after administration of 6 cc. intravenously.

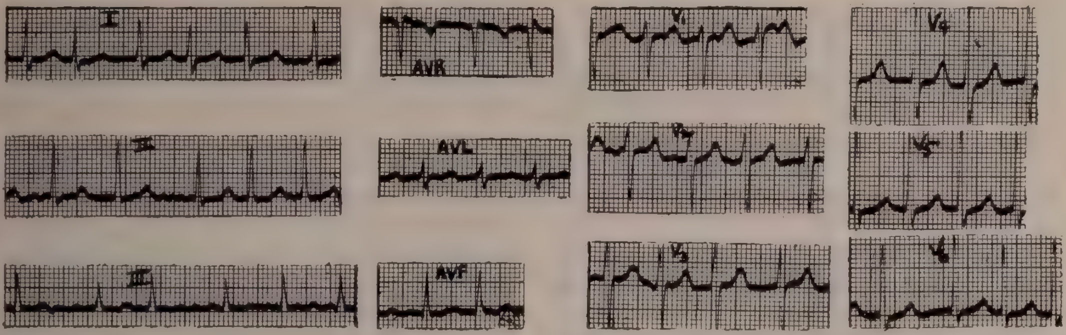


Fig. 10. *Case 6*—Electrocardiographic tracings in a case of auricular fibrillation with congestive failure.

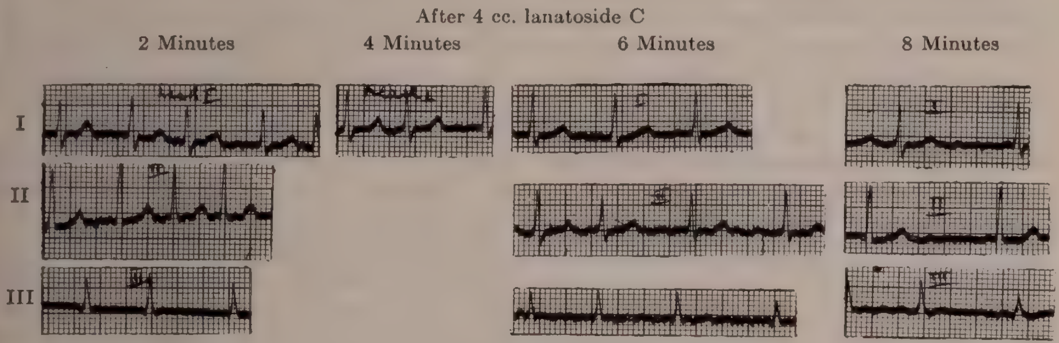


Fig. 11. *Case 6*—Effect of lanatoside C two, four, six, and eight minutes after administration of 4 cc. intravenously.

pressure rose to 110/70. He was then placed on Digilanid, 0.33 mg. twice a day, and also 3 grains of quinidine sulfate, three times a day. He is on this regime at present, with a ventricular rate of 70 per minute, and is well compensated.

Case 6.—A. K., white female, aged sixty-two, was referred because of shortness of breath. She gave a history of having had high blood pressure, frequency of urination, vertigo, and for the past few years wheezing in her chest. Her shortness of breath had become progressively worse. Otherwise, her history was not significant.

Essential findings were as follows: a sixty-two-year-old white female, dyspneic, with blood pressure 180/120, weight 227 pounds. Physical examination showed angiosclerosis. Heart sounds were of good quality; total irregularity present; rate varied between 120 and 140 per minute. She had a 2 plus pitting edema of both lower extremities. Fluoroscopy revealed enlargement of the left ventricle and elongation of the aorta. A diagnosis of hypertensive and arteriosclerotic heart disease with congestive failure was made.

An electrocardiogram was taken which revealed auricular fibrillation with a rate varying between 110 and 150 per minute (Fig. 10). She had a pulse deficit of 50 per minute. Because of her dyspnea and also congestive failure, she was given 4 cc. of lanatoside C intravenously (Fig. 11). Six minutes after the administration of lanatoside C, she felt better, no longer had dyspnea, and her rate had slowed to between 84 and 110 per minute. Ten minutes after the injection her rate varied between 74 and 100 per minute. She was markedly improved. Patient was then put on Digilanid, 0.33 mg. twice a day. She has gotten along well since on a maintenance dose of Digilanid.

Comment

The six cases presented represent a good cross section of the cases which have been treated with lanatoside C with good effect. Care is indicated when administering any cardiac glycoside intravenously, especially to patients previously treated with digitalis. However, it can be said with some degree of certainty that, in general, one can safely give 0.8 mg. of lanatoside C to patients requiring rapid digitalization, as in cases of rapid auricular fibrillation, paroxysmal tachycardias of auricular or supraventricular origin, or in congestive heart failure, provided they have not been overloaded with digitalis to the point of toxicity.

It is preferred to give lanatoside C in smaller quantities, starting with as little as 0.4 mg., because often one encounters patients who erroneously deny previous digitalis therapy. At times a patient with congestive heart failure will require more digitalis than usual. The mere finding of digitalis effect in the electrocardiogram is not always proof that the patient is receiving adequate doses of digitalis.

When is intravenous digitalis indicated? The use of intravenous lanatoside C is reserved for those cases where a patient has been exhausted physically and mentally by his cardiac status and where the administration of digitalis by vein would be of help in effecting sufficient recovery to permit administration of digitalis orally.

Lanatoside C is to be preferred as an intravenous preparation because it has a wide margin of safety, is rapidly eliminated, and exerts its maximum therapeutic effect within a very short period of time. It has been shown that the average time required for the development of maximal RST segment changes after the administration of 1.6 mg. of lanatoside C is twenty-seven and one-half minutes. In all of the cases presented, lanatoside C given intravenously began to show effect within the first eight minutes after administration. It is fairly obvious that one should wait a period of fifteen to twenty minutes before giving a second dose of lanatoside C (it is assumed that 0.4 to 0.8 mg. will be used as the initial dose). If at the end of thirty minutes no change is noted in the patient's cardiac rate or symptoms and more digitalis is deemed advisable, the second dose may also be administered intravenously. Once the cardiac rate has been reduced sufficiently and the patient's status improved, oral digitalis can be used for maintenance.

After a patient has been controlled by intravenous lanatoside C, one may continue with any of the oral digitalis preparations such as Digilanid, digitaline nativelle, Crystodigin, or Digoxin. I prefer the use of the latter since the margin of safety appears somewhat wider. Digilanid has about the same action as Digoxin.

Because of its obvious advantages lanatoside C should be included in the anesthetist's armamentarium since it will be very useful in patients undergoing surgery who develop arrhythmias or sudden heart failure.

Summary and Conclusions

1. A review of literature on the uses and administration of lanatoside C is presented.
2. Six cases dealing with various types of cardiac conditions, namely, cardiac arrhythmias complicated by congestive failure in which lanatoside C was used, are discussed with electrocardiographic findings showing the physiologic effect of lanatoside C on the heart.
3. The use of intravenous digitalis is outlined.
4. It is shown that lanatoside C has a relatively wide margin of safety, is rapidly eliminated, and exerts its maximum therapeutic effect within a very short period of time.

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Do not do unto others as you would be done by . . . . their tastes may not be the same.—GEORGE BERNARD SHAW

Evaluation of Mebaroin in the Treatment of Grand Mal

E. L. REDER, M.D., BROOKLYN, NEW YORK

(From the Department of Neuropsychiatry, Greenpoint Hospital)

In a series of 108 patients with convulsive disorders, Meller and Resch[1] compared the relative efficacy of phenobarbital, mephobarbital (Mebaral), diphenylhydantoin sodium (Dilantin), 3-methyl-5,5-phenylethyl-hydantoin (Mesantoin), and 1,3,5,5-trimethyloxazolidine-4,4-dione (Tridione). The most favorable results were obtained from the use of phenobarbital and mephobarbital; approximately 75 per cent of the patients were controlled or definitely improved by the use of each of these two drugs. However, mephobarbital was preferred because of its lesser toxicity.

Furthermore, Meller and Resch obtained even better results with the combined use of mephobarbital and diphenylhydantoin. They state, "From our experience we have been impressed by the results that can be obtained by the combined use of the anticonvulsants. By the addition, for example, of Mebaral to Dilantin, one can obtain 85 per cent control or improvement in patients with convulsive disorders."

Accordingly, it was thought worth while to study the efficacy of this combination* in a specially selected series of grand mal patients. The writer was fortunate in being able to work with a series of 15 patients who had had grand mal seizures at least once a week for periods of time ranging from five to fifteen years. Table I represents the results of this study.

It can be seen from Table I that eight patients experienced no further seizures beginning with Mebaroin therapy, one patient had but one seizure, three patients experienced a reduction in incidence of seizures, and three patients exhibited no improvement. The failure with Case 13 was due to indulgence in alcohol and refusal to follow medication; Case 14 improved at first but became pregnant and was then deserted by her husband; Case 15 had not responded either to any other medication such as bromides and phenobarbital.

Summary

The efficacy of Mebaroin in 15 highly selected cases of grand mal is reported.

Although every patient in this series had had a history of at least one grand mal seizure per week for from five to fifteen years, Mebaroin therapy eliminated seizures in eight patients and reduced the incidence of seizures in four patients. There were three failures.

Reference

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TABLE I.—Summary of Results with Mebaroin

Case	Dosage	Results	Side-effects
1	1 tablet four times a day	No seizures since beginning of therapy to this date	None
2	1 tablet four times a day	Improved status; fewer seizures	None
3	2 tablets three times a day, reduced to 1 tablet three times a day	No seizures since beginning of therapy to this date	Drowsiness with 2 tablets three times a day
4	2 tablets three times a day	No seizures since beginning of therapy to this date	None
5	2 tablets three times a day	Improved status; fewer seizures	None
6	2 tablets four times a day	Only one seizure in four months; previously 1 to 2 seizures daily	None
7	2 tablets four times a day	No seizures since beginning of therapy to this date	None
8	1 tablet three times a day	No seizures since beginning of therapy to this date	None
9	1 tablet three times a day	No seizures since beginning of therapy to this date	None
10	1 tablet four times a day	No seizures since beginning of therapy to this date	None
11	1 tablet twice a day	No seizures since beginning of therapy to this date	None
12	2 tablets three times a day	Improved status; fewer seizures	None
13	1 tablet four times a day	Unimproved	....
14	1 tablet four times a day	Unimproved	....
15	2 tablets four times a day	Unimproved	....

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* Winthrop-Stearns brand name for a combination of 60 mg. diphenylhydantoin and 90 mg. mephobarbital (Mebaral) per tablet. The Mebaroin used in this study was supplied through the courtesy of Winthrop-Stearns, Inc.

CASE REPORTS

Toxic Reactions Due to Antabuse

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The physician who plans to use Antabuse (tetraethylthiuram disulfide) for the treatment of chronic alcoholics should be aware of its possible toxicity. The usual method of administrating Antabuse to the patient is to give him 2 Gm. on the first day of treatment, 1.5 Gm. on the second day, 1 Gm. on the third day, and 0.5 Gm. or 0.75 Gm. as a daily maintenance dose thereafter. Several test doses of alcohol are given to the patient in the first two months of treatment to adjust the maintenance dose and to familiarize the patient with the effects of drinking alcohol while taking Antabuse. The disagreeable memory of these test doses of alcohol and a fear of the recurrence of these symptoms serve as the motivating forces conditioning the chronic alcoholic against drinking.

The usual reaction of the patient receiving the maintenance dose of Antabuse develops about five minutes after the ingestion of alcohol and consists of flushing, first of the head and neck, which later spreads to cover the entire body. This is accompanied by hyperemia of the conjunctivae, dyspnea, hyperpnea, dizziness, severe headaches, tachycardia, and a fall in blood pressure. Later the patient becomes nauseated, often vomits, and then falls asleep. At times more violent reactions such as convulsions, unconsciousness, and collapse may occur. The above symptoms are due to the conversion of alcohol to acetaldehyde which acts as a toxic agent. Other symptoms have developed shortly after starting patients on Antabuse therapy. These have been found to be transient and disappear in from one to six weeks and may be due to the anxiety of the patient when he can no longer use alcohol as a defense. These symptoms include insomnia, somnolence, diarrhea, constipation, anorexia, increased appetite, headaches, palpitation, dizziness, urinary frequency, enuresis, and nocturia.[1]

Macklin and his coworkers[2] reported cardiovascular complications which consisted of myocardial ischemia and infarction. Electrocardiographic changes were noted in patients with negative history of a previous heart condition.

Lewis and Bremers[3] in 1950 reported a patient on Antabuse therapy who developed a fixed drug eruption which developed after each time the patient drank alcohol. The rash persisted for several days and consisted of a pronounced erythema with numerous excoriations, accompanied by intense pruritus on the thighs and of the genital, gluteal, inguinal, scrotal, lower abdomen, and axillary and cervical regions. This skin eruption was attributed to the increase in blood acetaldehyde.

Jones[4] in 1949 reported a death about two and one-half hours following the ingestion of alcohol in an Antabuse-treated patient. Postmortem examination of this patient revealed the cause of death to be acute congestive right side cardiac failure. Previous to Antabuse therapy there had been no evidence of cardiovascular disease.

Linden[5] in 1949 reported a case of a patient who had received 1 Gm. of Antabuse per day for three weeks. After the patient drank 50 cc. of cognac, he first became flushed, then cyanotic, and one hour later was found severely ill with dilation of the heart. On the following day he had recovered completely. The electrocardiogram and x-ray of the heart were then normal.

Furtado and his coworkers[6] report the case of a chronic alcoholic, forty-nine years of age, who, while being treated with Antabuse, became progressively somnolent and died in seven days. Necropsy showed two cerebral hemorrhages, one in the occipital lobe and the other in the corpus callosum.

Strecker and Lathbury[7] in 1952 reported two cases of toxic psychosis which developed eight and ten days after the start of Antabuse.

Becker and Sugarman[8] reported a death following the test drink of alcohol in a forty-nine-year-old patient. This patient received the following dosage of Antabuse: 2 Gm. the first day, 1.5 Gm. the second day, 1 Gm. the third day, and 0.5 Gm. the fourth day. On the fourth day four and one-half hours after the test drink of 1 ounce of whiskey the patient died. Autopsy showed no findings that could account for the patient's death.

Brown and Knoblack[9] determined that a patient should not be given more than 60 cc. of whiskey or its alcoholic equivalent in other beverages. Any amount in excess of this intensified the test reaction up to the point of shock.

Mann and his coworkers[10] have reported that out of 32 patients on Antabuse therapy eight cases developed psychotic reactions. In three of these cases they were of a relatively minor nature and were controlled with psychotherapy and sedation. Antabuse was safely continued in these cases. In the remaining five cases severe reactions ensued, and several of these required hospitalization in a mental institution. Like the case reported in this article, they recovered after a short time in the hospital. These five cases required cessation of the drug. Also described in this report is a case of urticaria which developed giant hivelike eruptions with arthralgia, fever, and pruritus which developed five weeks after the start of Antabuse. When Antabuse was discontinued and antihistamine and epinephrine were given, the rash disappeared. Antabuse in small dosages was again started in conjunction with the antihistamines, but the rash recurred and the patient discontinued treatment and resumed drinking.

The case reported in this paper developed a toxic psychosis and toxic cardiovascular changes.

Case Report

A forty-year-old woman was admitted to the psychiatric division of a city hospital on March 15, 1952. She presented the picture of a toxic psychosis. She was disoriented, confused, negativistic, and kept her eyes tightly shut. Temperature was normal, and the physical examination was negative except for a systolic murmur at the apex of the heart. The history revealed that the patient had been drinking from 1 pint to 2 quarts of wine daily for the past six years since the death of her mother.

On February 8, 1952, the patient had a hemorrhoidectomy and on February 10, 1952, while still in the private hospital, had been started on Antabuse. She received 2 Gm. the first day of treatment, 1.5 Gm. the second, 1 Gm. the third day, and 0.5 Gm. daily for three days. After the sixth day she was given 2 ounces of whiskey as a test drink. No symptoms developed, and there was no change in pulse or blood pressure. She was then given 1 Gm. Antabuse daily for three more days and drank 3 ounces of wine as a test drink, and again no symptoms developed. On February 21, 1952, she was discharged from the hospital and continued to take 0.5 Gm. daily until March 12, 1952.

About two weeks after the patient was started on Antabuse, her husband noticed the following symptoms. She was extremely tired, suspicious, and began to check the doors of the house more frequently to make sure they were locked at night. About March 7 she started doing bizarre things and appeared to be confused; she would lift up her glass, move it an inch, and then move it back for no apparent reason. She would pick up common articles like stockings and look at them as if she did not know what they were.

There had been no previous psychotic behavior. In January, 1951, the patient had gone to a private psychiatrist because of her chronic alcoholism, and a report from this doctor indicated no psychotic material. In May, 1951, the patient had been admitted to a private mental hospital, and a diagnosis of chronic alcoholism was made. At that time no evidence of a psychosis was found. It may be postulated that by withholding alcohol from her when she was started on Antabuse the patient's defenses were breaking down, and psychotic behavior began to manifest itself. Another precipitating factor may have been the psychic trauma from her operation.

On March 12, about six weeks after the patient had been started on Antabuse, she abruptly stopped taking the medicine and consumed 1 quart of wine over a period of five to six hours. After each glass of wine she became flushed, vomited, and had urinary and fecal incontinence. She became very weak, and she had difficulty standing up. She slept the entire night. By March 13 her psychotic symptoms had increased. She was confused, did not recognize members of the family, and began to use profane language. The patient felt she was going to die and insisted that she be taken to church. She was then admitted to the psychiatric hospital.

On March 16, 1952, the day after her admission, the patient was too weak to be ambulatory and had to be confined to bed. She continued to be confused, did not respond to questions, and was resistive to examination. An electrocardiogram was taken, and this revealed myocardial damage as a result of a toxic effect on the myocardium. There was a flattening or inversion of the T waves in the limb leads and all V leads. During the next week the patient ate poorly and received clyses daily. Her temperature rose to 104 F., and she was completely out of contact with her surroundings. The record of the electrocardiogram on March 31, 1952, revealed that the myocardial damage was still present but not so severe. There was a low voltage R wave in all the chest leads and a flattening T wave in the aVR and aVF. Patient was placed on penicillin, 300,000 units twice a day.

By March 24 the patient was able to answer questions, but she was still disoriented, believed she was on a steamship, and had no memory of her family's visits. During the toxic psychosis she believed the doctor was her lawyer and that she had an argument with his wife for which the patient's mother was responsible.

The patient had many paranoid ideas and believed she was going to be killed. She felt she was being watched, and plans were being made so she could never get out of the hospital. She believed she was being acused of having a child by a man who was not her husband. Laboratory tests, including blood cell counts, spinal fluid examinations, and liver tests, were negative. The patient gradually became afebrile, and the toxic psychosis disappeared. Three weeks after admission to the hospital she became oriented, cooperative, recognized members of her family, and returned to her prepsychotic state. Electrocardiogram on April 8, 1952, was normal, and the patient was discharged from the hospital on April 13, 1952. Follow-up of this patient one year later revealed that the patient's mental state is clear, and her electrocardiogram is normal. She has resumed the care of her family and resorts to alcohol only occasionally when under stress.

Comment

Some facts of this patient's background may give some basis for evaluation of patients who may develop psychotic reactions while taking Antabuse. She had always been very dependent upon her mother and held her mother in high esteem. She always considered her mother's wishes or needs above those of her own family. The patient always felt that her mother could do more for her than she could do herself. She would always consult her mother on any problem she had and would see her every day.

After her mother died of cancer of the uterus, the patient developed cancerphobia. She went to many doctors for examinations but was not reassured by their findings that she had no cancer. She felt the truth was being withheld from her as it had been from her mother who had not been told she had cancer before she died. Since the death of her mother the patient felt completely alone in the world and felt she had no one to turn to with her problems. She cried for her mother constantly and wished her mother were alive.

The patient's father was a chronic alcoholic, and he was unable to care for his business so that the patient's mother was always busy in the candy store they owned. He died in 1941 of stomach ulcers, but his death did not disturb the patient as much as her mother's.

The patient had one sister who was one year older than she and of whom she was extremely jealous. The patient wanted to have everything her sister had and wanted her husband to manage better financially than her brother-in-law. Her sister is living, but the patient has no feelings of affection for her. After every visit to the sister the patient would feel irritable, tense, and would start arguing with her husband.

It may be postulated that because of the patient's extreme dependency on the mother, these needs were not satisfied after she died, and the patient used her father's defense against anxiety which was alcohol. Another dynamic factor involved was her feeling of guilt about her mother's death which she sought to appease by destroying herself with alcohol.

It is interesting to note that the patient tended to infantilize her children and make them very dependent upon her. The patient supervised her children's life so rigidly that her husband was able to tell the time of day from the children's routine. Her older child was unable to put on her own shoes until the age of six, and the younger child was kept restricted to a playpen most of the day until the age of two.

The patient's sexual life had always been abnormal. She was married at the age of twenty-six, and for three or four months after the marriage she would not allow her husband to have sexual relations with her. After the birth of her first child, for a period of six months there were no sexual relations. Then after that sexual relations occurred once a month. In the past four years since the birth of her second child sexual relations had occurred only once.

The factors contributing to this patient's toxic psychosis can be listed as follows: (1) the patient's abnormal prepsychotic personality, (2) the sudden withdrawal of her daily ingestion of alcohol from February 8 to March 12, 1952, (3) trauma of the operation on February 8, 1952, and (4) acetaldehyde from the test doses of alcohol and from the quart of wine she drank on March 12, 1952. The myocardial changes can only be attributed to the toxic effect of the acetaldehyde after she ingested the quart of wine.

Patients who are not familiar with the severe reaction to alcohol while taking Antabuse may be more prone to take large amounts of alcohol and to have very severe reactions. It is extremely important that the patient on Antabuse have a reaction under supervision with the test dose of alcohol, or they may indulge in excessive quantities of alcohol causing a severe toxic reaction from the large quantity of alcohol converted into acetaldehyde. In the case presented the patient had no reaction to the test doses of alcohol.

Summary

The serious toxic effects of Antabuse include cardiovascular complications, toxic psychosis, and death. A toxic psychosis with transient myocardial damage while on Antabuse therapy is reported.

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Turner's Syndrome Associated with Carcinoma of the Rectosigmoid

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THE increasing number of cases of Turner's syndrome reported has made the recognition of this bizarre condition much easier. The clinical picture comprises hypogonadism, short stature, webbing of the neck, cubitus valgus, low implantation of the hair on the back of the neck, multiple pigmented nevi, osteoporosis, and other abnormalities. Today individual instances do not merit publication unless they describe a new or unusual aspect of the syndrome. Our patient, observed for many years with a typical picture of Turner's syndrome, developed a malignant neoplasm at a relatively early age.

Most of the cases reported in the literature have been studied by endocrinologists because of failure to menstruate and by pediatricians because of the retarded growth and webbing of the neck. There are only a few published reports[1-4] of Turner's syndrome followed to death and autopsy. Our patient was followed for nineteen years.

Case Report

J. S., a forty-year-old, unmarried dress cleaner, was admitted to Morrisania City Hospital on January 6, 1953, having been referred from the Neurological Clinic which she attended because of numbness in the left hand and left leg and a wobbly gait of several weeks duration.

She gave a history of being born during the seventh month of gestation and weighing $1^1/_2$ pounds. During her infancy she had "convulsions." She started school at six years, repeated one grade due to family difficulties, and finished at sixteen years. Since the age of seventeen she had been self-supporting. Her parents and two siblings, a brother and a sister, were normal in every respect.

In 1934 the patient, then twenty-one years old, presented herself at the Gynecological-Endocrine Clinic (L.W.) for treatment of primary amenorrhea. At that time she showed a masculine body contour with sparse pubic hair and absence of axillary hair (Fig. 1). The vulva was markedly hypoplastic, the vagina extremely short and narrow. On rectal examination the uterus was felt as a vague thickening within the broad ligament. The adnexae were not palpable. The patient admitted absence of libido but said she would marry for protection. Basal metabolic rate was minus 17 per cent. Retardation in the closure of the epiphyses of the long bones was noted. The pelvis was android. Urinary estrogen was absent, and the titer of urinary gonadotropins was markedly elevated. Agenesis of the ovaries was diagnosed, and the patient was treated with estrogens for four years. During this period the breasts developed, pubic hair appeared, and the patient's behavior became more feminine. Occasional spotting but no real menstrual flow was noted. In 1950, at the age of thirty-eight, she was admitted to the Surgical Service for acute large bowel

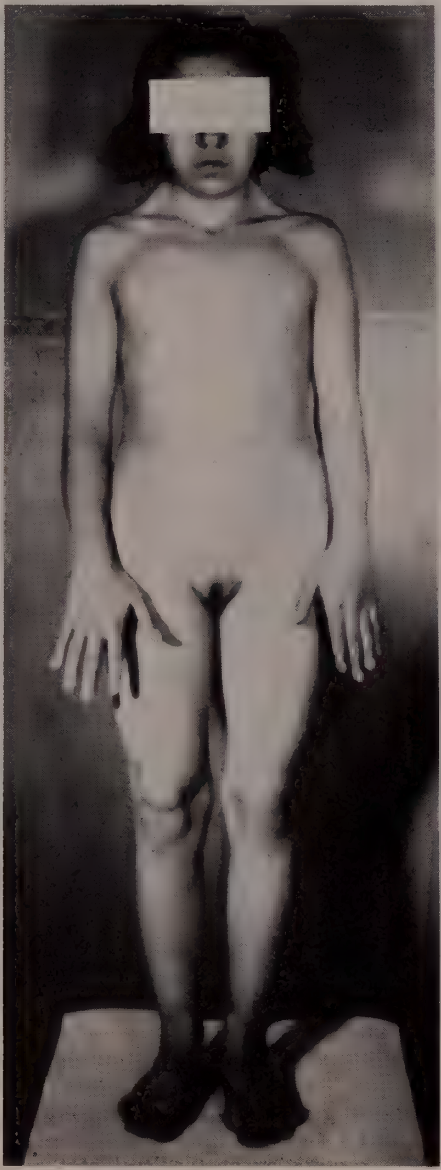

FIG. 1. Patient at age twenty-one (1934) before estrogen therapy. Note webbing of neck, masculine body contour with sparse pubic hair, absence of breast development, widely spaced nipples, and pigmented nevi.

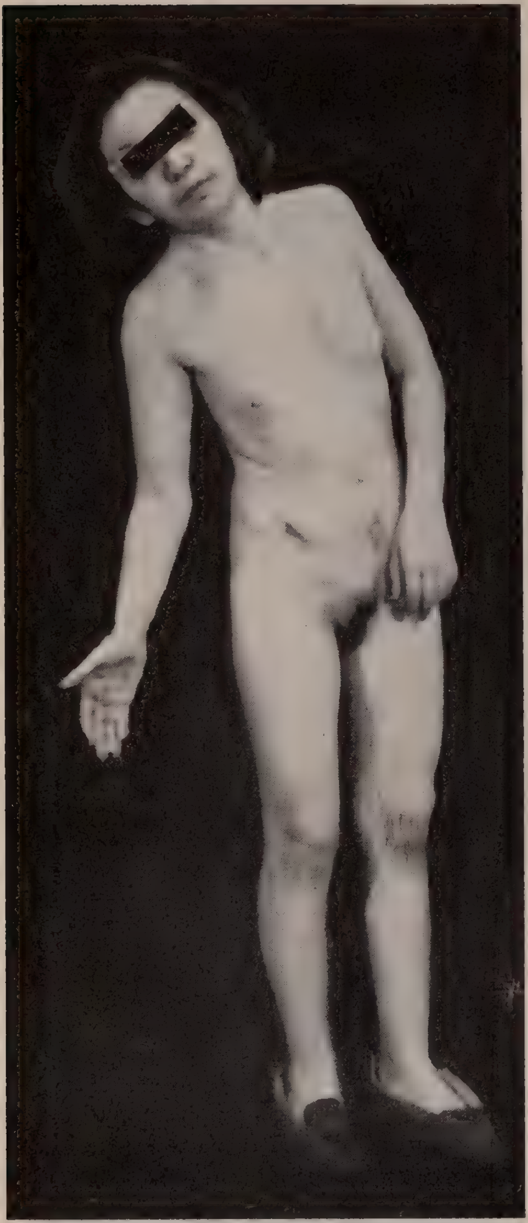

FIG. 2. Patient at age forty (1953). Small breasts and cubitus valgus visible.

obstruction. An emergency colostomy was performed, and a few days later a barium enema revealed an obstruction at the level of the rectosigmoid. Laparotomy was performed, and an annular tumor of the rectosigmoid was found and resected. No exploration of the genital organs was done. The pathologic report was adenocarcinoma of the rectosigmoid. A regional lymph node showed only nonspecific inflammatory changes. The postoperative course was uneventful. The colostomy closed after a few weeks, and the patient was discharged. She returned to work and felt well until December, 1952, when numbness of the left hand and leg and the wobbly gait developed.

Physical examination showed a white female, 51 inches tall and weighing 93$^1/_2$ pounds. She was well oriented, readily understood questions, but was somewhat slow in her answers. She was able to walk, but her gait was unsteady due to a sense of insecurity in her left leg. Temperature was 98.6 F., pulse 72, and blood pressure 112/84 mm. Hg.

The following positive physical findings were noted:

1. Bilateral sagging of the eyelids and occasional divergent strabismus (present only when she was tired).
2. Webbing of the neck and low implantation of the hair, giving the impression that the patient had a particularly short neck. On x-ray the cervical vertebrae were normal.
3. Numerous pigmented nevi of the face and body.
4. Breast development corresponding to that of a girl of ten to twelve years. The nipples were relatively far apart and considerably lateral to the midclavicular line (Fig. 2).
5. Pubic hair was present, and axillary hair was absent. The external genitalia were infantile. A hypoplastic uterus was felt on rectal examination.
6. Bilateral cubitus valgus.
7. Neurologic examination (Dr. N. Savitsky) indicated the presence of an expanding cerebral lesion (left dysmetria, left astereognosis, defective plantar response on the left side, hyperesthesia of the left upper and lower extremities, and left hemianopsia).

Urinalysis, hemogram, blood chemistries, and serology were normal. Basal metabolic rate was plus 24. X-ray examination of the lungs showed multiple round opacities of different sizes throughout both lung fields. The skull and cervical spine were normal. The dorsal spine showed a moderate degree of scoliosis. There were areas of osteosclerosis and a few small, punched-out areas of osteolysis in the head and neck of the left femur. Osteoporosis of all bony structures was noted. A diagnosis was made of Turner's syndrome and metastases to the brain, bones, and lungs from adenocarcinoma of the rectosigmoid.

Soon after admission the patient's general condition became worse. She complained of frequent nausea, and her gait became more and more unsteady. A low-grade temperature developed. Several tests for follicle-stimulating hormones (FSH)* during the two weeks preceding her death were negative. She died in hyperpyrexia on February 26, 1953. Permission for autopsy was refused.

In summary, this patient showed the following typical features of Turner's syndrome: short stature (51 inches), ovarian agenesis (primary amenorrhea, absent secondary sex characteristics), webbing of the neck, low implantation of the hair at the back of the neck, cubitus valgus, multiple pigmented nevi, sagging eyelids, weakness of the eye muscles, osteoporosis. FSH titers were elevated at the age of twenty but were negative on her last admission. Neither a shieldlike chest nor coarctation of the aorta were noted in this case. A point of interest is the fact that the patient had been born prematurely. At the age of thirty-eight an adenocarcinoma of the rectosigmoid was diagnosed and resected. The patient did well for two and one-half years but then succumbed to generalized metastases.

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* We are indebted to Mrs. R. S. Glauberman, B.Sc., for the FSH assays.

Comment

Only those cases which present the association of gonadal agenesis, short stature, and the multiple congenital malformations above enumerated should be classified as Turner's syndrome. Some of the cases[5,6] reported in the literature as such, we believe, belong more properly to Albright's syndrome[7] or the syndrome of the rudimentary ovary.[8,9]

There has been a great deal of speculation concerning the etiology of this bizarre association of malformations, involving as it does the general body structure and such unrelated organs as the gonads, the skeleton, the skin, the eye muscles, and sometimes the aorta. Pituitary or gonadal dysfunction or unfavorable intrauterine conditions[10] do not appear to be an adequate explanation of this syndrome.[11] While Ezes[12] thinks that the agent responsible for the malformations acts over a certain length of time and therefore affects the development of different systems, it is our belief that we are dealing with congenital anomalies[13,14] originating at an early period of embryonic development,[11] most likely due to mutations[9] of linked genes. The absence of any family history in all the published cases, the association of similar malformations in most of the typical cases, and the fact that the teratogenic mechanism affects unrelated systems (the development of which occurs at different periods of embryogenesis) support this view.

Why does not every case present all the malformations which have been noted if we assume that they are due to mutations of linked genes? A theoretic explanation may be the variations in penetrance or expressivity of genes. There seem to be varying degrees of expressivity among the genes which determine Turner's syndrome. The maximum degree is apparently asserted by the genes dominating the combination of ovarian agenesis and short stature. At a lesser level are the genes determining the webbing of the neck, cubitus valgus, and the widely spaced nipples. All the other abnormalities, weakness of the eye muscles, sagging eyelids, pigmented nevi, shieldlike chest, coarctation of the aorta, etc., which are encountered less often, may be due to mutations of genes with a still lower degree of expressivity.

The association of Turner's syndrome with a malignant neoplasm has been reported only once before. This was in a patient who died of a malignant melanoma.[2]

Estrogen as substitution therapy was successful in this case. Following treatment the secondary sex characteristics and an increased feeling of feminity appeared. The patient did not consider herself handicapped.

Summary

A case of Turner's syndrome associated with an adenocarcinoma of the rectosigmoid in a thirty-eight-year-old woman is described. The latter caused the patient's death two and one-half years later.

A theoretic explanation for the genesis of the syndrome and the variations in the incidence of the different malformations is proposed.

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The greatest mistake you can make in this life is to be continually fearing you will make one.—ELBERT HUBBARD

Guillain-Barré Syndrome

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Guillain-Barré syndrome is extremely rare in the United States. The Willard Parker Hospital in New York City officially reported only four cases in the year 1952, and nearly ten million people live in New York City.

The symptoms of Guillain-Barré syndrome are so meager in the textbooks that it seemed well to have this patient describe her symptoms in her own words.

Case Report

Mrs. R. B., about thirty years of age, a mother of two children, reported her symptoms as follows (without any corrections, deletions, or additions):

"In the middle of January, 1952, I didn't know why I didn't feel up to par. Nothing hurt me, but everything about my body didn't feel right. During a dress fitting (being a dressmaker as well as a mother of two small boys), I remarked about how *unreal* my arms felt. The following morning I awoke with a terrific headache which was particularly severe at the back of my head. I took two aspirins approximately every three hours that entire day. The following day I changed to empirins. Neither of them gave me relief. On the third day of the headache, I decided to see my doctor. He prescribed some capsules containing codeine and aspirin, other drugs. These capsules gave me some relief, but it wasn't complete. The following dates, I will never forget.

"Monday, January 21: When I awoke that morning my upper arm had the queerest sensation when raised; pins and needles, yet no feeling of muscular strength. Everytime that I had to pick up my youngest child (thirteen months), I felt that I would drop him.

"Tuesday, January 22: My upper legs began to feel the same way that my arms had felt. When I sat down or stood up, my legs felt as if they didn't belong to me. I went to see the doctor again. For this, he prescribed Terramycin. Also, he suggested that I have my teeth x-rayed because by then I had begun to complain of a toothache in addition to my other symptoms. The dentist found the start of an abscess, possibly two. That evening I had two molars extracted.

"Wednesday, January 23: I couldn't get out of bed without assistance. My husband stayed at home to help me. My arms and legs were movable but had absolutely no strength. I continued to take Terramycin, two capsules with milk. The base of my spine began to pain; not the sharp type of pain but the dull, pins and needles type that I was unable to bear. The doctor gave me codeine for this in a rather large dose. It was to be taken every four hours, but it didn't relieve me for that length of time.

"Thursday, January 24: On that morning, I couldn't raise my head from my pillow. My arms and legs felt completely numb. The pain at the base of my spine was more severe. As the day wore on, I found that I was unable to swallow food, but could take some liquid although it was a very small amount.

"Friday, January 25: The doctor became greatly troubled after testing my reflexes and decided to call the Board of Health. The Board of Health M.D. arrived early in the afternoon and diagnosed me as a possible polio case. He suggested that I be moved to Willard Parker Hospital. I couldn't void the entire day.

"Upon arriving at Willard Parker, I was given the usual examination for polio patients, including a spinal tap. The doctor there ordered an immediate catheterizing and a penicillin injection.

"The following day, I was given a sensation test, and all my sensation nerves were found to be in good condition. They gave me hot packs to relieve the spinal pain, but since they made that pain worse, they dispensed with them.

"I was catheterized every eight hours but in between was given some sort of injection to make me void. The injection had no results. Two days later, I became unwell. About the third day of my monthly period, I was able to void without the aid of anything.

"I stayed at Willard Parker Building I three weeks. Then I was transferred to Building II, Polio Physical Therapy. I received hot water tank treatments. It was noted by the head therapist that when in the water, all motion came back to me. My arms and legs would move as I wanted them to. After one week of the tank treatment, they put me on the mat for exercising (to roll and crawl).

"Here again, on about the third day of my monthly period, I showed great improvement. Rolling on the floor became easier. I was able to get to a hands and knees position for crawling without assistance. I could crawl more easily and for longer periods of time. About the second week here, the therapists stood me up. I could stand alone and walk, but the slightest bend of the knees sent me down to the floor. Walking between parallel bars became a daily exercise. I then asked for permission to walk whenever I felt up to it. I had to be helped to stand up from the wheel chair that I was now using.

"Eating was still quite a problem. Food would stick in my throat, but there was no coughing and choking as there had been previously. One cough and the food returned to my mouth. Liquids gave me no trouble. On March 12 I was sent to the Bellevue Rehabilitation Center. There, I started exercises of all kinds; mat, elevation, and ambulation (to break the stiff knee walk habit I had acquired for safety reasons). I wanted more, but the doctors would not allow it. I was in a hurry to get home. With the exercises they did give me, I pushed myself until my arms began to really pain me. There were also sharp stabbing pains in the arm pits. Consequently, I was taken off all exercise for three days.

"Returning to work, I again noticed about the third day of my monthly period that I was able to walk up small stairs unassisted and down more securely. From the small steps I went to the larger and more normal steps. Exercise on the mats became somewhat easier. Again I hounded the doctors in charge for bike riding and arm pulley exercises. They finally added these to my daily program. Strength slowly returned. By May I could fully dress myself, walk normally with some assurance, and cross streets with just the aid of holding someone's arm. Eating was no longer a problem. The doctors and staff at Bellevue Rehabilitation Center felt that I could leave by mid-June. By that time I could walk stairs slowly, pulling with my hands to help get me up each step, and bracing myself with my arms down each step.

"It wasn't long before I had practically full control of my muscular system. The little muscular weakness I had left, which amounted to about 10 per cent, lasted for about three months, during which time I did or tried to do most of my household activities. As far as I was concerned, there was enough physiotherapy in that to get me back to normal."

Comment

The above case only serves to testify to the fact that the symptoms described in any book on this subject do not compare with the details portrayed by the individual patient. To begin with, let us see what Guillain-Barré syndrome originally meant. During the war of 1914 (actually 1916), Guillain and Barré individually discovered some new symptoms in many of the soliders who stayed in the trenches during the rainy seasons and got aches and pains which were quite out of the ordinary. After much research they arrived at the following definition of Guillain-Barré syndrome (polyradiculoneuritis): "Acute diffuse infective disease of the nervous system, involving the spinal cord and peripheral nerves and occasionally the brain."[1] In those days, it was particularly found in males between twenty and fifty years of age. It was an acute febrile condition suggesting infection with an organism, the toxins of which had a predilection for the lower motor neuron. In England the etiology is supposed to be a virus, 0.2 to 0.5 μ in diameter.

Pathologically, there was a slight congestion of the meninges and petechial hemorrhage in the anterior horn and posterior roots. Indications of inflammatory and degenerative changes through the whole of the lower motor neurons, equals polyneuronitis or is equivalent to the Guillain-Barré syndrome.

The first symptoms of Guillain-Barré syndrome are usually febrile, followed by latency from a few days to several weeks. Paralysis follows, accompanied by severe headache, vomiting, slight pyrexia, pain in the back and the limbs, and stiffness of the neck. Paraplegia usually begins in the lower back and then affects the upper extremities. All the muscles of the limbs are affected, which differs from other paralysis. Paralyzed muscles are flaccid and rarely wasting. Superficial and deep reflexes are usually but not always lost. The sensory characteristics of polyneuritis are present with the addition of pain, numbness, and tingling in the limbs. Sphincter control is sometimes lost for a while. Catheterization is generally necessary for bladder control. There are no cerebral symptoms present, and the patient is conscious.

Examination of the blood shows a moderate increase of polymorphonuclear leukocytes. The cerebral fluid shows a great excess of protein with either a normal cell count or only a moderate excess of mononuclear cells. Guillain-Barré syndrome is distinguished by the disassociation of cell albumincytologoque, which Guillain and Barré themselves defined as distinctive of this condition.

In a differential diagnosis from poliomyelitis, Guillain-Barré syndrome shows symmetric characteristics of paralysis. Sensory losses are characteristic, but there is slight muscular wasting. A differential diagnosis must be made from Landy's paralysis which has a sensory loss.

Guillain-Barré syndrome in its epidemic form has a high mortality rate, whereas in its sporadic form the mortality rate is low. Improvement is generally slow. Treatment is symptomatic and nonspecific but involves a great deal of physiotherapy to re-educate the muscles.

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Nursing Aide Project

The U.S. Public Health Service, in cooperation with various medical associations, is sponsoring a plan to help hospitals develop on-the-job training for untrained or inadequately trained nursing personnel.

Two publications are available, one for the use of the nursing aide and the other designed to help the nursing instructor. It is hoped that state and county medical societies together with hospitals will avail themselves of the instructor workshops being held regionally.

This program has proved its value all over the nation and can do much to improve hospital care for patients.

Information on the Nursing Aide Project may be obtained from the Department of Hospital Nursing, National League For Nursing, 2 Park Avenue, New York City.

Bent Kuentscher Nail

An Unusual Complication of Intramedullary Nailing

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(*From the Surgical Service of Coney Island Hospital*)

The various advantages and failings of intramedullary nailing are by now fairly well known. We think it of interest, therefore, to report an unusual complication, bending of the nail, in a patient treated with a Kuentscher cloverleaf pin. It was removed with considerable difficulty at reoperation by cutting it at the site of fracture and withdrawing the segments. We have been unable to find a similar complication in the literature. Kuentscher[1] in an evaluation of intramedullary nailing states that in a series of a thousand nailings, no case of bent nail occurred.

Case Report

H. K., a white fifty-six-year-old female, was admitted to the hospital on March 21, 1952, with a fracture of the shaft of the right femur about 2 inches below the greater trochanter. The fracture was moderately comminuted, and because of the pull of the psoas muscles and abductors, the proximal fragment was sharply rotated and displaced (Fig. 1).

On March 24, a cloverleaf Kuentscher nail, 9 mm. by 32 cm., was inserted by the open method, with incisions at both the fracture site and the upper surface of the major trochanter. The operation was uneventful and convalescence smooth. The patient was kept in bed for two days and then allowed to stand for twenty minutes, with support, to impact the fracture. She was then kept in bed for two weeks longer, allowed to go home on crutches, and advised against weight-bearing.

On April 17, twenty-four days after operation, the patient fell at home. She stated on readmission that she had not struck the hip or knee. She walked with great difficulty but remarked that her walk had become increasingly awkward for several days prior to the fall.

X-ray examination at the hospital revealed a 45-degree angulation at the site of fracture (Fig. 2). Exuberant callous formation was also evident. The nail was impinging on the acetabulum by its slotted end. The deformity was so great as to preclude expectant treatment, but the removal of the nail posed a problem.

At operation the excessive callus was removed and the fracture site visualized. The nail was exposed by chisel and hammer for a distance of several centimeters with removal of a wedge of bone. The nail was crushed at the bend with a 30-inch bolt-cutter and then severed with a Berdecker cutter. The proximal fragment was withdrawn from above with the extractor. The distal fragment was removed by hooking the extractor to the crushed trough of the nail and withdrawing it by several hammer blows. Figure 3 shows the removed nail as in its position in situ; the crushed and cut area just above the bend is visible.

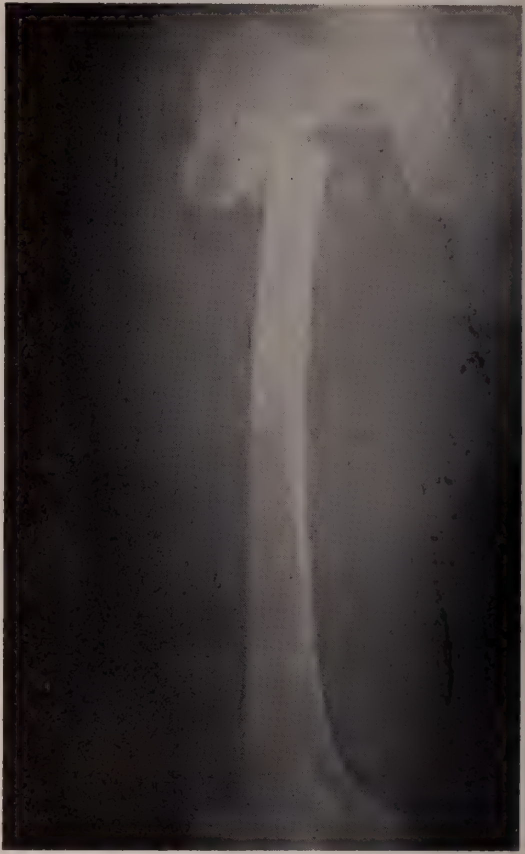

Fig. 1. Fracture of shaft of right femur with proximal fragment rotated and displaced.

A new Kuentscher nail of the same diameter was inserted, using the nail guide as a lever to rotate the proximal fragment into position, then threading on the distal fragment and driving the nail home. Recovery has been uneventful to date. The patient was kept from weight-bearing until bony union occurred.

Comment

It is to be noted that where a new nail is to be

Presented at a meeting of the New York and Brooklyn Committee on Trauma, American College of Surgeons, April 25, 1953.

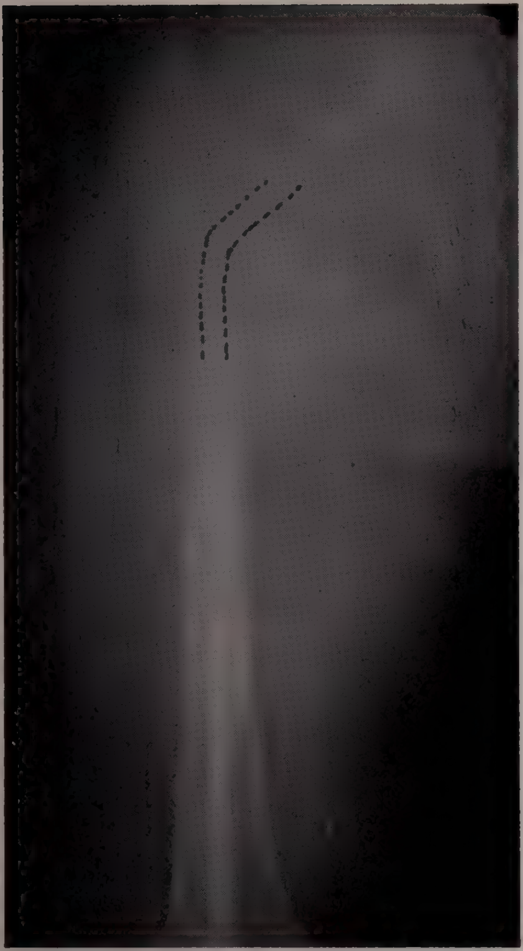

FIG. 2. X-ray taken approximately four weeks after operation. Note 45-degree angulation at the site of fracture and exuberant callous formation.

inserted, as we did, it is important to remeasure for length since sufficient bone resorption may occur at the fracture site to alter size requirements significantly.

The reason for the bending of the Kuentscher nail is still a matter of conjecture, but we are inclined to blame metal fatigue for the complication.

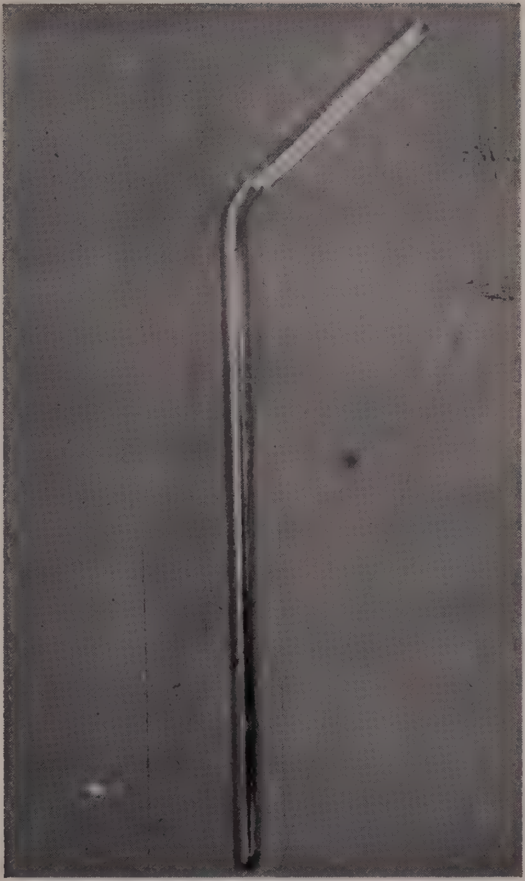

FIG. 3. Removed nail shown as in its position in situ.

Summary

An unusual complication of intramedullary fixation of a femoral fracture and the method used to correct the resulting defect have been presented.

We believe that patients with fracture of the femur in the region from the junction of the middle and upper third of the bone to the trochanter should not be allowed to bear weight after Kuentscher nailing until satisfactory callus or union is demonstrated by x-ray.

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It is well that there is no one without a fault, for he would not have a friend in the world.—WILLIAM HAZLITT

Sudden Onset of Hypertension Caused by Thrombosis of the Renal Arteries (Goldblatt Phenomenon)

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AFTER Goldblatt[1] produced hypertension in dogs by narrowing the renal arteries with silver clamps, two questions arose: Can the same phenomenon spontaneously occur in man? Is this mechanism responsible for the so-called essential hypertension?

The answer to the first question could be expected only from clinical cases simulating the original experimental conditions. Numerous reports have appeared on patients who had hypertension associated with various pathologic conditions of the kidneys. The cases may be classified into two main groups: (1) urologic diseases of the kidneys (pyelonephritis, pyonephrosis, hydronephrosis, atrophy of the kidney, hypernephroma, compression of kidney by tumors in the neighborhood, etc.)[2,3] and (2) occlusion of the renal arteries (thrombosis, embolism, thromboangiitis, atheromatosis, thickening or other anomalies of the arterial wall, compression, or aneurysm).[4-13]

Before one can accept the fact that an elevation of the blood pressure was produced by the Goldblatt mechanism, it should be ascertained that the onset of hypertension coincided with the renal circulatory disturbance and that the hypertension was cured either by improvement of the renal circulation or by removal of the diseased kidney. In most of the cases of chronic urologic disease it was rather difficult to determine which started first, the renal pathology or the hypertension. Therefore, the behavior of the blood pressure following nephrectomy may be considered the crucial answer to the relationship between renal pathology and hypertension. Smith collected and reviewed from the literature 242 cases of hypertension which underwent nephrectomy. Only 19 per cent were completely and permanently relieved of their hypertension. While this figure of success is rather low, it cannot be disregarded. It has been emphasized by Goldblatt that although removal of the clamps from the renal arteries is followed by return of the blood pressure to normal, irreversible hypertension may ensue if the clamps are left in place long enough.

The situation in acute vascular accidents of the renal arteries is somewhat different. Here, clinical symptoms are usually sudden enough to mark the time of arterial occlusion and the onset of hypertension. Therefore, early diagnosis and successful surgical intervention are possible.

The occurrence of renal hypertension in man on the basis of a Goldblatt mechanism is generally accepted today. Whether this mechanism is responsible for all cases defined as essential hypertension is still a matter of much debate. It is beyond the scope of this paper to enter into the discussion of this controversy which has been reviewed in detail in several publications.[14-16]

While production of hypertension by urologic diseases of the kidney may or may not be explained by the disturbed renal hemodynamics, only acute, partial occlusion of one or both renal arteries can be regarded as true duplication in human subjects of Goldblatt's classic experiments. Few cases meeting these rigid criteria have been reported.[4,6,10,13,17-21] Therefore, we consider it of interest to add our case in which the exact time of onset of hypertension could be observed and could be related to the findings at autopsy.

Case Report

A fifty-five-year-old laborer was admitted to the hospital on March 3, 1951, as a transfer from another Veterans Administration installation.

The patient had been committed to a mental institution in June, 1949, because of alcoholic psychosis. While in that hospital, he became ill with weight loss and repeated febrile episodes. In November, 1950, a chest x-ray revealed an exudative lesion of the left lung with some involvement of the right lung. The sputum was positive for acid-fast bacilli. On combined streptomycin and para-aminosalicylic acid therapy he slowly but gradually improved. The patient was transferred to our hospital for further care.

Physical examination on admission revealed an undernourished, chronically ill, white male with normal temperature, pulse, respiration, and a blood pressure of 108/90. The lungs showed unimpaired resonance throughout with bronchovesicular breathing and no rales. The cardiovascular system was essentially negative, and so were the rest of the findings. Mentally the patient was confused and disoriented with a marked memory defect. Hallucinations and delusions were not elicited.

Additional studies revealed that the patient had active bilateral pulmonary tuberculosis. Under the care of the Tuberculosis Service he was continued on streptomycin and para-aminosalicylic acid through December, 1951. His sputum converted to negative in September and remained so thereafter.

Around the end of August 1952, the patient de-

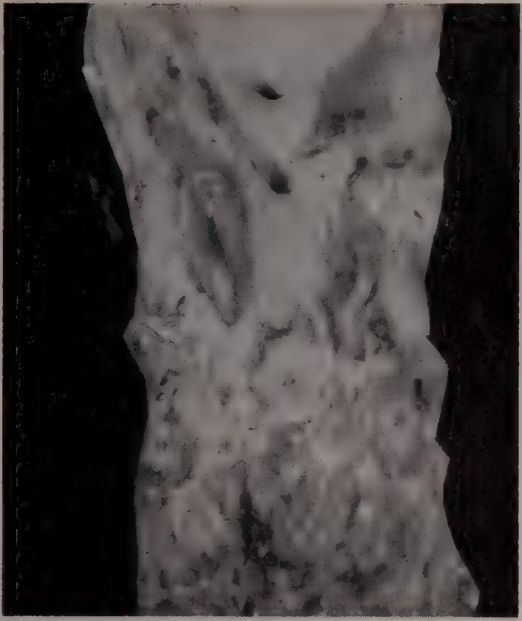

Fig. 1. Abdominal aorta. Thrombi protruding from the orifices of the renal arteries.

veloped abdominal pain with intermittent vomiting. On September 9, 1952, an x-ray examination of the gastrointestinal tract was done and reported negative. On October 3 the patient had hematemesis. Physical examination showed slight pallor but otherwise nothing remarkable. Blood pressure was 108/74 and the pulse rate between 80 and 90. The red blood count was 3,800,000 with 11.1 Gm. of hemoglobin. On the following day, October 4, he had 3,500,000 red blood cells with 10.1 Gm. of hemoglobin, and the blood urea nitrogen was reported as 106 mg. per cent. On October 5 the patient's usually normal blood pressure was found to be elevated to 220/120. Because of repeated episodes of hematemesis, the patient was transferred to the Medical Service on October 7, 1952.

Physical examination on October 7, 1952, on the Medical Service revealed an anemic looking, moderately obese patient in no apparent distress. The blood pressure was 200/100, pulse 110, and temperature normal. The only positive findings were some crepitant rales over the left lower chest in the axillary lines, a faint systolic murmur over the entire heart with maximal intensity over the aorta, accentuated second aortic sound, and slight tenderness about 1 inch above the umbilicus in an otherwise negative abdomen. Eyegrounds could not be examined because of the patient's lack of cooperation. Laboratory findings on October 7, 1952, were 10,000 white blood cells with a normal differential count; 2,100,000 red blood cells with 6.9 Gm. hemoglobin; urine specific gravity 1.009 with traces of albumin, from 0 to 2 red blood cells, 15 to 20 white blood cells, and 0 to 2 hyaline casts per high power field in the centrifuged sediment. The electrocardiogram showed a normal tracing.

A blood transfusion was started. After having received 500 cc. of citrated fresh blood, the patient developed shortness of breath and pulmonary edema. Oxygen, morphine, and aminophylline were administered with good response, and the patient was digitalized. On the following day, October 8, the red cell count was 3,200,000 with 9.6 Gm. hemoglobin, and the patient appeared to be comfortable. Further transfusions were temporarily suspended.

During the subsequent course the patient appeared severely ill. Although he was not complaining and did not show any signs of distress, there was marked anorexia and occasional drowsiness. While on a few occasions he passed a small amount of black, dried fecal material, there was no hematemesis and no clinical signs of a significant degree of anemia. The blood pressure remained elevated, between 200 and 220 systolic and 110 to 125 diastolic. The azotemia also persisted with blood urea nitrogen of 98 mg. per cent and nonprotein nitrogen 144 mg. per cent on October 16. The urinary output was markedly diminished during the entire period. Repeated urinalyses showed a specific gravity of 1.009 or 1.010, albumin varying between trace and 2 plus, with 1 to 5 red blood cells, 15 to 30 white blood cells, and 1 to 4 coarsely granular casts per high power field in the centrifuged sediment. Urine culture revealed Staphylococcus albus. Repeated electrocardiograms were normal except for digitalis effect. The temperature varied between 99 and 100.4 F. rectally.

On October 20, 1952, the patient again looked unusually pale, and his blood count showed 30,100 white blood cells with a slight shift to the left in the differential count. He had 1,200,000 red blood cells and 3.3 Gm. hemoglobin. A total of 1,000 cc. of fresh blood was transfused at a slow rate which the patient tolerated well. The following morning his color appeared improved, vital signs were normal, and the patient was in no distress. Shortly after he was seen, he suddenly expired.

Autopsy

Gross Examination.—The heart weighed 450 Gm. It was in systolic contraction. The color of the muscle was brown. The walls of the ventricles were hypertrophic; the average thickness on the left side was 16 mm., on the right side 6 mm. The left ventricle was wide and rounded. The right auricle was moderately distended. Below the endocardium of the mitral valve there were soft yellow deposits, and the edges of the aortic valves showed nodular thickenings, one in the left posterior cusp being calcified and 5 mm. thick. The left coronary artery showed small, soft, yellow, subintimal deposits; the right after a course of 2.5 cm. suddenly changed into a stony hard, thick-walled vessel with a very narrow lumen. In the arch of the aorta were numerous flat, elevated, partly soft, and partly calcific plaques. They extended into the innominate artery. From the level of the diaphragm downward, hard plaques were increasingly more densely spaced, larger, and mostly eroded; they extended into the iliac arteries.

At the ostia of the renal arteries, pink, soft, fleshy

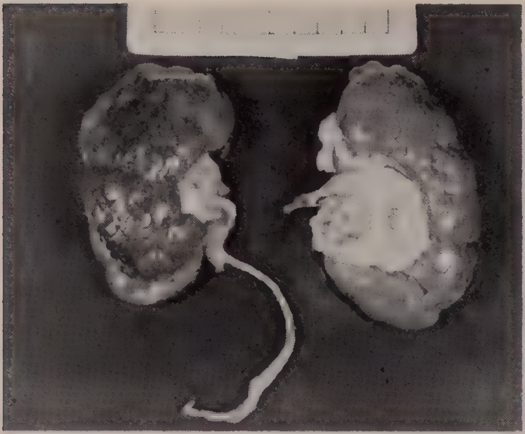

FIG. 2. Kidneys showing arteriosclerotic scars.

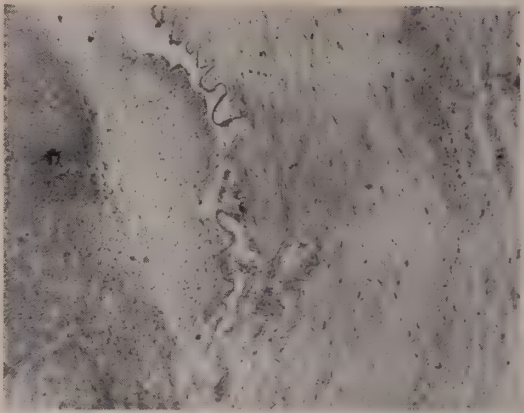

FIG. 3. Photomicrograph of left renal artery showing beginning organization of thrombus.

masses with central dimples were protruding into the lumen of the aorta; the larger one, on the right, was 2.5 cm. long and 1 cm. wide (Fig. 1). Sections through the renal arteries showed extensive calcifications of the walls and the lumina filled with dark, blood-colored, soft coagula that were adherent to the walls and extended on the right halfway to the hilus of the kidney, while that on the left reached the hilus and extended into the upper branch.

The right kidney weighed 105 Gm., and the left 110 Gm. The capsules were not adherent. The surfaces were pale and showed numerous star-shaped, deep retractions (Fig. 2). Cross sections showed much peripelvic fat, the average thickness of the parenchyma being 1.5 cm. The pelves and ureters were not remarkable.

Both pleural cavities were obliterated by firm, dry adhesions. A calcified subpleural node was located in the lower lobe of the right lung, and calcified foci were present in a right hilar lymph node. A multilocular cavity with smooth lining and open bronchial connections was found in the apex of the left lung surrounded by dense fibrosis, and scattered, dry, caseous foci, not exceeding 3 mm. in diameter, were found in the lingula. The arteries of the lungs showed small, yellow intimal thickenings.

The omentum was adherent to the neck of the gallbladder, the pylorus, and the fragile anterior wall of the first portion of the duodenum. In the posterior and inferior wall of the duodenum 2 cm. from the pylorus was an ulcer having the shape of an upright oval 6 by 2.5 cm. Its ground consisted of greenish, friable material and was fixed to the pancreas and portal vein. Large amounts of blood were found in the stomach and intestines.

The liver surface was slightly granular. A pigment stone was found in the gallbladder. The prostate was large and nodular. Three small mucosal polyps were found in the large intestine. The rectal mucosa was hemorrhagic and edematous. The basal arteries of the brain showed scattered, soft, yellow plaques.

Microscopic Examination.—In the ground of the duodenal ulcer there was an artery with markedly thickened muscle coat and an eccentric, marked broadening of the subintimal layer by amorphous material. The cavity from the left lung was epithelized, and the caseous foci were surrounded by fibrous capsules only. The clots filling the renal arteries consisted of fibrin, platelets, and partly intact, partly laked red blood cells. They were continuous with the intima which was denuded of endothelium (Fig. 3). In portions of the left renal artery small groups of fibroblasts were invading the clot. The kidneys showed multiple radial scars between which there was well-preserved parenchyma. Some of the arcuate arteries showed subintimal hyaline deposits and muscular hypertrophy. In the motor area of the brain there was endarteritis of blood capillaries, both in the pia and in the brain substance. In places there was a scarcity of pyramidal cells; others showed shrinkage and occasional satellitosis. The liver showed slight fibrous enlargement and lymphocytic infiltration of the periportal spaces which almost completely surrounded some of the lobules but did not cross through them.

Anatomic Diagnosis.—Diagnoses were as follows: arteriosclerosis, generalized, especially of aorta and cerebral and renal arteries; recent thrombosis of both renal arteries with incomplete occlusion; uremic hemorrhagic edema of the rectum; atheromatous aortic stenosis; arrested pulmonary tuberculosis; hypertrophy of both cardiac ventricles; penetrating, bleeding duodenal ulcer; incipient cirrhosis of the liver; pigment stone in gallbladder; mucosal polyps of the large intestine; nodular hyperplasia of the prostate.

Comment

Complete obstruction of the circulation in both kidneys does not produce hypertension in dogs. Unilateral complete obstruction should not result in hypertension either unless there is pre-existing impairment of the hemodynamics in the other kidney. It is the marked but incomplete obstruction of one or both renal arteries that represents the true duplication of Goldblatt's experiment, leading to hypertension.

Our patient had pre-existing arteriosclerosis of both kidneys. Hypertension, however, did not develop until the blood flow to the kidneys became markedly impaired by thrombus formation in both renal arteries.

The time of onset of the sudden blood pressure elevation could be determined. The patient's death sixteen days later afforded the opportunity to find fresh thrombosis of the renal arteries which caused marked but not complete obstruction of the arterial blood flow.

The course of events in this patient may be construed as follows: It started with a gastrointestinal hemorrhage from an arteriosclerotic blood vessel in a penetrating duodenal ulcer. Subsequently thrombus formation in both renal arteries took place. Thrombotic vascular accidents are not uncommonly seen following major hemorrhages. They are usually ascribed to the fall in blood pressure of shock states, to the marked anemia in patients with atheromatosis of the vessels, or both. There was no clinical evidence of shock in this case, but anemia was severe, and atheromatosis of the renal arteries was present.

The occlusion of the renal arteries was incomplete, as evidenced by the fact that there was no anatomic damage to the renal parenchyma between the arteriosclerotic scars.

The thrombi were of recent origin; the degree of organization was rather slight, probably due to severe damage of the arterial wall from atheromatosis. The picture appears quite compatible with a duration of sixteen days.

Hypertrophy of the left cardiac ventricle must be ascribed to the calcific aortic stenosis inasmuch as there was clinically no hypertension up to the last sixteen days. Hypertrophy of the right ventricle was due to pulmonary fibrosis. The cause of death was renal insufficiency with repeated hemorrhages as the contributing factor.

Summary

1. A case is reported in which the sudden onset of hypertension coincided with the thrombosis of both renal arteries, causing marked but incomplete obstruction of the blood flow.
2. This case is presented as a true example of the Goldblatt mechanism of hypertension occurring in a human subject.

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Stale Medicine Includes Free Beefs

Something unforeseen has popped up under Britain's socialized medicine scheme.

Writing in the *Chicago Daily News*, London Correspondent Ernie Hill says that under the British health service, patients have now discovered that they can sue the government if they don't get well. Under the legal aid scheme, which is a separate Socialist institution, they can get the government to furnish them a free lawyer to handle their suit. If they win, the government pays off. If they lose, the court costs still have to be paid by the government. "So have a go," Hill says. "It's all on the welfare state."

He adds that a rash of lawsuits against hospitals under the National Health Service has broken out all over the place. "Medical authorities," he said, "estimate that some 200 suits for damages have been filed in the last three years."

Nontropical Sprue

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This report of nontropical sprue is presented (1) to emphasize that the diagnosis might easily be missed for a long period of time in clinical practice and (2) to stress its resistance to conventional forms of treatment.

Case Report

M. S., a fifty-eight-year-old white female, was admitted to Saint John's Hospital on December 26, 1950. Three years prior to admission she began to complain of weakness, poor appetite, and loss of weight. She was told she was anemic and was given liver injections twice a week for several weeks. There was only slight improvement, and the symptoms recurred and persisted. About three months prior to admission she began to feel pain in the legs and noticed a hoarseness with an occasional stridor and some black and blue marks on the skin. During the month prior to admission there were additional complaints on walking, persistent weakness and exhaustion, loss of weight, and a diarrhea which occurred every two or three days, the stools being light colored and occasionally bulky. Two days before admission she had epigastric pain; one day prior to admission there was a convulsion lasting two hours, and she had a nosebleed on the day of admission. Family history and past history were noncontributory except that her mother died of diabetes mellitus.

First Admission.—Examination revealed an emaciated white female with marked pallor of the skin and mucous membranes. Ecchymotic areas were noted on the upper and lower extremities and the left buttock. The eye disclosed marked pallor of the conjunctiva, and the pupils reacted normally to light and accommodation. The left nostril disclosed some freshly clotted blood. The tongue was smooth and moist. Gums and pharynx appeared normal. The neck revealed no rigidity, masses, or abnormal pulsations. The thyroid gland was not palpable. Heart was not enlarged; rate was 100 with regular sinus rhythm; a systolic murmur was heard at the apex. The blood pressure was 112/80. Lungs were clear and resonant throughout. The abdomen showed slight distention of the lower half, no tenderness or rigidity. No masses were felt; the liver and spleen were not palpable. Extremities disclosed no edema, but there was tenderness on palpation of the left upper and right lower extremities. There was a positive Chvostek sign on the left side. Vaginal and rectal examinations were normal.

Shortly after admission, before any laboratory data were obtained, the patient had a bowel movement. The abnormal, light-colored, bulky stool was observed by the nurse and called to the physician's attention. This provided the immediate clue as to the probable diagnosis and pointed the way to the laboratory workup.

TABLE I.—Gastric Analysis

Specimen	Free Hydrochloric Acid	Total Acid	Presence of Bile and/or Blood
First	38	58	Positive for bile
Second	65	82	Positive for bile and blood
Third	68	98	Positive for bile and blood
Fourth	20	34	Positive for bile, negative for blood

Laboratory data were as follows: red blood cells 2,540,000, hemoglobin 7.5 Gm. (53 per cent), white blood cells 14,800 with neutrophils 90 per cent and lymphocytes 10 per cent, bleeding time three minutes, coagulation time five and one-half minutes, prothrombin time sixty-four seconds, and blood type group O, Rh negative. Urine was negative for sugar, albumin 4 plus, and many red blood cells were seen on microscopic examination. Icteric index was 6 units. Blood chemistry showed sugar 100 mg. per cent, nonprotein nitrogen 37 mg. per cent, urea nitrogen 17 mg. per cent, chlorides 516 mg. per cent, and calcium 4 mg. per cent. Results of gastric analysis of four specimens are given in Table I.

Glucose tolerance test was as follows: fasting 87 mg. per cent; one hour 105 mg. per cent; two hours 110 mg. per cent; three hours 100 mg. per cent. Stool analysis showed total fats 37 per cent, neutral fats 20 per cent, fatty acids 43 per cent, and soaps 37 per cent. Gastrointestinal series was negative.

Completed workup confirmed the clinical impression of nontropical sprue. Treatment consisted of an initial transfusion of 500 cc. of whole blood, intravenous injections of calcium gluconate and vitamin K, intramuscular injections of liver extract and folic acid, and high-protein, low-fat, low-carbohydrate diet. On this regime the patient speedily improved with increase in strength and appetite and subsidence of symptoms. Just prior to discharge from the hospital the blood calcium was 6 mg. per cent and prothrombin time twenty-six seconds (control fourteen seconds).

During the next twelve months the patient was ambulatory and received liver extract, vitamin B_{12}, folic acid parenterally, iron, and multivitamins and calcium orally. Bilateral cataracts were removed in March, 1951.

Second Admission.—On January 7, 1952, she was admitted to Queens General Hospital with chief complaint of asthma, faintness, dizziness, and episodes of bulky light stool and bloating after meals with flatus. In addition, there was anorexia and a weight loss of 14 pounds over the past year.

Physical examination revealed a thin, emaciated, white female in no acute distress, looking pale and clinically ill. The eyes showed dilatation of pupils; fundi were normal. The breasts were atrophic. Heart disclosed a rate of 90, regular sinus rhythm, no murmurs. Blood pressure was 90/60. Lungs were clear. The abdomen was firm and tympanitic; liver and spleen were not palpable. The extremities showed lesions from scratching on both legs and no edema. Rectal examination was negative. Reflexes were uniformly absent or barely perceptible.

Laboratory data were as follows: hemoglobin 12.5 Gm.; white blood cells 18,600 with polymorphonuclears 83 per cent, lymphocytes 12 per cent, monocytes 5 per cent; Mazzini negative; urine 8 to 10 white blood cells per high power field; total proteins 5.87, albumin 3.21, globulin 2.6; blood sugar 92 mg. per cent; urea nitrogen 16 mg. per cent; cholesterol 170 mg. per cent, cholesterol esters 135 mg. per cent; calcium 5.5 mg. per cent; phosphorus 3.3 mg. per cent; amylase 198 units; icteric index 8 units; cephalin flocculation 2 plus. Chest x-ray showed the heart slightly enlarged to the left and sclerosis of the aortic knob; the lung fields were clear.

On January 13, 1952, patient had a convulsion and became disoriented and incontinent. Blood pressure was not obtainable, and reflexes could not be elicited. Oxygen and intravenous calcium were administered with no response, and the patient expired shortly thereafter.

AUTOPSY FINDINGS

General Description.—The body was that of a moderately well-developed, well-nourished white female measuring 5 feet in length and weighing approximately 120 pounds. The skin appeared natural except for scratch marks on both lower extremities and also a large scratch mark, which was secondarily infected, in the midline of the lower abdomen. The scalp contained an abundance of gray-black hair. The irises were brown. The pupils were regular, equal, and in mid-dilatation. The sclerae were slightly icteric. The external ears were natural, the septum intact. The jaws were edentulous. The trachea was in the midline. The chest was symmetric, and the abdomen was round and flat. Breasts were flat. No hernias or scars were noted. No lymph nodes were felt. Rigor mortis of the extremities was moderate. There was cyanosis of the nailbeds but no clubbing or edema noted.

Body Cavities.—The pericardial cavity contained about 10 cc. of straw-colored fluid. Both pleural spaces contained about 50 cc. of yellow, clear fluid. Both leaves of the diaphragm were at the level of the sixth intercostal space anteriorly. The peritoneal cavity was clear and contained no fluid. The omentum was free. The liver edge extended about 3 cm. below the right costal margin. The relationship of the abdominal organs was natural.

Head.—The scalp appeared natural. There were no hemorrhages into the temporal muscles. The calvarium was opened in the usual manner. The brain weighed 1,050 Gm. No skull fracture was present. The circle of Willis was intact. No antemortem thrombi were noted. No asymmetry of the uncinate gyri were noted. The meninges were thin, smooth, and transparent. On section of the brain no areas of hemorrhage or softening were seen.

Respiratory.—The right lung weighed 300 Gm., the left 375 Gm. The mucosa of the tracheobronchial tree was moderately injected. The pleural spaces were clear, smooth, and mildly anthracotic. On cut section the lung parenchyma appeared emphysematous and on pressure yielded a considerable amount of frothy fluid. The pulmonary vessels were clear. The bronchioles were moderately dilated and did not extend to the periphery of the lungs. There were a few tracheobronchial nodes which were soft, black, and succulent. There were no enlarged or firm tracheobronchial nodes.

Circulatory.—The heart weighed 180 Gm. The epicardium was clear, smooth, and shiny. The myocardium showed white, scarred areas in the left ventricular wall. There was no shortening of the chordae tendineae. The papillary muscles showed no fibrosis. The endocardium was thin and smooth throughout with no adherent thrombi. The auricular appendages were clear. There was no dilatation or hyperthropy of the right or left side of the heart. The valve cusps were thin, delicate, and freely movable. There was no narrowing or distortion of the coronary ostia. There was a moderate sclerosis of the coronary arteries but no complete occlusion, and there was no sclerosis of the thoracic and abdominal aorta, renal or iliac arteries. The iliac veins, inferior vena cava, and renal veins were natural.

Gastrointestinal.—There were white leukoplakic columns seen in the esophagus. The stomach appeared somewhat hypertrophied with prominence of the rugal folds and moderate injection of the mucosa. The wall appeared thickened. The pylorus and duodenum appeared natural. In one area of jejunum about 5 inches in length there was injection of the mucosa. The small and large intestine appeared distended and dilated and contained clay-colored, foul-smelling feces. The wall of the small and large intestine was natural, but the wall of the rectum was very thin and atrophic. No masses or diverticulas were seen.

Biliary.—The liver was natural in size and position and weighed 1,000 Gm. The capsule was smooth and shiny, and on cut section the parenchyma was brownish in color with a large amount of nutmegging. It was firm in consistency. The gallbladder was natural in color and consistency and contained about 15 cc. of dark green, viscid fluid. There were no stones. The extrahepatic biliary tree was patent throughout. The pancreas was natural in position, size, and shape. The pancreatic duct was patent throughout. The portal and splenic veins were clear.

Excretory.—Both kidneys were natural in size and position; the right kidney weighed 150 Gm. and the left 160 Gm. There was some evidence of fetal lobulation. The capsule stripped with ease, leaving a smooth cortical surface. There were no scars. The corticomedullary junction was distinct throughout. The cortex was of the usual width. The medulla had the usual purplish, streaked appearance. The renal pelvis of the right kidney had no submucosal hemorrhage. The papillae appeared natural. There were no stones. The ureters were clear and entered the bladder in the usual fashion. The mucosal bladder surface was clear. There was no hypertrophy of the wall.

Genitalia.—The external genitalia were natural. The uterus was natural in size, position, and configuration. The external os had a fish-mouth orifice. The cervix was patent. The endometrial surface was white and smooth; the myometrium was grayish white in color and homogeneous. Both fallopian tubes were normal in position and patent, and both ovaries were firm and on cut section showed a lobulated, grayish white parenchyma. The breasts were symmetric, small, and flat, and there were no lesions on the overlying skin. On cut section there was a considerable amount of fibrotic tissue present. No masses were found by palpation or section.

Hematopoietic.—The bone marrow appeared hypoplastic, and small areas of rarefaction were seen. The spleen was natural in position and size and weighed 50 Gm. The capsule was slate blue. On cut section it was rather firm in consistency, and scraping produced a small amount of pulp. The follicles were not prominent.

Endocrine.—The thyroid gland was natural in position and size. On cut section it revealed red-brown, homogeneous tissue. The adrenals were natural in position and size. On cut section the right yellow cortex was of the usual width, and the grayish-white medulla was seen.

Stool Analysis.—Analysis of stool (wet weight) gave the following results: total fats 7.6 per cent, neutral fats 1.6 per cent, and fatty acids and soaps 6.0 per cent.

Summary

A case of nontropical sprue is presented with autopsy findings. Symptoms were present for three years before a diagnosis was made. Response to treatment was temporary, and a fatal relapse occurred one year later.

We wish to call attention to newer forms of therapy of nontropical sprue with ACTH and cortisone. Since the preparation of this report there have been references in the literature to the use of cortisone and ACTH in the treatment of this condition.[1,2]

4141 50TH STREET

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Strike It Rich Under Fire

A recent *TV Guide* magazine editorial tore into the CBS-TV Strike It Rich programs and upheld the viewpoint long held by the medical profession.

The editorial started out by saying: "It must be a cinch to write for the Daily Worker, Pravda and other Communist sheets as long as TV press agents dish out publicity releases like this one: 'Even though she failed to win the top cash prize on the CBS-TV Strike It Rich program, Mrs.——, of Philadelphia, "struck it rich" . . . when she appeared as a recent contestant. In desperate need of medical aid, Mrs.—— won $115 toward it, but through the show's heart line telephone, she received an additional $100, plus free medical treatment for as long as she may need it.' "

Then the magazine's editorial said: "can't you just hear the Red propagandists citing that as proof that the poor in America must bare their misery on television shows in the hope of winning medical treatment? The fact is that the poor in America receive medical care as good as, if not better than, anyone else.

"Leading doctors give unstintingly of their time, and hospitals and clinics of their facilities, so that those who require treatment and can't afford it can be helped—without charge. No one, especially in a great medical center such as Philadelphia, has to be 'in desperate need of medical aid.' No one has to appear on television to ask for such aid.

"In all fairness to Strike It Rich, the program did not originate the idea of using human misery as a form of entertainment. Nero, for one, had a great time with it. If, today, a television show can thrive on misery, and if that's what viewers want to see, the sponsors of the show have good reason to keep it on the air. But we can, and do, object strenuously to stupid publicity material that presents a false picture of our way of life in order to grab off a few lines of newspaper or magazine space."—*J.A.M.A., February 8, 1954*

SPECIAL ARTICLES

Factors That Weaken the Walls and Harden the Heart of the Modern Hospital

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This is a discussion of the impact of the powerful social and professional readjustments of the present era on the structure of the modern hospital. The structure of the hospital includes, besides the steel girders and masonry of its physical plant, the organization of its professional activities. These are its real walls. Granted that modern hospital architecture with improved facilities in plant structure may be conducive to improved patient care with economy of service, the physical plant can supply only the framework for efficient operation. The pattern of the hospital is governed by its staff organization. How it functions in its intimate contacts with human beings constitutes the heart of the hospital.

The predominant function of the hospital is the care of the sick, and the patient is the keystone and lodestar and major responsibility of the hospital. Because of the rapidly expanding scope of medical care with its complexities and skills, hospitals must provide a vast organization for the facilities and procedures requisite in diagnosis and treatment. In addition to this basic function, hospitals serve two further main objectives. These are teaching and research. Both demand further resources of technical equipment and special skills commensurate with the medical expansion of this era.

Large institutions possessing facilities for all of these purposes have developed widely over the nation, but caring for the great bulk of our population are the many smaller hospitals whose main objective is the care of the patient. Of the 6,665 hospitals in the United States, the government controls 2,078 or 31.1 per cent, and 4,587 or 68.8 per cent are under control other than governmental. Of this group of nongovernment controlled hospitals the majority have 100 beds or less (62.3 per cent), while only 13.2 per cent have 300 beds or more. Americans are a hospital-minded nation. In the past year hospitals cared for 18,914,847 patients and 3,170,459 births. Hospital admissions are at the rate of one every 1.6 seconds.

Social Economic Adjustments

Powerful pressure on the walls of the hospital results from several sources, both from within and without. One of the most important of these is the economic and social upheavals of the present postwar era. The first effect is the rise in rates, which in proportion to the mounting cost of operation of the hospital is never commensurate, resulting in deficits. The former sources of philanthropic donations are drying up, but expenses mount, and funds are lacking to extend plants and renew obsolete equipment and to furnish new facilities for expanding technical services.

Adjustment is especially hazardous in the hospital to a "forty-hour week" in the servicing of the hospital. The hospital must obviously function around the clock. A host of diseases do not recognize social dogmas but strike with startling disregard for convenience or schedule. To reconcile the disparity, either more workers are essential, or service must be curtailed. But the increasing tendency for shorter hours of work among technicians and certain professional workers strains the machinery of the hospital and jeopardizes the continuity of professional service. Serious emergencies demand attention with total disregard of calendar or clock. The x-ray and laboratory staffs who are increasingly seeking week-end and holiday leisure are certainly entitled to a rest from the heavy burden imposed on their laboratories furnishing the enormous volume of diagnostic procedures essential in the modern hospital. But they should maintain emergency coverage adequate for any contingency comparable to services available at such times for surgical and obstetric patients.

The burden of responsibility in this field naturally falls heavily on the director of the hospital. He occupies a critical position in the hospital organization for he is concerned with the financial burden of maintenance, with providing the many essential services involved in the operation of the plant, and with the over-all direction of policy. Close association between him and the staff and complete understanding and cooperation in the development and expansion of their common undertaking are imperative.

Prepaid Insurance Plans

Another powerful social adjustment in medical care results from the expansion of insurance plans. In 1953 there were 85,900,000 patients admitted to hospitals through one of several prepaid hospital insurance programs. The extent of the growth of this program which is continuously expanding is apparent when we compare this figure with 16 million admissions under such plans in 1941. It is estimated that about 23,000 persons are being enrolled each day in voluntary health insurance groups. Expansion of this program provides, besides the increase in number of members, increased service benefits afforded through a longer period of hospitalization, as well as increased coverage for a larger list of ancillary services. Another impact of such insurance plans is in the over-all expenditure of the whole nation for medical care. The amount expended in paying hospitals is only slightly less than that spent for paying doctors for professional services; for each dollar spent in 1951 for medical care, 28.1 cents was for physicians' services, and 23.8 cents went to hospitals. The figures become more significant when compared with the relative expenditures in 1930 when the proportion was 31.8 per cent for physicians and 15.9 per cent for hospitals.

Here is a source of pressure on the walls of the hospitals. Admissions crowd all the facilities already heavily burdened by the expanding pressure of greatly improved technical advances in diagnosis and treatment. The tax on hospital resources results in crowding not only of beds but of schedules as well. Furthermore, in preserving doctor-patient relationship insurance prepaid admissions on the basis of private patient care tend to reassign an increasing number of patients who formerly would have been ward patients to private service. For these patients we need vastly increased so-called semiprivate accommodations. Further, we shall need to revise our concept of available teaching material which heretofore has been ward admissions, relegating private patients to a different staff setup. The advisory Committee on Internships of the American Medical Association in 1953 made definite recommendations in this regard: "That the patients on private services are as sick and present the same range of diseases as those on public wards and that comparable opportunity for follow-up exists. That the same critical standards of diagnosis and treatment apply to private and public ward patients."

Regulation of Professional Activities

Whether a small community hospital or a great teaching center, the hospital becomes the workshop of its staff. The educational program may not be expressed, but although inarticulate, it is a natural sequence of hospital organization. Individual competence is stimulated, and the standard of practice rises for the staff who are exposed to conferences, daily hospital contacts, and staff meetings. In proportion to the development of this function of a modern hospital, professional advancement becomes the prerogative of the entire staff, and all share in its broad implications. A well-conducted service teaches all who share in its responsibilities and perhaps none more efficiently than its chief. The obligation for unbiased review and analysis of the medical and surgical services, including the specialties, rests squarely upon the staff.

University and teaching hospitals with full-time staffs organized for teaching and research as well as patient care can provide inherent supervision over the whole project. But in every type of hospital, even the so-called private hospitals, such control and check may be instituted and may be adapted to varying needs. What is involved is the basic need for safeguarding the best interests of patients and defining responsibility for their care. Study of catastrophes arising in the hospital, such as those following unforeseen contingencies as a fall out of bed or the more directly tangible accident of pulmonary embolism or cardiac arrest, concerns not only the patient and doctor involved but the entire staff, who should be alert to provide the remedies for meeting such emergencies. It is rare that such accidents or catastrophes result from individual carelessness but rather expose weakness of organization in a failure to provide the necessary safeguards through responsible control.

Surgical procedures involve long assignments in a crowded schedule, and equally increased demands result from new technics in diagnosis and treatment. The safety of the patient demands every safeguard which can be provided, but provision of all of these increases the load. It is obvious, therefore, that every hospital should conduct a searching inquiry as to how it is meeting this pressure. Self-appraisal in such matters is the surest guarantee for strengthening any inherent weakness. It is those working within the hospital responsible for patient care who must be held responsible for their own competence. Group appraisal is the fulfillment of personal conscience which is the doctor's most cherished attribute. Such self-appraisal transcends investigation and supervision by licensing authorities. Such self-appraisal is the surest sign that the heart of the hospital is sound.

The obligation for unbiased review and analysis of all the essential services in the care of patients rests squarely upon the staff. No board of trustees nor director can escape responsibility as custodians of the public interest in the hospital for indifference in this matter. It is assumed that a representative medical board governs all the professional activities of the hospital, closely integrated with the director and board of trustees. No single autocratic head should be entrusted with such ultimate authority which is not only the responsibility but the privilege of the staff. Teamwork and acceptance of the principle of teamwork on the part of all who participate in the care of patients is the first requisite of good staff organization.

Professional activities involved in the work of the hospital arrange themselves into certain categories: technics, records, laboratories, nursing, diet and medication, intern and resident training, library, and program of staff and sectional meetings. The integration of such committees covering each of these subdivisions becomes assured if the chairman of each is a member of the medical board, if numbers are not too great; in that case each should be a member of the executive committee which directs all professional activities for a large staff by whom it is selected.

The Joint Commission on Accrediting Hospitals has laid down basic rules for the regulation of the professional services of our hospitals. These provide for (1) a meeting of at least 75 per cent of the entire staff, devoted to a comprehensive review of all deaths and complications, monthly or quarterly if frequent sectional meetings consider these matters; (2) critical review of all charts by a record committee reporting to the board or its executive committee; (3) study by a tissue committee which shall review all tissues examined as well as other reports bearing on the management of cases, with special emphasis on correlation between pre- and postoperative diagnosis. The clear directives and far-reaching program of this Commission become more significant by reason of the fact that it is composed of representatives of the American Medical Association, American Hospital Association, American College of Physicians, and the American College of Surgeons. The most interesting fact is that it is typically American in the sense that its authority emanates from within the confines of the medical profession. This authority is authentic and reasonable.

Although tradition and precedent play a large role in the medical organization of a hospital, these need not prevent adjustments in policy and methods necessary to meet the extraordinarily heavy demands of a changing order in society and in medical practice. Stability does not mean statism for the hospital any more than for any other modern institution. When professional activities are properly integrated through controlled participation of all who are involved, rather than as a series of independent units, the hospital machinery will function more smoothly and efficiently. For in no art is it more fundamental than in the practice of medicine in our hospitals that "style in any art is a kind of tension arising from the conjuction of the greatest discernible effect with the least discernible effort."

Intern and Resident Training

The hospital fulfills the further function of training interns and residents. The safeguards regulating training of interns and residents set up by the various groups having authority in this field leave wide autonomy to approved hospitals and exclude a large number of hospitals as not meeting their minimum standards. That so many hospitals fail to meet the minimum standards prescribed emphasizes their lack of competent organization. It would seem advisable that constructive effort should be made by those who have the authority to stimulate such hospitals toward the standardization necessary to reach their goal. Leadership in this field is completely lacking, and the loss of all the clinical opportunities available in hospitals not approved must indeed be very large. Not only would these clinical opportunities be made available, but, in addition, such hospitals would be enormously benefited in the process of approval by meeting standards with manifest benefit to their community. When the time comes, as it will inevitably, that the present shortage of interns leads to need for increased approved hospitals for intern and resident training, these should be available. Here is weakness of hospital walls that needs constructive support.

Hospitals must have resident and intern personnel. This is essential for hospital function. Teaching hospitals providing a wide range of training facilities are organized so that the function of teaching is a part of staff responsibility covering clinical instruction of medical students as well as intern and resident staffs. The training program is an integral responsibility of the hospital staff. While large medical centers may provide even an educational director for efficient supervision, smaller hospitals have an equal responsibility for efficient and orderly programs of personal instruction for interns and residents. In their report to the Council of Medical Education of the American Medical Association, the Advisory Committee on Internships, which had studied the whole problem presented by the changing order in medical education and hospital organization from the basic standpoint of the intern and his place in the modern hospital, offered as their conclusion the following: "That the attending attach the same value and breadth of viewpoint that goes to time spent in teaching and do not treat teaching as an unwelcome burden inherent in staff privileges. That the same critical standards of diagnosis and treatment apply on public and private ward patients."

Included in every such program should be the human as compared to the purely technical approach to patients, for training has for its objective the attainment of sound judgment, as well as technical efficiency, and of ethical standards, as well as professional attainments. This may well unconsciously escape emphasis by reason of the necessary concentration on preparation of the resident for competitive qualifications in future specialization, but it still remains an essential factor. Those who have received the old preceptorship type of training would advise the value of that type of personal supervision without any sacrifice of the present high standards of resident training in the vast majority of our hospitals. It would curb a present dominant tendency for our young men to assume the attitude of knights of old who ride into their prey as master craftsmen, each "in the very morn of his youth, ripe for exploits and mighty enterprises." Such supervision and cultivation of the training program are in sharp contrast to unclassified internships and require organization of the teaching program. This results at once in improved records, staff service, and in patient care. Assignment to the usual subdivisions of the various services aimed at coverage for convenience of the service must envisage in addition truly comprehensive training for interns. Residency training involves an even more far-reaching program at the graduate level of teaching special technical and specialized skills. Toward all of these an important contribution flows from proper organization of professional activities involving staff and sectional meetings, library and record room facilities, and the review of cases. Personal instruction must not be submerged in the machinery of training but should be aimed at the development of maturity and the attainment of judgment.

We might even today, with all the expansion of technical and scientific knowledge and enlarging scope of therapy, remember the wisdom of what Benjamin Franklin wrote to a friend about medical education and training when he was the dominant figure in founding the Pennsylvania Hospital in 1751: "I suppose there is more valuable knowledge of Physic to be learnt from the honest candid observations of an old Practitioner—who has discovered the insufficiency of most remedies and modes and practice, than from all the formal lectures of all the universities upon earth."

Nursing Problems

The role of the nurse in hospital function is so paramount that nursing service becomes a major factor in hospital organization. The outstanding problem in this field is the scarcity of nurses available for efficient care of the sick. The number of nurses and their distribution in the hospitals is at the heart of this problem. Last year there were 226,613 graduate nurses employed in all our hospitals and 31,013 assigned to private duty. But of this total the hospitals assigned 10,166 nurses to administrative duties, 6,259 as full-time instructors, 22,997 as supervisors, and 35,829 as head nurses. In other words, 33.3 per cent of all nurses are assigned to special services. There were only 112,342 full-time and 29,721 part-time general duty nurses or 62.97 per cent of all nurses available for general nursing care.

Emphasis is placed on the expansion of the administrative and educational program of the training of nurses in elevating the standards of our training schools, but the emphasis has been on this object rather than on meeting or maintaining general nursing service for patients. Furthermore, a shortage results from the withdrawal from nursing service in the hospital of a very considerable group of nurses who enter the armed services or government agencies or school and industrial service. The goal is set among leaders in the nursing field on elevation of standards rather than on adequate nursing service for patients, both through adequate numbers of nurses and through their practical fitness for nursing. Before the present era of hospitalization, when patients were sick at home, they received home nursing care which provided creature comforts without scientific standards but happily satisfactory to the body and soul of that period. The same human needs exist today which science in nursing cannot wholly satisfy. Nursing care, to be adequate, takes time difficult to assign when there is a scarcity of graduate nurses and undergraduates are assigned to long periods of demonstrations and a crowded teaching schedule.

Without any substantial sacrifice in the high plane of our fundamental present-day nursing standards, a division could be evolved between the two functions of the nurse in the modern hospital of administrative supervisory nursing and of furnishing direct nursing care to patients. The present system selects and trains nurses for a system which sets standards for all nurses at a level fitting all graduate nurses for either nursing service or as administration instructors or other specialized services. There is a fixed standard in qualifications and the training program.

If comparison is made with our present conception of the education of doctors and their training for specialization, we find universal acceptance that while undergraduate medical education with reasonable intern training may fit the doctor for general practice, specialization demands special graduate training. We demand, therefore, advanced graduate work of those who are to become specialists in our hospitals or teachers in medicine. It would be logical to apply the same reasoning to the field of nursing. Nurses should be adequately and thoroughly trained for general nursing duty in a schedule adapted to such fundamental preparation. They then could receive additional training to fit them for their administrative and teaching skills as graduate training. This should permit of a readjustment of the schedule of preparation in the training schools. A system could be set up well within the present standards, condensing the three-year course so as to compress it with greater emphasis on purely clinical nursing, leaving more advanced scientific education to be covered by those who qualify for specialization.

This is a practical and pressing problem in our hospitals. Assignment of nurses includes such vital services as anesthesia, recovery room care, and general supervision of wards and groups of rooms, all of which require special training and special capacity. These specialized services require fundamental training at the graduate level far beyond the general nursing course. The importance of these supervisory and administrative responsibilities justifies this additional graduate course. Such service contributes improved patient care and safety in all the complex technical procedures of modern medicine. But there is equal need for providing direct nursing care. Patients remain in need of nursing irrespective of the administrative and technical considerations in the system of training of nurses. An understanding and accomplishment of an accurate twenty-four-hour fluid intake and output chart does not require specialist knowledge of the complex theory of tubular resorption. Nursing care of thyrotoxicosis does not demand knowledge of all the organic chemistry of the iodine compounds involved. Both require, however, fundamental training in basic preparation and more practical bedside care. This emphasis on the clinical aspect of nursing is, after all, fundamental if the function of the nurse in hospital organization is to be truly integrated into the general thesis that the hospital is dedicated to the care of sick patients.

Abraham Flexner, in a discussion of what vocations have a professional status, laid down two concepts which apply to the role of the nurse in hospital organization. He stated that among other attributes: (1) They involve essentially intellectual operations accompanied by large individual responsibility, and (2) they are not merely academic and theoretic, however, but are definitely practical in their aims.

Whether nurses' aides, so-called, or practical nurses can be made available for the routine service in our nursing care or whether a revised and direct supply of graduate nurses would fulfill this need, we should take heed of the additional strain on the walls of our modern hospital by inadequate nursing care.

In their relation to general hospital organization, nurses are an essential part of the medical organization. The selection of supervisors and administrative assistants is based on an evaluation which necessarily often does not include an estimate of their ability of leadership or as executives. They may have skill but lack what it takes to direct and inspire. Consideration of fitness for executive posts, such as industry devotes to personnel, in the hospital organization might reshuffle and shift when indicated and ensure continuity of a long-range program of efficient function by proper selection. Assignment of personnel in the hospital too often results in the fitting of a square peg in a round hole.

Relating the nursing service to hospital organization by a definite plan is more conducive to efficiency than a loose contact suddenly established only when something goes wrong. If the nurses understand in advance what may be necessary in equipment and care when a special therapy is ordered, there will be a better systematic carrying out of orders and procedures. In the operating room conferences held once a week between supervisors and surgeons or a representative committee would promote efficiency and better function of this vast department of the hospital. Such conferences provide an opportunity to discuss matters of technic, and changes in methods or equipment suggested by either group. This is one way to resolve the constantly recurring difficulty of lack of preparation for an operation resulting from the necessity of meeting conditions not anticipated in the original posting of the operation, although perhaps foreseen by the surgeon, for which the operating room might have provided better coverage. In other words, in her vital role in the hospital the nurse should be looked upon as a member of the team in the overwhelming importance of teamwork for efficient operation of the modern hospital.

Hospital "Politics" and Ethical Practices

The focus of all the problems so far discussed is the doctor and his relationship to the hospital. This depends largely on whether he conceives of the hospital as primarily developed for his personal advantage, which is a prevalent attitude. In this era association with hospitals becomes indispensable for the doctor and confers both professional and financial security since it is the site of most of his practice. It is properly looked upon as an important criterion of competence. The hospital connection confers definite privileges but also specific obligations. Among these are candor and cooperation with the staff and sharing in its diversified activities and integration of the individual into the whole professional organization. Men differ widely in their ability or interest in the essential administrative machinery. Some show natural aptitude and enthusiasm, while others exhibit disregard with predominant individualism. Competent direction channels staff resources into proper spheres for it recognizes diversified talents and the proper place for each in the large staff of the organization.

Certain vicious practices may invade the doctor's role in the hospital, the responsibility for which, while predominantly individual, involves the whole staff of the organization. Among these is "hospital politics." This represents the bickering and back-biting prevalent in all large groups but largely dependent on the well-known temperamental reaction of doctors and on jealousy and intrigue. Putting ringleaders hard at work and sharp discipline are provided by a good staff organization. Cutting corners in attendance at meetings, in record keeping, and in supervision of cases and other assignments represents a tendency fostered by loose staff organization and requires key supervision and an occasional overhaul of the machinery. Intrigue and fault-finding are inevitable in any large group of doctors who are likely to assume a prima donna reaction to discipline.

There are, however, other more vicious practices which, although relatively uncommon, manage to invade certain hospitals, just as termites and other pests may invade the cleanest, well-built country home. These are fee-splitting and ghost surgery, the vicious quality of which is due to the fact that they directly affect the safety of the patient and involve a specific moral degradation among doctors. They are the result of cupidity for fees among men who otherwise are honorable enough and usually professionally competent.

Fees constitute an important part of the relationship of doctors in current practice in the hospital. Fees involve the whole broad principle of full-time paid staffs as well as of individual practitioners who, after all, constitute the majority of doctors attached to hospitals. The great bulk of the profession are forthright, honest, and exhibit ethical standards in their handling of fees. In certain communities in the handling of patients, members of hospital staffs who refer cases to surgeons or specialists often set up a system of mutual assistance for which joint bills are sent. Since all concerned, including the hospital and patient, are fully cognizant of the financial arrangements, this system differs from fee-splitting.

Fee-splitting contrives a clandestine course among a very small proportion of men who have the same membership in national organizations that honest men possess. It exists because the business is profitable, like bribery among public officials, among doctors who are endowed with a similar unprincipled personality and contempt for all hospital rules and standards. The fact that it is relatively uncommon in our great profession is no excuse for the large majority to ignore it. There has been sporadic publicity and continuous pious exhortation against the evils of fee-splitting on the part of our national organizations. But there has been no defined, concerted campaign for the control and eradication of the business. It is, of course, a practice cloaked in secrecy, and the slimy business is beyond the grasp of hospital boards or local groups who attempt to grapple with the splitters who are entrenched in their mantle of professional competence and inviolate rights, for competent proof is a horse of a color different from all the other horses you may pursue in dealing with it. When a powerful voice is raised in our national committees or a courageous individual group attempts to expose the business, the conservative ponderous machinery of organized medicine intent on the preservation of the dignity and traditions of organized medicine grinds to a halt, to the enrichment of the splitters and the discouragement of all good men. If, once and for all, all the vast authority of the national organizations that determine hospital standards would institute a determined campaign, bringing support as well as constructive guidance to the local level of control, we might then clean our Augean stables. There is at any rate no evidence that fee-splitters will disappear by any inherent improvement of the human race in this era of economic pressure and social readjustment.

Ghost surgery is another example of low moral tone in the hospital. Legitimate consultation between surgeons and their association in the operating room is perverted into a commercial traffic conceived on the basis of manipulation of fees rather than on any primary surgical consideration. It is a form of medical counterfeiting since the patient assumes that the practitioner who employs the ghost surgeon actually is performing the operation.

In general, insurance coverage contributes an increasing increment of the individual income of physicians for services rendered in the hospital. A certain amount of chiseling inevitably arises, but on the whole there is an economic benefit to all concerned. Professional competence largely determines the economic status of doctors, even in the zone of the fees collected by full-time staffs in their care of private patients and even in that debatable field of the invasion of private practice by hospitals. The economic pressure in this era falls heavily on the individual doctor and the problems involved in these various overlapping zones where fees are a factor will with time reach a fair adjustment, provided ethical standards can be maintained that are fair alike to the hospital and to the individual practitioners.

Centralization and Specialization

In the furious pace of modern medical practice knowledge now becomes immediately available, and application of new procedures developed anywhere in hospital practice may be put to clinical use in proportion to the physical as well as professional resources of the hospital. The concentration of both physical and professional resources in great centers is economically sound and determined by the same factors which make similar concentration of resources necessary in many other spheres of American life for efficient utilization. In providing ready access for patients transportation has now become immediately available and makes the hospital accessible in spite of distance. Practical measures are constantly enlarging in making available all our vast resources for prompt direct application in clinical medicine.

Such resources may not exist in hospitals which otherwise are equipped to provide the highest standards of care in their community. Concrete examples where such consideration applies exist in many fields. Among these are the use of isotopes, requiring not only special facilities in equipment but also a basic knowledge remote from clinical practice. Specialization shows evidence of subdivision of the specialty into special fields as in the example of the development of cardiac surgery within the field of thoracic surgery. The unfolding of the drama of cancer will probably entail even more drastic readjustments in the handling of this great group of cases constituting so large a proportion of hospital admissions.

The referral of those complicated problem cases requiring highly specialized services to institutions having all the facilities available to provide expert handling is in the best interests of the patient. As the pace accelerates in the manifold specialization fields of practice, such a system will become essential in the regions of the country which cannot support costly hospital facilities. Such a program, now being evolved in individual cases, would require for its implementation on a comprehensive national scale the location of strategic centers and the necessary means of fast and safe transportation. Both of these already exist and merely require integration.

Conclusion

The emphasis on the great role of the psychosomatic concept of diseases and the increasing importance of the psychiatric aspects of medicine make it necessary to recognize the place of spiritual and human values in hospital organization. Seldom definitely recognized but rather assumed to find practical expression, all these factors enter into hospital organization. While many highly organized surgical and gynecologic services are reporting the benefits accruing from association with psychiatrists in their services, the need exists for recognition of the fundamental fact that the hospital is probably the most human organization of all complex organizations in government, industry, or any other sphere of life. There is a heart in every hospital, and the cultivation of human relationships in the hospital is as essential as physical care of patients. This is the factor which will determine whether the patient leaves the hospital filled with genuine appreciation or bearing a chip on his shoulder placed there by lingering resentment over some breach of human behavior in his hospital contact.

The pressure which this era has so rapidly developed for the necessary readjustment of hospital organization to powerful economic factors and to the enormous developments in medical practice will continue as a further challenge. There is no reason to fear that this challenge will not be met with the same wisdom and courage and imagination that has brought the modern hospital so far forward in making available to all our people the highest quality of medical care in the world.

Facial Pain

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THE etiologic factors of facial pain are many and varied. Some of these causes are infected sinuses, malposition of the cervical spine, neuralgias, ear disturbances, nasal aberrations, congenital and traumatic deformations, and other general infections.

One of the causes of this pain which has not been completely investigated is the condition of the temporomandibular joint. Usually when a patient manifests a facial type of pain, he consults the family physician. Being well aware of the complexity of of this pain, the physician usually tries to rule out the various etiologic factors by the process of elimination. If the factor is found, then the facial pain is treated accordingly, and usually the symptoms disappear. However, many cases do not respond, and it is in these cases that the author suggests that the temporomandibular joint be considered. As far back as 1934 the medical profession was interested in facial pain to the extent that the able investigator Costen[1] described a series of symptoms that were named after him (Costen's syndrome). Some of the reasoning behind these symptoms has been found not entirely valid under recent investigation, but nevertheless the implication is there. Temporomandibular joint syndrome would appear to be the better term.

In establishing a diagnosis for temporomandibular joint disturbances the following subjective symptoms are of interest. The patient may complain of various degrees of discomfort from a dull sensation to extreme pain. The duration of the pain may vary from an intermittent type to one that remains quite constant. The pain may not be at the site of the disturbance but can travel over other pathways.

There can be preauricular tension and pain, pain in the temporal area, pain that spreads from the malar process to the ala of the nose, pain around the frontal sinus and orbital area, pain that travels from the ear up to the occipital portion of the skull and down to the back of the neck, migraine type of headache, pseudopostnasal drip, difficulty in deglutition, tingling and burning sensation on the sides of the tongue, impaired respiration, impaired speech, or dryness of the mouth. The symptoms are augmented by various objective ones such as facial malformations, snapping and crackling of one or both joints on opening and closing, restricted or too free opening of the mouth (trismus or subluxation), tenderness on pressure over the joint, and hypotonic or hypertonic facial musculature. The symptoms are all brought about because of a malrelation of the head of the condyle in the glenoid fossa of the temporomandibular joint. This malrelation may be of a unilateral or bilateral type and can be caused by congenital defects, malocclusion, loss of teeth and their nonreplacement, loss of vertical height or dimension, traumatic occlusion and faulty dental prothesis, habits such as unilateral mastication, pipe clenching, etc., acute and chronic inflammation of the joint, various forms of rheumatism and arthritis, possible dietary deficiencies, and possible glandular aberrations.

There are many ways that the *mechanical* malposition can be corrected. In the case of loss of vertical dimension the height is increased in order to bring the head of the condyle into its correct relationship in the joint. If the mandible is pushed slightly distally or rotated to any degree, then a temporary dental splint can be used. The use of direct injections of sclerosing solution into the joint, especially in cases of subluxation, have been shown to be of great help In extreme cases surgery may be attempted, especially in cases of malocclusion of the class III type ("bull-dog" appearance).

In handling such cases of mandibular joint pain, the cooperation of both the physician and the dentist is required not only in arriving at the diagnosis but in planning the treatment. In so doing they can study the patient from all angles, thereby eliminating faulty diagnosis and treatment.

Two other factors that might be brought to mind are the psychologic and muscular afflictions attached to this disturbance. Pain of any degree over any length of time will always leave some effect on the nervous system of the patient. During diagnosis and treatment of such patients the physician is in an enviable position to treat the mental attitude of the patient, as well as the physical, by means of suggestions, understanding, drug therapy, and other established practices of psychic medicine. Musculature in and about the face that has been affected by this syndrome must also be retrained to normal. In practically all cases, through disuse various groups of muscle and fascia may become extremely hypotonic. Some cases display a hypotonic musculature due to partial or complete disuse, while others demonstrate a hypertonic musculature due to greater tensions. Since the position of the head of the condyle in the mandibular joint is primarily retained by antagonistic action of the muscles of the supramandibular and the inframandibular groups, any mechanical appliance will have a limited effect unless these muscles are retrained to their normal tone. In cases where the cause of symptoms has been bad habits, new neuromuscular pathways must be developed.[2] All this is necessary to place the mandible in the normal relationship, not only to the maxilla, but to the entire axial skeleton.[3] "Oral Orthopoedea" is the term that can be used in repositioning procedures.

745 FIFTH AVENUE

References

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2. De Vanna, A. N.: New York J. Dentistry **22**: 441 (Dec.) 1952.
3. Riesner, S. E.: J. Am. Dental A. **10**: 25 (Dec.) 1938.

The ideas of Freud were popularized by people who only imperfectly understood them and who assigned to them a prominence out of all proportion to their true importance.—ALFRED NORTH WHITEHEAD

Department of

MEDICAL CARE INSURANCE

Conducted by GEORGE P. FARRELL, *Director*

Eighth Annual Progress Report on New York State Blue Shield Plans

The Bureau operates under the direction of the Society's Council Committee on Economics and its Subcommittee on Medical Expense Insurance. The statements in this report reflect the operation of the plans for the year ending December 31, 1953, and comparisons with previous years.

Membership.—At December 31, 1953, membership totaled 4,311,464, an increase of 544,383.

Earned Premium Income and Benefits to Members.—Net earned income on premiums received amounted to $42,923,738, an increase of $7,096,129, and incurred benefits to members were $30,467,755, an increase of $4,504,656.

Payments to Doctors.—Claim payments to doctors amounted to $29,461,597, an increase of $3,986,742.

Surplus and Maternity Reserves.—Total surplus at December 31, 1953, amounted to $15,899,869, an increase of $6,045,045. Reserves for deferred maternity benefits amounted to $5,037,273, an increase of $283,326.

During 1953, Genesee Valley Medical Care, Inc., Rochester, paid the doctors $121,125, which was the accumulated contribution commencing February, 1952, and representing the difference between 90 per cent of parity and parity and reflected in Unassigned Surplus at the end of 1952. This accu-

TABLE I.—Comparative Membership (Subscribers and Dependents) for Years Ending December 31, 1953, and 1952

Location	1953	1952	Increase	Per Cent of Increase
New York				
Subscribers	1,419,150	1,276,934	142,216	11.14
Dependents	1,638,649	1,442,948	195,701	13.56
Total	3,057,799	2,719,882	337,917	12.42
Buffalo				
Subscribers	185,891	156,268	29,623	18.95
Dependents	265,061	227,517	37,544	16.50
Total	450,952	383,785	67,167	17.50
Rochester				
Subscribers	126,280	106,280	20,000	18.82
Dependents	182,884	152,977	29,907	19.55
Total	309,164	259,257	49,907	19.25
Syracuse				
Subscribers	40,808	29,696	11,112	37.42
Dependents	61,709	45,414	16,295	35.88
Total	102,517	75,110	27,407	36.49
Utica				
Subscribers	76,206	75,798	408	0.54
Dependents	100,564	95,192	5,372	5.64
Total	176,770	170,990	5,780	3.38
Albany				
Subscribers	85,253	64,922	20,331	31.32
Dependents	115,164	86,375	28,789	33.32
Total	200,417	151,297	49,120	32.46
Jamestown				
Subscribers	6,133	3,115	3,018	96.88
Dependents	7,712	3,645	4,067	111.58
Total	13,845	6,760	7,085	104.81
Grand Totals				
Subscribers	1,939,721	1,713,013	226,708	13.23
Dependents	2,371,743	2,054,068	317,675	15.46
Total	4,311,464	3,767,081	544,383	14.45

mulation was released for payment by the State of New York Insurance Department.

The Western New York Medical Plan, Buffalo, paid to the doctors $132,342 representing monies withheld from September to November, 1951, and paid in full all monies withheld. The Plan also refunded organizational deposits of $7,360.

Central New York Medical Plan, Syracuse, refunded organizational deposits to the doctors in the amount of $16,800.

Additional information has been compiled and is available upon request.

This report covers Blue Shield Plans approved by the Medical Society of the State of New York.

TABLE II.—Comparative Membership and Increases (Blue Shield and Blue Cross) and Per Cent of Blue Shield Members to Blue Cross Members for Years Ending December 31, 1953, 1952, and 1951

Location	1953		1952		1951	
	Members	Increase	Members	Increase	Members	Increase
New York						
Blue Shield	3,057,799	337,917	2,719,882	230,369	2,489,513	540,598
Blue Cross	5,410,499	230,061	5,180,438	256,985	4,923,453	440,842
Per Cent	56.52		52.50		50.56	
Buffalo						
Blue Shield	450,952	67,167	383,785	30,670	353,115	16,132
Blue Cross	677,991	49,493	628,498	13,421	615,077	16,270
Per Cent	66.51		61.06		57.41	
Rochester						
Blue Shield	309,164	49,907	259,257	34,198	225,059	95,544
Blue Cross	428,518	19,503	409,015	6,661	402,354	14,645
Per Cent	72.15		63.39		55.94	
Syracuse						
Blue Shield	102,517	27,407	75,110	25,291	49,819	8,936
Blue Cross	360,963	7,247	353,716	5,364	348,352	20,184
Per Cent	28.40		21.23		14.30	
Utica						
Blue Shield	176,770	5,780	170,990	17,805	153,185	14,813
Blue Cross	199,081	874	198,207	13,977	184,230	8,805
Per Cent	88.79		86.27		83.15	
Albany						
Blue Shield	200,417	49,120	151,297	19,444	131,853	30,657
Blue Cross	328,579	26,435	302,144	9,052	293,092	9,000
Per Cent	60.99		50.07		44.99	
Jamestown						
Blue Shield	13,845	7,085	6,760	4,927	...	...
Blue Cross	45,030	1,804	43,226	2,718	...	...
Per Cent	30.75		15.64		..	
Totals						
Blue Shield	4,311,464	544,383	3,767,081	362,704	3,403,544	706,680
Blue Cross	7,450,661	335,417	7,115,244	308,178	6,766,558	509,646
Per Cent	57.87		52.94		50.30	

TABLE III.—Claim Data (Paid Basis) for Year Ending December 31, 1953

Plan Location and Type of Contract	Earned Premium Income	Claim Cost	Per Cent of Claim Cost to Earned Premium	Number of Claims	Average Cost per Claim	Claim Incidence per 1,000 Members per Annum
New York						
Surgical	$13,386,084	$ 9,448,894	70.59	148,537	$63.61	101.7
Surgical, In-Hospital Medical	14,913,896	9,742,758	65.33	166,667	58.46	126.0
General Medical	2,753,809	1,908,312	69.30	142,589	13.38	1,343.3
Total	$31,053,789	$21,099,964	67.95	457,793	$46.09	
Buffalo						
Surgical	$ 3,117,603	$ 2,350,619	75.40	91,313	$25.74	254.8
Surgical, In-Hospital Medical	773,446	426,470	55.14	15,703	27.16	273.7
Total	$ 3,891,049	$ 2,777,089	71.37	107,016	$25.95	
Rochester						
Surgical	$ 3,495,942	$ 2,406,776	68.84	54,101	$44.49	189.2
Syracuse						
Surgical*	$ 54,077	$ 49,165	90.92	1,598	$30.77	280.5
Surgical-Medical*	543,767	372,556	68.51	19,042	19.56	467.7
Surgical, In-Hospital Medical	481,923	342,878	71.15	10,476	32.73	228.4
Total	$ 1,079,767	$ 764,599	70.81	31,116	$24.57	
Utica						
Surgical	$ 456,744	$ 299,500	65.57	12,862	$23.28	216.2
Surgical, In-Hospital Medical	957,325	729,285	76.18	31,572	23.10	279.1
Total	$ 1,414,069	$ 1,028,785	72.75	44,434	$23.15	
Albany						
Surgical, In-Hospital Medical	$ 1,869,994	$ 1,317,867	70.47	27,372	$48.15	147.9
Jamestown						
Surgical	$ 122,392	$ 66,517	54.35	1,473	$45.16	142.9
Grand Totals	$42,927,002	$29,461,597	68.63	723,305	$40.73	

* Contracts on an indemnity basis and not offered to new groups.

TABLE IV.—COMPARATIVE NUMBER OF PAID CLAIMS (BY CONTRACT) FOR YEARS ENDING DECEMBER 31, 1953, AND 1952

Location	Surgical	Surgical and In-Hospital Medical	Surgical-Medical (Home, Office, Hospital)	Total Claims
New York				
1953	148,537	166,667	142,589	457,793
1952	145,584	124,752	114,248	384,584
Increase	2,953	41,915	28,341	73,209
Buffalo				
1953	91,313	15,703	...	107,016
1952	83,034	5,802	...	88,836
Increase	8,279	9,901	...	18,180
Rochester				
1953	54,101	...	...	54,101
1952	41,768	...	...	41,768
Increase	12,333	...	...	12,333
Syracuse				
1953	1,598	10,476	19,042	31,116
1952	2,063	...*	20,896	22,959
Increase	−465	10,476	−1,854	8,157
Utica				
1953	12,862	31,572	...	44,434
1952	15,454	24,171	...	39,625
Increase	−2,592	7,401	...	4,809
Albany				
1953	...	27,372	...	27,372
1952	...	24,165	...	24,165
Increase	...	3,207	...	3,207
Jamestown				
1953	1,473	...	...	1,473
1952	640	...	...	640
Increase	833	...	...	833
Totals				
1953	309,884	251,790	161,631	723,305
1952	288,543	178,890	135,144	602,577
Increase	21,341	72,900	26,487	120,728

* Not available for 1952.

TABLE V.—COMPARATIVE CLAIM INCIDENCE (FREQUENCY WITH WHICH CLAIMS OCCUR) PER 1,000 PARTICIPANTS PER ANNUM (BY TYPES OF CONTRACTS) FOR YEARS ENDING DECEMBER 31, 1953, 1952, 1951, AND 1950

Location	Surgical	Surgical and In-Hospital Medical	Surgical-Medical (Home, Office, Hospital)
New York			
1953	101.7	126.0	1,343.3
1952	96.1	122.2	1,229.3
1951	85.5	106.4	966.8
1950	80.1	101.0	902.4
Buffalo			
1953	254.8	273.7	...
1952	233.6	345.4	...
1951	216.6	343.9	...
1950	178.0	329.5	...
Rochester			
1953	189.2	...	...
1952	171.3	...	...
1951	155.1	...	...
1950	132.9	...	...
Syracuse			
1953	280.5	228.4	467.7
1952	200.6	...	373.6
1951	174.9	...	417.7
1950	154.6	...	433.7
Utica			
1953	216.2	279.1	...
1952	228.4	247.2	...
1951	226.7	282.0	...
1950	226.2	282.0	...
Albany			
1953	...	147.9	...
1952	...	168.5	...
1951	...	148.4	...
1950	...	143.4	...
Jamestown			
1953	142.9	...	...
1952	148.9	...	...

TABLE VI.—COMPARISON OF EARNED PREMIUM INCOME, INCURRED CLAIM AND ADMINISTRATIVE EXPENSES AND CLAIM AND EXPENSE RATIOS TO EARNED PREMIUM INCOME FOR YEARS ENDING DECEMBER 31, 1953, AND 1952

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown	Totals
Earned Premium Income								
1953	$31,053,789	$3,891,049	$3,495,942	$1,079,767	$1,410,805	$1,869,994	$122,392	$42,923,738
1952	26,314,650	3,224,063	2,675,769	773,624	1,352,523	1,432,063	54,917	35,827,609
Increase	$ 4,739,139	$ 666,986	$ 820,173	$ 306,143	$ 58,282	$ 437,931	$ 67,475	$ 7,096,129
Incurred Claim Expense								
1953	$21,616,307	$2,947,089	$2,570,844	$ 795,568	$1,049,263	$1,408,115	$ 80,569	$30,467,755
1952	18,769,739	2,354,138	2,055,108	524,052	1,038,614	1,185,254	36,194	25,963,099
Increase	$ 2,846,568	$ 592,951	$ 515,736	$ 271,516	$ 10,649	$ 222,861	$ 44,375	$ 4,504,656
Administrative Expense								
1953	$ 4,799,283	$ 435,783	$ 326,731	$ 137,895	$ 247,374	$ 205,415	$ 17,539	$ 6,170,020
1952	4,250,909	328,254	262,147	113,392	219,418	155,760	9,400	5,339,280
Increase	$ 548,374	$ 107,529	$ 64,584	$ 24,503	$ 27,956	$ 49,655	$ 8,139	$ 830,740
Claim Expense Ratio to Earned Premium Income								
1953	69.61	75.74	73.54	73.68	74.38	75.30	65.83	70.98
1952	71.33	73.02	76.80	67.73	76.79	82.76	65.91	72.47
Administrative Expense Ratio to Earned Premium Income								
1953	15.45	11.20	9.35	12.77	17.53	10.98	14.33	14.37
1952	16.15	10.18	9.80	14.66	16.22	10.88	17.12	14.90

TABLE VII.—INCOME, GAIN, AND LOSS FOR YEAR ENDING DECEMBER 31, 1953

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown
Earned Premium Income	$31,053,789	$3,891,049	$3,495,942	$1,079,767	$1,410,805	$1,869,994	$122,392
Claims and Expenses Incurred	26,415,590	3,382,872	2,897,575	933,464	1,296,637	1,613,530	98,108
Gain from Underwriting	$ 4,638,199	$ 508,177	$ 598,367	$ 146,303	$ 114,168	$ 256,464	$ 24,284
Underwriting Adjustments							
Deferred Maternity Benefits	−$ 145,000	−$ 80,000	−$ 5,154	−$ 12,861	$ ...	−$ 33,000	−$ 7,310
Provision for Special Contingent Surplus	− 1,256,705	− 159,562	− 141,961	− 47,145	− 56,716	− 76,921	− 5,305
Profit and Loss Items	− 98,490	5,714	535	...	165	− 3,024	40
Total Underwriting Adjustments	−$ 1,500,195	−$ 233,848	−$ 146,580	−$ 60,006	−$ 56,551	−$ 112,945	−$ 12,575
Adjusted Gain from Underwriting	$ 3,138,004	$ 274,329	$ 451,787	$ 86,297	$ 57,617	$ 143,519	$ 11,709
Gain from Investments	365,072*	31,303	26,255	9,245	20,940	12,279	...
Gain from Underwriting and Investments	$ 3,503,076	$ 305,632	$ 478,042	$ 95,542	$ 78,557	$ 155,798	$ 11,709
Surplus Adjustments							
Payments of Amounts Withheld from Physicians September to November, 1951	...	−$ 132,342	...	...	...	...	...
Payments to Physicians (Difference Between 90% and Parity)	...	...	−$ 121,125	...	...	...	...
Organization Deposits Repaid	...	−$ 7,360	...	−$ 16,800	...	...	...
Provision for Epidemics and Other Contingencies	−644,076	...	...	...	...	...	...
Provision for Security Valuation	...	...	...	...	−$ 24,000	...	...
Total Surplus Adjustments	−$ 644,076	−$ 139,702	−$ 121,125	−$ 16,800	−$ 24,000	...	...
Increase in Unassigned Surplus	$ 2,859,000	$ 165,930	$ 356,917	$ 78,742	$ 54,557	$ 155,798	$ 11,709

* Additional $77,093 (Provision for Security Valuation) not included in Investment Gain.

TABLE VIII.—SURPLUS (PER CONTRACT AND PER MEMBER) FOR YEAR ENDING DECEMBER 31, 1953

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown	Totals
Special Contingent Surplus[1]	$ 4,742,623	$ 663,472	$ 393,274	$140,366	$353,594	$249,257	$ 5,305	$ 6,547,891
Unassigned Surplus[2]	7,304,744[3]	523,691	714,435	182,848	352,201[4]	259,079	14,980	9,351,978
Total Surplus	$12,047,367	$1,187,163	$1,107,709	$323,214	$705,795	$508,336	$20,285	$15,899,869
Special Contingent Surplus								
Per Contract	$3.34	$3.57	$3.11	$3.44	$4.64	$2.92	$0.86	$3.38
Per Member	1.55	1.47	1.27	1.37	2.00	1.24	0.38	1.52
Unassigned Surplus								
Per Contract	$5.15	$2.82	$5.66	$4.48	$4.62	$3.04	$2.44	$4.82
Per Member	2.39	1.16	2.31	1.78	1.99	1.29	1.08	2.17
Total Surplus								
Per Contract	$8.49	$6.39	$8.77	$7.92	$9.26	$5.96	$3.30	$8.20
Per Member	3.94	2.63	3.58	3.15	3.99	2.53	1.46	3.69

[1] A percentage of earned premium income (4%), required by the State of New York Insurance Department, to meet emergencies which may arise from overutilization, epidemics, etc. This surplus can only be used with the permission of the Insurance Department.

[2] Residue of assets after establishment of all necessary reserves for known liabilities after setting aside the Special Contingent Surplus.

[3] Includes $1,170,369 segregated for epidemics and other contingencies.

[4] Includes $24,000 segregated for Special Security Valuation Reserve.

TABLE IX.—COMPARISON OF TOTAL SURPLUS (PER CONTRACT AND PER MEMBER) RESERVE FOR DEFERRED MATERNITY BENEFITS (PER FAMILY CONTRACT) FOR YEARS ENDING DECEMBER 31, 1953, 1952, 1951, AND 1950

	Total Surplus	Per Contract	Per Member	Maternity Reserve	Per Family Contract
New York					
1953	$12,047,367	$8.49	$3.94	$3,700,000	$6.72
1952	7,337,585	5.75	2.70	3,555,000	7.40
1951	4,297,329	3.63	1.74	3,012,000	6.81
1950	2,573,622	2.74	1.32	2,440,000	6.97
Buffalo					
1953	$ 1,187,163	$6.39	$2.63	$ 525,000	$4.27
1952	861,672	5.51	2.25	445,000	4.22
1951	443,149	3.11	1.25	380,000	3.89
1950	438,521	3.31	1.30	289,000	3.18
Rochester					
1953	$ 1,107,709	$8.77	$3.58	$ 333,254	$3.89
1952	608,831	5.73	2.35	328,099	4.58
1951	209,329	2.27	0.93	374,598	6.02
1950	196,628	3.64	1.52	132,428	3.75
Syracuse					
1953	$ 323,214	$7.92	$3.15	$ 98,868	$3.86
1952	197,327	6.64	2.63	86,007	4.51
1951	96,277	5.00	1.93	47,503	3.61
1950	95,050	5.84	2.33	29,295	2.69
Utica					
1953	$ 705,795	$9.26	$3.99	$ 229,207	$5.69
1952	570,522	7.52	3.37	229,207	5.44
1951	482,759	6.83	3.15	204,207	5.28
1950	401,780	6.15	2.91	175,207	5.02
Albany					
1953	$ 508,336	$5.96	$2.53	$ 137,000	$3.85
1952	275,616	4.24	1.82	104,000	3.88
1951	183,699	3.30	1.39	97,000	4.04
1950	123,851	2.82	1.22	62,000	3.21
Jamestown					
1953	$ 20,285	$3.30	$1.46	$ 13,944	$6.21
1952	3,271	1.05	4.75	6,634	6.10
Totals					
1953	$15,899,869	...	...	$5,037,273	...
1952	9,854,824	...	...	4,753,947	...
1951	5,711,542	...	...	4,115,308	...
1950	3,829,452	...	...	3,127,930	...

NOTE: Maternity Benefits are also included on Husband and Wife Contracts in the Utica Plan. Allowances for normal obstetric delivery are as follows: New York $75, Jamestown $90, Buffalo $65, Rochester and Syracuse $60, Utica and Albany $50.

NECROLOGY

Gilman Sterling Currier, M.D., of New York City, died at his home on May 2 at the age of fifty-nine. Dr. Currier graduated from Columbia University College of Physicians and Surgeons in 1918 and interned at New York, Woman's, and Lying-In Hospitals.

Dr. Currier invented a widely used gynecologic instrument while at Woman's Hospital. He was an assistant attending surgeon at City Hospital at the time of his death and formerly served as medical director of a life insurance company. He was also on the medical staff of the Socony-Vacuum Oil Company.

Dr. Currier belonged to the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

William Weir Fitzgerald, M.D., of Yonkers, died suddenly on April 21 at the age of forty-nine. Dr. Fitzgerald received his medical degree from McGill University School of Medicine in 1931. He was a Diplomate of the American Board of Ophthalmology and a member of the American Academy of Ophthalmology and Otolaryngology.

Dr. Fitzgerald was consulting ophthalmologist at the Yonkers General Hospital and the Veterans Administration Hospital at Sunmount. He was an attending ophthalmologist at the Saranac Lake General Hospital.

Walter G. Frey, Sr., M.D., ninety years old, formerly of Queens, died on February 13 at his home in Radnor, Pennsylvania. Dr. Frey graduated from New York University Medical School in 1888. Before his retirement he was a consulting physician at St. Johns Hospital, Long Island City. Dr. Frey was a member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Edward A. Klauber, M.D., of Staten Island, died of a heart attack at the age of fifty-five on May 1. Dr. Klauber graduated from the Long Island College Hospital School of Medicine in 1924. He belonged to the American Congress of Physical Medicine.

Dr. Klauber was attending physiatrist at the Staten Island Hospital and at Richmond Borough Hospital for Communicable Disease. He was a member of the Richmond County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles Irwin Lambert, M.D., of New York City, died of a coronary thrombosis at the age of seventy-six in Casablanca, French Morocco, on April 18 while on vacation. Dr. Lambert received his medical degree in 1903 from the University of Iowa and had done postgraduate work both at Harvard University and in Munich, Germany. He was a Diplomate of the American Board of Psychiatry and Neurology and belonged to the American Psychiatric Association. Dr. Lambert was also a member of the New York Society for Clinical Psychiatry.

He was consulting psychiatrist at the White Plains and Northern Westchester Hospitals. For many years he was professor of psychiatric education at Teachers College, Columbia University, and associate professor of psychiatry at Columbia University College of Physicians and Surgeons. From 1913 to 1922 he was assistant director of Bloomingdale Hospital. At the time of his death he was medical director of the Four Winds Hospital in Katonah.

Dr. Lambert belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Justin McKeown, M.D., of Jackson Heights, died at the age of sixty-two on January 17. Dr. McKeown received his medical degree from the University of Toronto Medical School in 1917.

Herman Otto Mosenthal, M.D., of New York City, died on April 24 at the age of seventy-five. Dr. Mosenthal graduated from Columbia University College of Physicians and Surgeons in 1903, and interned at the New York Foundling and New York Hospitals. He was a Diplomate of the American Board of Internal Medicine, a Fellow of the American College of Physicians, and a member of the American Society for Clinical Investigation, and the New York Academy of Medicine.

Dr. Mosenthal was a consulting physician at the New York Infirmary and at the St. Lukes, Sea View, and Bellevue and New York University Hospitals. He had been a teacher at Columbia University Post-Graduate Medical School and the New York Medical College. In 1941 and 1942 he was president of the American Diabetes Association.

Dr. Mosenthal belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Caroline Rickards, M.D., of Roslyn Heights, died following a heart attack on April 23 at the age of eighty-two. Dr. Rickards received her medical education at the Women's Medical College of Pennsylvania in 1894. One of the oldest practicing women physicians in the country, Dr. Rickards retired last year.

William Stone, M.D., of Buffalo, died of a heart attack while returning from a vacation on March 28. Dr. Stone was fifty-six years old. He received his medical degree from the University of Toronto Medical School in 1923.

Dr. Stone belonged to the Buffalo Academy of Medicine and was an assistant attending physician at Deaconess Hospital, where he was on the teaching staff. He was a member of the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Frederick P. Tietz, M.D., of Kew Gardens, died on February 16 at the age of sixty-five. Dr. Tietz received his medical degree in 1912 from Kiel University, Germany. He was a member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Abraham Urevitz, M.D., of New York City and Union City, New Jersey, died on January 13 at the age of sixty-seven. Dr. Urevitz received his medical degree from the Medical College of the University of Virginia in 1910. He was a member of the New Jersey State Medical Society, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

MEDICAL NEWS

University of Buffalo Rehabilitation Center for Alcoholism—As a part of the Chronic Disease Institute, the University of Buffalo School of Medicine maintains an Information and Rehabilitation Center for Alcoholism at 2183 Main Street, Buffalo. This center provides consultation services for physicians on the treatment of the alcoholic and his family and offers a large library to students wishing to do research on problems of alcoholism.

American Diabetes Association Moves—The new address of the American Diabetes Association is 1 East 45th Street, New York City 17. Dr. Louis K. Alpert of Washington, D.C., is the new chairman of the Diabetic Detection Drive, replacing Dr. John A. Reed.

American Board of Obstetrics and Gynecology, Inc.—New applications for the American Board of Obstetrics and Gynecology, Inc. are now being received, and it is drawn to the attention of candidates that the deadline date for receipt of applications is October 1, 1954.

Conference on Medical Proof—A Conference on Medical Proof was held on May 15 at Syracuse University in the Medical College Auditorium. Conducted by Syracuse University College of Law, State University College of Medicine, and Practising Law Institute, the conference was endorsed by New York State Bar Association, Federation of the Bar of the Fifth Judicial District, Onondaga County Bar Association, Onondaga County Medical Association, Syracuse Casualty Insurance Claim Managers Council, and the Syracuse Claim Association.

Among those taking part in the morning session were Dr. Rubin A. Gerber and Dr. Lawrence I. Kaplan, of New York City. Dr. Edward J. Stainbrook, Department of Psychiatry, State University College of Medicine at Syracuse, spoke on "Criminal Behavior and the Sick Role in Society," at the luncheon. Drs. Clarence C. Hare and Harry Sherman, New York City, were members of the panel at the afternoon session.

American Physicians Art Association—The American Physicians Art Association will have its seventeenth art exhibition in conjunction with the American Medical Association Convention at San Francisco, California June 21 to 25, 1954.

Any physician who follows the hobby of fine or applied arts can exhibit at this convention by becoming a member of A.P.A.A. and applying for entry blanks and shipping labels by writing to the office of the A.P.A.A., 1058 Phelan Building, San Francisco 2, California.

The art exhibit will be held in the Rotunda Art Galleries of the City of Paris, corner Stockton and Geary Streets, San Francisco, California. Headquarters for A.P.A.A. during the A.M.A. Convention will be at the Civic Auditorium Booth D-43.

Dr. and Mrs. Philip Parker, New York City, have sent a contribution to establish the "Dr. Joseph Garrison Parker Award" in memory of their son who died in June, 1953. Dr. and Mrs. Parker's gift is to be awarded to the best work of art in the A.P.A.A. exhibit, created by an intern, resident, or physician who has been in practice less than five years. This award is being given as an inspiration to other youths in the field of medicine not to neglect art and culture while in the pursuit of science.

Fellowships—A number of fellowships offering further training for health educators currently employed in state departments of health or education are offered by the National Foundation for Infantile Paralysis.

Financial assistance will be given for tuition and maintenance. Appointments will be made for one calendar year. Requirements include a bachelor's degree and a minimum of two years experience as an educator in the field of health. Application forms may be obtained from the Division of Professional Education, National Foundation for Infantile Paralysis, 120 Broadway, New York City 5.

Warning on Use of Wintergreen Preparations—To minimize accidental poisonings by oil of wintergreen preparations, the Department of Health, Education, and Welfare has announced that drug products containing more than 5 per cent of this ingredient will be considered as misbranded unless their labels warn that use contrary to directions may be dangerous, and that the article should be kept out of reach of children.

Charles W. Crawford, Commissioner of Food and Drugs, said there are approximately 15 deaths per year, mostly of young children, from accidental poisoning caused by oil of wintergreen preparations. He said that methyl salicylate (oil of wintergreen) is commonly regarded by the public as harmless but that as little as a teaspoonful of the oil taken internally can cause death. Young children, Mr. Crawford said, are particularly apt to be attracted by the odor.

Oil of wintergreen is commonly used in liniments, which contain from 10 to 100 per cent, labeled for external application for relief of minor muscular pain. Medical literature contains a number of reports that oil of wintergreen is toxic and that drugs containing it should be labeled to warn parents, Mr. Crawford said.

Meetings—Past

New York Rheumatism Association

The annual meeting of the New York Rheumatism Association was held at Cornell University on April 20. At that time the following officers were elected: Dr. Robert L. Preston, president; Dr. Mortimer B. Ehrlich, vice-president, and Dr. Bernard Rogoff, secretary-treasurer, who was reelected to this post. Drs. Alexander B. Gutman and Edward W. Lowman were elected to the executive committee.

Schenectady County Medical Society

The regular meeting of the Medical Society of the County of Schenectady heard Dr. J. J. Kohlhas, associate professor of medicine at the Graduate School of the University of Pennsylvania, speak on "Newer Concepts in the Diagnosis and Treatment of Gout," in May.

Queens Hospital Center

"Cobalt and Isotope Therapy" was the subject of discussion at the Queens Hospital Center on May 27. Dr. S. Allan Lough, senior physicist (Isotope) spoke on "Recent Advances in Isotope Therapy"; Dr. Carl Braestrup, senior physicist, "Cobalt Therapy," and Dr. Ruth Guttman, radiation therapist, "Clinical Experience with Supervoltage and Cobalt Therapy." All the discussants are from the Francis Delafield Hospital, New York City. Dr. Leonard B. Goldman, Queens Hospital Center, Jamaica, was chairman of the Isotope Committee.

Nassau Pediatric Society

A scientific meeting of the Nassau Pediatric Society was held at the Garden City Hotel on April 12. Dr. John R. Cobb, attending orthopedic surgeon, Hospital for Special Surgery, New York City, spoke on "Common Orthopedic Disorders in Infancy."

Society of Medical Jurisprudence

"Juvenile Deliquency in the Courts and Broken Homes," was presented by the Honorable John M. Murtagh, Chief City Magistrate, at the April 12 meeting of the Society of Medical Jurisprudence. Dr. Jean A. Thompson, acting director, the Bureau of Child Guidance, Board of Education, presided.

The seventieth anniversary dinner, honoring Dr. LeWald, was held on May 10 at the Hotel Statler. Guest speakers were Chief Judge Court of Appeals, the Honorable Edmund H. Lewis and Dr. Andrew A. Eggston, president of the Medical Society of the State of New York.

Jefferson County Medical Society

Speakers at the April 20 meeting of the Jefferson County Medical Society were: Mr. Orrel York, Watertown who spoke on "Welfare"; Mr. Stanley Rega, physiotherapist, City Health and Poliomyelitis Programs, who spoke on "Physiotherapy (State Health Department)," and Drs. L. R. Smith, Watertown, and C. B. Alden, Adams, who spoke on "Mental Health."

State University of New York College of Medicine at New York City, Research Society

Speakers at a meeting of the Research Society of the State University of New York College of Medicine at New York City on April 21 were: Drs. Bruce Kessler and William S. Rosenthal, Veterans Administration Hospital, Brooklyn, who spoke on "Hepatic Blood Flow and Oxygen Consumption in Alcoholic Fatty Liver"; Dr. Noble O. Fowler, Brooklyn Hospital, "The P Loop of the Spatial Vector cardiogram in Normal and Diseased Human Subjects"; Dr. L. C. Chesley, Department of Obstetrics and Gynecology, Kings County Hospital, "Salivary Sodium in the Menstrual Cycle," and Drs. Edward Kamens, Nathan Solomon, Charles E. Friedgood, and Charles B. Ripstein, Surgical Services, Maimonides Hospital, Brooklyn, "The effect of Alteration in pH on Cardiac Muscle Activity in the Normal and Hypothermic Dog Heart."

Nassau Ophthalmological Society

The April meeting of the Nassau Ophthalmological Society was held at the Swan Club, Glenwood Landing, New York. Dr. Isadore Givner spoke on "Ocular Infections" at the scientific session.

The next regular meeting will be held September 27.

Monroe County Sponsored Health Forum

On April 27 the Rochester Health Forum, under the joint sponsorship of the Rochester Academy of Medicine and the Monroe County Medical Society, held a public meeting to answer questions on cancer. Drs. Samuel J. Stabins, Curtis Lund, John Butler, and Donovan Jenkins took part.

Albany County Medical Society

Dr. John H. Bland, assistant professor of medicine, University of Vermont Medical College, attending physician, Mary Fletcher Hospital and Bishop De Goesbrian Hospital, Burlington, Vermont, was the guest speaker at the April 28 meeting of the Albany County Medical Society. Dr. Bland spoke on "Newer Aspects of Sodium Metabolism; Correlation of the Clinical with the Chemical Picture," and Dr. John E. Kiley was the discussant.

Chemung County Clinic Program

On May 5, the Chemung County Medical Society sponsored their fourth annual clinic program in the Dunn Memorial Auditorium of St. Joseph's Hospital. This program was a postgraduate educational activity of the Rochester Regional Hospital Council, Inc.

At the Elliot T. Bush Memorial Lecture held in the evening of the same day, Dr. Robert J. Coffey, of Washington, D.C., discussed, "Hyperplasia and Functional Tumors of the Endocrine Glands."

Livingston County Medical Society

Dr. Pelham Glasier, associate professor of surgery, Albany Medical College, was the guest speaker at the dinner meeting of the Livingston County Medical Society on May 6. The meeting was held in Dansville and Dr. Glasier spoke on "Surgical Management of Gastric and Duodenal Lesions."

Hawaii Medical Association

The Hawaii Medical Association held its annual meeting in Honolulu May 13 through 16. Following the A.M.A. Convention, there will be a post convention tour to Hawaii with scientific sessions in Honolulu on June 28 and 29. Information for the tour may be secured from Mr. Robert Lyons, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

Sixth International Cancer Congress

The Sixth International Cancer Congress will be held in São Paulo, Brazil, July 23 to 29. Dr. Brewster S. Miller, American Cancer Society, 47 Beaver Street, New York City 4, can furnish travel information to interested doctors.

Meetings—Future

Annual Health Conference

The fiftieth annual health conference will be held at Lake Placid June 7 through June 10. The conference will deal with the latest developments in viral diseases, including poliomyelitis and cancer, which will highlight the conference, as well as problems on general sanitation, control of infectious hepatitis, and general health trends in the state and nation today.

Speakers at the opening session will be Dr. T. N. Hurd, State Budget Director; Dr. Martha M. Eliot, Chief of Children's Bureau, Department of Health, Education, and Welfare, Social Security Administration, Washington, D.C.; Dr. Dan Mellen, president, Medical Society of the State of New York, and Dr. Herman E. Hilleboe, Commissioner, New York State Department of Health.

Among the speakers at the second general session on viral diseases will be Dr. Joseph Stokes, Jr., professor, Department of Pediatrics, University of Pennsylvania School of Medicine; Dr. W. McD. Hammon, head of the Department of Epidemiology and Microbiology, Graduate School of Public Health, University of Pittsburgh; Dr. Harold S. Ginsberg, associate professor of medicine, Western Reserve University School of Medicine, and Dr. Fred M. Davenport, associate professor, Department of Epidemiology, School of Public Health, University of Michigan.

Dr. Charles S. Cameron, medical and scientific di-

[Continued on page 1696]

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Triethanolamine trinitrate biphosphate, Leeming, tablets, 2 mg.

Clinical excellence

SUMMARY[1] *(From the Department of Medicine, McGill University)*

Condition of Patients	Daily number of anginal attacks during:			
	Control period (3-4 weeks)	Placebo A (3 weeks)	METAMINE (3 weeks)	Placebo B (3 weeks)
1. Angina of effort, coronary occlusion; man, 53 years old	Average: 7 Range: 5-12	Average: 8 Range: 5-11	Average: 0.75 Range: 0-8	Average: 5.5 Range: 1-9
2. Angina of effort; man, 45 years old	Average: 9 Range: 7-12	Average: 7 Range: 5-12	Average: 4 Range: 0-6	Average: 4.4 Range: 3-6
3. Angina of effort; man, 50 years old	Average: 4.5 Range: 3-6	Average: 4.2 Range: 2-8	Average: 2.6 Range: 0-3	Average: 4.5 Range: 3-8
4. Angina of effort, coronary occlusion; man, 40 years old	Average: 6.5 Range: 4-9	Not administered	Average: 3.5 Range: 0-5	Average: 6.5 Range: 4-9
5. Angina of effort, coronary occlusion; man, 57 years old	Average: 7.2 Range: 2-10	Average: 8 Range: 3-12	Average: 3.5 Range: 0-8 (8 days only)	Not administered because patient developed upper respiratory infection.

A
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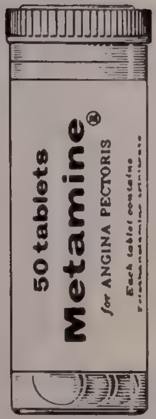
1ST

Numerous clinical and experimental studies since 1946 indicate that METAMINE is ideally suited for routine prevention of anginal attacks because of low (2 mg.) effective dose, prolonged action, and exceptional freedom from side effects. Taken routinely, METAMINE prevents attacks of angina pectoris or greatly diminishes their number and severity.[1] The entire circulation appears to benefit,[2] and the anginal patient may resume a life of useful activity under continuing treatment with this new, low-dose, long-acting coronary vasodilator.

DOSAGE TO PREVENT ANGINA PECTORIS: 1 tablet (2 mg.) after each meal, and 1 to 2 tablets (2 to 4 mg.) at bedtime. Full preventive effect is usually attained after the third day. Bottles of 50 and 500 tablets.

in prevention of

angina pectoris



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[Continued from page 1693]

rector, American Cancer Society, Inc.; Dr. Cushman D. Haagensen, College of Physicians and Surgeons, Columbia University; Dr. Ernest L. Wynder, chief resident in medicine, Memorial Hospital, and assistant, Sloan-Kettering Institute for Cancer Research, Memorial Center for Cancer and Allied Diseases, and Dr. George E. Moore, Director, Roswell Park Memorial Institute, Buffalo, will speak at the third general session on malignant diseases.

Chest Disease Symposium

The third annual symposium on "Tuberculosis and Other Chronic Pulmonary Diseases for General Practitioners" will be held in Saranac Lake, New York, July 12 through July 16. Approved by the American Academy of General Practice, twenty-six hours of formal credit will be extended to the members who attend.

Sponsored by the American Trudeau Society, the Saranac Lake Medical Society, and the Adirondack Counties Chapter of the New York State Academy of General Practice, the scope of the symposium has been broadened to cover the diagnosis and treatment of nontuberculous pneumonias, pulmonary cancer, lung abscess, fungus diseases, bronchiectasis, sarcoid, cystic disease, emphysema, and the pneumoconioses. Speakers and panel members will include physicians, surgeons, and scientists from Saranac Lake and surrounding areas. Guest lecturers will include Dr. Ewan Cameron, professor of psychiatry, McGill University, Montreal, and Dr. Donald Miller, assistant professor of thoracic surgery, University of Vermont Medical School, Burlington Vermont.

Complete information concerning the program can be obtained by writing to Dr. Richard P. Bellaire, Chest Disease Symposium, P.O. Box 2, Saranac Lake, New York.

American Association of Blood Banks

The seventh annual meeting of the American Association of Blood Banks will be held at the Shoreham Hotel in Washington, D.C., September 13, 14, and 15. Further information may be obtained from the American Association of Blood Banks, 3500 Gaston Avenue, Dallas, Texas.

Personalities

Awarded

Dr. Theodore J. Curphey, the Distinguished Service plaque and medal from the American Cancer Society. . .Dr. Wilson G. Smillie, the Lord and Taylor scroll and $1,000 for Kips-Bay Yorkville Adult Counseling Center and its research counterpart, Cornell Medical College's Studies in Gerontology. . .Dr. Howard A. Rusk, chairman of the Department of Physical Medicine and Rehabilitation of the New York University College of Medicine, the annual award of the Gotham Chapter of the National Foundation for Muscular Dystrophy on May 8. . .Dr. Arthur Purdy Stout, the Clement Cleveland award for "outstanding work in the campaign to control cancer in 1953" on May 4.

Appointed

Dr. Joseph Chibnik, of the United States Naval Reserve Medical Corps, raised to Lieutenant Commander at the Bayonne, New Jersey, naval supply depot. . .Dr. Warren H. Eller of Sayville, as chief of medical service at the Southside Hospital. . .Dr. Basil G. MacLean, as New York City Hospital Commissioner.

Elected

Dr. Martin R. Steinberb, director of Mount Sinai Hospital, as president of the Greater New York Hospital Association.

Resigned

Dr. John B. Healy, of Babylon, chief of medical service at the Southside Hospital, Bay Shore, for reasons of health.

Speakers

Dr. Leona Baumgartner, Commissioner of Health in New York City, on "Problems of Aged" before Women's Council of Community Service Society. . . Dr. Paul F. deGara of New York City, on "Treatment of Allergies with ACTH and Cortisone," at the University of Florence, Italy, for the Accademia Medico-Fisica Fiorentina. . .Dr. Joseph Gioia, pathologist of St. Francis Hospital, before high school students at Poughkeepsie High School on opportunities in pathology. . .Dr. Howard A. Rusk before the Association for the Aid of Crippled Children. . .Dr. Frederick A. Wurzbach, president of the Bronx County Medical Society, at the cornerstone ceremonies for the Morrisania District Health Center . . . Dr. Robert C. Hunt, assistant commissioner of the Department of Mental Hygiene of New York, at the annual spring meeting of the State Charities Aid Association on April 21 in Albany . . . Dr. Albert S. Hyman, professor of medicine, New York University Medical School, at the Valley Forge Heart Institute and Wolffe Clinic, Philadelphia, in April . . . Dr. George T. Pack, the J. Shelton Horsley Memorial Lecture at the Richmond Academy of Medicine, Richmond, Virginia, on April 13.

New Office

Dr. Michael T. McNichols moved his office from Woodmere to Cedarhurst. . .Dr. Saul Meyers, general practice, at 368 North Genesee Street in Utica.

Dr. John Betlejeski, formerly with the Veterans Hospital, Albany, practice of surgery in Schenectady.

whole-root Raudixin:

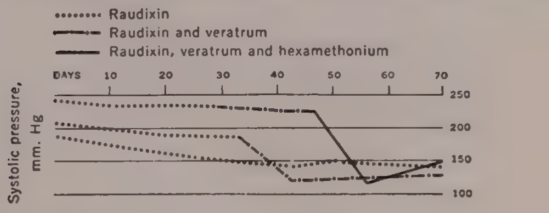
safe, smooth, gradual reduction of blood pressure

Raudixin is the most prescribed of rauwolfia preparations. It is *powdered whole root* of Rauwolfia serpentina—not just one alkaloid, but all of them. Most of the clinical experience with rauwolfia has been with Raudixin.

Raudixin lowers blood pressure in gradual, moderate stages. "A sense of well-being, decrease in irritability, 'improvement in personality' and relief of headache, fatigue and dyspnea" are frequently described by patients.[1]

Raudixin is base-line therapy. In mild or moderate cases it is usually effective alone; "...when rauwolfia is combined with other hypotensive agents, an additive hypotensive effect frequently is observed even in severe hypertension."[2] "It produces no serious side effects. It apparently does not cause tolerance."[1] 50 and 100 mg. tablets, bottles of 100 and 1000.

Raudixin alone and combined with other hypotensive agents



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SQUIBB

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Health Poster Contest Awards Announced

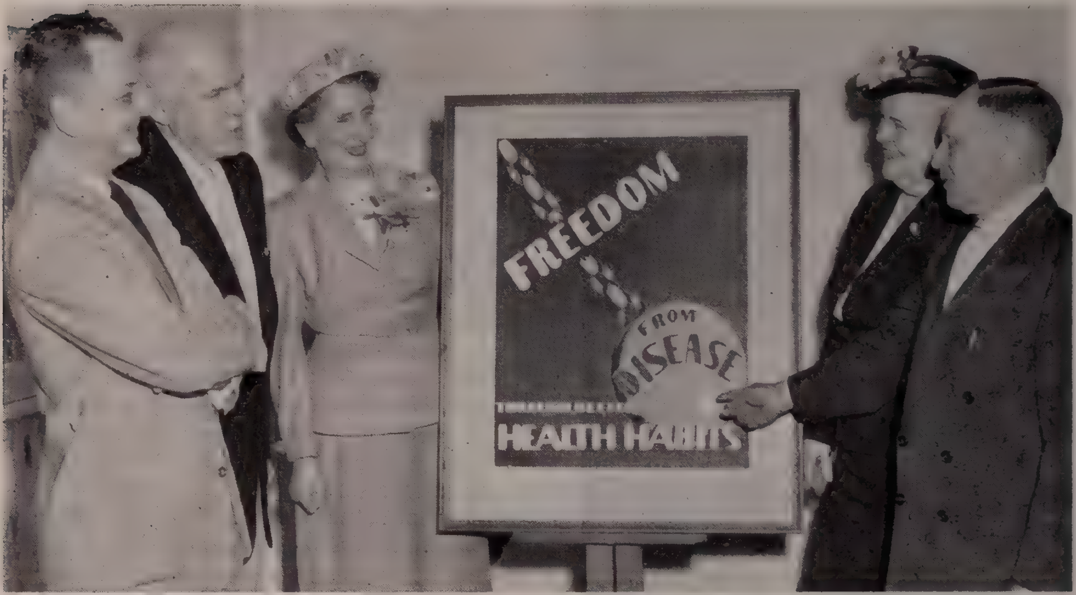

FIG. 1. Winning poster of the second annual Health Poster Contest sponsored by the Woman's Auxiliary to the Medical Society of the State of New York. Admiring the poster submitted by Eleanor Crooks, West New Brighton, Staten Island, are (*left to right*): Mr. Robert Skelton, Art Department, Brockport State Teachers College; Dr. Floyd S. Winslow, chairman, Council Committee on Public Relations; Mrs. Thomas M. d'Angelo, president, Woman's Auxiliary to the Medical Society of the State of New York; Mrs. Bruce M. Mills, president, New York State Federation of Women's Clubs, and Dr. Andrew A. Eggston, president, Medical Society of the State of New York.

WINNERS in the second annual State-wide Health Poster Contest, sponsored by the Woman's Auxiliary to the Medical Society of the State of New York, were announced in April at the award ceremonies held in Rochester. First prize in the high school division was awarded to Eleanor Crooks of Staten Island, who received $125 in U.S. Savings Bonds and an invitation to New York City to attend the convention of the State Medical Society and the State Woman's Auxiliary in May.

More than 8,000 posters were submitted in the contest, it was announced. The basis of awards were health message, 60 points; originality of design, 25 points, and neatness and general appearance, 15 points.

Judges included Dr. Andrew A. Eggston, president, Medical Society of the State of New York; Mrs. Bruce M. Mills, president, New York State Federation of Woman's Clubs; Mrs. Gertrude Herdle Moore, director, Rochester Memorial Art Gallery; Miss Margaret Habein, dean of women, University of Rochester, and Mr. Robert Skelton, Art Department, Brockport State Teachers College.

Following the award ceremony, the judges were guests of the State Auxiliary at a luncheon at the Rochester Academy of Medicine. Speaking at the luncheon, Mrs. Thomas M. d'Angelo, State Auxiliary president, pointed out that "the object of the Health Poster Contest was to help school children throughout the State develop a deeper appreciation of their own health and the part they must play in its protection, and to discuss the value of frequent discussion with their family physician, and demonstrate the importance of active participation in sound community health programs."

[Continued on page 1700]

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1. Buxton, C. L., and Vann, F. H.: New England J. Med. 236: 536, 1948.
2. Cushney, A. R.: Textbook of Pharmacology and Therapeutics, ed. 10, Philadelphia, Lea & Febiger, 1943, pp. 436-437.

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1. Rev. Gastroenterology 20:744 (Oct.) 1953; abstract in J. A. M. A., 153:1580 (Dec. 26) 1953.

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[Continued from page 1698]

In expressing appreciation of the Medical Society and the Auxiliary, Mrs. d'Angelo said, "The Medical Society of the State of New York and the Auxiliary are deeply appreciative of the interest of the children, school authorities, the county and state judges, and all others who helped make the contest such a huge success."

Mrs. Isadore Zadek, Mount Vernon, was State chairman of the contest committee.

Prize winners, in addition to Miss Crooks, included the following: Grades 10 to 12—Erwin Retins, Rochester, second; Louis Albertson, Buffalo, and Carmine Rende, New Rochelle, honorable mentions.

Grades 7 to 9—Maxine Gravel, New Rochelle, first; Diane Munson, Canandaigua, second; Linda Lind, Washingtonville, and Lynn Miller, Rochester, honorable mentions.

Grades 4 to 6—Muriel Cowart, Niagara Falls, first; Henry Saffnauer, Greece, second; Andrea Lee Hanas, Corning, and Ellen Rogin, Middle Village, honorable mentions.

Grades 1 to 3—Janice Moncsko, Saratoga, first; Norma Hutchison, Oswego, second; Mary Behr, Staten Island, and Judith Schultz, Moravia, honorable mentions.

CORRESPONDENCE

The Woolly Bear School of Meteorology

To the Editor:

Every so often some old superstition is revived briefly in this scientific age and is played up in the news. I have in mind such nonsense as the aching corn predicting rain, the nine lives attributed to cats, the ground hog and his shadow on Candlemas Day, the alleged beneficial effect on warts (verruca plana) of rubbing them with one half of a bean which is then thrown away by the sufferer with some sort of mumbled incantation, and the amusing, perhaps, superstition of the ability of the so-called "woolly bears," a species of caterpillar, to predict the severity of winter weather by the width of the black band of hairs on their skins.

Many of these legends stem from the ancient ignorance of the folk but certainly have no place in these days of accurate scientific research, forecasting and investigation, advances in mental hygiene, decent treatment of the insane, reliable study of weather and climate by scientifically equipped weather stations and bureaus, and college degrees for the masses.

These periodic revivals of superstitions, such as the woolly-bear nonsense, for example, are abhorrent to the intellect. They give aid and comfort to supporters of such pseudoscientific claptrap as chiropractic, such credulous persons as resort to patent medicines, and to such massive intellects as support antivivisection, oppose vaccination, and tolerate medieval mysticism in a scientific age.

This business of the woolly bears has again appeared. They are credited with being better guessers last fall about the winter just ended than the Weather Bureau.[1]

> Dr. C. H. Curran, curator of insects and spiders at the American Museum of Natural History and leader of the annual woolly bear expedition to Woolly Bear Mountain, received the news with scientific calm. It is Dr. Curran's aim to determine whether there is anything to the old superstition that these fur-bearing insects are prognosticators of winter weather.
>
> Although it is well known that Ernest J. Christie, meteorologist in charge of the Weather Bureau here, doesn't give a dried Smyrna fig for the woolly bears or their predictions, he was kind enough to assemble the statistics yesterday which proved that the bears were in the groove.

All the same, investigations of this sort lend a certain authority to the pretensions of these animals. Is it a healthy trend? Does it discourage really serious investigation? Does it encourage supporters of and believers in nonscientific procedures?

This writer intends to pursue the matter further. Where is this Woolly Bear Mountain? What is the effect on the caterpillars of all this publicity? Will it alter the reliability of their predictions, assuming the validity of psychosomatic influences? Worse still, will such competition encourage the Weather Bureau to abandon its observations or become careless in its deductions? These are grave considerations in view of the possible effect of climatology on health and the wanton encouragement of superstition.

NAME WITHHELD

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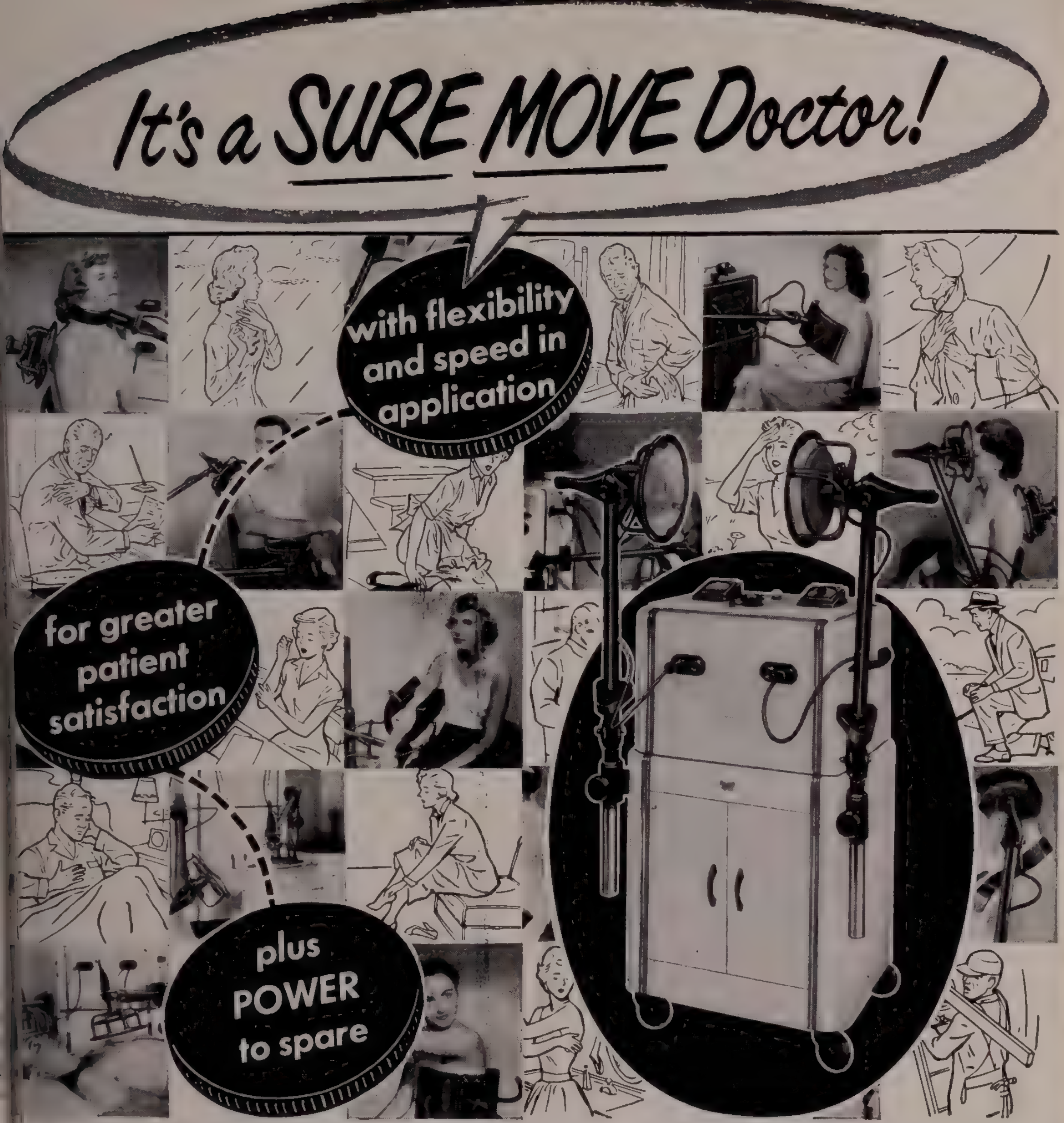
[1] Herald Tribune, Mar. 23, 1954, p. 1.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NEWS FROM THE MEDICAL SCHOOLS

Albany Medical College

Pediatrics Day—Over 150 physicians attended Albany Medical College's annual pediatrics teaching day on April 15. Papers were presented on agammaglobulinemia, cat scratch fever, and retrolental fibroplasia. Speakers included Dr. Gerald Austin, Dr. Edwin S. Goodwin, Dr. M. Edwin Pesnel, Dr. Jack Spitalny, Dr. Paul R. Patterson, Dr. Thomas Riedy, Jr., Dr. Thomas L. Rider, Dr. Thomas Frawley, Dr. Allan MacCollum, Dr. Harry D. Eastman, Dr. Clifford Tepper, Dr. Arthur Swartz, and Dr. Edward Schlesinger.

Ehler Memorial Lecture—Dr. Edward S. Welles, president of the American Thoracic Society, gave the 1954 Adrian Ehler lecture at Albany Medical College on April 19 on the subject, "Recent Rapid Change in the Surgery of Pulmonary Tuberculosis." The Ehler lectures were established as a memorial to the late Dr. Adrian A. Ehler, who was first associated with the Albany Medical College in 1940. Following his death in 1951, a fund was established for the memorial lecture series, of which this is the third to be presented.

New York Medical College

Charter Day Lecture—Dr. Louis H. Bauer, past-president of the Medical Society of the State of New York and of the American Medical Association, delivered the Charter Day lecture at New York Medical College, Flower and Fifth Avenue Hospital, on April 7. Discussing "Medical Ethics," Dr. Bauer described the development of the International Code of Medical Ethics adopted in 1949 by the World Medical Association, of which he is secretary-general.

The Charter Day lecture was sponsored by the Alpha Kappa Kappa medical fraternity.

New York University Post-Graduate Medical School

New Course Announced—A course in "Medical Testimony in Malpractice and Negligence Cases for Practitioners of Medicine, Law, and Allied Professions" will be given for the first time by New York University-Bellevue Medical Center's Post-Graduate Medical School in cooperation with the New York University School of Law.

Under the direction of Dr. Maxwell H. Poppel, chairman of the Department of Radiology at New York University College of Medicine, the sessions will be held every Thursday, beginning October 7, 1954, through March 10, 1955, from 8:30 to 10:00 P.M. Application for the course may be made through the Office of the Dean, N.Y.U. Post-Graduate Medical School, 477 First Avenue, New York 16, New York.

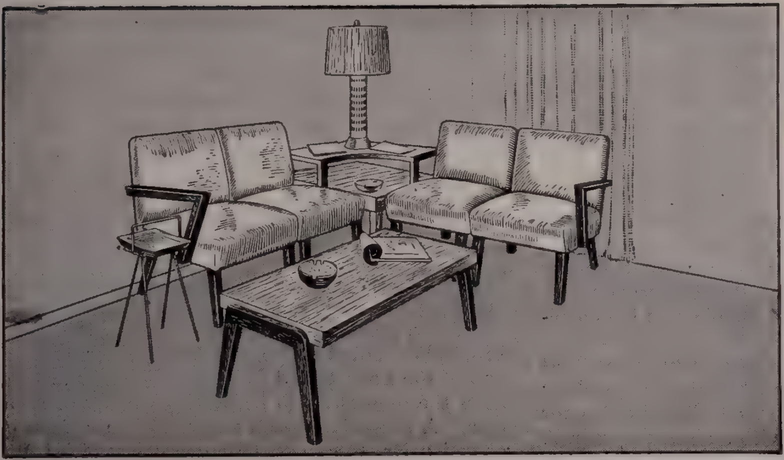
State University College of Medicine at New York City

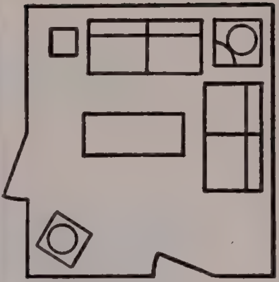
Annual Meeting of the Society of Neurological Surgeons—The State University College of Medicine in Brooklyn and the Kings County Hospital were hosts on April 23 and 24 to 60 leading neurosurgeons of the United States and Canada at the 45th annual meeting of the Society of Neurological Surgeons. The April 23 meetings were held in Building E of the Kings County Hospital and included presentation of papers and demonstrations on the surgical treatment of Parkinsonism by Dr. E. Jefferson Browder, professor and chairman of the College's Department of Neurosurgery, and special papers by other State University faculty members. The program of April 24, held at the Waldorf-Astoria Hotel, included two symposia, on "Convulsions" and on "Cerebrospinal Fluid Pressure."

Research—The College's Department of Pediatrics entertained members of the Junior League of Brooklyn at an open house in their honor on April 14 to celebrate the opening of a new Pediatrics Research Laboratory, which had been equipped chiefly through a $4,000 gift from the League. Dr. Richard L. Day, professor and chairman of the Department, described five new research projects which the Department is embarking upon this year as follows: (1) the basic physiology of the kidney as it relates to nephrosis in children, (2) retrolental fibroplasia, (3) the physiology of the newborn infant's first breath, (4) the critical first three days in the life of the premature infant, and (5) the mechanism whereby bilirubin and other pigments may injure the brain in babies suffering from Rh disease.

Drs. Julius Belford and Frederick F. Kao, of the

[Continued on page 1704]





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[Continued from page 1702]

Department of Physiology and Pharmacology, presented a paper at the annual meetings of the Federation of American Societies for Experimental Biology in Atlantic City on April 14 describing their research on a new drug called Nalorphine (Merck & Co.) which shows promise of restoring normal respiration in cases of certain barbiturate poisonings. Although this was an animal study, they feel that the drug may have definite clinical value and that further studies are justified in human patients poisoned with pentobarbital sodium or other members of the barbiturate family.

Dr. Oscar Orias of Argentina, who served as visiting professor in the Department of Physiology several years ago, returned to the College in May for a short assignment to assist with a research program in cardiology. This is a cooperative study between the Departments of Medicine and Physiology.

Lectures—Dr. Israel Snapper, director of medicine and medical education at the Beth-El Hospital in Brooklyn, delivered the annual Alpha Omega Alpha lecture on May 4. His topic was "The Metabolism of Calcium and Phosphorus in Connection with Diseases of the Skeleton." This lecture, which was established by the Eta Chapter of the AOA fraternity in 1950, concludes the official annual lectureship series at the College for the academic year.

Dr. Douglas Guthrie, Fellow of the Royal College of Surgeons and lecturer on the history of medicine at the University of Edinburgh, delivered a special lecture on "Medical Education in Scotland" at the College on May 11. This lecture was sponsored by the Medical History Club.

Alumni Day—The College's Alumni Association held its annual Alumni Day at the College on May 1. Those present included graduates of the former Medical School of the Long Island College Hospital and of the Long Island College of Medicine, as well as of the present State University College of Medicine. A scientific session was held in the morning at which Dr. Joseph R. DiPalma, Class of '41, professor of pharmacology at Hahnemann Medical School in Philadelphia, presented a paper on "Some Observations on the Etiology of Fibrillation of the Heart." The 74th annual dinner was held in the evening at the Hotel Granada in Brooklyn. Proceeds from the dinner went to the Alumni Association's Research, Scholarship, and Student Loan Fund.

BOOKS REVIEWED

Surgical Pathology. By Lauren V. Ackerman, M.D. Quarto of 836 pages, illustrated. St. Louis, C. V. Mosby Co., 1953. Cloth, $14.50.

This textbook of 813 pages and 913 illustrations has condensed practically all the pathologic material pertaining to surgical problems within its covers. Of necessity, the discussion of some problems is too brief, but the illustrations are so complete and clear that they make up for the conditions that the author should have considered in more detail. Nevertheless, Dr. Ackerman and his associates deserve credit for their effort in publishing another good *Surgical Pathology*.—GAETANO DE YOANNA

Conferences on Drug Addiction Among Adolescents . . . held at the New York Academy of Medicine on November 30, 1951, and March 13 and 14, 1952. Sponsored by the Committee on Public Health Relations of the New York Academy of Medicine with the assistance of the Josiah Macy, Jr. Foundation. Octavo of 320 pages. New York, Blakiston Co., 1953. Cloth, $4.00.

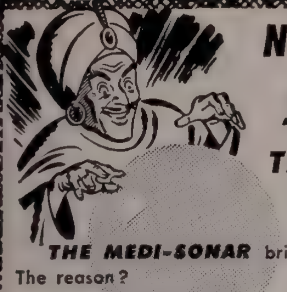
This is a report on two conferences concerning drug addiction among adolescents held in 1951 and 1952 at the New York Academy of Medicine and sponsored by the Academy and the Josiah Macy, Jr. Foundation. The participants included members of the medical profession, the police department, the legal profession, the clergy, and governmental and social agencies. For those interested in this vital subject there is no better report than this detailed cross section of experience and opinion. It points out vividly the multifaceted problem of preventing or alleviating drug addiction with the hope that such an interplay of disciplines will eventually lead toward a satisfactory solution.—THEODORE MELTZER

Muscle Relaxation. As an Aid to Psychotherapy. By Gerald Garmany, M.B. Octavo of 65 pages. London, Eng., Actinic Press, 1952. Cloth, 5/6. (Physical Medicine Series, Vol. 1.)

The value of muscle relaxation in general therapy has received considerable attention in the recent literature. In this excellent monograph the author presents a study of the use of muscle relaxation as an adjunct to psychotherapy. The various means of securing relaxation are outlined together with suggestions for promoting cooperation of the patient. Although compiled for the guidance of the physical therapist, this book will be found to be most interesting and informative to the medical student and practitioner as well.—JEROME WEISS

Foundations of Neuropsychiatry. By Stanley Cobb, M.D. Fifth edition. Octavo of 287 pages,

[Continued on page 1706]



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[Continued from page 1704]

illustrated. Baltimore, Williams & Wilkins Co., 1952. Cloth, $3.00.

This is a new edition of Professor Cobb's former *Preface to Nervous Diseases,* which was based on a series of lectures about the neurologic foundations of psychiatry. It is primarily an introduction to neurology, however, and the psychiatric part of it is merely an appendage in sketchy form. The present edition merely brings up-to-date some of the chapters on neurophysiology and cerebral localization.

Dr. Cobb's work is original and reliable, but the organization of the book can hardly serve any specific purpose for the specialist except as an auxiliary reference.—Sam Parker

Hypnosis in Modern Medicine. By Jerome M. Schneck, M.D. Octavo of 323 pages. Springfield, Charles C Thomas, 1953. Cloth, $7.50.

This book consists of a collection of articles on the use of hypnotism in internal medicine, surgery, anesthesiology, dermatology, psychiatry, obstetrics, gynecology, and dentistry. There are also chapters on the history and physiologic mechanisms of hypnosis. Much material on psychosomatic medicine is presented.

The material is interesting, informative, and clearly printed. It can be of value to both general practitioner and specialist.—Arthur J. Lapovsky

Glaucoma, Pathology and Therapy. By Paul Weinstein, M.D. Translated by Julius Foldes, M.D. Octavo of 295 pages, illustrated. St. Louis, C. V. Mosby Co., 1953. Cloth, $8.00.

This book is the result of a tremendous effort to review all the important world literature covering the subject of glaucoma. The major objective has been to crystallize the available knowledge and to bring the salient facts together under one cover and in one language medium.

An enormous volume of material has been skillfully digested and the essential facts and theories, together with the most logical evidence supporting the latter, have been successfully set forth to provide the reader with a lucid understanding of glaucoma as it is now conceived of by leading ophthalmologists.

The author has drawn upon his great clinical experience and his wonderful linguistic abilities to produce a masterful contribution to the world literature. A debt of gratitude is owed both Dr. Weinstein and Dr. Julius Foldes, who translated the monograph for the English-speaking members of ophthalmology.—Mortimer A. Lasky

Biologie, Pathologie und Therapie der Gelenke Dargestellt am Kniegelenk. By Arnold Sonnenschein, M.D. Octavo of 496 pages, illustrated. Basel, Switzerland, Benno Schwabe & Co., 1952. Cloth, 52 Swiss francs.

This is a scholarly presentation of joint disease, using the knee as a representative articulation for all joint conditions, since it is one of the most accessible and large enough to be studied in great detail.

While it is true that most joints respond in a similar manner to baleful influences, there are mechanical considerations which make the knee unique. However, this factor does not detract from the completeness of the presentation.

Of interest primarily to orthopedic surgeons, there is adequate material for the rheumatologist, the traumatic surgeon, and the internist and geriatrist who also treat arthritic problems. There are even a number of plastic surgical problems which well may be applied to other joints as well as the knee, and which are thoroughly treated.

One could find fault with the arrangement of the bibliography, which is poorly tabulated although complete.—Max S. Rabinowitz

Textbook of Gynecology. By John I. Brewer, M.D. Octavo of 532 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $10.

As stated by the author in his preface, this is essentially a textbook for the undergraduate student. It is somewhat unique in that the first half of the volume is devoted to discussion of disease entities and the second half to analysis of symptom complexes. It reflects recent trends in therapy. Though lacking the colored illustrations which embellish most present-day textbooks, the usual photographs and drawings are adequate and accurate. It is written in clear and simple language which is easily understood.—J. Thornton Wallace

Psychiatric Dictionary. With Encylopedic Treatment of Modern Terms. By Leland E. Hinsie, M.D., and Jacob Shatzky, Ph.D. Second edition with Supplement. Octavo of 781 pages. New York, Oxford University Press, 1953. Cloth, $15.

A dictionary, more especially an encyclopedia, is a valuable aid in any learning process. For the student psychiatrist, Hinsie and Shatsky have enlarged and brought up-to-date their 1940 dictionary, enabling the reader to find in one moment psychiatric terms scattered among many books and schools of thought. For the general practitioner and even the advanced psychiatrist it provides a ready source of information with little expenditure of time, a salient feature in this age of goal striving. This volume is recommmended without reservation. Theodore Meltzer

Operating Room Technic. St. Mary's Hospital, Rochester, Minnesota. Fourth edition. Octavo of 345 pages, illustrated. Philadelphia, W. B. Saunders Co., 1952. Cloth, $6.50.

Fifteen years have elapsed since the third edition in 1937, and this, the fourth edition, contains further accumulated data in keeping with continued surgical, technical progress. This book of only 345 pages is a compact storehouse of information relative to operating room conduct, personnel, and equipment.

The first chapter is an interesting description of the operating room in the large St. Mary's Hospital at Rochester, Minnesota, which might well serve as a model for other hospitals both small or large. The material is presented clearly and concisely in outline form and the directions are practically foolproof. Indeed, because of its drawings and sketches, the book might very well serve as a primer on operative surgery for both nurses and young surgeons in training. Practically all instruments of proved usefulness have been listed and illustrated. The text warrants wide and favorable acceptance by both supervising nurses and executive surgeons.—Arthur Goetsch

Health Saboteurs. By Robert William Davis, M.D. Octavo of 306 pages, illustrated. New York, Pageant Press, 1953. Cloth, $4.00.

Health Saboteurs relates to the tonsils and adenoids as the real health saboteurs. It is a book intended for physicians, dentists, and the lay public. The author strongly recommends routine tonsilloadenoidectomy at two years of age or younger. Realizing this is controversial, he sustains his thesis with many, many quotes yet few statistics.

The book is not scientific enough for a text and is far too long for use of the laity. Much good thought is expressed therein to sustain the author's main theme, but such is diffused throughout the book and could have been condensed into but few pages. The hazards of anesthesia and surgical procedure and the fact that varying quality in the surgical endeavor bears proportional results are hardly mentioned. The book, however, is stimulating. It shows serious consideration of the problem, much evidence through research, and a very sincere desire to do the public health good.—Charles R. Weeth

Brain Surgeon. The Autobiography of William Sharpe, M.D. Octavo of 271 pages. New York, Viking Press, 1952. Cloth, $3.75.

Dr. William Sharpe in his autobiography *Brain Surgeon* unrolls a tale which makes the writings of the professional wanderers seem rather pale and insipid by comparison. From his early days as an undergraduate at Harvard until the later years as a respected member of his community and a man who has achieved prominence in his profession, Dr. Sharpe's life has been a series of extraordinary experiences.

Each chapter of this remarkable story is filled with almost unbelievable anecdotes which fill out the picture of a man of ideals, ideas, warmth, and humor. For an enjoyable visit around the world with a pioneer of brain surgery, this book is highly recommended.—Howard Freedman

The Radiology of Bones and Joints. An Introduction to the Study of Tumours and Other Diseases of Bone. By James F. Brailsford, M.D. Fifth edition. Quarto of 875 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $19.

That this book has met with acceptance is attested by the publication of five editions since the

[Continued on page 1708]

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[Continued from page 1707]

original work appeared in 1934. The author has had unlimited experience with skeletal deformity and disease and presents the subject most thoroughly. It probably has received greater praise in his native England than in the United States, but the completeness of his treatment of the subject and his voluminous personal knowledge justify more extensive use in this country.

Since the publication of the third edition in 1944, the volume has grown from 440 pages to 875. The illustrations are more lavish and of superior clarity to previous editions; subjects are dealt with in larger detail and in the light of experience through the years. Much attention has been given to the pathology of bone (the author is an outstanding pathologist) which adds to its usefulness. This is an outstanding treatise on the subject and will continue to be of value to the orthopedist as well as the radiologist. Though the literature abounds in material on the subject of bone pathology, this all-inclusive book stands high in its dignity, detail, and quality and should prove of inestimable significance to all physicians.

There is much we still have to learn relative to osseous pathology, but for our present information we have in this scholarly volume an exhaustive digest of our knowledge to date. It should meet with loud acclaim.—Milton G. Wasch

Therapeutics in Internal Medicine. By eighty-four authorities. Edited by Franklin A. Kyser, M.D. Second edition. Quarto of 830 pages. New York, Paul B. Hoeber, 1953. Cloth, $15.

In its second, completely revised, and reset edition, this book contains 787 pages of facts and advice as well as a 42-page index. It is written by 84 authorities in their respective specialities. The presentation, including the therapeutic directions, is concise and to the point, based upon the modern concept of the subject. The administration of popular drugs, hormones, and vaccinations as well as the therapeutic technics of handling possible reactions to them are fully explained. The print and paper are of first grade and the index is accurate and comprehensive. The book can be highly recommended to practicing physicians and medical libraries.—Max G. Berliner

Medicine and Pathology. Edited by V. Zachary Cope, M.D. Octavo of 565 pages, illustrated. London, Her Majesty's Stationery Office, 1952. Cloth, $11. (History of the Second World War. United Kingdom Medical Series. Editor-in-Chief, Sir Arthur S. MacNalty, M.D.)

This text is an official medical *History of the Second World War* relating to clinical medicine and surgery. It is prepared by many British authors under the editor-in-chief, V. Zachary Cope, M.D., with extensive collaboration with the Commonwealth countries and the United States. This is the first of two volumes relating to the Second World War.

The presentation is of very complete and exhaustive character. The medical challenges under war time conditions are dramatically described, with compilation of management, prevention, and new advances outlined.

The subjects covered include acute as well as chronic diseases. Psychologic medicine, both in the Army and Royal Navy, is discussed. Typhus fever, hepatitis, undulant fever, influenza, primary atypical pneumonia, encephalitis, and staphylococcus and pneumococcus infections are presented. Cardiology, including rheumatic diseases, is adequately investigated.

This volume is a most important military medical contribution. The information has been collected in a most comprehensive manner through many Commonwealth and Government agencies and, for the greater part, is presented in readable and logical order.—EDMUND R. MARINO

The 1952 Year Book of Neurology, Psychiatry and Neurosurgery (November, 1951–October, 1952). Neurology edited by Roland P. Mackay, M.D. Psychiatry edited by Nolan D. C. Lewis, M.D. Neurosurgery edited by Percival Bailey, M.D. Duodecimo of 603 pages, illustrated. Chicago, Year Book Publishers, 1953. Cloth, $6.00.

There is no better way of keeping one's professional finger on the pulse of the significant publications pertaining to neurology, psychiatry, and neurosurgery than the critical perusal of the articles reviewed and abstracted during the current year by these authoritative editors. The division of labor required for this essential task indicates the need of teamwork.

Dr. Mackay restrains any tendency to over-optimism concerning new trends and treatment promulgations. The work in neurophysiology is commended with respect to cerebral localization and function, and the hormonal and chemical features of the effector mechanism. Emphasis is placed upon the need of studying the operation of the brain as a whole and thereby avoid becoming unscientifically biased re sharply demarcated functional areas of the cerebral cortex. Antibiotics are regarded as very useful but of little value against neurotrophic viruses.

Dr. Lewis points out the growing interest in social psychiatry, although the main trends continue in psychosurgery and physiologic methods, psychosomatic medicine, pharmacologic investigations, and psychodynamics with an ever-increasing psychoanalytic literature.

Dr. Bailey returns as editor of the neurologic section and presents ample evidence of the rapidly growing global interest in neurologic surgery.

This volume will take its honored place with its fellows of yesteryears within handy reach not only of the specialist concerned in the above fields but also the keen student and progressive general practitioner bent upon keeping abreast with current advances in these specialties.—FREDERICK L. PATRY

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[Continued from page 1709]

Water, Electrolyte and Acid-Base Balance. Normal and Pathologic Physiology as a Basis for Therapy. By Harry F. Weisberg, M.D. Octavo of 245 pages, illustrated. Baltimore, Williams and Wilkins Co., 1953. Cloth, $5.00.

This is a thorough review of the topics noted in the title and it provides the facts in a well-organized systematic fashion. For most practicing physicians, it would be wise to begin by reading Chapter 15, which discusses the practical application of the theories and facts to "Patient X," and then turn to Chapters 10, 6, and 7 on pathologic physiology. This will make the more fundamental chapters easier to read and the clinical implications more evident. For no matter how clearly such material is set forth, it is not easy reading for those who spend their days in the practice of medicine. They must bring to the study of such books a real interest and be able to concentrate on each topic.—WILLIAM DOCK

Handbook of Orthopaedic Surgery. By Alfred Rives Shands, Jr., M.D., in collaboration with Richard Beverly Raney, M.D. Illustrated by Jack Bonacker Wilson and others. Fourth edition. Octavo of 644 pages, illustrated. St. Louis, C. V. Mosby Co., 1952. Cloth, $8.00.

This volume will prove stimulating and informative to medical students and general practitioners who wish an authoritative yet elementary text for quick reference on subjects in the field of orthopedic surgery.

The opinions expressed are not those of one person or school but represent the consensus of thought of leading teachers in the field. The bibliography is extensive and an excellent reference when more detailed information is desired.

The subject matter is presented simply and concisely and the text is well-illustrated with reproductions of roentgenograms rather than drawings. It is clearly evident that the author and collaborator have had many years teaching experience for the volume is well planned.

This new edition should be on the bookshelf of every general practitioner and orthopedist.—HENRY P. LANGE

Clinical Management of Behavior Disorders in Children. By Harry Bakwin, M.D., and Ruth Morris Bakwin, M.D. Octavo of 495 pages, illustrated. Philadelphia, W. B. Saunders Co., 1953. Cloth, $10.

This work takes up the clinical management of behavior disorders in children in a series of 12 chapters embracing growth and development and psychologic care of the child. Behavior disorders of all types are discussed. There is also a good chapter on the care of the physically ill and handicapped child.

The book has a very good general reference text, and author and index text. It should prove useful to the general practitioner as a guide.—STANLEY S. LAMM

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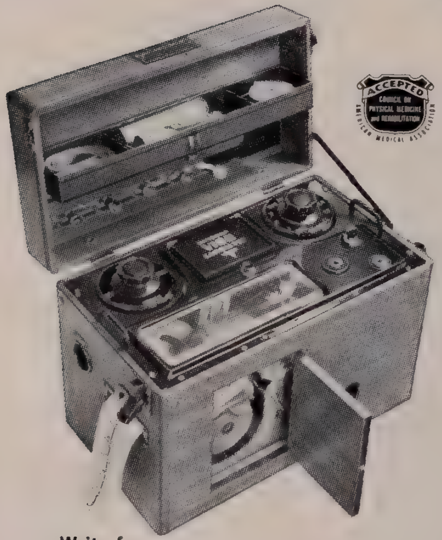

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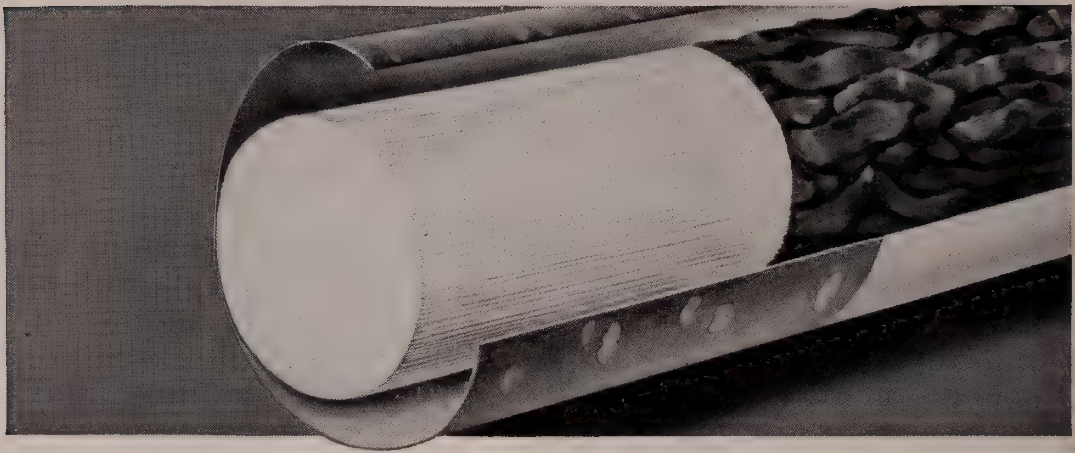

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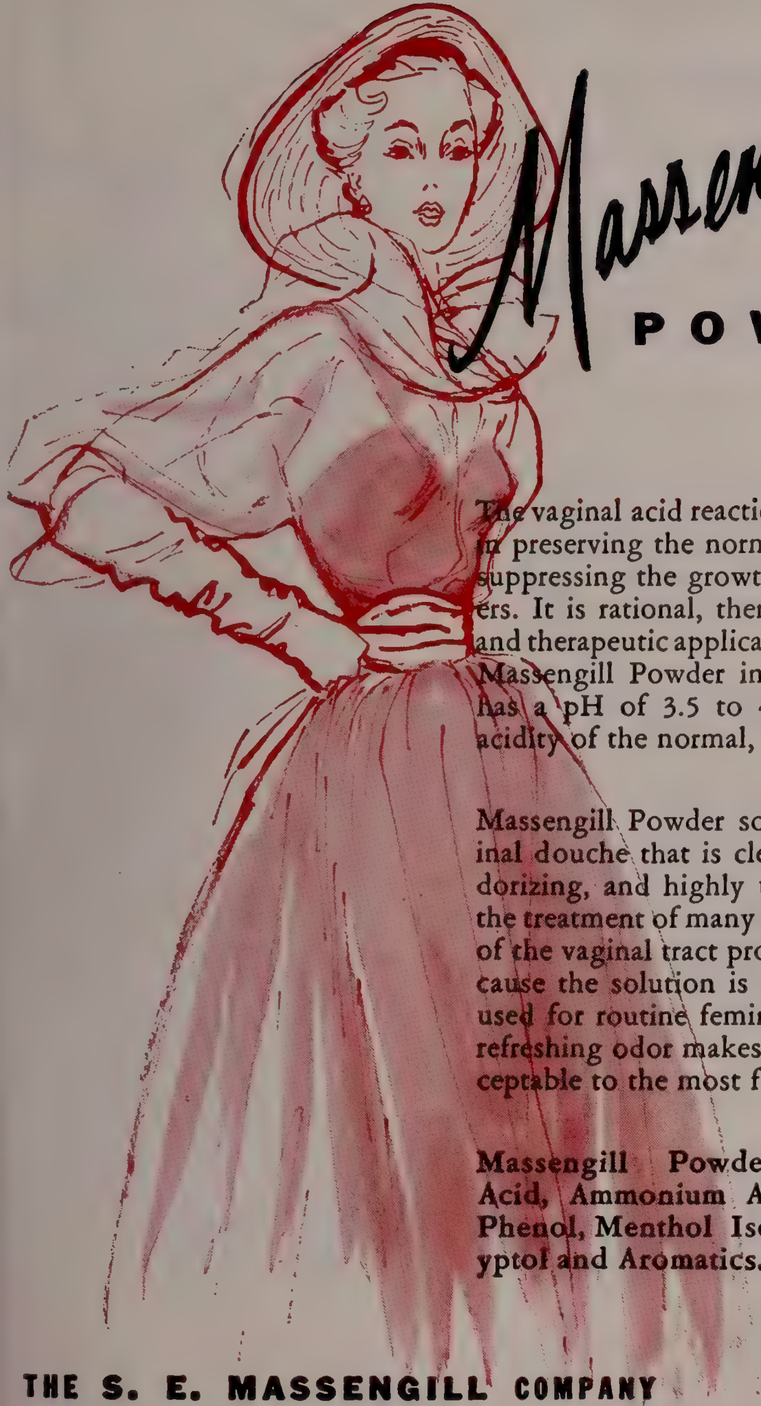

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Bottles of 100, 500 and 1000.

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No safer drug in management of hypertension

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For the pain, depression and cramps of

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Edrisal* to relieve the cramps

"The most satisfactory antispasmodic for use in spastic dysmenorrhea is, in my experience, 'Benzedrine' Sulfate . . ."

Janney, J.C.: Medical Gynecology, ed. 2, Philadelphia, W.B. Saunders Co., 1950, p. 365.

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Wells, R.L.: M. Ann. District of Columbia 20:360, 1951.

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"Mental depression was always relieved."

Hindes, H.J.: Indust. Med. 15:262.

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Recommended dose: 2 tablets.

Smith, Kline & French Laboratories, Philadelphia *T.M. Reg. U.S. Pat. Off.

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'Edrisal* with Codeine ½ gr.'

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new!

for daytime tranquility

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A new, *non-barbiturate* formula for daytime use
To calm the tense and nervous patient

CAR-SED-INE fills a long-felt need for a non-hypnotic, non-narcotic sedative that can be safely prescribed for daytime sedation without dulling the senses or producing unwanted drowsiness.

CAR-SED-INE combines two drugs of established clinical efficacy and safety:

Carbromal ". . . a dependable sedative. It allays excitement and anxiety and tends to restore quietude and tranquility."[1]

Scopolamine ". . . certainly . . . is effective in relieving the patient's emotional disturbances."[2]

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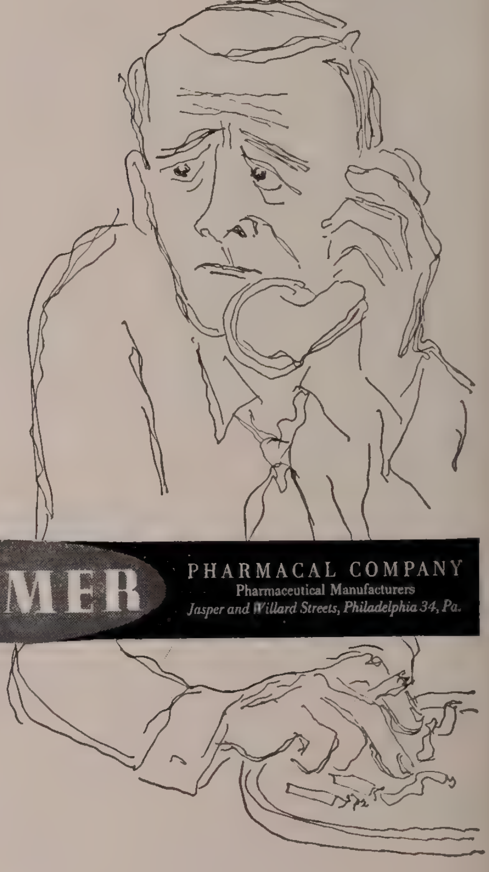

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---

1. Krantz, J.C. & Carr, C.J.: Pharmacological Principles of Medical Practice, Williams & Wilkins Co., Baltimore, Md., 1951.
2. Goodman, L. & Gilman, A.: The Pharmacological Basis of Therapeutics. The Macmillan Co., New York City, 1941.

Serving the medical profession for nearly a third of a century.

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TRANQUILIZER-ANTIHYPERTENSIVE,
ESPECIALLY IN MILD, LABILE
ESSENTIAL HYPERTENSION....

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✳

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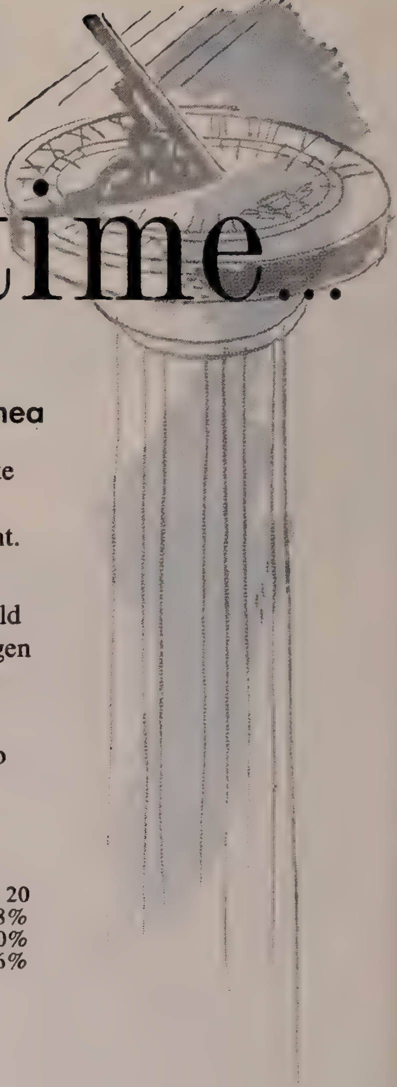

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HI-PRO with its high protein, low fat and moderate carbohydrate content is ideal in providing quick relief and nutritional support with simple treatment.

High in Protein
"The digestion of protein is little affected. The child with diarrhea continues to absorb and retain nitrogen and may even do so when moribund."[2]

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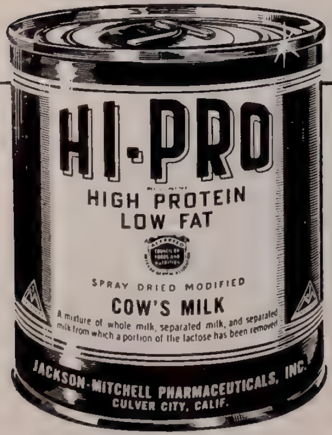
"In the presence of diarrhea, fats are most likely to escape absorption, as much as 25% or 50% being lost by way of the bowel."[1]

SIMPLE TREATMENT IN DIARRHEA

Hi-Pro–3 tablespoonfuls Water–6 ounces	=	Calories per fluid ounce	20
		Protein	6.8%
		Fat	2.0%
		Carbohydrate	5.6%

[1] Jeans, P. C. & Marriott W. McK. Infant Nutrition; 4th ed.
[2] Holt, E. M. Diseases of Infancy; 11. 223.



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HIGH PROTEIN
LOW FAT
SPRAY DRIED MODIFIED
COW'S MILK
A mixture of whole milk, separated milk, and separated milk from which a portion of the lactose has been removed
JACKSON-MITCHELL PHARMACEUTICALS, INC.
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Protein	41%
Fat	14%
Carbohydrate	35%
Calcium	1.15%
Calories per ounce	121

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will be effective
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**Fewer than 3 of 100
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VITAMINS: Containing specified amounts of thiamine, riboflavin, and niacin, enriched bread makes a significant contribution to the satisfaction of these vitamin requirements. Enriched bread has played an important role in virtually eliminating frank deficiency diseases and materially reducing subclinical deficiency states resulting from dietary inadequacies in these essentials.[2]

MINERALS: By providing substantial amounts of calcium[3] and of added iron, modern enriched bread goes far in satisfying the needs for these substances. For example, six ounces of bread on the average provides approximately 15 per cent of the day's recommended calcium allowance for adults and 38 per cent of the iron allowance.

PROTEIN: The protein of commercial bread is of high biologic value because it is a mixture of wheat flour protein and milk protein, the latter derived from added nonfat milk solids.[4] One pound of enriched bread furnishes about 39 Gm. of protein.

ECONOMY: At its present day low price, bread represents an outstanding nutritional "buy." It provides not only generous amounts of essential nutrients, but also readily available food energy. These features truly make enriched bread one of America's *basic foods.*

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

REFERENCES

1. Sebrell, W. H., Jr.: Trends and Needs in Nutrition, J.A.M.A. *152*:42 (May 2) 1953.

2. Flour and Bread Enrichment, 1949-50: Prepared by The Committee on Cereals, Food and Nutrition Board, National Research Council, 1950.

3. Data furnished by the Laboratories of the American Institute of Baking, Chicago, Illinois.

4. Sherman, H. C.: Chemistry of Food and Nutrition, ed. 8. New York, The Macmillan Company, 1952, pp. 212; 597-600; 646.

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Unger, A. H. and Unger, L. Annals of Allergy. 10:128,1952.

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Jenkins, M. C. Jl. National Med. Assoc. 45:120,1953.

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Naterman, H. L. The Journ. of Allergy. 24:60,1953.

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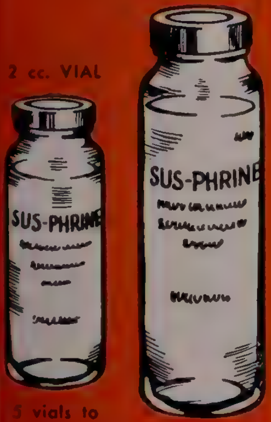

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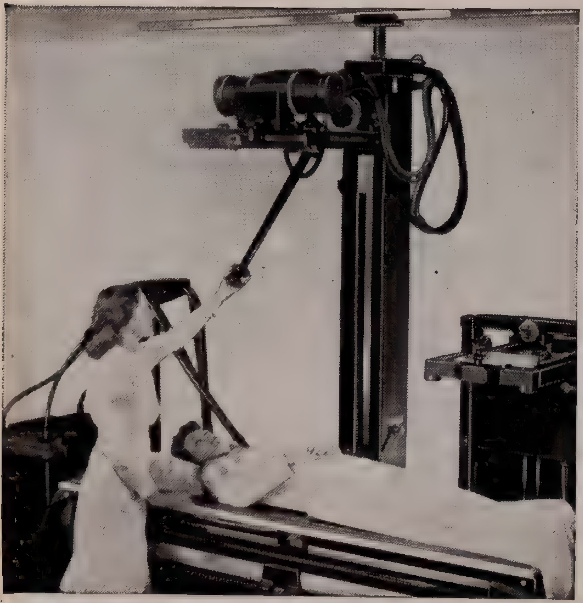

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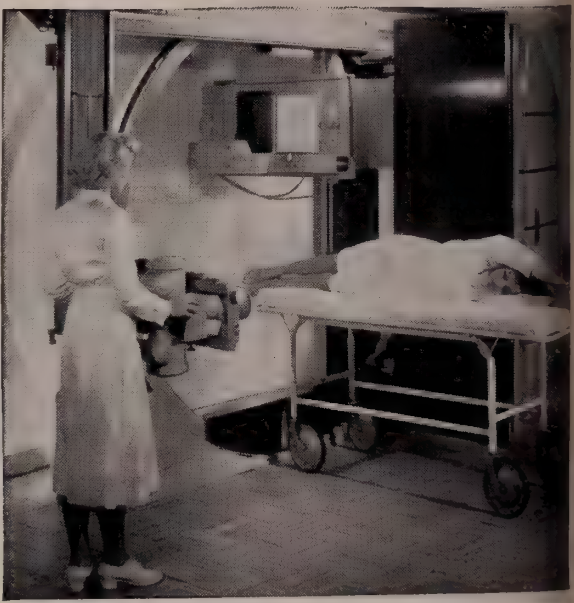

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[1] Editorial, J. Allergy 23: 279, 1952.

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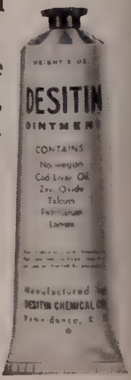

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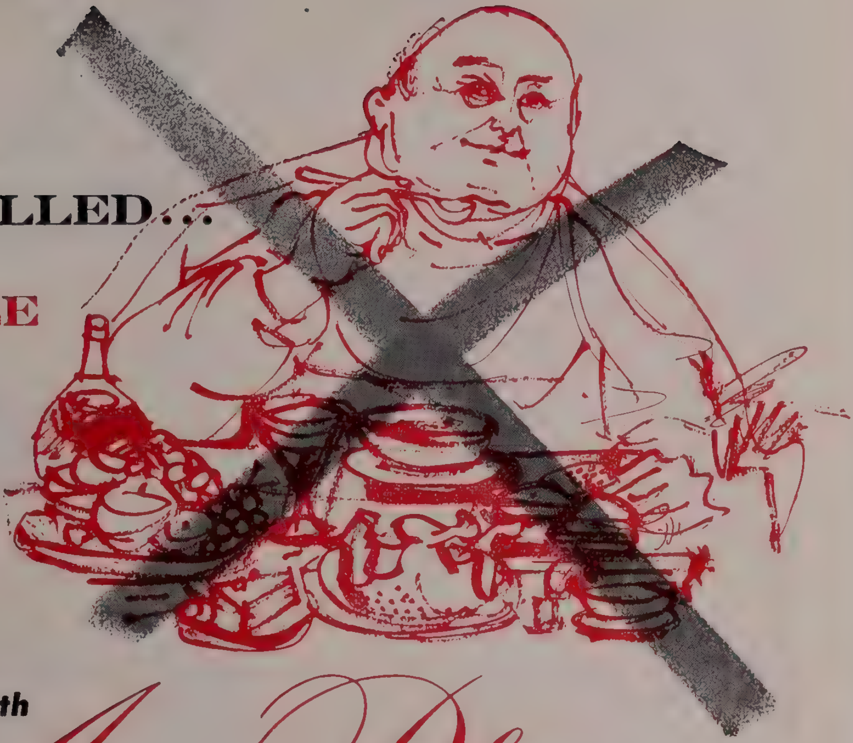

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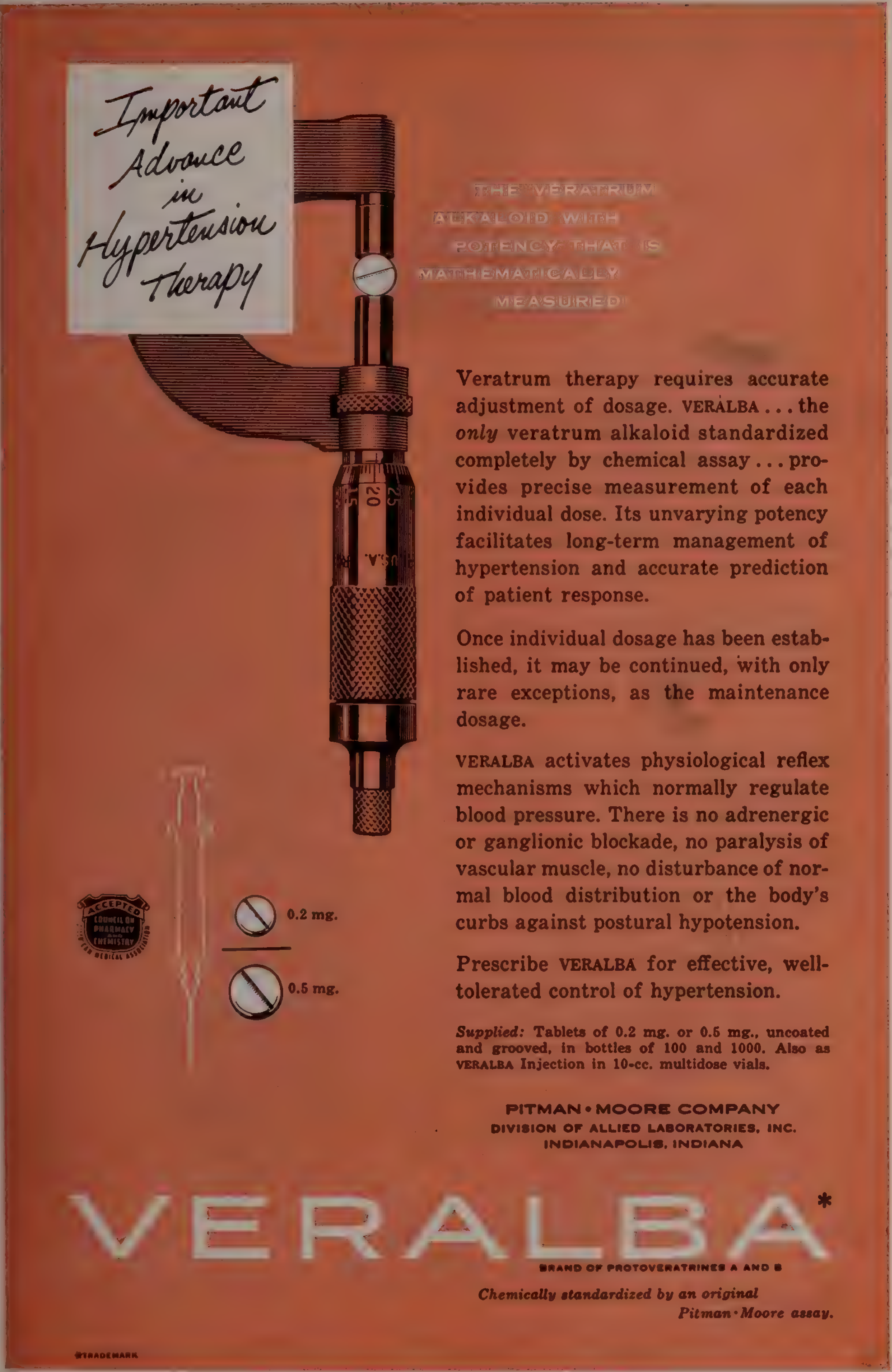
- Bodansky & Bodansky: Biochemistry of Disease, 2nd ed., 1952, p. 337.
- Shallenberger, P. L. & Kerr, P. B.: Postgrad. Med. 13:32, 1953.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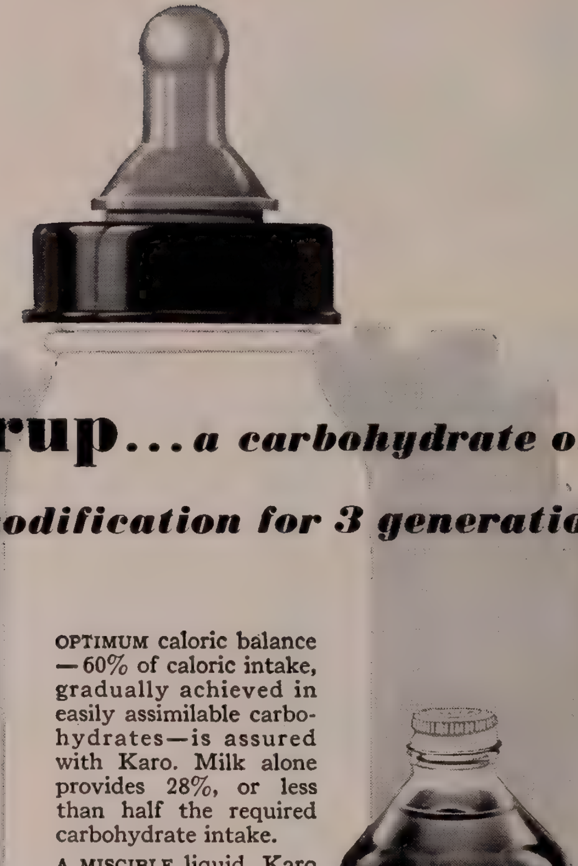

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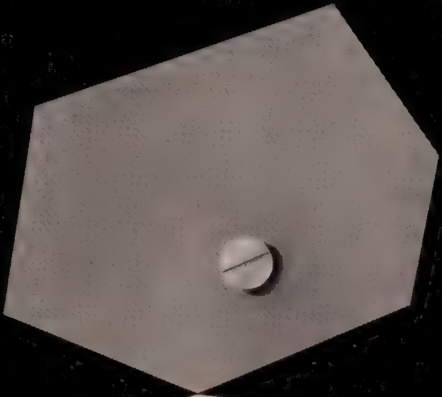

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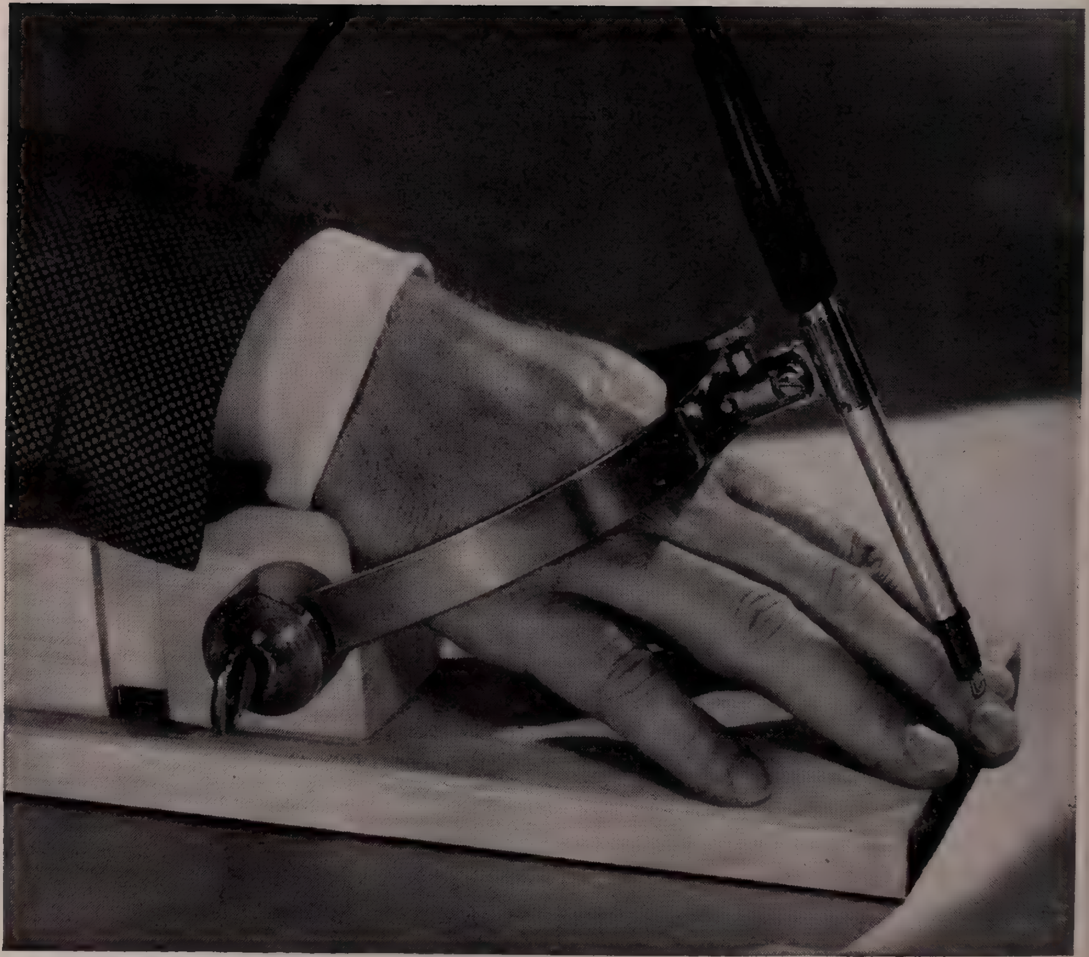

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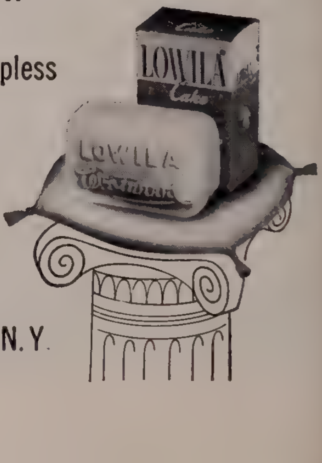

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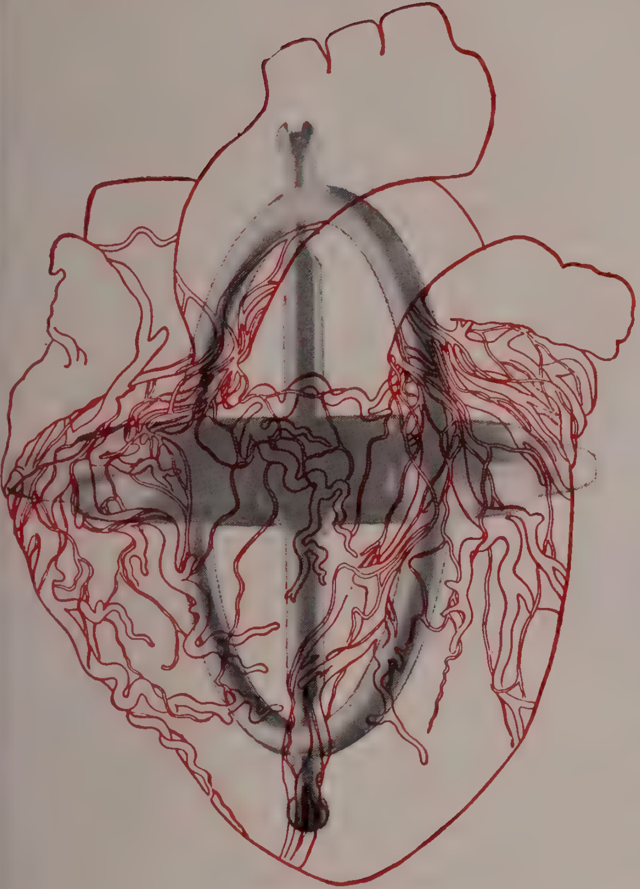

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EDITORIALS

Reunions at Conventions

The Class of 1938 of the Medical School of Western Ontario, Canada, is blazing a trail in New York State. Their 1954 reunion was held in New York City coincident wtih the annual meeting of the Medical Society of the State of New York. These gentlemen registered as guests and were admitted to all scientific meetings and the exhibits.

The annual convention of the American Medical Association is marked by reunion dinners of several national organizations and hospital and medical college alumni societies. Our New York State bodies might well follow this example by convening during the annual meeting of the State Society. Travel and living expenses for attending medical meetings are income tax deductible.

We hail the advent of our Canadian colleagues. We hope they will make their visit a regular annual event. They have set a noteworthy example to us!

Of This and That

Of the desirability of long life, opinions may vary. Some may hold with Cutherbert that "It's a short life and a gay one." Others may hold with William Morris[1] that this is "A world made to be lost—a bitter life 'twixt pain and nothing tost." Or with Hamlet:[2] "...There's the respect that makes calamity of so long life...." Or with John Gay[3] "Life is a jest, and all things show it; I thought so once, but now I know it." But whatever may be thought about it, the fact seems to be that we will have to put up as best we can with more of it. For,

> With the continuing decline in mortality in our country, the chances that an individual will reach the age sixty-five have greatly increased. Under the mortality conditions prevailing in the United States around 1900, nearly 40 out of every 100 newborn white boys could expect to reach the threshold of old age. For a boy born in 1930 the chances of attaining age sixty-five were 53 in 100; currently they are 64 in 100.
>
> Most persons who attain age sixty-five can expect to live for a considerable number of additional years. More than one half of the white men who celebrate their sixty-fifth birthday will survive another twelve years, and one fifth for twenty years. The outlook is even better for women; one half of those who reach age sixty-five will live to age eighty, and about one fifth will celebrate their eighty-eighth birthday.[4]

To make our longer lives interesting there is, happily, always controversy. Says the *J.A.M.A.*[5] of a currently lost cause:

> The controversy stimulated by the amendment to the Constitution proposed by Senator Bricker and 63 of his colleagues has spread to every segment of our population, including the medical profession. The American Medical Association has received a number of letters from physicians during the past few weeks expressing various sentiments concerning the proposal. Some endorse the amendment wholeheartedly; others have deplored the intervention of organized medicine in what they consider to be a nonmedical issue; still others have requested additional information defining the threat to our system of medical care posed by our present method of negotiating and ratifying treaties.
>
> This cause for the moment is lost but will come up again probably next year. For this reason, and to have something to chew on in the interim, we review the matter.
>
> In tracing the interest of the medical profession in the Bricker amendment, it is important first to recognize the fact that treaties become the supreme law of the land if ratified by two thirds of the Senate present and voting. In addition, it must be noted that significant changes have occurred during the past few years in the scope of treaties and executive agreements whose ratification would change our domestic laws.
>
> In the health field three specific situations can be explored. They deal with the activities of the United Nations treaties of friendship with other countries and the conventions of the International Labor Organization.
>
> The United Nations Charter, which was ratified in 1945, has two general sections that lay the framework for broad treaty provisions in the field of health. Article 55 provides in part: "The United Nations shall promote solutions of international, economic, social, health and related problems." Article 56 provides that "all members of the United Nations pledge themselves to take joint and separate action in cooperation with the organization for the achievement of the purposes set forth in Article 55." Agreements and treaties negotiated pursuant to these provisions could fundamentally change medical practice in this country if ratified by two thirds of the Senate present and voting.

---

[1] The Earthly Paradise.
[2] Hamlet, Act III, Scene 1.
[3] His own epitaph.
[4] Statist. Bull. Metropolitan Life Insur. Co., Nov., 1953, p. 1.
[5] J.A.M.A. 154: 680 (Feb. 20) 1954.

The second example deals with a series of friendship treaties that were before the Senate this past year. These include treaties with Denmark, Holland, Israel, and Greece, which dealt with immigration quotas, citizenship requirements, and matters of professional licensure in the various states. If these treaties had been ratified as originally prepared, some of the requirements of the state medical licensing boards would have been abrogated.

The International Labor Organization, an affiliate of the United Nations, in June, 1952, adopted a convention known as the "Minimum Standards of Social Security." This convention includes almost all of the socialist medical proposals that have until now been rejected by the Congress. If this convention is ratified under the existing provision of our Constitution, government control of medicine will have been achieved. Because of the danger of the socialization of medicine via international treaty, the American Medical Association favors a redefinition of existing treaty-making powers.

The exact wording of a suitable amendment is a matter for constitutional lawyers to determine, not for physicians. The House of Delegates of the American Medical Association recognized the impropriety of an action to endorse the wording of any specific bill and therefore endorses the principles embodied in Senate Resolution No. 1. Whether modifications of that resolution achieve the objectives sought is primarily a legal issue. Certainly the interest of the medical profession in this historic and constitutional controversy is wholly proper. The action of the House of Delegates was based on careful study, the resolution adopted temperate and reasonable.

Of course, the hydrogen bomb in irresponsible hands could radically change things statistically and lend support to William Morris' rather dour idea as quoted above, but isn't such a development a seemingly expensive method of eradicating controversies? Why not just wait for something to go wrong in the universe, and in the meantime, with income taxes paid, enjoy the spring as it "unlocks the flowers to paint the laughing soil?"

Editorial Comment

Xeroradiography and Medical Defense. According to an editorial in *Health News*,[1] a recent development in the art of x-ray printing, for lack of a better word, provides an aid to civilian defense, conserves materials, time, and facilities, and does away with ordinary film and developing processes.

> Xeroradiography is a photoelectric process for recording x-ray images; no solution or liquid of any sort is required as in conventional radiography.
>
> Xerography, the photographic counterpart of xeroradiography, was first described and patented by Carlson, a physicist, in 1937. During 1953, the General Electric Corporation and the Haloid Company, licensed to use the process, became aware of the medical potentialities of xeroradiography in medical defense.
>
> The essential feature of xeroradiography is the xeroplate, a sheet of aluminum or brass cut in any size desired and coated with selenium. This nonmetallic element is a semiconductor whose electrical charge may temporarily change when exposed to radiation. To record x-ray images, the xeroplate is sensitized by inserting it in an electrical device that causes a uniform positive charge of electricity to flow onto the selenium surface. If the charged plate is then exposed to x-rays, with a person's hand, for example, superimposed between the plate and the x-ray tube, varying amounts of positive charge will remain on the plate; the distribution will depend upon the absorption of the x-rays by the bone and other parts of the hand being examined. Thus if the proper amount and quality of radiation is used, there will

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[1] Feb., 1954, vol. 31, no. 2.

remain on the plate, after exposure, an electrostatic image of the hand.

This invisible image can be made visible in a closed chamber simply by sprinkling fine powder, negatively charged, which clings firmly to the positively-charged selenium surface. The result is an etching-like image which is easily interpreted by the radiologist. If a permanent record is desired, a photograph may be made with an ordinary camera, or the powder image may be imprinted on an adhesive-coated piece of paper or transparent material. After the image has been interpreted or reproduced, a soft brush removes the powder from the surface of the plate, and it is ready for recharging. The same plate can be used over and over several hundred times. The whole procedure takes only thirty to forty seconds; the plate is ready for interpretation one minute after exposure of the part of the body examined. It is truly a simple, inexpensive, and ingenious medium for the recording of x-ray images of the human body.

In the event of an atomic explosion, such a device can prove of incalculable value in the handling of fractures, foreign bodies, and other injuries in the emergency hospitals. There are no films to be stored, or destroyed by atomic radiation after the blast, no transport of large quantities of films and chemicals and darkroom equipment. No special skills or special x-ray machine are necessary.

The Department of Radiology of the Albany Medical School and the State Department of Health have completed the developmental phases of the application of xeroradiography to general medicine as well as civil defense. Studies are going forward on its practical application to accident cases coming into the emergency room of the Albany Hospital. Xeroradiography shows a great promise of adding a new chapter to medical science in the diagnosis of human ills.

For the information of our readers, we reproduce the editorial at length in order that the details of the process may be understood by all interested.

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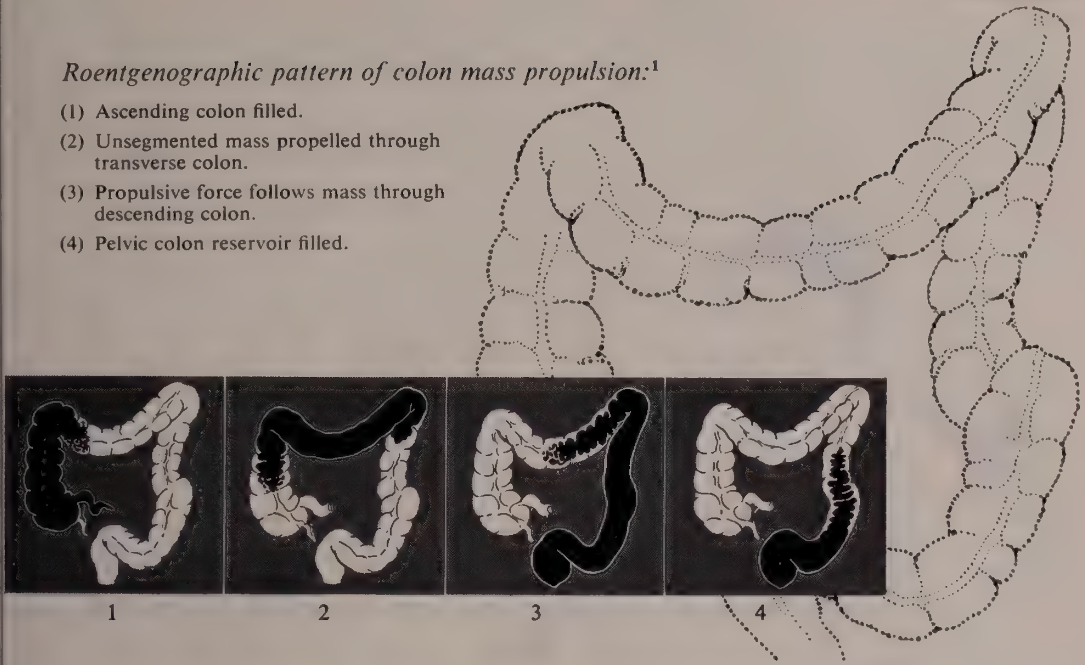
Roentgenographic pattern of colon mass propulsion:[1]

(1) Ascending colon filled.
(2) Unsegmented mass propelled through transverse colon.
(3) Propulsive force follows mass through descending colon.
(4) Pelvic colon reservoir filled.



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Such gentle stimulation is of distinct advantage in reeducating and reestablishing those reflexes which control bowel evacuation. Many factors may pervert the normal reflexes, causing finally chronic constipation. Among them are: nervous fatigue and tension, improper intake of fluid, improper dietary habits, failure to respond to the call to stool, lack of physical exercise and abuse of the intestinal tract through excessive use of laxatives.[2]

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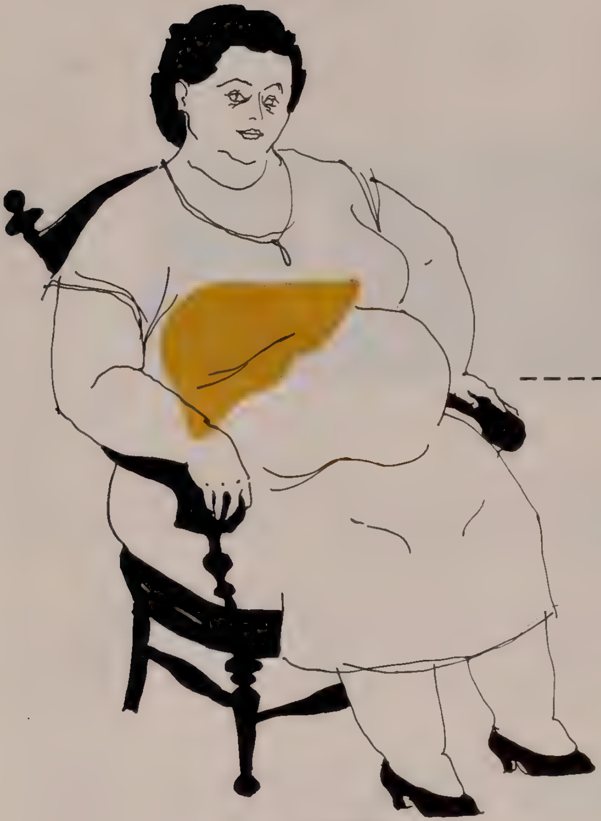

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*Zelman, S.: Arch. Int. Med. *90*: 141, 1952.

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SCIENTIFIC ARTICLES

Guillain-Barré Syndrome

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(From the New York State Rehabilitation Hospital)

In the six years from 1947 to 1952, 12 patients at the New York State Rehabilitation Hospital presented the typical picture of myeloradiculopathy or the so-called Guillain-Barré syndrome. During this period there were 2,033 inpatients; 1,193 of these patients had anterior poliomyelitis. All 12 patients were selected so that the history, clinical findings, and laboratory findings conformed to the basic criteria of the Guillain-Barré syndrome. Two patients with identical clinical pictures and laboratory findings were eliminated because of a history of tetanus antitoxin injection a few days before onset. Although some authors have included these cases in their series, I have considered these to be cases of allergic polyneuritis of known etiology.

Clinical Features

The Guillain-Barré syndrome is a neurologic complex of unknown etiology. There is no evidence to date that it is caused by a virus or that it is infectious or contagious. Baker[1] classifies the disease into five types: mononeuritic, polyneuritic, myelitic, bulbar, and cerebral forms, depending on the outstanding clinical findings. However, it had best be called encephalomyeloradiculopathy, dropping off that part of the nervous system which is least involved for brevity. In 50 per cent of the cases it is preceded by an infection, usually of the upper respiratory tract.[2] Frequently there is a latent period, then a sudden onset of neurologic signs, either sensory or motor. Usually the motor weakness starts distally in the feet and ascends. In many cases the patient falls while walking. If the sensory phenomenon precedes the motor, then there are paresthesias and hyperesthesias of the hands and feet. The sensory phenomena usually are overshadowed by the ascending, bilateral, symmetric flaccid paralysis that may follow in hours, days, or weeks.

Generally there is little evidence of an infection. The temperature is usually not above 100 F. The sensorium is clear unless in some cases the primary symptomatology is in the brain and cranial nerves. Then there is dysphagia, dysarthria, and disorientation, and death may ensue. Cranial nerve involvement is common. The seventh, ninth, and tenth nerves are most commonly involved, with two, four, five, and six infrequently involved, as manifested by blurring of vision and diplegia. Some authors[3] report as high as 50 per cent of cases with involvement of the seventh facial nerve.

There is muscle tenderness and radicular pain present, but they are usually not severe. Only infrequently does radicular pain persist and become the outstanding complaint.

The laboratory findings are usually within normal limits and do not suggest an infection. The cerebral spinal fluid is considered diagnostic. The cell count is below 25 while the total protein is above 45 mg. The initial protein level is frequently found at the onset to be slightly elevated. However, if lumbar punctures are done during the course of the disease, the level will be seen to rise to 300 or more, and then it drops to normal as functional recovery ensues. Aring[4] has pointed out that the increased total protein is due to a pooling of proteins in the lumbar area and does not indicate the level in the cisternal area. He gives examples where lumbar and cisternal determinations were done on the same patients with the lumbar level being 300 mg. or more and the cisternal level normal. One theory for the elevated total protein is that advanced by Govaerts and Dagnelie. Normally about one fifth of the cerebrospinal fluid escapes from the spinal subarachnoidal space along radicular sheaths, the remaining fluid escaping by way of the intracranial venous sinuses. In this syndrome there is tumefaction of the spinal roots following the inflammation and vascular congestion, producing an obstruction at the radicular sheaths. Also the meningeal capillaries are dilated so that plasma protein passes through them to add more protein to the already stagnant spinal fluid. Biemond demonstrated radicular obstruction by injecting Thorotrast into the lumbar sac.

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There are minimal changes in the brain characterized by mild edema, occasional scattered petechiae, and some perivascular lymphocytic infiltration. In the spinal cord there may be mild chromatolysis of the anterior horn cells which is regarded as retrograde in nature. The most profound alterations are found in the peripheral nerves. There is severe edema with demyelinization and phagocytic infiltration. Most changes occur at the junction of dorsal and ventral roots, with changes to a diminishing degree in adjacent spinal roots and spinal nerves. There may be changes in the sympathetic nervous system characterized by slight edema and small round cell infiltration. The lesions in the cranial nerves are similar to those in the peripheral nerves.

Usually good functional recovery is the rule. In the case where the bulbar manifestations are great, death may ensue from involvement of the vital centers. Some series report 20 per cent mortality.[1] Usually, however, once recovery starts, it is continual, slow though it may be. The recovery usually descends so that the first parts to be involved, usually the legs, are the last to recover. In the cases followed recovery continues, although remissions have been reported by Baker.

Thiamin is given for nerve regeneration. Other drugs including cortisone have been given without any significantly beneficial results. The treatment program is the same as that for poliomyelitis with hydrotherapy, stretching of tight structures, and splintage for the prevention of deformities. As the patient progresses, braces are fitted and gradually discarded as he improves. The extensively involved patients fit into a specialized program of physical therapy and rehabilitation for poliomyelitis. However, our cases progressed fairly rapidly through all phases of physical therapy and rehabilitation and left the less fortunate poliomyelitis cases far behind.

Differentiation from Poliomyelitis

Unlike poliomyelitis the etiology of Guillain-Barré is unknown. It is not seasonal, occurs in all decades of life, and does not occur in epidemics. In more than half the cases there is an antecedent infection, usually an upper respiratory tract infection followed by a latent period. The temperature is usually normal, and there are no signs of an infection when neurologic symptoms occur. In poliomyelitis there is fever, systemic infection, and rapid onset of paralysis. Meningeal irritation and headaches are rare in Guillain-Barré, while they are frequent in poliomyelitis. Sensory changes are rare in poliomyelitis, while they are frequent in Guillain-Barré. Vasomotor changes, frequent in poliomyelitis, are rarely seen in Guillain-Barré. The motor symptoms are bilateral, symmetric, and ascending, and the paralysis may progress for days or weeks, whereas the paralysis in poliomyelitis follows no pattern and is spotty and additional involvement rarely occurs after the second week. Optic neuritis is not infrequent in both diseases as well as diplopia and involvement of the ninth and tenth nerves. However, facial paralysis is frequent in Guillain-Barré, as high as 50 per cent of cases in some series. The spinal fluid in Guillain-Barré reveals a high total protein with few cells; there are many cells and only a slightly elevated total protein in poliomyelitis. With extensive involvement the prognosis in poliomyelitis is poor, while in Guillain-Barré the chance for functional recovery is good.

Analysis of 12 Cases

The date of onset of the 12 cases ranged from October, 1946, the oldest case, to March, 1952, the most recent case. The youngest was nineteen months, the oldest fifty-four years. Five were ten or younger; three were in their thirties; three were in their forties, and one was over fifty. Two had onset in January, three in February, two in December, one each in April, May, June, October, and November.

Nine had an antecedent illness lasting from one month to one week before onset. Of these, two of the children had fever of unknown cause for one month before onset of neurologic signs. Three had upper respiratory infection one week before onset. Three patients had the "grippe" which lasted one week and occurred two weeks before onset; one had generalized illness for three days before onset of neurologic signs.

In six of the patients there was an interval of three to seven days when they were asymptomatic. Following these antecedent infections two of the adults returned to work when paralysis had its onset; three of these patients had resumed ambulatory activities when paralysis began.

At the time of onset of neurologic signs only one had a temperature over 99 F. That temperature went to 102 F. for a short period. The patients who had antecedent infections had temperatures up to 103 F. with the antecedent illness.

The first signs of onset of the neurologic symptoms were pain, sensory changes, or motor paralysis. Six patients had the onset of motor paralysis in the lower extremities. Two children developed a drop foot gait. Three fell while walking and were unable to rise again. One, the infant, was unable to stand or move. Two patients had sensory changes in the form of numbness of the legs, quickly followed by motor weakness. Two patients had onset of fatigue that was gradually followed by motor weakness. Two patients had rapid onset of general illness followed gradually by motor weakness and sensory changes without a definite interval.

All 12 had motor paresis or paralysis of all four extremities. The time from onset of paralysis until complete involvement varied from twenty-four hours to six months. Eight patients had their complete motor involvement within two days after onset. Two took two weeks; one three weeks, and one six months to develop the complete motor paralysis.

All 12 had a bilateral, symmetric muscle picture, the motor weakness being about the same on opposite extremities. In some cases the muscle charts showed a "mirror image" of the right to the left extremity.

All cases had the greatest involvement distally in the hands and feet. Most of the cases showed the first motor sign in the legs, with the legs being the last to improve and bilateral foot drop being the most persistent motor residual.

Ten had definite sensory changes. They had anesthesia, hyperesthesia, and paresthesias of the hands and feet. These sensory changes rapidly cleared up except in two adults, where they were a source of annoyance two years after onset.

Eight patients had evidence of involvement of the cranial nerves. Six patients had involvement of the ninth and tenth nerves as evidenced by dysphagia and dysarthria. Five had one or both facial nerves involved. Two had involvement of the fifth cranial nerve, and only one had diplopia.

Only one had radicular pain of any significant degree after the initial muscle pain of two to three weeks duration, and this has persisted for five years.

None had vasomotor changes significant enough to produce subjective complaints or objective signs.

All cases had at least one spinal fluid examination. None had a cell count over 25. In all cases the total protein was elevated. In two cases it was reported as "elevated." In the remaining ten it varied from 80 to 366 mg. Eight cases had more than one spinal fluid examination, and these showed an increase in the total protein after the initial diagnostic tap. Six of the cases were followed with lumbar punctures as they progressed. Five showed a normal protein at the time of discharge when they were ambulatory. The other patient dropped from 345 to 166 on discharge as an ambulatory patient.

Other laboratory tests were not diagnostic. Heterophil agglutinations done in seven cases were not positive. Liver function tests were done in seven cases without positive findings. All other routine laboratory work was within normal limits. In seven cases specimens of stool, blood, spinal fluid, and throat cultures were collected for virus studies which have not been reported.

The cases of longest duration had their onset seven years ago, the most recent cases nine months ago. Three cases were of seven years duration, one of five years, one each of three and two and one-half years duration. Two cases were of one year and three of nine months duration.

All cases had paralysis of all four extremities following onset of the disease. These same patients are now completely ambulatory and independent, some with slight to moderate residual paresis. Seven patients require no apparatus; three patients require bilateral spring wire drop-foot braces, and two other patients require Lofstrand crutches for stability. The residual paresis is limited to the legs in all five patients, three in the feet and two in the knees.

Five cases, the three oldest cases of seven years duration and two of nine months duration, have complete return of functional power. Two cases, one of three years and one of nine months duration, have slight weakness of the dorsiflexors of the feet but no limp. Three patients, one of five years and two of one year duration, have footdrop gait requiring braces. Two patients, one of two years and one of one and one-half years duration, have bilaterally weak quadriceps not requiring braces but necessitating the use of Lofstrand crutches for stability when outdoors.

Of the ten patients with sensory changes at onset, only two have residual disturbances. Both of the patients, men aged forty, have annoying intermittent paresthesias of the hands and feet.

The eight patients with cranial nerve paralysis showed no sequelae. Three of the patients, all over thirty-five, complain of occasional pains in the arms and legs of the radicular type. Two of the patients are of seven years and one of five years duration.

None of the patients showed a recurrence. Once improvement began, it continued in all cases.

Comment

The Guillain-Barré syndrome has been considered by some to be a form of atypical poliomyelitis. However, the antecedent infection, latent period, and mode of onset are different from poliomyelitis, as is the pattern of progression of the paralysis and the sensory symptoms. The etiology and pathology are different. However, one disease that is most similar to the Guillain-Barré syndrome is allergic myeloradiculopathy, resulting from serum sickness following injections of tetanus antitoxin. Two such cases were observed in which the clinical course including the functional recovery and high spinal fluid total protein with low cell count were identical to Guillain-Barré syndrome. Both patients had received tetanus antitoxin ten to twelve days before onset of neurologic signs, and if their history were not known, they would have fulfilled the criteria of the Guillain-Barré syndrome.

It seems probable, then, that the disease is a selective inflammation of the spinal roots with retrograde changes in the cord and peripheral nerves caused by an allergic reaction to an unknown toxin. In some cases the toxin might be chemical, but it is possible that in many cases with antecedent infections and a latent period that the pathology is due to an allergic reaction to an organism or its toxin. An antecedent upper respiratory tract infection, although caused by an organism of low virulence, may produce a toxin with a selective action on the spinal nerve roots where it would produce an acute inflammation. The prognosis would depend not only upon the virulence of the toxin but also upon the length of time that it acts upon the spinal roots before it is detoxified and eliminated.

Two young patients, aged ten and six, had onset of mild scoliosis shortly after onset. They began an intensive program of physical therapy designed to stretch the tight fascial structures in the trunk. Both had poor trunk musculature after onset. One had complete return of all muscle powers with elimination of the scoliosis; the other progressed more slowly, but the trunk muscles returned to normal. It is conceivable that many cases of idiopathic scoliosis are the result of an unrecognized mild myeloradiculopathy that has caused a transient trunk paralysis that permitted the establishment of trunk imbalance due to development of tight fascial structures with resulting scoliosis.

All cases showed remarkable recovery considering they were all bedridden following onset of the disease. While the results do not confirm Guillain's statements that all the patients recover promptly and completely after a few months, they do indicate an excellent prognosis over a long period when compared to patients with similar flaccid paralysis immediately following onset of the anterior poliomyelitis.

Inasmuch as the ultimate functional prognosis is good, many patients are not given the advantages of intensive physical therapy and rehabilitation that they require. It is a flaccid paralysis, and they should receive the physical therapeutic measures to prevent contractures and deformities while nerve regeneration is taking place.

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Highlights in Sterility and Infertility

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Although the clinical approach to relief of reproductive disorders is still somewhat empiric, constant research and the more rational use of the agents at our disposal is constantly decreasing our percentage of failures. Propagation is affected by emotional, physical, and environmental causes. Anything that depresses or alters the body economy may affect fertility in varying degrees. This fact must be especially considered in that residual 10 per cent of infertile couples where no apparent causes are found.

Five of the less recognized phases of propagation which constitutional factors may profoundly influence are (1) the quality of ova produced, (2) the quality and optimum amount of endometrial glycogen, (3) the proper testicular distribution of fat, glycogen, and phosphates, (4) the optimum presence of hyaluronidase in seminal fluid, and (5) the gross chemical and bacteriologic state of cervical mucus. These may all seem minor, but they do play a very important part in fertility.

Realizing that all aberrations from the normal help decrease the couple's fertility index, we must from the very beginning determine all possible factors, however slight, and eliminate as many of these as possible. Each couple must undergo a minimum basic study with more specialized procedures used as indicated. Basal metabolic rates, complete blood counts, urinalyses, blood grouping and Rh factor must be done on both husband and wife as part of the basic study. Even after a most extensive survey and general "building up" regime, one is confronted with many infertile couples who still remain without offspring.

The infertile couples pose the problem of either providing them with their own offspring or definitely concluding that this is impossible. In the latter instance they can adjust themselves to this fact and thus be freed of the psychic trauma arising from frustrated hope and constant disappointment. Some may elect to adopt children. In the instances where both are sterile, the knowledge of bilateral failure will prevent feelings of self-guilt and mutual recrimination.

The Male Factor

From 7[1] to 20 per cent of husbands in sterile matings are azoospermic. Another 28 per cent show definite asthenospermia.[2] The quality of a semen specimen is determined by the number, morphology, and motility of the sperm and also by the volume and character of the fluid and its constituents. Although the pendulum as to criteria of semen quality swings back and forth, we wish to emphasize that the quality of a specimen is to be determined by the sum total of all its characteristics. Only a critical survey by an experienced examiner and not by the average laboratory technician is satisfactory.

Normal spermatogenesis is an end result of normal interplay of the gonadal-pituitary system operating in an environment of normal function and optimum nutrition.[3] There are so many possible etiologic factors which may impair this close interplay that in many cases a broad and comprehensive although empiric regime must be instituted as part of the treatment. In cases of repeated azoospermia, the prognosis for the re-establishment of male fertility is practically nil.

Some men produce small volumes of seminal fluid, 0.5 to 1 cc., but the sperm are concentrated and of good quality. In such cases infertility may be due to an insufficient number of sperm entering the fallopian tubes through insufficient cervical inundation. In these instances homologous insemination directly into the cervical canal only or placing the ejaculate in a plastic cervical cap, which is then applied over the external cervical os, is often helpful.

In oligospermia and asthenospermia recent knowledge offers greater hope for success than in the past. If testicular biopsy shows advanced testicular damage with atrophy and extensive fibrosis of the seminiferous tubules, improved spermatogenesis is extremely unlikely with any therapy. In many cases, however, the testicular germinal epithelium is partially intact, and improvement may be expected with general supportive therapy.

For many years our therapy has included (1) a high protein diet supplemented with concentrated proteins such as Essenamine powder, (2) a high B-complex intake including six B-amino complex tablets and nine Brewers yeast tablets daily, (3) 1 to 2 grains of thyroid daily unless contraindicated, (4) large amounts of fresh and desiccated liver, and (5) iron, calcium, and phosphorus in various forms. Following Glass and Russell's report,[3] we have added 50,000 units daily of vitamin A, and we advise parenteral administration of 50 mg. of testosterone propionate three times a week until 500 mg. have been given. Although for the last twenty-four years we have frequently used vitamin A and E alone or together with no appreciable result,[2] it is possible that better results may be obtained if they supplement other therapy.[4]

In extreme oligospermia with total sperm counts below 60,000,000 per ejaculate, the prognosis has been extremely poor despite therapy. Heckel and McDonald,[5] however, have reported encouraging results with very large doses of testosterone in producing what is being called the rebound phenomenon. In all of their 64 patients testicular biopsies showed reversible tubular damage.

The Tubal Factor

Treatment and investigation of the fallopian tubes is the most important single procedure in infertility. Tubal insufflation is therapeutic as well as diagnostic and is essential in every workup. Insufflation will re-establish patency in 40 per cent of the closed tubes and improve function in most of those impaired. Done properly and in the absence of contraindications, it is a perfectly safe, harmless, and efficient procedure. The absolute contraindications include (1) inflammation, however slight, anywhere in the genital tract, (2) uterine bleeding, (3) the pre- and postmenstrual phases, and (4) pelvic masses of questionable etiology. It must be done under manometric and volumetric control using carbon dioxide gas and with constant abdominal auscultation to account for the gas used and thus guard against gas emboli. Used in conjunction with a mercury manometer or kymograph it determines the degree and type of tubal patency and tubal function. By noting the absence or location of pain during insufflation, one can determine the site of tubal occlusion with a fair degree of accuracy.

Tubal insufflation is preferable to uterosalpingography which has but slight therapeutic value and gives little information as to tubal function apart from that of patency. Uterosalpingography, if properly used, does give an accurate picture of the uterine cavity and is employed where one suspects benign uterine pathology such as abnormalities of the uterine cavity or the presence of polyps or submucous fibroids. It should be used with the greatest caution and asepsis and with regard for the same contraindications as insufflation. It should be done by the gynecologist.

In some instances if culdoscopy is performed simultaneously with tubal insufflation, one will be better able to determine the site and type of tubal occlusion and also study the physiologic anatomic relationship between the tubal fimbria and the ovaries.

Culdoscopy

Direct visualization of the pelvic structures through the cul-de-sac of Douglas is a procedure that is rapidly becoming widespread. It enables one to observe adnexal pathology and function as well as associated pelvic pathology. Its use before undertaking abdominal tubal plastic operations will help evaluate the probable outcome and may discourage surgery if the outlook is poor. Ovarian study via culdoscopy is of special value also in infertility associated with amenorrhea, hypomenorrhea, persistent clinical failure of ovulation, recurring abnormal luteal phase, or persistent endometrial hyperplasia.

Although the technic of culdoscopy is not difficult, the interpretation of the findings requires experience.

Tubal Reconstruction

Tubal reconstructive surgery enjoyed several years of popularity following the work done at Bellevue Hospital by Sovak and Lardaro from 1928 to 1932. In fact, it became too popular, often being done without adequate study or preparation and selection of the patient.[6]

Success in tubal plastic surgery depends primarily on the gentleness with which the tissues are handled at operation and the state of the tubes and surrounding pelvic tissues. Prior to operation all traces of pelvic congestion and inflammation must be eliminated. A prolonged preoperative course of intravaginal heat with maximum distention, such as is obtainable with the Elliott

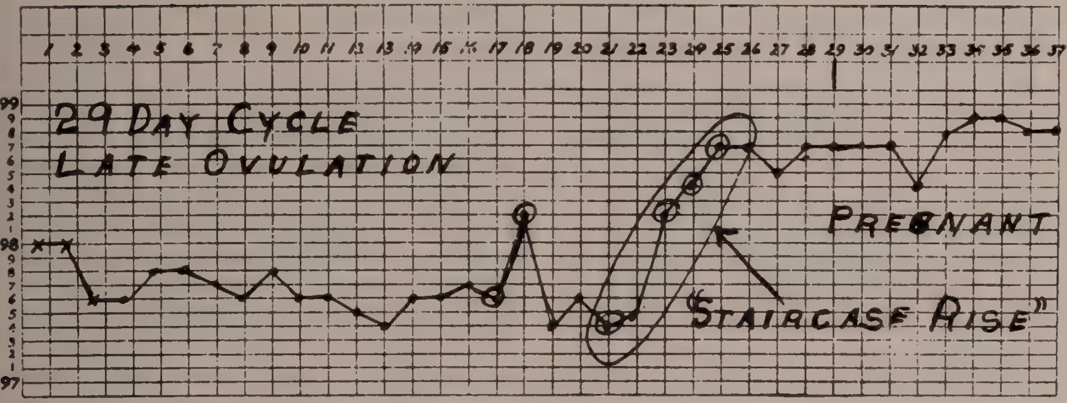

FIG. 1. Late ovulation in a regular twenty-nine-day cycle. Infrequent coitus was concentrated during fertile phase.

apparatus, is often required. Both husband and patient must first have been thoroughly worked up and both placed in a condition of maximum fertility so that pregnancy may occur within a possible maximum of six months.

Type 1 is the Cuff operation and is used where only the distal end of the tube is closed. Type 2, tubal implantation, is employed where the interstitial or the proximal portion of the tube is occluded. In both of these operations the tubes are kept open and free of adhesions by instituting insufflations as soon as possible. Type 3 is salpingostomy. In instances where the tubal lumen is patent but very narrow or where the walls are too thick to permit a successful cuff operation, a total linear salpingostomy, as recommended by Israel,[7] may be employed. Type 4 is the Estes' transplantation.

There are instances of bilateral tubal damage where surgery is essential because of pelvic pain. Here, one can give the patient some slight hope for pregnancy by a modification of the Estes' operation. This consists in entirely excising both tubes and reaming out a tunnel in both cornual regions, including the interstitial portions, and then implanting a previously denuded surface of each ovary on to the reamed-out area.

Basal Body Temperature

This subject is still full of contradictions. However, certain facts are in general acceptance, and records of the basal body temperature will give us fairly accurate and often important leads in diagnosis and treatment, provided the graphs are not slavishly followed and are carefully interpreted.[8]

Definite, although limited, use can be made of this phenomenon. In the first place, it is of vluea in indicating the time of maximum fertility (Fig. 1).

This is especially valuable where coitus is of infrequent occurrence and in cases of artificial insemination where the number of inseminations is necessarily limited. It is of particular value in patients with marked menstrual irregularities, again in localizing the period of maximum fertility. It is of value also in patients who are otherwise normal but in whom the postovulatory phase shows temperature irregularities. Here it indicates the need for endocrine therapy. Endometrial biopsy usually shows a deficient or defective endometrium. In some of these cases there has been success with the use of 0.5 to 1 mg. of stilbestrol by mouth daily. In others chorionic gonadotropin (equine), 500 units, and progesterone, 50 mg. parenterally twice a week, have given good results.

Basal body temperature can be used as a guide in the early management of pregnancy in infertile patients or in those with a history of repeated abortions. Normally the basal temperature remains at a high plateau for the first three months. Any definite downward tendency or any marked irregularity, especially if associated with staining or pelvic discomfort, calls for immediate endocrine therapy. We use stilbestrol in doses rapidly increased to tolerance and maintained there. We start with 5 mg. repeated every two to three hours up to tolerance and then increase individual doses until 50 to 75 mg. are given daily. Bed rest and sedation are also employed.

Artificial Insemination

There are two types of artificial insemination. In one, the husband's ejaculate is used. The indications for this are rare. The most common indication for homologous artificial insemination is oligospermia characterized essentially by a very small volume and where the sperm are concentrated and otherwise normal. A second indication is the inability of the husband to deposit the seminal fluid in close proximity to the cervical os for mechanical reasons, whether of male or female origin.

Artificial or heterologous insemination, using a donor other than the husband, should only be considered in cases of azoospermia or extreme, intractable oligo- or asthenospermia and provided the woman appears to be of normal fertility.

It is in a way another form of adoption and should be offered and employed with the same selection and care as adoption. The procedure presents definite and important legal, ethical, and moral responsibilities and must be employed with due consideration for these. The donor must be selected with great care and consideration for the prospective parents. If the woman is Rh negative, one should select a suitable donor who also is Rh negative.

Insemination should not be undertaken unless the patient is ready to continue for several successive months. Otherwise an anovulatory cycle or one producing defective and nonfertilizable ova may be chosen. Greater success can also be anticipated if the menstrual cycles and the character of the basal body temperature are first studied for several successive months. In this way the ovulation pattern and the general character of the thermal shift can be used to greater advantage. Intercourse with the husband is advisable the same morning or evening of each insemination. This may stimulate ovarian expulsion of the ovum or its migration down the tube or may influence pituitary activity in some way not clearly understood at present.

Radiation Therapy

Small-dosage, medium voltage (180 kilovolts) radiation therapy of the pituitary gland and ovaries has been selectively employed for about twenty-five years. Although used empirically and usually in cases long resistive to organotherapy, it is often attended with most dramatic results.

Best results are obtained in amenorrhea, oligomenorrhea, and irregular menstruation. The results are poor in normally menstruating women who exhibit normal basal temperatures and only slightly better if the basal curves show evidence of ovarian dysfunction. Anatomically the best subjects are those with hyperplastic or proliferative endometria and those where the ovaries are enlarged or contain numerous retention follicle cysts. These facts can be determined by endometrial biopsy and by adnexal palpation, but the ovarian status is best determined by culdoscopy. Small ovaries and atrophic ovaries with or without endometrial hypoplasia give doubtful prognosis but are no contraindication.

Treatment is preferably begun right after a menstrual period, and the patient is emphatically instructed to refrain from exposing herself to pregnancy. If the patient is amenorrheic or has very infrequent menses, pregnancy must first be definitely excluded, and the same instructions are then given. Exposure to pregnancy is not permitted until after menstruation occurs or an interval of two weeks elapses from the last radiation exposure. These precautions are to prevent irradiation of a very early embryo and also to prevent possible fertilization of an irradiated ovum.

Conclusions

The many years of intensive clinical and experimental research by many workers throughout the country are beginning to bear fruit. Greater understanding of the intricate problems involved and the greater use of our old and newer modalities should constantly raise our percentage of success. With all-inclusive studies and thorough treatment of every infertile couple, our percentage of failures should be lowered to an irreducible minimum.

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Cat-Scratch Syndrome

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About twenty-three years ago, while working on tularemia, Foshay of Cincinnati recognized a disease, not tularemia, but similar and seemingly related to a cat scratch.

Foshay did not report these results but did relate his experience to Debre when Debre was visiting this country in 1947. This French pediatrician had encountered the disease in his practice. Shortly after his return to France, he wrote his first article on cat-scratch disease, which appeared in the French literature in 1950. Since then a number of articles have appeared at home and abroad, and the following features have been established:

1. It is seen mostly in children but occasionally in adults.
2. It is characterized by subacute regional adenitis which frequently suppurates without scarring.
3. The course is usually mild but occasionally prolonged, painful, and associated with fever.
4. The adenopathy is usually preceded by a peripheral skin lesion, a small, almost healed maculovesicular lesion, not tender and with no obvious lymphangitis.
5. In the majority of cases there is a history of association with cats and usually of a cat scratch, but some typical cases have had no contact with cats.
6. The adenopathy appears about two weeks after the cat scratch, when such is present.
7. The patients give positive skin tests to an antigen prepared from pus or biopsied gland. The antigen is prepared in the same way that the Frei test antigen is prepared.
8. Although no large-scale skin test surveys of the general population are possible (the antigen is too rare), small groups of controls have uniformly given negative tests. Once positive, the skin test has been found to remain so for years.
9. The cats manifest no disease, the skin tests on the cats are negative, suggesting that the cats play a purely passive role. The virus may be present primarily in plant or vegetable life.
10. Several members of one family have been simultaneously involved, but this is unusual.
11. The disease in many respects resembles tularemia and lymphogranuloma venereum. It has also been confused with tuberculosis adenitis, infectious mononucleosis, sarcoidosis, and Hodgkin's disease.
12. Pathologists cannot make a definite diagnosis, but certain features may be suggestive; all biopsied glands have shown nonspecific epithelioid cell granulomatous type of inflammatory reaction.
13. It is now conceded that antibiotics have no effect.
14. It has not been accepted that the virus has been isolated. It is obvious that the last word on cat-scratch disease has yet to be uttered. In the meantime, we had better speak of it as "cat-scratch syndrome."

The following brief case histories are presented as being representative of the findings in this syndrome.

Case Reports

Case 1.—On March 19, 1952, a four-year-old girl was brought to our office with a swollen left epitrochlear gland. This gland was about the size of a walnut and was quite firm and tender. There was a small, reddish scratch on the left wrist. It seemed almost healed. It was not tender. She thought she had scratched the wrist on a stick over a week before. There was no knowledge of a cat scratch, although she played intimately with a neighbor's cat. We made the vague diagnosis of adenitis secondary to the scratch and gave penicillin. Although the child remained afebrile, the gland did not improve. We requested a surgical consultation. The surgeon confirmed the original diagnosis and felt that antibiotics had not been pushed hard enough. However, when he pushed antibiotics theoretically hard enough, the child still did not improve. On referring the case we had mentioned that the patient reminded us of a case of tularemia once seen. After the failure of the antibiotics, the surgeon entertained the very astute diagnosis of cat-scratch fever. The patient then forsook both of us and went to another doctor. Still another antibiotic was given. Finally, the gland suppurated and was drained after which the child recovered. Unfortunately the pus was not saved. No skin test was done.

The clinical picture here was typical, but whether we accept the cat-scratch diagnosis or not, this patient made us very conscious of cat-scratch disease. You may be sure that subsequently we have entertained this diagnosis with the slightest provocation.

Case 2.—The next case was a nine-year-old girl who developed a swelling in the left groin associated with fever on September 21, 1952. She was seen by the family physician two days later. Because she was acutely ill with a large tender inguinal gland and a considerable leukocytosis, she was referred to us as a possible leukemia. The child's family had acquired a two-month-old kitten two weeks before the onset of this illness. When the child was first seen, red scratches which had been made by this kitten were still present on the left shin. The patient was admitted to the hospital. She ran a septic temperature between 98.6 and 105 F. for two days. This fever spontaneously subsided, but for the next six weeks she would shoot a fever for two or three days each week. The left inguinal gland varied from a peak size of a walnut to peanut size. It would seem almost ready to suppurate and then would subside only to enlarge again. She looked pale and chronically ill. There was some secondary anemia. The sedimentation rate was high. Tuberculin test was negative. Tests for lymphogranuloma were negative. Skin test to cat-scratch antigen was positive. After about six weeks, she returned to school.

This patient represents the typical and complete picture of severe cat-scratch disease. The one exception is that although red cat scratches were present, they were not the typical sluggish pustular lesions seen in other cases.

Case 3.—The third case was a ten-year-old girl who was seen first on November 10, 1952, because of right axillary swelling which had first appeared two days before. This child was hardly ill. She had no fever, and there was little malaise. The gland was only slightly tender, although it was larger than a hen's egg and discomfort was experienced because of its size. She had not even noticed the small, painless red pimple on the right forefinger. She knew of no specific cat scratch but played regularly with their three house cats. This child was not even excluded from school; she was never ill. The gland subsided gradually until it was almost gone after two weeks. There was no suppuration.

Skin test material was finally obtained through Dr. Foshay five months after recovery. The test on this child was positive.

Case 4.—The fourth case was seen on January 23, 1953, because of a pimple under the right eye. This pimple had been present without much change for two weeks. It was initiated by the bite of the family cat. It looked like a small impetigenous lesion, and bacitracin ointment was prescribed. Cat-scratch disease was not considered in this case until during the third week of the lesion when we were called to the home of this child because of suspected mumps. The "mumps" proved to be a large right preauricular gland on the side of the skin lesion. She had a temperature of 103 F. Terramycin was given to this child. The fever subsided after two days, but the gland and skin lesion did not disappear for three weeks. Although clinically this case was typical of the cat-scratch syndrome, we will have to exclude it because the skin test was negative with the same material that produced a positive test in Case 3.

Comment

These four cases represent clinically suggestive, but varied examples of the cat-scratch syndrome. In each case a different gland was involved depending on the location of the primary lesion: the axillary, the epitrochlear, the inguinal, and the preauricular. The severity varied from almost no discomfort or illness to a protracted febrile course of six weeks in the patient originally suspected of having leukemia. Even though the workup on these private cases might be considered scanty, they seem unique enough to get the point across. If nothing else, the failure of antibiotics should make one suspicious. The major involvement of the gland with the minor, almost insignificant appearance of the primary lesion was outstanding.

The fact that we have seen these cases in a twelve-month period indicates that the disease is not uncommon locally. One hesitates to describe a disease as really new, yet these cases seem so distinctive that it seems hard to admit that we have consistently misdiagnosed them in the past.

In the literature it is usually suggested that all suspected cases should be given a skin test. Skin test material is not available commercially. We obtained one test from Dr. Seymour Kalter in Syracuse, and then he ran out. After several letters we finally obtained material for several tests from Dr. Foshay himself. Most local universities are working on the disease and are more than happy to process purulent materials into skin test material. If any of you have patients who suggest this syndrome and who suppurate, by all means collect the material aseptically and send it in for processing. You will then make available material, not only for your own use but for others.

Nonmalignant Tumors of the Bronchus

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BENIGN bronchial neoplasms comprise a group of tumors which formerly were discovered only at autopsy. With the advent of direct visualization of the air passages developed by Killian and the expansion of the method by Jackson, a path of investigation was opened for the study of endobronchial tumors in much greater detail. Bronchoscopy, coupled with x-ray studies, increased the possibilities of recognizing endobronchial lesions of all varieties. Tumors arising in the bronchial tree were first noted at autopsy, and various classifications were used. But it was not until the clinical signs and symptoms were correlated with endobronchial findings by bronchoscopy that interest advanced beyond the curiosity stage. The purpose of this paper is to review the benign neoplasms and to present four cases from our experience with these lesions.

Classification of the benign neoplasms is fairly well agreed upon with the exception of just where to classify the disputed bronchial adenoma. In reviewing the literature, one finds classes of lipoma, fibroma, chondroma, osteoma, the hamartoma group, papilloma, myoblastoma, and the bronchial adenoma, the last divided into the carcinoid and the cylindroma types. Such tumors as angiomas, lymphangioma, and hemangioendotheliomas are referred to, but the suggestion that they are examples of adenomas of a highly vascular pattern[1-3] seems to be accepted. It is of interest that only one report of a neurogenic tumor is mentioned and that in Langston's review in 1950.[2] This was a personal report from Colonel Ash, the director of the American Registry of Pathology, in 1948. This tumor was classified as a neurofibroma.

The lipoma is one of the rarer types of benign neoplasms since only 12 cases had been reported in the literature up to 1952.[3,4] The majority were located in main stem bronchi. The nonmalignant character of these tumors was brought out by the fact that they are pedunculated or have only a limited attachment to the bronchial wall and never metastasize. Histologically, the cells are of uniform character and are composed mainly of fat cells. No case of malignant degeneration of a bronchial lipoma has been reported. Eight of the 12 cases reported were removed endoscopically, and four were seen at autopsy. Seven of the eight cases were in men, and the average age was forty-nine.

The fibromas constituted about 9 per cent of the benign bronchial tumors reviewed by Lindgren.[5] However, Langston in 1951 could find only 12 cases in the literature, and he makes the statement that he is at a loss as to how the figure of 9 per cent was arrived at. Malignant changes in fibromas are exceedingly rare.

The osteoma, chondroma, and hamartoma group are rare. Pure chondromas are extremely rare since most of the reported cases contain fibrous tissue, fat, and epithelial elements in varying proportions.[6] Most of these tumors should be classified in the hamartoma group. Pure chondromas do occur, however, and Davidson[7] reported such a case. Malignant transformation of these tumors is exceedingly uncommon.

Other miscellaneous tumors have been reported, such as the papilloma[8] and myoblastoma.[9]

The so-called bronchial adenoma presents a somewhat perplexing problem to both the clinician and the pathologist. It is included in the benign tumors since some consider it such. More recently, it has been considered to be malignant.

This tumor has certain well-recognized characteristics. It nearly always occurs in a primary bronchus or close enough to permit visualization by bronchoscopy. The statistics seem to prove that the incidence is slightly greater in women: 64 per cent reported by Brunn and Goldman,[10] 54 per cent in a series of 35 cases reported by Clerf and Bucher,[11] and 57.9 per cent of 38 cases reported by Moersch and Tinney.[12] The age of the patient at the onset of symptoms of adenoma is below forty. In Brunn and Goldman's series[13] 63 per cent had symptoms before the age of forty.

Several hypotheses about the origin of bronchial adenomas have been made, but Womach and Graham[6] have presented the most accepted and likely explanation. They are of the opinion that these tumors occur when the bronchial buds fail to develop into the orderly arrangement of normal tissue. According to their theory, when the mesodermal elements predominate, osteomas, lipomas, or fibromas result, and when the endodermal elements are dominant, bronchial adenomas occur.

The microscopic appearance of these tumors is characterized by closely packed, cuboid and columnar cells with small darkly staining nuclei in which mitosis is rarely seen. These cells are arranged in two or more layers, between which spaces of varying size are found. Moersch and McDonald[14] have separated the adenoma into two types, the carcinoid and the cylindroma types. The carcinoid type represented 90 per cent of their 86 cases and the cylindroma 10 per cent.

The carcinoid type tends to have a smaller pedicle than does the cylindroma type. In the cylindroma type two patterns are seen: a Swiss-cheese pattern with the spaces filled with a mucoid secretion and a tubular pattern. In the experience of several investigators the cylindroma type seems to be a more difficult therapeutic problem and may be the tumor that metastasizes.

The question whether bronchial adenoma is malignant still is unsolved, but of the 700 cases reported in the literature 78 were metastasizing adenomas. In McBurney, Kirlin, and Woolner's recent report,[15] in a series of 111 cases nine metastasizing adenomas were found, an incidence of 8.1 per cent. In October, 1951, Jackson and Norris[16] reported that they had no metastases in any of their cases. Womach and Graham have considered the adenoma a malignant tumor since their report in 1938.

The bronchoscopic appearance is usually quite characteristic. These tumors appear as smooth, pink or purple, rounded masses projecting into the lumen of the main stem bronchus. The tumor usually has a broad base, and often the extrabronchial portion is much larger than the portion lying within the bronchus. The tumor may be very vascular and bleed extensively on biopsy.

The symptoms are those produced by bronchial obstructions. Polypoid tumors of any type tend to produce the same sequence of events. If the obstruction is only partial, emphysema may be present in the distal lung segment. Partial obstruction occurs early in the course of the disease so that wheezing or asthmatic manifestations may be the earliest symptoms.

When the tumor completely blocks the bronchus, it prevents aeration of the distal lung, and atelectasis results. Bronchial drainage is also interrupted, resulting in inflammatory reactions associated with pneumonitis, bronchiectasis, lung abscess, empyema, and the so-called "drowned lung."

Pulmonary bleeding is a common symptom and often may be the cardinal symptom. The symptoms may be of long duration since these are slowly growing lesions. Cough and recurrent bouts of pneumonia and pleurisy are the usual story.

The treatment of the benign intrabronchial tumors other than the adenoma group seems to be fairly standard. The procedure of choice is removal with bronchoscopic forceps. Pulmonary resection is resorted to only when the tumor cannot be successfully reached or when the suppuration in the pulmonary tissue distal to the obstruction is irreversible. On the other hand, there is much disagreement concerning the proper treatment of the adenoma group. Those who consider these tumors strictly benign[17] treat them just as they would the above-mentioned group.

Others[1,13] feel as we do that the danger of local invasion, metastases, hemorrhage, and local recurrence with resulting bronchial occlusion outweigh the risk of primary pneumonectomy or lobectomy.

Case Reports

Case 1.—W. F. was a twenty-four-year-old male first seen in November, 1952, because of hemoptysis. He gave a history of pain over his left anterior chest for two years, a rattle in his chest for at least one year, severe cough and expectoration of thick yellow sputum for one year, and shortness of breath for one year. The pulmonary bleeding, which began about three weeks prior to his first visit, at first was just blood-tinged sputum, but it had increased to where he might raise a cup of blood a day. There was no weight loss or anorexia and no significant family history. Physical examination revealed a pale, chronically ill young man with labored breathing. At the time of examination his posterior pharynx was full of bright red blood. There was no adenopathy. Examination of the lung fields revealed rales and ronchi over the left posterior and anterior chest. No other significant findings were noted. He was admitted to the hospital. Initial blood examination revealed a normal red and white blood cell count, with a sedimentation rate of 2. A bronchoscopy was performed, and a smooth large polypoid tumor mass was encountered in the left main stem bronchus just inferior to the left upper lobe opening. The tumor mass practically occluded the entire bronchus. The biopsy taken was reported as a granuloma and chronic bronchitis. The bronchoscopy was repeated three days later and again was reported as an ulcerogranulomatous reaction.

Roentgenograms of the thorax taken on admission revealed feathery markings in left base, and repeated films showed a decrease in aeration of the left lung. Ten days after admission a left lower lobe lobectomy was done. At surgery the left main stem bronchus was opened, and the tumor mass was seen. It was pedunculated, had somewhat of a ball-valve action, and partially occluded the left upper lobe opening. The base was just inferior to the left upper lobe opening. The tumor mass was removed with the bronchus open, and a left lower lobe lobectomy was done. Postoperative bronchoscopy showed complete removal of the tumor. The patient had an uneventful recovery and was discharged nine days postoperatively.

In the latter part of March, 1953, a bronchoscopy again was negative. He has returned to work and has no complaints. The pathologic diagnosis of the removed tumor was bronchial adenoma.

Case 2.—T. S., a forty-six-year-old male, was first seen in October, 1952. The diagnosis of bronchial adenoma had been made in 1939 by Dr. Henry Rentschler of the Guthrie Clinic. At that time the tumor was treated by coagulation, and he was asymptomatic until 1951, a period of twelve years. In 1951 he developed shortness of breath. He had pneumonia in September, 1951, frequent grippe attacks until spring of 1952, and pneumonia again in July, 1952. Recently, when rebronchoscoped by Dr. Rentschler, a lesion was noted at the same site as in 1939. The lesion was in the left main stem bronchus at the level of the upper lobe opening. Biopsy was reported as bronchial adenoma.

Physical examination was negative other than for the lungs. There was hyperresonance of the left lung with markedly diminished breath sounds; the right lung was negative. Fluoroscopy revealed hyperventilation of the left chest with the diaphragm low and fixed in the expiratory phase. X-rays from the Guthrie Clinic showed a complete atelectasis of the left lower lobe and obstructive emphysema of the left upper lobe. He was admitted to the hospital for study. A bronchoscopy revealed a large polypoid tumor mass occluding the left main stem bronchus and partially occluding the left upper lobe. Biopsy was reported as bronchial adenoma. The patient had a history of pneumonia in the right lower lobe so a right bronchogram was done which revealed no pathology. A left pneumonectomy was carried out. There were no mediastinal nodes, and the tumor did not invade the bronchus. On opening the main stem bronchus the tumor base was found to be on the mesial wall, measuring 1.4 cm. by 1 cm. A spur projected into the left upper lobe bronchus occluding half the opening. It extended downward into the lower lobe and completely obstructed the lumen for a distance of 3 cm. His postoperative course was uneventful, and he was discharged two weeks postoperatively. He returned to work in January, 1953, and was last seen in May, 1953. without respiratory symptoms.

The following patient is being reported to show the perplexity of the diagnostic problem. She is not in our series but is presented for consideration of diagnosis.

Case 3.—A forty-one-year-old female schoolteacher was seen in July, 1946. In 1942 there had been a gradual onset of productive cough and soreness in the right chest. No hemoptysis had occurred. In August, 1943, and October, 1943, she was hospitalized for febrile episodes with pathology in the right chest. The x-rays then suggested inflammatory lesion involving the right lower and the right middle lobe. She had increasing chest pain on the right, particularly over the anterior end of the fifth rib. In June, 1946, x-ray revealed a definite circumscribed area of density in the right chest midway from apex to diaphragm.

Physical examination revealed a healthy appearing woman. Examination was essentially negative except for a palpable enlargement of the anterior end of the right fifth rib. A bronchoscopy revealed no tumor mass, and bronchoscopic Papanicolaou smears were negative. Biopsy of inflammatory thickening of the mucosa of the right lower lobe bronchus was negative. A radical excision of the tumor of the fifth rib was done and was reported as metastatic carcinoma with the statement that the histologic pattern was adenomatoid. A week later a pneumonectomy was carried out. The tumor mass infiltrated the interlobar fissures, and it also extended into the mediastinum. The mass was primarily within the upper pole of the right lower lobe. Following the pneumonectomy intensive deep x-ray therapy was instituted. Postoperatively she made an excellent recovery. In June, 1947, the fourth rib on the right was explored, because of abnormal x-ray findings. A negative biopsy report was made. Patient has been followed closely, and the latest x-rays in January, 1953, show no change. The patient is well. Is this a metastasizing adenoma?

Case 4.—A fifty-seven-year-old female patient was first seen by Dr. Swen L. Larson in 1946. At that time she gave a history of having had about 50 bronchoscopies at Rochester, New York, for fulguration of a neuroma of the right bronchus. At that time she was seen for a respiratory infection and stated that she returned to Rochester for bronchoscopic checkup every two months. She was seen again in January, 1948, by Dr. Larson, complaining of a severe cough, particularly when lying down. Dr. George A. Hilleman of Rochester had advised surgery. In all, the tumor had been fulgurated 47 times. Her chief complaint was a severe nonproductive cough. There had been no hemoptysis. Other significant history included a radical mastectomy in Buffalo in 1929 and admission to the Arnot-Ogden Hospital for chronic cough in 1944. At that time she was bronchoscoped by Dr. E. F. Butler. He noted that the right middle lobe orifice was filled with granulation tissue. A biopsy was taken and reported as chronic inflammatory disease.

Physical examination revealed a well-developed, well-nourished white female. There was a well-healed radical mastectomy scar. No abnormal signs were noted in lung fields. On April 19, 1948, she was admitted to the Arnot-Ogden Hospital for pulmonary study. X-ray of the chest on admission showed no atelectasis, and it was noted that the appearance of the right base had improved since 1944. A bronchoscopy done by Dr. Larson revealed a well-defined tumor on the right bronchial wall between the middle lobe and the lower lobe segments. On April 21, 1948, a right middle and lower lobe lobectomy was carried out by Dr. Tillou and Dr. Larson. The postoperative course was stormy, and eventually a thoracotomy was needed for drainage of empyema. She left the hospital six weeks postoperatively. The pathologic report was a neuroma. The patient is alive and well today.

Summary

A review of the benign endobronchial tumors has been presented. Two cases of adenoma with pulmonary resection have been presented. One case of a probable metastasizing adenoma alive and well seven years after resection of the chest wall and right pneumonectomy is presented. One case of primary neuroma of the right bronchus is reported.

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No mind is thoroughly well organized that is deficient in a sense of humor.—Samuel Taylor Coleridge

Tumors in Children

A Report of 90 Cases

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NOT so long ago tumors in children were considered an extreme rarity, and the subject was relegated to pathologic museums. In 1932 the writer communicated with various authorities on neoplastic disease, whom he asked the following question, "Do you agree with me that it is a fallacy to teach the public that cancer is a disease of old age instead of a disease of all ages, beginning at birth or before birth, and most prevalent after the age of forty?" Some of the replies follow:

Bloodgood (August 15, 1932) answered in the affirmative and stated that "there have been very few clinics with sufficient material to work with in malignancy in children." Ewing (September 24, 1932) similarly agreed and added, "I agree with you that it is wrong to teach the public that cancer is a disease of the aged, and I combat this tendency on all possible occasions." Carter Wood (August 7, 1932) was the lone dissenter and appeared more pessimistic on the subject. He stated, "I think that no harm results in focusing our educational propaganda on cancer in those of middle age. So many of the malignant growths of children—either brain tumors, abdominal or bone tumors, are almost all hopeless. We had better keep on talking about cancer of the breast, uterus, mouth and skin—which are almost never seen in children but which are the only types in which our present therapy is effective. In other words, there is not much use in talking about something that we cannot cure."

Since 1932, 90 cases of tumors in children (hemangiomas were excluded) have been studied at the John E. Jennings Hospital (Table I). The report of these cases would not have been possible if their study had not been undertaken twenty-one years ago and each case studied from the time of admission. Very few cancer hospitals keep separate files for neoplastic diseases in children, including our own, and in many hospitals the charts are destroyed within ten years. Only within the past decade has the medical profession become aware that cancer in children is no longer a pathologic curiosity, that cancer is not limited to the aged but may be present at birth or before birth. This is well illustrated by Dargeon[1] in his illuminating monograph on cancer in children and the formation of the Tumor Registry Committee of the American Academy of Pediatrics in 1940.

Summary

Ninety cases of tumors in children are reported. Eighty-four of the children were white (93 per cent), and six were Negroes. Seventy-three cases were malignant (81 per cent), and 17 were benign (19 per cent). All patients except Cases 61 and 76 were proved by biopsy, surgical specimens, or autopsy. Fifty-one were male (57 per cent) and 39 female (43 per cent). The youngest patients were newborn (six cases), the oldest fifteen years of age (16 cases). The average age was 5.4 years. Sixteen cases were treated by surgery alone, 27 by radiotherapy alone, 15 by surgery and radiation, and 15 received supportive, symptomatic treatment.

Of the 73 malignant cases, 56 (77 per cent) died.* Of those who died the average duration of life after the discovery of the tumor was 1.75 years; the longest survival was fourteen years, the shortest one week. Six cases lived five or more years from the time of the discovery of the tumor. Seventeen of the patients are still alive. Fourteen of them are alive five or more years as shown in Table II.

Conclusion

No conclusion can be drawn from such a small series of cases, and yet not many institutions have a larger series. However, if other institutions

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* Of these 16 came to autopsy (22 per cent).

TABLE I.—Report of 90 Cases of Tumors in Children

Case	Sex Age	Location of Tumor	Histology	Treatment	End Results
1	M Birth	Left axilla	Lymphosarcoma	Surgery, radiation	Died 1 year later (postmortem).
2	F 2¹/₂	Mediastinum	Lymphosarcoma	Radiotherapy	Living and well 12 years later. Last seen July 22, 1952.
3	M 3	Mediastinum	Lymphosarcoma	Radiotherapy	Died 6 years later.
4	M 15	Mediastinum	Lymphosarcoma	Radiotherapy	Died 3 years later.
5	M 12	Small intestine (ileum)	Lymphosarcoma	Surgery, radiation	Living and well 20 years later. Last seen January 4, 1954. Married, working as longshoreman.
6	F 15	Thymus	Lymphosarcoma	Radiotherapy	Died 1 year later (postmortem).
7	M 9	Pelvis (soft tissue)	Lymphosarcoma	No treatment	Died 1 month later (postmortem).
8	M 15	Submaxillary and axillary glands	Lymphosarcoma	Radiotherapy	Living and well 3 months later.
9	M 15	Bilateral cervical, axillary, inguinal nodes	Acute lymphatic leukemia	Radiotherapy	Died 2 months later.
10	M 11	Bilateral cervical, axillary, inguinal, mediastinal	Acute lymphatic leukemia	Supportive treatment, blood transfusions	Died 4 months later (postmortem).
11	F 5	Bilateral cervical, left axillary, left orbit	Acute myelogenous leukemia	Supportive treatment, transfusions	Died 2 months later.
12*	F 15	Right cervical	Hodgkin's disease	Radiotherapy	Died 16 months later.
13*	M 14	Right cervical	Hodgkin's disease	Radiotherapy	Died 16 months later.
14*	F 5	Primary skeletal (ilium and clavicle)	Hodgkin's disease	Supportive treatment	Died 1 month later (postmortem).
15	M 10	Retroperitoneal tumor	Hodgkin's disease	Radiotherapy	Died 10 years later (postmortem).
16	M 9	Bilateral cervical, axillary, inguinal, mediastinal	Hodgkin's disease	Supportive treatment	Died 7 months later.
17	M 12	Bilateral cervical, inguinal	Hodgkin's disease	Radiotherapy	Not traced, moved.
18	M 7	Left cervical	Hodgkin's disease	Radiotherapy	Died 3 years and 9 months later.
19	M 14	Right cervical glands	Hodgkin's disease	Radiotherapy	Alive 10 years and 3 months later. Last seen January 20, 1952.
20	F 4	Bilateral cervical, axillary, mediastinal glands	Hodgkin's disease	Radiotherapy	Died 15 months later.
21	M 3	Cervical, axillary, inguinal	Hodgkin's disease	Radiotherapy	Died 13 months later (postmortem).
22	M 8	Left cervical, bilateral axillary, inguinal	Hodgkin's disease	Radiotherapy	Died 7 months later.
23	F 8	Bilateral cervical, axillary, inguinal, mediastinal	Hodgkin's disease	Supportive treatment	Died 2 months later.
24	F 4 months	Left pararenal region	Neuroblastoma	Pre- and postoperative radiation, removal of tumor	Living and well 12 years later. Last seen September 1, 1953.
25	M 4 days	Left pararenal region	Neuroblastoma	Radiation, supportive treatment	Died 4 months later (postmortem).
26	F 2¹/₂	Right adrenal	Neuroblastoma	Supportive treatment	Died 2 months later.
27	F† 19 months	Right adrenal	Neuroblastoma	Supportive treatment	Died 1 month later (postmortem).
28	M 5	Right ear, nasopharynx	Neuroblastoma	Radiotherapy	Died 4 months later.
29*	F† 4 months	Right eye	Neuroblastoma	Radiotherapy	Died 1¹/₂ years later.
30	F 2¹/₂	Right eye	Neuroblastoma	Enucleation, radiotherapy	Died 2 years later.
31	F 9	Right adrenal	Neuroblastoma	Radiotherapy	Died 1¹/₂ years later.
32	F 4	Right adrenal	Neuroblastoma	Supportive treatment	Died 3 months later (postmortem).
33	M 6	Retroperitoneal region	Ganglioneuroma	Surgery, radiation	Living and well 9 years later. Last seen October, 1952.
34	M Birth	Right kidney	Wilms's tumor	Supportive treatment	Died 5 months later (postmortem).
35	F 22 months	Left kidney	Wilms's tumor	Surgery	Died 1 week later.

TABLE I.—(*Continued*)

Case	Sex Age	Location of Tumor	Histology	Treatment	End Results
36	M 9 months	Right kidney	Wilms's tumor	Surgery	Died 1 year later.
37	F 14 months	Left kidney	Wilms's tumor	Pre- and postoperative radiation, surgery	Living and well 8 years later. Last seen January 22, 1952.
38	M 3	Right kidney	Wilms's tumor	Surgery, radiation	Died 6 months later.
39	M 7	Right kidney	Wilms's tumor	Pre- and postoperative radiation, surgery	Living and well 9 years later. Last seen August 21, 1952.
40	M Birth	Right kidney	Wilms's tumor	Supportive treatment	Died 2 months later (postmortem).
41	F 9	Right kidney	Hypernephroma	Surgery, radiation	Died $7^{1}/_{2}$ years later.
42	F 2	Left thigh	Neurogenic sarcoma	Excision, radiation	Died 12 years later.
43	M 6	Left thigh	Neurofibromatosis, neurogenic sarcoma of left thigh	Excision (3 times), radiation	Died 14 years later.
44	F† 15	Left scapular region	Neurogenic sarcoma	Excision, removal of scapula, radiation	Died 7 years later (postmortem).
45	M 13	Left buttock	Neurogenic sarcoma	Excision, radiation	Died 1 year later.
46	M 9	Right thigh	Neurogenic sarcoma	No treatment	Died 1 month later.
47	M [illegible]	Pelvis	Fibrosarcoma	Excision	Living and well with recurrence 3 years later.
48	F 16 months	Retroperitoneal region	Fibrosarcoma	Excision	Died 6 months later.
49	M 11	Buttocks	Fibrosarcoma	Supportive treatment	Died 3 months later.
50	F† $2^{1}/_{2}$	Abdominal wall	Fibrosarcoma	Excision	Living and well 7 years later. Last seen November, 1952.
51	F 11 months	Posterior aspect of neck	Spindle cell sarcoma	Excision, radiation	Living and well 14 years later. Last seen April 1, 1952.
52	M 15 months	Prostate	Spindle cell sarcoma	Excision, radiation	Died 6 months later.
53	F 15	Buttock	Angiosarcoma	Excision	Died 9 months later.
54	M 14	Thigh	Angiosarcoma	Excision	Living and well 11 years later. Fought in World War II in 1945.
55	M 14	Chest wall	Malignant melanoma	Excision	Alive 15 years later. Last seen April, 1938. Case closed.
56	M 14	Abdominal wall	Fibromyoma	Excision	Living and well 17 years later. Last seen October, 1952
57	M 15	Right thigh	Neurofibroma	Excision	Living and well 6 months later.
58	M 15	Tendon sheath	Lipoma	Excision	Not traced.
59	M 11	Left buttock	Pigmented nevus	Excision	Living and well 5 years later.
60	F 2	Both ovaries	Embryonal carcinoma	Surgery, radiation	Died 3 months later.
61	F 13	Both ovaries	Carcinoma of ovaries with generalized abdominal metastasis and ascites (no histology)	Exploratory	Lost to follow-up.
62	F 15	Left ovary	Medullary carcinoma of ovary	Surgery, radiation	Died 1 year later.
63	F† 15	Ovary	Plexiform carcinoma	Exploratory biopsy, supportive treatment	Died 4 months later.
64	F† 3	Ovary	Fibroma	Surgery	Living and well 2 years later.
65	F 14	Ovary	Malignant teratoma	Surgery	Living and well 3 years later. Last seen April 17, 1952.
66	M 7	Liver	Congenital nonparasitic cyst of liver	Surgery	Lost to follow-up.
67	M 16 months	Liver	Carcinoma, aspiration biopsy	Supportive treatment	Died 1 month later.
68	F 2 months	Right side of face	Papillary lymphangioma	Excision, radiation	Living and well 10 years later. Last seen April, 1938. Case closed.

TABLE I.—(*Continued*)

Case	Sex Age	Location of Tumor	Histology	Treatment	End Results
69	M Birth	Right side of face	Multilocular cysts of parotid gland	Surgery, radiation	Living and well 5 years later. Last seen April, 1937. Lost to follow-up.
70	F 14	Right submental region	Mixed tumor submaxillary gland	Surgery (3 times), radiation	Living and well 20 years later. Last seen July 28, 1952. Married.
71	F 5	Left side of face	Myxosarcoma	Surgery	Living and well 10 years later. Last seen August 27, 1952.
72	M 9	Left eye	Basal cell epithelioma	Surgery	No recurrence 16 years later. Last seen July 10, 1951.
73	M 9	Left eye	Squamous cell epithelioma	Surgical excision	Living and well 11 years later. Last seen August 21, 1952.
74	M 6 months	Lower lip	Papilloma	Excision	Not followed.
75	M Birth	Occipital region of scalp	Papilloma	Excision	Not followed.
76	F 10 1/2	Brain	Pontine tumor (pneumoencephalogram)	Radiation therapy	Died 15 months later.
77	M 13	Brain	Multiple spongioblastoma	Radiation therapy	Died 2 years later (postmortem).
78	M Birth	Right subclavicular region	Xanthoma tuberosum	Excision	Not followed.
79	M 15	Upper third of left femur	Osteogenic sarcoma	Radiation therapy	Died 1 year later.
80	M 13	Upper third of right femur	Osteogenic sarcoma	Radiation therapy	Died 2 months later.
81	M 6	Upper third of left femur	Osteogenic sarcoma	Radiation therapy	Died 1 year later.
82	F 12	Upper third of left femur	Osteogenic sarcoma	Radiation therapy	Died 7 months later.
83	F 9	Upper third of right tibia	Osteogenic sarcoma	Disarticulation of right leg	Died 2 months later (postmortem).
84	F 10	Upper third of right humerus	Osteogenic sarcoma	Radiation therapy, disarticulation	Living and well 18 years later. Married. Last seen July 12, 1949. Moved to another state.
85*	M 15	Upper third of left fibula	Osteogenic sarcoma	Amputation of leg at hip	Died 1 year later (postmortem).
86	F 8	Upper end of left tibia	Ewing's tumor	Radiotherapy	Died 1 year later (postmortem).
87	F 7 1/2	Upper end of left femur	Ewing's tumor	Radiotherapy	Died 2 years later.
88	M 9	Lower third of right fibula	Giant cell tumor (benign	Resection of lower half of fibula	Living and well 14 years later. Last seen August 29, 1948. Case closed.
89**	M 10	Left humerus, right scapula, seventh rib, bilateral tibia	Multiple osteochondroma	No treatment	Lost to follow-up.
90**	M 10	Left humerus, right scapula, 5 ribs bilateral, bilateral tibia	Multiple osteochondroma	No treatment	Lost to follow-up.

* One of homologous twins.
† Negro (a total of 6 Negroes in the series), all other patients were white.
** Cases 89 and 90 are a pair of homologous twins.

TABLE II.—Length of Survival of 14 Cases

Length of Survival (Years)	Number of Patients	Case Number*
20	2	5, 70
18	1	84
15	1	55
14	1	51
12	2	24, 2
11	2	73, 54
10	2	19, 71
9	1	39
8	1	37
7	1	50

* See Table I.

would contribute a building block such as ours, we would have enough cases to build a solid foundation for the further study and understanding of tumors in children.

75 Prospect Park Southwest

Reference

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Decholin in Penicillin Reactions

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In 1948 Thomas and his colleagues[1] reported a series of 10,000 syphilitic patients treated with penicillin. They noted the occurrence of penicillin sensitivity in 2.5 per cent of their cases. The most common type of reaction was characterized by spreading urticaria, angioneurotic edema, arthralgias, and fever.

In patients treated with repeated courses of penicillin, a summation effect takes place, and hypersensitivity to the drug may develop. This has been in some measure responsible for the recent increasing number and severity of reactions. Fatal and near fatal immediate anaphylactic reactions from the use of penicillin were recently reported by the Feinbergs and Moran.[2]

Adrenalin, antihistamines, and recently the steroids have been used in penicillin reactions with varied results. In view of the increasing number and severity of reactions, all possible therapeutic agents are of interest to the physician. Early in 1952, Pelner and Waldman[3,4] reported on the use of Decholin in penicillin reactions. They used 5 cc. of Decholin Sodium intravenously (sodium dehydrocholate, 20 per cent solution) every day or every other day plus one tablet of Decholin orally (dehydrocholic acid, 0.25 Gm.) three times a day. As a result of their success in 14 cases so treated, we decided to institute this therapy in a larger series of penicillin reactions.

Results of Therapy

This paper represents a report on a total of 33 patients who received 34 treatments. The therapy was either (1) a combination of 5 cc. of Decholin* intravenously once a day (for three days) with the oral administration of Decholin, 0.25 Gm. three times a day (for three days), or (2) the use of oral Decholin alone, 0.5 Gm. three times a day for three days.

The criteria for judging results were as follows:

1. Good—Complete clearing of reaction within three days.
2. Doubtful—Incomplete clearing of the urticaria within three days, complete clearing of the urticaria but residual element of pruritus, or complete clearing of the urticaria and pruritus within three days but incomplete clearing of the arthralgias.
3. Poor—No response to therapy.

Penicillin Reactions Treated with Decholin.—Fourteen cases of penicillin reaction treated with combined intravenous and oral Decholin showed 12 good and three doubtful responses. Twelve cases of penicillin reaction were treated with oral Decholin alone with eight good, two doubtful, and two poor responses. The 20 cases which showed good responses cleared in two to three days.

In one case treated with the combined method, recurrence developed one week after good clearing. Retreatment produced a doubtful result. Cortisone produced relief only while the patient was on hormone therapy. Urticaria recurred when cortisone was stopped. In one case in which the oral regimen was used alone, the patient was responding in a good fashion when calcium gluconate was given for pruritus on the second day. Since this agent was also used, the results at best can be considered doubtful.

Other Allergic Skin Eruptions Treated with Decholin.—Three cases of chronic urticaria, one case of atopic dermatitis, and three cases of drug eruption were treated with combined intravenous and oral Decholin with doubtful to poor results.

In all three cases of chronic urticaria food sensitivities were present as proved by skin tests and elimination diets. These patients developed penicillin sensitivities, thus complicating the chronic urticaria already present. The results were considered doubtful in all three cases because of incomplete clearing of the urticaria, although there was some improvement. It was felt that the amount of clearing might be related to a natural remission in the course of chronic urticaria.

Reviewed in the Veterans Administration and published with the approval of the Chief Medical Director. The statements and conclusions published by the authors are the result of their own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

* Generous samples of Decholin were supplied through the courtesy of Mr. Paul de Haen, Ames Co., Inc., Elkhart, Indiana.

Side-Effects from Decholin

In one patient who gave no previous history of joint complaints, a course of Decholin therapy (three days) produced podagra and a typical clinical picture of acute gouty arthritis. Elevated blood uric acid levels and a good response to colchicine confirmed the diagnosis. Decholin has been reported previously as a provocative agent in gout.

Comment

We feel that the results presented herein are statistically significant and encouraging. Clearing of symptoms in 20 out of 26 cases of penicillin reactions took place within two to three days. We believe that certainly this is a more rapid clearing than can be expected in the natural course of these reactions. In our experience untreated penicillin reactions usually show clearing within seven to ten days. Riley[5] in 1952 reported on 22 cases of penicillin reaction. Twelve of her cases were treated within forty-eight hours of the onset of the reaction with bed rest, forced fluids, sedation, salicylates, and antihistamines. It took these patients five to six days to recover. Thus, we feel that clearing within two to three days should be considered significant. To indicate further that Decholin probably plays an active role in the clearing of the reaction, we would like to cite one of our unusual cases. A middle-aged male with recurrent penicillin reaction was treated by us with the combined regimen while being maintained on penicillin. Although the penicillin was continued, the reaction cleared after three days of therapy.

Pelner and Waldman based the rationale of their use of Decholin on its steroid structure. We found that Decholin unlike the steroids did not cause a fall in the total eosinophils four hours after its intravenous administration.

It is generally known that histamine is believed responsible for the urticaria, asthma, etc., seen in sensitivity reactions. We thought, therefore, that Decholin might work as a blocking agent of histamine. Accordingly, the following experiment was carried out in six nonallergic skin patients: Histamine wheals were induced by the use of histamine phosphate 1:10,000, 0.05 cc. intradermally. The size of the wheal and flare were measured after thirty minutes. After ascertaining the usual response in each patient, every day for three days each patient received 5 cc. of Decholin intravenously (and 0.25 Gm. orally three times a day). Fifteen minutes after the intravenous administration, histamine wheals were induced. The wheals and flares were measured thirty minutes later. In the controls the wheals measured 1.25 to 1.8 cm. by 1.25 cm., and the flares measured 0.6 to 1.8 cm. by 1.25 to 2.5 cm. After three days of therapy five of the six patients showed reduction in both the size of the wheal and flare; the wheals measured 0.5 to 1 cm. by 0.5 to 1 cm. and the flares 0.6 to 0.8 cm. by 0.6 to 0.9 cm. The sixth patient showed no change in the size of the wheal, but the flare was reduced.

Whether the reduction in the sizes of the wheals and flares is significant is difficult to evaluate because of the difficulties of exact measurements. Since the complete abolition of wheal and flare did not take place, we feel that blocking of histamine does not fully explain the mode of action of Decholin. The diminution in flare in all six cases might indicate a Decholin-induced reduction in inflammatory response.

Summary and Conclusions

The mode of action of Decholin is unknown. It may have a steroid-like effect, or it may act by detoxification and a subsequent reduction of inflammatory reaction.

Decholin is at the least a reasonably effective, easily administered, practically nontoxic drug for penicillin reactions. The combined intravenous and oral administration might be slightly more effective than the oral route alone. However, the oral route has been satisfactory for the majority of cases. If the patient should show delayed or poor response to the oral administration, the intravenous use of the drug may be added.

We recommend the use of Decholin in all cases of penicillin reaction in which adrenalin and antihistamines are unsuccessful and in which steroid therapy is contraindicated. We also feel that Decholin may prove useful as a primary therapeutic agent in penicillin reactions.

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Solitary Diverticulitis of the Cecum

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SOLITARY diverticulitis of the cecum is a relatively rare condition whose existence is not widely known, even among medical consultants. In addition, it is also relatively little known among surgeons, especially those who operate only occasionally. Since the disease may be mistaken at laparotomy for tuberculosis or carcinoma, or at times for an acutely inflamed appendix, especially when the uninvolved appendix is retrocecal, needlessly extensive operations may be performed with increased morbidity and mortality to the patient. In the 132 cases reported in the literature to date, a right colectomy was done 24 times, probably on the assumption that carcinoma of the cecum was present.[1]

It is entirely probable that the lesion is much more common than is indicated by a survey of the literature. It may be, as Bennett-Jones[2] stated, that some of the cases of perforated appendicitis with abscess formation are really cases of perforated diverticulitis of the cecum. This is especially true when, after a delayed operation, a normal appendix has been found.

Etiology

Most of the articles in the literature divide diverticulum, including cecal diverticulum, into two types: the congenital or true diverticulum, in which all layers of the bowel wall are found in the specimen, and acquired diverticulum, in which there is a deficiency of the circular muscle in the wall of the cecum which allows the herniation of the mucous membrane and the supporting structures through the weakened area.[3] Most of the diverticula of the cecum that are described are "true" according to the definition. In some cases, as indeed in the case described here, it is impossible to catalog the findings according to this classification, because the diverticulum had perforated and had no actual wall except the surrounding mesenteric fat.

Greensfelder and Hiller[4] describe two types of solitary acquired diverticulum of the cecum, a primary and a secondary form. The secondary, or traumatic, diverticulum arises as a result of an operative procedure in the right lower quadrant of the abdomen, whereas the primary variety arises independently. These investigators were able to find four diverticula of the cecum as a result of a survey of 5,385 major operations and 400 adult autopsies at the Michael Reese Hospital. Two were found at operation and two at autopsy. The authors produced diverticula in dogs, and as a result of their studies on these animals, they believe that there are two causes of diverticulum in addition to the causes commonly accepted, i.e., eversion between two constricting bands and tractions by adhesions. The additional causes are (1) eversion of the weak spot in the cecum caused by migration of the pursestring into the lumen of the gut and (2) eversion of the weakened area in the cecal wall resulting from simple abscess rupturing into the cecum. These mechanisms would seem to play a part only in diverticula occurring postoperatively and would not seem to be the cause in our patient nor in the majority of cases in the literature.

Undoubtedly most cases of solitary diverticulum of the cecum are congenital, and the fact that in many of the cases both muscular layers are found seems to bear this out. A cecal diverticulum was found at autopsy of a girl, aged three, who died of unrelated causes.[5] The fact that a diverticulum is always solitary in the cecum would indicate that it is probably not acquired, in contradistinction to diverticula of the sigmoid which are multiple and are always of the acquired type. In the case of the little girl mentioned above, the author considered the diverticulum of the cecum to be a misplaced Meckel's diverticulum. Waugh[6] considers that the cecal diverticulum is a persistent remnant of the anlage of a second appendix which is present during fetal life and which usually disappears before birth. Finally, the fact that enterogenous cysts occur occasionally constitutes another argument in favor of the congenital nature of these malformations.[7] These cysts may involve intestinal wall, retroperitoneal tissue, or mesentery and have a double muscle wall, as do the diverticula.

Location

Cecal diverticula are usually located between the anterior and posterolateral taenia of the cecum and may be located medially as well as posteriorly.[7] They are most always single. They communicate with the lumen of the cecum through a narrow neck, which leads to the retention of material and subsequent infection. Enteroliths play a prominent part in the development of acute complications. The infection may extend from the wall of the diverticulum to that of the cecum itself, producing a true inflammatory tumor.

The condition may occur at any age, but individuals of middle age are involved most frequently. It is rarely diagnosed before the age of twenty. It may certainly be present before, but not diagnosed, since the diagnosis is only suspected after complications ensue. Both sexes are involved equally, in contrast to diverticulitis of the sigmoid in which the male sex predominates.

Differential Diagnosis

In practically all the cases reported in the literature a preoperative diagnosis of acute appendicitis was made. In simple diverticulitis the diagnosis indeed mimics acute appendicitis. As one reads the case histories, it is noted that epigastric pain and vomiting occurs rarely in acute cecal diverticulitis. These points are hardly sufficient to differentiate the two diseases. The gangrenous type of diverticulitis, frequently with perforation, is more frequent in old people, as is the gangrenous form of appendicitis. The third type of cecal diverticulitis may be termed the pseudotumoral type,[7] in which the cecal wall is infiltrated and a hyperplastic reaction occurs in the cecum. Preoperatively this latter type mimics an appendiceal abscess and at operation either a carcinoma or tuberculosis. Our patient had the gangrenous type with perforation into the surrounding mesenteric fat.

With the abdomen opened, it is very important to be able to diagnose cecal diverticulitis so that the proper operative procedure will be performed. With the pseudotumoral form of cecal diverticulitis, the distinction from carcinoma of the cecum may be difficult. However, if the disease is kept in mind, the difficulty is partly surmounted. If there is doubt, a cecotomy should be done, which will show the mucosal side of the lesion.

Hyperplastic tuberculosis of the cecum must be ruled out. It is stated that the ileum is also involved in tuberculosis, that the peritoneum is thickened, adhesions are usually present, and the lymph glands show caseous changes.[3] However, there is a type of hyperplastic tuberculosis of the cecum without ileal involvement, which would make the differential diagnosis more difficult.

Actinomycosis also invades the cecum, but the sinuses found in this disease would delineate it. There is another disease, called nonspecific ulcer of the cecum, that is exceedingly rare.[8] However, the ulcer is usually found on the medial aspect of the cecum above the ileocecal valve. This disease has complications like peptic ulcer.

Treatment

If the disease is recognized and the pathology permits, a simple diverticulectomy is the treatment of choice. The frequency with which hemicolectomy has been done shows that the disease was probably not recognized in those instances. In some of the cases ileocecal resection would probably have to be done, especially if the cecal wall was heavily involved in a pseudotumor mass.

It has been stated that the disease might be treated medically with antibiotics if the diagnosis could be made definitely.[9] This would rarely be possible, because usually the first inkling of the presence of the disease is a complication, such as severe inflammation or perforation, which would make it hazardous to treat the disease medically.

Case Report

C. W., an obese, Negro male, age forty-three, was admitted with a history that he first experienced a sharp, then a dull pain in the right lower quadrant of the abdomen one month before the present complaint. Thereafter, he was relatively free of the pain except for slight pain on exercise until he suddenly developed severe, sharp, excruciating pain in the same area one month later. This time the pain was so severe that he was kept awake all night. The pain radiated across to the left side of the abdomen. There was no vomiting, although the patient complained of slight nausea. There was no diarrhea or urinary symptoms.

The past history was essentially negative, except for an incision and drainage operation done ten years previously for a prostatic abscess.

Physical examination revealed that although there was some tenderness over McBurney's point, there was marked tenderness, spasm, and rebound tenderness in the right lateral middle quadrant of the abdomen and in the right flank. A rectal examination did not reveal tenderness in the right side of the pelvis. A preoperative diagnosis of acute appendicitis was made. The white blood count was 17,200 with 86 per cent polymorphonuclear cells.

At operation a mildly infected, elongated appendix was found in the usual location, and, in addition, a hard, indurated phlegmonous cecal mass was also delivered into the operative wound. The nature of this mass was fortunately recognized. It consisted of a diverticulum of the cecum which had perforated into the surrounding fat. The diverticulum was on the lateral surface of the cecum. An appendectomy was done with inversion of the stump, and the diverticulum was excised with the surrounding fat and the stump buried. There were no other diverticula present. A fecalith was found in the diverticulum.

The patient's convalescence was marred by acute distention of the abdomen from a partial intestinal obstruction, probably caused by adhesions around the terminal ileum. This responded to the conservative therapy of intubation and infusions.

The microscopic examination of the surgical specimen showed a marked congestion of the serosal surface of the appendix, and the pad of fat removed with the ruptured diverticulum showed an area of necrosis in the center and was covered with a fibrinous yellow exudate.

Comment

Since it is virtually impossible to differentiate solitary diverticulitis of the cecum from acute appendicitis before operation and is sometimes difficult to differentiate it from carcinoma of the cecum at operation, a consideration of the subject is important. In the 132 reported cases[1] 24 had a right colectomy, making it highly probable that the diagnosis was thought to be carcinoma of the cecum at operation. Perforation of the diverticulum of the cecum has been described six times and generalized peritonitis twice. In our patient the diverticulum had perforated into the mesenteric fat. This probably occurred one month previously. He had very little pain thereafter except on doing calisthenics. One month later the pain again became very severe, which probably signaled another perforation.

Summary

Another case of solitary diverticulitis of the cecum with perforation is noted. Wide dissemination of information about this disease is warranted because even at operation the disease may be misdiagnosed and the operation made unnecessarily severe.

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Medical Education Funds

Here is a year-end financial picture of the two fund-raising organizations for the nation's 79 medical schools—the American Medical Education Foundation, founded by the A.M.A., and its cooperating agency, the National Fund for Medical Education with offices in New York City.

As of December 31, the American Medical Education Foundation, working through its 53 state and metropolitan committees, recorded a gross return of $1,089,962.93 from 18,176 individual physicians, organizations, and laymen. This is the first time that the foundation's annual income has passed the million dollar mark. The number of contributors in 1953 increased 149 per cent over the previous year.

The National Fund for Medical Education, which seeks its funds primarily from business and industry, has just announced that during the past year 994 corporations contributed $1,367,979. This represents an increase over 1952 of 74 per cent in contributions and 193 per cent in the number of participating firms. This record is a tribute to the leadership of 1,000 corporation executives who make up the 47 industry divisions and 17 local sponsoring committees of the Committee of American Industry.

The two fund-raising organizations jointly have distributed nearly $5,000,000 to the nation's medical schools since 1951. Fifty per cent of this money has been contributed by the medical profession and others in the medical field.—*A.M.A., February 5, 1954*

Aplastic Anemia Due to Chloromycetin Toxicity

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The toxic potential of Chloromycetin has received considerable attention recently. To date, 33 cases of Chloromycetin intoxication, most of which terminated fatally, have been reported. Parmer[1] of the United States Food and Drug Commission has collected some 200 cases from communities with a population of 100,000 or more people. This indicates that the affliction is even more widespread than is supposed. In Parmer's group at least 50 per cent are already dead. In all probability this figure will have to be revised upward with the passage of time since only a tenth of the cases have been followed to completion.

Chloromycetin, one of the so-called "wonder drugs," is derived from the mold Streptomyces venezuelae. It is easily absorbed, and about 90 per cent is excreted in the urine within twenty-four hours. It is effective against infections with rickettsiae, certain viruses, and gram-negative bacteria. Its chemistry and mode of action have been adequately described by many authors. It is interesting to note that, chemically, the drug contains a benzene ring. This led Smadel[2] to predict in 1949 that Chloromycetin might prove toxic to hematopoietic tissues on the basis of its chemical structure. Despite this prediction Smadel later remarked about its relative apparent nontoxicity.

This report will add another death to the published list. At the same time the reported cases will be reviewed to ascertain whether they fall into definitive patterns.

Case Report

L. D., a fifty-seven-year-old insurance executive, was first seen on July 14, 1952. He had noted red spots on his chest, arms, penis, and lower extremities ten days previously. He had no complaints other than slight gingival bleeding. The patient gave a history of having received Chloromycetin for a bladder infection following cauterization of a papillary adenoma on December 15, 1951. The drug was prescribed as follows: 2 Gm. daily for four days, then 1 Gm. daily for seven days. The cystitis improved, and he received no medication for about a month. With recurrence of his bladder symptoms at this time, he was again placed on Chloromycetin, receiving 1 Gm. daily for seven days. Two weeks later, because of another recurrence of his symptoms, he was given Chloromycetin in daily 1-Gm. doses for fourteen days. After one month's remission of his symptoms, the cystitis appeared again, and once more, he took 1 Gm. of the drug daily for thirty days. In all, 66 Gm. of Chloromycetin were consumed from December 15, 1951, to May 15, 1952. No other medication was used except vitamin B capsules.

The patient's past medical history revealed considerable contact with physicians. He had scarlet fever in 1917 which was followed by "inflammatory rheumatism" and a "heart murmur." He had pneumonia in 1920 and was operated on for a right inguinal hernia in 1932. From 1932 to 1949 he was in good health. In 1949 he suffered with a severe gastrointestinal hemorrhage and was admitted to the Presbyterian Hospital in New York City where a laparotomy was performed. No definite bleeding point could be found at this operation. He was too ill to undergo more extensive surgical investigation, but following the operation the bleeding stopped and his general health improved with supportive measures including multiple blood transfusions. X-ray studies at the hospital failed to reveal an intrinsic gastrointestinal lesion. Liver function tests showed no abnormalities. Blood studies at the time of his discharge from the hospital were within normal limits, the anemia caused by the profuse bleeding having been corrected. Except for occasional episodes of indigestion, which were controlled by diet and alkaline powders, he remained in good health after discharge from the hospital. About six months after this bleeding episode an x-ray study of the stomach and duodenum showed evidence of a duodenal ulcer. In May, 1951, he had another episode of bleeding from the gastrointestinal tract. An emergency operation was performed at the Albany Hospital where a perforating duodenal ulcer was found and a gastrectomy performed. He recovered from this operation without difficulty and returned to work shortly after discharge from the hospital. In December, 1951, he experienced gross, painless hematuria and was admitted to the Beth Israel Hospital in New York City. Here, a papillary adenoma of the bladder was found. A

TABLE I.—PERIPHERAL BLOOD STUDIES

Date	Hemoglobin (Per Cent)	Red Blood Cells (Millions)	White Blood Cells	Polymorphonuclears (Per Cent)	Bands (Per Cent)	Lymphocytes (Per Cent)	Monocytes (Per Cent)	Eosinophils (Per Cent)	Platelets	Remarks
1951										
June										
3	80	3.91	6,300	68	..	32	..	..	...	Prior to present illness
December										
14	84	4.52	10,500	58	..	40	2	..	...	Prior to present illness
1952										
July										
15	65	2.85	6,550	24	..	76	..	..	12,000	Bleeding time 4 minutes, clotting time 8 minutes
17	63	2.55	6,450	16	..	82	..	2	14,000	...
21	63	2.94	5,200	22	..	78	..	..	±	...
22	50	2.27	3,450	12	..	84	4	..	...	...
23	60	3.71	2,750	21	4	72	3	..	...	...
25	74	4.21	2,500	20	6	70	4	..	1,200	...
29	67	3.67	4,450	24	6	70	..	..	...	Bleeding time 3 minutes, clotting time 9½ minutes
30	..	3.51	...	..	..	..	..	..	3,510	...
31	70	3.62	7,900	17	1	80	2	..	21,720	...
August										
4	80	3.94	5,250	19	5	76	..	..	15,960	...
5	85	4.57	3,650	17	5	78	..	..	22,850	...
6	81	4.21	3,000	20	4	74	..	2	25,260	...
7	85	4.77	2,150	26	10	60	2	2	23,850	...
8	80	4.21	3,750	36	..	62	..	2	8,420	...
9	81	4.52	4,700	12	1	87	..	..	4,700	...
14	77	4.45	4,900	17	1	81	1	..	...	...
15	77	4.17	3,450	10	5	84	1	..	None seen	...
16	77	4.29	3,550	10	3	86	1	..	4,290	...
19	65	3.42	3,150	5	2	93	..	..	None seen	...
20	67	3.22	2,750	24	6	70	..	..	None seen	...
22	59	2.89	4,250	5	2	90	3	..	None seen	...
23	59	2.88	4,310	7	3	90	..	..	None seen	...
26	50	3.03	3,700	20	6	72	2	.	6,060	..
28	..	3.46	...	..	..	..	..	..	17,300	...
29	56	3.43	5,200	10	2	87	1	..	85,700	...
September										
3	50	2.99	2,450	12	2	84	2	..	74,700	Reticulocytes 0
9	53	2.71	1,750	..	..	..	..	..	32,520	Reticulocytes 0.2%
15	53	2.59	1,500	8	3	84	3	2	87,600	...
17	27	...	2,250	..	..	..	..	..	...	...
18	40	2.29	1,750	..	..	..	..	..	25,198	Reticulocytes 0.1%
19	62	3.34	1,150	..	..	..	..	..	16,700	...
22	40	2.53	2,100	12	1	85	..	2	21,180	...
23	34	2.04	3,500	11	2	87	..	..	16,320	...
24	43	1.98	4,900	6	..	94	..	..	...	...

TABLE II.—BONE MARROW STUDIES*

Cells Found	July 15	July 25	August 5	August 25	August 29
Myelocytes	2	2	6	1	1
Metamyelocytes	17	6	18	2	..
Bands	33	7	31	20	4
Polymorphonuclear leukocytes	8	6	5	7	5
Lymphocytes	40	79	40	70	90
Megakaryocytes	0	±	±	0	0
Ratios					
G:E	10:7	5:1	10:9	5:1	20:1
E:N	4:5	2:5	1:3	1:6	..

* All markedly hypoplastic with many smudges present. Anisocytosis and poikilocytosis prominent.

biopsy was taken, and the tumor was fulgurated, after which he developed the cystitis mentioned above, for which he received Chloromycetin therapy. The blood studies done at the Albany and Beth Israel Hospitals were normal (Table I).

On examination on July 14, 1952, he did not appear acutely ill. His blood pressure was 140/80, and his pulse rate was 78 and regular. He was afebrile but seemed somewhat pale. Petechiae and small purpuric spots were seen on his upper and lower extremities and on his chest. Several telangiectatic spots were present over his chest and on his penis. His gums bled easily with tongue depressor irritation. No adenopathy was found. No enlargement of the liver or spleen was felt, nor were there any other abdominal masses. His heart was not enlarged, and no murmurs were heard. His lungs were clear and resonant throughout, and no rales were present.

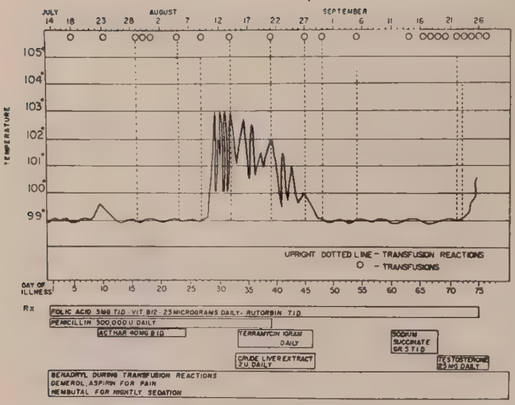

FIG. 1. Clinical chart.

A complete peripheral blood and bone marrow study revealed a hypoplastic anemia with pancytopenia (Tables I and II). Urine analysis was normal. No microscopic blood was seen. On July 18, 1952, he was given a transfusion of whole blood and was started on intramuscular penicillin prophylactically. Rutorbin, folic acid, and vitamin B_{12} were used as supportive therapy. On July 22, 1952, he was admitted to the Jewish Hospital of Brooklyn for further investigation and treatment. Repeated blood counts and bone marrow studies confirmed the pancytopenia seen previously (Tables I and II). All urine tests were normal. The sedimentation rate was 29 mm. on one occasion and 12 mm. on a second occasion (Westergren). One stool specimen showed bright red blood which had come from a hemorrhoid. Subsequent stool examinations were negative even for occult blood. X-ray examination of the chest showed no abnormality. All chemistry tests were normal. These included prothrombin levels, Coombs' test, total protein, albumin-globulin ratio, blood sugar, urea, cephalin flocculation, thymol turbidity, alkaline and acid phosphatase, and an icterus index. The serology was negative.

During the patient's stay in the hospital he was ambulatory and afebrile except for three episodes of transfusion reaction, the first occurring during a platelet transfusion. He had received many transfusions prior to this with no reaction. Penicillin was administered prophylactically; corticotropin and vitamins were also used (Fig. 1). He showed some improvement in his peripheral erythrocyte picture, but the leukopenia, neutropenia, and thrombocytopenia persisted (Table II). It was felt, however, that he could continue supportive therapy as an ambulant patient, and he was discharged from the hospital on August 10, 1952.

On the day following his discharge from the hospital, he began to complain of severe frontal headache associated with fever which ranged from 100 to 103 F. He was readmitted to the hospital on August 14, 1952. The fever continued for almost two weeks, finally subsiding by lysis with Terramycin therapy (Fig. 1). Headache persisted, however. He followed a continual downhill course during this second hospital stay. All supportive measures failed to stimulate bone marrow response. Multiple transfusions of whole fresh blood, packed washed red cells, platelets, and bank blood were given. He received a total of 32 units of blood during his two hospital admissions. Sodium succinate and testosterone, as well as bone marrow transplants, were also used in attempts to stimulate bone marrow regeneration. On September 12, 1952, he began to complain of severe pain in the calves of his legs. Five days later, he suffered a profuse gastrointestinal hemorrhage with vomiting of fresh and old blood and the passage of multiple tarry stools. All attempts to stop this bleeding failed, and he died on September 26, 1952, eighty-six days after he had first noted purpuric spots on his body and approximately one hundred thirty-four days after his last dose of Chloromycetin.

AUTOPSY

Gross Description.—The body was that of a well-developed, well-nourished, adult white male. The skin over the back, medial aspect of the arms, and chest showed numerous petechiae and areas of ecchymosis. There was a healed median supra-umbilical scar 17 cm. in length. The body cavities contained no excess of free fluid.

The heart weighed 480 Gm. There were numerous petechial hemorrhages in the epicardium, especially on the right auricular surface. Petechiae were also present in the endocardium of the left ventricle. There was moderate atherosclerotic thickening of the coronary arteries and of the aortic valve.

The lungs were crepitant but bloody; frothy fluid exuded from the cut surfaces.

The stomach was 8 cm. in length and was anastomosed to the jejeunum. The mucosa of the entire intestinal tract was intact and in places hyperemic. The stomach and small and large intestines were dilated and filled with blood which was liquid or jelly-like and dark red.

The liver weighed 1,780 Gm., and the capsule was smooth. In the left lobe there was a subcapsular hematoma measuring 3 by 2 cm. The cut surfaces were tan, and the markings were moderately distinct.

The right kidney weighed 220 Gm.; the left, 210 Gm. In the upper pole of the right kidney there was a subcapsular hematoma which measured 4 by 3 cm. Petechial hemorrhages were present in both renal pelves. Otherwise, there was nothing of note. The urinary bladder contained about

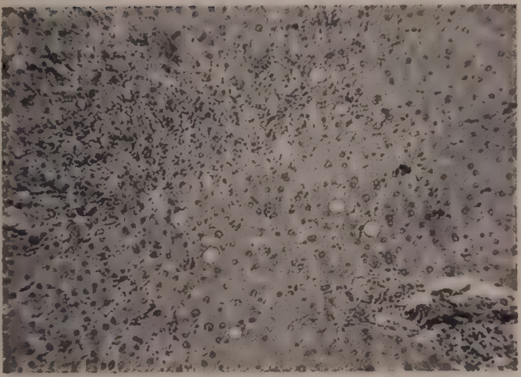

FIG. 2. Focal areas of necrosis in liver.

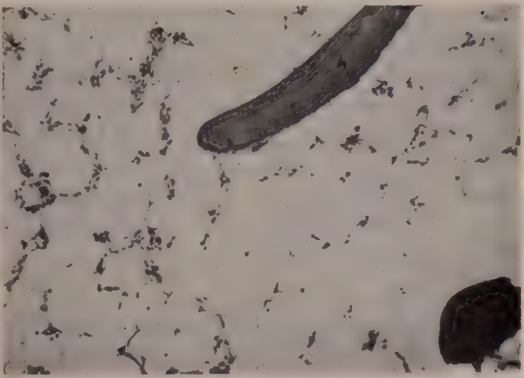

FIG. 3. Marked hypoplasia of bone marrow.

10 cc. of cloudy urine. The mucosa was trabeculated. Three diverticula were present in the bladder, the largest measuring 2 by 3 cm.

The spleen was soft and weighed 220 Gm. The capsule was wrinkled. The cut surfaces were purple-red, and the malpighian corpuscles were prominent.

The bone marrow was gray and porous.

The brain weighed 1,430 Gm. The arachnoidea was thickened and contained areas of dark red and brown hemorrhage over the frontal lobes. The hemorrhages extended laterally over the parietal and temporal areas. The hemorrhages were more extensive on the left side than on the right. No hemorrhages were noted in the cut brain.

Microscopic Descriptions.—The capsule of the liver was of usual thickness. The lobular architecture was well preserved. The central veins were dilated. The sinusoids were distended and contained blood. The arrangement of liver cells into cords was generally orderly, and the liver cells stained fairly well. Scattered throughout, there were roughly rounded areas where the liver cells were fragmented, and the architecture was disrupted. Throughout the granular debris of the necrotic liver cells were erythrocytes and a scattering of lymphocytes. Polymorphonuclear leukocytes were not seen. These small, necrotic foci were found in various portions of the hepatic lobule and did not predominate in any one area (Fig. 2). In addition, some appeared more hemorrhagic, while in others necrosis of liver cells predominated. In all, the leukocytic reaction was minimal with lymphocytes and mononuclear histiocytes comprising the infiltration.

The capsule of the spleen was of usual thickness. Follicles were numerous, well formed, and well spaced. Germinal centers were not seen. Small areas of necrosis similar to those seen in the liver were seen at the periphery of some of the malpighian corpuscles. The sinusoids were distended.

Preparations taken from various locations in the gastrointestinal tract showed an intact mucosa. Distended capillaries were seen occasionally within the submucosa. Blood was noted adherent to the mucosa.

Preparations taken from the frontal areas of the brain revealed a thickened arachnoidea which contained extravasations of blood. In places, proliferated fibroblastic cells were seen which extended into the blood. There were also large numbers of macrophages filled with blood pigment. A moderate infiltration of lymphocytes was also noted, but polymorphonuclear leukocytes were conspicuously few in number. The blood vessels were engorged but otherwise not remarkable.

The bone marrow was fatty, and islands of hemapoiesis were small. There was a marked decrease of all blood formative elements and especially of megakaryocytes (Fig. 3). In places, rounded collections of lymphocytes resembling lymphoid follicles were seen instead of granulocytic or erythrogenic elements.

Final Diagnosis.—Hypoplasia of bone marrow due to Chloromycetin intoxication; hemorrhages—gastrointestinal, subarachnoid, subcapsular of liver and kidney (right) and in skin; focal necroses in liver and spleen; gastrojejeunostomy, healed (operative); splenomegaly; diverticula in urinary bladder; pulmonary edema.

Comment

In the 33 cases reviewed, it is quite evident that the majority terminating in death received Chloromycetin in intermittent doses (Table III). This calls to mind a pattern similar to sulfonamide intoxication. Apparently, patients are sensitized by a first course of the drug, and subsequent administration results in damage to the sensitized organs, principally hematopoietic. The mechanism is similar to that seen in a tuberculin type of reaction. It is a delayed

TABLE III.—REVIEW OF REPORTED CASES

Reporter	Age	Sex	Disease for Which Drug Given	Dosage				Presenting Symptom	Previous Allergy	Therapy	Length of Therapy (Days)	Result	Cause of Death and Remarks
				Approximate Total (Gm.)	Intermittent or Continuous	Period	Time After Last Dose						
Hargraves *et al.*[3]	11	F	"Cold"	8	Intermittent	1 month	1 month	Petechiae, ecchymosis	Yes	Supportive	31	Died	Hemorrhage
	42	M	Furuncle	4$^1/_2$	Intermittent	1 week	2 months	Petechiae, ecchymosis	Yes	Supportive	44	Died	Hemorrhage
	3	F	"Cold"	5	Intermittent	3 weeks	0	Petechiae, epistaxis	...	Supportive	8	Died	Hemorrhage
	5	F	"Cold"	1	Continuous	5 days	3 months	Purpura, epistaxis	...	Supportive	117	Died	Hemorrhage
	5	F	"Cold"	2	Continuous	7 days	3 months	Purpura, epistaxis	...	Supportive	117	Died	Hemorrhage
	13	F	Grippe	2	Intermittent	13 months	1 month	Petechiae, epistaxis	...	Supportive	26	Died	Hemorrhage
	36	M	Grippe	Few	Intermittent	3 months	12 days	Petechiae, epistaxis	Yes	Supportive	80	Died	Hemorrhage
	70	F	Cystitis	20?	Intermittent	2 years	0	None, routine examination	...	Supportive	50	Living	No follow-up
	62	F	Cystitis	45	Continuous	6 months	0	Fatigue, epistaxis	...	Supportive	730	Living	2-year follow-up with reversal
	18	F	Sinusitis	15	Intermittent	6 months	6 months	Fatigue, ecchymosis	...	Supportive	365	Living	No follow-up
Rheingold *et al.*[4]	31	F	"Cold"	5	Intermittent	2 weeks	1 month	Fatigue, petechiae	...	Supportive	29	Died	Hemorrhage
	23	M	Sinusitis	18	Intermittent	3 months	0	Petechiae, epistaxis	No	Supportive	145	Died	Hemorrhage and septicemia
	18	F	Furunculosis	25	Intermittent	3 months	5 weeks	Purpura	...	Supportive	82	Died	Hemorrhage
	36	F	Ulcer of leg	60	Intermittent	2 months	2 months	Petechiae, septicemia	...	Supportive	14	Died	Septicemia
	26	F	Acne, eczema	60	Continuous	2 months	23 days	Menorrhagia	No	Supportive	5	Living	No follow-up
Smiley *et al.*[5]	29	M	Duodenal ulcer	62	Intermittent	14 months	1 week	Petechiae, epistaxis	Yes	Splenectomy	30	Died	Hemorrhage
	6	F	"Cold"	20	Intermittent	9 months	1 month	Ecchymosis, epistaxis	Yes	Supportive	146	Died	Hemorrhage
	8	F	"Cold" and earache	7	Intermittent	1 year	0	Ecchymosis, epistaxis	Yes	Supportive	171	Died	Hemorrhage
Claudon *et al.*[6]	71	F	Pneumonitis	24	Intermittent	10 months	1 month	Ecchymosis, petechiae	Yes	Supportive	23	Died	Hemorrhage
	92	M	Cystitis	90	Intermittent	2 months	2 months	Fatigue, conjunctival hemorrhage	...	Supportive	89	Died	Hemorrhage
Sturgeon[7]	22 months	M	Diarrhea, "cold"	6	Intermittent	4 months	2 months	Petechiae	...	Supportive	480	Died	Hemorrhage
	5$^1/_2$	F	Tonsillitis	?	Intermittent	1 year	2$^1/_2$ months	Ecchymosis	...	Supportive	21	Died	Hemorrhage
	6$^1/_2$	M	Tonsillitis, "cold"	?	Intermittent	1 year	4 months	Purpura	...	Supportive	8	Died	Hemorrhage
	6	M	Pneumonia, "cold"	?	Intermittent	7 months	6 weeks	Ecchymosis, epistaxis	...	Supportive	60	Died	Hemorrhage
Wilson *et al.*[8]	39	F	Bronchiectasis	56	Intermittent	6$^1/_2$ months	0	Epistaxis, hemoptysis	Yes	Supportive	13	Died	Hemorrhage
	37	F	Bronchiectasis	52	Intermittent	6$^1/_2$ months	0	Epistaxis, fatigue	...	Supportive	90	Living	No follow-up
Rich *et al.*[9]	63	M	Pyelitis, cystitis	52	Intermittent	3 months	0	Purpura	...	Supportive	11	Died	Hemorrhage, septicemia
Lloyd[10]	28	F	Pyelitis	?	Intermittent	1 year	1$^1/_2$ months	Petechiae	...	Supportive	5	Died	Septicemia
Gill[11]	13 months	F	Salmonellosis	7	Continuous	7 days	0	None	...	Stopped drug	0	Living	Reversal of blood picture
	4 months	M	Salmonellosis	2	Continuous	2 days	0	None	...	Stopped drug	0	Living	Reversal of blood picture
Volini *et al.*[12,13]	11	M*	Typhoid fever	53	Continuous	18 days	5 days	None	...	Stopped drug	0	Living	Reversal of blood picture
	41	M*	Brucellosis	53	Continuous	19 days	2 days	None	...	Stopped drug	0	Living	Reversal of blood picture
	14	M*	Typhoid fever	26	Continuous	9 days	4 days	None	...	Stopped drug	0	Living	Reversal of blood picture
Pickard and Rosenblatt	57	M	Cystitis	66	Intermittent	4$^1/_2$ months	1$^1/_2$ months	Petechiae, purpura	Yes	Supportive	75	Died	Hemorrhage

* Negro patients; all others listed in table were white.

reaction and constitutional in type. The focal necroses found in the viscera are characteristic of this type of hypersensitive response.

The ages of those patients reviewed varied considerably. The range was from four months to ninety-two years. There were 13 males and 20 females. Only three Negroes were reported in this series.

There was no definite relationship between the amount of drug administered, the period of administration, or the length of time it took for symptoms to develop after the last dosage of the drug was taken. The dosage varied from 1 to 90 Gm. with similar termination. In one case the patient received the medication for only two days, while in another it was given intermittently for two years before symptoms appeared. In some instances toxicity was discovered while the drug was being administered; in others there was a variance from two days to six months after cessation of the drug before symptoms appeared.

The presenting symptoms in most instances were petechiae and purpuric spots associated with epistaxis. In one case there was severe menorrhagia and in another septicemia. Several of the patients showed a prodomal picture of marked fatigue, and in some the condition was discovered on routine examination for other diseases. Eight patients gave a history of previous allergies, two had no such history, and in the remainder no allergy history was mentioned. There was no correlation between a pre-existing allergic history and the final outcome. Five patients in whom the toxicity was discovered on routine examination, while Chloromycetin was being used for an infectious condition, showed reversible phenomena as soon as the drug was stopped. Five other cases are reported as living, but only in one has there been a lengthy period of survival and evidence of bone marrow regeneration. The others have not been followed carefully. The cause of death in most of the patients was gastrointestinal or cerebral hemorrhage. In a few the patient succumbed to a fulminating septicemia.

Volini[12,13] reported three cases in which the hematopoietic changes were reversible. He stressed the importance of careful blood studies on patients receiving the drug. Gill[11] found evidence of granulopenia after only two days administration of Chloromycetin. Here, too, there was a reversal of the blood picture on cessation of the drug. In Lloyd's case[10] the patient's blood picture was followed very carefully. After the first three courses of Chloromycetin, there were no signs of hematopoietic change. It was not until one and one-half months after completion of the third course of the drug that petechiae appeared and evidence of bone marrow degeneration was seen. Five days after these symptoms appeared, the patient died of a fulminating septicemia.

Further perusal of Table III gives no indication that a favorable prognosis is warranted in those cases which survive lengthy periods of treatment after the diagnosis of bone marrow damage is made. Patients died at intervals varying from eight to four hundred and eighty days after therapy was begun. No specific treatment offered evidence of having stimulated bone marrow regeneration. Treatment concerned itself in the main with supportive measures, such as the transfusion of whole blood or platelets, hematinics, and vitamins. On occasion, cortisone, ACTH, and testosterone were used. Homologous bone marrow transplants were also of no avail.

In the case herein reported the patient's symptoms appeared almost two months after the last administration of Chloromycetin. No other medication had been used in the interim except vitamin B. Although his condition remained relatively static during two months of supportive therapy and although at times he showed an increase in his circulating thrombocytes (85,700 on the forty-sixth day after therapy was started), he finally succumbed to the effects of his pancytopenia. It is interesting to note that he developed febrile transfusion reactions with his first transfusion of concentrated platelets. The reactions varied in intensity, being greatest with bank and whole fresh citrated blood and least with washed packed erythrocytes or sedimented erythrocytes. The patient belonged to Group O, Rh_1, and in all instances type specific blood was used. The reactions were unaffected by antihistaminics. At no time was there evidence of hemolysis. The Coombs' test was repeatedly negative, and investigation for cryptic antibodies was unsuccessful. It was finally concluded that the patient had developed a nonspecific plasma sensitivity. Therefore, blood was forced since it was evident that blood replacement was of the utmost importance, and the febrile reactions were disregarded. Despite the forcing of blood the patient died of exsanguination into his gastrointestinal tract.

In reviewing the conditions for which the drug was prescribed, it is disturbing to realize that in the majority of cases a mild upper respiratory infection or a stubborn bladder inflammation was the reason for its administration. In fact, in one case, that of a physician's wife, the drug was taken prophylactically on several occasions to ward off a cold, and in another case it was given for the first six days of each month as a prophylactic measure for duodenal ulcer. In contrast, Harris reported 62 cases of severe lung infections in which only two showed toxic effects and only one of these died. One of the authors (Rosenblatt) has seen another such case of bronchiectasis treated with Chloromycetin, the patient subsequently succumbing to the effects of aplastic anemia.

It would seem wise, therefore, to use the drug only in those cases where the severity of the infection is such that drastic measures are necessary to prevent death from the disease itself and where other drugs have proved ineffective. Certainly, enough evidence is now available to warrant discontinuing the use of Chloromycetin as a prophylactic measure or in those mild infections where other medicaments, which have already been accepted as beneficial and nontoxic, can be substituted. Perhaps it would be wisest to eliminate Chloromycetin from our medical armamentarium altogether until such time as further experience has established its proper place in therapeutics.

With all these findings in mind, the exact mechanism of Chloromycetin toxicity is still poorly understood. It is even more difficult to predetermine the case which is to terminate fatally. Although daily blood studies prove normal, a case may develop fatal symptoms long after the drug is discontinued. It must always be kept in mind, therefore, that administration of this drug bears with it a calculated risk. Smadel's early prediction of intrinsic danger of Chloromycetin intoxication has become most pertinent in the light of these increasing reports of fatalities.

Summary

1. A case of Chloromycetin toxicity with evidence of bone marrow degeneration is presented.
2. A review of 33 reported cases is analyzed.
3. Warning against indiscriminate use of Chloromycetin is offered.

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The Old Time Doctors Were Best

We have a communication that recalls the yarn about the doctor who wrote out a prescription in his usual illegible hand. The patient got well anyhow, before he had the prescription filled. In fact, he forgot what it was. But he used it two years for a railroad pass, and twice it got him into the theaters. Finally, to cap the climax, his daughter played it on the piano and won a scholarship to a conservatory of music!

—*Cincinnati Enquirer*

CLINICOPATHOLOGIC CONFERENCE

ST. JOSEPH'S HOSPITAL, ELMIRA, NEW YORK

Conducted by GERALD T. CONNELLY, M.D. JANUARY 28, 1953

Discussed by JOHN D. STEWART, M.D., BUFFALO, NEW YORK

Case History

The patient was a fifty-four-year-old white linotype operator who was admitted to the hospital complaining of a right inguinal hernia. The hernia had been present for more than ten years and had gradually increased in size. Because of the increase in size and the discomfort caused by it and because of pain, the patient decided to have the condition corrected. Five days before admission an x-ray examination with barium showed small bowel in the hernial sac.

Past and Family Histories.—These were noncontributory. Over a month before admission the patient had had an acute respiratory infection with severe coughing spells.

Physical Examination.—Examination showed a well-developed, well-nourished man with no findings except those in the right inguinal region. These findings were a massive right scrotal hernia, approximately the size of a honeydew melon, which was irreducible and did not transmit light.

Temperature, pulse, and respirations were normal. Blood pressure was 176/108.

The urine was within normal limits. The red count was 5,600,000 with 17.9 Gm. of hemoglobin. The white count was normal, as was the differential. X-ray of the chest was "negative except for slight left ventricular cardiac accentuation without gross cardiac enlargement."

Course in Hospital.—On the third hospital day right inguinal herniorrhaphy was done. Both ascending colon and ileum were found within the hernial sac. In the ileocecal region an organized hematoma, approximately the size of a melon, was encountered.

After returning the intestines to the abdominal cavity, the sac was ligated, and hernial repair was done. The operative procedure took four hours, under spinal anesthesia.

Shortly after his return from the operating room, Wangensteen suction was started. A number 14 French tube was passed with ease, and a small amount of dark red blood (approximately 5 cc.) mixed with approximately 50 cc. of thick mucus was returned through the tube when suction was applied. Temperature at this time was 100 F., pulse 100, and respirations 28. The patient was able to move about with ease. Daily infusions of normal saline and glucose were started.

Wangensteen suction was continued and returned ever-increasing amounts of dark red blood mixed with thick green mucus.

Approximately thirty-six hours postoperatively the temperature was 101.6 F., pulse 84, and respirations 18. The suction apparatus continued to function well, and the returns were intermittently black or brown. The abdomen continued soft, and the patient remained alert and cooperative, although weak and tired. A rectal tube was inserted because of some distention, and relief of the distention was obtained thereby. The Wangensteen drainage was now bright red blood together with large amounts of solid mucus. The patient passed dark blood and tarry feces per rectum from this point on.

Approximately fifty hours postoperatively, Wangensteen was clamped for short intervals, and the abdomen remained soft and "relatively nontender." Red count was 3,300,000 with 10.9 Gm. of hemoglobin. The white count was 20,000 with polymorphonuclears 81 per cent, lymphocytes 15 per cent, monocytes 2 per cent, and eosinophils 2 per cent. The prothrombin time was twenty-two seconds with a control of sixteen seconds. The coagulation time was seven minutes, and the bleeding time was one minute ten seconds.

Temperature rose to 104 F., pulse 110, respirations 24. Three 500-cc. transfusions and large doses of vitamin K were given. X-ray of the abdomen was not satisfactory for interpretation.

On the fifth postoperative day the patient became nauseated while the Wangensteen was clamped off, and he vomited approximately 1,000 cc. of dark red blood and appeared to be in shock. His condition rapidly deteriorated, and the patient died two hours later.

Discussion

Dr. John D. Stewart: "The patient was a fifty-four-year-old white linotype operator who was admitted to the hospital complaining of a right inguinal hernia.

"The hernia had been present for more than ten years and had gradually increased in size. Because of the increase in size and the discomfort caused by it, as well as because of pain, the patient decided to have the condition corrected. Five days before admission an x-ray examination with barium showed small bowel in the hernial sac."

I'll ask Dr. Burch to show the x-rays at this point.

Dr. Hobart A. Burch: A flat plate of the lower abdomen revealed a large soft tissue mass projecting down into the scrotal region on the right. No gas shadows were observed in it. Patient was given a part of a barium meal on the floor and brought up to x-ray three and one-half hours later and again at four and one-half hours. At these two examinations (including fluoroscopy), it was determined that distal small bowel extended down into a large right inguinal hernia. There was no obstruction, and some of the barium was already in the rectum at four and one-half hours. No examination of the esophagus, stomach, or upper small bowel was requested or done.

A chest plate was taken which appeared negative except for slight left ventricular cardiac accentuation without gross cardiac enlargement. Moderate hypertrophic changes were present in the mid and lower dorsal spine.

Just before death a stat portable film of the abdomen was attempted without the Bucky, but detail satisfactory for interpretation could not be obtained.

Dr. Stewart: One of the purposes, I suppose, for the x-ray study in this case was to see whether or not the man had a sliding type of hernia. At least that would be one thing that I would have in mind because the primary approach to repair a large sliding hernia, which I prefer, is somewhat different from the approach to an inguinal hernia of this size. I presume the physician in charge had that in mind.

"Past and Family Histories: Noncontributory. Over a month before admission the patient had had an acute respiratory infection with severe coughing spells." I suppose that may have been a factor in his deciding to have his hernia repaired. These severe coughing spells may have aggravated his hernia, making him much more uncomfortable, and possibly increased its size and led to complications. I think that point has to be kept in mind.

"Physical examination showed a well-developed, well-nourished man with no findings except those in the right inguinal region. These findings were a massive right scrotal hernia, approximately the size of a honeydew melon, which was irreducible and did not transmit light." We don't know if the hernia had been irreducible for a considerable period of time or whether it had become irreducible recently. As you know, a hernia of this size, if it is irreducible and stays outside the abdomen proper for a long period of time, produces in connection with the repair some disproportion between the abdominal contents and the size of the peritoneal cavity. This was obviously a very large hernia and possibly large enough so that difficulty in restoring its contents to the peritoneal cavity might have become a problem at the time of operation. That would have been less of a problem had this hernia been reducible in the past. In other words, if each night this hernia was reduced completely only to recur in a standing position, its operative repair would have been easier than if it had been permanently incarcerated in the scrotum.

That raises a rather interesting technical point. As you will see later on, this operation was done under spinal anesthesia. Spinal anesthesia gives you the greatest facility in repairing a large hernia, because it produces such complete relaxation and also may produce some contraction of the gastrointestinal viscera. On the other hand, if reduction is accomplished with the help of such very good relaxation, there may be a buildup of intra-abdominal pressure following operation as the relaxation of spinal anesthesia is lost. So there are some drawbacks to using such complete relaxation. The same holds true for curare. Sometimes we have to use curare to reduce a large hernia. I can recall several diaphragmatic hernias, for example, which could be reduced only with the help of curare, but when the effect of curare is lost, you pay the price. Because of this buildup of intra-abdominal tension, although the operation is facilitated, the postoperative convalescence and postoperative course may be complicated somewhat.

"Temperature, pulse, and respirations were normal; blood pressure was 176/108. The urine was within normal limits. The red count was 5,600,000 with 17.9 Gm. of hemoglobin." Those are normal values of course. "The white count was normal as was the differential." In connection with the fact that the urine was normal, we might note, in passing, that in a hernia of this size the bladder sometimes is incriminated. In the repair of a hernia of this size, the bladder has been injured at operation. This point needs to be kept in mind in connection with the surgical technic of inguinal herniorrhaphy, also with postoperative care. It may be advisable, where the bladder has been displaced and distorted for a period of time by a large hernia, to use an indwelling catheter for a while in the postoperative period.

"On the third hospital day, right inguinal herniorrhaphy was done. Both ascending colon and ileum were found within the hernial sac. In the ileocecal region an organized hematoma, approximately the size of a melon, was encountered." Apparently the man who drew up this protocol was fond of melons because of the repeated references here to them. It is obvious that it is a large hematoma because no matter what kind of melon is referred to, it must have been a very large hematoma. Now that hematoma may have some significance as regards the subsequent course, or it may not. It may mean that during the trauma of coughing with his respiratory infection a month previously, he ruptured a vein with hemorrhage at the time. This hematoma is described as being organized, and possibly it is a justifiable assumption that it occurred in connection with the respiratory infection.

"After returning the intestines to the abdominal cavity, the sac was ligated and hernial repair was done. The operative procedure took four hours, under spinal anesthesia. Shortly after return from the operating room, Wangensteen suction was started. A number 14 French tube was passed with ease, and a small amount of dark red blood (approximately 5 cc.) mixed with approximately 50 cc. of thick mucus was returned through the tube when suction was applied." We see here the first evidence of the onset of the postoperative complications which resulted in the death of the patient five days later.

I would like to say, in connection with the use of the suction tube here, that in my judgment it was a wise plan to use the suction tube in a case like this where it was highly desirable to keep the gastrointestinal tract decompressed postoperatively. In fact, with a large, irreducible hernia of this size, you can raise the question whether or not it would have been desirable to pass a Cantor tube before operation and have that in place to decompress completely not only the stomach but also the small bowel. That facilitates the operation very much where we need all the room we can get in the peritoneal cavity. I use that technic at times, as many others have, and I suppose some of you have. At any rate it's a point to consider in the surgical treatment of a massive hernia.

"Temperature at this time was 100 F., pulse 100, and respirations 28. The patient was able to move about with ease. Daily infusions of normal saline and glucose were started." Now I presume that the surgeon here believed, as I do, that early ambulation was important in the postoperative care of herniorrhaphy cases. I don't suppose everybody will agree with us on that, but I am convinced personally that the patient who has a herniorrhaphy should be gotten out of bed just as the patient who has almost any other abdominal operation. In patients with a combined abdominal-peritoneal resection for cancer, even though they have an indwelling urethral catheter, we get them out of bed the next day. We get the patient out of bed with any abdominal operation in the upper abdomen. We get all the patients up, practically speaking, except those who are in borderline shock or those who have a spreading peritoneal infection. They don't need to stay up long, but they should stand on their feet at least for a moment, usually at the time that they are trying to void. That is done usually two or three times the day after the operation. If the operation is done early in the morning, the patient may be out of bed late that day. In my opinion this has been one of the real advances in surgery in the last decade. As you probably know, it's not a new idea, but as with a good many other advances in medicine, it represents the rediscovery of an old idea. Postoperative ambulation was in common use in certain clinics in Europe, for example, in 1900. Then the practice fell into disrepute, and all of us can, I am sure, remember when it was customary to keep patients who had a simple herniorrhaphy in bed for three weeks following repair. That wasn't very long ago. Now there is very general acceptance of the principle of early postoperative ambulation.

"Wangensteen suction was continued and returned ever-increasing amounts of dark red blood mixed with thick green mucus. Approximately thirty-six hours postoperatively the temperature was 101.6 F., pulse 84, and respirations 18. The suction apparatus continued to function well, and the returns were intermittently black or brown. The abdomen continued soft, and the patient remained alert and cooperative, although weak and tired. A rectal tube was inserted because of some distention, and relief of the distention was obtained thereby. The Wangensteen drainage was now bright red blood together with large amounts of solid mucus. The patient passed dark blood and tarry feces per rectum from this point on." In other words, we are being given here the picture of continuing upper gastrointestinal bleeding. The patient had a slight elevation of his temperature at that time, 101.6 F., which probably was a rectal reading, but he had no evidence of localized infection anywhere as far as we can tell, and his complication up to this time seemed to be that of hemorrhage.

"Approximately fifty hours postoperatively, Wangensteen was clamped for short intervals, and the abdomen remained soft and 'relatively nontender.' A red count was 3,300,000 with 10.9 Gm. of hemoglobin." The patient now has reduced very appreciably his red count and hemoglobin values through hemorrhage. And actually the loss of blood may have been greater than these values indicated. In the presence of continuing hemorrhage there may be a vascular constriction set up so that the blood in circulation has a higher red cell count than if the entire circulatory bed was in service. This can be demonstrated only by blood volume determination. But we know that he had produced by this time a hemorrhagic anemia, and it may have been even more severe than indicated.

"The white count was 20,000 with polymorphonuclears 81 per cent, lymphocytes 15 per cent, monocytes 2 per cent, and eosinophils 2 per cent. The prothrombin time was twenty-two seconds with a control of sixteen seconds." That is an appreciable reduction in the prothrombin concentration or an appreciable prolongation of the prothrombin time. Different laboratories vary somewhat, and you have to be familiar with your own laboratory before you can properly interpret such values. But other things being equal, I would have to assume that it is suggestive of some prothrombin deficiency.

"The coagulation time was seven minutes, the bleeding time was one minute ten seconds. Temperature rose to 104 F., pulse 110, respirations 24," still without any localizing signs of infection as far as we know. "Three 500-cc. transfusions and large doses of vitamin K were given. X-ray of the abdomen was not satisfactory for interpretation." It has been pointed out that this was an obese individual, and portable films under the circumstances are difficult to obtain and to interpret with satisfaction.

"On the fifth postoperative day the patient became nauseated while the Wangensteen was clamped off, and he vomited approximately 1 L. of dark red blood and appeared to be in shock. His condition rapidly deteriorated, and the patient died two hours later."

In summary it is the picture of a fifty-four-year-old man who was apparently in good health except for a very large right inguinal hernia and who one month previously had had a rather severe respiratory infection. He decided to have his hernia repaired, repaired uneventfully as far as technic goes. Almost immediately the patient began to bleed in the upper gastrointestinal tract; the bleeding continued, and the patient died five days after operation with the evidences of hemorrhagic shock.

Now the problem here centers (1) in diagnosis and (2) in treatment. As for diagnosis, we have two general lines to take. Either this man had some lesion before the operation which he was not aware of, which produced no symptoms, and which resulted in hemorrhage immediately following the operation, or else the bleeding lesion was a complication which developed following the operation. Now let's consider for a moment the possibility that he had a lesion which could produce bleeding into his upper gastrointestinal tract without having produced very much in the way of symptoms so that there was no telltale evidence before the operation. Of course, for one thing he could have cirrhosis of the liver and esophageal varices. Cirrhosis of the liver needn't produce any particular disturbance in the patient's health; if he had ascites at all, it may have been mild enough so that he was not aware of it. He could have varices developing over a period of time, and the first manifestation of such varices could be severe or even fatal hemorrhage. We have no knowledge as to whether this man was an alcoholic or not. But he could have cirrhosis and varices whether he was addicted to alcohol or not. That remains a possibility that we have to consider further perhaps.

In the next place he could have had a peptic ulcer with little or no symptomatology from it. That is unusual, as you well know, but nevertheless it does occur. We have seen a good many patients now who have come in with severe bleeding from peptic ulcer, either in the stomach or duodenum, and we have been unable to get very much in the way of a history suggesting a chronic ulcer with remissions and exacerbations and so on over a long period of time; so the absence of a pre-existing history of ulcer dyspepsia would not entirely exclude that possibility either in my opinion.

He could have had other less common causes of bleeding into the upper gastrointestinal tract. For example, he could have had a benign lesion of the fundus, leiomyoma particularly, or he could have had peptic esophagitis, erosion of the lower end of the esophagus; he could have had a malignant lesion in the stomach, although the lack of history of any disturbance in his health would be against that. There are other rare causes which may have been operative here but which I think we don't have to consider very seriously.

Now let's take the second tack. Let us suppose this man had no abnormality in his upper gastrointestinal tract prior to operation but developed, postoperatively, some ulcerating lesion which resulted in fatal hemorrhage. Now what are the possibilities? In the first place the tube itself can produce erosions and severe hemorrhage from the lower esophagus; that's a well-known fact, and it's one of the drawbacks to using nasogastric suction. It doesn't happen very often, but it happens now and again and has to be kept in mind. As a matter of fact, one of the complications in the use of the nasogastric tube is erosion in the upper esophagus or lower pharynx in the region of the larynx, and the production of changes in the intrinsic larynx, even permanent crippling of the voice. This isn't very common either, but it does happen.

Now this man probably had the ordinary number 14 type catheter which is in common use. I would like to suggest, more or less in passing, that there is pretty good evidence that the use of the plastic tubes, polyethylene for example, is a good deal less irritating to the mucosa of the esophagus and stomach than is the usual rubber catheter. I recently saw a patient who had had a series of complicated gastric procedures done in another hospital before I saw him, and when I saw him, he had had in place continuously for forty days and forty nights the same polyethylene catheter. He had no evidences of irritation whatsoever as far as I could find, and consequently we left it in in connection with the major surgery which he had to have. So he wore it a while longer before he got through with it. And in the treatment of severely burned patients it is possible to put down a polyethylene catheter into the stomach and give them tube feeding for a long period of time with relatively little inconvenience. It can be a very useful device. The possibility of irritation from the catheter has to be considered. It is not very likely but possible.

The second possibility is that this man developed after the operation an acute peptic ulcer in the lower esophagus, stomach, or duodenum. You probably recall that Dr. Harvey Cushing became very much interested in this condition years ago in connection with some of his craniocerebral procedures. And there is a small literature that has been developing on the subject since his day. As a matter of fact, there is a paper that will shortly be coming out from Philadelphia in which a series of cases of acute peptic ulcer following operative procedures will be analyzed. These ulcers were manifested by perforation or bleeding or merely pain and distress. We don't know of course why such ulcers should develop postoperatively, but Dr. Selye likes to talk about stress reaction and how this reaction might play a part in the production of peptic ulcer. Curling's ulcer in the burn patient may have some such etiologic background. The fact is, peptic ulcer may develop as an acute process following a major surgical procedure, and it may take us unawares because we are not looking for it.

About two weeks ago on my service, we operated on a patient for cancer of the rectum and did a combined abdominal-peritoneal procedure. About the third day following operation, he began vomiting up blood, and he continued to vomit blood over a period of about two weeks. He lost large amounts of blood. We had an x-ray study of his upper gastrointestinal tract and confirmed our suspicion that he had a duodenal ulcer. Presumably he had it before the operation, but if so, we had not been sharp enough to pick up the diagnosis. He later stopped bleeding. He required a lot of blood for replacement. As soon as his colostomy is functioning well and his abdominal wound is well healed, we will go ahead with appropriate treatment for a bleeding ulcer. There may be some counterpart of that case here.

I would like to digress for a minute. Is it possible that this man had a hemorrhagic diathesis? Was he bleeding not because of the extent of his ulceration in the upper gastrointestinal tract but because he had impaired clotting? There isn't very much evidence here to support that diagnosis, but it always has to be considered in severe bleeding in the upper gastrointestinal tract. Two conditions which can produce such bleeding in our experience have been multiple myeloma and aleukemic leukemia, where the routine blood smear doesn't help you very much. Those are the two conditions about which we are particularly concerned. There are other less common things. There is no reason for us to believe that this man had hemophilia, for example. There is no reason to suppose that he had a specific reduction in his platelets for some reason or another which would favor bleeding.

His prothrombin time was prolonged apparently, but we don't get very much conclusive evidence from the study of bleeding and clotting times. I believe that any patient who is severely bleeding in the upper gastrointestinal tract should have these studies made, however. As a matter of fact before we operate on a patient who is bleeding massively from a peptic ulcer, we are very careful to carry out these tests for impairment of the clotting mechanism. I don't see very much evidence here to support that particular angle, but evidently the surgeon considered it in this instance, and it always should be considered.

Let's admit that we can't make an absolute diagnosis and take the question of the handling of the case. I think I would have been willing to ask the radiologist in this situation to see if he could help me with an upper gastrointestinal examination with barium. Such an examination may not help you at all. It is asking a good deal of the radiologist because the patient is retching, nauseated, vomiting blood, perhaps. He's got blood in his stomach, and it's difficult to get a conclusive study carried out. However, you have to remember that if you don't get positive information, it doesn't mean anything, but if you do get positive information, it may mean a great deal. And now and again the radiologist under these circumstances can visualize a lesion in the stomach or duodenum. I think I would have been interested in having such a procedure carried out in this case. Hindsights are a good deal easier, of course, but it might have helped a good deal in the care of this patient.

Now the question is how to treat the patient otherwise. Well, I think we have some evidence here that he would have probably tolerated larger amounts of blood. As I make it out, he was given 1,500 cc. Ordinarily it takes more than that to replace the amount of blood lost in a hemorrhage that produces peripheral vascular collapse in the average adult. The blood volume studies we have made now in a large series of cases would indicate that 3 L. would be a more appropriate amount to give under most circumstances, and we actually sometimes have to give more than that. We have given as much as 18 L. of blood in the course of a week in sustaining the patient who is continuing to bleed from an ulcerating lesion in the upper gastrointestinal tract.

The rather sudden exitus here, with a picture of severe hemorrhage, makes you wonder if that had any particular significance in regard to the nature of the lesion. I don't think it did. We might wonder, though, whether or not a large artery such as the gastroduodenal or a branch of the left gastric might have been eroded. But this same thing can happen in erosion of esophageal varices, as you well know. And the patient bleeding from varices may require enormous amounts of blood to keep him alive until the bleeding finally stops.

Whether or not you would consider surgical treatment in an effort to control bleeding in a case like this is a fair question. You certainly would hate to operate on this man again within five days of the major procedure that he's already had. Furthermore you're at a loss for a diagnosis, and not knowing a definite diagnosis would tend to dissuade you from operating on him. I don't think I would have favored surgical treatment with the knowledge that we are given in this protocol. I think I would have treated him much as was done here, except I feel sure that I would have wanted to give him larger amounts of blood.

Now you can raise the question that if it's good to operate on patients with peptic ulcer who are bleeding massively who have not been operated on, why is it not good to operate on someone who has been operated on for some other lesion? Well, several times we have done that, but an influencing factor in this case, to me, would be the fact that we don't have very much of a lead as to the diagnosis. Let's suppose, for the sake of argument, that this man did have a penetrating gastric ulcer and that your radiologist had demonstrated that for you at his examination. Then would I have operated on him? I think I would have treated him supportively with blood for a period practically as was done here, always having enough blood on hand even if you have to store some of it away. You can't expect to get it day by day because you never know when the bleeding which has suddenly begun is going to become very much more severe. I think I would have treated him for two or three days to give him a chance to stop bleeding. If he continued to bleed, I probably would have operated on him with the idea of doing a gastric resection.

In conclusion I can't make a definite diagnosis here except that I believe that this man was bleeding from the upper gastrointestinal tract and had bled fatally. I would say that the most likely diagnoses were peptic ulcer or esophageal varices, and I would pick peptic ulcer as my choice.

Dr. Gerald T. Connelly: Are there any questions? Do you care to ask about the case further?

Question: If you thought this was a peptic ulcer, would you remove the tube or leave it there? Does it have any influence at all on the bleeding?

Dr. Stewart: I believe in leaving the tube down in these cases because it helps you to gauge whether or not the bleeding is continuing, and I, personally, don't believe that it tends to keep up the bleeding. We used to think that, but for several years now we've routinely kept the tube in these patients, and I'm not convinced that I've ever seen any harm come of it. And I think you get some helpful information from it.

Question: Do you believe that there is any significance in that large hematoma, and also do you think there is any significance in the 20,000 white count?

Dr. Stewart: The hematoma I would have to ascribe to trauma in connection with the fact that he had an irreducible hernia and he had severe coughing spells. Now that may be making it too simple. If this man had a hemorrhagic diathesis, he could have bled from trauma into his ileomesentery, and he could have bled into his upper gastrointestinal tract. I don't think we can exclude that possibility. Nevertheless, he had a recent fresh operative incision of some extent, and I'm assuming that there was no hematoma in that, or we would have been told about it.

Now the white count of 20,000—we often see that in severe hemorrhage. I don't know whether it had any significance in this case or not, but it's a common finding in a patient with peptic ulcer who is bleeding badly. We would expect it rather than otherwise.

Question: Would reducing the large mass act as a cause of hemorrhage from pre-existing esophageal varices due to the increase in intra-abdominal pressure?

Dr. Stewart: Well, that's a rather attractive idea. I suppose, at least theoretically, it might. We must remember this man had his operation carried out, as we pointed out, with good relaxation, and the peritoneal cavity was probably embarrassed to some extent to accommodate the intestines, cecum, and ascending colon which had been in the hernial sac. So possibly that entered into the picture. If he had pre-existing esophageal varices, I'm sure that reducing a large hernia wouldn't tend to lower the venous pressure in his varices; it might increase it significantly.

Question: Do you think that you could get that amount of bleeding from an acute hemorrhagic gastritis?

Dr. Stewart: I think it would be unlikely, but we have seen it occasionally, and we always have to consider that as a possibility. It's very hard to make that diagnosis, and the pathologist has difficulty in telling you whether you're dealing with erosive gastritis or merely acute gastritis. In other words, as far as I can make out, even pathologically it's a good deal of a no-man's land. As a matter of fact, now and again, we see almost anything as the cause of bleeding in the upper gastrointestinal tract. It can be such things as aneurysmal dilation of an artery, and the pathologist can't find a thing unless he injects the arterial system with some opaque medium like Lipiodol. Several months ago we had a patient who came in with severe pain in his chest, bleeding, shock, vomiting blood, passing blood by rectum; he died soon after admission. The pathologist found his entire gastrointestinal tract and his esophagus filled with blood, but he could find no lesion whatsoever in a complete examination. So we see some queer things now and again in connection with bleeding.

Question: Could it be possible that this man had a postoperative complication such as a strangulation of the bowel which was caught during the repair and that would cause bleeding.

Dr. Stewart: Well, I think that would be possible, but I would consider it pretty unlikely because this man was raising so much blood from his stomach. Of course, it could happen, and blood may appear in the stomach from bleeding lower down, but it's quite unusual. It seems to me that the evidence indicates that the bleeding point in this instance would definitely be in the upper gastrointestinal tract. He was passing altered blood, tarry stools, and there was blood coming out of his nasogastric tube.

Question: At the same time the white count was 20,000, his temperature went up to 104 F Can you draw any correlation there?

Dr. Stewart: The fever in this case bothered me because I haven't, in my own mind, any explanation for it. It is true, however, that patients do simmer along for several days bleeding to death from gastrointestinal hemorrhage, and they may have fever. I suppose they develop a respiratory infection to some degree, and I can't give any better explanation than that. I don't really know why this man should have a temperature of 104 F., and I can't tie it in with his bleeding.

Question: That could be explained by the azotemia, possibly?

Dr. Stewart: Well, certainly he must have had azotemia.

Question: In the event that the x-ray man did give you a lead to an esophageal lesion, do you employ the nasogastric tube, such as the Patten tube, for a tamponade?

Dr. Stewart: Yes, we do. In some instances we think it has been lifesaving. On the other hand, we've seen other cases where it accomplished nothing whatsoever and was merely a nuisance to the patient. I suppose it depends on the location of the varices for one thing. Some patients with esophageal varices may have varices all the way from the upper end of the thoracic esophagus down to and including the gastric mucosa. Now we understand that the commonest site of bleeding is in the lower esophagus, but I see no reason why the varices may not be at higher levels or even in the stomach, where we do not produce very much pressure with the tube. Now in that connection there is a growing interest in direct surgical attack on esophageal varices. Several years ago Dr. Linton of Boston began treating some of these patients in that way, and more recently several other clinics have employed the method tentatively, and with a good deal of trepidation, I'm sure. We have had one instance in which we have made a direct attack on the bleeding varices because of persistence of life-endangering hemorrhage. The young man had received, I think, some 20 transfusions, and we were running out of blood. In this case the Patten tamponade bag did not work, so we felt we didn't have much choice. It was possible to ligate some of the varices by opening the esophagus, and whether there was any connection or not, the bleeding stopped. Of course, the bleeding can stop in varices whether you operate on the patient or not. I mention that because I am sure you will be hearing more about the method. I think it is purely experimental now, but it may turn out to have value.

Question: In taking care of a postoperative patient, when you pass a Wangensteen tube and you get blood back immediately, how long do you leave it in?

Dr. Stewart: I think I'd leave it in, as in this instance. That to me wouldn't be reason for taking the tube out because I think it's unusual to have severe ulceration and bleeding from the tube itself.

Question: What about gastroscopy in these patients? Do you ever use it?

Dr. Stewart: We use esophagoscopy, now and again, and I should have mentioned that. In esophagoscopy, the esophagoscopist is under the same disadvantage the radiologist is under. It's hard for him to make a clear-cut examination because of the condition of the patient who has active bleeding. In doubtful cases in a number of patients now, we have esophagoscoped the patient before going ahead with operation. It's a very difficult procedure under the circumstances.

If you get positive information, it's all right, but if you don't, you just have to say it doesn't mean anything. It is one of the ways of trying to make a diagnosis in a desperate situation like this, and I should have mentioned it.

QUESTION: Do you feel ligation of the hepatic artery has any place in the treatment of bleeding esophageal varices?

DR. STEWART: We have been very much interested in portal hypertension. This may be a little beside the point, and it may not be. Since carrying out a series of ligations of the hepatic and splenic arteries, I have to confess that the procedure is worthless. There is a rather acrimonious debate going on right now on the subject between Dr. Reinhoff of Baltimore and several others because he still feels that this method has some value. But in the cases where we've used it and where we have measured the reductions in portal pressure after the ligation, we have to conclude that it is not only a worthless measure but probably does the patient some harm. Personally I could never see any good reason for it. Berman's theory never made sense to me, and I find that it hasn't made sense to others. I didn't have much faith in that method, but I did feel that I had to try it out—I think in some eight cases—and I'm satisfied that I wouldn't want to use it again.

QUESTION: Do you think that there is quite a difference between the irritating qualities of the rubber and polyethylene tubing?

DR. STEWART: Well, that's kind of a hard question to answer. The polyethylene tube has some drawbacks. It is not as flexible, of course; it is harder to deal with. It is apparent when using the transfusion sets, for example, which are prefabricated and equipped with polyethylene tubing, that you have no way, if you want to give blood any faster, of milking the tube as you can with a rubber delivery tube. It is tolerated very well in the veins too; we use a very small polyethylene catheter in children. You can leave it in place for some days even, with relatively little reaction. But whether or not it can replace the rubber tube altogether, I don't know; I rather doubt it. I think the lack of flexibility would be the major drawback there. But I think it could replace the tube going into the nose and esophagus. I see no reason why it shouldn't be standard equipment instead of rubber for nasogastric purposes.

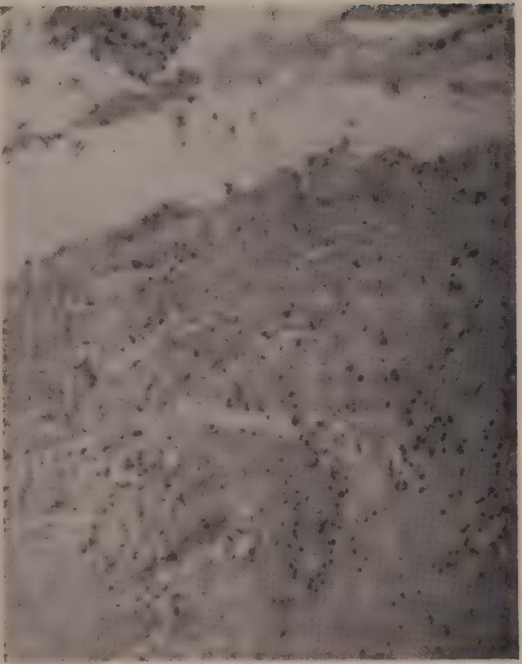

FIG. 1. Involvement of mucosa down to the muscularis mucosa with an inflammatory cellular infiltration of the wall composed of lymphocytic and neutrophilic cells and some fibrinous exudate in the floor.

Pathologic Report

DR. JAMES A. MITCHELL: At autopsy, the body was that of a well-developed, adult, white male, fifty-four years of age and weighing approximately 200 pounds. There was a healing oblique hernial incision in the right inguinal region with some edema of the scrotum. The peritoneal and pleural cavities showed no free fluids.

The thoracic and abdominal viscera were essentially normal, and the pertinent findings were confined to the gastrointestinal tract. The stomach was filled with approximately 1,500 cc. of fluid and clotted blood, and the jejunum and ileum were filled with clotted red and tarry material. There was also noted some hemorrhage into the mesentery of the lower ileum and into the mesocolon just distal to the cecum, probably due to operative trauma.

Examination of the stomach showed some atrophy of the gastric mucosa with loss of the usual rugae formation. No definite gross evidence of ulceration was noted in the stomach, pylorus, or duodenum. On opening the esophagus there was noted a small area of ulceration situated 1 cm. above the cardia on the posterior wall, the ulcer measuring 1.5 cm. in diameter. There was no evidence of induration or undermining of the edges, and the ulcer did not appear to penetrate below the muscularis mucosa. There were no apparent varicosities noted in the lower third of the esophagus. The mucosa of the esophagus above the area of ulceration appeared grossly normal.

There was some question at the autopsy as to whether the ulceration was of traumatic origin due to passage of the Wangensteen tube, but after histologic examination of the area I am inclined to believe the etiology of the ulceration is consistent with the acute ulceration of the postoperative type as mentioned by Dr. Stewart and described by Cushing many years ago. Histologic examination of the area confirmed the fact that the ulcer involved only the mucosa down to the muscularis mucosa with an inflammatory cellular infiltration of the wall composed of lymphocytic and neutrophilic cells and some fibrinous exudate in the floor (Fig. 1). Exsanguinating hemorrhage can occur from very small ulcerations in this area of the esophagus as has been indicated in recent literature on this subject.

Anatomic diagnoses were as follows: postoperative ulceration of esophagus, hemorrhage, shock, right inguinal herniotomy, and orchiectomy and appendectomy.

Urges Parental Education to Prepare Children for Surgery

Parents should be given instructions in how to prepare their children for surgery, it was suggested editorially in the February 6 issue of the *Journal of the American Medical Association.*

"Parents can play an extremely important role in preparing the child psychologically and emotionally before admission to the hospital," the editorial stated.

"Actually it is important that all three—the mother, father, and child—know in a general way what will ensue. The parents should possess sufficient information in order to answer those questions the child is certain to ask.

"Parents, and mothers particularly, need guidance in preparing a child for a hospital experience. A gigantic step forward in terms of parental education could be taken if the medical profession together with hospitals would routinely issue instructional leaflets to parents of children who are about to become surgical patients." Reactions of children having their first surgical experience in a hospital vary, according to the editorial. Children over five years of age seem to forget quickly the stay in a hospital, while those under five years are more likely to show transient behavior changes such as fear of the dark, fear of being left alone, and such regressive behavior phenomena as bed wetting, wanting to be fed, and fear of doctors and nurses. Disobedience, temper tantrums, increasing dependency, and spiteful, defiant behavior are more likely to occur in older children.

It has been found, the editorial said, that the three principal anxieties which concern children who are admitted to a hospital for the first time are: (1) separation from the home, (2) the nature of the anesthetic, and (3) the operation itself.

A simple, forthright explanation of the operation, anesthetic, and hospital personnel will help to alleviate part of this anxiety. The bringing to the hospital of a familiar toy, pair of slippers, or a pillow will create a tangible tie to the home in the child. Admission to the hospital some twenty-four hours before an operation often will enable the child to overcome a sense of initial panic.

CASE REPORTS

Keratosis Blennorrhagica or Reiter's Syndrome?

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(From the Department of Medicine and Dermatology, St. Joseph's Hospital)

SINCE Reiter in 1916 first described the symptoms of arthritis, conjunctivitis, and urethritis as an entity not ascribable either to dysentery or to gonorrhea, this syndrome has been recognized more frequently both in Europe and in America. However, the etiology is not yet clear. In addition to the original syndrome described by Reiter, it was found by recent authors that this disease is occasionally accompanied by a skin rash which may be similar to keratosis blennorrhagica. Because of the presence of skin lesions in addition to the triad of symptoms originally described, the clinical entity of Reiter's syndrome became obscure. Many resulting discrepancies are found among the authors in the literature of this particular field.

At St. Joseph's Hospital we observed a case which presented us with the same problem. A patient was admitted with the symptoms of severe arthritis. Three weeks prior to the onset of the arthritis, after intercourse with a chance acquaintance, he suffered from an acute urethritis with yellowish discharge and was treated with penicillin S-R. In the hospital he developed a conjunctivitis so that the diagnosis of Reiter's syndrome was considered. But twenty days after admission a keratotic eruption appeared on the skin which was typical of keratosis blennorrhagica. Here we had to deal with two possible diagnoses: Reiter's syndrome with skin eruptions or keratosis blennorrhagica. It is the purpose of this article, on the basis of our findings and others described in the literature, to discuss and clarify the differential diagnosis between Reiter's syndrome and keratosis blennorrhagica.

Looking for the etiology of Reiter's syndrome, it is interesting to notice that frequently dysentery precedes the onset of the disease.[1] In an epidemic of Shigella dysentery in Finland, Peronen[2] saw that in 344 cases of Reiter's syndrome 96.4 per cent were affected with the dysentery. Also pneumonia-like organisms were found in nonspecific urethritis, arthritis, and conjunctivitis.[3] These organisms have been found to have a general pathogenic activity in the genitourinary tract in men and women. A definite causal relationship to Reiter's syndrome has not been proved. The etiology of the syndrome still remains obscure.

The diagnosis of Reiter's syndrome depends on the clinical picture. It is determined by the course of the disease, the failure of specific treatment, and by the exclusion of gonorrheal infection. Reiter's syndrome is seen mostly in men between twenty and forty years of age. Destructive arthropathies are reported by Guck and Wolf.[4] Laboratory tests and biopsies of the involved synovia were performed, but they did not definitely establish the diagnosis.

With the exception of a balanitis circinata, skin lesions do not belong to the picture of Reiter's syndrome. However, hyperkeratoses, psoriasiform exanthemata, and lesions resembling erythema exudativum multiforme may accompany it. According to Lucas and Weiss[5] 40 per cent of the cutaneous lesions which are seen in Reiter's syndrome are of hyperkeratotic type and similar to keratosis blennorrhagica.

Even if gonococci cannot be found in skin lesions, the diagnosis of keratosis blennorrhagica may still be maintained. In a review of the literature up to 1946,[6] gonococci were found in the keratotic eruptions in 10 per cent of 166 cases of keratosis blennorrhagica. Therefore, the question of keratosis blennorrhagica without gonorrhea was considered. It was first discussed by Buschke[7] and later supported by other authors such as Lever and Crawford.[8] Kuske[9] considered all cases of urethritis, conjunctivitis, and arthritis with parakeratotic skin lesions as Reiter's disease *sui generis* even when there was a recent gonorrheal infection in the previous history.

From the etiologic point of view we are of the opinion that Reiter's syndrome and keratosis blennorrhagica are different diseases, although the skin lesions appear similar and an exact differentiation is very difficult and sometimes impossible. This is a dilemma with which we are frequently confronted in

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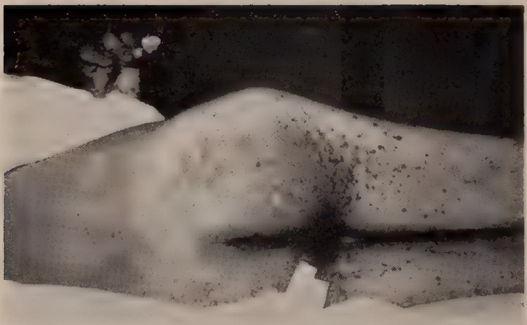

FIG. 1. The buttocks show a confluent picture of reddish papules and vesicles. Horny skin formations are more prominent in the lower gluteal region.

dermatology since diseases of different etiology often present manifestations of similar skin lesions.

The careful evaluation of the histologic picture of the involved skin is of great value for the diagnosis, and it is important to rule out any form of pustular psoriasis (see biopsy report below).

The most reliable way to establish the diagnosis of keratosis blennorrhagica is to find gonococci in the skin lesions. In most of the cases the organisms are not seen. In spite of the failure to observe gonococci, the history of gonococcal infection should be very suggestive of a latent focus. In those cases with the lack of gonococci in the lesions, the most general interpretation for the presence of a rash is that of an allergic reaction, although it does not explain the problem completely. The question still remains open as to why in those cases only certain parts of the integument and certain joints are sensitive to the specific toxin.

Case Report

H. L., a twenty-one-year-old, single male, developed pain in the urethra with yellowish-white discharge after sexual intercourse two days previously on June 6, 1952. He was treated by his private physician with 400,000 units penicillin S-R on the two following days. After that he had no urethral discharge and was apparently improved. Two weeks later, on June 18, his ankles, toes, knees, and finger joints started to swell, and movement became painful. On June 25 he was admitted to the medical ward service. After the sixth day in the hospital both eyes became infected, and photophobia was present. On July 10 he developed a rash which became progressively worse in the next three weeks.

The lesions were widely distributed over the entire body. The rash first appeared on both buttocks (Fig. 1). The extremities later became infected. The hands, including palms and fingers, and the toes and soles of the feet were most severely involved (Fig. 2). A true picture of hyperkeratotic lesions was predominant. Both eyes showed an acute conjunctivitis with yellowish, purulent discharge and marginal ulcers. There was no cutaneous lesion on the glans penis and no urethral discharge on admission. The prostate was not enlarged and felt normal on palpation. The fingers, toes, wrists, ankles, and knees were remarkably swollen. Motion was limited. The fingers were held in continuous flexion with ulnar deviation.

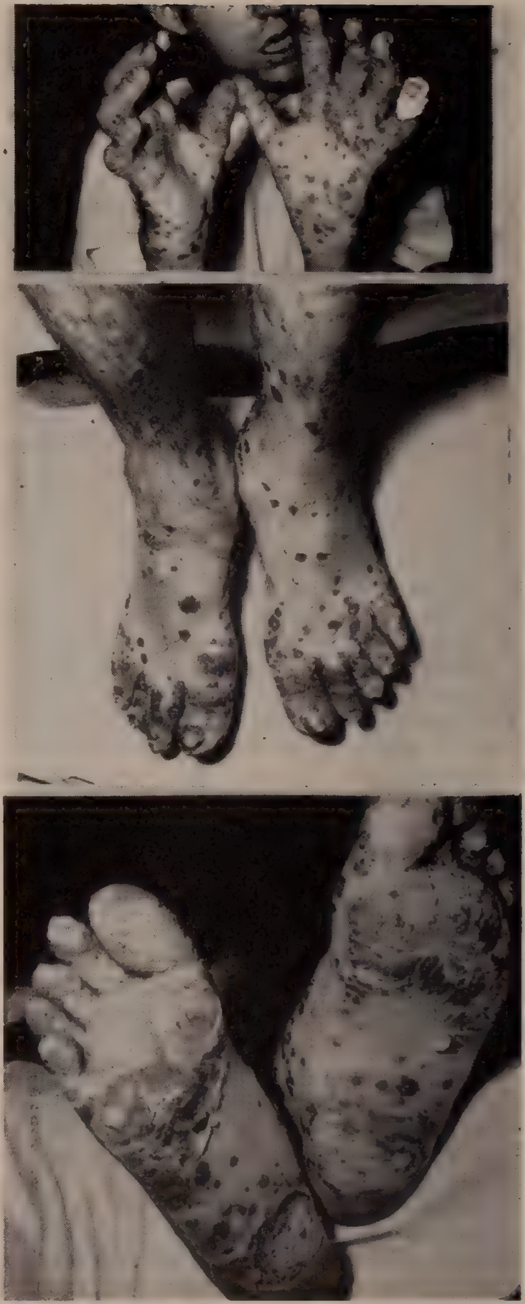

FIG. 2. The hands and feet show heaped-up, thick scales which lift the nails from the beds.

Laboratory findings were as follows: Hemoglobin, red blood cells, and hematocrit were low but within normal limits. White blood cells ranged between 15,000 and 20,000 in the first two months but were less than 10,000 thereafter. Urine was normal. Several blood cultures and the culture of the spinal fluid were negative. No gonococci were found by smear or culture of the secretion obtained from the prostate by rectal massage. Agglutination test for typhoid O and H and Brucella abortus were negative. Wassermann was negative.

During the first two weeks in the hospital the patient was treated with aspirin (temperature 99 to 101 F.). Cortisone was then administered for twenty days in daily doses of 100 mg., then 200 mg., and later 50 mg. to a total of 1,550 mg. No essential change in his general condition was noted while he was on cortisone (temperature 99 to 101 F., occasionally 103 F.). He was then treated with sulfapyridine, 2 Gm. daily, for five days (temperature 100 to 102 F.). Then 4,000,000 units penicillin S-R and 1 Gm. streptomycin were given daily for five days (temperature 100 to 102 F.). Two days after the last application the temperature went down and remained normal.

For the next twenty-five days the patient was on physiotherapy only. Cortisone treatment was then resumed, and he received small doses up to the end of October, 1952, when he was discharged after a stay of three months. His rash had completely healed, and swelling and stiffness of the involved joints were markedly decreased. He is being followed in the outpatient clinic.

Biopsies taken from the skin of the buttocks after five weeks hospitalization were sent to Dr. F. Weidman* who reported as follows:

> ". . . an outstanding edematous reaction with acanthosis. The more severe pathologic changes concern the uppermost stratum of squamous cells, amounting to intracellular hyaline degeneration and a leukocytic infiltrate. Although the lesions of Reiter's disease may be psoriasiform, the histologic features here are not such. The writer judges that although not diagnostic, the sections are quite compatible with keratosis blennorrhagica; he would prefer this interpretation to that of Reiter's disease because etiologic agents appear to be operating from the surface of the skin rather than by the hematogenous route. This, though, is stated on theoretic grounds, and inasmuch as Lever states that the histology is identical in keratosis blennorrhagica and Reiter's disease, it remains that the clinical circumstances must be the deciding one. . . It is to be emphasized that in the pathologic diagnosis submitted above, the writer's preference for keratosis blenorrhagica is stated on grounds of principles in general pathology."

Roentgen examination of the wrist after two and one-half months revealed evidence of subcortical decalcification with slight hazing of the carpal joints.

Our final diagnosis was keratosis blennorrhagica with symptoms of Reiter's disease.

Comment

In the first days of hospitalization this case was considered as Reiter's syndrome because of the presence of arthritis, urethritis, and conjunctivitis. The rash which the patient developed later led us to the diagnosis of keratosis blennorrhagica. The repeated bacteriologic studies in the hospital failed to prove the gonococcal nature of the disease. This may be explained on the basis of the penicillin treatment. Unfortunately the clinical diagnosis of acute gonorrheal urethritis three weeks prior to admission was not proved by smear or culture before the treatment was started. The effect of the penicillin, however, tends to indicate a gonorrheal infection because the urethritis subsided completely after three to four days and did not recur in the hospital. The incubation time of two days is also typical of gonorrhea.

The histopathology, although not decisive, was of great value in the differential diagnosis between the two diseases. Although Lever[10] stated that the histology is identical in keratosis blennorrhagica and Reiter's syndrome, the interpretation of Dr. Weidman was that the sections of our biopsy material were compatible with a diagnosis of keratosis blennorrhagica in preference to that of Reiter's syndrome.

The differential diagnosis which we have here discussed is so difficult because the etiology of Reiter's syndrome is obscure. Further investigations, especially in the isolation of Reiter's syndrome, will be of great value in the differentiation from keratosis blennorrhagica.

I wish to thank Dr. M. Newer and Dr. H. J. McKinnon from the medical department for permission to study this case and especially Dr. J. Voehl, the attending dermatologist, for his valuable advice and suggestions in the preparation of this article.

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The Control of the Edema of Nephrosis by Dextran

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DEXTRAN is a water-dispersible, high molecular weight polysaccharide which is produced by the enzymatic action of Levconostoc Mesenteroides on sucrose. Dextran acts by increasing the plasma volume; 500 cc. of dextran increase it by 10 to 15 per cent, while 1,000 cc. expands the volume 15 to 20 per cent. In view of this increase in plasma volume it must be used cautiously in persons with heart disease.

Dextran is excreted primarily in the urine. From 20 to 40 per cent is excreted in twenty-four hours, and 65 to 70 per cent of the total amount is eventually excreted. The remainder is slowly metabolized to carbon dioxide and water. Side-effects with the American product have been limited to urticaria, muscle aches and pains, and in one case transient hematuria. The incidence of reaction with the British and Swedish products used in Korea has been reported high.

It was first used in the treatment of nephrosis by Wallenius[1] at Upsala, Sweden. He reported three cases in 1950 in which the edema was markedly improved after therapy with dextran.

Olive, Mills, and Lundy[2] of the Mayo Clinic reported in 1953 on 12 children with chronic glomerulonephritis. In seven of the 12 diuresis was induced. However, all but one reaccumulated edema fluid when therapy was discontinued.

Two additional cases which responded dramatically to dextran* therapy are herein reported.

TABLE I.—FLUID BALANCE CHART FOR CASE 1

Date	Intake (Cc.)	Output (Cc.)	Weight (Pounds)	Treatment
July 8	1,080	900	130	High-protein low-salt diet, Lanolac feedings, and salt-poor albumin
9	1,180	925	130	
10	1,300	1,425	130	
11	1,525	1,175	130	
12	990	760	130	
13	1,680	1,175	130	
14	1,250	1,125	130	
15	1,930	1,210	130	
16	1,780	2,400	118	500 cc. dextran and the above
17	1,750	3,750	114	500 cc. dextran and the above
18	1,210	1,190	114	500 cc. dextran and the above
19	1,480	1,850	110	
20	1,410	1,240	110	
21	860	780	110	
22	990	860	110	
August 7	1,250	1,300	116	500 cc. dextran
8	1,250	1,750	116	500 cc. dextran
9	1,200	1,050	115	500 cc. dextran
10	1,320	1,950	115	500 cc. dextran
11	1,200	1,800	114	500 cc. dextran
12	2,000	2,400	110	500 cc. dextran
13	1,030	1,650	108	500 cc. dextran
14	1,140	1,710	106	500 cc. dextran
25	710	1,100	118	500 cc. dextran
26	1,260	1,500	114	500 cc. dextran
27	1,010	1,400	114	500 cc. dextran
28	860	1,850	108	500 cc. dextran
29	1,380	1,250	108	500 cc. dextran
30	1,390	1,475	106	None
31	1,220	1,200	105	None
September 1	1,100	1,200	104	

Case Reports

CASE 1.—A seventeen-year-old Puerto Rican boy was admitted to the Long Island College Hospital on July 8, 1953, complaining of dyspnea and anasarca. At three years of age the patient was treated at the Presbyterian Hospital, Puerto Rico, for Pott's disease and was later hospitalized at Kings County Hospital, Brooklyn, from 1946 to 1949 where he underwent surgery for this condition. The patient remained well until two months prior to admission. At this time he noted the onset of ankle edema which rapidly progressed to ascites and anasarca. On the day of admission he became very dyspneic and was hospitalized.

Physical examination revealed a young male in acute respiratory distress with a barrel chest and marked kyphoscoliosis. The neck veins were not distended. The lungs were clear to auscultation. The heart size could not be accurately determined because of the chest deformity. The heart sounds were distant, and no murmurs were present. The abdomen was markedly distended and showed shifting dullness and a fluid wave. There was marked clubbing of the fingers and toes. There was pitting edema of both legs up to the thighs and also over the sacrum.

Laboratory findings were as follows: The venous pressure was 60 mm. of water. Circulation time, arm to tongue, was fifteen seconds. Hemoglobin was 14.9 Gm., red blood cells 5,600,000, and white blood cells 11,150 with 59 neutrophils, 40 lymphocytes, and 1 monocyte. Urine showed specific gravity 1.021, albumin 4 plus, sugar and acetone negative; rare fatty and hyaline casts were seen on microscopic examination. Mazzini was negative. Blood chemistry results were as follows: urea 26.8, 22.1 mg. per cent; total protein 3.5, 3.8, 3.6, 3.4 Gm.; albumin 1.1, 1.6, 1.4, 1.2 Gm.; globulin 2.2, 2.2, 2.2, 2.2 Gm.; cholesterol 500, 480 mg.; esters 329, 283 mg.; chlorides 612, 596 mg.; carbon dioxide combining power 68.1, 59.7 volumes per cent; sodium 327, 377 mg.; potassium 16.2, 17.5 mg.; calcium 8.8, 7.3 mg.; phosphorus 3.4, 3.8 mg.

Electrocardiogram showed low voltage complexes throughout. Chest x-ray revealed no cardiac enlargement, a marked kyphoscoliosis, and clear lung fields. Partial destruction of the eleventh thoracic and first lumbar vertebrae and complete destruction of the twelfth thoracic, in keeping with the diagnosis of Pott's disease, were visible on x-ray of the spine. Intravenous pyelogram showed both kidneys normal in size and position and apparently functioning well. The calyceal groups in both kidneys appeared normal. A Congo red test was attempted, but because of lipemic serum no definite color could be determined.

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* Dextran used in this study was supplied by the courtesy of Wyeth Laboratories, Philadelphia, as Plavolex.

Because of the patient's extreme dyspnea he received an immediate abdominal paracentesis. A total of 5,100 cc. of fluid was removed with a specific gravity of 1.015. Following this the patient was controlled on a high-protein, low-sodium diet, Lanolac feedings between meals, and 350 cc. of salt-poor albumin. The patient's weight, intake, and urinary output are charted in Table I. He lost no weight and had no lessening of edema while on this regime. Therefore, on July 16, eight days after admission, dextran was instituted, 500 cc. a day for three days. The patient lost 20 pounds during this three-day period, and the edema completely disappeared. During this time there was no demonstrable increase in the serum albumin and no slackening of the albuminuria.

Following this the patient's serum albumin fell to 0.7 Gm. In an attempt to raise the serum albumin and to stimulate patient's appetite, which was very poor while on a restricted diet, he was placed on a high-protein diet without sodium restriction. Fluid slowly reaccumulated, and on August 7 he weighed 116 pounds. He was again given a course of dextran with prompt weight loss. The day by day fluid balance is shown in Table I. It is to be noted that the patient needed considerably more dextran this time to effect the same result.

The patient was again placed on a diet without salt restriction to see if he would again accumulate fluid. He rapidly gained weight, and on August 25 he weighed 118 pounds. He was again treated with dextran and again lost weight.

The patient was then placed on a diet of marked sodium restriction and mercurial injections twice a week. He maintained his dry weight for two weeks on this regime and then was discharged to clinic, which he failed to attend. Consequently the subsequent course is unknown.

CASE 2.—A sixty-seven-year-old Italian male was first admitted to the Urological Service of the Long Island College Hospital on March 8, 1953, complaining of edema of the legs, back, and abdomen for three months. The patient had been in good health all his life until three months before admission at which time he noted edema of the ankles at the end of the day. This gradually progressed until two weeks before admission at which time he noted increasing size of the abdomen and difficulty in buttoning his pants.

Physical examination revealed a temperature of 99 F., pulse 86, respirations 16, and blood pressure 180/80. The head and neck were not unusual. The lungs were clear to percussion and auscultation. The heart was not enlarged. There were no murmurs present, and the aortic second sound was not accentuated. The abdomen revealed pitting edema of the abdominal wall. No organs or masses were palpable. There was 2 plus pitting edema over the sacrum and edema of the ankles.

TABLE II.—FLUID BALANCE CHART FOR CASE 2

Date	Intake (Cc.)	Output (Cc.)	Weight (Pounds)	Treatment
August 24	500	800	156	500 cc. dextran
25	1,800	800	155	
26	1,400	1,650	155	500 cc. dextran
27	1,600	400	153	
28	1,430	1,800	151	500 cc dextran
29	500	1,200	148	

Laboratory examination revealed a hemoglobin of 14.5 Gm., red blood cells 5,000,000, white blood cells 8,200 with 60 per cent neutrophils, 36 per cent lymphocytes, and 4 per cent monocytes. Urinalysis showed 4 plus albumin and sugar negative; microscopic examination showed occasional red blood cells. Fishberg concentration test revealed a maximal specific gravity of 1.018. Blood urea was 60, blood sugar 83, albumin 2.2 and 2.4 Gm., globulin 1.7 and 2.0 Gm., chlorides 613 mg. Serology was negative. Urine cultures failed to grow any organisms.

Chest film revealed a normal sized heart, and the lungs were negative. Intravenous pyelography revealed a bifid kidney, pelvis, and ureters on the left.

The patient was considered to show the nephrotic phase of a chronic glomerulonephritis. He was treated with a high-protein, low-sodium diet and discharged on March 18, 1953, slightly improved.

He returned again on May 31, 1953, with the same complaints. At this time his hemoglobin was 13 Gm., red blood cells 3,800,000, white blood cells 6,650 with 64 per cent neutrophils and 36 per cent lymphocytes. The urine again revealed marked albuminuria. The urea was 79 mg. per cent, albumin 2.1 Gm., globulin 1.7 Gm., carbon dioxide combining power 64.8 volumes per cent, chlorides 618 mg. per cent. The patient received a low-sodium diet, 300 cc. of salt-poor albumin, and mercurial injections. He lost 5 pounds and was discharged on June 5, 1953.

He returned a third time on August 23, 1953, complaining of swelling of legs, abdomen, and genitalia. Physical examination revealed the presence of abdominal fluid in addition to the previous edema of legs, scrotum, and sacrum. At this time the hemoglobin was 13.9 Gm., red blood cells 4,200,000, white blood cells 9,650 with 65 per cent neutrophils, 34 per cent lymphocytes, and 1 eosinophil. The urine again revealed marked albuminuria. Urea was 79.9 mg. per cent, sugar 119 mg. per cent, albumin 1.7 Gm., globulin 2 Gm., sodium 350 mg. per cent.

The patient was started on dextran with the hope of gaining a more rapid diuresis than with previous medication. In five days the patient lost 8 pounds and felt much improved (Table II). He was discharged on August 29, 1953, on a low-sodium diet.

Comment

The edema associated with the nephrotic syndrome has been most refractory to therapy. Restriction of sodium by diet, resins, and mercurials and attempts to raise the serum albumin by high-protein diet and salt-poor albumin have failed to give any constant relief from this distressing edema. Recently, the use of ACTH and cortisone has caused a diuresis in many patients. However, these compounds have many serious side-effects.

Dextran has proved to have very few side-effects in patients not suffering from heart disease. The untoward effects seem limited to urticaria and muscle pains. The side-reactions have been rarer with this compound than with acacia, globin, or gelatin.

There appear to be several modes of action of the compound in controlling the edema. Peters[3] in 1935 showed that increasing blood volume in nephrotic patients caused a diuresis. Lepore[4] postulated that this was due to the opening up of glomeruli not actually functioning. Cargill[5] and Patek[6] separately showed that increasing the blood volume increases kidney flow and filtration rate. Wallenius[1] felt that, in addition to the above factors, an increase in blood volume decreased the antidiuretic factors and aided diuresis. Also, the passage of dextran molecules through the kidney tubules prevented tubular resorption of water by their osmotic effect.

The above two cases show that dextran can markedly reduce edema in cases of nephrosis. After the edema is removed, the improvement will not be maintained unless the patient is continued on a strict low-sodium regime.

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Your Business Stationery

Medical Economics for April has some useful suggestions for selecting office stationery of all kinds.

They recommend a twenty-pound 25 per cent rag content bond for letterheads and envelopes, for prescription pads and receipts a less expensive sturdy white stock, a dull finish vellum for business and appointment cards.

All stationery except receipts and prescription blanks should be engraved because the appearance is worth the slight extra charge. A typical doctor's letterhead plate should cost about ten dollars to engrave and the plate will wear indefinitely. A change in address can be erased and re-engraved.

If all stationery is ordered at once and the printer is given plenty of time to deliver, the total cost will be slightly lower, especially if the job comes during his slack season.

The information contained on a letterhead depends upon the type of practice. Pediatricians may wish to feature their phone number in large figures, prominently displayed, while an internist may give more attention to his address. Appointment cards should be large enough to contain explicit notation of date and time. Monthly statements should be itemized as a good public relations gesture, with the reason for each charge explained on the printed form.

Urinary Surface Tension Changes in a Recurrent Renal Stone Former Treated with Hyaluronidase

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It has long been thought that stone formation in the urinary tract results from a disturbance in the balance between colloid and crystalloid components of the urine.[1] The crystalloids are excreted in a supersaturated state but are prevented from precipitating by the solubilizing action of the colloids. Until recently, the physical phenomena involved have been neglected, attention being primarily directed towards reducing the concentrations of the various crystalloids with the aim of preventing or retarding stone formation in the urinary tract. Butt and his group[2-4] have revived the concept which emphasizes the role of the colloids in the prevention of stone formation. They have found that the subcutaneous administration of hyaluronidase increases the colloid content of the urine, as observed under the ultramicroscope, and have employed the spreading-factor enzyme in the treatment and prevention of renal calculi in recurrent stone formers. Their clinical reports indicate that they have been successful in preventing or retarding the rate of stone formation in such patients.

The "protective" effect of the colloids is a surface phenomenon, and a close correlation has been found to exist in the urine between the level of colloid activity and the surface tension.[5,6] It has been shown that when the colloid activity is low, the surface tension is high. Presumably stone formation is favored under such conditions.[7]

Therapy directed toward increasing the level of protective colloids can be facilitated by developing a suitable method for determining satisfactory dose levels. Butt and his group have attempted to accomplish this by counting the colloid particles in the urine with the ultramicroscope or by means of a turbidity chart. Neither of these methods is well adapted to clinical use.

The surface tension changes in the urine are closely correlated with changes in colloid activity.[6] Revici[8] has recently designed a urotensiometer which is calibrated to give direct readings of the surface tension of urine in terms of dynes per cm. Determinations require only a few seconds and can be done as part of the routine urinalysis. Measurement of the surface tension by this method is as simple as reading a clinical thermometer and can be carried out by patients themselves.

The Revici urotensiometer has been employed to follow the serial changes in the urine surface tension values of a recurrent stone former under hyaluronidase therapy and are presented because of the wide interest in this new approach to the treatment of renal calculi.

Case Report

This forty-three-year-old white man had his initial attack of renal colic and hematuria in 1935. During 1946, 1947, and 1948 he passed single small stones at the rate of one each year. By 1949 the rate had increased to one stone every eight months, and on two occasions first the right and later the left kidney temporarily ceased functioning prior to the passing of stones. By the end of 1952, stones were being passed with increasing frequency, and he passed a stone each month during December, 1952, and January and February, 1953. In January, 1953, treatment was instituted utilizing a single weekly dose of 150 turbidity-reducing units (T.R.U.) of hyaluronidase. Although the stone passed in February was smaller than the preceding stones, the dose was increased to 300 T.R.U. twice a week and on occasion to 600 to 900 T.R.U. From February to the present, a period of eight months, this patient has been free of symptoms of calculus. An intravenous pyelogram on November 12, 1953, failed to reveal a stone.

In order to determine whether hyaluronidase was influencing the colloid excretion and surface tension of the urine, the patient was instructed in the use of the Revici urotensiometer. He carried out determinations of the surface tension of his own urine immediately after voiding. Surface tension measurements were made immediately before hyaluronidase injections, during the first sixteen hours after injection, and in the days intervening between injections.

Surface tension changes in serial specimens during this period of study are shown graphically in Fig. 1. The arrows indicate the surface tension of urine specimens passed immediately prior to hyaluronidase administration.

Comment

Findings on serial specimens from healthy subjects have shown mean surface tension values of 67 to 68 dynes per cm., with day-to-day variations of 5 to 11 dynes per cm. In contrast the urine of this chronic stone former had a mean surface tension of 71 dynes per cm. during the period of hyaluronidase administration. The range of variation during a period of seventy-three days with but a single exception was never greater than 4 dynes per cm.

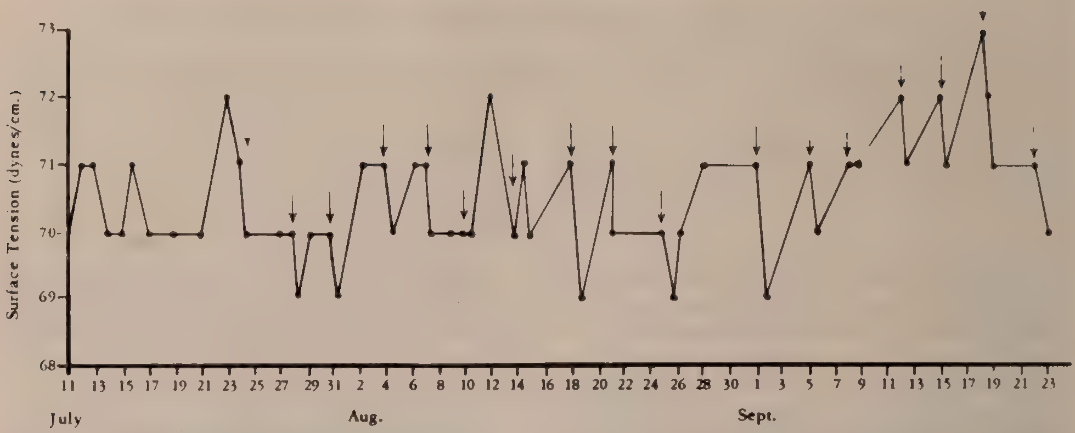

FIG. 1. Surface tension values of the urine in a recurrent renal stone former. Arrows indicate surface tension values of specimens obtained immediately prior to subcutaneous administration of 300 to 900 T.R.U. of hyaluronidase.

Within the first sixteen hours after almost every injection of hyaluronidase, there was a slight but definite lowering of the surface tension. This effect usually was no longer evident after twenty-four hours. The surface tension was never reduced by more than 2 dynes per cm. after an injection and frequently was only reduced by 1 dyne per cm. Furthermore, hyaluronidase did not lower the surface tension below levels which were at times achieved spontaneously in the intervals between injections.

At different times the injection dose was increased to 450 to 900 T.R.U. It was found that higher dose levels produced a more consistent lowering of the surface tension, but the degree to which the surface tension was lowered did not depend upon the size of the dose.

The findings suggest that hyaluronidase consistently lowers the surface tension of the urine of a chronic stone former to a limited degree. The surface tension was not reduced in this case to the levels found in healthy individuals. These observations support the view that the urine of the recurrent stone former contains a reduced amount of surface-active substances. While it is possible that the observed reductions following hyaluronidase administration are sufficient to re-establish satisfactory colloid-crystalloid balance in the urine, other agents may be found that are more effective in lowering the surface tension of the urine.

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The author wishes to express his appreciation to Dr. I. B. Krebs for his assistance in following this case, and to Dr. E. Revici who permitted him to use one of the experimental models of the urotensiometer in these studies. This instrument is now available through the Clay-Adams Co., New York. Hyaluronidase (Wydase) was supplied by Wyeth Corp., Philadelphia.

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Physiognomy: The art of determining the character of another by the resemblance and differences between his face and our own, which is the standard of excellence.—AMBROSE BIERCE

SPECIAL ARTICLE

A Study of Physicians' Visits in Welfare Medical Care

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THE introduction of a third party as a payer for physicians' services brings with it the possibility of abuse of such services by physician or patient. This is true whether the third party be a public welfare agency, a voluntary health agency, or a commercial or nonprofit insurance company.

In brief, three methods of approach to this question by welfare agencies have been suggested:

1. No controls: This method has been suggested on the basis that physicians' ethics and patients' general reasonableness will permit no significant difference in the frequency of physicians' visits under third party payment programs as compared to private practice.
2. Rigid controls: This method places little or no reliance on ethics or reasonableness. It calls for controlling medical care to patients while it is being given by means of requiring prior authorizations for all visits made, narrowly limiting the number of calls which may be made by a physician under a single authorization, and requiring immediate justification for any renewal of that authorization.
3. Moderate controls: This method permits initial visits to or by physicians without prior authorization, followed by a fairly liberal authorization for additional required visits. While general supervision of current practice is maintained and special approval is required for extraordinary or expensive items, control depends chiefly upon reviewing the practices of various physicians after they have completed treatment for a series of patients. In this way it can be determined whether their practices have been consistent with that of their colleagues and may be regarded as characteristic of good medical care.

The first method, "no controls," may appear desirable but, in view of abuses which have been known to occur, cannot be justified where public tax funds are being spent. Recognizing without question the generally high ethical level of the medical profession and a more than fair sense of reasonableness among most patients of any economic group, it remains the duty of the public agency to safeguard public moneys against the exploits of an irresponsible minority of either group, no matter how small.

The second method, "rigid controls," defeats its own purpose by introducing too much administrative red tape for both the welfare agency staff and the physician. The higher caliber physician may well be driven away from such a program. The less ethical doctor will not be stopped from practicing abuses because it is most difficult to challenge him when he states that a patient under his care requires an extraordinary amount of treatment.

The purpose of this article is to demonstrate how the method of "moderate controls," permitting liberal authorizations and exercising control primarily by reviews of past practice rather than by attempts rigidly to regulate current practice, can operate advantageously.

Method

Data regarding visits requested and visits made by physicians were collected for seven local welfare districts utilizing moderate medical controls of various types. The districts will be identified by the letters A through G. For two of these districts, namely, F and G counties, the data had already been collected during medical audits by one of the area offices of the State Department of Social Welfare.

The remaining five districts were selected from a group considered to have good medical direction. The medical consultants of four of these districts serve on the Medical Advisory Committee of the New York Public Welfare Association. These districts were asked to collect a random sample of authorizations for physicians' visits in the office and in the home. It was requested that emphasis be placed upon care for acute conditions or acute episodes of chronic conditions, but the districts varied in their approach to this study.

All districts in the study operate under the basic plan of allowing an initial visit without prior authorization and subsequently either authorizing a total of ten calls routinely or authorizing the exact number of additional visits estimated as necessary by the physician up to a maximum of ten. Additional visits beyond those initially authorized require renewal of the authorizations and approval by the medical consultant if more than ten visits are requested in any one calendar month.

The data were analyzed by the number of occasions upon which physicians requested a given

TABLE I.—Analysis of Medical Authorizations for Home and Office Visits in Selected Local Welfare Districts, 1953

District and Sample	Frequency Distribution of Visits Requested and Completed														Total Authorizations	Total Visits	Average Visits per Patient	Per Cent Above 5 Visits
	1	2	3	4	5	6	7	8	9	10	11	12	13	14				
District A																		
Acute Care																		
Requested*	31	57	51	31	21	5	2	3	0	1	..	..	..	..	202	605	3.0	5
Completed†	59	60	36	29	8	1	2	3	0	0	..	..	..	..	198**	487	2.4	3
Chronic Care																		
Requested	15	20	43	46	21	4	2	3	1	0	..	..	..	..	155	598	3.9	6
Completed	27	49	26	25	10	1	3	1	0	1	..	..	..	..	142**	402	2.6	4
District B—All medical care																		
Requested	83	61	60	37	29	3	2	1	2	6	..	..	..	..	284	796	2.8	4.9
Completed	156	56	27	23	12	3	2	2	..	3	..	..	..	..	284	579	2.0	3.5
District C—Routine care for chronic illness excluded																		
Requested	33	12	12	13	8	2	2	3	1	2	..	..	..	..	88	264	3.0	...
Completed	46	15	11	9	3	1	1	1	1	..	..	..	..	..	88	189	2.1	...
District D—Routine care for chronic illness excluded																		
Requested	2	5	23	11	11	6	1	1	2	31	0	1	0	0	94	571	6.1	45
Completed	2	24	20	15	9	4	4	2	1	6	2	2	0	1	92**	412	4.5	24
District E—All medical care on Old Age Assistance, Aid to Disabled, and Home Relief																		
Requested	Not determinable																	
Completed	20	16	3	10	3	1	6	4	0	4	1	..	..	..	68	247	3.6	24
District F—All medical care																		
Requested	15	21	29	17	19	10	7	0	0	63	..	..	..	..	181	1,046	5.8	...
Completed	65	52	29	13	9	4	4	0	1	4	..	..	..	..	181	454	2.5	...
District G—All medical care on Old Age Assistance																		
Requested	Not available														198	891	4.5	...
Completed	Not available														198	530	2.7	...

* Frequency with which given numbers of visits were requested.

† Frequency with which given numbers of visits were completed.

** Billings for visits made not received for all visits requested.

number of visits and by the number of occasions upon which a given number of visits was completed. The average numbers of requested and completed visits per patient were then determined. The data were also studied to determine the frequency with which more than five visits were requested or completed.

The data were studied in detail only in regard to the initial authorization during the calendar month for each illness. Renewals for the same illnesses during a calendar month were reported but were not analyzed by numbers of visits requested and completed since the purpose of the study was to determine the effect of the controlling regulations and procedures of the local welfare districts upon the initial authorizations only. However, when a second and different illness occurred in a patient during a calendar month, as indicated both by a completely different diagnosis and a definite interval of time occurring between the two illnesses, the initial authorization for the second illness was included in the study as a separate item.

Special analyses were made regarding the practices of individual physicians who treated five or more patients during the study period. The purpose of this was to determine whether the pattern of practice of any one physician was out of line with that of his colleagues. Obviously, no pattern could be determined for any physician treating less than five patients.

Results

The data pertinent for all districts are presented in Table I. The following is an analysis of the data for each district.

District A.—The District A data were collected for the spring of 1953. Separate studies were made for acute care and for chronic care.

For the acute care group, the numbers of visits requested most frequently were "two" and "three." The numbers of visits completed most frequently were "one" and "two." The average number of requested visits per patient was 3.0; the average of completed visits was 2.4. For only 5 per cent of the patients were more than five visits requested, and for only 3 per cent were more than five visits completed.

For the chronic care group, the figures were slightly higher. The numbers of visits requested most frequently were "three" and "four." The number of visits completed most frequently was "two." The average number of requested visits per patient was 3.9; the average of completed visits was 2.6.

Each of nine physicians treated five or more welfare patients during the study period. Their individual practices were consistent with the general pattern in all instances.

District B.—The District B data consisted of all physicians' authorizations in May and part of June, 1953. It included all items of physicians' care and consultation visits. In contrast to District A, the number of visits requested most frequently was "one" with a gradual falling off thereafter. The number of visits completed most frequently was also "one," but the frequency was almost twice as great as for visits requested. The average number of requested visits per patient was 2.8; the average of completed visits made was 2.0. For 4.9 per cent of the patients, the requests were for more than five visits, while for only 3.5 per cent were more than five visits completed.

It was noted that in District B a total of 40 physicians participated in providing the medical care, but 17 of these gave only consultation service or specialist care. If these consultation or specialist care visits are eliminated and the data limited to the visits made by the 23 general practitioners, the average number of visits requested by these practitioners is increased only to 3.1 per patient, and the average number of visits completed is increased only to 2.2.

There were 17 physicians who handled five or more patients during the period of the study. In no instance did a physician appear to be requesting or making a higher average number of calls than the group as a whole.

Thus it would seem that the District B data compare very favorably with those of other districts.

District C.—The District C data were collected for July and August, 1953. Authorizations for chronic care were excluded, and the data were therefore limited to primarily acute conditions.

As with District B, the number of visits requested most frequently was "one." The number of visits completed most frequently was also "one," but the frequency was only about one and one-half times as great as for visits requested. The average number of requested visits per patient was 3.0; the average of completed visits was 2.1. There were five doctors who treated five or more welfare recipients during the period of the study. For three of these physicians the average number of requested visits and the average number of completed visits were as low as, or lower than, the averages for the group as a whole. However, there were two physicians handling five or more cases who had significantly higher averages. One of these physicians treated five patients and requested five or more calls in every instance, averaging 5.6 visits requested and 5.0 visits completed. The other physician also treated five patients during the study period, averaging 5.4 vistis requested and 4.2 visits completed. These averages are considerably higher than those of the group as a whole.

In general, the District C data compare favorably with those for other districts. However, the study indicates that the practices of two physicians, while possibly completely justifiable, warrant inquiry or at least close observation by the medical consultant.

District D.—The District D data are based on consecutive authorizations for physicians' services for patients having an acute illness or acute exacerbation of a chronic illness. Several of the patients included in the study had been hospitalized. Those instances in which the major part of the care was given in hospitals were eliminated from the analysis so as to make the data comparable with that from the other districts. However, it was noted that the agency was quite generous with its authorizations for daily hospital calls and apparently permitted the doctors to be paid for daily calls for periods over several months.

Surprisingly, the number of visits requested most frequently was "ten," with a second slightly smaller peak at "three." The numbers for visits completed most frequently were "two" and "three," the tapering off was longer than that encountered in the previous studies, and there were five instances where completed visits exceeded "ten." The average number of visits requested per patient was 6.1; the average of completed visits was 4.5. It is also noted that 45 per cent of the requested authorizations were for more than five visits, and 24 per cent of the billings showed more than five visits completed.

It is noted that the figures for District D are much higher than for the preceding districts. However, in reviewing the data, it appeared that there was one individual physician who was requesting and completing visits in much greater numbers than his colleagues. This physician had a very high percentage of all visits.

In Table II a comparison is made between this physician's practice and that of his colleagues. This physician will be designated Dr. X. It is noted that Dr. X served 22 of the 94 welfare patients receiving nonhospital medical care during the study period. In contrast, the physician with the second highest number of welfare patients in District D took care of only seven persons during

TABLE II.—ANALYSIS OF CONSECUTIVE AUTHORIZATIONS IN DISTRICT D FOR PHYSICIANS' SERVICES FOR 94 WELFARE RECIPIENTS

Analysis of Visits	All Physicians	Dr. X	Other Physicians
Nonhospitalized patients	94	22	72
Visits requested	571	198	373
Per patient	6.1	9.0	5.2
Requests for more than 5 visits			
Number	42	20	22
Per cent	45	91	31
Billings received	92	22	70
Visits made	412	145	267
Per patient	4.5	6.6	3.8
Billings for more than 5 visits			
Number	22	11	11
Per cent	24	50	16

the study period (not in table). The remaining patients were distributed among about 50 other practicing physicians.

Returning to Table II, it is noted that for the total of the 94 nonhospitalized cases, there were 571 visits requested, an average of 6.1 visits per patient. Actually, there were only 412 visits completed, or an average of 4.5 visits per patient. When the services of Dr. X are considered separately, it is noted that for his 22 authorizations for nonhospitalized patients, he requested 198 visits or an average of 9.0 visits per patient. It was noted in the study that Dr. X routinely requested ten visits, except when his request was submitted during the last week of the month. In the latter instances, his requests appear to coincide fairly well with the number of days remaining in the month.

Dr. X completed 145 visits or an average of 6.6 visits per patient. The averages of all other physicians, excluding Dr. X, amounted to only 5.2 per patient for visits requested and 3.8 per patient for visits completed. Thus, Dr. X's average of requested visits exceeded that of his colleagues by 3.8 per patient; for completed visits the excess was 2.8 per patient. Of the 22 instances in which authorizations for more than five calls were requested, 11 of these authorizations were requested by Dr. X, and the remaining 11 by all of the other physicians combined.

Dr. X requested more than five visits for 20 of his 22 patients (91 per cent). In contrast, the remaining physicians requested more than five visits for only 22 of their 72 patients (31 per cent). Dr. X completed more than five visits for 11 of his 22 patients (50 per cent), in contrast to the other physicians who made more than five visits for only 11 of the 70 patients for whom billings were received (16 per cent).

Among individual patients treated by Dr. X, there were several cases which seemed unusual. Thus, a patient with bursitis required 20 office visits; seven home visits were made for a patient with streptococcus sore throat; 11 office visits for a young boy with malnutrition and anemia; 17 home visits for a patient with a virus infection; and 18 home visits for a patient with bronchitis. These figures include the visits authorized and completed under renewals which were not included in the above data. If they had been, the difference between the experiences of Dr. X and the other physicians would appear wider.

Wherever situations of this kind are encountered, a more detailed study of the physician's experiences with welfare recipients would be in order. It might prove that his activities are completely justifiable in view of the particular type of patients who make up his practice. However, in fairness to him, to the agency, and to the taxpayer, the reasons for the large number of calls he requests and completes should certainly be established.

In District D the elimination of Dr. X's cases still leaves the district's figures somewhat higher than those for most other localities, including those with very similar samples. Although the remaining differences are not exorbitant, it should be very informative to compare the district's experiences with those of other districts to determine possible reasons for the differences.

DISTRICT E.—The District E data relate to authorizations on the July 31, 1953, payroll for the welfare categories of Home Relief, Old Age Assistance, and Aid to the Disabled. The largest number of home visits were made in the OAA category, and these were chiefly for chronic illness or acute phases of chronic illness. The brief self-limiting illnesses were in the minority.

District E was not able to supply data regarding requests for visits. In 60 of the 68 authorizations, no estimate of needed visits was made by the physicians. In such cases the physician continues to see the patient, but the decision as to whether he will be paid for such visits is made by the medical consultant. In the infrequent instances in which an excessive number of visits appears to have been made and the number cannot be adequately explained by the physician on the basis of clinical reasons, the excess visits may not be paid for. The numbers of visits completed most frequently were "one" and "two," with a secondary peak at "four."

The average number of completed visits per patient was 3.6. This is similar to the figure for District D with Dr. X's practice eliminated and somewhat higher than that for other districts. It is to be noted that for 24 per cent of the patients more than five visits were completed. This figure is much higher than the corresponding figures for other districts with similar samples.

In District E there were three physicians who treated five or more persons during the study period. In no instance did these doctors appear to be completing more calls than the average for the group as a whole.

District F.—The District F data related to all physicians' visits in June, 1953. The number of visits requested most frequently was "ten," with much smaller secondary peaks at "two" and "three." This unusual frequency distribution is due to the practice of many physicians routinely to request authorizations for ten visits. The practice is apparently related to their desire to avoid the necessity of requesting renewals and has not resulted in any exploitation of the program. The numbers of visits completed most frequently were only "one" and "two." The average number of visits requested was 5.8, a fairly high average due to the practice described above. On the other hand, the average number of visits made was only 2.5, which compares favorably with the other districts in the study.

District G.—The District G data referred to Old Age Assistance in June, 1953, and included all requests for physicians' services for patients in this category. A frequency distribution of the numbers of visits requested and completed was not available. The average number of visits requested was 4.5 per patient; the average of completed visits was 2.7, a relatively low figure.

Summary and Conclusions

1. A review of the average numbers of physicians' visits requested and completed and the frequency distribution of such visits in seven local welfare districts has been made. These districts all operate welfare medical programs with "moderate" degrees of controls.

2. The findings indicate that a moderate level of control, allowing initial visits without prior authorizations and subsequent authorizations up to ten visits, is compatible with freedom from significant abuse, if good medical direction is provided.

3. With one possible exception the study indicates no suggestion of abuse of the welfare medical programs. However, two districts had averages higher than the other five, and the reasons for this should be determined.

4. This method of studying the pattern of welfare medical care practice in the welfare district is an excellent check upon the presence or absence of abuses. It informs the local commissioner and his medical consultant whether the number of visits being made to welfare recipients is in accord with what might be expected for this population group.

5. The method allows not only a review of the over-all medical practice of the physicians participating in the program but permits a study of the practice of each of the individual physicians. While it is very difficult to challenge a physician regarding the care currently being given to an individual patient, any gross discrepancy between his general pattern of practice and that of the other physicians in the community is subject to inquiry.

6. This type of review might well be carried out in each welfare district on a yearly basis, the study sample being selected at random for a one to three-month period, depending upon the size of the case load.

The findings should be made known to the welfare medical care advisory committee of the county medical society, and the assistance of that committee should be extended to the welfare district if any suggestions of abuse are revealed.

An alternate and simpler, although not so revealing, method of reviewing physicians' experiences is to determine the total fees requested by each physician and divide that by the number of patients treated to determine his average fee per patient. This will offer a cruder index to any deviations from the general pattern of medical practice in the community.

Blue Shield Finds Reinsurance Unnecessary

The annual 1954 conference of the 78 Blue Shield Plans considered the basic objectives of the President's message to Congress on health insurance and concluded that while they could endorse the program it would not apply to them.

As the Blue Shield Plans have always been entirely self-supporting, there is no reason to assume they will ever need to rely upon anything other than their own proved resources as they continue to expand their operations.

HISTORY OF MEDICINE in New York State

Editor
FREDERIC D. ZEMAN, M.D.

EDITOR'S NOTE: This charming study of nineteenth century medicine is contributed by an old friend of the editor who is delighted to welcome so distinguished a writer to the NEW YORK STATE JOURNAL OF MEDICINE. This contribution will also serve notice to our readers that this department is not limited to members of the profession. We shall be glad to extend the hospitality of our pages to any reader who has material bearing on the history of medicine in New York State or the relation of doctors to their patients and to community life.

Hudson Valley Doctor

THÉRÈSE VON HOHOFF, NEW YORK CITY

A LONG way back, before socialized medicine was even a glint in a British eye, there was a doctor named Tuttle who practiced in Poughkeepsie, New York, and its environs. Environs meant, in the nineteenth century, a sweep of 10 or 20 miles and in this particular case meant crossing the broad and sometimes inhospitable Hudson River by buggy or sleigh, according to the weather. My grandmother's cherrywood medicine chest, with its supply of Thompsonian herbs and (*mirabile dictu*) a thermometer, saved Dr. Tuttle a number of uncomfortable, time-consuming visits to the West Shore. But whenever an emergency arose which she could not handle, he came, in bitter cold or blistering heat, his old horse toiling up and down the fiendish, sharp little hills and Dr. Tuttle grumbling in his white beard about the uncertainty of ever getting paid for his trip.

He believed that most human ills came from the stomach, which he called the "biler." "When the biler busts, the whole machine stops." He treated his own with proper respect and complained that the steep hills "cramped his biler" to danger point. It was he who persuaded Dr. Carhart that the community on the West Shore needed a young doctor, full time.

So one day a gig drove up to the ancient mill where my grandfather was watching the final bolting of some white flour. The driver was large and clean-shaven with brown, protuberant eyes. He explained that he was the new doctor, that he wasn't expecting to have any money in the near future, and didn't know how he was to pay for feeding his horse. "Unless," he said shyly, "I can persuade you to provide grain, for which I will give you free professional services. I understand," he added, "you have a large family."

Granddad looked solemn. He said, "Well, I don't know. But I have got a patient for you. There's a cow in there," pointing to the barn, "that's gone lame. I imagine you'll know what to do for her."

The doctor got out of the gig and started for the barn without a word. Granddad chewed his moustache, a sign of amusement or approval. He told the miller to stow two bags of oats in the gig well out of sight, and a few moments later the young man came back. He said the cow was suffering from a muscular lameness which would disappear if she took moderate exercise. Then he climbed back in the gig. Granddad said, "Thank you very much," and the doctor started to drive away, looking unhappy.

Granddad called after him, "Come again when the oats you'll find in the back are gone. We'll call on you when we need you."

That "trade" was the beginning of a long friendship. The doctor and my grandmother between them took care of the sick and needy for miles around; in the absence of organized social workers they made a pretty good substitute. He was cheerfully nonsectarian in a rabidly sectarian village. No church party, from the Methodist to the Catholic, was complete without him; he carved roasts at the dinners in winter and served the ice cream in summer. He tried to avoid a choice of political parties but finally settled on the Republican and somehow got appointed postmaster. As he obviously couldn't serve and equally couldn't bring himself to disappoint his backers, he hired a young woman as his clerk who became the most efficient postmistress the place had ever had.

One day on a back road he met a man who said he was suffering agonies from a bad tooth. "Get down and let me look at it," the doctor said. After a moment he took out his kit, picked up the forceps, ordered the farmer to hold fast to the spokes of the buggy wheel, and pulled the tooth without further ado.

Professional ethics sometimes got in his hair. Once, for instance, a small girl had been bitten by a copperhead, that vicious deadly snake which inhabits stony fields. A new doctor had come into the neighborhood by that time, and because he was nearest, the child's family called him in. When Dr. Carhart returned from a difficult delivery back in the mountains, he drew up at the gate to ask, in a friendly way, how the patient was getting along. It was evening then, and the accident had happened early in the morning. The father was frantic. He said the new doctor had tied a bandage tight around the leg above the wound and had gone away, warning them not to touch it. That doctor didn't like to go out after dark, but the girl was awful sick and "would Dr. Carhart please, for God's sake, come in and look at her?" So he did, with only an instant's hesitation, and then he got to work, cursing the other man softly under his breath.

He had nearly finished when the new man rushed angrily in, having been peremptorily summoned by the irate father, but Dr. Carhart spoke first. He said, "I've saved her life, and now I'll save her leg and you couldn't even do that. Now get out and don't come back."

Later he worried about his breach of ethics, but my grandmother told him not to be silly, the child was alive and what difference did it make which doctor saved her?

Then there was the time one of the berry pickers fell screaming into the strawberry bed, to die a few hours later of "acute indigestion." Dr. Carhart blamed himself. He said there was something he didn't know that could have saved her. Oh yes, he admitted acute indigestion was nearly always fatal, but there was *something*—only he couldn't put his finger on it. He found it a while later in a medical journal: removal of the vermiform appendix.

Of course there were some people (such is the perversity, or perhaps the loyalty, of human nature) who pined for old Doc Tuttle, with his long beard and his "cramped biler." They said the younger doctor had too many newfangled notions.

University to Train Doctors for Industry

The first department of industrial medicine in an American university has been established at Wayne University, Detroit.

The large number of industries in the area apparently influenced the decision to establish the new department.

Research, especially on measures for prevention of occupational diseases, instruction of graduate doctors as well as medical students, and general service to the entire community are aims of the new department.

Dr. Arthur J. Vorwald, former director of the Edward L. Trudeau Foundation in Saranac Lake, New York, will head the new department.

—*Science News Letter, May 8, 1954*

NECROLOGY

Harry M. Archer, M.D., of New York City, died on May 17 at the age of eighty-six. Dr. Archer graduated from Bellevue Hospital Medical College in 1894. He held the position of assistant to the Chair of Surgery at Bellevue Medical College for six years at the turn of the century and later taught at Cornell University Medical College. He then became chief surgeon for a life insurance firm.

Dr. Archer was well known in New York City as the medical patron saint of the fire department. For more than sixty years he volunteered his services at virtually every serious fire and won the highest honor the Fire Department can give a civilian when he was presented with the James Gordon Bennett Medal for heroism in action in 1923. Following his retirement in 1940 he devoted full time to the Fire Department and was named Second Deputy Fire Commissioner.

Alfred Bell, M.D., of Woodhaven, died on April 10 at the age of eighty. Dr. Bell graduated from Columbia University College of Physicians and Surgeons in 1895. Before his retirement he served as pathologist for the Greenpoint, St. Catherine's, and Bushwick Hospitals, in Brooklyn, and the South Nassau Communities Hospital in Oceanside.

Dan S. Bellinger, M.D., of North Tonawanda, seventy-five years old, died of a heart ailment on April 28 in DeGraff Memorial Hospital. Dr. Bellinger graduated from the University of Buffalo School of Medicine in 1915. He was a member of the Niagara Falls Academy of Medicine and was on the consulting staff of DeGraff Memorial Hospital.

Dr. Bellinger belonged to the Niagara County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Hal B. Brownell, M.D., of Buffalo and Java Center, died on April 18 at the age of seventy-nine. Dr. Brownell graduated from Bellevue Hospital Medical College in 1897. He was a member of the Buffalo Academy of Medicine.

Maurice Edward Connor, M.D., of Brooklyn, died on May 7 at the age of seventy-six at his home. Dr. Connor graduated from Bellevue Hospital Medical College in 1897 and interned at St. Catherine's Hospital where he became an attending surgeon. During World War II he served with the Selective Service Board.

Dr. Connor was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Daniel Finbarr Crowley, M.D., of New York City, died May 5 at the age of fifty-four. Dr. Crowley received his medical degree from the University of Dublin in 1922 after fighting in the Irish Revolution of 1916. He came to the United States in 1927 and became assistant attending gynecologist at the City Hospital. During World War II Dr. Crowley served with the Ninety-third Armored Field Artillery Battalion in Sicily and Italy and was awarded the Silver Star. For eighteen years he served as a medical consultant to the Bureau of Social Hygiene of the City Department of Health.

Sumner Egbert Douglas, M.D., of Adams, died on May 4 following kidney surgery in Waukegan, Illinois. He was seventy-four years old. Dr. Douglas received his medical degree from the University of Michigan Medical School in 1903. He was associate attending physician at the Mercy and House of the Good Samaritan Hospitals in Watertown. Dr. Douglas was health officer of the village of Adams and the towns of Rodman, Worth, and Lorraine.

Dr. Douglas was president of the Jefferson County Medical Society in 1910 and again in 1946. In addition, he belonged to the Medical Society of the State of New York and the American Medical Association.

John Robert Evers, M.D., formerly of North Tarrytown and Elmsford, died on April 11 in Wentworth, New Hampshire. He was sixty-five years old. Dr. Evers graduated from Fordham University Medical School in 1910. He was a Fellow of the American College of Surgeons. Before his retirement in 1947, he had been a consulting surgeon at the Tarrytown Hospital and a member of the Westchester County Medical Society and the Medical Society of the State of New York.

Samuel William Flack, M.D., of Utica, died at his home on April 15 at the age of sixty-five. Dr. Flack graduated from Long Island College Hospital School of Medicine in 1912.

Guido James Gianfranceschi, M.D., of Watertown, died of heart disease on April 12 in Veterans' Hospital in Buffalo. Dr. Gianfranceschi was born in Italy and came to this country in 1904. He graduated from the University of Buffalo School of Medicine in 1911. He was an attending physician at Mercy Hospital and an associate attending physician at the House of the Good Samaritan Hospital. During World War I, Dr. Gianfranceschi served in the United States Army Medical Corps. During World War II he served on the Selective

Service Board. Dr. Gianfranceschi was a member of the Jefferson County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Joseph Raymond Griffin, M.D., of Yonkers, died on May 13 at the age of forty-nine. He graduated from Syracuse University College of Medicine in 1930. Dr. Griffin was a member of the Yonkers Academy of Medicine. He was chief attending physician and pediatrician at St. John's Riverside Hospital. Dr. Griffin belonged to the Westchester County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Arthur J. Herzig, M.D., of New York City, died on May 6 at the age of seventy-three. Dr. Herzig graduated from Columbia University College of Physicians and Surgeons in 1912 and interned at St. Luke's Hospital. He was a Diplomate of the American Board of Otolaryngology, a member of the American Academy of Ophthalmology and Otolaryngology, and the New York Academy of Medicine.

Dr. Herzig was an attending otorhinolaryngologist at the Flower and Fifth Avenue Hospitals, an honorary consultant in otolaryngology at the Governeur Hospital, and senior consultant in otolaryngology at the Veterans Administration Hospital in Lyons, New Jersey.

Dr. Herzig belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Sidney Dattner Jacobson, M.D., of New York City, collapsed and died on May 4, while testifying in a malpractice suit in behalf of the plaintiff. He was eighty-six years old. Dr. Jacobson received his medical degree from Tulane University School of Medicine in 1890. He did graduate work in Vienna and at Guy's College, London. Dr. Jacobson was a Licentiate of the Royal College of Physicians of London, and a Member of the Royal College of Surgeons of England, 1904.

Moses Michel Kadetz, M.D., of New York City, died on May 12 at the age of sixty-seven. Dr. Kadetz was one of the first graduates of the Long Island College Hospital Medical School in 1914. He served with the American Red Cross in Kiev, Russia, in 1918 and was twice captured and imprisoned by the Bolsheviks.

Dr. Kadetz was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Robert Valory Martin, M.D., of Brooklyn and Rockville Centre, died on May 19 in Nassau Hospital at the age of forty. Dr. Martin graduated from New York Medical College in 1939. He was assistant attending orthopedic surgeon at the Flower and Fifth Avenue Hospitals, and the Metropolitan and Norwegian Hospitals.

Dr. Martin was the founder and medical director of the Nassau County Cerebral Palsy Center at Roosevelt, the first institution in the nation devoted exclusively to diagnosis and treatment of this condition. He developed several technics in the treatment of cerebral palsy, concerning himself especially with speech disorders.

He was a member of the Kings County Medical Society and the Medical Society of the State of New York.

Stanley Wilson Sayer, M.D., of Gouverneur and St. Petersburg, Florida, died on May 4 at his home in the South. He was seventy-three years old. Dr. Sayer graduated in 1902 from Syracuse University College of Medicine. He was on the consulting staff of St. Lawrence State Hospital at Ogdensburg before his retirement in 1947. Dr. Sayer was also district state health officer for Lewis, Franklin, and St. Lawrence counties, and coroner in St. Lawrence County. He was a member of the St. Lawrence County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

R. Wilson Shelley, M.D., of Buffalo, died on April 18 at the age of fifty-eight. Dr. Shelley received his medical degree from the University of Michigan Medical School in 1919. From 1921 to 1927 he was medical superintendent of Lockport Sanatorium. At the time of his death he was clinical assistant attending physician at the Buffalo General Hospital.

Dr. Shelley was a member of the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles Snyder Sherman, M.D., of Tonawanda and North Tonawanda, died in the DeGraff Memorial Hospital on April 21 at the age of forty-two. Dr. Sherman received his medical degree in 1937 from Hahnemann Medical College in Philadelphia. He was an attending physician at the DeGraff Memorial Hospital, where he served as secretary of the staff. Dr. Sherman belonged to the Niagara County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Milton Sills Lloyd, M.D., of New York City and Staten Island, died on May 18 following a cerebral hemorrhage. He was sixty years old. Dr. Lloyd received his medical degree in 1924 from McGill University, Montreal, Canada. He was a Fellow of the American College of Chest Physicians and a member of the New York Society for Thoracic Surgery.

Dr. Lloyd was attending thoracic surgeon at St. Vincent's Hospital, Staten Island; attending surgeon and bronchoscopist and director of the chest division of the Staten Island Hospital; consulting pneumonologist at the Richmond Memorial Hospital; associate attending thoracic surgeon and bronchoscopist at French Hospital; attending bronchoscopist at the Municipal Sanatorium in Otisville; consultant to the thoracic division of the United States Public Health Service Hospital in Staten Island, and consultant in thoracic diseases at the St. Francis, Port Jervis, Cornwall, and Ulster County Tuberculosis Hospitals. He was consulting peroral endoscopist at the Sea View Hospital.

Dr. Lloyd was a past president of the Richmond County Medical Society. He also belonged to the Medical Society of the State of New York and the American Medical Association.

S. Millville Skinner, M.D., of Setauket, died on May 12 at the age of fifty-six. Dr. Skinner graduated from the Long Island College Hospital School of Medicine in 1922 and interned at St. Catherine's Hospital. He was a member of the Suffolk County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

George Matthew Thompson, M.D., of Rochester, died on April 22 following a heart attack. He was eighty-two years old. Dr. Thompson received his medical degree in 1898 from the Hering School of Medicine in Chicago. He belonged to the New York State Homeopathic Society. During World War II he was on the staff of Highland Hospital and was physician for the General Motors Corporation in Rochester. Dr. Thompson retired eight years ago.

Arthur Burton Van Loon, M.D., of Albany, died on May 8 at his home at the age of eighty-five. Dr. Van Loon graduated from Albany Medical College in 1891. He was a Fellow of the American College of Surgeons, and a member of the New York State Society of Industrial Medicine and the National Gastroenterological Association.

Dr. Van Loon was a consulting surgeon at Albany Memorial Hospital at the time of his death. He served at one time as secretary of the State Board of Medical Examiners and was also secretary of the medical grievance committee of the State Board of Regents from 1929 to 1940 and committee chairman from 1941 to 1943. He had been a member of the board of directors of the Albany Memorial Hospital.

Dr. Van Loon belonged to the Albany County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Reginald Van Woert, M.D., of Ravena, died on May 6 at the age of fifty-seven. Dr. Van Woert graduated from Albany Medical College in 1920. He was formerly health officer for the Village of Ravena. Dr. Van Woert belonged to the Albany County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Ernst Waldstein, M.D., of New York City, died on May 15 at the age of seventy-five. Dr. Waldstein received his medical degree from the Prague University Medical School in 1904 and practiced in Europe for many years before coming to this country. He was a Diplomate of the American Board of Ophthalmology and a member of the New York Society for Clinical Ophthalmology. Dr. Waldstein was retired but retained a post as honorary surgeon at the New York Eye and Ear Infirmary. He belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Boris Whynman, M.D., of New York City, died on February 19 at the age of eighty-four. He was a graduate of University and Bellevue Hospital Medical School in 1899. Dr. Whynman belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Doctors in Armed Forces

Results of the first year's study of physicians leaving active military service discloses that 29 per cent felt there was overstaffing, 20 per cent understaffing, and 51 per cent found staffing adequate. Of those medical men assigned to domestic duty, 53.4 per cent were engaged in treating military personnel, 28.3 per cent in treating military dependents, and 18.3 per cent in "other," while of those assigned overseas, 51.8 per cent treated military personnel, 23.8 per cent dependents of military personnel, and 24.4 percent "other." As for the type of medical care required by other than military personnel, the Army and Navy needed outpatient care while the Air Force used obstetrics and gynecology.

Medical soldiers queried on how their local medical associations might better serve them while in service replied that they wanted more information via a newsletter, personal visits by civilian doctors to evaluate grievances, invitations to civilian medical meetings, help in obtaining posts after discharge, and more specialists for clinical conferences within the service.—*A.M.A. News Notes, April, 1954*

THE MONTH IN WASHINGTON

At the request of the Defense Department, Congress is considering a bill to expand and make more uniform the medical care program for civilian dependents of military personnel. It could have significant impact on the practice of medicine and on medical economics.

The legislation developed out of the Defense Department's Moulton Commission report of a year ago. In the intervening months the department's legislative planners called in representatives of the American Medical Association and other professional groups for advice. But the bill finally presented to Congress is evidence that not all differences of opinion were compromised. While in many respects the measure is in line with the policy of A.M.A. on dependent care, at least one basic conflict remains: The department's bill states that dependents should receive private medical care only when military facilities are unavailable or inadequate. The A.M.A.'s policy, adopted after long study of the problem, is that dependents should be cared for in military hospitals and by uniformed physicians only when civilian care is inadequate or unavailable.

There is almost complete agreement that the present patchwork dependent medical care program should be changed to make benefits uniform geographically and within the services and to spell out the benefits in law. The issue is whether the military medical services should care for all qualified civilian dependents or whether dependents should, like the rest of the population, get their medical care from civilian physicians and hospitals.

Under the bill medical care furnished by or underwritten by the Federal government would be limited to "diagnosis, acute medical and surgical conditions, contagious diseases, immunization, and maternity and infant care." Dental care would be allowed only in emergencies or as an adjunct to medical care. These restrictions would be waived overseas and at remote stations in the United States. The definition of "dependents" would not extend beyond parents and parents-in-law, and these relatives would have to receive at least half their support from the military member to qualify.

The Secretary of Defense would decide what charges, if any, to levy against dependents treated at military facilities. When treated privately, the dependents would pay the first $10 cost of any illness, plus not more than 10 per cent of the total cost. The Secretary could make use of voluntary health insurance for dependents if this system were found to be more economical.

The Senate Armed Services Committee was slow to take up the dependent care bill because of a heavy schedule of other hearings. Nor did it make fast progress in the House. There the introduction of the bill was delayed when Chairman Dewey Short (R., Mo.) called on Defense Department to furnish him with detailed information on what the new medical care program would cost.

By mid-May, when Congress had about concluded hearings on all major administration health bills, a new factor was introduced. Chairman Wolverton of the House Interstate and Foreign Commerce Committee called hearings on his own bill for Federal guarantee of private loans to health facilities. This was not part of the original Eisenhower health program, but there were some indications that the administration might get behind it.

As originally drawn, the bill would virtually exclude all clinics and hospitals except those operated in conjunction with prepaid insurance plans. During the hearings Mr. Wolverton indicated he would be willing to drop this restriction. If this were done, the law then would offer benefits to all—fee-for-service physicians and groups as well as "closed panels."

During this period some sentiment developed to combine the loan guarantee bill with the reinsurance bill, which wasn't making much progress on its own. The result was a period of confusion and uncertainty, with no clear indication of what either the committee or the administration really wanted.

A few other medically important bills were advancing on schedule. The House Ways and Means Committee gave every indication of reporting out a bill to require all employers (physicians included) to participate in the Federal-state unemployment insurance program. As usual, moving faster than the Senate, the House had passed a bill to give state health officers more control over Federal grants for public health work. The House also was nearing a vote on extension of the social security program, with no suggestion that physicians and other self-employed groups who don't want coverage would be exempted. The House-approved Hill-Burton expansion bill was waiting action in the Senate.

Prepared by the Washington Office of the American Medical Association, Washington, D.C.

CORRESPONDENCE

Discrimination in Selection of Medical School Candidates

To the Editor:

In your issue of March 15, Dr. Currier McEwen states in his article, "Medical Education Today," that "it is my honest opinion that discrimination in the sense in which these aggrieved reports use it plays very little role in the selection of medical students in this country."

Dr. McEwen undertook to discuss, in an otherwise very fine and factual lecture, the problem of discrimination as a policy of selecting medical school candidates. He is either unfamiliar with the problem or is unwilling to face up to it realistically. Despite Dr. McEwen's statement, I am prepared to say and to prove that discrimination does play a very important role in the selection of candidates to medical schools, affecting two racial groups in particular, Negroes and Jews.

Discrimination against persons of Jewish origin follows more or less one important course—the quota system. Many of the medical schools who feel compelled to accept them on this basis do not actually want them. Not only is the quota system practiced by those in control of the medical schools, but many medical schools formerly informed the colleges from which they receive Jewish and Negro premedical students that they would accept just so many. This policy was well known and practiced throughout the middle west in the late twenties and thirties when I attended college. This policy prevails generally throughout America, although the authorities are not so brazen today in their pronouncements as they were in the days when I attended medical school.

Discrimination as a studied policy is the order of the day as far as Negroes are concerned. In the states south of the Mason-Dixon line and the District of Columbia, Negroes are not accepted in most of the medical schools and were accepted in none until forced to do so by the Supreme Court in 1950. In the sections of the country where Negroes are accepted, the policy followed by those in power usually takes one of three courses. In some schools that admitted Negroes, they were subjected to a quota system. In others they were admitted on a patronizing basis. Still a few other medical schools admitted only those who agreed to leave and attend a Negro medical school after two years.

To be sure, Jews and Negroes who were finally admitted were selected on the same elaborate personality interviews as other students were selected. Dr. McEwen would have done a great service to medical education if he had discussed this problem forthrightly. Instead, he chose to berate and belittle that small band of men and women who are trying to make the democratic process work in the selection of candidates to our medical schools. Dr. McEwen let pass a golden opportunity to discuss this problem openly and forthrightly and at the same time to show that today there is an aggressive movement on foot sponsored by socially minded medical men to remove the stigma of discrimination from our great American institutions.

It is well even for doctors to remember that we cannot cure a patient until we first determine the cause of his illness. We cannot cure a man suffering from cancer by denying the existence of the malignancy. So, also, we cannot break down the barriers of discrimination practiced even today by far too many of our medical schools, until we first admit that there still exists discrimination based on the ethnic and religious background of the applicant.

W. Adrian Freeman, M.D., F.A.C.S.

128 West 138th Street
New York 30, New York

Comment by Dr. McEwen

To the Editor:

Concerning Dr. Freeman's letter in which he commented on my article in the March 15 issue of the Journal, I, of course, knew that any comment I might make regarding unfair discrimination in the selection of medical students would be questioned by some readers. I think I understand fully the point of view which Dr. Freeman expressed, and certainly the millenium has not yet arrived, but I would stand by the general statement I made in my article.

Currier McEwen, M.D., *Dean*

New York University College of Medicine
477 First Avenue
New York 16, New York

MINUTES OF THE COUNCIL

The following is a summary of the minutes of the April, 1954, meeting of the Council of the Medical Society of the State of New York.

The Council met April 8, 1954, from 9:15 A.M. to 1 P.M. at the Manhattan Club, Madison Square, New York City. Dr. Andrew A. Eggston, president presided.

Secretary's Report

Executive Committee

Correspondence.—Dr. Anderton reported:

1. "The Executive Committee yesterday considered several communications. The first two came together regarding the transfer of Dr. L. Miller Harris and Dr. Walter C. Levy to Albany County. The matter of their transfers was difficult to decide on account of the new year. Both requested transfer in December, and it was not voted until January. The Executive Committee recommends the transfers of Dr. L. Miller Harris and Dr. Walter C. Levy to Albany County be approved and that their payment of 1954 dues to Albany County be approved."

It *was voted* to approve the recommendations.

2. "A letter from the secretary of the Monroe County Medical Society requesting that Dr. Lloyd H. Clark be elected to retired membership in May, although he will not reach seventy years of age until June 13, 1954. The Executive Committee felt that such election would be contrary to the Bylaws and recommended that the Secretary be instructed by the Council to write Dr. Schultz that the request could not be granted."

It *was so voted.*

3. "Three letters of thanks for gifts from the State Society: one from the World Medical Association, United States Committee, Inc., accompanied by a certificate from Dr. Louis H. Bauer to the effect that our Society is a founder corporate member of the World Medical Association; one from the New York State Society for Medical Research; and another from the National Society for Medical Research.

4. "Letter from Mr. Royal W. Ryan, executive vice-president of the New York City Visitors and Convention Bureau, requesting that our Society invite the American Medical Association to hold its annual convention in 1957 in New York City. After discussion the Executive Committee felt that 1957 was probably a logical year for the American Medical Association to go to the Pacific Coast and that also there was a possibility that the coliseum would not be ready by June, 1957. They, therefore, recommend that the Council vote to invite the American Medical Association to New York City in 1958 and request that our delegates to the American Medical Association so proceed."

It *was so voted.*

Dues Remissions.—Upon recommendation of the Executive Committee, the Council voted to remit 1954 annual dues of 21 members because of illness; 1953 dues of eight members and 1954 dues of 72 members because of service with the armed forces; 1953 dues of one member on account of financial hardship; and to rescind a previous remission of 1954 dues of one member who was released from service in the fall of 1953. The Council also voted to request remission of American Medical Association dues of seven members for 1953 and of 70 members for 1954. It was also voted to request exemption from further payments of American Medical Association dues for ten members who are more than seventy years of age.

General

Dr. Anderton reported: "Dr. Alexander N. Letko, 1805 Central Avenue, Albany, lives near the Schenectady County border, and his hospital affiliations are in Schenectady County. He requests permission from the Council to apply for membership in the Medical Society of the County of Schenectady. The president of the Medical Society of the County of Albany and the secretary of the Medical Society of the County of Schenectady have expressed approval. Your secretary recommends that the Council vote this, in accordance with Chapter XIV, Section 1 (a), of the Bylaws."

It *was voted* to approve the recommendation.

"Under the 1952 law requiring hospital residents either to be licensed or to be eligible to take licensing examinations, the New York State Department of Education has signified that it will issue a certificate to a resident upon presentation of 'a petition under oath showing that he meets all the qualifications specified' for admission to the medical licensing examinations.

"On March 22 your Secretary attended, with Dr. Gerald D. Dorman, a conference at the Medical Society of the County of New York, under the auspices of Mr. Spiegel of the Moreland Act Commission investigating the cost of workmen's compensation insurance. He plans to attend a meeting of the Public Medical Care Subcommittee of the Economics Committee, April 1; a meeting of the Public Health and Education Committee, April 2; and on April 7 meetings of the Publication, Office Administration and Policies, and Executive Committees, and the Malpractice Insurance and Defense Board."

It *was voted* to accept the Secretary's report.

Dr. Anderton continued: "Mr. President, the Executive Committee felt that the attention of the Council should be drawn to two proposed amendments to the Bylaws. In essence these two proposed amendments would have the preparing of the budget by the Trustees instead of by the Council.

These proposed amendments were discussed. No action was taken, but it was felt that the question deserved the deepest thought of the House of Delegates and that each one should make up his mind as to what he thinks is the best policy.

The Treasurer's report was accepted.

Reports of Committees

Blood Banks Commission.—Dr. Dan Mellen, chairman, requested Dr. J. Stanley Kenney, president of the Blood Banks Association, to report. Dr. Kenney stated that the blood exchange and blood assurance programs have been started in Genesee County and that the pilot project was progressing actively. More than 200 donors had been procured, and the bleeding was planned to continue for twelve weeks from its inception on March 26, when a shipment of blood had been sent from St. Jerome Hospital and Genesee Memorial Hospital, Batavia, to St. Vincent's Hospital in New York City. Other banks which have agreed to receive blood are the Bender Laboratory Blood Bank in Albany, the Blood Bank of the New York University-Bellevue Medical Center in New York City, the Broome County Blood Center in Binghamton, and the Roswell Park Memorial Institute in Buffalo.

It was hoped to have the clearing house in operation on Monday, April 19, at 9 A.M., on a five-day weekly basis, covered by a telephone answering service, which will take calls during the evenings and week ends. Meetings were held in New York and Buffalo to bring the clearing house to the attention of blood bank directors and, through them, of hospital trustees and boards. "Terms of Agreement" outlining the responsibilities of participating banks and of the association were signed by the Bender Laboratory Blood Bank in Albany, the Broome County Blood Center in Binghamton, the Genesee Memorial Hospital in Batavia, the Nyack Hospital Blood Bank in Nyack, and five banks in New York City (the Blood Bank of New York University-Bellevue Medical Center, the Blood Transfusion Association, the Lenox Hill Hospital Blood Bank, the Montefiore Hospital Blood Bank, and St. Vincent's Hospital Blood Bank).

The successful opening of the pilot program in Genesee County showed an encouraging response from industrial organizations and received considerable newspaper publicity. It resulted in plans for a permanent blood procurement and exchange program in Genesee County and a similar program in New York City, using the New York University-Bellevue Medical Center Blook Bank to start the program. Such projects are also planned for the Hudson valley, the Catskill region, the area around Binghamton, and the northern part of the State. Interest in the program has been expressed by the director of the blood bank at Roswell Park Memorial Institute.

Dr. Kenney called attention to an article on the Blood Banks Association in the April 15, 1954, issue of the NEW YORK STATE JOURNAL OF MEDICINE and reminded Council members that the scientific program of the association would be presented on May 13, during the annual meeting of the Society. He stated that, at the request of the American Association of Blood Banks, an article had been prepared for publication in their administrative manual in August. It is expected that this will encourage the formation of similar associations in other states.

Economics.—Dr. Renato J. Azzari, chairman, presented the following report of the Bureau of Medical Care Insurance, Mr. George P. Farrell, director:

"March 10, 1954—Your director addressed the Dutchess County Medical Society at Poughkeepsie on prepaid voluntary medical care problems.

"March 11, 1954—Your director attended the annual meeting of United Medical Service at the Commodore Hotel, New York City.

"The Bureau will soon mail to members of the Council its Eighth Annual Progress Report on the New York State Blue Shield Plans."

It *was voted* to adopt the report.

(The quarterly report is attached to the office copy of these minutes.)

Legislation.—Dr. James Greenough, chairman, stated: "Just a short report for information. One bill, out of ten mandated by the House, was passed, the proration bill. It has been signed by Governor Dewey and made law the proration of medical fees in medical expense indemnity plans. On the other side, most of the bills against which we took a stand did not pass. I don't think this was due to our action completely. We had a peculiar legislature. Not only was it an election year, but also there were political difficulties. Very few bills got through. This worked to our disadvantage in regard to the bills which we proposed. It worked to our advantage in regard to the bills to which we objected."

Medical Licensure and Medical Service.—Dr. Leo E. Gibson, chairman, reported: "Some time ago this committee was requested to consider a candidate for the President's Award to the physician who had done the most for rehabilitation of the physically handicapped. It is entitled 'The President's Committee on National Employ the Physically Handicapped Week Award.' Perhaps I should read the brochure describing that committee.

'On January 11, 1952, the Executive Committee of The President's Committee unanimously voted to establish a "Physician's Award" to be given to a physician "for an outstanding contribution to the employment welfare of the physically handicapped of our country."

'Subsequently, The President's Committee chairman discussed the "Physician's Award" with the President of the United States. Ex-president Truman approved the plan and agreed to sign the illuminated scroll which is to be presented with appropriate ceremonies each year.

'Chairman of Governors' Committees on Employment of the Physically Handicapped and presidents of the respective medical societies in the several states and territories have been asked to cooperate in this undertaking, aimed at increasing the interest of the medical profession in the employment of the handicapped and in establishing closer liaison between Governors' Committees and their respective medical societies. . .

'It is our hope that this joint cooperative effort will increase employment opportunities for handicapped workers and reward achievement in a signal manner.

'There has been established an annual award to a physician for an outstanding contribution to the employment welfare of the physically handicapped of our country. This award will be given by The President's Committee, on the recommendation of the Medical Committee and with the approval of the Executive Committee.

'The "Physician's Award" will be in the form of an illuminated parchment scroll, appropriately lettered and signed by the President of the United States and the chairman of The President's Committee. The actual design will be approved by the President and the chairman prior to final execution of the scroll.

'The "Physician's Award" will be presented with appropriate ceremonies at some national gathering at which other physicians are present for, in this manner, additional attention will be called to the importance of the national program.

'In order to establish an orderly system of making such awards, the following rules have been established:

'1. Each Governor's Committee will be requested to name one outstanding physician each year to receive the Citation for Outstanding Service of The President's Committee, providing the qualifications for the citation are present in the physician so named. The Guide for Nominations for Citations for Outstanding Service shall establish the qualifications, except that in addition, for this purpose, the person named shall be a physician. There is nothing in this program which would prohibit a state from naming more than one physician to receive the abovenamed citation.

'2. The Governor's Committee shall request the state medical society to recommend an outstanding physician to receive this citation. It may be necessary for the respective state medical societies to set up a special committee to consider nominations before making one or more recommendations for such citation or citations.

'3. As recommendations are received from the state committees, the signed citations will be forwarded to the state committee by The President's Committee for appropriate presentation, preferably with ceremonies at a state or county medical society meeting.'

"In 1953 Dr. Frank Hammond Krusen, prominent specialist at the Mayo Clinic, Rochester, Minnesota, was named to receive the second annual Physician's Award; and the year before, 1952, the first Physician's Award was won by Dr. Henry M. Kessler, orthopedic surgeon and medical director of the Kessler Institute for Rehabilitation, West Orange, New Jersey.

"I suppose that it is within the province of this body to decide first whether they wish to participate in the award and then to choose a physician as a candidate for that award.

"Assuming that we so decide, which is the recommendation of your committee, the committee with the aid of several other members of the State Society, including Dr. Kaliski, have chosen Dr. George G. Deaver of New York City."

After summarizing Dr. Deaver's curriculum vitae and describing some of his achievements, Dr. Gibson continued: "Your committee, Mr. President, has collected much material in regard to this Committee, The President's Committee, and the Governor's Committee. The personnel of the Governor's Committee is contained on the first page of this 1953 report, the Governor's Committee on Employment of the Physically Handicapped.

"Your committee recommends Dr. Deaver as the candidate for this award from New York State."

It *was voted* that the Society participate in the award and choose a physician as a candidate.

It *was voted* that Dr. George G. Deaver be recommended as the candidate for this award from New York State.

Rural Medical Service Subcommittee.—Dr. Denver M. Vickers, chairman, reported: "Two weeks ago I attended a meeting of the Community Health Council in Ithaca. Our Past-President, Dr. Carlton Wertz, is president; Dr. Curphey is on the committee. It is a committee of doctors and laymen, and the idea is community health councils to get doctors and laymen together to talk around a table to learn community needs in health matters.

"The meeting was held at Cornell during their Home and Farm Week, when they invite many graduates and potential students. There were many people, young and old. One day was devoted to health matters. It was amazing to me, the interest that some of these laymen took in the whole subject. One object of this State Health Council is to encourage communities to form health councils. One group brought a panel and told how they obtained a doctor. They spoke nicely of Dr. Anderton visiting their community and giving his advice. They found a house for the doctor and conferred with the doctors in the vicinity to be sure they would cooperate.

"Another community built a small hospital. They brought a panel to tell the rest of the people, laymen mostly, how to secure a hospital. Perhaps a doctor does not need a hospital, but the community might need a new water supply. In short, the matter of health seems to have infinite angles and approaches.

"Journals, magazines, and papers have bemoaned for the last decade the passing of the family doctor, the father confessor of the whole community—rest his bones in peace—but it seems to me that this approach is not only feasible in rural but also in urban communities. It gives a wonderful spot for public relations if we can sit around a table with other individuals, the social workers, pillars of the community, bank directors, and others, to decide what each community needs, then decide how to secure it.

"I would recommend to the Finance Committee and the Board of Trustees that the budgetary items necessary to encourage this Community Health Council be continued."

Office Administration and Policies.—Dr. John J. Masterson, chairman, reported that various personnel matters were approved at the meeting held April 7.

It *was voted* to accept the report.

Publication.—Dr. Masterson, chairman, reported: "At the meeting of the Publication Committee on April 7, 1954, there was general discussion of an article by Dr. Joseph Eller which appeared in the JOURNAL and which is to be used for a press release.

"It was decided to establish a policy regarding press releases in connection with the JOURNAL. Dr. Eller's article is entitled, 'Removal of Pitted Acne Scars by Surgical Planing.' It was the sense of the committee that a brief release on this article be given to the press, because we feel that it is of public value. The same thing is being done by the American Medical Association regarding articles that have public relations value.

"The committee approved the plan of obtaining clearance of such releases from the authors of scientific articles and of notifying the author's county medical society prior to publication. In notifying county societies it was decided that the following statement be included: '(1) only genuinely newsworthy items, of interest to the laity, be chosen for publicity; (2) only nonanxiety-producing material be used, so as to avoid charges of sensationalism; (3) every thought be given to the tendency the public seems to have toward self-diagnosis and self-medication; and (4) the author's approval be secured before release.'

"It was decided to request that Dr. Saul Jarcho be made a member of the Subcommittee on History.

"It was decided to authorize the appearance occasionally in the JOURNAL of a special Selected Reprints department.

"It was moved, seconded, and passed to write to Dr. Austin Smith for information concerning *Medical Abstracts* magazine's request for approval to abstract from the JOURNAL.

"The Advertising Department requested 2,500 reprints of the *Journal of the American Medical Association* article on the Medical Society of the State of New York. It was moved, seconded, and passed to obtain information regarding the use to which the reprints will be put and the cost of obtaining them.

"It was decided to request the president to appoint Dr. George Lewis associate editor in dermatology.

"It was decided to recommend to the president-elect that the present Associate Editorial Board be reappointed for the new year.

"A request from Dr. Charles F. McCarty, director of the Medical Society of the County of Kings, was read, requesting that the past hospital appointments of doctors no longer actively connected with hospitals be printed in the *Directory*. I might say that this was a request sent to him by a member of the Kings County Society. It was the sense of the meeting that the request be denied. It was suggested that Dr. Anderton write to Dr. McCarty explaining that the request was contrary to the policy of the Committee.

"It was the sense of the meeting also to deny the request of Dr. McCarty that appointments of doctors holding full-time executive positions be listed in the *Directory*.

"It was decided to approve the request of the New York Diabetes Association, Inc., for biographic listing in the *Directory*.

"It was the decision of the meeting to approve a change in the listing of the North-Western Dispensary as follows: 'North-Western Dispensary—temporarily closed pending removal.' A request for this came from the North-Western Dispensary because their property has been taken over for some public purpose, and they have not secured new quarters.

"Since the Psychoanalytic Clinic of Columbia University is a teaching clinic and part of the Psychiatry Department, it was decided not to list the clinic separately in the *Directory*. This was approved by Dean Rappleye.

"It was the sense of the meeting that a notice be placed in the JOURNAL to the effect that the State Society maintains a placement bureau and that Dr. W. P. Anderton should be contacted for any information desired.

"It was decided to use the symbol 'S' after the names of school doctors in the *Directory*.

"We decided to deny the request of the American Academy of Child Psychiatry for biographic listing in the *Directory*, because the Academy members in New York State are less than the minimum number of 50 required for listing."

It *was voted* that the report be adopted.

Public Health and Education.—Dr. Theodore J. Curphey, chairman, introduced Dr. Larimore and stated: "Just to lay a little of the background for Dr. Larimore's presence this morning, we had a meeting in Albany last Friday to discuss the polio vaccine, the gamma globulin program, and the proposed admendment to the Hill-Burton Act.

"So far as the polio vaccine goes, Dr. Larimore, with Dr. Hilleboe and Dr. Albright, from the Health Department, briefed the members of the Public Health and Education Committee as to the situation at that time. (I must remind you that preceded Walter Winchell's telecast Sunday night.) On the strength of what we heard, and in the light of some justifiable doubt in the minds of certain of the members of the Council last month, the Public Health and Education Committee invited Dr. Hilleboe or his representative to come to the Council this morning. Dr. Hilleboe has sent Dr. Larimore, who has been much closer to the problem than anyone else in the State Health Department."

Dr. Larimore gave a detailed explanation as to what had been accomplished to make polio vaccine safe. He ended his talk by stating:

"In summary, we can assure you that every possible safeguard has been taken to assure the safety of the vaccine, and Dr. Hilleboe, who was unable to be here this morning because he has to leave this afternoon for Cincinnati, asked me to say to you that it would be most helpful to the successful conduct of the free trials in New York State, to the practicing physicians, and to the parents of children concerned, if the Council would reaffirm the action it took at the last meeting, so that we might jointly reassure physicians, who are being bombarded with questions, that every possible step has been taken to verify the safety of the vaccine so that they, in turn, may reassure their patients."

> After discussion, it *was voted* that the Council of the Medical Society of the State of New York reiterate its stand and confirm its approval of the field trial for poliomyelitis vaccine in the State for 1954.

Dr. Larimore was thanked for his presentation to the Council.

Dr. Curphey stated: "At the request of the State Health Department, we have been asked to appoint an advisory committee on polio prevention. For the moment I will request that you appoint Dr. Givan and Dr. Wyatt to act as an advisory committee and, later on, if it is possible to get Dr. Rivers, that he be included."

> It *was voted* that the president be empowered to appoint this committee to act in consultation with or advisory to the State Health Department in connection with this procedure.

Dr. Curphey continued: "I should also like to request the appointment of Dr. Herman Wirth of the State Health Department, who is now the director of the Geriatrics and Chronic Disease Control Program of the Division of Medical Services, to serve as an adviser to the Subcommittee on Geriatrics of which Dr. Zeman is chairman."

> It *was so voted.*

Dr. Curphey stated: "There is just one more matter. Dr. Bourke, the secretary of the Hospital Survey and Planning Commission, wanted to have a meeting with some of the men in the Society in respect to the proposed amendment of the Hill-Burton Program. I suggested that it would be better to call a full meeting of the Council Committee on Public Health and Education with Dr. Hilleboe's group at the same time we discussed the polio vaccine. Dr. Bourke was present, and Dr. Post, Dr. Anderton, Dr. Wyatt, and representatives from the Health Department.

"The new legislation covers the establishment of chronic disease units, nursing homes, diagnostic centers, and rehabilitation centers, with an appropriation of $150,000 from the Federal government.

"The broad plan is to center these services around hospitals, the voluntary hospitals, as focal points. I think all of us are cognizant of the gravity of such a move, and it is certainly not the intention of the Council Committee to make any recommendations whatever to Dr. Bourke's group at this time.

"He pointed out that there were seven regional hospital councils in the State and that doctors sit on them. Policies are developed at the regional level, and to date they have not been vetoed by the State commission as a whole. In other words, local representation has received full approval of the State organization.

"Dr. Bourke pointed out it was important to have the doctors attend the meetings of these regional hospital councils.

"I move that a committee be appointed, composed of the medical men on the various regional hospital councils of the State in conjunction with the chairman of the Planning Committee and the chairman of the Public Health and Education Committee, for the purpose of studying the amendment to the Hill-Burton Act."

> It *was so voted.*

Dr. Curphey moved the adoption of his report, including the portion distributed in the agenda as follows:

> "*Activities of Chairman:* March 19—attendance at scientific session of the New York Heart Assembly, Syracuse. (Outlined postgraduate educational opportunities sponsored by State Society and Department of Health.) April 2—joint meeting of Council Committee with representatives of State Health Department, at Albany.
>
> "*Postgraduate Education:* The following meetings have been arranged since the last report to the Council: Jefferson County—March 16, April 1; Cortland County—March 22, April 26; Orange County—March 23; Mohawk Valley Gynecologic and Obstetric Society—March 23; Chenango County—March 24 (Syracuse); Chemung County Academy of General Practice—March 31, April 28; Sullivan County—March 31, April 7, April 14, April 21, April 28, May 5; Montgomery County—April 13; Ontario County—April 13; Rockland County—April 13; Fulton County—April 15; Cayuga County (Teaching Day)—April 5; Geneva Academy—April 19; Binghamton City Hospital—April 26; Albany County—April 28."

> The report *was adopted.*

Public Relations.—Dr. Floyd S. Winslow, chairman, presented the following report: "During March your committee and the Public and Professional Relations Bureau began preparations for the annual meeting.

"Among the projects was a news release to editors of county medical society bulletins advising them of the highlights of the convention and requesting an announcement be published in their bulletins. Letters also were mailed to newspapermen inviting them to attend the meeting. The deans of medical schools were asked to invite their students to be present. Another invitation was mailed to hospital superintendents asking them to make the meeting known to interns and members of their staffs.

"Although previous issues of the *Newsletter* carried stories about the annual convention, the April issue was dedicated in great part to the May meeting. The third page was given over to a 'calendar of events.'

"Much time was spent in developing the guide of cooperation which is under the supervision of the Subcommittee on Codes of Cooperation, headed by Dr. John C. McClintock. Four meetings were held to discuss this guide. On the morning of March 12, the subcommittee met with members of the radio and television networks. That afternoon a meeting was held with magazine writers. The following day, the committee sat down with three men appointed by the New York State Society of Newspaper Editors. Mr. Miebach was present at these conferences, the result of which is that another revision of the guide of cooperation has been prepared. It incorporates suggestions from the several conferences.

"The transcription of the minutes of the conference held February 12 by the subcommittee on the Guide of Cooperation has been completed.

"Your committee and the bureau worked with the State Health Department and Dr. Curphey's Committee on Public Health and Education in regard to the polio vaccine field trial to be conducted this spring. On March 15 Mr. Miebach went to Albany for a meeting called by the State Health Department to prepare for the field trial. One result was the preparation of an article by the State Health Department for the *Newsletter*. After approval by Dr. Curphey, it was given front page prominence in the April issue.

"The bureau also cooperated with the Council Committee on Legislation, when it prepared a one-column summary of the activities of the committee and the State Medical Society's legislation program in the 1954 State Legislature. This article appeared in the April issue of the *Newsletter*, after having been approved by both Dr. Greenough and Dr. Smith.

"News releases concerning postgraduate medical lectures were mailed to newspapers in the following counties: Albany, Broome, Chemung, Orange, Steuben, Suffolk, Sullivan, and Wayne.

"On March 25, Mr. Miebach attended the New York State Rural Health Conference in Ithaca.

"The field men, Mr. Messinger, Mr. Tracey, and Mr. Walsh, during the month, concentrated on the survey of public relations activities being conducted by county medical societies.

"A new edition of 'You and the Medical Society of the State of New York,' which describes the activities of our Society, is now on the press.

"As reported elsewhere, the bureau assisted the Woman's Auxiliary in many activities, including the planning and preparation of materials used by the Auxiliary's president in connection with the convention.

"The speakers' service aided several organizations to secure speakers from county medical societies and distributed a letter urging county public relations chairmen to distribute a leaflet describing their speakers' bureau. A representative of the bureau spoke on 'Public Relations as It Should be Practiced in the Doctor's Office' at the first meeting of a training class for medical office personnel conducted by the Broome County Medical Society in Binghamton."

It *was voted* to approve the report.

Veterans Administration, Liaison with.—Dr. Herbert H. Bauckus, chairman, reported: "Yesterday morning we had a meeting of the Liaison Committee and the Directors of Veterans' Medical Service Plan. We discussed many things including the American Medical Association Washington Letter of March 26, which contains a statement of the United States House Veterans Affairs Committee, recommending that there be no change in procedure on hospital admissions until all concerned have had an opportunity to observe the workings of Veterans Administration's new questionnaire on admissions.

"The American Medical Association's position is that, although the present Veterans Administration policy is basically unsound, now is not the time to propose new legislation."

In Dr. Bauckus' opinion, the fact that the admission application form, 10-P-10, was changed by the Veterans Administration, without any necessity for Congressional action, indicates that other policies unfavorably regarded by physicians may be altered without recourse to legislation.

He stated that construction of 16 hospitals was eliminated from the Veterans Administration building program by presidential order in 1949; that Congressional authorization for the construction of these hospitals expired in June, 1952; and that neither the Administration nor Congress has taken steps to revive the projects, although about $6,800,000 has been spent for the acquisition of sites and for design and related technical services. The maximum capacity of Veterans Administration hospitals under present legislation will be 128,000.

Dr. Bauckus reported the committee had authorized him to present information pertinent to this Society's position with respect to the American Medical Association resolution and the opposition thereto of the veterans' service organizations. In addition to this information he called attention to an independent report on the subject prepared by Dr. Frederick S. Wetherell.

Dr. Bauckus also reported the committee's recommendation to the House of Delegates that this Society's delegates to the American Medical Association be instructed to oppose the revised "Tennessee Resolution" regarding medical and hospital care insurance which it was expected will be introduced in the American Medical Association House of Delegates in June, 1954.

He stated: "I, therefore, have two recommendations to present to you: One is the question of preparing data and information for the House of Delegates, and the second relating to the Tennessee Plan."

After discussion it *was voted* that no action be taken on the Tennessee Plan at present, that it be left to the House of Delegates to decide.

It *was voted* to approve the report as amended.

Workmen's Compensation.—Dr. Gerald D. Dorman, chairman, presented the following report: "On March 19 your Workmen's Compensation Bureau's director, Dr. Kaliski, sent a letter to Dr. Curphey, chairman of the Public Health and Education Committee, regarding the field of rehabilitation. It was felt that this subject is of wider interest in medicine than in the realm of workmen's compensation and that the subject should be given consideration by a larger group.

"On March 13, 1954, your chairman and director had luncheon with Mr. Archie O. Dawson, Moreland Act Commissioner, and Mr. M. L. Spiegel of his staff. One of the items discussed was the possibility of setting up specialists' panels to act as advisors to referees in workmen's compensation cases.

"Your chairman and Dr. W. P. Anderton, secretary, were invited to participate in a meeting between Mr. M. L. Spiegel of the Moreland Commission and officials of the Medical Society of the County of New York on March 23."

Dr. Dorman added: "Dr. George Wheatley of the Subcommittee on Cardiology brought in a resolution which he hopes to have Dr. Curphey submit to our House on the employment of cardiacs in industry.

"Chairman Mary Donlon advised me that she is planning by directive to increase the payment for the attendance of a doctor at a hearing from $10 to $15 and $10 for each additional testimony the same session, as we have frequently requested.

"She also tells me she is going to insist that where an insurance carrier pays more than $25 to a specialist for testimony, the doctor representing the patient shall receive an equal fee. That means that the referee at the trial will ask the man representing the insurance company as an expert what they are paying him, and the referee will then make a similar allowance to the specialist representing the patient if he has equal standing or an equal compensation board rating. Dr. Kaliski feels that this is not always fair because very often the insurance company will send its physician representative a thick file which may require two or three days to go over, going back several years. It is not a question of the expert merely appearing and reporting or testifying during that hearing, but he is also being paid for time that he has been devoting to it outside in some cases. Miss Mary Donlon does not feel that that is necessarily so. She feels that it will help to even up the matter if the patient's doctor receives an equal payment.

"There has also been the question as to whether the insurance companies might cut down to $25 the total that they would pay to any consultant they called, because they don't want to have to pay double."

It *was voted* to adopt the report as a whole.

New Business

Dr. Eggston.—Dr. Mott stated: "This is the last meeting of the present Council, and I think it would be appropriate for the Council to go on record as expressing its appreciation of the able and efficient manner in which Dr. Eggston has conducted his office in the last year. As I have not the privilege of introducing a motion, I will ask Dr. Reuling to sponsor it for me."

Dr. Reuling stated he would be very happy to do so.

The motion was seconded and *was carried* by acclamation, the members arising during their applause.

Dr. Eggston responded: "I thank you all very deeply. I have always realized the responsibility that rested with me, and I have certainly conscientiously tried to do my best. I could not have done anything, however, without the staff, Dr. Anderton, and all of you members of the Council and chairmen of committees and members of committees. To all of you I owe a deep debt of gratitude. It has been a pleasure, a little journey that I shall never forget. It has been educational to me. It has been a wonderful training. I wish every medical student or every doctor could be imbued and indoctrinated into the good that they get out of participating in organized medicine. A lot of them sit by and take for granted the things that are done for them. They sit back and complain if things are not done as they think they should be done, without even raising an arm or a hand or a pen to express themselves. So without any further words I know you feel that I am deeply grateful for everything and for all of the cooperation that I have had." (*Applause*)

Sonnet by Editorial Assistants

We suffer new diseases every issue.
Agranulocytosis was a good one . . .
And that dissecting aneurysm—fun!
Until we learned of ulcerated tissue.

Just now we all have hydrops at the umbo.
It doesn't sound too painful, and we think
It might be worn, perhaps—with trim of mink?
Or could be something downed when bending elbow.

No matter what it is, we like our hydrops
Straight, so take away that useless umbo.
We wonder if it's not a safe placebo
Or something used in toothpaste, gum,
  or eyedrops?

Enough of this guesswork, toss Dorland's to limbo
Let's dash out for hydrops at the dirty old Umbo!

BOOKS RECEIVED

(The following books were received during the month of April, 1954)

French's Index of Differential Diagnosis. Edited by Arthur H. Douthwaite, M.D. Seventh edition. Quarto of 1,046 pages, illustrated. Baltimore, Williams & Wilkins Co., 1954. Cloth, $20.

Electrocardiography. By E. Grey Dimond, M.D. Quarto of 261 pages, illustrated. St. Louis, C. V. Mosby Co., 1954. Cloth, $14.

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No great man is ever born too soon or too late.—NORMAN DOUGLAS

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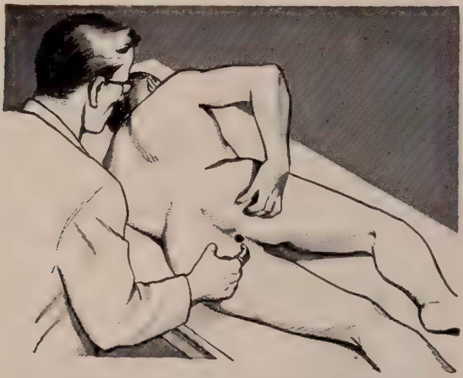
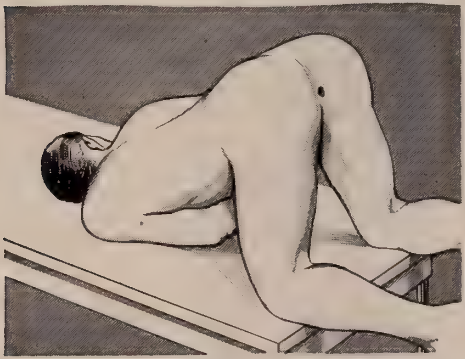
DETECTION OF RECTAL, RECTOSIGMOID, AND COLONIC POLYPS AND CANCER

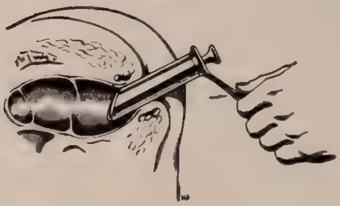


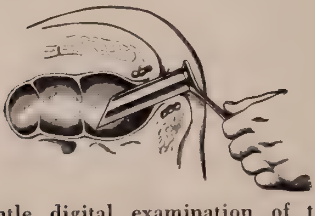
Sims position for digital and anoscopic examination, right knee across and in front of left thigh.



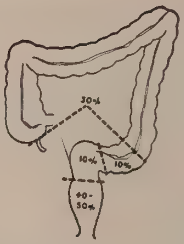
Shoulder-chest position on ordinary table for proctoscopic and sigmoid examination. Thighs slightly apart, at right angles to edge of table. Left shoulder under chest, face to right.

Anorectal examination — digital and anoscope or proctoscope.





After gentle digital examination of the walls of the rectum, the well-lubricated anoscope or proctoscope with its obturator is inserted within the anal canal in the direction of the table. The obturator is withdrawn and air enters the rectum, permitting a view beyond the length of the proctoscope.

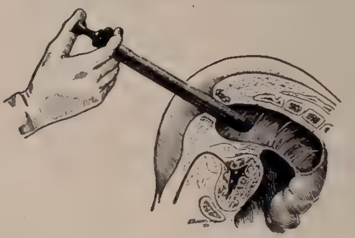


40 to 50 per cent within reach of digital and proctoscopic examination.

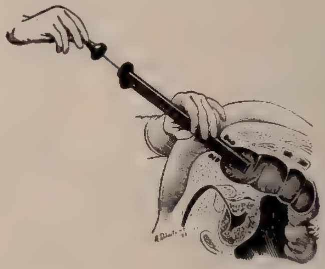
40 to 70 per cent within reach of proctoscopic and sigmoidoscopic examination.

The sites of COLONIC POLYPS PARALLEL the SITES OF COLONIC CARCINOMA. BARIUM ENEMA, EXPULSION, and AIR CONTRAST FILMS will detect polyps and carcinoma proximal to rectosigmoid.

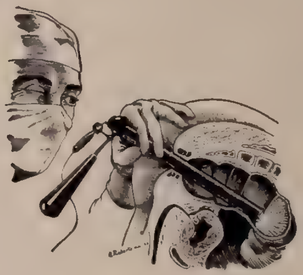
Sigmoidoscopic examination, with the patient in the knee-chest position.



Introduction of sigmoidoscope with obturator *just beyond the sphincter.*



Obturator is removed before advancing the sigmoidoscope.



ONLY UNDER DIRECT VISION *should* the *sigmoidoscope be advanced.*

(Prepared by the Subcommittee on Cancer, Medical Society of the State of New York)

AS OLD AS MEDICAL HISTORY...STILL

The Basic Drug

IN A HOST OF DERMAL AFFECTIONS

In . . .

- **Eczema**
- **Infantile Eczema**
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MEDICAL NEWS

Hill-Burton Grants—The status of the Hill-Burton grants in New York State as of April 30 was as follows: *Completed and in operation*—65 projects at a total cost of $54,912,482, including Federal contribution of $16,716,037 and supplying 3,367 additional beds; *Under construction*—11 projects at a total cost of $42,967,597, including Federal contribution of $6,066,519 and designed to supply 1,054 additional beds; *Approved but not yet under construction*—6 projects at a total cost of $13,636,690, including $3,328,049 Federal contribution and designed to supply 803 additional beds.

The Bronx Hospital—A pilot program involving the use of radioactive gold for the treatment of persons with certain types of cancer has been instituted by the Bronx Hospital, Bronx, New York, it has been announced. The service will be made available when indicated to those persons having lung or abdominal cancer and the presence of fluid in these areas. The period of treatment and length of stay of the patient will range from three to six days and, in line with the policy of the hospital to render care to all patients regardless of ability to pay, no charge will be made for those who are unable to meet the expense of the treatment.

Commissions and Liability for Service—The requirements of the military services for physicians between July 1, 1954, and June 30, 1955, are such that all who have obligations for military service in Priority I and Priority II and that portion of Priority III born after August 30, 1922, will, in all probability, be called to duty.

Due to new processing regulations it will take much longer to issue commissions after applications are filed than in recent months. Therefore, every effort should be made to have those physicians who will finish internships and residencies by July 1 apply at once for commissions so there will not be a protracted period of waiting between the end of the hospital year and the call to active duty. The only exceptions to the above are those cases of individual physicians who occupy positions that have been declared essential in medical practice in remote communities or those physicians who hold essential positions on medical faculties.

Mount Sinai Hospital—A course in "Newer Developments in Cardiovascular Diseases" will be given at the Mount Sinai Hospital, New York City, October 11 through 15, 1954, under the auspices of the American College of Physicians. Dr. Arthur M. Master and Dr. Charles K. Friedberg will direct the course, and prominent cardiologists and cardiac surgeons will participate.

United Cerebral Palsy Grants—Grants for research or professional training in cerebral palsy have been announced by Leonard H. Goldenson, United Cerebral Palsy president. New York State institutions and doctors chosen are: Dr. Heinrich Waelsch, New York State Psychiatric Institute, New York City, for "Formation of Proteins and Enzymes in the Developing Central Nervous System," $10,800; Dr. James B. Campbell, College of Physicians and Surgeons of Columbia University, New York City, "A Study of the Innervation of the Urinary Tract from the Urethra to the Renal Pelvis in Animals, Directed at Improving the Therapeutic Approaches to Urinary Dysfunction of Neurogenic Origin in Man," $10,800; Dr. Abner Wolf, also of the College of Physicians and Surgeons, Columbia University, "Studies in the Etiology of Functional and Morphological Abnormalities of the Nervous System of the Child. Inapparent Maternal Viral Infection and Damage to the Fetal Nervous System," $7,192.80; Dr. Peter Gruenwald, State University of New York, Research Foundation, New York City, "A Study of the Physiology and Pathology of Aeration of the Lungs of Newborn Infants, and of Methods for the Prevention of Prolonged Asphyxia at Birth," $5,769, and a training grant to Columbia University College of Physicians and Surgeons, New York City, for "Postgraduate Courses in Cerebral Palsy for Physical and Occupational Therapists and Physicians," $8,000.

Rochester Health Forums—The final Rochester Health Forums for the season were concluded with a television program dealing with "Facts and Fiction About Childbirth." The Health Forums have been sponsored by the Rochester Academy of Medicine and the Monroe County Medical Society. The final forum was cosponsored by the Rochester League. Mrs. William S. Allen, first vice-president of the Junior League, was the moderator, and the members of the panel were Dr. Shirley Snow, Genesee Hospital; Dr. Louis Iuppa, St. Mary's Hospital; Dr. Donald Kariher, Strong Memorial Hospital, and Dr. Robert Clark, General Hospital.

American Foundation for Allergic Diseases—The formation of a scientific and educational council of nationally known scientists and educators to promote more research and wider professional education in the field of allergic diseases has been announced by the American Foundation for Allergic Diseases. Among the New York doctors appointed to the Council are: Dr. Robert A. Cooke, director, Institute of Allergy, Roosevelt Hospital, New York City, and Dr. Marion B. Sulzberger, chairman, Department of Dermatology and Syphilology, Post-

[Continued on page 1844]

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[Continued from page 1842]

Graduate Medical School, New York University-Bellevue Medical Center, New York City.

American College of Gastroenterology—Final steps in the activation of the American College of Gastroenterology were taken by the Fellowship of the National Gastroenterological Association at a special meeting held recently in New York City. The transfer of the membership of the National Gastroenterological Association and all assets including the official publication, *The American Journal of Gastroenterology*, to the College was voted.

Officers of the College from New York are: Dr. Frank J. Borelli, New York City, fourth vice-president; Dr. Roy Upham, New York City, secretary-general; Dr. A. Xerxes Rossien, Kew Gardens, secretary; Dr. Elihu Katz, New York City, treasurer, and Dr. Samuel Weiss, New York City, editor.

Members of the Board of Trustees are: Dr. William C. Jacobson and Dr. William B. Rawls, both of New York City; Dr. F. H. Voss, Phoenicia, and Dr. Anthony Bassler, New York City, honorary president.

The first annual convention will be held in Washington, D.C., October 25, 26, 27, in conjunction with the nineteenth annual convention of the National Gastroenterological Association.

Information concerning membership in the American College of Gastroenterology may be obtained by writing to the Executive Secretary, American College of Gastroenterology, 33 West 60th Street, New York City 23.

Regional Cancer Teaching Day—The first annual regional cancer teaching day, presented by the Utica Academy of Medicine and the Tumor Clinic of the Medical Society of the County of Oneida, was held on May 20 in Utica. Dr. John S. Fitzgerald, president, Medical Society of the County of Oneida, presided at the first session at which the speakers and their subjects were: Dr. H. L. Richardson, director of cytology, Memorial Center, "Cytology in the Diagnosis of Cancer"; Dr. George Escher, assistant physician, Memorial Center," Hormone Treatment in Advanced Breast Cancer"; Dr. Frank G. Leone, president, Oneida County Chapter of the A.A.G.P., and Dr. David Karnofsky, assistant physician, Memorial Center, on "Management of the Incurable Cancer Patient." Dr. Stuart E. Krohn, president, Utica Academy of Medicine, presided at the dinner and Mr. Earl Dunmore, president, Oneida County Chapter, American Cancer Society, spoke.

At the evening session, Dr. John Pool, associate surgeon on thoracic service, Memorial Center, discussed "The Therapeutic Modalities in the Management of Bronchogenic Cancer," and Dr. Gordon McNeer, associate surgeon on gastric and mixed tumors service, Memorial Center, spoke on "Extended Horizons in the Surgical Management of Gastric Cancer."

Guest speakers were from the Memorial Center for Cancer and Allied Diseases, New York City.

Dermatology Prize Essay Contest—The American Dermatological Association announces a cash prize contest for the best essays submitted before November 15, 1954, not previously published, relative to some fundamental aspect of dermatology or syphilology. The candidate winning first prize will be invited to present his paper before the annual meeting of the American Dermatological Association in 1955. First prize will be $500, with second and third place receiving $300 and $200 respectively.

Manuscripts should be sent to Dr. J. Lama Callaway, American Dermatological Association, Duke Hospital, North Carolina.

Robert Roesler de Villiers Foundation, Inc.—The fifth annual meeting of the Robert Roesler de Villiers Foundation, Inc., was held in February in New York City. At this time, it was announced that Dr. Ludwik Gross, Chief of Research, Veterans Administration Hospital, Bronx, had been awarded the first "Robert Roesler de Villiers Award" at a meeting held in October, 1953, at the Academy of Medicine in New York, for his contributions to the knowledge of the nature and cause of leukemia and to enable him to continue his studies.

Due to the increased interest in leukemia, stimulated by the Foundation's contests, it is hoped that more grants will be awarded during 1954 as well as the possibility of the establishment of the "Robert Roesler de Villiers Scholarships" or fellowships for medical students specializing in the research of leukemia.

March of Medicine—The second anniversary of the first "March of Medicine" will be telecast from the one hundred and third annual meeting of the American Medical Association in San Francisco on June 24. Sponsored by the American Medical Association and Smith, Kline and French Laboratories, the program will carry on-the-scene views of the nation's physicians studying medical advances.

Meetings—Past

International Academy of Proctology

The sixth annual meeting of the International Academy of Proctology was held in Chicago in April. Dr. Alfred J. Cantor, the founder of the Academy, was reelected secretary.

During the meeting, the premier presentation of 3-D stereoscopic films on ambulatory proctology and office surgery was held.

Eastern New York Eye, Ear, Nose and Throat Association

The election of officers was held at the April meeting of the Eastern New York Eye, Ear, Nose and Throat Association in Schenectady, at which time the following officers were elected: Dr. John A. Cetner, Albany, president; Dr. H. Little, Hudson,

[Continued on page 1846]

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[Continued from page 1844]

vice-president; Dr. Frank C. Furlong, Schenectady, secretary-treasurer.

A paper on "The Deaf and Hard of Hearing" was presented by Dr. S. Richard Silverman, St. Louis, during the scientific session.

Society of Medical Jurisprudence

The seventieth anniversary dinner of the Society of Medical Jurisprudence was held on May 10 at the Hotel Statler, New York City. The guest of honor was Dr. Leon Theodore LeWald in recognition of his thirty-five years of service to the Society. Dr. Howard J. Hutter, president, Society of Medical Jurisprudence, and Dr. Andrew A. Eggston, president, Medical Society of the State of New York, were among the speakers.

National Rehabilitation Association

The third annual four-state conference of the National Rehabilitation Association was held at West Point, New York, in May. The theme was "Rehabilitation at the Crossroads." Among the New York doctors taking part in the conference was Dr. Herman E. Hilleboe, Commissioner, New York State Department of Health.

Jefferson County Medical Society

The regular monthly meeting of the Jefferson County Medical Society was held on May 18 at the Black River Valley Club, Watertown. At this time, Mr. John D. Rich and Mr. Ralph W. Roberts spoke on "New Surgical Plan—Blue Shield Insurance."

Monroe County Medical Society

The Medical Society of Monroe County held its semiannual meeting on May 18 at the Rochester Academy of Medicine. New members were introduced to various aspects of medical life in Rochester by Dr. Fred Bush, president. Mr. A. Gould Hatch, co-author of the Hatch-Metcalf Bill enabling dogs and other animals to be used for medical purposes, spoke on "How Your State Legislature Works."

Kings County Medical Society

Presentation of a portrait of Dr. John J. Masterson was made at the stated meeting of the Kings County Medical Society on May 18. This marks the first time such an honor has been paid a living member of the Society.

Dr. Ronald V. Christie, visiting professor of medicine, State University of New York College of Medicine at New York City; director, Medical Professional Unit and physician, St. Bartholomew's Hospital, London, and professor of medicine, University of London, spoke on "Dyspnea."

New York Academy of Medicine

Dr. Iago Galdston, executive secretary of the New York Academy of Medicine, presided at a program which was held on May 20 by the Academy in collaboration with the Asia Institute Association in honor of the thousand-year anniversary of the birth of the Great Persian physician Avicenna. At the time of the meeting an exhibit was opened to the public, exhibiting a collection of manuscripts and works of art derived from the lifetime of Avicenna.

American Urological Association

The annual meeting of the American Urological Association was held at the Waldorf-Astoria Hotel, New York City, May 31, and June 1, 2, 3, 1954. The meeting featured the presentation of the Guiteras Lecture by Dr. John Eager Howard.

Ontario County Medical Society

"Cancer of the Colon and Rectum" was discussed by Dr. Pelham Glasier, associate professor of surgery, Albany Medical College, at the meeting of the Ontario County Medical Society on June 8.

Meetings—Future

American College of Physical Medicine and Rehabilitation

The thirty-second annual scientific and clinical session of the American Congress of Physical Medicine and Rehabilitation will be held from September 6 to 11, at the Hotel Statler, Washington, D.C.

There will be a prize for an essay on any subject relating to physical medicine and rehabilitation. Further information about the meeting and the essay award may be obtained from the office of the Congress, 30 North Michigan Avenue, Chicago 2, Illinois.

Joint Meeting on Cardiology

The Second World Congress of Cardiology and the 27th scientific sessions of the American Heart Association will be held jointly in Washington, D.C., September 12 to 17. Membership in the Congress is open to all members of the American Heart Association; nonmembers may attend by special invitation.

International Congress of Internal Medicine

The Third International Congress of Internal Medicine will be held in Stockholm, Sweden, September 15 to 18, under the auspices of the International Society of Internal Medicine. The Congress committee in Stockholm is headed by Professor Nanna Svartz of the Caroline Medical Institute.

Pan-Pacific Surgical Association

The Pan-Pacific Surgical Association will hold a congress in Honolulu, October 7 to 18. For further information, including travel reservations, write to Dr. F. J. Pinkerton, Pan-Pacific Surgical Association, Suite 7, Young Building, Honolulu, Hawaii.

[Continued on page 1848]

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[Continued from page 1846]

American Public Health Association

The eighty-second annual meeting of the American Public Health Association will be held in Buffalo, October 11 to 15. Experience with inoculation of 1,500,000 children with the Salk vaccine for poliomyelitis will be presented at one of the 75 scientific sessions, as well as the impact of suburbanization on public health.

The Sedgwick Memorial Medal for distinguished service in public health will be presented on the evening of October 12 and the Lasker Awards for 1954 for notable achievement in medical research and public health administration on the evening of October 14. Local arrangements for the meeting are being made by a committee under the chairmanship of Dr. Berwyn F. Mattison, Health Commissioner, Erie County.

International College of Surgeons

The American Society of Vienna, in celebration of the fiftieth anniversary of the Society, is conducting a series of seminar congresses which will be held in the University Clinics throughout 1954. For further information contact the American Medical Society, Universitätsstrasse 11, Vienna, Austria.

Personalities

Honored

Dr. Henry W. Cave, New York City, by Edinburgh's Royal College of Surgeons, as an honorary fellow, in May . . . Dr. Harry C. Denham, Gloversville, upon his retirement as chairman of the Department of Radiology at the Nathan Littauer Hospital, at a testimonial dinner by the Fulton County Medical Society and the Nathan Littauer Nurses' Alumnae Association, in April . . . Dr. Merrill N. Foote and Dr. Adele Stresseman, St. John's Hospital in Brooklyn, the Distinguished Service Cross of the Protestant Episcopal Diocese of Long Island . . . Dr. Herman G. Weiskotten, dean emeritus, Syracuse University School of Medicine, in June, an honorary Doctorate of Humane Letters by the University of Rochester . . . Dr. Eugene D. Rosenfeld, director, Long Island Hospital, New Hyde Park, as guest of honor of the surgical supply industry at the annual dinner for the United Jewish Appeal, in June . . . Dr. Abraham B. Tamis, a testimonial plaque for "outstanding leadership in the service of his people" at the annual dinner-dance of the Bronx Physicians Division of the United Jewish Appeal of Greater New York on May 8 . . . Dr. Virginia Travell Weeks, Brooklyn Hospital, at a pre-Mother's Day luncheon sponsored by the Women's Division of the Albert Einstein College of Medicine in May.

Elected

Dr. William G. Childress, Valhalla, secretary-treasurer of the American Trudeau Society . . . Dr. Robert F. Loeb, professor of medicine at the College of Physicians and Surgeons of Columbia University, president of the Association of American Physicians and Dr. Maclyn McCarty, Rockefeller Institute, as a member . . . Dr. Erwin Neter, Buffalo, chairman, Division of Medical Bacteriology and Immunology of the Society of American Bacteriologists . . . Dr. Martin R. Steinberg, director of Mount Sinai Hospital, New York City, as president of the Greater New York Hospital Association . . . Dr. Edward S. Welles, senior thoracic surgeon of Saranac Lake General Hospital, as president of the American Association for Thoracic Surgery.

Appointed

Dr. William W. Bennett, Milbrook, as assistant medical examiner for Dutchess County . . . Dr. Vincent J. DeRisio, Elmira, as a Fellow of Medicine, Lahey Clinic, Boston, Massachusetts . . . Dr. Harold W. Jacox, professor of radiology, Columbia University College of Physicians and Surgeons, acting executive officer of the Radiology Department and acting director of the Radiological Service, Presbyterian Hospital . . . Dr. Randolph A. Wyman, to succeed Dr. William F. Jacobs who has retired as medical superintendent of Bellevue Hospital.

Speakers

Dr. Ralph S. Banay, New York City, at the annual meeting of the American Psychiatric Association in St. Louis in May . . . Dr. Alvan L. Barach, assistant professor of medicine, Columbia University College of Physicians and Surgeons, as a member of the panel during the annual meeting of the National Tuberculosis Association in Atlantic City in May . . . Dr. Eugene Clifton, Memorial Hospital and Bellevue Medical Center, Dr. Horace L. Hodes, director, Department of Pediatrics, Mount Sinai Hospital, New York City, at the postgraduate symposium sponsored by Maryland Academy of General Practice and Lederle Laboratories, in Hagerstown, Maryland, in May.

Dr. Morton S. Bryer, Department of Medicine, Mount Sinai Hospital, New York City, at a meeting in April of the Maryland Academy of Medicine and Surgery in Baltimore.

Dr. Basil C. MacLean, City Commissioner of Hospitals, and Dr. Philip D. Wilson, surgeon-in-chief, Hospital for Special Surgery, in May at the laying of the cornerstone for the new Hospital for Special Surgery in New York City . . . Dr. Leona Baumgartner, at a conference on "A Century of Progress in Nursing" in New York City . . . Dr. Erwin Neter, Children's Hospital, Buffalo, at a meeting of the Virginia Academy of General Practice, Richmond, Virginia, in May . . . Dr. Earl D. Osborn, Buffalo, in May, during a business session of the Oklahoma Medical Association in Oklahoma City . . . Dr. Howard A. Rusk, New York City, at the newly formed Washington committee of the American-Korean Foundation, Washington, D.C., in May.

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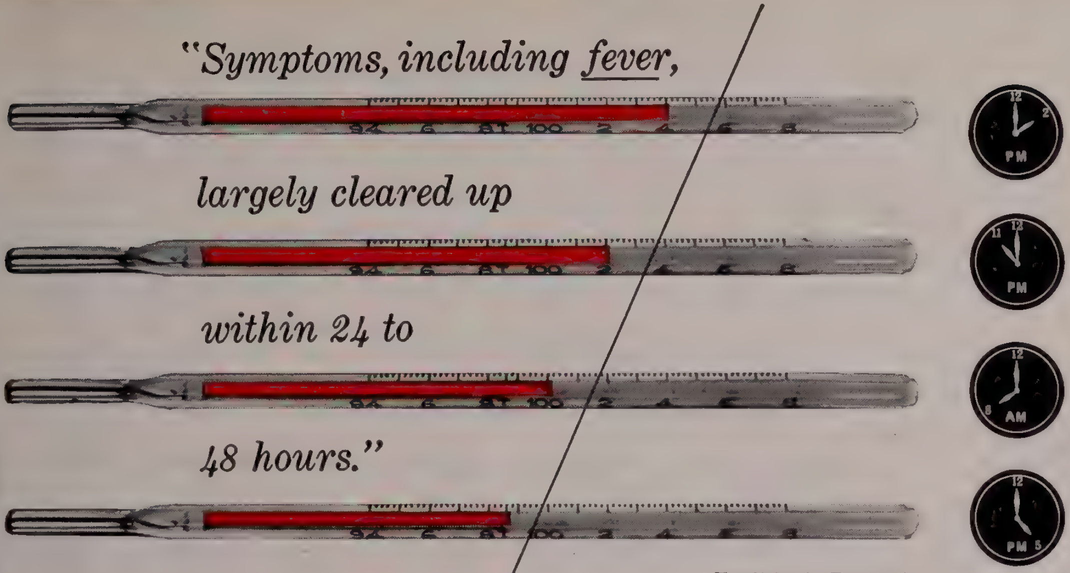

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English, A. R., et al.:
Antibiotics Annual (1953-1954),
New York, Medical
Encyclopedia, Inc., 1953, p. 70.

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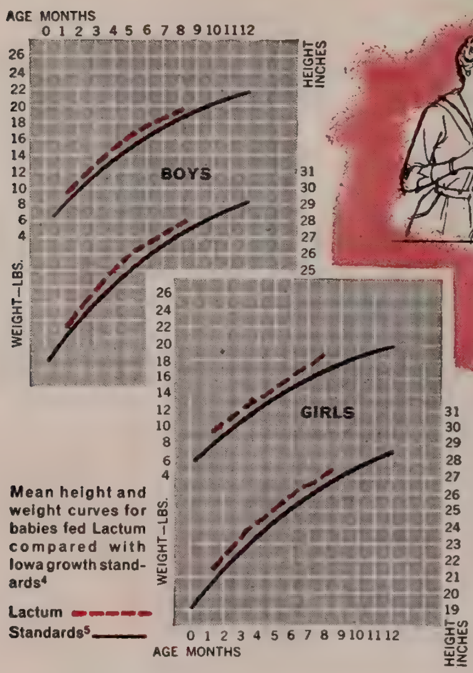

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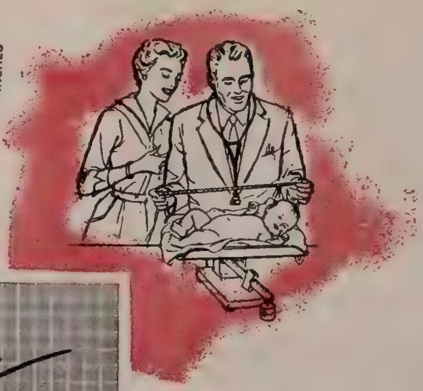

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1. Jeans, P. C., in A.M.A. Handbook of Nutrition, ed. 2, Philadelphia, Blakiston, 1951, p. 275; 2. Albanese, A. A.: Pediatrics 8: 455, 1951; 3. Holt, L. E., Jr., and McIntosh, R., in Holt's Pediatrics, ed. 12, New York, Appleton-Century-Crofts, Inc., 1953, pp. 175-178; 4. Frost, L. H., and Jackson, R. L.: J. Pediat. 39: 585, 1951; 5. Jackson, R. L., and Kelly, H. G.: J. Pediat. 27: 215, 1945.

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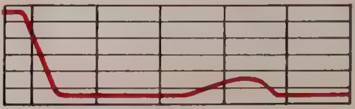

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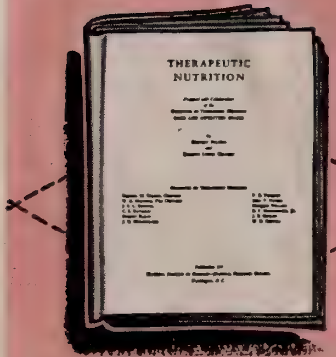

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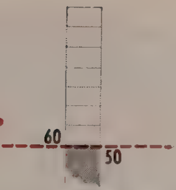

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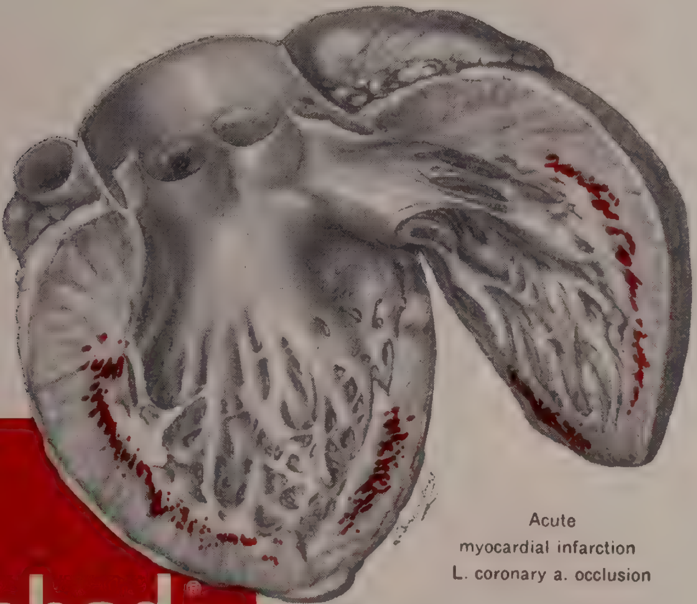

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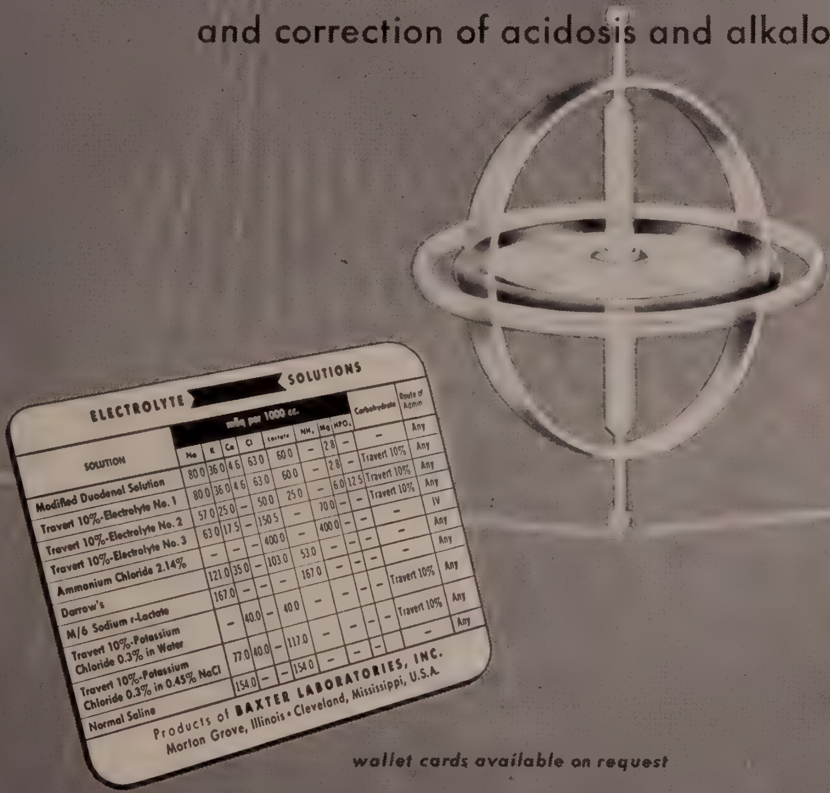

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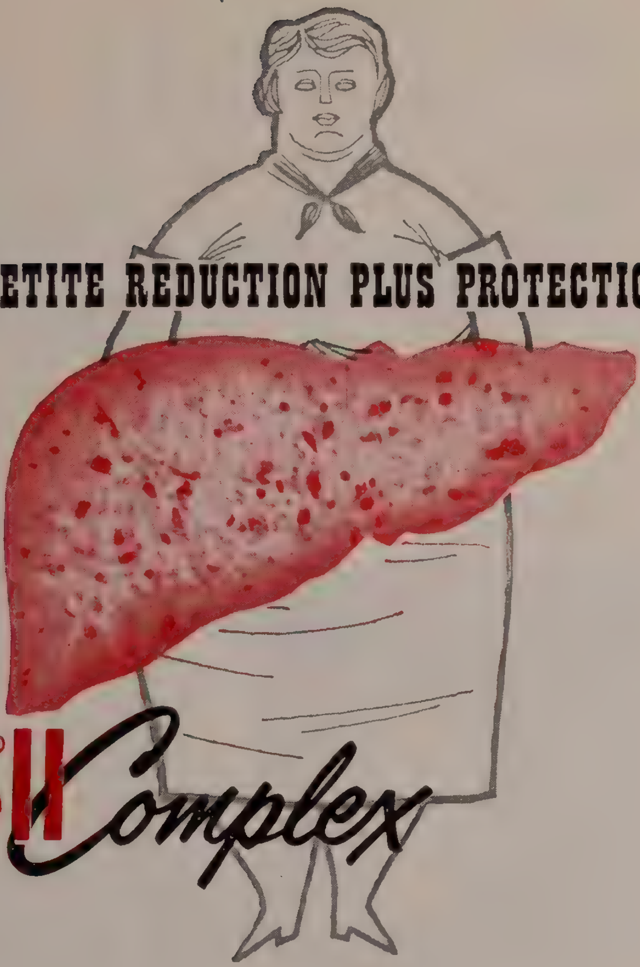
in the grossly obese **APPETITE REDUCTION PLUS PROTECTION**



Obocell® Complex

In treating the grossly obese, consider the important three-way protection of Obocell Complex:

1. **Protection against hunger pangs**
2. **Protection for the damaged liver**
3. **Support for co-enzymes**

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d-Amphetamine Phosphate (dibasic)	5 mg.
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Riboflavin	1.2 mg.
Niacinamide	8 mg.

*Irwin-Neisler's Brand of High Viscosity Methylcellulose

Bottles of 50 and 500

A definite relationship exists between gross obesity and liver damage. Zelman[1] reports on 20 cases of gross obesity. All cases showed both *laboratory* and *histologic* evidence of liver damage.

Obocell Complex not only provides protection against liver damage but also suppresses the appetite, satisfies bulk hunger, and supplies important vitamins. Hence, it provides three-way protection for your heavily overweight patient.

1. Zelman, S.: Arch. Int. Med. 90:141, 1952.

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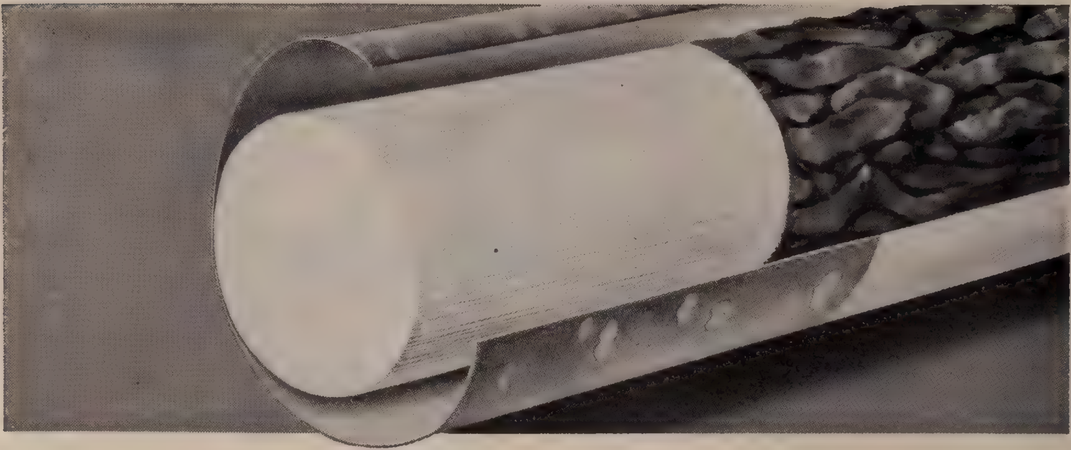
Thank You, Sir!

To 64,985 doctors who visited Viceroy exhibits at medical conventions . . . and to the many doctors who smoke and recommend Viceroy, we say "Thanks."

Your approval of new King-Size, Filter Tip Viceroy has helped establish our leadership . . . *Viceroy now outsells all other filter tip cigarettes!*

NEW VICEROY GIVES SMOKERS
DOUBLE THE FILTERING ACTION!



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ONLY A PENNY OR TWO MORE THAN CIGARETTES WITHOUT FILTERS

New King-Size
Filter Tip **VICEROY**

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Filter Tip
CIGARETTES
KING-SIZE

OUTSELLS ALL OTHER FILTER TIP CIGARETTES COMBINED

Gevral*

Geriatric Vitamin-Mineral Supplement Lederle

"Me retire? Call me back in about 10 years!"

GEVRAL Capsules are indicated for the prevention of multiple vitamin and mineral deficiencies, especially common in the geriatric patient. GEVRABON* *Lederle* supplies similar supplementation in liquid form.

*REG. U. S. PAT. OFF.

LEDERLE LABORATORIES DIVISION AMERICAN Cyanamid COMPANY Pearl River, New York Lederle

EACH GEVRAL CAPSULE CONTAINS:

Vitamin A	5000 U.S.P. Units (125% MDR)
Vitamin D	500 U.S.P. Units (125% MDR)
Vitamin B_{12}	1.0 microgram
as present in concentrated extractives from streptomyces fermentation	
Thiamine Hydrochloride (B_1)	5.0 mg. (500% MDR)
Riboflavin (B_2)	5.0 mg. (250% MDR)
Niacinamide	15.0 mg.
Folic Acid	1.0 mg.
Pyridoxine Hydrochloride (B_6)	0.5 mg.
Ca Pantothenate**	5.0 mg.
Choline Dihydrogen Citrate**	100.0 mg.
Inositol**	50.0 mg.
Ascorbic Acid (C)	50.0 mg. (166% MDR)
Vitamin E (tocopheryl acetates)**	10.0 Units
Rutin**	25.0 mg.
Iron ($FeSO_4$)	10.0 mg. (100% MDR)
Iodine (KI)	0.5 mg. (500% MDR)
Calcium ($CaHPO_4$)	145.0 mg. (19% MDR)
Phosphorus ($CaHPO_4$)	110.0 mg. (14.6% MDR)
Boron ($Na_2B_4O_7 \cdot 10H_2O$)**	0.1 mg.
Copper (CuO)**	1.0 mg.
Fluorine (CaF_2)**	0.1 mg.
Manganese (MnO_2)**	1.0 mg.
Magnesium (MgO)	1.0 mg.
Potassium (K_2SO_4)	5.0 mg.
Zinc (ZnO)**	0.5 mg.

**The need for these substances in human nutrition has not been established.

MDR—Minimum daily requirement for adults.

SERPILOID®

RESERPINE, RIKER

Serpiloid, a crystalline alkaloid of Rauwolfia serpentina, possesses a measure of the hypotensive, bradycrotic, and tranquilizing actions of the total alkaloids in the rauwolfia root.

- To be used when an isolated, pure alkaloid is preferred in the treatment of mild, labile hypertension.
- Relieves tachycardia, if present, and lowers blood pressure gradually, safely.
- The frequently present anxiety is replaced by a feeling of serenity and well-being.
- Side actions rarely interfere with therapy when Serpiloid is given in proper dosage.
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Initial dose, 1 tablet (0.25 mg.) t.i.d. or q.i.d. If Serpiloid alone proves inadequate, combination therapy should be used, adding Veriloid or hexamethonium in proper dosage.

Available in bottles of 100 scored tablets.

for use in mild, labile hypertension

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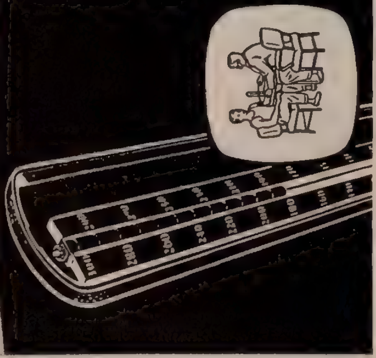

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DACTIL is *eutonic*—that is, it restores and maintains normal visceral tonus whereas "antispasmodics" tend to produce an inert, paralyzed viscus.

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PLAIN AND WITH PHENOBARBITAL

relieves ***pain ⇄ spasm*** *usually in ten minutes*

see it work in your office

Use your DEMONSTRATION SUPPLY to note its effect in patients with gastroduodenal and biliary spasm, cardiospasm, pylorospasm, spasm of biliary sphincter, biliary dyskinesia, gastric neurosis and irritability, and as adjunctive therapy in selected inflammatory hypermotility states. A specific for upper gastrointestinal pain ⇄ spasm, DACTIL is not intended for use in peptic ulcer.

TWO FORMS: ***Q.I.D.***

DACTIL with Phenobarbital in bottles of 50 capsules. There are 50 mg. of DACTIL and 16 mg. of phenobarbital (warning: may be habit-forming) in each capsule.

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DACTIL is the only brand of N-ethyl-3-piperidyl diphenlyacetate HCl.

Lakeside pioneers in piperidols
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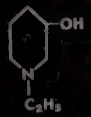

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A VAGINAL CLEANSING AGENT

that is different!
that is efficient!

LORZINEX solutions cleanse at the *acid pH of 4* (normal to the vagina) and efficiently disperse mucus debris[1]. Inclusion of a zinc salt in the formula promotes astringency. Lactose (a good nutrient for Doederlein bacilli) is added to further establish the physiological flora.

Contains: The newly discovered trichomonacidal synthetic wetting agent —*Sodium Lauryl Sulfate.*

For: EFFICIENT CLEANSING at Acid pH
DISPERSION OF MUCUS DEBRIS
TRICHOMONACIDAL ACTION
ANTIFUNGAL ACTION
ASTRINGENCY

LORZINEX is recommended (before administration of therapeutic agents) as an aid in—

MONILIASIS OF THE VAGINA
VAGINAL TRICHOMONIASIS

Highly Effective . . .
Unusually Economical

(1) Lawrence, E. D., W. J. Surg., Ob. & Gyn., 58, 236-7, 1950.

Samples and literature sent on request

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heartier appetite
better digestion
more vigorous health
a more useful, more enjoyable life in patients

over 40

where these attributes are diminished by lack of sufficient . . .

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Vitamin B_2	14 Mg.
Vitamin B_6	5 Mg.
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Vitamin D	2,800 U.S.P. Units
Niacinamide	180 Mg.
Iron	20 Mg.
Calcium	188 Mg.
Phosphorus	160 Mg.
Iodine	0.1 Mg.
Calcium Pantothenate	20 Mg.
Folic Acid	1.5 Mg.
Vitamin E	10 Int. Units
Vitamin B_{12}	5 Mcg.
Choline Bitartrate	200 Mg.
Inositol	100 Mg.
dl-Methionine	20 Mg.
Rutin	60 Mg.
Biotin	50 Mcg.
Cobalt	0.1 Mg.
Copper	0.2 Mg.
Magnesium	2 Mg.
Manganese	0.5 Mg.
Potassium	0.05 Mg.
Zinc	1.5 Mg.

Recommended daily dose . . .
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TRANQUILIZER-ANTIHYPERTENSIVE,
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2/2019M

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Patients can lose weight and maintain a restricted diet, in comfort, without undesirable side effects . . .

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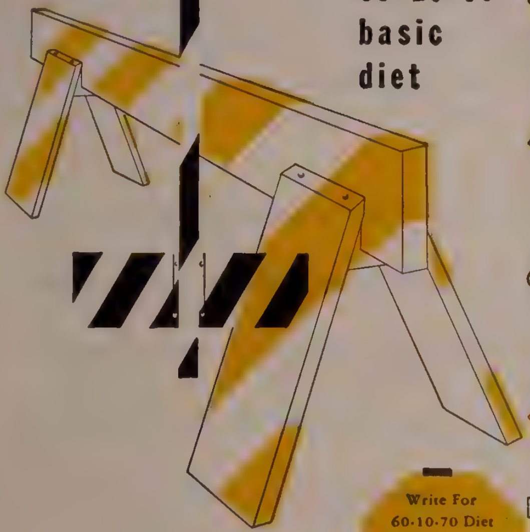
The 60-10-70 Basic Diet provides enough roughage, so artificial bulk is unnecessary. The hazards of impaction caused by "bulk" producers is obviated.



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Each tablet contains:

Semoxydrine HCl	5 mg.
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Pentobarbital	20 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	0.5 mg.
Riboflavin	1 mg.
Niacin	5 mg.

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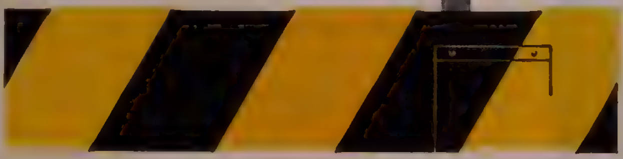

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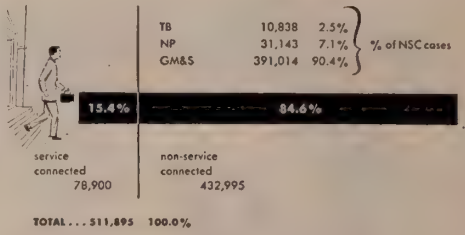
In Viewing the VA Medical Program . . .

VA patients discharged during 1951



Of 511,895 patients discharged from VA hospitals in 1951, only 15.4% were treated for illnesses or injuries incurred as a result of military service. Physicians believe it is unsound to continue authorization of "free" lifetime medical care for those who suffer no mishap while in uniform, while other citizens with no military background must pay their own way.

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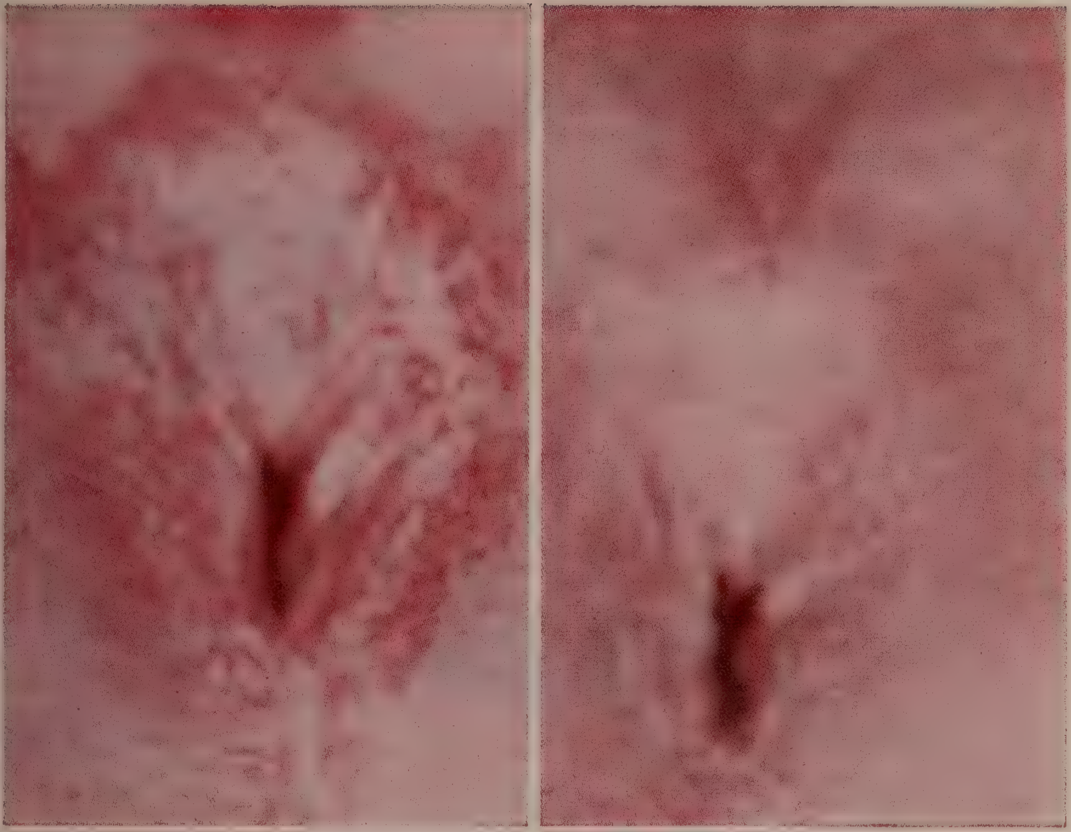

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Profound and prolonged relief of pruritus ani

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HydroCortone®
ACETATE
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RESULTS: Topical Ointment of HYDROCORTONE Acetate (2.5%) was used to treat 29 patients with severe non-specific intractable pruritus ani. "Only three patients failed to derive lasting benefit from this treatment." "Perhaps the most interesting feature . . . is the small amount of ointment necessary to produce and maintain a beneficial effect." Furthermore, the ointment ". . . is not painful, does not soil clothing, and has no odor." *Alexander, R. M. and Manheim, S. D., *J. Invest. Dermat.* **21**: 223-225, October 1953.

OTHER INDICATIONS: Non-specific pruritus vulvae and scroti, atopic dermatitis and contact dermatitis.

SUPPLIED: Topical Ointment of HYDROCORTONE Acetate, 1% and 2.5%, 5-Gm. tubes.

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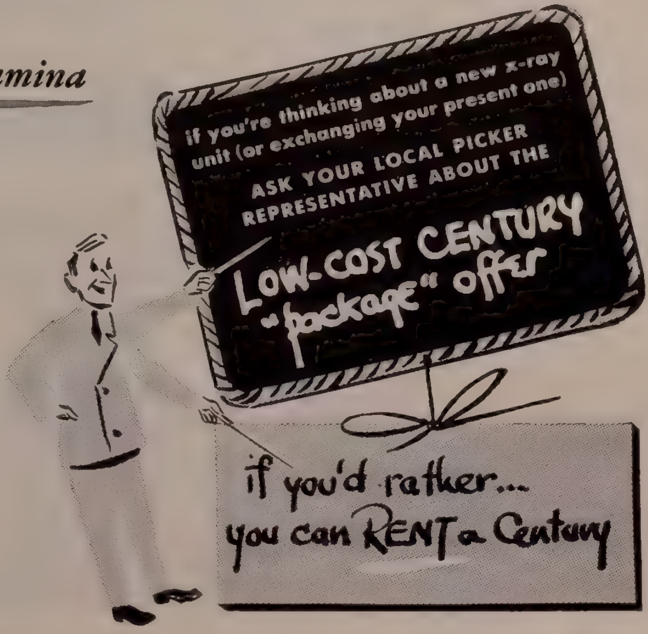
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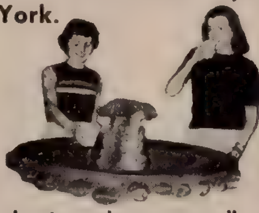

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†Kimble, S.T., and Stieglitz, E.J.: Geriatrics 7: 20, 1952.

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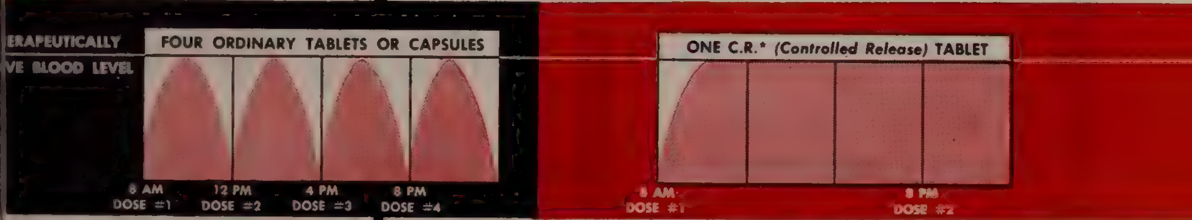

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1. Rev. Gastroenterology 20:744 (Oct.) 1953; abstract in J. A. M. A., 153:1580 (Dec. 26) 1953.

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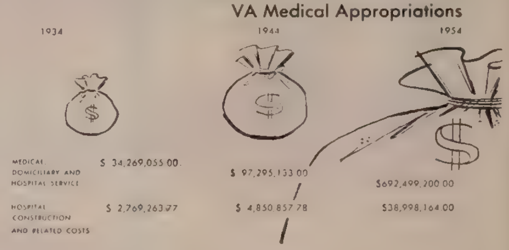
increasing tax burden



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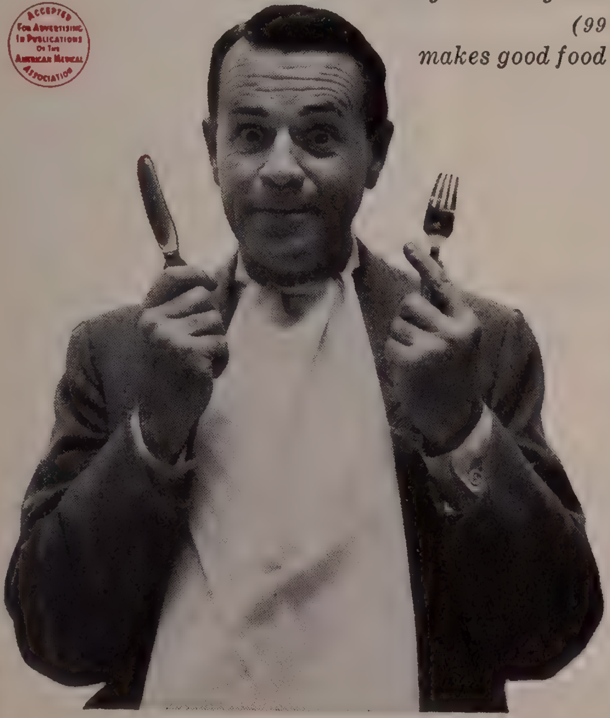

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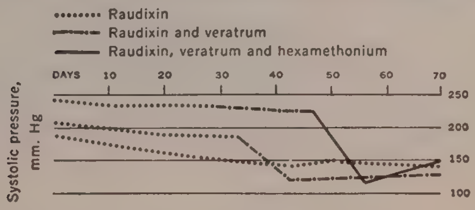

Raudixin Squibb rauwolfia

SQUIBB

1. WILKINS, R. W., AND JUDSON, W. E.: NEW ENGLAND J. MED. 248:48, 1953.
2. FREIS, E. D.: M. CLIN. NORTH AMERICA 38:363, 1954.

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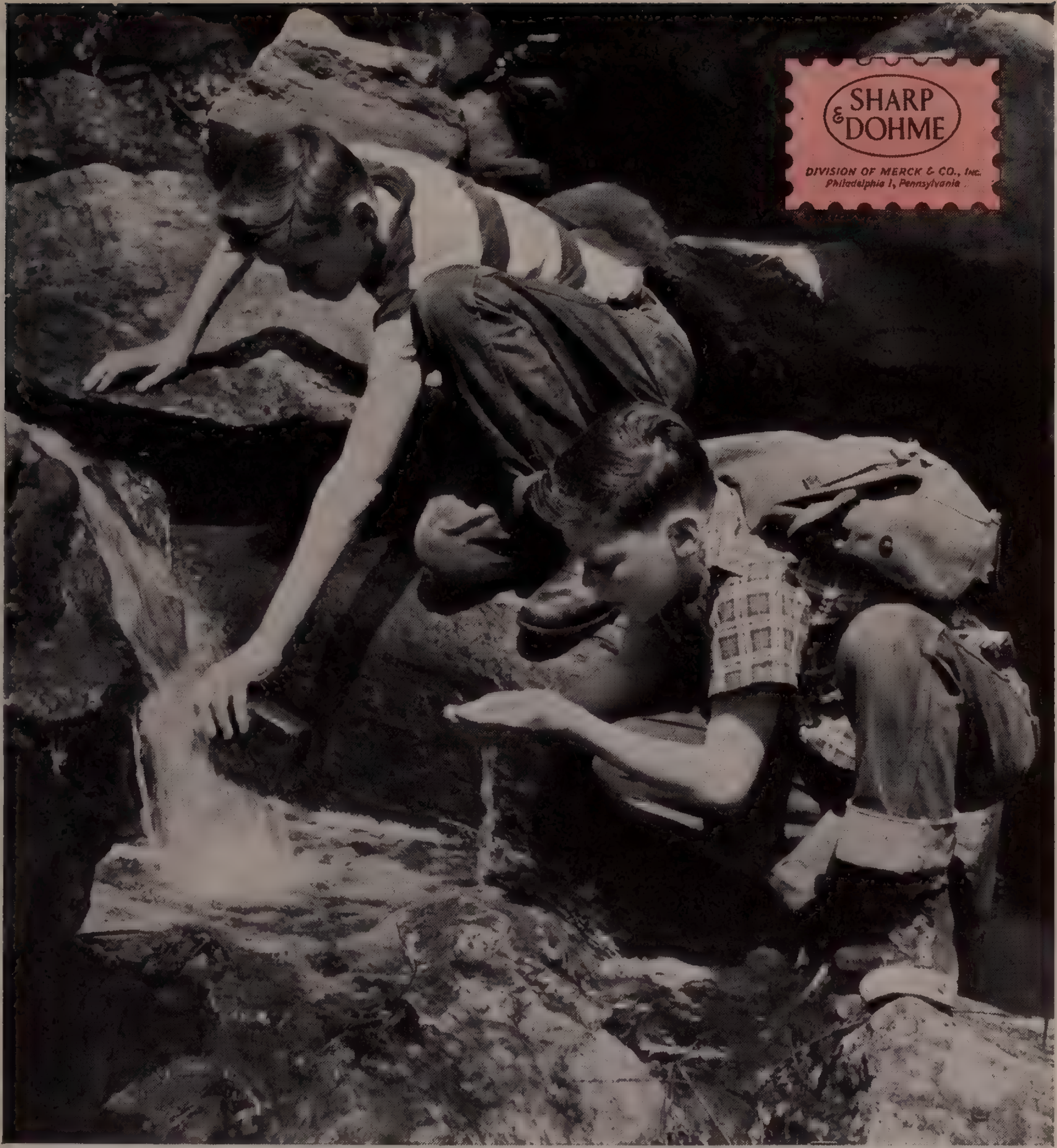

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Reference: 1. J. A. M. A. 153:1519 (Dec. 26) 1953.

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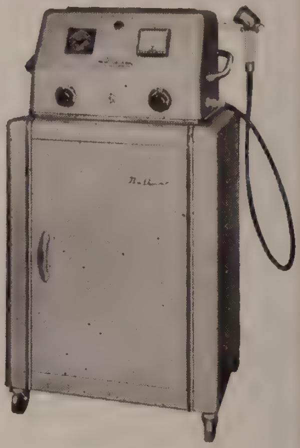

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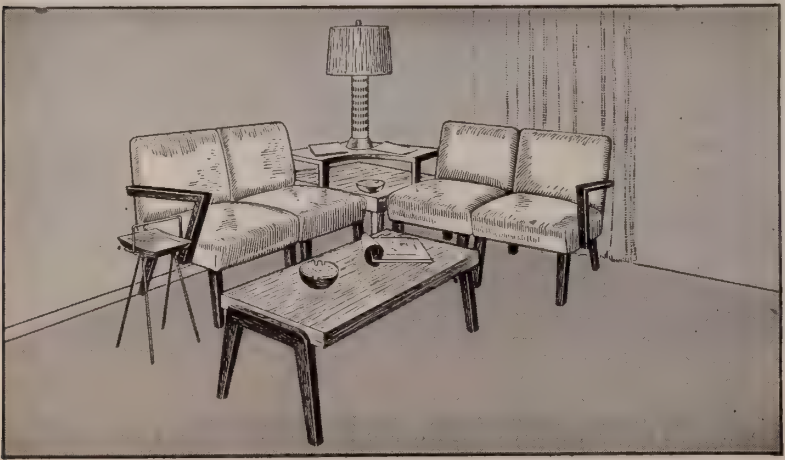

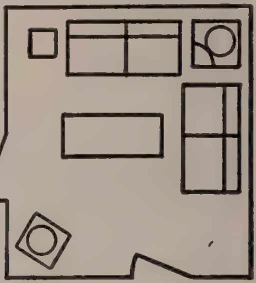

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On the basis of this study a dietary plan recommended for treatment of gastrointestinal disorders provides at least one gram, of protein per kilogram of body weight, but preferably more. Meat constitutes one of the important sources of animal protein in the plan.

In dietotherapy, meat serves many important physiologic and nutritional functions. Its appetizing flavor animates the desire to eat and promotes good digestion. Meat is easily and almost completely digested. Its high content of protein provides goodly amounts of all the essential amino acids well supplemented with others. Meat also contributes valuable amounts of many B vitamins and of essential minerals, especially iron, phosphorus, and potassium.

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*Kirsner, J. B.; Brandt, M. B., and Sheffner, A. L.: Diet and Amino Acid Utilization in Gastrointestinal Disorders, J. Am. Dietet. A. *29*:1103 (Nov.) 1953.

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VOLUME 54 JULY 1, 1954 NUMBER 13

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EDITORIALS

The Annual Meeting

The Medical Society of the State of New York held its 148th Annual Meeting at the Hotel Statler, May 10 to 14, 1954, in New York City. During one of the longest legislative sessions in the history of the House of Delegates, important measures were adopted relating to group malpractice and defense insurance and a clarification of the Principles of Professional Conduct, among others. Altogether 45 resolutions were introduced and considered.

For the information of new members and a reminder to older ones, the detailed minutes of the House of Delegates will appear this year as formerly in the Supplement, Part II of the September 1 issue of the JOURNAL. In the minutes, resolutions may be followed from their introduction on the floor, through their respective reference committee reports to the House, to the final action of the delegates on them. For this reason it is urged that the membership preserve and read carefully these minutes. The volume is indexed for convenience and contains in detail the policy of the Society relative to any given subject. Watch for it September first.

A feature of the meeting that seemed to be well received was the night sessions. Many busy doctors in the vicinity of New York City, as well as those in the city itself, found that they could attend in the evenings when they could not leave their work in the daytime. In consequence attendance at these night meetings was relatively large.

In general the Annual Meeting was well attended; there were registered 3,901 doctors and 1,421 guests. These were medical technicians, nurses, medical and other students, secretaries, and others interested. Technical exhibitors registered in the number of 1,093, making a grand total of 6,415 persons.

Exhibits were well arranged, particularly in the scientific section. Space was sufficient in the aisles so that observers could view and talk with those in attendance without being jostled or carried along by the flow of traffic.

The commercial exhibits seemed to be well attended by doctors and guests alike. Merchandise was attractively displayed and courteously explained by the exhibitors to all who inquired.

From all points of view the meeting was a success. The installation of Dr. Dan Mellen of Rome, New York, the new president, was followed by a dinner dance at which doctors and their wives enjoyed themselves during a pleasant interlude in a session of hard work.

Editorial Comment

Dr. Martin B. Tinker, Sr. A brief notice on page 1249 of the April 15, 1954, issue of this JOURNAL announced the passing at the age of eighty-four of Dr. Martin B. Tinker, Sr., president of the Medical Society of the State of New York from 1916 to 1917. This distinguished surgeon was indeed an ornament to the profession.

He was born on an unpromising hill farm in western Massachusetts and worked his way through Harvard University and Jefferson Medical College. Following four years of surgical training under Dr. W. W. Keen in Philadelphia and at Boston City Hospital, Dr. Tinker became assistant resident surgeon with Dr. Halsted at Johns Hopkins University. From 1900 to 1903 he worked with Drs. Halsted and Harvey Cushing on brain surgery.

In 1903 he accepted a post at Cornell University Medical College teaching surgery and at the same time became chief surgeon at the Clifton Springs Sanitarium.

Dr. Tinker took a second medical degree from the University of Berlin in 1899 and at that time became interested in the work of Dr. Theodor Kocher, father of the surgical treatment of goiter. During Dr. Tinker's teaching career at Cornell he introduced the multiple-stage operation for the treatment of toxic goiter to this country. In 1910, when the Cornell University Medical College was moved from Ithaca to New York City, Dr. Tinker's teaching career formally ended, although he retained the attitudes of a natural and gifted teacher all of his life.

During Dr. Tinker's active career he published eighty papers dealing with surgical subjects. Most of his work was on thyroid surgery, but he also contributed some valuable papers on antiseptic technic and wound excision. In 1930 and 1931 the American College of Surgeons asked him to report his results with electric cutting and coagulation.

Dr. Tinker was elected president of the Medical Society of the State of New York in 1916. In 1918 he entered the United States Army with the rank of major and was assigned as chief of the surgical service at Reconstruction Hospital 26 located at Fort Des Moines, Iowa.

For many years he served his profession and the State as a member of the New York State Grievance Committee. He also served on the Credentials Committee of the American College of Surgeons.

Dr. Tinker was one of this country's outstanding surgeons, but his worth did not depend upon his surgical skill alone. He was also a splendid example of a physician who accepts his responsibility both to his profession and to his community. It is with deep regret that we note the passing of a great doctor and a good man.

The Five-Day Hospital Week. The *Bulletin of the Medical Society of the County of Kings*[1] comments on the five-day hospital week and asks "whether or not this is a blessing or a curse to the sick people"—

> It seems as if but yesterday that hospitals functioned twenty-four hours a day and seven days a week. However, since the second World War, there have been serious changes in the management of hospitals and at amazing speed, so much so that the average doctor is at a loss when confronted with ever-changing innovations instituted in many hospitals. Among the changes now prevailing in the vast majority of hospitals, especially in the larger cities, is the establishment of the five-day hospital week. The pathologic and clinical laboratories, the x-ray department, the social service department, the administrative department, and many other departments function five days a week. Only a skeletal force of interns and residents is to be found in most hospitals on Saturdays and Sundays. It must be remembered that change and progress are not synonymous. It would be well for all of us to stop and to evaluate the consequences of the five-day hospital week. Many serious-minded doctors are beginning to complain that their patients are inadequately treated in the hospitals on week ends. Patients are complaining that they receive no treatment on week ends while in the hospital, and many of them protest that they are unjustly charged for these two days since nothing is being done for them at that time.

It is time to reflect whether or not the five-day hospital week is a blessing or a curse to the sick people. From every side we are being warned that doctors have a bad press, that there has developed a strained relationship between the lay people and the medical profession, that lay people are no longer regarding doctors as messengers of God, and that the public is turning to cultists and quacks because of the unfavorable propaganda against the medical profession. The fact of the matter is that the five-day hospital week is creating a good deal of the discord between the medical profession and the general public. It would be well for the leaders of medicine to stop and to think and to evaluate the end results of the five-day hospital week and to institute measures to remedy them. The treatment of the sick is the responsibility of the medical profession; it must not permit laymen to dictate how, where, and when to treat those who are ill.

We agree that the welfare of the sick person is, or should be, paramount. We think that all who operate the hospitals, administer them, and care for the sick do so with that consideration in mind. Since all are human beings with diverse backgrounds and training, it may well happen that the objective may not always be attained. It is true that

> . . . voluntary hospitals are regulated and controlled by lay people who comprise the board of trustees or directors of the hospitals, and who may "hire or fire" doctors at will. Nevertheless, it is the doctors who regulate the management of the average hospital, and directly are responsible for the reputation of any particular institution. Most lay people equate hospitals with doctors, and believe that it is the doctors who are responsible for the type of management of any given hospital. Consequently the type of treatment that lay people receive in hospitals will in a measure mould and determine the opinion of doctors held by laymen.

But only in a measure will this be so. The opinion lay people may have about doctors will in the final analysis be determined, will it not, by the doctors and their attitudes towards nonmedical people, sick or well?

The *Bulletin* presents an interesting argument if not, in our opinion, the whole story.

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[1] February, 1954, p. 58.

PRESIDENT-ELECT

Medical Society of the State of New York

1954–1955

Dr. Renato J. Azzari of the Bronx was chosen president-elect for the year 1954–1955 by the House of Delegates of the Medical Society of the State of New York at the 148th Annual Meeting.

Dr. Azzari was born in Proctor, Vermont, where he lived until the age of eleven when the family moved to New York City. He was graduated from Long Island College Hospital in 1915 and interned at Italian Hospital in New York City from June, 1915, to February, 1917. Dr. Azzari joined the United States Army in May, 1917, and served as transport surgeon until February, 1919.

Following his return to civilian life Dr. Azzari started general practice in the Bronx in March, 1919. Since 1931 he has restricted his practice to the field of surgery. At present he is director of surgery at Morrisania City Hospital; attending surgeon, Union Hospital; consulting surgeon, Seton and St. Barnabas Hospitals. He also holds the position of clinical professor of surgery at New York Medical College.

Joseph Merante

RENATO J. AZZARI, M.D.

He has been a member of the Council of the Medical Society since 1949 and is chairman of the Committee on Economics and a member of the Executive Committee and Office Administration and Policies Committee. Dr. Azzari is also a delegate to the American Medical Association from the State Society.

President of the Bronx County Medical Society from 1948 to 1949, Dr. Azzari has been a director of United Medical Service and also served as chairman of its Medical Policy Committee. He is a Fellow of the American College of Surgeons and has been a member of the Board of Higher Education of the City of New York since 1948; his present term of appointment runs till 1961. Dr. Azzari is also a member of the Administrative Committee on the Board at Hunter College and City College of New York.

The War Memorial

The celebration of Independence Day this year, for the first time in many years, will see us hopefully free from any domestic military conflict with little military commitment in foreign lands except as might be necessary for adequate military defense measures. However, we have for long engaged in foreign wars with a resulting large toll of deaths among the noncombatant medical officers of the armed forces of the United States. These noncombatant medical officers have suffered heavy casualties, and among these were many from the State of New York, members of the Medical Society and with families.

What more fitting tribute could be paid to these men than the establishment of the War Memorial Fund to be utilized in the best tradition of our independence to help defray the costs of education of the children of these members?

The War Memorial Fund was created by contributions from each member of the State Medical Society. This type of thoughtfulness developed into a project which allowed the children of these heroes to be able to continue their education. It was not specified that this Fund must be used for a medical education. It extended its helping hand to all sons and daughters who qualified to participate in this Fund.

This kindness we know reached into the hearts of all members of our State Society. A feeling of gratitude was born within us. This meant that even though the head of the family could no longer provide, it had been so arranged that his children could carry on in a most honorable way despite his absence and be comforted.

Queer that so many battles again seem necessary to help produce the long looked-for peace of the world. While our medical officers are termed noncombatants and their great purpose is to ease the pain and repair the wounds of those who are combatants, their lives, too, must be subjected to great danger. Again through these catastrophes of war the medical men themselves must often make the supreme sacrifice. They have made this supreme sacrifice. They no longer can assist and aid in the direction of their families, and separation from their loved ones becomes a law of nature. They have complied with the law.

Those who have made the War Memorial possible at this time should feel deep gratitude for having done so, because this means that the loved ones may participate in the fund which has been created for their use by the thoughtfulness and kindness of the members of our State Medical Society whose thought was to help the doctor's children to carry on. No greater tribute could have been made to these heroes whose great sacrifice meant giving their all. Under these conditions and the circumstances of war, had they been able to make a choice for their children, I doubt if they would have done otherwise.

Again, as founders of and participants in this War Memorial, we should feel a sense of pride as we realize what has been done for the widows of these heroes. Because their children may go forward in educational fields of their choice, much peace of mind must be experienced, much comfort felt, great must be the heart ease for the wives of these men because their colleagues cared enough to so honor them. Great for the mothers and children but little enough for us to do. May the dead in memory forever march forward, heads erect, eyes front, ever reminding us, "If you have victory, sound the bugle for those who gave it to you."

Dan Mellen

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CONVENTION

New York State Academy

of

General Practice

October 11, 12, and 13, 1954

SYRACUSE, NEW YORK

Senile vaginal epithelium is low in glycogen, low in acid and (inset) low in protective Döderlein bacilli, encouraging growth of pathogenic organisms.

Normal vaginal epithelium is high in glycogen, is definitely acid and (inset) contains adequate Döderlein bacilli to combat pathogenic organisms.

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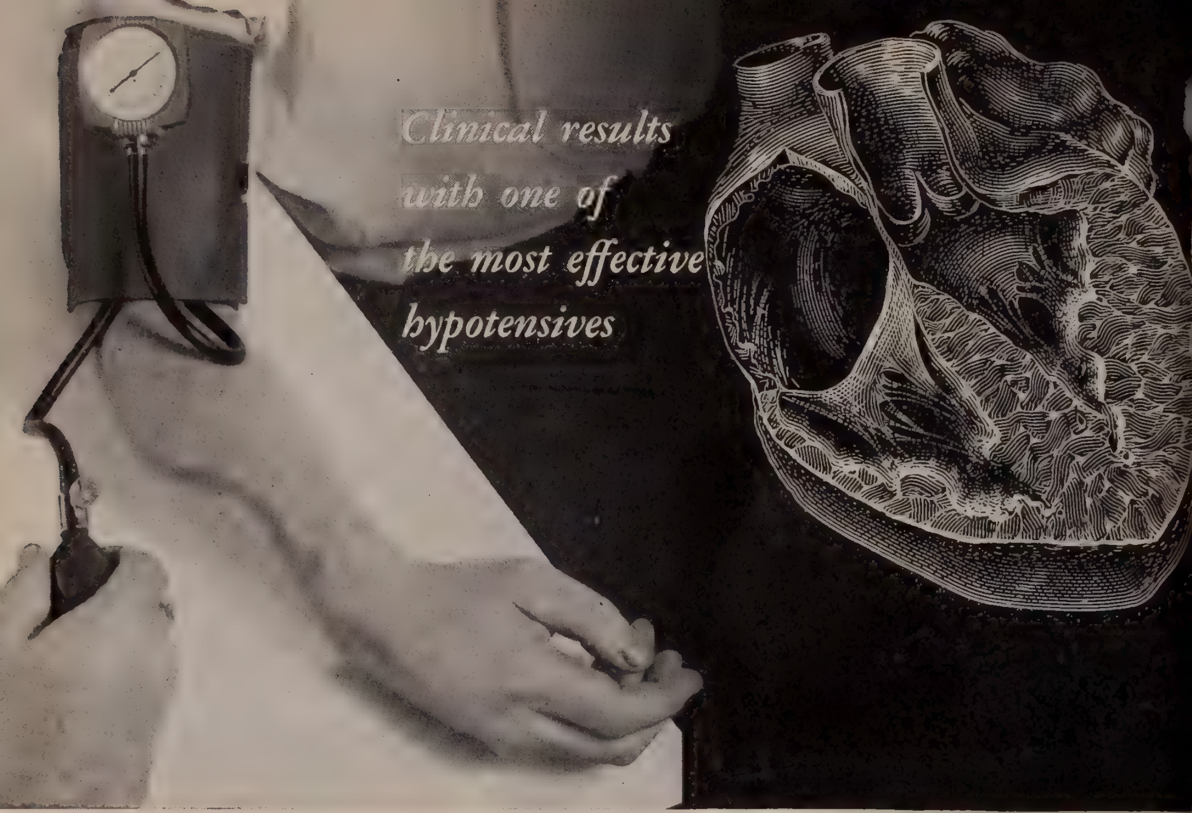
As infection develops, the epithelial cell layers, which normally number between forty-five and fifty-five, may decrease to as few as fifteen to twelve layers or may disappear entirely. With this loss of glycogen-bearing cell layers, the available carbohydrate released by physiologic desquamation into the vaginal secretion and ultimately converted into lactic acid is proportionately decreased.

Floraquin not only provides an effective trichomonacide (*Diodoquin*®), destructive to pathogenic organisms, but furnishes sugar and boric acid for reestablishment of the normal vaginal acidity and regrowth of the normal protective flora. G. D. Searle & Co., Research in the Service of Medicine.



Improvement in 67 to 72% of patients with hypertensive heart disease[1]

Together with significant reductions of elevated blood pressure in 80 per cent of outpatient hypertensives,[1] Methium therapy may result in substantial improvement in cardiac symptoms and signs.[1,2,3] Precordial pain, ventricular strain, heart failure and hypertrophy may all respond to careful treatment.[1,2,3] Actual myocardial damage, however, seldom shows any improvement (only 8 out of 44 in one study[1]).

With continued management, up to or beyond a year, blood pressure may be reduced and stabilized, and cardinal symptoms arrested or reversed, without any increase in dosage.[1]

As blood pressure is reduced, and even without reduction, hypertension symptoms have regressed. Retinopathy may disappear; headache, cardiac failure and kidney function may improve.

Methium, a potent autonomic ganglionic blocking agent, reduces blood pressure by interrupting nerve impulses responsible for vasoconstriction. Because of its potency, careful use is required. Pretreatment patient-evaluation should be thorough. Special care is needed in impaired renal function, coronary disease and existing or threatened cerebral vascular accidents.

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SCIENTIFIC ARTICLES

Sulfasuxidine Sensitivity

ALFRED A. POMERANZ, M.D., AND PAUL A. KIRSCHNER, M.D., NEW YORK CITY

(*From the Surgical Service of Mount Sinai Hospital*)

THE principle of bowel sterilization in the preoperative preparation of the patient for colonic surgery is now well established and universally practiced. Although complete sterilization is not quite achieved, it is possible to decrease the bacterial content of the colon to such a degree that postoperative morbidity and mortality due to infection are now at satisfactory low levels. This concept was first proposed in 1939,[1] but it was not until the introduction of the poorly absorbed, locally acting, insoluble sulfa drugs in 1942[2-4] that it was brought to fruition.

Of the many drugs introduced two have withstood the test of time and innumerable clinical trials, namely, sulfasuxidine (succinylsulfathiazole) and sulfathalidine (phthalylsulfathiazole). In contradistinction to other sulfa drugs and the newer antibiotics they retain this unique popularity because of efficiency of bactericidal action, economy, and a minimum of adverse reactions. Sulfasuxidine has been employed routinely on the ward and private services of Dr. John H. Garlock since 1942, and it is from this eleven-year experience that the cases forming the basis of this report are derived.

It has been demonstrated that sulfasuxidine has a minimal toxic effect both experimentally and in humans. Mice, rats, and monkeys fed massive doses of the drug orally not only showed low blood concentrations but demonstrated little systemic effect.[5] In a study of 200 patients Poth[6] found less than 5 per cent of the ingested drug was excreted in the urine, while blood levels did not exceed 1.5 mg. per cent of the free drug or 2.5 mg. per cent of the conjugated derivatives.

In a review of the cases reported thus far and in our patients, the reactions described are those now readily identified as specific allergic manifestations. They recall the more familiar allergic responses so commonly noted after sulfathiazole therapy. Indeed the active principle of sulfasuxidine (and sulfathalidine) is the sulfathiazole radical which is released from the parent compound by bacterial action and hydrolysis in the bowel lumen. It has been demonstrated that sulfathiazole is the most potent sensitizer of all commonly used sulfonamides[7] and thus can be expected to excite a severe reaction of hypersensitivity even if traces are absorbed in an allergic individual. Although 15 per cent of patients sensitized to one sulfonamide will react to any other sulfonamide, for the most part the reactions of hypersensitivity are highly specific for the particular substance used.[8]

Several authors have reported cases of severe reactions to these sulfonamides. Poth mentioned one case in 250 receiving sulfasuxidine in which a patient with ulcerative colitis developed fever of 103 F., headache, nausea and vomiting, chills, and erythema nodosum. The febrile response and rash were reproduced some time later by 1 Gm. of sulfathiazole. Clay and Pickrell[9] reported two cases, one of hyperpyrexia and the other of hematuria and crystalluria. In the former the reaction recurred after a second administration of sulfasuxidine. Johnson[10] described a fatal case of agranulocytosis due to sulfasuxidine in a patient previously demonstrated to be sensitive to sulfathiazole. Bargen[11] noted the incidence of allergic reactions to sulfasuxidine to be less than 1 per cent and indicated that sulfathalidine could be substituted with minimal or no symptoms.

In a pathologic study Moore, McMillan, and Duff[12] reviewed 22 fatal cases of sulfonamide allergy. Fifteen of these had received sulfathiazole either alone or in combination with other drugs, and one of the 15 had sulfasuxidine. This latter patient had been sensitized by sulfonamides administered a year previously. Characteristic necrotic, granulomatous, interstitial inflammatory, and polyvascular inflammatory lesions were described affecting the heart, liver, spleen, kidney, and other organs.

Stanton[13] described a fatal reaction to sulfathalidine in an individual previously sensitized by sulfathiazole. The clinical picture was that of hyperpyrexia with chills, edema, arthralgias, and leukocytosis. At autopsy a fatal myocarditis was disclosed along with other pathologic changes as described by Moore *et al.*

Bell[14] mentioned two patients who had to discontinue sulfasuxidine because of rash and severe headache. Fisch and Sachs[15] in commenting on high blood levels due to sulfathalidine noted a case which developed a chill, fever of 102 F., and granulocytopenia.

This small group of reported cases of severe allergic reaction to sulfasuxidine and sulfathalidine, when compared to the vast number of cases treated with the drugs, emphasizes the relative safety of these agents. Nevertheless, with a large proportion of our population already sensitized to sulfonamides and with certain of these yearly being exposed to colonic surgery as they become afflicted with intestinal cancer and other diseases, the total number of reactions will rise, although the incidence remains constant. This may well explain why on one service in one institution we have seen six severe reactions in less than two years.

Present Series

Our routine bowel preparation extends over four days and includes the following: low-residue diet, daily colonic irrigations, and sulfasuxidine, 4 Gm. four times daily. Of the cases described here four were males, all treated by bowel resection for carcinoma of the colon, and two were females, one with regional ileitis and one with carcinoma of the gallbladder. The ages ranged from fifty-one to eighty-one years with five patients sixty-nine years or older. There were no deaths.

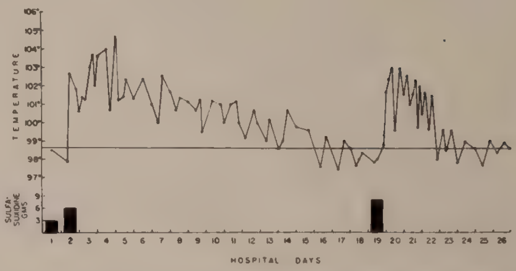

FIG. 1. *Case 1*—Immediate febrile response to sulfasuxidine reproducible eighteen days later by a second, smaller dose.

CASE 1.—M. A., an eighty-one-year-old white male, was admitted with a three-month history of increasing constipation and intermittent bleeding per rectum. Barium enema revealed the presence of a constricting carcinoma of the sigmoid. Preoperative preparation included sulfasuxidine, 3 Gm. three times daily. He received 3 Gm. on the evening of admission and again the next morning. Several hours later a third dose of 3 Gm. was given (total dose of 9 Gm.) at which time the patient first noted a chilly sensation and the temperature was found to be 102.6 F. In rapid order nausea, flushed facies, mild respiratory distress and cough, and diaphoresis appeared. For the next forty-eight hours he continued a spiking, elevated temperature, reaching 104 F. (Fig. 1) and had a nonproductive cough and two more shaking chills. Penicillin and Terramycin failed to affect his course. Three days after cessation of sulfasuxidine, he was subjectively and objectively improved. The temperature fell gradually, finally reaching normal levels ten days later.

After the temperature remained normal for four days, he was restarted on sulfasuxidine, receiving a total of 8 Gm. in approximately twelve hours. There was an almost simultaneous reaction similar to the first (Fig. 1). The temperature rapidly rose to 103 F.; he again began to cough and have repeated chills and severe diaphoresis. The blood examination at this time revealed a sulfa level of 0.3 mg. per cent. The symptoms and temperature elevation gradually subsided, and in seventy-two hours he was back to normal.

He was then prepared with oral streptomycin, 2 Gm. daily for three days, and underwent sigmoid resection and complementary cecostomy uneventfully. His postoperative course was uneventful, and he was discharged on the tenth postoperative day.

CASE 2.—M. G., a seventy-nine-year-old white man, was admitted with a three-month history of intermittent mild bleeding per rectum. The onset was manifested by fainting, tarry stools, and subsequent anemia. Since that time stools had showed frequent occult blood and occasional fresh blood. Physical examination revealed the presence of a firm, movable, nontender mass in the right abdomen. Barium enema confirmed the presence of carcinoma of the ascending colon.

The usual preparation was begun shortly after admission including sulfasuxidine, 4 Gm. four times daily. After receiving 20 Gm. of sulfa the patient's temperature rose to 103.2 F. During the next forty-eight hours he received another 24 Gm. (total dose of 44 Gm.), the temperature rising further and continuing to range between 103 and 105.4 F., dropping only briefly with antipyretic therapy. Throughout this three-day period of high fever the patient remained surprisingly well; he had no complaints and enjoyed a good appetite. The white blood cell count at the height of his fever (105.4 F.) was 6,800 with a differential count that included 86 per cent polymorphonuclear leukocytes, 7 per cent nonsegmented (band) forms, and 7 per cent lymphocytes. The remainder of the laboratory examination was within normal limits, and the physical examination, insofar as revealing a source of the fever, was entirely negative. In view of these findings it was accepted that this represented a reaction to sulfasuxidine, and the drug was discontinued. There followed a rapid lysis of the temperature, and within twelve hours it had fallen to 99.4 F., remaining normal thereafter. After a satisfactory recovery period he was prepared with neomycin, underwent colon resection uneventfully, and enjoyed a smooth postoperative course.

Case 3.—M. L., a seventy-one-year-old white man, was admitted with a five-month history of increasing constipation, intermittent generalized cramping abdominal pains, and the occasional appearance of small amounts of bright blood per rectum. Physical examination was not remarkable. The preoperative barium enema revealed the presence of a constricting neoplasm of the transverse colon. He was started on sulfasuxidine 4 Gm. four times daily, receiving a total of 16 Gm. in the first two hospital days. Over the next twenty-four hours the temperature rose to 103 F., remained at this level for sixty hours, and then dropped rapidly to normal levels twenty-four hours later. During the period of elevated temperature he complained of mild dizziness, headache, drowsiness, and anorexia, these symptoms subsiding with the temperature.

Two days preparation with neomycin was substituted, and he underwent colon resection. The postoperative course was complicated by a complete wound dehiscence without eventration on the seventh day. Although his condition remained precarious for several days, he showed a steady and gradual improvement. The wound healed secondarily, and he was discharged on the thirtieth postoperative day, ambulatory, afebrile, and having normal bowel evacuations.

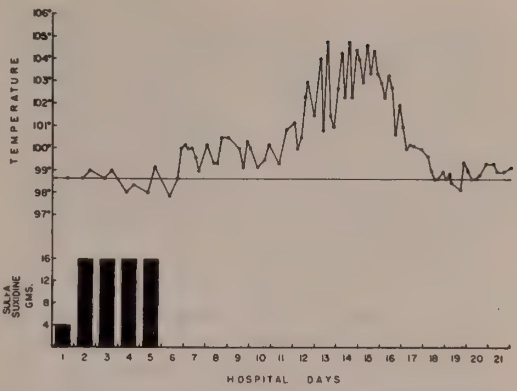

Fig. 2. *Case 4*—Delayed febrile response to sulfasuxidine occurring seven days after the last preparatory dose.

Case 4.—H. R., a seventy-year-old white man, gave a history of intermittent cramping lower abdominal pain, occasionally localized to the left lower abdomen. There was no change in bowel habits and no history of blood per rectum. Physical examination and laboratory findings were within normal ranges. Sigmoidoscopy was negative. Barium enema, however, revealed the presence of a carcinoma of the sigmoid. The usual preparation was instituted, including sulfasuxidine 4 Gm. four times daily. He received a total dose of 68 Gm. over four and one-half days.

He underwent sigmoid resection and complementary cecostomy uneventfully and entered a perfectly benign afebrile postoperative course for the next six days. He received no antibiotics or drugs postoperatively except for mild analgesics and sedatives. Spontaneous bowel movements started on the sixth postoperative day at which time the Michel skin clips and the cecostomy tube were removed.

On the evening of the sixth postoperative day his temperature rose to 103 F. The next day and for a total of three days, the temperature ranged as high as 104.8 F. (Fig. 2). During this time the patient remained well subjectively, suffering only mild malaise and anorexia and an occasional chill. Physical examination throughout this period was strikingly negative, the abdomen remaining soft and nontender at all times and the patient having normal bowel and bladder evacuations. Daily white blood cell counts during this period ranged between 6,550 and 9,700 per cu. mm. In the differential counts the polymorphonuclear leukocytes ranged between 86 and 91 per cent, the nonsegmented band forms running as high as 34 per cent. Repeated urine examinations were negative, as was the blood culture and multiple blood agglutinations. Because of the patient's age, the severity of previous surgical procedure, and severity of the prevailing temperature reaction, he was started empirically on massive doses of antibiotics that included intravenous aureomycin and penicillin-streptomycin in combination. After three days of high fever above 104 F. a rapid defervescence appeared, reaching normal on the twelfth postoperative day, at which time the white blood cell count was 12,000 with a normal differential. The course thereafter was entirely normal; the patient suffered no sequelae from his bout of fever and was discharged on the sixteenth day after operation.

Case 5.—B. R., a sixty-nine-year-old white woman, complained only of increasing constipation for the six months prior to admission associated with occasional nausea. Physical examination was not remarkable except for the presence of a large, irregular, nontender, and movable mass in the right flank. Barium enema, gastrointestinal series, and intravenous pyelogram were negative. Although the consensus of opinion was carcinoma of the gallbladder, in anticipation of a possible associated bowel resection she was placed on the usual colonic preparation. This included sulfasuxidine for three days during which time she received a total of 44 Gm. Laparotomy revealed an inoperable carcinoma of the gallbladder with multiple liver metastases and many enlarged retroperitoneal lymph nodes.

On the evening of the first postoperative day the temperature rose to 100.8 F., and over the next four days it continued to rise, reaching a maximum of 104.2 F. on the fifth postoperative day. Thereafter the temperature ranged between 102 and 103 F., slowly subsiding to normal by the twelfth postoperative day. On the sixth postoperative day she presented a severe, generalized urticarial rash with edema of the hands, feet, and face.

Throughout this period of fever and rash the physical examination was entirely negative. The abdomen was soft and nontender, and bowel movements were regular and normal in character. Similarly, laboratory examinations were nonrevealing. The white count never exceeded 13,000 per cu. mm. with a slight shift to the left: 81 per cent polymorphonuclear leukocytes of which 16 per cent were band forms. Antibiotics did not appear to affect the temperature course. The rash did not respond to antihistamines but faded with the return of normal temperature. The patient was finally discharged on the fourteenth postoperative day, afebrile and asymptomatic.

Case 6.—B. M., a fifty-one-year-old white woman, was known to be suffering from regional ileitis of eight years duration, manifested by abdominal pain, nausea, and diarrhea. Because of a recent exacerbation of symptoms and the appearance of obstructive changes surgery was advised.

Physical examination revealed tenderness in the right lower abdomen and the presence of a large, boggy, ill-defined mass in this region. Her preparation included sulfasuxidine for four days for a total dose of 56 Gm. An ileotransverse colostomy with exclusion was performed. She tolerated the operative procedure very well, and her immediate postoperative course was unusually smooth and afebrile. Spontaneous bowel movements started on the third day, and Michel skin clips were removed on the morning of the sixth day. There was primary wound healing, and the patient was ambulatory and asymptomatic at this time.

On the evening of the sixth day a rather sudden change in the patient was noted. She became nervous, had a flushed facies, and the temperature suddenly rose to 104 F., the pulse to 96. For the next forty-eight hours the temperature hovered in the vicinity of 105 F., while the pulse only twice exceeded 100 per minute. During this interval she was relatively comfortable, had no complaints, managed to take nourishment by mouth, and had spontaneous bowel movements. The physical examination consistently failed to disclose a source for the temperature elevation. Chest films, blood culture, and urine examinations were negative. The white blood cell count did not rise above the preoperative level of 13,700, although there was a shift to the left with 91 per cent polymorphonuclear leukocytes of which 37 per cent were band forms. Twelve hours after the first temperature spike a maculopapular erythematous rash, both confluent and discrete, appeared over the extremities, persisted for two days, and then rapidly faded with the fall in temperature.

By the morning of the ninth postoperative day, after a precipitous drop, the temperature reached normal levels and remained so for the remainder of the postoperative period. She enjoyed a smooth convalescence thereafter and was discharged ambulatory, afebrile, and asymptomatic.

Comment

It is to be noted from the above cases that the first three are reactions that appeared almost immediately on institution of the drug. In contrast, the last three cases represent a delayed response appearing several days after cessation of therapy, corresponding to the end of the first postoperative week. Both types of reaction, immediate and delayed, have been amply described in the past, and it is customary to consider them analogous to sensitization phenomena. It has been observed that after initial tolerance to a drug, subsequent doses of smaller and even minute amounts may precipitate severe reactions in susceptible individuals.

An effort was made to determine in each case, either from the patient directly or through the attending physician, whether or not there had been exposure to sulfa therapy. In only two cases was it possible to obtain an affirmative reply: Case 1 received Gantrisin while undergoing transurethral prostatectomy, and Case 2 received triple sulfa five years ago. From past experience we are inclined to believe that Case 3 probably received a sulfa drug in the past and that this group of three cases presented the immediate generalized reaction in the form of a high sustained fever. Indeed, in Case 1 it was possible to demonstrate, as Clay and Pickrell[9] had previously, the reproducibility of the phenomenon by a subsequent test dose.

One can only speculate on the possible mechanism of delayed reaction in the last three patients. First, these may well be reactions of sensitivity to former administrations of sulfa drugs, the latent period being explained on the basis of individual variation. Or, what is more likely, they represent reactions to the initial exposure to a new drug, the delayed appearance of sensitivity phenomena being comparable to "serum sickness." In Case 5 the rash first appeared seven days after the last dose of sulfasuxidine, while in Cases 4 and 6 the initial spike in the temperature reaction appeared seven days after the last dose of sulfasuxidine. We believe that the uniformity of reaction time in these cases supports the second of the two possible mechanisms.

In the absence of a rash there may be great difficulty in differentiating these alarming episodes of fever from a catastrophic postoperative complication. Careful search for evidence of infection by both physical examination and extensive laboratory tests is unrevealing. Striking, however, is the relative well-being of the patient and the maintenance of the normal bodily functions of appetite, digestion, and bowel and bladder function. Of the multiple laboratory tests performed the only consistent finding was in the differential white blood cell count. While the total counts remained with normal limits, there did occur a considerable shift to the left in most cases, with polymorphonuclear leukocytes ranging up to 91 per cent and nonsegmented (band) forms up to 37 per cent. All the reactions were self-limited, and in none did we believe that the broad-spectrum antibiotics, when employed, exerted any appreciable effect.

The appearance of these febrile reactions in the preoperative period, although puzzling and not likely to engender the anxieties attending their appearance in the postoperative course, nevertheless must be differentiated from the myriad manifestations and complications of the disease being treated. For example, in carcinoma of the colon or in diverticulitis one might consider bowel perforation and pericolonic abscess, while in ulcerative colitis or regional ileitis the possibility of recrudescence of activity may loom.

Summary and Conclusions

A series of six cases exhibiting severe febrile and allergic reactions to sulfasuxidine has been presented. The literature has been reviewed with special reference to the occurrence and mechanism of these reactions.

Sulfathiazole, the active principle of the relatively insoluble sulfonamides, has been shown to be responsible for these reactions. It is suggested that a history of sulfonamide allergy be sought prior to administration of either sulfasuxidine or sulfathalidine and that the occurrence of untoward reactions be attributed to these drugs barring other obvious causes.

The authors wish to express their appreciation to Dr. Shepard Siegel for his aid in the clarification of the drug sensitization phenomena.

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Treatment of Refractory Nephrotic Edema and Acute Cirrhosis of the Liver

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WHETHER nephrosis is a distinct entity, a renal disease, a component part of glomerular nephritis, or a metabolic disorder[1-3] remains to be determined. However, there is no question of the link with altered metabolism of protein, electrolytes, and water. In Laennec's cirrhosis of the liver altered metabolism of these constituents also exists.[4] Edema and ascites are the most distressing results. The reduced colloid osmotic pressure of the blood corresponds to the degree of hypoalbuminemia.[5] In the nephrotic the edema is largely due to hypoproteinemia on the basis of hypoalbuminemia brought about by continuous albuminuria,[6] the edema being closely correlated to the degree of proteinuria.[7] There is also evidence to show that serum proteins of nephrotics differ chemically from normal protein in amino acid composition. In cirrhosis of the liver the edema is largely due to hypoproteinemia (hypoalbuminemia) on the basis of failure of the liver to synthesize albumin.[5,8] Inadequate protein intake, anemia, increased capillary permeability probably on the basis of intracellular hypoproteinemia, and portal hydrostatic hypertension also play a part. Water and electrolyte imbalance occurs with edema formation after colloid osmotic equilibrium between blood and tissue is lost. During the period when edema is present, antidiuretic substances can be extracted from the urine.[9,10] The disturbed electrolyte balance of sodium and potassium, water retention, transient glycosuria, and, especially in cirrhotics, the low to absent urinary output of androgens and elevated estrogens[11,12] with suggestive testicular atrophy[13] would indicate an associated endocrine disturbance.

The etiology of cirrhosis and nephrosis is poorly understood, and treatment today usually is directed not to the underlying pathology present in the kidney or liver, but rather to electrolyte imbalance and protein metabolic disturbances that accompany the disease. There is one exception, however, and that is surgical treatment for alleviating portal hypertension by portacaval and splenorenal shunts.[14-16] Favorable results in eliminating ascites and decreasing the size of esophageal varices may be obtained by these procedures, but the patient must be in a fairly good nutritional state before they can be attempted. In a significant number of patients managed on a salt-poor, highly nutritious diet containing large amounts of protein, carbohydrates with vitamin supplements, and parenteral liver in cirrhotics, there has been loss of edema and ascites and disappearance of jaundice with improvement in liver function.[17,18] Low blood albumin levels may continue in some cirrhotics even after positive nitrogen balance is established.[19] In nephrotics serum albumin levels usually remain low and also are difficult to elevate by high-protein diets and high rates of nitrogen retention.[20] Tryptophane, when omitted from the diet of man or animals, is followed by the immediate development of negative nitrogen balance plus tissue wasting. In rats there is anemia and a marked reduction of serum proteins involving both the albumin and globulin fractions.[21-23] Methionine, on the other hand, is poorly utilized by patients with liver disease and may produce toxic symptoms when given in therapeutic doses.[24]

In refractory nephrotic edema or acute fulminating cirrhosis of the liver with associated anorexia, nausea, and vomiting, it is a difficult and tedious problem to administer even the necessary minimum protein nutritive requirements. Dietary management is not sufficient to control edema and maintain the well-being of the patient. The diet is supplemented by the use of diuretics and intravenous feedings of such nutrients as amino acid mixtures, whole blood, plasma, albumin, serum, globin,[25] etc. The results in the majority of the patients treated with intravenous supplements are disappointing; there is usually only a temporary rise in plasma protein levels and a transient diuresis that lasts only as long as treatment is continued.[26,27]

Typhoid vaccine,[28] ACTH, cortisone, and induced measles in combination with albumin in nephrotic children has been effective in bringing about a sharp drop in proteinuria that is followed by a diuresis and an occasional short-lasting remission.[29,30] A more sustained diuresis is obtained by the intravenous use of colloid osmotic active acacia and a rigid dietary restriction of sodium, supplemented with diuretics.[31–33] Because of the possible toxic effects [34,35] its use is not without hazard[36] and is usually held in reserve until all other methods have failed.

After careful observation of the result of treatment in an adult nephrotic, a safe and efficient method has been worked out to mobilize and eliminate edema fluid that is refractory to the usual methods of current treatment. As will be shown in detail in one case of nephrosis and in one case of acute cirrhosis of the liver with refractory edema, good results can be obtained when a salt-poor diet, such as the rice-fruit-sugar diet of Kempner,[37] plasma, whole blood, and mercurial diuretics[38] are used according to a plan based on known physiologic principles of hemocirculatory dynamics.[6,39–41]

Plasma is used for its hypertonic qualities taking advantage of the high partial osmotic pressures of protein colloids,[42] and electrolytes consisting of sodium chloride normally present in plasma plus the excess sodium that was added as sodium citrate. Whole blood is used for the additional cell volume it could contribute to the circulatory volume.[43] Whole blood and plasma were administered rapidly in 500-cc. quantities over a period of twenty to thirty minutes.[44] Rapidly raising the colloid osmotic pressure of the blood produces marked changes in plasma osmotic pressure and insures mobilization of extracellular tissue fluid. It also delays equilibrium and diffusion of the excess administered sodium (as citrate) into the extracellular tissue spaces. The mobilized extracellular fluid increases blood volume which directly increases the glomerular filtration pressure and glomerular filtration rate. A mercurial diuretic is administered immediately following each transfusion to prevent sodium and chloride reabsorption by the kidney tubules while the glomerular filtration rate is elevated. The excess sodium administered as sodium citrate promotes the excretion of fluid in excess of the amount which would normally be eliminated following a mercurial diuretic.

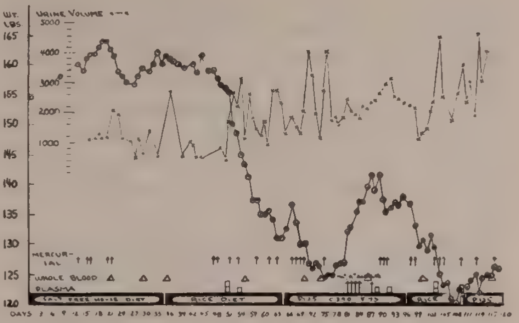

FIG. 1. Results of treatment in Case 1. Key to medication: short upright arrow—2 cc. intramuscular Mercuhydrin; triangle—500 cc. citrated whole blood; block—500 cc. citrated pooled plasma; long arrow—8 Gm. sodium and potassium acetate mixture.

Clinical Material and Methods

This physiologic procedure was also tried on three adult nephrotics, one case of cirrhosis of liver with jaundice and hepatic failure, and one case of chronic leukemia that responded to nitrogen mustard but developed generalized anasarca. While all were refractory to the usual methods of treatment, they responded to this treatment with loss of pleural effusion, ascites, and edema. In three cases of cirrhosis of the liver uncomplicated except for ascites, this method had no effect except for the prevention of the formation of ascites. Abdominal paracentesis was not required while on active treatment. Failure to respond to treatment is probably due to the overwhelming influence of the hydrostatic pressure over the colloid osmotic pressure in the portal circulation.

Case Reports

Case 1.—First admission of a male Puerto Rican, age twenty-eight, was on July 9, 1948. He gave a history of increasing edema beginning one and one-half years ago. There was massive anasarca associated with pleural effusion and ascites. Blood pressure was 140/105. Urine was acid, specific gravity 1.008, albumin 4 plus; microscopic examination showed many granular casts and occasional white and red blood cells. Total serum protein was 4.3 Gm. with inversion of the albumin-globulin ratio; cholesterol and esters were 332 and 173 mg. per cent, respectively; red blood cells 3,370,000, hemoglobin 13 Gm. Nonprotein nitrogen was 81 mg. per cent, and the blood Mazzini test was negative for syphilis. Diagnosis was chronic glomerulonephritis with a nephrotic component.

Results of treatment are summarized in Fig. 1. The patient was placed on a salt-free house diet and given periodic transfusions and frequent injections of Mercuhydrin over a thirty-four-day period. There was no evidence of improvement, and the patient was running a downhill course with increasing edema. On the thirty-fifth day the diet was changed to rice-fruit-sugar supplemented with vitamins. This diet was continued to the sixty-sixth hospital day when it was changed to protein 125 Gm., carbohydrate 390 Gm., and fats 73 Gm. During the thirty-one days on the "rice" diet the diuretic effect of the plasma and blood followed with mercurials was dramatic. There was a progressive weight loss of approximately 30 pounds with disappearance of ascites and pleural effusion; 1 plus ankle edema persisted. On changing the diet to P-125, C-390, F-73, there was a slight weight gain, but this responded to additional mercurials with plasma. The patient continued to lose weight, going from 162 pounds when the "rice" diet was started on the thirty-fifth day to 124 pounds on the seventy-sixth hospital day, a weight loss of 38 pounds over a forty-one-day period. A trace of ankle edema persisted, however. No medication was given over the next six days. The patient gained 7 pounds in weight, and pitting edema reappeared up to the knees. It was decided to try combined sodium and potassium acetate[45] as a diuretic measure in an attempt to eliminate the residual edema fluid. Thirty-two grams were given over a four-day period and an 8-Gm. dose by error four days later. This form of medication had to be discontinued because of the gain in weight associated with the reaccumulation of ascites and pleural fluid. It is interesting to note that during this time, although the patient gained weight with edema formation, the urinary output remained high. This edema remained refractory to whole blood and plasma in conjunction with mercurials and only responded to this form of treatment when the diet was changed to rice-fruit-sugar. The edema then entirely disappeared, and the patient weighed approximately 120 pounds, a loss of 42 pounds since the "rice" diet started. The P-125, C-390, F-73 diet was again started and the patient discharged nine days later (November 3, 1948) at his request with 1 plus ankle edema and weight gain of 6 pounds.

Follow-up studies in the clinic showed a weight gain of 12 pounds over a two-week period. Ankle edema was 2 plus. The "rice" diet was then supplemented with 120 Gm. daily of an amino acid mixture containing 1.5 per cent tryptophane and less than 0.05 per cent sodium (Protinal*), equivalent to 70 Gm. of protein per day. Edema disappeared completely in approximately one month. He was then placed on a regular salt-poor diet along with the amino acid supplement as above. No further plasma or diuretics had been required up to June, 1949, when contact was lost with the patient.

Laboratory Results on First Admission.—The urine continually showed a specific gravity fixed around 1.010 with a persistent 4 plus albuminuria and occasional glycosuria. On microscopic examination there were a moderate number of hyaline, granular, and a few waxy casts with an occasional white and red blood cell. The blood count during the time in the hospital ranged between 2,000,000 and 4,000,000 red blood cells per cu. mm., and after discharge it remained above 4,000,000 red blood cells and 13 Gm. of hemoglobin. The white cells usually remained between 10,000 and 14,000 with a normal differential count, except for an occasional increase of eosinophils of 3 and 9 per cent.

Blood chemistries were as follows: On the salt-free house diet the nonprotein nitrogen remained between 81 and 56 mg. per cent; cholesterol and esters rose from 352 and 178 to 815 and 530 mg. per cent, respectively. When the diet was changed to rice-fruit-sugar, cholesterol and esters dropped to 280 mg. and 140 mg. per cent with a drop in nonprotein nitrogen to 37 mg. per cent. High cholesterol levels were again obtained along with a slight increase in nonprotein nitrogen when the diet was changed to P-125, C-390, F-73. The serum protein was less regularly altered. It averaged about 5.0 Gm. with an inverted albumin-globulin ratio. When on the "rice" diet with the administration of plasma or whole blood and mercurial diuretics, there was a progressive elevation of blood pressure to 170/120 mm. of mercury associated with the diuresis and weight loss. The same type of blood pressure rise was seen when the patient was on the "rice" diet and received amino acids. When the diet was changed to high protein and also during the time while receiving sodium and potassium acetate, the blood pressure dropped to 128/90 at one point. At no time during treatment did the diastolic blood pressure go below 90 mm. of mercury.

SECOND ADMISSION (AUGUST 18, 1949).—The patient complained of weakness, nausea, and vomiting with bilateral costovertebral pain of approximately one month duration and anorexia for three months. He had occasionally noticed a clay-colored stool during the past month. He denied edema since his last admission. On physical examination the patient was ambulatory and in no acute distress. The skin was pale and sallow. The sclera were slightly icteric. Breath sounds were diminished over the left lower lung with fluoroscopic confirmation of fluid. The abdomen was slightly distended with fluid, and the liver was palpated two or three fingerbreadths beneath the costal margin and was nontender. The spleen was felt on deep inspiration. Ankle edema was 1 plus.

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* Protinal was obtained from National Drug Company, Philadelphia.

The weight was 130 pounds and blood pressure 108/68 mm. of mercury.

Laboratory findings were as follows: The urine was acid, specific gravity 1.012, albumin 4 plus, glucose trace, bile trace, urobilinogen positive in a 1:5 dilution; microscopic examination showed 8 to 10 red blood cells and an occasional white blood cell. The hemoglobin was 9.2 Gm. per 100 cc., red blood cells 3,320,000 per cu. mm., white blood cells 3,450 with normal differential except for 6 per cent eosinophils. Nonprotein nitrogen was 81 mg. per cent; cholesterol and esters 222 and 60 mg. per cent, respectively; icterus index 30; cephalin flocculation test strongly positive; alkaline phosphatase 15.1 Bodansky units; phosphorus 8 mg. per cent; the albumin-globulin ratio was reversed. The diagnosis was chronic glomerulonephritis with nephrotic component, complicated by hepatitis. The exact date of the onset of this complication is unknown. The jaundice was assumed to be on the basis of delayed homologous serum hepatitis.

The patient was placed on a high-protein, low-salt diet supplemented with the protein hydrolysate (Protinal) and vitamins. He remained on this diet throughout his hospital stay. As on his previous admission, Mercuhydrin, whole blood, or plasma alone had little effect. When the blood or plasma was immediately followed by a mercurial diuretic, the response was dramatic with disappearance of edema, ascites, and effusion. The urinary output remained consistently high, and there was a gradual weight loss of $10^1/_2$ pounds. Icterus disappeared, and the patient felt well. On discharge he was edema-free, but the liver and spleen were still palpable.

Laboratory Results on Second Admission.—Urine specific gravity ranged between 1.012 and 1.017. All specimens showed a 4 plus albuminuria with a trace of glucose. Bile gradually disappeared, and urobilinogen never was present beyond a dilution of 1:20. The cephalin flocculation test remained positive. Nonprotein nitrogen, which was 81 mg. per cent on admission, rose to 100 mg. per cent and gradually fell to 60 mg. per cent on discharge, at which time the urea nitrogen was 38 mg. per cent. Cholesterol and esters gradually rose from 222/60 to 445/287 mg. per cent, respectively. Alkaline phosphatase, which was 15.1 Bodansky units on admission, rose to 20.4 units and then fell to 11.1 units on discharge. The phosphorus gradually fell from 8.04 to 5.05 mg. per cent and the icterus index from 30 to 8 units.

THIRD ADMISSION (DECEMBER 9, 1949).—The patient felt well until two weeks prior to this admission when he began to notice almost constant headache and vomiting after each meal. He was edema-free and had a uremic odor to his breath. Emergency nonprotein nitrogen was 100 mg. per cent, and the patient was admitted to the hospital. The liver was palpable three fingerbreadths below the costal margin and was nontender. Spleen was not palpable. Blood pressure was 150/100; pulse was 80 with regular sinus rhythm.

Laboratory findings were as follows: Urine specific gravity was 1.012, albumin 4 plus, glucose negative; microscopic examination showed red and white cells and granular casts. Red blood count was 2,800,000, hemoglobin 8.15 Gm.; differential count was normal except for 6 per cent eosinophils. Albumin-globulin ratio was 2.75:2.5, cholesterol-ester ratio 286:111, Hanger test weakly positive, alkaline phosphatase 1.0, phosphorus 10.4, nonprotein nitrogen 100 mg., blood urea nitrogen 90 mg., creatinine 4.3 mg. Phenolsulfonphthalein test showed excretion of less than 10 per cent of dye in two hours. Concentration and dilution test showed a fixed specific gravity of 1.012. Bromsulfonphthalein test showed no dye in blood in thirty and after forty-five minutes.

The patient was transfused with whole blood and given intravenous feedings. The course was downhill, terminating in uremia on January 17, 1950, with a nonprotein nitrogen of 360 mg. Autopsy revealed chronic glomerulonephritis with markedly contracted kidneys.

Case 2.—A thirty-six-year-old white man entered Bellevue Hospital complaining of weakness and abdominal pain of three weeks duration. He admitted brandy and beer drinking for three years. Eight weeks prior to this admission, the patient went on an alcoholic binge and consumed $1^1/_2$ pints of brandy per day and an unknown quantity of beer. Four weeks later he began to lose his appetite and had abdominal pain and vomiting. His abdomen became progressively larger and his urine dark. For one to two days, two weeks prior to this admission, he had noticed arthralgia of both shoulders and one knee. One week prior to his admission he stopped eating because of distaste for all food. At that time he had four to five loose black stools per day and was told his eyes were yellow. The patient appeared toxic and acutely ill; temperature was 101 F., pulse 106, blood pressure 110/78 mm. of mercury. Skin and sclera were slightly yellow. The tongue was magenta red without atrophy. Both diaphragms were elevated, and the abdomen was slightly distended with fluid. The liver extended to the umbilicus and was smooth and tender. Spleen was not palpable. There was edema of the ankles.

Laboratory findings were as follows: Hemoglobin was 13 Gm., red blood cells 3,860,000 per cu. mm., white blood cells 19,850 per cu. mm., platelets 285,000, hematocrit 44 per cent, mean corpuscular volume 113, reticulocytes 2.8 per cent. Examination of blood smear showed target cells, macrocytes, and

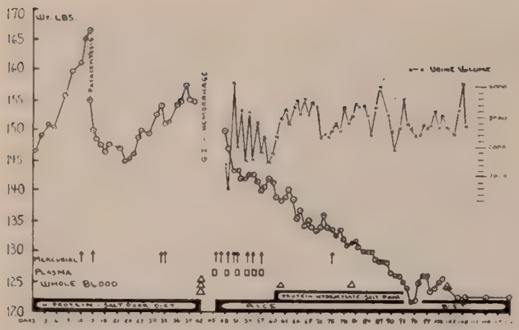

FIG. 2. Results of treatment in Case 2. Key to medication: upright arrow—2 cc. intramuscular Mercuhydrin; block—500 cc. citrated pooled plasma; triangle—500 cc. citrated whole blood.

hyperchromia. The urine specific gravity was 1.020, pH 6.5, albumin 2 plus, glucose 1 plus; microscopic examination revealed 15 to 20 red blood cells and 1 to 3 white blood cells. There were a few hyaline casts. Bile was present, and urobilinogen was positive in dilution 1:60. The albumin-globulin ratio was 2.34:3.86 Gm., cephalin flocculation test strongly positive, alkaline phosphatase 7.2 Bodansky units, calcium 7.2 mg. per cent, phosphorus 2.9 mg. per cent. Icterus index was 45, van den Bergh immediately positive, Mazzini negative, erythrocyte sedimentation rate 45 mm. in one hour (Westergren).

Results of treatment are summarized in Fig. 2. The patient was placed on complete bed rest and given a high-protein, salt-poor diet supplemented with vitamins, Brewer's yeast, and eggnog. His appetite was poor, and he consumed very little food. Ascites and edema accumulated rapidly, necessitating paracentesis on the thirteenth hospital day. A low-grade temperature persisted. Ascites reaccumulated, and the patient became lethargic and finally refused all food.

On the forty-second hospital day he had a massive hematemesis and appeared terminal. He was immediately transfused with 1,500 ml. of whole blood and given nothing by mouth for the next three days; he was then placed on a rice-fruit-sugar diet supplemented with vitamins and given plasma infusions followed by mercurials. The response was dramatic. The urine output increased with each infusion of plasma and mercurial, and this was associated with improved well-being and a gradual loss of ascites and edema. Plasma was discontinued after the sixth transfusion because of slight albuminuria, probably due to circulatory saturation with albumin. Because of the small quantities of protein available in a rice diet and the increased demand for protein in cirrhotics to maintain positive nitrogen balance, the diet was supplemented with a low-sodium and high-tryptophane amino acid mixture containing approximately 1.5 per cent tryptophane and less than 0.05 per cent sodium (Protinal). He received 4 ounces of this per day, equivalent to 70 Gm. of protein. The amino acid mixture had a pronounced diuretic effect with increased urinary output that averaged well over 2,500 ml. per day. Plasma was no longer required, but periodic transfusions of whole blood were given for anemia. Ascites, edema, and the low-grade temperature progressively disappeared. During this time he developed a sterile left hydrothorax. The patient lost 33 pounds during the seven-week period of treatment. The spleen became palpable on the seventy-ninth hospital day and increased in size as the liver became smaller and more firm. The diet was changed to a salt-poor house diet supplemented with vitamins, and the amino acid mixture was tried. The edema-free state was maintained, and the patient was discharged upon request April 18, 1949.

Because of the low-grade temperature during hospitalization, penicillin, 100,000 units every three hours, was given for sixteen days and aureomycin, 250 mg. every six hours for two days, with little or no effect. Immune globulin, 11.5 cc., was administered during the time of plasma transfusions.

Laboratory Results on First Admission.—The urine urobilinogen levels became normal on the fifth hospital day, and bile disappeared on the twelfth hospital day. Specific gravities ranged from 1.010 to 1.020 up to the time of beginning of the "rice" diet, and thereafter during diuresis with plasma and mercurials the specific gravity averaged 1.003. Transient glycosuria and albuminuria disappeared on the seventeenth hospital day. Microscopic hematuria with occasional white blood cells and granular casts persisted throughout his hospital stay. Creatinuria occurred frequently with no regularity, and a level of 500 mg. per cent was obtained on one twenty-four-hour specimen. The albumin-globulin ratio with a relative high globulin level returned to normal one month after treatment with the "rice" diet and plasma infusions had been started. The cephalin flocculation test remained positive, and blood cholesterol values were low through the hospital stay. The alkaline phosphatase and icterus index slowly returned to normal values during the first month of hospitalization. Nonprotein nitrogen varied between 25 and 35 mg. per cent, but the blood urea nitrogen dropped from 15 to 5 mg. per cent after treatment. Daily nonprotein nitrogen levels at the time of hematemesis showed no change.

During the period of transient glycosuria two fasting blood sugar levels of 63 and 77 mg. per cent were recorded. A 100-Gm. oral glucose tolerance test done on the twenty-fifth hospital day at a time when edema fluid was accumulating showed the following blood sugar levels: fasting 98 mg., half-hour 107 mg., one and a half hours 100 mg., two and a half hours 108 mg. per cent; corresponding urine specimens were lost. Glucose tolerance was repeated on the sixty-first hospital day following the plasma transfusions at a time of active diuresis with the following results: fasting blood sugar 67 mg., half-hour 100 mg., one hour 243 mg., two hours 111 mg., three hours 105 mg. per cent. Corresponding urine specimens were negative for glucose.

Prothrombin time varied between 50 and 64 per cent of normal on different occasions following treatment. The heterophil and cold agglutination tests were negative. Smears and cultures of both ascitic and pleural fluid were negative for acid-fast bacilli and pyogenic organisms.

Second Admission.—Patient was readmitted to another hospital in December, 1949, complaining of diarrhea and weakness. History was essentially negative except for the fact that he continued to drink brandy amounting to 1 pint a day since previous discharge from the hospital. The patient appeared well with no edema, ascites, or jaundice. There were a few spider angiomata over the upper thorax; the liver was firm and nontender and extended two fingerbreadths below the costal margin. The spleen could not be palpated on careful examination in various positions. The albumin-globulin ratio was slightly greater than 1; Hanger test was positive, and the alkaline phosphatase was within normal limits, as was the icteric index.

Comment

Kempner diet, plasma, whole blood, and mercurial diuretics, when used according to known physiologic principles of hemocirculatory dynamics, proved to be effective agents in rapidly mobilizing and eliminating refractory nephrotic edema and edema associated with acute cirrhosis of the liver and chronic leukemia.

That three cases of longstanding cirrhosis of the liver failed to lose their ascites by this form of treatment can best be explained on the basis of failure of the colloid osmotic forces of the blood to balance the opposing forces of the colloid osmotic pressure of the ascitic fluid and the probable high portal system hydrostatic pressure.

The interesting feature of this form of treatment is the diuretic response to whole blood and plasma containing sodium as sodium chloride, etc., and sodium citrate added as a preservative. This observation emphasizes certain facts already known concerning the importance of protein (Starling, Tullio Gayda, Epstein) and sodium in maintaining fluid and electrolyte balance between blood and tissue: "Experiments performed by Tullio Gayda[40] showed that edema, which is produced in perfusion experiments when normal saline or Ringer's solution is used, is prevented by the addition to the perfusing fluid of colloids which are in osmotic equilibrium with the colloids of the lymph and tissue."[6] The balancing of the colloid osmotic forces between the blood and tissues, however, is not sufficient to control edema in all hypoproteinemic patients such as nephrotics and cirrhotics. Although fluid is mobilized from the tissue spaces when the plasma protein levels are elevated, this fluid is not always eliminated as it normally should by way of the kidneys. Histopathologically in a great many nephrotics of the so-called "lipoid" variety and in many cirrhotics, the amount of degenerative changes in the glomeruli, tubules, and blood vessels is negligible.[1] It is reasonable then to assume, especially since the kidneys respond to diuretics by doing work, that there may be some other factor preventing the kidney tubular epithelium from functioning in its normal capacity.

Following the administration of plasma or whole blood alone, the glomerular filtration pressure is elevated and glomerular filtration accelerated, but only small amounts of urine are produced. It would seem logical that most of the tubular urine was reabsorbed. If the sodium and chloride constituents of the glomerular filtrate are prevented from being reabsorbed by the action of mercurials at a time when the rate of filtration is high, as following the administration of plasma or whole blood, then diuresis ensues. When the glomerular filtration rate is low as seen in hypoproteinemia, especially when salt intake is rigidly restricted, the administration of a mercurial alone has little diuretic effect. These observations indicate that antidiuretic substances and low plasma protein levels play a major role in edema formation in nephrotics and cirrhotics by maintaining sodium retention and low rates of glomerular filtration. Temporary elevation of the plasma protein levels by the administration of 500 ml. of plasma or whole blood increases the rate of glomerular filtration, but a good diuresis ensues only when a combined mercurial is used. This indicates a renal tubular factor. The increased rate of tubular reabsorption of sodium and chloride may be the predominant effect in preventing a diuresis following the administration of 500 ml. of plasma or whole blood alone. Probably the reabsorptive capacity of the tubule cells may be a function of the summation of the effects of antidiuretic substances and increased colloid osmotic pressure in the efferent arterioles.

Since this work has been completed, Weston *et al.*[46] have demonstrated, in selected hypertensive patients with normal serum protein levels and without demonstrable renal pathology, significant decreases in glomerular filtration rates when on low-salt but normal protein diet and further decreases in glomerular filtration rates when on the more severe sodium restriction and reduced protein in the "rice" diet of Kempner. Further studies[47] revealed that resistance to the diuretic action of organic mercurial compounds is on a basis of low rates of glomerular filtration. The intravenous administration of hypertonic solutions of sodium chloride (2.5 per cent), whole blood, plasma, or salt-free albumin alone, to increase the filtration fraction and cause diuresis, was not successful. Diuresis, however, did occur when a mercurial diuretic was given one-half hour before the administration of the hypertonic sodium chloride, plasma, or whole blood but not with the administration of the salt-poor serum albumin. The studies of Weston *et al.* indicate the importance of sodium in diuresis when mercurial diuretics are used and when the serum protein levels are within normal limits.

Conclusions

Plasma, whole blood, and mercurial diuretics, when used according to known physiologic principles of hemocirculatory dynamics and concurrently with the rice-fruit-sugar diet of Kempner, proved to be effective agents in rapidly mobilizing and eliminating refractory nephrotic edema and edema associated with acute cirrhosis of the liver.

That three cases of longstanding cirrhosis of the liver failed to lose their ascites by this form of treatment can best be explained on the basis of failure of the colloid osmotic forces of the blood to balance the opposing forces of the probable high portal system hydrostatic pressure and the colloid osmotic pressure of the ascitic fluid. This finding may be of value in selecting patients for the surgical alleviation of ascites by portacaval shunt.

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Diagnosis and Treatment of Hemochromatosis

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Despite the fact that hemochromatosis still remains in the category of rare or unusual diseases, certain new developments have served to focus the attention of alert clinicians on this interesting condition.

The diagnostic criteria of the fully developed case of hemochromatosis, namely, cirrhosis of the liver, diabetes, bronzing or darkening pigmentation of the skin, and regression of secondary sex characteristics are almost unmistakable. However, this clinical tetrad is now believed to represent the far-advanced stage of a metabolic dysfunction which has been in effect throughout the major portion of the lifespan of the individual.[1,2] At the present time most authorities are agreed that hemochromatosis is an inborn error of metabolism, probably a congenital defect of the enzyme system concerned with the combination of iron and protein in the mucosal cell of the gastrointestinal tract and the liberation of iron from the protein molecule.[3-5] The enormous quantity of iron stored in the liver, pancreas, skin, and other organs of individuals exhibiting the clinical characteristics of the disease is said to be from 10 to 40 times normal and up to 100 or 200 Gm. in total.[2,4] When this amazing total is viewed in relation to the minute amounts of iron in the daily diet (15 to 20 mg.), the obvious conclusion is reached that the accumulation of iron must take place over a period of many years. Even the abnormally excessive intestinal absorption of iron which is the result of the metabolic error in hemochromatosis cannot produce such iron stores in just a few years. A prolonged subclinical stage of hemochromatosis has long been postulated and even confirmed by its accidental surprise finding at autopsy in individuals having no antemortem symptoms or signs of the disease.[2]

However, accurate and easy methods for the detection of comparatively early cases were not available until fairly recent times. The development, acceptance, and common practice of a liver biopsy technic using a special hollow needle has definitely provided such a means and probably is the basis for the upsurge in case-finding. Even more recently an intravenous iron tolerance test has been described as a valuable diagnostic aid in the differentiation of Laennec's cirrhosis from hemochromatosis.[6]

Additional impetus to the stimulation of interest in hemochromatosis has been provided by recent broadening of knowledge in the field of iron metabolism itself. Many studies have been made, from absorption to transport, storage, and excretion, utilizing radioactive iron and other new methods of protein investigation.[7-10] The results have confirmed much of what was based only on speculation and hypothesis. The pathogenesis of hemochromatosis thus rests on a new and firm foundation of laboratory evidence.

Clarification of the pathogenesis of hemochromatosis has logically suggested a therapeutic approach which is now in the early stages of evaluation. If the defect produces the excessive absorption and storage of an element for which there is no physiologic means of excretion, then it would seem that an unphysiologic route might be substituted. The only known way of removing iron from the body is by removing blood, which contains from 250 to 500 mg. of iron per 500 cc. Reports on the effects of repeated venesections at varying short intervals over extended periods are just beginning to appear in the medical literature.[7,11-13] Most amazing has been the demonstration of the prodigious faculty of these patients for the manufacture and replacement of hemoglobin and red blood cells. As much as 18 L. of blood was removed in seventeen weeks in one case recently without significant decrease in the hemoglobin, red blood cell count, or serum protein content.[12] Other patients have tolerated with ease the removal of a pint of whole blood every week for periods of one to four years.[12,13]

Recently a more vigorous and accelerated program of venesection has been tried. This consists of the removal of 500 cc. of blood daily until the hemoglobin level has been reduced to approximately 10 to 11 Gm. Following this the patient is bled at four to eight-day intervals, depending on how often it is found necessary to keep the hemoglobin level on the mildly anemic side. With this technic it is advocated that the plasma be retained and reinfused at the time of the next bleeding. This is to insure against the breaking down of tissue protein to maintain the serum protein level. The advantage of maintaining the patient in a mildly anemic state would appear to be to provide, theoretically, the maximum demand on the iron stores for blood regeneration.[7,12]

Reports of the results of this type of therapy are still few in number. However, to date, they have been universally encouraging and informative. Cases have now been followed with serial liver biopsies for a sufficient period of time to demonstrate either a remarkable decrease in the iron deposits or complete disappearance. It has thus been established already that the iron stored in abnormal locations is definitely available for hemoglobin synthesis. Other evidences of both subjective and objective improvement have been outstanding. Within a few weeks after the institution of treatment patients report a sense of well-being probably related to a definite return of strength and energy. Objectively, there is reported a decrease in size of the liver, a decrease in skin pigmentation to resumption of normal color, improvement of the diabetes, and a return to normal of abnormal liver function tests. Since the fibrosis and cirrhosis of organs seen in this disease have long been considered secondary and late pathologic changes, it is extremely encouraging to have indirect evidence that this irreversible portion of the pathology plays only a minor role in the production of the early clinical symptoms.

The following case is illustrative of the ease with which the diagnosis of hemochromatosis is established today.

Case Report

W. B., a fifty-one-year-old bartender, was admitted to the Flower and Fifth Avenue Hospitals on September 30, 1953, for diagnostic study. About ten months prior to admission he had had a severe epistaxis and since then had noted gradually increasing severe weakness. Three months before admission he noted the development of intermittent lower abdominal pains, the expulsion of foul flatus, and a sudden change to semisolid daily stools. Since the onset of illness, he had lost 16 pounds. In recent months his family physician had brought his attention to a deepening in color of the skin. He also complained of impotency, cessation of sweating, and dryness and scaliness of the skin, especially of the extremities, for the past year.

The patient was a known diabetic of eight years duration who had been fairly well controlled until recently on 40 units of protamine zinc insulin daily. In the past month the insulin requirement had increased to 50 or more units. Prior to the onset of diabetes in 1945, he admitted to a heavy daily consumption of alcoholic beverages and excessive caloric intake. Since the discovery of diabetes the alcoholic intake had been discontinued and a dietary regime instituted. The family history revealed that the mother had had diabetes and "an enlarged hard liver."

Physical examination revealed a well-developed, fairly well-nourished, white male. The color of his skin may best be described as the appearance of a fairly deep suntan which was fading. It was most noticeable over the exposed areas of the body. There was no pigmentation of the oral or buccal mucosa. The blood pressure was 106/76; cardiac rate was 72 per minute, and the rhythm was regular. The heart sounds were of good quality, and there were no murmurs present. The lungs were clear to percussion and auscultation. The liver edge was palpable 3 to 4 cm. below the costal margin. It was firm and slightly tender with a suggestion of fine nodularity on palpation. The skin was dry and scaly, especially over the lower extremities. There was complete absence of axillary hair, but scanty hair was present over the anterior of the chest. The pubic hair was fairly abundant, and the distribution suggested a female escutcheon. The general contours of the body appeared to be softened, especially the trunk over the hips and buttocks. The testicles were soft, very small, and atrophic. The prostate gland was unusually small.

Laboratory investigations revealed the following: hemoglobin 14 Gm., white blood cell count 5,850 per cu. mm. with normal differential. The urine contained 3 plus sugar, no albumin, specific gravity 1.015. The fasting blood sugar level was 191 mg. per cent. Liver function studies were reported as follows: icteric index 7 per cent, serum bilirubin 0.89 mg. per cent, cephalin flocculation 2 plus, thymol turbidity 1 unit, alkaline phosphatase 9.4 King-Armstrong units, plasma proteins 5.63 Gm. per cent, albumin 3.54 Gm. per cent, globulin 2.09 Gm. per cent, total cholesterol 196 mg. per cent, cholesterol esters 152 mg. per cent, prothrombin time 15.6 seconds (control 13.6 seconds), bromsulfalein 2.4 per cent retention at forty-five minutes. Repeated studies one week later revealed icteric index 7 per cent, van den Bergh direct negative, serum bilirubin 1.2 mg. per cent, cephalin flocculation 1 plus, thymol turbidity 2 units, plasma proteins 5.71 Gm. per cent, albumin 3.49 Gm. per cent, globulin 2.22 Gm. per cent.

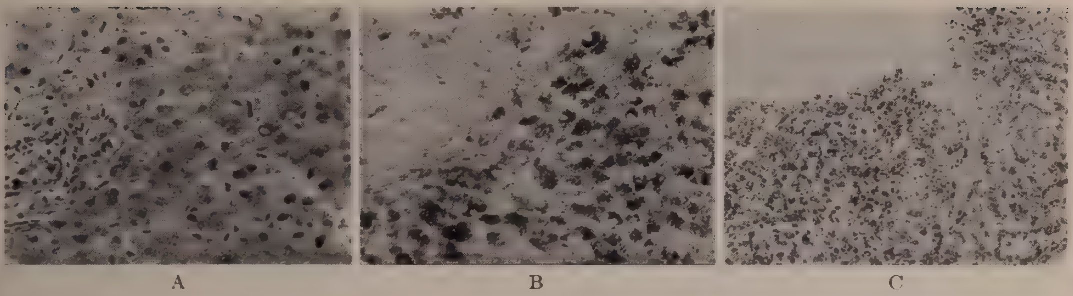

FIG. 1. Sections of the liver obtained by needle biopsy. (*A*) The liver cells are laden with numerous golden-brown granules of hemosiderin. Note the increased amount of fibrous tissue in the portion of a portal area shown. (*B*) Same section as (*A*) using a special stain for iron. (*C*) Low-power view of (*B*) which demonstrates the huge quantity of iron deposited throughout the parenchyma of the liver.

Serial radiography of the entire gastrointestinal tract was reported as normal. Proctosigmoidoscopy up to 12 inches revealed normal mucosa. A liver biopsy* was performed utilizing a Vim-Silverman needle. It was reported as follows: "Laennec's cirrhosis. The liver cells are laden with large granules of brown pigment, probably hemosiderin. The diagnosis is consistent with hemochromatosis" (Fig. 1A). Special iron stains* were done which confirmed the presence of large quantities of iron (Figs. 1B and C). During his course in the hospital the patient's diabetes was easily and adequately controlled on a diet of approximately 2,000 calories and 50 units of NPH insulin daily. He was discharged from the hospital on a high-protein, high-caloric dietary regime for cirrhosis of the liver and the oral administration of aluminum phosphate gel with meals. In addition, methyltestosterone, 10 mg. orally daily, and a program of weekly phlebotomy was instituted. After six bleedings of 500 cc. each in seven weeks there was no noticeable drop in hemoglobin level or red blood cell count. At this time the patient first began to note an increase in strength and some general improvement. At the present time a total of 12,000 cc. of blood has been withdrawn without evidence of untoward effects and with continued subjective improvement.

Comment

This patient manifested the diagnostic triad of diabetes, increased skin pigmentation, and hepatomegaly. In addition, he exhibited some regression of the secondary sex characteristics. Feminization in the male should be added as the fourth characteristic of hemochromatosis. In this case diabetes preceded the onset of other signs and symptoms of the disease by approximately seven years.

The promise of an effective means of control, symptomatic alleviation, and prolongation of lifespan in hemochromatosis emphasizes the significance of early diagnosis. It is suggested, therefore, that patients who exhibit any two of the four diagnostic criteria of hemochromatosis should have a needle biopsy of the liver performed. If hepatomegaly is present, the use of the intravenous iron tolerance test should be considered. All patients in whom the diagnosis is established should have the benefit of a trial of repeated venesections, and if well tolerated, this therapy should be continued over a prolonged period until the maximum benefit is judged to be attained. Arrival at this point may best be judged by serial liver biopsies. Following this, a maintenance regime of periodic bleeding would probably be indicated to prevent reaccumulation. At this stage the use of compounds which form unabsorbable iron complexes, namely, phosphate salts, is of importance. These compounds should be given with meals and are known to decrease the intestinal absorption of iron to some extent.[7]

Summary

1. Some of the latest concepts of the etiology and pathogenesis of hemochromatosis are briefly reviewed.

2. The effect which these developments and the use of new diagnostic technics have had on the status of hemochromatosis is discussed.

3. The methods of utilizing multiple venesection and the highly favorable results of this therapy to date are also discussed.

4. The ability to treat effectively has increased the importance of earlier diagnosis. For this reason the presence of any two of the diagnostic tetrad is considered an indication

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* Liver biopsy was performed by Dr. Walter L. Mersheimer; pathologic studies were done by Dr. Frank D. Speer, Flower and Fifth Avenue Hospitals.

for needle biopsy of the liver. If the diagnosis lies between cirrhosis of the liver and hemochromatosis, the intravenous iron tolerance test is suggested.

5. A case is reported which illustrates the classic criteria of hemochromatosis and the quick, easy diagnosis made by liver biopsy. Follow-up studies of the therapy of massive bleeding in this and other cases should be made and reported.

1056 FIFTH AVENUE

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Succinylcholine Chloride in Private Practice of Electroshock Therapy

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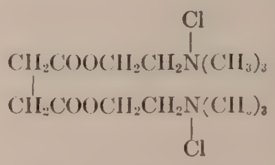
IN THE private practice of general psychiatry electric shock treatment has become well established in the fifteen years that have elapsed since this modern application to convulsant therapy was introduced by Ugo Cerletti in 1938.[1] A variety of contraindications was gradually established as serious complications were encountered, attributable to the violence of muscular rigor or the direct effects of electrical currents. Blocking the skeletal muscle contractions with curare during the convulsion was introduced by Bennett in 1940.[2] Chemists have steadily added synthetic drugs which have a similar skeletal muscle-blocking function, the briefest in action being succinylcholine chloride, hereafter referred to in this report as Anectine.* The chemical formula is as follows:



$$\begin{array}{l}\mathrm{CH_2COOCH_2CH_2\overset{Cl}{\overset{|}{N}}(CH_3)_3}\\ \;|\\ \mathrm{CH_2COOCH_2CH_2\underset{Cl}{\underset{|}{N}}(CH_3)_3}\end{array}$$

Its action at the myoneural junction differs from that of curare. Prostigmine is not an antagonist. It acts by preventing repolarization until the drug breaks down, as it does in two to three minutes.

At Albany Hospital five private attending psychiatrists doing electric shock treatments use Anectine in the following way. Patients are brought to the clinic without breakfast. The patient is directed to put on pajamas, and the accompanying relative makes an interval report which guides the physician in scheduling the next appointment. The patient is then given an intramuscular injection of 0.6 mg. atropine sulfate at least a quarter hour before shock treatment. Anectine is drawn into a 5-cc. syringe and then sufficient Sodium Pentothal is added to the same syringe to produce a brief narcosis, usually 150 mg. The dose of Anectine is varied according to the demands of the patient's condition. A muscular man will usually require 30 to 60 mg. if skeletal muscles must not react strongly enough to move a major joint, while 10 to 20 mg. will prevent fractures in normal bones. There should be little delay between the adding of the Pentothal and the intravenous injection of the Anectine-Pentothal mixture since the alkaline Pentothal decomposes the Anectine within a few minutes.

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* Anectine is Burroughs Wellcome and Company's brand of succinylcholine chloride and was furnished for this study by them.

The mixture may be injected in a fifteen-second period. If the injection is faulty and little narcosis or muscle weakness appear within the following minute, a new syringe filled with the same original amount of Anectine and Pentothal should again be injected without intentional delay. Before the patient loses consciousness from the Pentothal, we insert a rubber U-shaped bite-block that fits over the lower teeth and provides a 1 by $^1/_2$-inch aperture for oral oxygen administration and insertion of a Guedel type curved rubber airway. When breathing decreases following the injection of Anectine and Pentothal, we apply an oxygen face mask to which is attached a 5-L. rebreathing rubber bag filled with oxygen. Pressure on the bag readily inflates the patient's lungs so that no oxygen deficiency occurs in the one minute allowed to elapse between the end of the Anectine and Pentothal injection and the electric shock stimulus. The electric shock stimulus should be well above average threshold since the Pentothal raises the normal threshold, and the transient nature of the Anectine muscle blockade and Pentothal makes responses to delayed shocks more vigorous.

The stimulus may be given with any electric shock machine. The size of pupil, its response to light, and the status of the skin piloerector muscles of portions of exposed extremities should be noted before the electric convulsant stimulus is applied so that changes in the pupils and skin may aid the therapist in detecting a seizure, should all skeletal muscles fail to move. Where pupil dilatation and unresponsiveness to light and gooseflesh appear following the electric stimulus and persist after the stimulus, we record the result as a 4 plus, completely modified seizure. If muscle clonus is visible but not preceded by muscle stiffness, we record the result as 3 plus. If the muscle stiffness is present in arms and legs but can be overcome at knee and elbow, we record the modification as 2 plus. If the limbs become rigid but cyanosis and elevation of the limbs are absent, we record the modification as 1 plus. Intermediate degrees of this scale of modification may be recorded if desired. Grade 2 plus modification has been sufficient for prevention of fractures in physically normal patients. Grade 3 plus modification protects patients with all but the most extreme pathology.

At the end of the seizure the oxygen face mask is reapplied, and a few positive pressure chest excursions induced by bag pressure are carried out, after which the patient will resume spontaneous breathing.

The treatment rooms are provided with a suction machine and suction catheters that will readily pass down the Guedel rubber airways should mucous or gastric contents require removal. A laryngoscope and intubation tube are available in case laryngeal obstruction is encountered, but intubation has never been needed in the two years during which we have treated a thousand electroshock patients some ten thousand times.

Anectine has made it quite unnecessary to restrain a patient during the electrically induced modified seizure. We have had no known fracture nor treatment-induced physical handicap other than an occasional brief headache. The Anectine-modified case requires only an additional two minutes on the treatment table, a small price for the freedom from complications and surmounting of most contraindications. We do avoid treating patients with highly contagious diseases, acute upper respiratory infections, and terminal states. We always weigh the possible benefits of electric shock treatment against the risks of complications, but with the advent of Anectine very few of our mental patients have had to be denied the benefits of electric shock therapy.

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Oto-neuro-ophthalmologic Manifestations of Cervical Origin

Posterior Cervical Sympathetic Syndrome of Barré-Lieou

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BARRÉ[1] in 1925 described a syndrome consisting mainly of headaches and cervical pains. He saw the source of these symptoms in the involvement of the posterior cervical sympathetic system, most frequently through cervical arthritis of different types or through inflammatory, traumatic, or other lesions. The posterior cervical sympathetic system consists of the vertebral nerve and the sympathetic network surrounding the vertebral artery. In 1928 the syndrome was studied in detail by Lieou Yong-Choen,[2] and since then the polymorphic clinical picture, characterized by pains of many kinds and a variety of signs, has been known as the "posterior cervical sympathetic syndrome," or the "syndrome of Barré-Lieou." In recent publications[3,4] the terms "posterior cervical syndrome" and "posterior cervical nervous syndrome" are used.

The Barré-Lieou syndrome is often mistaken for other clinical entities, such as facial neuralgia, migraine, or tension headache. The kaleidoscopic and frequently bizarre manifestations are often interpreted as psychogenic. Many a patient receives psychotherapy or is subjected to electroconvulsive therapy which is here fruitless and may be even harmful by injuring already damaged anatomic structures in the cervical region.

The posterior cervical sympathetic system is very extensive and has many anatomic connections with the central nervous system. Its network spreads from the spinal cord to the remotest posterior parts of the head and the neck. The pathophysiology of this, as of all sympathetic systems, explains why a lesion at one point of the network may have repercussions on the entire system and may cause dysfunction at points far away from the site of the original lesion. It is often erroneously assumed that pains always originate in the structures where they are felt. In searching for causes of headache one dares not abandon the cranial cavity,[5] but the primary lesion may lie in the posterior cervical sympathetic system.

Symptoms

HEADACHES AND FACIAL PAINS.—Clinically,[6] the syndrome of the posterior cervical sympathetic is manifested by pain which may appear in almost any part of the head or neck. The patient may complain of a superficial pain in the frontal, temporal, temporoparietal or mastoid region, or in the occipital area or in the posterior or posterolateral parts of the neck. Deep pain may be felt in the orbital contents, in the nasal and oral cavities.

Ordinarily, the pain is continuous but interrupted by frequent paroxysms. Constancy of the pain exasperates the patient more than its intensity. The pain is described as throbbing, burning, stinging, pricking, or creeping. The headache is experienced as a sensation of fullness or weight or of lightness or emptiness. A patient may state that his head is pounded with a hammer or is squeezed with tongs.

The pain may be precipitated or aggravated by sudden movements or certain positions of the head and neck, by pressure on the cervical muscles, or by sneezing, sighing, or coughing. Pain may be provoked or intensified by mental effort, emotional upsets, gastrointestinal disturbances, atmospheric changes, etc.

There is no end to the list of painful sensations. Their range is wide with regard to their site and type. Pain may involve one eye one day and then migrate to its fellow or shift to some other part of the head and neck the next day. But in the occipitonuchal region pain is always felt. Here lies the "root" of the pains.

PHARYNGEAL AND LARYNGEAL SYMPTOMS.—Pain may be felt in the paranasal sinuses; it may be experienced in the posterior part of the oral cavity, including the tonsils and the soft palate, and particularly in the posterior part of the tongue (glossodynia).[7] Sensory disturbances in the pharynx, described as burning, stinging, "pins and needles," pricking, or formication, plague the patient and cause him much anxiety. Some patients rasp, cough, and expectorate to rid themselves of nonexisting mucosities or some imaginary foreign body in the throat, such as a needle, fishbone, bread crumb, etc. Mild distress in the oropharynx may be relieved by the act of swallowing, but in advanced stages deglutition itself may become bothersome.

Objective findings are few. Usually, the tongue is smooth and supple; occasionally it exhibits a few hypertrophied papillae. The mucosa of the pharynx may be diffusely hyperemic or dry, pale, and atrophic. Hypesthesia of the soft palate and the pharyngeal mucosa may be noted; the pharyngeal reflex is often absent.[7]

Some patients complain of obstruction of the nose. Laryngeal troubles may occur; the voice may become subdued, and periods of aphonia may suddenly appear and just as suddenly disappear. Some patients have the sensation that the right and left halves of the head are asymmetric.

VESTIBULAR SYMPTOMS.—These are always present. The patient may suffer attacks of true rotatory vertigo,[8] but the majority complain rather of uncertainty in space or unsteadiness, coupled with the feeling that they are going to fall, but it is rare that such a patient actually falls. Turning the head or looking upward or downward intensifies the sensations.

AURAL SYMPTOMS.—Aural troubles are characterized mainly by tinnitus. The patient hears various sounds such as ringing, hissing, whistling, buzzing, bubbling, clicking, etc. In most cases tinnitus is unilateral; it may occur in association with some hearing loss and also with otalgia.

ASTHENIA.—Most patients suffer from marked asthenia[9] which is wholly out of proportion to the rather localized nature of the affection. Patients fatigue easily and complain of an unusual degree of tiredness. They are already tired on arising, accomplish very little work during the day, and impatiently await the moment when they can go to bed in the evening. Palpitation, tachycardia, and insomnia are common.

OBJECTIVE SIGNS.—In contrast to the abundance of symptoms, there is a paucity of objective signs. The neck muscles are often painful and show sustained contraction; one or more of the facial muscles may be in spasm. Tender spots may be demonstrated along the course of the occipitalis major nerve. The mucous membrane of the pharynx and the larynx may be congested. The blood pressure in the retinal arteries is generally lower than the brachial blood pressure. Facial muscle reflexes may be hyperactive. There may be hyperesthetic or paresthetic areas on the skin of the back of the neck.

The disease develops very slowly. Periods of progression lasting many weeks or months alternate with intervals of remission of varied length. The affection is very distressing; some patients become depressed and even may show suicidal tendencies.

Clinical Forms

The syndrome of Barré-Lieou appears in a wide range of clinical forms. The forms most easily and most often confused with other disease entities are briefly described.

FACIAL.—The facial form of the syndrome is characterized by sympathicogenetic pains associated with a wide variety of autonomic disturbances including vasomotor phenomena and sweating. Simultaneously with an attack of vertigo or following it, half of the patient's face turns red and hot, and the patient has burning sensation. Such an attack persists for a period varying from five to ten minutes. Lacrimation, rhinorrhea, salivation, and injection of the conjunctiva may be superimposed. The facial form may be mistaken for trigeminal neuralgia or sphenopalatine neuralgia (syndrome of Sluder[10]) or erroneously diagnosed as Horton's histamine cephalalgia[11] or as "temporal arteritis."

CERVICO-OCCIPITAL.—Sharp pain is felt in the back of the neck and in the occipital region. The posterior and lateral neck muscles show sustained and painful contraction. The pain may extend to the shoulder, the arm, and the upper dorsal region (occipitocervicoscapular form). This form of the disease may arouse suspicion of tumor of the cervical cord.

VERTIGINOUS.—Here features of the syndrome described by Lermoyez[12] (*"Le vertige qui fait entendre"**) predominate. This clinical form begins with sudden attacks of tinnitus associated with diminished hearing. Sudden paroxysms of vertigo of short duration occur which result in rapid restoration of hearing and cessation of tinnitus.

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* Vertigo which restores hearing.

Ocular.—In this form the following symptoms and signs may appear: spots before the eyes, decreased vision, slow or absent pupillary reflexes, miosis or mydriasis, corneal hypesthesia, and recalcitrant and recurrent ulcers of the cornea.[13] The syndrome of Pourfour de Petit consisting of exophthalmos and mydriasis (pseudo-Graves's disease) was observed occasionally. Association with the syndrome of Claude Bernard-Horner has been reported.[14]

Asthenic Form with Head Pain.[15]—The characteristic feature is head pains of an unusual type which resemble malaise or discomfort rather than actual headaches. The patient, tortured by fear and anxiety, lives as if in a dream. Marked asthenia compels him to forsake all activities. Blood and cerebrospinal fluid pressure values are normal; retinal arterial pressure, however, is decreased. Unilateral or bilateral mydriasis may be observed. Other manifestations of the disease are minimal or absent except the "root" of the pain at the back of the neck which is always present.

Psychoneurotic.—The psychoneurotic forms described by Riser[4,16] may be very misleading. The patient complains of painful superficial and visceral dysesthesias affecting the entire body.

The syndrome in its psychoneurotic form resembles the hyperesthetic and hypochondriac entities described by Dupré[17] but without delusions. For instance, a young man, twenty-four years old, became depressed and experienced strange pains within and on the surface of the chest and neck. The patient had pain in the occipitonuchal region where the muscles were in spasm. Roentgenologic examination revealed the presence of Pott's disease involving the fifth cervical vertebra.

Pathogenesis

Osteoarthritis of the cervical portion of the vertebral column was found to be the most frequent single etiologic factor underlying the posterior cervical sympathetic syndrome.[1,2] Lateral osteophytic spurs of cervical vertebrae, however, do not represent the only pathologic lesion responsible for the development of the Barré-Lieou syndrome. Vertebral caries (Pott's disease),[16,18] cervical disk disease,[19] spina bifida,[8] cervical rib,[20,21] trauma,[22] etc., have been reported to be associated with the syndrome. In view of the widespread ramifications of the posterior cervical sympathetic system and its extensive connections with somatic nervous structures, a wide range of lesions originating in different tissues and structures located in the posterior part of the neck can produce oto-neuro-ophthalmologic disturbances. Structures, involvement of which may give rise to the syndrome of Barré-Lieou, include the following: the skin; the muscles and tendons; the periosteum covering the cervical vertebrae and the ligaments uniting them; the vertebral articulations, especially the uncovertebral or Luschka joints, including articular capsules and ligaments—in brief, all tissues and structures connected with or overlying the cervical segment of the vertebral column (Fig. 1).

The problem is to determine the pathogenic mechanism underlying the posterior cervical sympathetic syndrome to explain how lesions in the cervical region are able to engender cerebral manifestations. According to Barré[1] the binding link between cause and effect is the posterior cervical sympathetic system. According to Lazorthes[23,24] the posterior cervical sympathetic system consists of a slender anterior and a thicker posterior vertebral nerve and of a superior vertebrobasilar plexus (Fig. 2). The vertebral nerves originate from the stellate ganglion and innervate the lower segment of the vertebral artery. The vertebrobasilar plexus supplies autonomic neural strands to the upper segment of the vertebral artery with which they enter the cranial cavity, furnishing innervation to the basilar artery and its branches, including the internal auditory artery.

Pathologic lesions implicating the cervical spine or other anatomic structures in the cervical region may compress and stimulate elements of the posterior cervical sympathetic system and thus provoke vasomotor reactions (vasoconstriction) in the vertebrobasilar vascular tree. The vasoconstriction reduces the caliber of the intracranial vessels supplied by the posterior sympathetic system and thus restricts the flow of blood in them. In view of the fact that the lateral part of the bulbopontine region is supplied by arteries of a very small caliber, called "short circumferential arteries,"[25] circulatory disturbances will lessen their blood supply first with consequent effect on the lateral part of the bulbopontine region which is the site of the nuclei of the fifth, sixth, seventh, eighth, ninth, tenth,

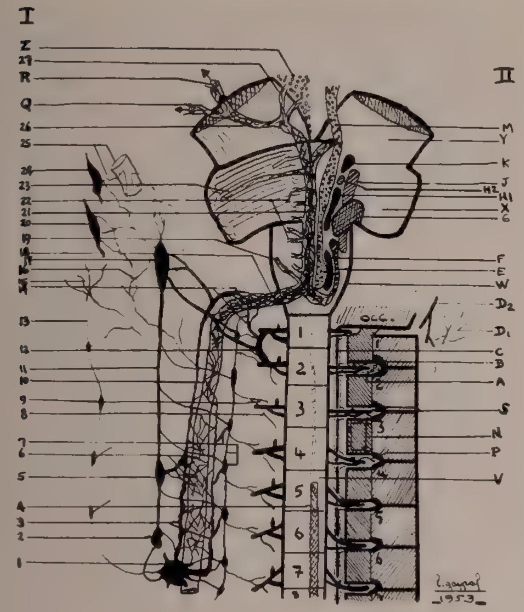
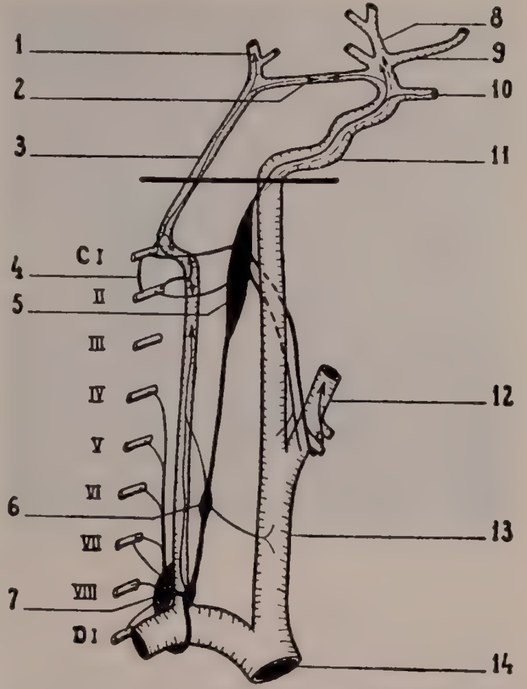


FIG. 1. Composite diagram showing parts and connections of the posterior cervical nervous network and sites of origin of symptoms of the syndrome of Barré-Lieou: *V*, spinal cord; *W*, medulla oblongata; *X*, pons; *Y*, cerebral peduncles; *Z*, interpeduncular foramen.

I. Parts and connections of the posterior cervical nervous network: *1*, stellate ganglion; *2*, intermediate ganglion; *3*, inferior vertebral nerve; *4*, sympathetic center in cervical cord; *5*, middle cervical sympathetic ganglion; *6*, inferior vertebral plexus; *7*, deep sympathetic chain and its ganglions; *8*, sinuvertebral nerve; *9*, ramus communicans; *10*, vertebral artery; *11*, cervical sympathetic trunk; *12*, loop connecting first and second cervical ventral roots; *13*, superficial cervical sympathetic chain; *14*, superior vertebral nerve and vertebrobasilar plexus; *15*, superficial cervical plexus; *16*, pharyngeal plexus; *17*, superior cervical sympathetic ganglion; *18*, vertebral artery and sympathetic plexus; *19*, posterior inferior cerebellar artery; *20*, petrosal ganglion; *21*, basilar artery; *22*, paramedian artery; *23*, superior cerebellar artery; *24*, ganglion nodosum; *25*, internal carotid artery and sympathetic plexus; *26*, posterior cerebral artery; *27*, paramedian artery of the peduncle.

II. Sites of origin of symptoms of the Barré-Lieou syndrome: *A*, intraforaminal root sleeve; *B*, intervertebral disk; *C*, meninges (periradicular and intraforaminal); *D1*, superficial cervical plexus (pain in the back of the neck); *D2*, occipital nerve (pain in occiput and back of neck); *E*, solitary tract (pain in the tongue, pharynx, and larynx); *F*, nucleus ambiguus (speech troubles, painful deglutition); *G*, vestibular and trochlear nuclei (vertigo, tinnitus, hearing loss); *H1*, motor nucleus of the facial nerve (spasm of facial muscles); *H2*, sensory nucleus of the facial nerve (otalgia); *I*, sensory nucleus of the trigeminal nerve (facial pains; pain back of the eye is due to the descending root of cranial nerve *V*); *K*, nucleus of the oculomotor nerve; *M*, formatio reticularis grisea (asthenia, obnubilation, vasomotor disturbances, hypotension, mydriasis); *N*, ligaments and periosteum; *P*, sinuvertebral nerve; *Q*, sympathetic plexus surrounding the posterior cerebral artery (sympathetic pain, vasomotor troubles affecting ear and labyrinth); *R*, sympathetic plexus of the circle of Willis (sympathetic pain and vasomotor troubles involving face, scalp, and head); *S*, ventral and dorsal nerve roots (pain in back of neck).



(*Courtesy of Dr. Guy Lazorthes*)

FIG. 2. Neural formations which supply the vertebral and the internal carotid arteries: *1*, posterior cerebral artery; *2*, posterior communicating artery; *3*, basilar artery; *4*, loop connecting first and second cervical nerves; *5*, superior cervical ganglion; *6*, middle cervical ganglion; *7*, stellate and intermediate ganglions; *8*, Sylvian artery; *9*, anterior cerebral artery; *10*, ophthalmic artery; *11*, internal carotid artery; *12*, external carotid artery; *13*, common carotid artery; *14*, innominate artery. The solid line indicates the base of the skull.

and eleventh cranial nerves. Restriction of the flow of blood to the region containing the nuclei of these cranial nerves could be responsible for the production of the symptoms and signs of the syndrome of Barré-Lieou. The syndrome, therefore, could be called the syndrome of the short circumferential arteries.[26] From what has been stated it follows that the majority of the clinical manifestations of the syndrome bears relationship to definite anatomic areas of the brain (Fig. 1).

Lazorthes[23,24] claims that the pain of sympathetic origin brought about by pathologic changes in the cervical region travels along sympathetic neural pathways, especially by way

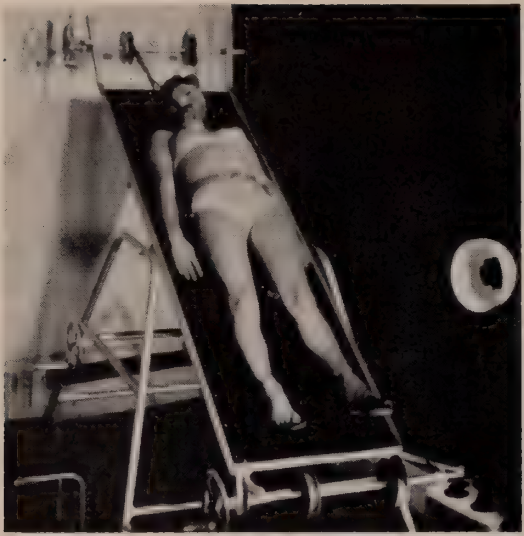


Fig. 3. Stretching of cervical spine by means of traction.

of the arterial plexuses, to the face and head, giving rise to the syndrome of Barré-Lieou.

Recently, Barré[5] projected the view that in the cervical region neural structures and pathways other than the posterior cervical sympathetic could be responsible for oto-neuro-ophthalmologic pathology.

Treatment

The majority of patients obtain benefit from stretching the cervical spine by means of traction. Traction is performed with the help of a tilting mechanical table which, with the patient in supine or prone position and a head sling applied to the chin and the occiput, is slowly inclined, foot end down (Fig. 3). The angle of inclination determines the amount of traction force in operation. This is indicated on spring scales attached bilaterally to the side straps of the head sling. According to the severity of the case, traction treatments are given daily or two to four times a week for ten to twenty minutes. The amount of traction force is gradually increased from about 10 pounds to 40 or more. Discomfort or pain experienced by the patient during traction indicates that too much pull is being employed. In severe cases it may be necessary to administer continuous cervical traction either in the hospital or the home.

Traction treatment may be combined with one or more of the following therapeutic measures:

1. Resting and sleeping on a firm mattress and using a pillow of a height that gives relief to the patient; consideration should also be given to the position of the head (prone or supine and turned to the right or left).
2. Wearing a leather or plastic cervical collar for short periods of time to immobilize the neck.
3. Administration of analgesic and/or sedative drugs.
4. Judicious application of heat and sedative massage to the back of the neck; (forceful cervical manipulations and exercises should not be employed because they may injure the cervical spine as well as the surrounding tissues and structures).
5. Spa therapy consisting of the use of sulfur thermae and the application of moderately heated peat or mud packs to the neck.
6. Ultrasonic therapy.
7. Enelectrolytic (iontophoretic) introduction of curare,[27] physostigmine and methacholine,[28] or iodine, aconitine, and other drugs into the tissues of the posterior cervical region.
8. Injection of procaine hydrochloride (2 per cent) deep into the cervical muscles high up and laterally to the cervical spine.
9. X-ray therapy to the cervical spine.

If no definite improvement is achieved or if the condition worsens, operation is considered. Gros and Cadilhac[29] discuss the relevant neurosurgical interventions under the headings of etiologic, pathogenic, and symptomatic treatment. Pathogenic surgery attempts to modify existing circulatory disturbances through severance of the vertebral nerve or by way of stellectomy, carotid sympathectomy, superior cervical ganglionectomy, and other surgical procedures. Symptomatic treatment embraces operations which act upon the cerebrospinal component of the syndrome in order to suppress craniofacial sensibility (complete or partial trigeminal neurotomy, high cervical rhizotomy, etc.). It should be borne in mind, however, that surgical management of oto-neuro-ophthalmologic disturbances of cervical origin does not always effect relief.

Case Reports

Three cases are briefly presented in which, after a complete physical examination, the clinical diagnosis of posterior cervical sympathetic syndrome of Barré-Lieou was made. Each patient responded favorably to the therapeutic measures outlined above but combined in a manner to suit individual requirements.

Case 1.—A. M., a fifty-four-year-old white female, was seen for the first time in March, 1949. She presented two series of symptoms: (1) On exposure to cold, paroxysms consisting of cold and pain would strike the fingers which would turn white (acrosyncope); nocturnal paresthesias in the left upper limb. (2) Bilateral frontal headaches spreading into the temporal regions and the orbits. The pains were continuous but would ease in the evening.

The patient complained that she felt heat in the forehead, had sensations of "pins and needles" in the eyes, and experienced insufferable pulling at the eyes deep in the orbits. She also complained of vertigo and of imbalance, because of which she refused to leave the house. The patient suffered from photophobia, asthenopia, and from momentary flashes of heat engulfing her whole head which turned red and threatened to burst with the sensation of impending syncope. The patient tired very easily.

Time and again, she had been treated for ovarian disease and arteriosclerosis, also for psychosomatic illness because of which she was subjected to narcoanalysis. All these therapeutic efforts had been fruitless, however.

Examination failed to discover any objective neurologic sign. The blood was normal. Blood pressure was 160/70; retinal arterial pressure was normal. The urogenital apparatus showed no abnormality. Endometrial biopsy disclosed the characteristics of menopausal mucosa.

Movements of the neck, particularly rotation to the left, were painful and restricted. There was sharp and persistent pain in the back of the neck and mild paramedian pain between the third and the fifth cervical vertebrae.

Roentgenograms of the cervical spine showed straightening of the physiologic ventral convexity, and osteophytic spurring of the third to sixth cervical vertebrae with encroachment on the intervertebral foramina in the same segment. The disk spaces were normal.

The response to traction treatment as discussed above was excellent. In 1951 the syndrome recurred, however. The symptoms yielded again to treatment. To date (July, 1953) there has been no relapse.

Case 2.—H. P., a white woman, aged fifty-eight, presented herself in August, 1948. She had been suffering from headaches for the past three years. Headaches and pains were located in the occipitonuchal region. The patient also complained of insomnia, "mouches volantes," and of periods of dizziness which occurred spontaneously and on movements of the neck. Marked asthenia was present. Retinal arterial pressure was diminished. Administration of DOCA (desoxycorticosterone acetate) afforded relief evidently so satisfactory to the patient that she failed to return for roentgenologic examination.

The patient was seen again in 1949. She complained of having more pain and, in addition, vertigo and tinnitus. Asthenia was very marked, and there was a further drop in the retinal arterial pressure (from 20 mm. Hg to 15 mm. Hg). The posterior "root" of pain was very intense and kept the patient awake.

Roentgenologic study of the cervical spine revealed osteoarthritic spurs arising bilaterally from the third to sixth cervical vertebral bodies and also disclosed osteophyte formation involving the third to fourth and fourth to fifth cervical apophyseal joints on both sides.

Traction therapy combined with other therapeutic measures, such as x-ray therapy, led to clinical recovery.

Case 3.—H. D., a white female, aged thirty-one, reported in May, 1949, that for the past four years she had suffered from headaches, tinnitus, and burning and pricking pains in the occipital and mastoid regions. She also complained of attacks of vertigo and of paroxysms of severe head pains which lasted for periods of three to four weeks and during which she had fallen on two occasions. Previously, she had been treated unsuccessfully for Graves's disease, ovarian dysfunction, and hysteria.

The first time the patient was seen, she was in bed suffering from headache and vertigo; she complained of sore throat and, in addition, plugged ears and photophobia. She was very weak and helpless. Pulse rate was 100, blood pressure 120/70. The pressure in the central retinal artery was low (35/15 mm. Hg). The optic disk was normal; the throat was hyperemic and inflamed.

Digital pressure to the left of the third cervical vertebra produced a sharp pain in the neck. In the same area marked muscular contraction was noted. Roentgenograms of the cervical spine revealed a minimal fracture implicating the third to fourth cervical apophyseal joint on the left side, slight subluxation of the fourth cervical vertebra, and several osteophytic spurs. The fracture may have occurred when the patient, as a young girl, had played volley ball.

Treatment consisted of local procaine injections into the muscles to the left of the impaired vertebra, roentgen therapy to the cervical spine, and careful massage to the soft structures at the back of the neck.

After four weeks of treatment the symptoms disappeared, and there has been no recurrence to date (July, 1953).

Summary and Conclusions

Barré in 1925 described a syndrome which he considered to be a primary result of involvement of the posterior cervical sympathetic system and which he called "posterior cervical sympathetic syndrome" or "posterior cervical syndrome." Because of the extreme diversity of its symptoms and signs, the posterior cervical sympathetic syndrome, known also as the syndrome of Barré-Lieou, is often misinterpreted and wrongly diagnosed.

The cardinal symptoms and signs of the syndrome are as follows: sympathicogenetic headaches and facial pains and pains in the back of the neck; vasomotor disturbances particularly affecting the face, the ears, and the oropharynx; vertigo, tinnitus, asthenia, insomnia, and photophobia. The retinal arterial pressure is generally decreased. Ocular lesions and paroxysms of orbital pain may occur.

Diagnosis of the syndrome is based upon careful and judicious questioning and thorough physical survey, roentgenologic exploration of the cervical segment of the vertebral column, and routine and special laboratory studies in line with individual problems presented.

Diagnostic errors are often made. The syndrome of Barré-Lieou often is confused with trigeminal, glossopharyngeal, and occipital neuralgias and with the pain due to temporal arteritis. The erroneous diagnosis of migraine and of tension headache is also frequent.

In view of the emphasis accorded today to psychosomatic medicine, it is important to establish the physical causes underlying the posterior cervical sympathetic syndrome to avoid confusing somatic illness with illness of the personality and labelling or dismissing the patient as a neurasthenic or a neurotic.

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Mebaral as an Anticonvulsant

After studies on 363 patients, the author concludes that mephobarbital (Mebaral) is an effective anticonvulsant in all types of seizures, with the additional advantage that it is least toxic of all the standard anticonvulsants. Toxic reactions to Mebaral, he reports, are never of a serious nature. It is less toxic than phenobarbital, which is not true of Mesantoin and Dilantin, both of which are comparatively toxic. Used in conjunction with other anticonvulsant drugs, the proportion of the more toxic agent was reduced without loss of seizure control. In fact, it appeared to be improved. The author says that in this series Mebaral was particularly useful as an adjunct to Tridione and Paradione in petit mal, enhancing response by effective action against the petit mal spells while reducing the possibility of exacerbating grand mal seizures.—*Harold Berris, M.D., Neurology, February, 1954*

The Treatment of Herpes Zoster, Neuralgias, and Neuritis with Thiamine Potentiated with Neostigmine (Thiastigmine)

SAMUEL WALDMAN, M.D., F.A.C.P., AND LOUIS PELNER, M.D., F.A.C.A., BROOKLYN, NEW YORK

IN 1947[1] we reported on the treatment of 23 cases of herpes zoster using a combination of thiamine chloride (100 mg.) and neostigmine methylsulfate (0.5 mg.). In view of the excellent results that we obtained, we continued this project and expanded it to include various neuralgias and neuritides. We felt that other neuralgic conditions might possibly respond favorably to treatment as well. In the present study we utilized a preparation called "Thiastigmine." *

The addition of atropine sulfate to the preparation prevented some of the previously encountered side-effects, such as twitching of the tongue and abdominal cramps.

Methods of Treatment

The large number and variety of remedies proposed for herpes zoster, each hailed with at least temporary enthusiasm in itself, indicates the lack of uniformity and specificity in therapy. In addition to treatment with posterior pituitary extract, autohemotherapy,[2] sodium iodide, ultraviolet and x-ray therapy, there has been added more recently thiamine chloride,[3–5] proteolytic enzymes,[6,7] and vitamin B_{12}.[8] In view of the viral etiology of herpes, smallpox vaccine[9] and antibiotics, such as oxytetracycline and chlortetracycline, have also been used. Large doses of vitamin B_{12}[10] have recently been used in the treatment of trigeminal neuralgia and diabetic and alcoholic neuritis. Enthusiastic reports heralding cortisone and ACTH[11] as excellent therapeutic agents for herpes zoster are dampened by instances of herpes zoster appearing during therapy[12] with cortisone for other diseases.

No specific controls were used in our study. We considered those cases treated in previous years with the therapies then in vogue, i.e., analgesics, local application, physical therapy, etc., as sufficient controls with which to compare results. We accepted herpes zoster as a self-limited disease with more or less severe pain, lasting six to eight weeks or longer if untreated, with the severely painful period lasting seven to ten days in the average case. In the older individual postherpetic neuralgia due to intraneural fibrosis may cause intolerable recurrent pain for months. Neuralgias were included only when the cause could not be specifically treated (such as many cases of sciatic neuralgia) or if, when properly treated, the pain persisted, e.g., controlled diabetes. All neuralgic and neuritic cases were completely investigated for obvious organic causes.

One cubic centimeter of Thiastigmine was injected intramuscularly daily or every other day depending upon the severity of the pain. The injections were repeated until the severe pain was relieved. Relief was generally apparent within a total of five injections. Occasional patients required more than five, but if no improvement was evident by this time, we felt that the patient would not respond to this therapy, and other methods were then advocated.

Results

Herpes Zoster.—Twenty-three patients with herpes zoster were treated with good results in all cases (Table I). The greatest number of injections required was ten. This was in Case 13, a seventy-two-year-old woman who suffered severe pain for eighteen days during which time another physician had failed to relieve her with injections of proteolytic enzymes. It is significant that following relief with Thiastigmine no postherpetic pain was noted. Under therapy corneal involvement failed to complicate two of three instances of ophthalmic herpes. The third patient recovered completely with the additional topical use of cortisone suspension (ophthalmic).

One patient complained of pain on weather changes for two months after the completion of therapy.

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* Each cc. of preparation contains thiamine chloride 0.100, neostigmine methylsulfate 0.0005, atropine sulfate 0.0002, chlorbutanol 0.35 per cent, and distilled water.

Vials of Thiastigmine were generously supplied by C. F. Kirk & Co., New York City.

TABLE I.—Herpes Zoster

Case	Age	Sex	Nerve Involved	Duration of Symptoms Prior to Treatment	Severity of Symptoms	Number of Injections For Relief	Number of Injections Total	Remarks
1	41	F	D 3,4 left	3 days	Severe	3	6	Patient had Hodgkin's disease. Mild relief after third injection; 5 given daily, then 2 days later. Lesions and residual staining extensive. No recurrence for 2 years (at time of death).
2	69	F	Right maxillary	4 days	Mild, sharp	3	5	Relief followed third injection. Given every second day.
3	62	M	D 11 right	5 days	Moderate	2	5	Marked relief after second injection. Given every second day.
4	60	F	D 4 right	7 days	Moderate	2	2	Pain disappeared and failed to recur after second injection.
5	62	F	C 2,3 right	2 days	Severe	5	7	Pain relieved after fifth injection and completely eliminated after seventh. Daily for first 5 days, then every second day.
6	45	F	D 4 right	4 days	Moderate	4	5	Complete relief after fourth daily injection.
7	77	M	Left ophthalmic	14 days	Moderate	3	5	No corneal involvement. Injections every second day.
8	46	M	D 5,6 right	7 days	Moderate	2	5	Excellent results.
9	72	F	Right ophthalmic	1 day	Severe	3	5	No corneal involvement. Lesions dry after third injection.
10	35	M	Left ophthalmic	3 days	Moderate	3	6	Corneal involvement with recovery. Local therapy with cortisone.
11	57	M	D 10 right	5 days	Moderate	2	5	No pain following second injection.
12	60	F	D 12 left	14 days	Moderate	5	5	Slight residual sharp pain for 1 week.
13	72	F	D 5 right	18 days	Severe	6	10	No postherpetic pain.
14	54	M	D 12 right	7 days	Moderate	1	4	No pain following first injection.
15	47	F	D 12 right	6 days	Moderate	3	5	Complete relief of pain after fourth injection and lesions were dry.
16	54	F	Left lateral cutaneous nerve of the thigh	3 days	Severe	3	5	Slight residual pain with weather changes.
17	55	F	Left femoral nerve	10 days	Severe	2	5	Excellent results.
18	35	F	C 5,6	1 week	Moderate	3	4	Excellent results.
19	68	F	L 1,2	3 weeks	Severe postherpetic neuralgia	4	6	Marked decrease in postherpetic pain.
20	55	F	D 4	3 days	Severe	4	4	Excellent results.
21	40	M	D 4	10 days	Moderate	4	5	Excellent results.
22	41	M	D 3,4	8 days	Moderate	3	5	Excellent results.
23	41	F	D 3,4	4 days	Severe	2	4	Excellent results.

Neuralgias and Neuritides.—Twenty-nine patients with variously situated neuralgic and neuritic pains were also treated with six failures, two being instances of trigeminal neuralgia (Table II).

One case of alcoholic neuritis was treated with excellent results. This case is reported in greater detail here.

N. Z., male, age thirty-eight, a bartender, a heavy whiskey drinker, first experienced weakness and dull pain in the left leg with left foot drop six months before our examination. As he walked, the foot would flap against the floor in a characteristic manner. In addition to his usual imbibition of large amounts of alcohol, he would go on drinking sprees in which he would not eat food for days.

Physical examination revealed sensory (hypesthesia) and motor loss (foot drop) and diminished knee and ankle jerks in the left lower extremity with normal findings on the right. The upper extremities were normal. There was no liver enlargement, but there were the usual signs of B complex deficiency. He had received elsewhere injections of B_{12} (60 micrograms), three weekly for four months, without avail. He was also given multiple vitamin capsules.

Thiastigmine (1 cc.) injections were then started daily. After the eighth injection there was improvement in the foot drop. There was some improvement in sensation, and the knee and ankle jerks were improved. Injections were then given twice weekly. Improvement continued so that within two months the neurologic findings were essentially normal. He was given four additional injections as a precautionary measure.

Comment

Thiamine has been shown to be associated with the activity of acetylcholine by inhibiting the formation of cholinesterase at nerve endings.[13] Similarly, blood cholinesterase levels are increased in thiamine deficiency. Physiologically it is

TABLE II.—Neuralgias and Neuritides

Case	Age	Sex	Nerve Involved	Relevant History	Duration of Symptoms	Severity of Symptoms	Number of Injections		Remarks
							For Relief	Total	
1	50	M	Supraorbital	Fracture of right maxillary sinus 3 years ago	3 years	Paroxysmal, severe	1	5	Pain returned after third injection but completely disappeared after fifth.
2	69	M	Right femoral	Sudden onset associated with flexion of left leg on right thigh	10 weeks	Moderate	3	5	Pain markedly diminished after fifth injection and gradually disappeared.
3	59	F	Trigeminal, right	Recurrent for 20 years	4 weeks	Moderate	3	5	
					3 days	Moderate	4	5	Followed first attack by 3 months.
					1 day	Moderate	3	3	3 months later.
					2 days	Moderate	3	4	1 year later.
4	50	M	Trigeminal, left	Recurrent for 7 years. Usual duration 6 weeks	4 days	Severe	3	7	
					2 days		1	4	Second attack 3 years later. No attacks since 1949.
5	52	M	Trigeminal, right	Recurrent 3 years. Brother of Case 4.	2 weeks	Severe	..	7	No relief. Subsequent nerve section with relief.
6	63	F	Trigeminal, right	Recurrent, 10 years duration	4 weeks	Severe	..	9	No ultimate relief. Temporary benefit with return of daily attacks. Moderation. Surgery considered.
7	68	M	Left ulnar neuritis	Cervical arthritis, allergic nasal polyposis	1 week	Moderate	3	4	Neuritis considered secondary to nasal sinus infection.
8	53	M	Sciatica, right	....	2 days	Severe	5	7	Was unable to walk when first seen. Complete relief after seventh injection. No other therapy.
9	61	F	Occipitofrontal neuritis	2 years, recurrent	2 weeks	Moderate	..	3	No relief.
10	55	M	Trigeminal	12 years, recurrent	1 week	Moderate	3	3	No recurrence since 1950.
11	35	M	Left radial neuritis	Obesity	1 week	Moderate	1	2	Marked improvement after first injection.
12	57	M	Sciatica, right	Diabetes osteoarthritis	3 weeks	Moderate	4	5	No recurrence in 2 years.
13	62	F	Femoral, right	....	1 week	Moderate	1	2	Relieved.
14	59	M	Occipitofrontal	Neurocirculatory asthenia	3 days	Moderate	1	2	Relieved
15	54	M	Occipital	Cervical arthritis	1 year	Severe	..	8	No relief until cervical traction performed.
16	40	M	Ulnar, right	Right grip weaker than left. Drops objects.	2 weeks	Moderate	6	9	No recurrence since June, 1951.
17	60	M	Radial, right	Weak right hand	1 week	Moderate	5	7	Able to return to work.
18	66	M	Plantar paresthesia	Marked neurosis	8 months	Mild, persistingly annoying	..	6	No relief.
19	37	M	Sciatica	Associated disk lesion	2 days	Moderate	..	3	No relief.
20	40	M	Trigeminal	....	10 days	Severe	3	5	No recurrence since March, 1952.
21	36	M	Radial	Mild pain and paresthesia	2 days	Mild	2	2	No recurrence.
22	34	F	Sciatica	....	.....	Moderate	6	6	Relief moderate.
23	26	F	Occipital	Pain and paresthesia	3 days	Mild	3	3	Complete relief.
24	45	F	Intercostal D 3,4	....	3 days	Severe	3	3	Good results. Recurrences every 6 to 8 months. Relief each time with 3 to 4 injections.
25	35	F	Intercosta D 3,4	....	10 days	Moderate	..	6	Good results.
26	42	M	Occipital	....	3 weeks	Severe	..	6	Relief complete.
27	32	F	Trigeminal, right	....	3 days	Severe	2	3	Relief followed second injection. Patient insisted on third injection.
28	44	F	Right ilioinguinal neuritis	Recent upper respiratory infection	2 weeks	Moderate	2	3	Relief complete.

demonstrable that thiamine augments the action of acetylcholine in lowering the blood pressure of the cat and on isolated rat intestines.[14] Jaros *et al.*[15] inferred that reactions following the action of thiamine were due to the formation of excess quantities of acetylcholine and possibly some histamine, thus indicating a similarity to neostigmine in effect. Since the action of neostigmine is also postulated through its inhibition of cholinesterase, we felt that these drugs were synergistic, and we utilized this combination in therapy.

Pathologically, Adams[16] has classified herpes into several categories including inflammatory necrosis of the ganglion; regional unilateral poliomyelitis, resembling the anterior form except for the greater involvement of the posterior horn, root, and ganglion; leptomeningitis and peripheral mononeuritis in the nerve fibers distal and central to the ganglion. We can conceive, therefore, that a therapy relieving herpes zoster may well relieve neuralgia or neuritic pain of other nature.

Browder[17] noted inflammatory foci in focal skin areas of patients with postherpetic neuralgia and consequently felt that the pain might result from the involvement of nervous structures in this focal inflammatory process.

Insofar as acetylcholine is the active chemical mediator at the preganglionic synapses of the sympathetic system, at the pre- and postganglionic synapses of the parasympathetic system, and at nerve terminals,[18] it is conceivable that correction of local metabolic derangements by Thiastigmine is concerned in its pharmacologic effect.

In our original series there were six cases of neuralgia treated during a period when herpes was commonly seen. These instances may have been preherpetic neuralgic pains. The salutary effects of the medication suggested its further use in neuralgias and neuritides. Treatment of neuralgias and neuritis with neostigmine has been reported by Davis.[19] His cases responded well to a dosage schedule varying from injections every other day to maintenance doses at seven to fourteen day intervals.

Secondary factors may be important in the action on neuromuscular structures as indicated by Hamill and Walker.[20] These investigators felt that neostigmine could augment defective innervation with resultant improvement in voluntary motion. They state that, "the action of the drug in facilitating voluntary movements will prove of value in treatment by maintaining the nutrition of muscles whose nerve supply has been impaired and will accelerate recovery." This was demonstrated in the case of alcoholic neuritis reported above.

Stepp[21] in a similar vein of thought found a synergistic action of thiamine and prostigmine to be helpful in the therapy of polyneuritis with muscular weakness.

Summary

A preparation containing essentially thiamine chloride and neostigmine was used in the treatment of 23 cases of herpes zoster and 29 cases of various neuralgias and neuritides. Uniformly good results were obtained in the instances of herpes zoster, while there were some failures in the neuritic series.

The therapy is postulated on the physiologic action of both thiamine and neostigmine as cholinesterase inhibitors permitting greater liberation of acetylcholine. Metabolic correction at nerve terminals may be the pharmacologic action.

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Bronchography—A Procedure in the Diagnosis of Pulmonary Diseases

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PHYSICAL examination, x-rays, planograms, bronchoscopy—all help in the diagnosis of pulmonary disease, and bronchography is another aid. On physical examination we may detect the presence of pathology in the lungs. X-rays will confirm this and give added information. Planograms will localize the lesion even more definitely. Bronchoscopy will determine the condition of the bronchi, will help in localization, and will afford an opportunity to take a biopsy or aspirated specimens, but the bronchogram will outline the bronchi beyond the vision of the bronchoscope and frequently give significant information of the pathology in the smaller branches. Bronchography is not utilized as a diagnostic procedure as frequently as it should be. It is not an examination that is done with a great deal of ease, yet with proper training and equipment it can be performed readily.

The question sometimes arises as to who should do bronchography—the laryngologist, the endoscopist, the roentgenologist, the chest physician, or the chest surgeon. Really, any of these may perform the procedure as long as he knows how. There are many methods of obtaining a bronchogram, and one may be more suited than another to the roentgenologist, or to the laryngologist, or to the chest physician. As long as the desired result is obtained, however, the method matters little.

This discussion is primarily concerned with bronchography as a procedure in the diagnosis of pulmonary diseases. We will, therefore, go into some detail in describing the procedure.

Contrast Media

As to the material used we prefer Lipiodol. We have had relatively little experience with water-soluble preparations. These are very readily absorbed, and if the setup is such that plates cannot be taken immediately, the results are not satisfactory. The material readily invades the alveoli and obscures the picture. It is more irritating to the mucosa and produces a cough necessitating more thorough anesthesia of the bronchi. The water-soluble preparations are more viscid than Lipiodol and, therefore, are not useful in lungs with limited function. Also, the roentgen contrast is less than with Lipiodol. However, they do have the advantage of absorption within four hours, and if a repeat bronchogram is necessary, it can be done the following day. Lipiodol, on the other hand, may remain in the lung for weeks.

Water-soluble media are not advised in children because general anesthesia is necessary since it would require a great deal of a local anesthetic to overcome the irritation of the material. It has been proved, too, that tissue reaction with the use of Lipiodol is not so much greater as to make the water-soluble media more desirable.

Lipiodol should be used at body temperature or very little above it. If it is too warm, it is more readily absorbed, and its infiltration into the alveoli interferes with the picture.

Preparation of Patient

Bronchography may be performed on ambulatory patients as well as hospitalized patients. Of course, inpatients may be premedicated better than outpatients so that the procedure is a little safer since occasionally we see reactions to a local anesthetic. However, the examination may be done on ambulatory cases if proper precautions are taken.

The patient is asked to omit breakfast if he is to have a bronchogram in the morning or lunch if it is to be done in the afternoon.

If the patient has a great deal of exudate in the lung, he should have postural drainage just before the procedure, or if this is not satisfactory, he should be bronchoscoped so the lungs may be thoroughly cleansed by aspiration.

Premedication is very important. If the patient is ambulatory, he should have a barbiturate about an hour before and some codeine one-half hour before the procedure. If the patient is hospitalized, we prescribe Nembutal, $1^1/_2$ grains two hours before and $1^1/_2$ grains one hour before, and codeine one-half hour before the bronchogram is done. The medication not only helps to prevent cough but also diminishes the likelihood of reaction to the local anesthetic.

Anesthesia

Many local anesthetics are used: cocaine 4 per cent, cocaine 10 per cent, Pontocaine 1 or 2 per cent, Butyn 2 per cent, Xylocaine, etc. We have been using a combination of 10 per cent cocaine and 2 per cent Pontocaine which gives a solution of 5 per cent cocaine and 1 per cent Pontocaine. It is important to give the anesthesia slowly, in small amounts at a time, and to wait between applications to get the maximum effect. We spray the pharynx and larynx with the solution, and then under indirect vision (mirror) with a curved cannula and syringe, we instill the solution into the trachea in drops, not in cubic centimeters, until the patient is sufficiently anesthetized and does not cough. Some apply the anesthesia to the piriform sinuses with applicators in order to desensitize the superior laryngeal nerves, but we do not find this necessary. Others prefer to give the anesthesia by aerosol. We find this usually requires supplementary anesthesia, which is rather time consuming.

Methods of Bronchography

There are many methods of obtaining a bronchogram. A great deal depends upon the facilities at the hospital or the office in which it is done. It is best to devise a method suitable to a given setup and stick to it, because the more proficient one becomes with a method, the better bronchograms will be obtained.

A very simple procedure in preparing a bronchogram is the supraglottic or passive method. The patient is in a sitting position, and after anesthetization the Lipiodol is dripped on the base of the tongue with a curved cannula while the tongue is held out with a piece of gauze. The patient is asked to breathe deeply or to "pant like a dog." The Lipiodol finds its way around the base of the tongue and epiglottis, and if the patient refrains from swallowing, the Lipiodol enters the larynx and trachea. In this way both lower lobes may be filled, tilting the patient first to one side, leaning forward then backward, and then tilting him to the other side and repeating the same maneuver. About 10 cc. of Lipiodol are used. Films are then taken in the erect position. This method is usually satisfactory if both lower lobes are to be filled and there is no special interest in the upper lobes.

Some prefer to drip the Lipiodol directly into the trachea with a curved cannula under indirect laryngoscopy. If it is important to fill the upper lobes, the procedure is best done under a fluoroscope to make certain the areas required are properly demonstrated. It is probably best to attempt to outline one lung at a time since there is a certain amount of superimposition when taking lateral films. However, patients seldom care to undergo the procedure more than once, and you will find yourself attempting bilateral bronchograms more often than unilateral fillings.

In order to outline the upper lobes it is best to have the patient in a recumbent position with the head lower than the feet and turned to the side that you are attempting to fill. When filling the right side, the patient is lying on his right side with the head low and the body almost prone so that the Lipiodol enters the upper lobe. The left side is outlined in a similar manner. The right middle lobe is filled while the patient is erect and is leaning far forward and to the right. When all lobes are outlined under the fluoroscope, films are taken either in the reclining or erect position. Anteroposterior, lateral, and oblique views are taken, and each view is important to visualize the various branches. It is not always necessary to outline the entire lung on each side, but it can be done. When both lungs are to be demonstrated, about 20 cc. of Lipiodol are used. It is very important that the patient refrain from coughing. Deep breathing helps to spread the Lipiodol along the smaller bronchi.

It is not necessary to obtain a complete column of Lipiodol in a bronchus in order to demonstrate it. If only the walls of the bronchi are lightly covered with Lipiodol, the outline is sufficient to reveal any pathology in them. Too great an amount of medium in any one bronchus may lead to "flooding" the alveoli, and the area is obscured by a mass of Lipiodol. Also, because of the possibility of "flooding," the plates should be taken as soon as possible after the installation of the medium. Therefore, fluoroscopy itself should not be extended over too long a period of time.

There are other ways of filling the upper lobes. The patient may be seated, and after tilting partially to one side to fill the lower lobes, he may be brought far forward so that his body and head are placed between his knees. This fills the anterior part of the upper lobes. By leaning backward almost in a supine position the posterior portion of the lungs is filled. This method may be used when a tilt table is not available.

After the procedure the patient should be encouraged to cough under postural drainage technic to expel as much Lipiodol as possible.

This is a relatively simple method, but it is not always successful, and it is difficult to fill all the branches. After all, you are trusting to chance when you expect the Lipiodol to go where you wish. Perhaps a better method, when you plan to fill the upper lobes, is that in which a catheter is used, the so-called transglottic method.

The patient is anesthetized in the usual manner. In addition, one side of the nose is anesthetized. A number 16 rubber catheter, not too soft, is passed through the nose and down the pharynx. With the tongue held out and the patient breathing, the catheter will slip into the larynx and trachea. If necessary, the catheter may be directed into the trachea with the help of a laryngeal mirror and dressing forceps. Some prefer to use a stylet in the catheter and under indirect vision insert it through the mouth instead of the nose. The insertion of the catheter is even more readily done when a bronchogram is planned following a bronchoscopy. During the bronchoscopy the lungs are thoroughly aspirated and cleansed of exudate. The catheter is introduced through the laryngoscope after the bronchoscope has been removed.

I prefer to use a Coudé catheter since the end of it is rather firm and directed to one side. It helps to insert the end into the bronchus desired.

When the catheter is in place, it is fastened to the face with adhesive tape so that it cannot be aspirated or coughed out.

Additional anesthesia may be passed through the catheter if necessary and if introduction of the catheter has caused coughing.

With the catheter in position the patient is placed on the fluoroscopic table, a tilt table if possible. Under fluoroscopic guidance Lipiodol is seen to pass down one side. Then the head of the table is lowered. The Lipiodol passes into the upper lobe while the patient is on his back. Next he is turned on his side to an almost prone position. In this way all lobes are filled, and x-rays are taken. The other lung is then filled and pictures again taken. These may be supplemented by placing the patient in an erect position and taking further views if necessary. Lateral and oblique views should be included. Again the fluoroscopic examination should not be prolonged because the Lipiodol tends to enter the small bronchial branches and bronchioles, and if it enters the alveoli, the picture may be obscured.

There is a subglottic method which seems rather drastic and unnecessary to me. In this instance the trachea or the cricothyroid membrane is punctured with a needle and Lipiodol instilled. There is an unnecessary risk of obtaining subcutaneous emphysema in this way. I have never used this method.

It is possible, too, to instill Lipiodol through the bronchoscope at the time a bronchoscopy is performed. This is done by inserting a flexible spiral-tipped cannula through the bronchoscope and passing Lipiodol through it. This method affords the opportunity to fill one or two selected branches, and if the equipment is adequate, spot films can be made. We have such a setup and, therefore, make rather frequent use of this method when we wish to outline a certain area.

Bronchography in Children

Bronchography in children presents a separate problem, a problem of planning and extreme patience. Because it is so trying and time-consuming, I am afraid many of us shy clear of doing bronchograms in children, but it is a procedure that aids greatly in comprehending their pulmonary lesions and at times is indispensable in determining treatment. The procedure is very much the same as in the adult, but it requires a great deal of understanding, perseverance, and tolerance to accomplish what one sets out to do.

The question of anesthesia in children is an important one. Some like to do a bronchogram under general anesthesia using a bronchoscope or inserting a catheter by direct laryngoscopy, instilling Lipiodol, and taking spot films. In young children who are difficult to manage this may be the better way.

It is possible, however, in children under four years of age to do a fast study under no anesthesia. Above the age of about four a bronchogram may be done under local anesthesia. Pontocaine or Xylocaine or Butyn, less toxic than cocaine, may be used in lesser strengths and in smaller amounts. They may be given by spraying or by nebulization. After spraying with the tongue out, the anesthesia may be dropped on the base of the tongue and allowed to enter the larynx, trachea, and bronchi. The supraglottic (passive) method or the transglottic (catheter) method may be used. The catheter should be small enough to allow adequate airway in the glottis. It may be necessary to insert the catheter by indirect or direct laryngoscopy. Additional anesthesia may be administered through the catheter. The procedure may be done under the fluoroscope, the various positions assumed in order to distribute the Lipiodol properly, and films taken as desired. If bronchoscopy is required, the catheter may be inserted by direct laryngoscopy, or the Lipiodol may be instilled through the bronchoscope and spot films taken. The child is given premedication in the form of a barbiturate and/or codeine and atropine in doses as indicated according to age.

It all sounds simple, very much like the procedure in the adult, but it takes a great deal of patience, time, teamwork, and certainly some good luck to obtain adequate bronchograms in a child. Of course, the more you do, the easier it will be to obtain the desired results.

Dangers

The dangers involved in doing a bronchogram are relatively few. It would be unwise to do the procedure in the presence of an acute infection. In patients with limited lung capacity one should use as little Lipiodol as possible and maintain constant observation throughout the procedure.

By far the most frequent difficulty encountered is sensitivity to local anesthesia, but premedication and the use of the anesthesia in small amounts will help to overcome this mishap.

Iodism is sometimes encountered, but we usually obtain a history of this sensitivity. Recently ACTH has been reported successful.

Very rarely lipoid pneumonia and the formation of granuloma have been reported. This complication may be overcome by the use of as little Lipiodol as possible in any case. Avoid overfilling, and avoid inserting the Lipiodol under pressure. Very important is the postural drainage after the procedure.

Indications for Bronchography

A bronchogram is certainly indicated whenever bronchiectasis is suspected. In fact the only way to make a certain diagnosis of bronchiectasis is by bronchography. In these days when surgery is utilized for the treatment of localized bronchiectasis, it is necessary to exclude this disease in the other lobes, and this can be done only by obtaining adequate bronchograms.

By bronchography tumors, abscesses, cysts, bronchostenosis, pulmonary cavities, and bronchial fistulas may be demonstrated. Obstructive lesions show a blockage of a bronchus, or in partial obstruction one may see a narrowing of a bronchus. It may be difficult to fill an abscess with Lipiodol because of edema of the mucosa lining the bronchus. At times an abscess may be recognized by the rearrangement or abnormal distribution of the bronchi around it.

For a long while tuberculosis was considered a contraindication, but the procedure has been found to be harmless. In these days of segmental resection in tuberculosis it is essential to know the exact extent of involvement. Bronchograms will help to demonstrate the diseased segments and those not diseased. It may be necessary to obtain information concerning the bronchi in a lung or a portion of a lung that will not re-expand following pneumothorax. The solution of the problem may be found in a bronchogram. There are times when a lung appears to have cleared, but one wishes to know the condition of the bronchi in this lung. Bronchography may help.

In the interpretation of bronchograms it is important that one acquaints himself with the lung segments. It is especially important for surgeons to know which segment of the lung is diseased. A student of bronchography must familiarize himself with the charts that have recently been made available by Jackson and Huber[1] and various textbooks.

Summary

We have attempted to describe in detail the procedure in bronchography. A number of methods have been mentioned in the hope that those performing bronchography will choose one that is commensurate with their ability and setup. The technic is not difficult to acquire but requires some experience.

Bronchography should be employed as an aid in the diagnosis of pulmonary diseases whenever it is necessary to know the condition of the smaller bronchi and bronchioles.

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Clinical and Electroencephalographic Studies of Demerol Addiction

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THE clinical and electroencephalographic material in this report has been drawn from the records of eight Demerol addicts who were studied in the Payne-Whitney Clinic. Five of the patients were men and three women. Three of the men were physicians, and one of the women was a registered nurse. The patients ranged from twenty-eight to sixty years of age with five between the ages of thirty-seven and forty-six.

The period of hospitalization for each patient was short since all were voluntary patients and insisted on discharge before the completion of therapy. Three accepted hospitalization for less than ten days, four stayed from five to seven weeks, and one patient remained eleven weeks, returned to Demerol in the subsequent four weeks, and was rehospitalized for four weeks.

The motivations which led the patients to accept hospitalization are revealing. Two physicians came fearing investigation and discovery. Two women came on their physicians' recommendation, one having already discontinued the drug. One woman entered to please her husband, and three patients were brought to the clinic because of symptoms of overdosage with Demerol. Insofar as external pressures led to hospitalization the patients' orientation to psychotherapy was poor, and ultimate flight from treatment resulted.

All of the patients stressed physical illness and discomfort as the initial reason for using Demerol. While three patients were unable to accept any but physical reasons for taking the drug, five of the patients readily admitted that once begun on Demerol, they continued to use it to ease such symptoms as anxiety, tension, insomnia, fatigue, and strong feelings of resentment. These patients denied that the drug produced euphoria. One patient stated that when his relationships with people became difficult, he could achieve "passivity" from the use of Demerol.

Five patients reported daily dosages of Demerol between 1,500 and 4,000 mg., and three stated they took lesser amounts. Six of the patients were withdrawn abruptly within twenty-four hours of admission. Two patients were withdrawn gradually from Demerol and given small amounts of codeine. Our results lead us to question both the physiologic and the psychologic merits of this technic. Prolonged baths and mild sedation were employed initially to promote relaxation and sleep. However, the primary aim of therapy was to eliminate all sedation as quickly as possible. All patients were encouraged to socialize and to participate in the full hospital routine including occupational and recreational therapy. Intensive, directive psychotherapy with interviews oriented to securing an anamnesis and a personality evaluation was used thoughout the hospital stay.

On admission most of the patients were apprehensive about withdrawal. The three who were taking less than 1,500 mg. daily had no symptoms. Three patients using 3,000 mg. daily had minimal symptoms such as restlessness, general somatic complaints, tearing, myoclonic twitches, muscle cramps, chilly sensations, and nausea for twenty-four to forty-eight hours and insomnia for a week. One patient abruptly withdrawn from 1,500 mg. daily developed a panic, and a patient gradually withdrawn from 4,000 mg. daily had a series of epileptiform seizures on her third day. With these two exceptions symptoms during the withdrawal period were minimal. One reason may be that segregation of the patients from previously withdrawn addicts eliminated any possibility of comparing notes, a possible contagion factor. The severity of symptoms did not appear to be related to the dosage of Demerol or the rapidity of withdrawal. In the case of the patient who developed a panic, it would seem that Demerol served to mask psychopathology already present and which became apparent as the effect of the drug wore off.

Presented at a meeting of the New York Neurological Society and the Section of Neurology and Psychiatry of the New York Academy of Medicine, New York City, May 12, 1953.

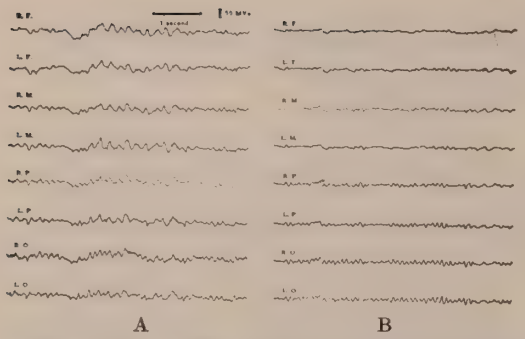

FIG. 1. (*A*) Eight monopolar electroencephalograms of patient who had been taking 300 mg. of Demerol daily for months. (*B*) Same patient one month after withdrawal of Demerol. Normal electroencephalogram.

Personality studies of the six patients whom it was possible to evaluate revealed that they were hardworking and capable in their business or professional endeavors. All were proud, rigid, tense persons unable to accept their shortcomings.

Outstanding was a need for recognition in terms of community prestige, wealth, and professional standing. All had a deep need to be appreciated and loved, yet lacked the ability to give of themselves in interpersonal relationships. When their needs were not met, the patients experienced anxiety, depression, resentment, tension, and associated physical reactions from which they found relief in Demerol. Three of the seven patients fit clearly into this category. One, a successful businessman, who was unable to express his prejudices and resentments had suffered migraine headaches for thirty-five years. Polite and congenial, yet insistent on his own way, he was unable to recognize emotional difficulties. Another was a nurse, ingratiating in manner, fearful of saying the wrong thing, and imbued with a strong sense of obligation coupled with intense resentment. Feeling "pushed around," she countered subtly or experienced marked tension. The third was a driving, ambitious physician whose strong underlying feelings of inadequacy were heightened by his failure to pass his board examinations.

The other three patients, successful and capable in their chosen fields, revealed psychopathic features when their interpersonal relationships were carefully scrutinized. They sought to make a big impression by embellishing personal accounts and lying for the listener's benefit. They were inconsiderate of others, sought personal pleasure, and resented responsibilities and social demands. These patients tended to use Demerol for solace when thwarted.

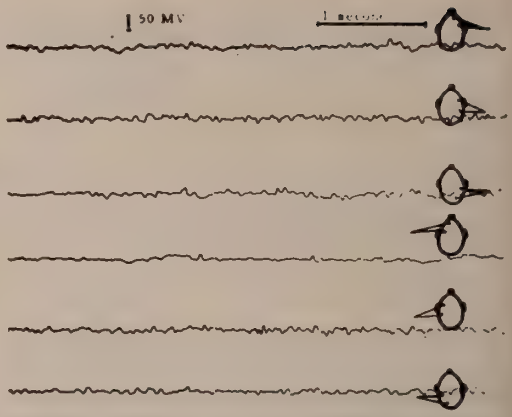

FIG. 2. Electroencephalogram within normal limits; patient had been taking about 2,300 mg. Demerol per day for ten days.

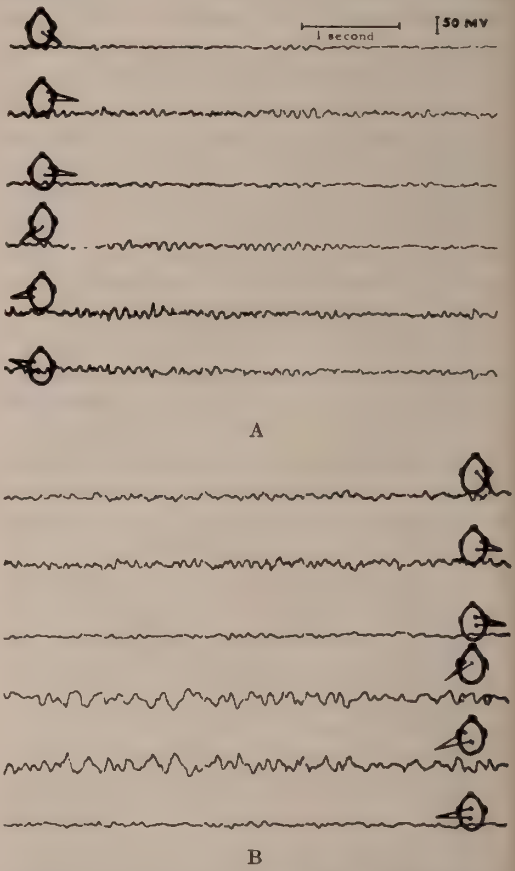

FIG. 3. (Top) Four days after withdrawal of Demerol, no focus. (Bottom) Twenty-four days after withdrawal of Demerol, focus in left anterior temporal area.

In reviewing the literature pertaining to the cortical effects of Demerol, we found that the only study was performed by Andrews,[1] and this work was done in an experimental situation. He gave five volunteer subjects increasing doses of Demerol up to 3,000 mg. daily. Electroencephalograms were taken weekly and at fifteen-day intervals following withdrawal.

He found that slow waves appeared after only a few days of administration. These waves became progressively slower (as low as 3 to 4 cycles per second) and increased in amplitude as the study progressed. They persisted for about forty-eight hours after withdrawal with a slow return to the original type of record. In our series we have never seen as much slowing as he indicates.

Clinically, he found loss of consciousness and tongue biting which suggested epileptiform attacks, and the electroencephalograms at these times were not inconsistent with epilepsy. However, Himmelsbach[2] who gave smaller doses (up to 800 mg. daily) found no such seizures.

The electroencephalographic findings in our patients proved variable, depending upon many factors. One patient, who had been taking 3,000 mg. at the time of admission, showed what we considered typical slowing due to Demerol (Fig. 1). Here 6 and 7-cycle per second activity is clearly seen. Four weeks later his record was normal. Another patient who had been taking 2,300 mg. of Demerol daily for less than three weeks showed an initial tracing that was considered within normal limits (Fig. 2). A third patient who had central nervous system syphilis showed only mild changes on her admission electroencephalogram. However, after she had been free from the drug for a period of three weeks, a suggestive left anterior temporal focus appeared on two successive studies (Fig. 3). Demerol, in this patient, appeared to mask an abnormality in the electroencephalogram which became apparent after the drug was withheld.

Thus in our series of patients the amount of Demerol taken and the sensitivity of the cerebral physiology to the drug were the main factors influencing the electroencephalogram.

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Bilateral Breast Cancer

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FOUR per cent of all mature women will become victims of breast cancer, and the incidence of cancer occurring in the opposite breast is approximately double this in women with proved cancer in one breast. Cancer of the breast is the most common type of cancer attacking women, and more than 20,000 women die annually from it in the United States. In the United States the mortality rate of carcinoma of the breast per 100,000 women was 10.9 in 1901 and had increased to 26.9 in 1948. Because of the fact that after suffering an initial breast cancer, a woman's chances of having malignancy in the other breast are double, we believe the problem of bilateral breast cancer merits consideration, and we wish to report six cases. Based on the average increasing age of the general female population and since malignancy of the breast occurs most frequently in the forty- to sixty-year age group, it is almost certain that breast cancer will continue to increase. Therefore, we should be even more alert to excise surgically suspicious tumors, especially in the remaining breast after prior surgery on the opposite side.

Harrington[1] at the Mayo Clinic, in reviewing 6,558 cases of breast cancer, found an actual incidence of 3.4 per cent of bilateral breast cancer which were operable and estimated an equal percentage to be inoperable due to distant metastasis from the breast operated on initially. Marshall and Hare[2] of the Lahey Clinic reported an incidence of 3.3 per cent, or eight times in 238 patients. Finney, Merkel, and Miller[3] had six cases (2 per cent) with bilateral breast cancer in 298 patients with breast carcinoma. Breast cancer is not a preventable disease, being unlike cancer of the lip, the tongue, the skin, and the cervix where chronic irritation plays an important role. Thus little in the way of prevention can be done because the etiology of breast malignancy is unknown.

Etiology

The etiology of bilateral breast cancer may be due to (1) a new primary malignant focus in the opposite breast or (2) a lymphatic spread to the second breast from the first breast. The lymphatic spread occurs through the subareolar and subcutaneous plexuses medially to the opposite breast. This route of metastasis is one of the less commonly involved pathways along with those routes to the liver, upper abdomen, inguinal, and cervical nodes. The most common paths for lymphatic metastasis are through the (1) transpectoral and retropectoral lymph channels, (2) internal mammary and mediastinal routes, and (3) external mammary, subclavicular, axillary, and subscapular lymph vessels. The lymphatic dissemination of tumor emboli through the subareolar and subcutaneous channels medially to the opposite breast probably accounts for the fact that the commonest site of occurrence of cancer in the second breast is in the circumareolar region where the lymph plexuses are most abundant. Retrograde lymph flow to the opposite breast when the radial lymphatic channels are plugged has been recognized as a factor in metastasis.

Prognosis

Bilateral breast cancer is divided into two different classifications: (1) cancer occurring in the second breast at a later date, or "nonsimultaneous" carcinoma, and (2) cancer occurring in both breasts at the same time, or "simultaneous" breast cancer.

The prognosis of the nonsimultaneous group appears to be markedly better than that of the simultaneous group in the small number of cases reported in the literature, and many authors have commented on this better than average survival rate following a second mastectomy for the nonsimultaneous type.

The five-year survival rate in the nonsimultaneous type frequently surpasses that for unilateral breast cancer. In our group of six patients, five of whom are in the nonsimultaneous group, four are well for five and one-half, five, four and one-half, and two and one-half years, respectively, after the second mastectomy, but conclusions should not be drawn as to end results in cases not followed at least five years. Of the four living, one had axillary metastasis on the first mastectomy, and one had axillary metastasis on the second mastectomy. In the two patients who died, one (Case 5) was a thirty-two-year-old woman with axillary metastasis who had delivered a child three months prior to discovery of the lump and nursed the child for six weeks. Thus the combined factors of pregnancy, lactation, axillary metastasis, and being in the early thirties were extremely unfavorable since any one of these carries a grave prognosis, much less having all four adverse conditions present in one patient. Clinically this patient obtained good palliation for three years following the second mastectomy using testosterone, sterilization, and radiation therapy for widespread osseous metastasis. She was able to perform most of her duties until the final few months and to raise her child to past four years of age. The second patient (Case 4) in this group who died had a high grade malignancy (grade III) which was metastatic to all levels of the axillary lymph nodes on sectioning of 20 nodes.

Harrington in reporting his nonsimultaneous group of patients, found that the prognosis appeared better than in the unilateral cases but pointed out that his series of 155 cases was relatively small. He also noted that the occurrence of axillary metastasis was less in a larger number of patients in this group and that the grade of malignancy was lower in a larger percentage of patients. He concluded that all of this indicated that even though cancer does develop in the remaining breast, the surgical results may be quite satisfactory.

Cliffton and Young[4] in a series of 332 cases of breast carcinoma found ten cases with bilateral nonsimultaneous spread. In the five-year follow-up of these cases they had seven patients (70 per cent) living and well after the second mastectomy. This was better than their average survival following radical mastectomy for

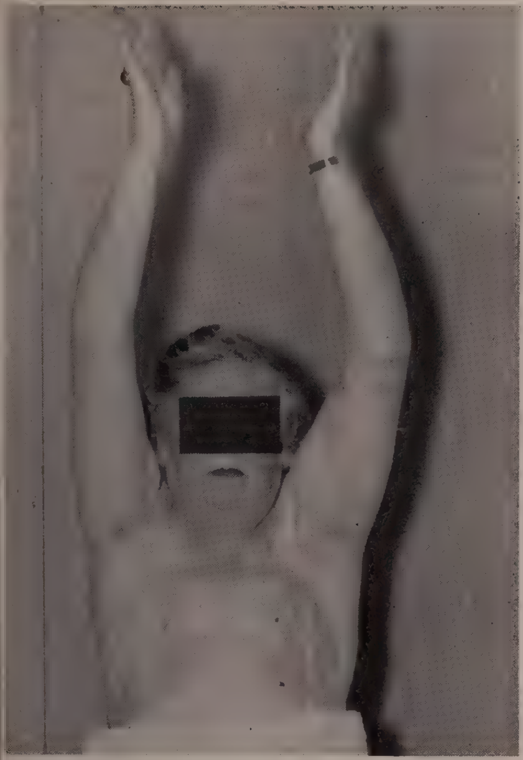

Fig. 1. Case 1—Full range of overhead motion of both arms following bilateral radical mastectomy and postoperative roentgen ray therapy.

one carcinoma of the breast since their over-all five-year survival rate was 54.9 per cent. In five cases of bilateral breast cancer of the simultaneous type, all of which had bilateral radical mastectomy, the end results were poor with three patients surviving less than one year and the other two lost to follow-up.

In the simultaneous classification of bilateral breast cancer without axillary metastasis, Harrington reported a more favorable outlook and found a 61.5 per cent five-year survival. However, when axillary metastasis was present, the five-year survival decreased to 17.9 per cent, and positive axillary nodes were present in 71 per cent of cases. The average five-year survival rate for the simultaneous group was 28.8 per cent which, while lower than that noted for the unilateral group and also for the nonsimultaneous type, emphasizes that these cases should have prompt and energetic surgical treatment.

Thus the over-all picture of bilateral simultaneous malignancy is serious, and the results are much less satisfactory than in cases of nonsimultaneous cancer. Our one case of simultaneous bilateral breast cancer (Case 1), grade IV malignancy with axillary metastasis, is living and well five years.

Breast cancer is more common in the nullipara by nearly two to one, and it is interesting to note that four of our six patients had never been pregnant.

Case Reports

Case 1.—This fifty-five-year-old woman was first seen on September 13, 1948, with the chief complaint of a mass in the right breast of five weeks duration. The rest of the history was not remarkable except that her maternal grandmother had cancer, and the patient had no children.

On physical examination in the right breast at one o'clock in the upper inner quadrant, 3 inches from the areola, there was a hard mass 2.5 cm. in size. It was not attached to the skin or pectoral muscles, and there was no palpable lymphadenopathy in the right axilla. The blood pressure was 190/110.

In the left breast at three o'clock, far out in the lateral half, there was a palpable tumor next to the chest wall measuring 2 cm. in diameter. The left axilla contained some small, firm palpable lymph nodes.

On September 17, 1948, a right radical mastectomy was performed at St. Clare's Hospital. The pathologic diagnosis on the right breast was "infiltrating duct adenocarcinoma of the breast, grade III, without involvement of the five axillary lymph nodes sectioned." On October 5, 1948, a left radical mastectomy was performed after frozen section examination revealed malignancy. The pathologic diagnosis on the left breast was "infiltrating duct carcinoma of the breast, grade IV, with metastatic invasion of the axillary lymph nodes, and tumor embolization of the lymph sinuses."

The patient is now living and well over five years without recurrence since the second radical mastectomy (Fig. 1).

Case 2.—This fifty-five-year-old female was first seen on December 10, 1948, with a history of having had a breast tumor locally excised five weeks previously from the upper outer quadrant of the left breast. The pathologic diagnosis was carcinoma. She had first become aware of the breast tumor three months previously. The patient was also aware of small lumps in the inner upper quadrants of both breasts. The rest of the medical history was noncontributory except she had never been pregnant.

On physical examination of the left breast, there were numerous small firm nodules scattered throughout the breast. In the upper outer quadrant there was a recent well-healed operative scar 2 inches long.

The left axillary contents were thickened, but no discrete lymph nodes were palpable. The right breast contained numerous small discrete nodules scattered throughout the parenchyma. No lymph nodes were palpated in the right axilla. An aspiration needle biopsy was performed on nodules in the right and left breast with a pathologic diagnosis of "hyperplastic ductal cells with no evidence of malignancy."

On December 29, 1948, a left radical mastectomy was performed at St. Clare's Hospital removing the breast, pectoralis major and minor muscles, and axillary contents en bloc. The pathologic diagnosis was "infiltrating duct carcinoma of the breast, grade III with evidence of foreign body reaction, as a result of previous exploration; lymph nodes are free of metastasis."

On March 17, 1949, a mass in the upper inner quadrant of the right breast was surgically removed and on microscopic diagnosis proved to be "scirrhous carcinoma." A radical mastectomy was performed on April 26, 1949, at St. Clare's Hospital. The pathologic diagnosis was "no evidence of residual tumor present in the breast; lymph nodes are free of metastasis."

The patient is living and well without recurrence of malignancy four and one-half years since the second radical mastectomy.

Case 3.—This thirty-six-year-old single woman was first seen on June 21, 1951, because of a mass in the left breast. The past medical history revealed that in November, 1946, a right radical mastectomy had been performed for carcinoma of the right breast.

Physical examination showed the right breast had been radically removed with no evidence of local recurrence. In the upper outer quadrant of the left breast at a distance of 2 inches from the margin of the areola there was a mass measuring 2 inches in diameter which was quite tender, well demarcated, pseudofluctuant, and slightly opaque on transillumination. An aspiration needle biopsy was performed obtaining 5 cc. of fluid which on pathologic examination was reported as "debris and occasional normal appearing cells."

On June 28, 1951, a local excision of the tumor was performed which on frozen section was reported as "benign fibrocystic disease." However, on paraffin section the final microscopic diagnosis was "extensive ductal epithelial hyperplasia with carcinoma in situ and early stromal invasion."

Therefore, on July 23, 1951, a left radical mastectomy was performed at St. Clare's Hospital. The pathologic diagnosis was "residual breast tissue showing two foci of well differentiated intraductal carcinoma, grade I. None of 17 lymph nodes shows metastasis." The microscopic slide from the right radical mastectomy performed in 1946 was obtained and reported as "ductal type of mammary carcinoma grade III."

The patient is now living and well without recurrence two years and four months after the second radical mastectomy.

Case 4.—This forty-year-old female was first seen on October 30, 1944, complaining of a small lump in the left breast of six weeks duration. The family history revealed no cancer, and the patient had two daughters living and well.

Physical examination revealed an indefinite swelling in the axillary segment of the left breast which was not an actually discrete tumor and was not opaque on transillumination. There were large lymph nodes in the left axilla, the largest measuring 3 cm. in diameter. An aspiration biopsy of an axillary node was performed and reported as "metastatic carcinoma consistent with breast as primary site." The right breast was normal.

A left radical mastectomy was performed on November 3, 1944, and the microscopic diagnosis was reported as "infiltrating mammary carcinoma, grade III, so-called sweat gland origin, metastatic to all levels on section of 20 lymph nodes." On November 6, 1945, a firm lymph node measuring 3 cm. in diameter was noted in the right axilla, and 2,400 r of high-voltage radiation therapy were given with complete disappearance of the palpable node.

On May 20, 1947, patient stated the right breast had increased in size in the past two weeks. On examination the breast was peculiarly boggy and doughy throughout. The right axilla was fibrotic. Four weeks later there was a definite firm mass in the right axilla. An aspiration biopsy of the mass revealed carcinoma. High-voltage radiation therapy totaling 2,100 r was given to the right breast and axilla.

On August 28, 1947, after the radiation erythema had subsided, a palliative right radical mastectomy with immediate skin grafting was performed. The pathologic diagnosis was "carcinoma of the right breast with radiation fibrosis and metastasis to axillary lymph nodes."

When examined on January 3, 1948, the patient complained of dyspnea, and 750 cc. of fluid were aspirated from the left chest. Her course was progressively downhill until she expired on May 5, 1948. From the clinical course it is evident that widespread lymphogenous spread had occurred.

Case 5.—A thirty-two-year-old woman was first seen on August 7, 1947, with a history of having a tumor removed from the right breast on July 25, 1947, with a diagnosis of "carcinoma." She had given birth to her third child on April 12, 1947, and had nursed the baby for six weeks. The family history was negative for cancer.

Physical examination revealed a scar in the axillary segment of the right breast from the recent operation. In the axilla there was a firm palpable lymph node.

On August 13, 1947, a right radical mastectomy was performed. The microscopic diagnosis was "metastatic carcinoma to four of nine right axillary nodes and postlactation hyperplasia." Postoperative radiation was given to the right axilla, direct as well as anteriorly, plus the anterior chest wall.

The patient was well until March 24, 1948, when a lobulated tumor measuring 1 cm. in diameter was found on follow-up examination in the remaining left breast. Surgical excision with frozen section report of malignancy and immediate left radical mastectomy were performed on April 3, 1948. The microscopic diagnosis was "scirrhous carcinoma of the breast."

The patient remained well for one year and two months until a roentgenogram of the pelvis on May 19, 1949, revealed osseous metastasis. Radiation therapy was administered over four pelvic portals including the ovaries with good response. On December 22, 1949, a roentgenogram of the lumbar spine revealed metastasis to all lumbar vertebrae. Therapy with testosterone propionate, 100 mg. three times a week for ten weeks, was begun. The response to androgen therapy was good. As time progressed, there was further metastasis to the humeri, but the patient felt well for the ensuing year and was able to perform most of her household duties until February, 1951, when she suffered severe back pain. By this time there was bilateral cervical lymphadenopathy and multiple small metastatic nodules in the scalp, chest, and abdomen. The course was downhill until exitus on June 3, 1951.

Case 6.—The patient, a thirty-six-year-old woman, was first seen on February 16, 1943, complaining of a lump in the right breast of two weeks duration. No history of cancer existed in the family. The patient had had hypertension for five years.

Physical examination showed the left breast to be normal. In the inner lower quadrant of the right breast there was a mass measuring 5 cm. in diameter; it was adherent to the skin, caused dimpling, and retracted the nipple inward and downward. No lymph nodes were palpated in the right axilla.

On February 24, 1943, a local excision, frozen section examination, and right radical mastectomy were performed. The microscopic diagnosis was "infiltrating duct carcinoma with suggestion of origin in previous fibroadenoma, metastatic to one lymph node. In addition, there is a second fibroadenoma with advanced precancerous changes, but without infiltration."

For five years the patient remained well until February 12, 1948, when skin dimpling with an underlying tiny nodule was noted in the axillary segment of the left breast. On March 5, 1948, a local excision, frozen section examination, and left radical mastectomy were performed at St. Clare's Hospital. The microscopic diagnosis was "duct cell carcinoma of the left breast with no evidence of metastasis to the regional lymphatics."

The patient remains well and shows no evidence of recurrence of the breast malignancy five and one-half years after the second mastectomy and ten and one-half years after the first radical mastectomy.

All of the patients routinely received postoperative radiation on the basis that implanted cancer cells can be destroyed, thus decreasing local recurrences, and already metastasized malignant cells can be killed.

Summary

1. Four per cent of all mature women will become victims of breast cancer, and the incidence of cancer occurring in the opposite breast is approximately double this (8 to 10 per cent) in women with proved cancer in one breast. Breast cancer is the most common type of cancer attacking women.

2. The etiology of bilateral breast cancer may be (1) a new primary malignant focus in the opposite breast or (2) a lymphatic spread to the second breast from the first breast.

3. Bilateral breast cancer is divided into two classifications: (1) "nonsimultaneous" and (2) "simultaneous."

4. The prognosis of the nonsimultaneous type of bilateral breast cancer is excellent, often being better than unilateral breast cancer following radical mastectomy, and reaching 70 per cent five-year survivals following the second radical mastectomy in some series.

5. Treatment consists of bilateral radical mastectomy with postoperative roentgen ray therapy.

6. Six cases of bilateral breast cancer are reported, four of whom are living and well without evidence of recurrence, five and one-half, five, four and one-half, and two and one-half years, respectively, after the second mastectomy.

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Infectious Mononucleosis and Appendicitis

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INFECTIOUS mononucleosis was first recognized as a clinical entity by Pfeiffer in 1889.[1] The characteristic combination of an acute infection, enlargement of the spleen and lymph nodes, and mononuclear leukocytosis is now well recognized. Occurring either sporadically or epidemically, it has been assumed by some investigators to be caused by a virus.[1,2] Paul and Bunnell in 1932 showed that a high titer of heterophil antibodies is present in the serum of patients with the disease.[3] The subsequent development of the Davidsohn absorption test has aided in ruling out falsely positive agglutination reactions.[4] Occasionally, patients with typical clinical and hematologic findings may have no heterophil antibodies for a considerable length of time.[1,2]

Atypical forms of the disease have been reported in increasing numbers, in some of which abdominal symptoms and signs are especially prominent.[4–6] In one particular clinical form, the onset is almost indistinguishable from acute appendicitis.[7–9] There are several reported examples of patients with infectious mononucleosis who were operated upon for acute appendicitis, but in whom there was found either a normal appendix with enlarged mesenteric nodes or a slightly "congested" appendix with the histologic findings of marked increase in lymphoid tissue.

It is the general opinion that lymphoid hyperplasia accompanying the generalized adenopathy of infectious mononucleosis is also present in either the mesentery or the appendix and may thereby produce the abdominal symptoms.[9,10] Some authors believe that the lumen of the appendix may be occluded by hyperplasia of the follicles and that the stasis thus caused may produce symptoms and signs easily confused with acute appendicitis.[11] A few investigators have even reported that histologic findings may be seen in the appendiceal wall which can be matched closely with the pathologic changes in the lymph nodes of infectious mononucleosis.[12]

However, although it is well understood that infectious mononucleosis may simulate a variety of abdominal diseases, we have not been able to find any descriptions of infectious mononucleosis as a complication of an established abdominal condition. Two case reports are therefore presented in which infectious mononucleosis occurred either simultaneously with or immediately after acute suppurative appendicitis and made difficult the interpretation of events in the postoperative course.

Case Reports

CASE 1.—A thirty-year-old white male was admitted to the Mount Sinai Hospital with a ten-hour history of severe, crampy, diffuse, unrelenting abdominal pain. He was known to have had a duodenal ulcer for fifteen years. Six months before admission he passed several tarry stools, and he subsequently had periodic episodes of postprandial pain relieved by food.

He was well nourished and in acute distress. There was muscular rigidity of the abdomen, equally in the upper and lower quadrants. Rebound tenderness was present. The area of greatest direct tenderness was in the right lower abdomen.

Laboratory findings were as follows: hemoglobin 14 Gm.; white blood cells 8,750 with 50 segmented polymorphonuclear cells, 43 band polymorphonuclear cells, 2 lymphocytes, 2 monocytes, 3 metamyelocytes. Urinalysis showed specific gravity 1.026, acid reaction, trace of albumin, negative test for glucose, and normal microscopic findings.

With a diagnosis of "perforated duodenal ulcer," the patient was operated upon through a right upper rectus muscle-splitting incision. A duodenal ulcer was palpated in the slightly edematous duodenum, but no perforation was present. Nevertheless, because considerable free pus was found in the peritoneal cavity, further exploration was made by enlarging the incision, and a gangrenous, perforated appendicitis was found. Appendectomy was performed by the ligature, excision, and drop technic. The peritoneum and fascia were closed separately with chromic catgut after placing two Penrose drains in the region of the appendiceal stump; steel wires were placed in the skin but not tied.

Postoperatively, penicillin and streptomycin were administered parenterally for ten days. During the first week, the temperature varied between 100 and 101 F. Purulent material issued continuously from the drainage tract. Rectal examination revealed a pelvic mass which was assumed to represent a pelvic abscess. Daily, hot rectal irrigations were begun, and the mass gradually disappeared. Purulent drainage gradually subsided, and the wound began to show healthy granulations. During the second week, the temperature remained at about 100 F. The white blood cell count varied between 10,000 and 14,500 with 50 to 60 per cent polymorphonuclear cells and 23 per cent lymphocytes. Urinalysis was normal.

On the sixteenth day the temperature suddenly rose to 102 F., and from then on during the remainder of the course the temperature curve remained between 102 and 103 F. with two peaks at 104 F. accompanied by shaking chills. A short course of pencillin and streptomycin had no effect. The appearance of well-being belied the temperature height. Many attempts were made to find a cause related to the appendicitis, the peritonitis, or the operative procedure. The urine remained normal.

Fluoroscopy and roentgenography of the chest and diaphragm revealed no abnormalities. The pelvic mass did not reappear, and the wound began to close rapidly. There was no evidence of peripheral thrombophlebitis. Blood smears for malarial parasites and blood cultures were negative.

Along with the rise in temperature, the white blood cell count had fallen to between 6,300 and 11,000. The polymorphonuclear leukocytes fell to 15 per cent. The lymphocytes rose from 19 to 78 per cent, and most of these forms were finally interpreted by the department of hematology as atypical lymphocytes as seen in infectious mononucleosis. There was also a normochromic anemia, and a marrow smear was normally cellular. Heterophil agglutinations were then done. Initially these were negative, but by the thirty-fourth day the titer, using guinea pig tissue absorption, rose to 1 : 28.

The patient was discharged to the care of his family physician who reported that the wound healed completely, and the temperature gradually returned to normal over the next two weeks. Five months after leaving the hospital, the patient was still well.

This patient had a perforated, gangrenous appendicitis with generalized peritonitis. Postoperatively a pelvic mass, presumably an exudate, gradually disappeared. During the third week a sudden rise in temperature, which remained persistently elevated, led to a fruitless search for a cause related to the original peritonitis. Finally the development of leukopenia, increased numbers of abnormal mononuclear cells in the blood smear, and a slightly elevated serum heterophil antibody titer established the diagnosis of infectious mononucleosis.

Case 2.—A thirty-two-year-old male physician was admitted to the Mount Sinai Hospital with a history of general malaise and pain of six days duration. His appetite had remained good, but he noted considerable abdominal "rumbling." Temperature was 100 F. during the entire week prior to admission. The day before admission he developed mild, general, crampy abdominal pain.

Temperature was 98.6 F., pulse 92, respirations 20, and blood pressure 130/74. Except for slight redness of the pharynx the findings were confined to the abdomen which was tender in the right lower quadrant. There was moderate muscle spasm in the same area, and palpation of the left lower abdomen caused pain on the right. Rebound tenderness on the right was also found. Rectal examination disclosed no abnormality.

Laboratory findings were as follows: white blood cells 15,150 of which 66 per cent were mature polymorphonuclear leukocytes, 6 per cent band forms, 19 per cent lymphocytes. Urinalysis revealed a trace of albumin and sugar, but microscopic findings were normal.

With a diagnosis of acute appendicitis operation was performed through a right McBurney incision. A swollen, indurated, intensely reddened appendix covered with flakes of fibrin was found. The inflammation extended down the appendiceal base on to the cecal wall. The parietal peritoneum of the area was reddened and swollen. The appendix was removed by ligature, excision, and drop technic. A small cigaret drain was placed and the wound closed. Pathologic diagnosis was "acute phlegmonous appendicitis."

During the first postoperative week the patient's temperature at first rose to 102 F. and then declined but did not quite return to normal. The temperature then began to show daily rises as high as 103 to 104 F. The patient felt well each day except during the height of fever. No reason for the fever could be found. The wound healed benignly after the drain was completely removed on the sixth day. There was no tenderness of the abdomen, chest, extremities, or limbs. Chest x-ray and electrocardiogram were normal. Urinalysis repeatedly showed no abnormality. Blood cultures remained negative. The white blood cell count ranged between 5,000 and 7,000 of which between 26 and 47 per cent were lymphocytes.

On the fourteenth postoperative day, the hematology department made a diagnosis of infectious mononucleosis on the basis of the large number of abnormal mononuclear cells in the peripheral smear. Heterophil agglutination was at first negative, but the titer rose slightly to 1 : 14. The peripheral blood smears showed more and more cell forms typical of infectious mononucleosis (50 to 60 per cent were large mononuclear cells). Enlargement of the axillary lymph nodes developed. Blood chemical changes suggesting hepatocellular damage were found (cephalin flocculation 3 plus). The swings in temperature gradually subsided, and by the twenty-sixth day the temperature remained normal. The patient was discharged on the twenty-eighth day. He has been well for a year.

Six days of general malaise and low-grade fever preceded the onset of abdominal pain. Acute phlegmonous appendicitis with localized appendicitis was found. The temperature curve showed a gradual decline after the initial postoperative rise but suddenly rose again to 103 F. and remained elevated for an additional two weeks. During this time the patient looked and felt well. Search for a cause was unsuccessful until the white blood cell count and smear showed findings typical of infectious mononucleosis. Lymphadenopathy and rise in heterophil antibody titer developed later.

Comment

Usually when fever develops in the postoperative course after appendectomy for acute appendicitis, the most common causes are wound infection, pulmonary disease, urinary infection, intra-abdominal abscess, phlebitis, or pylephlebitis. However, when no assignable cause is discoverable, other less common reasons should be sought. The two case reports described indicate that infectious mononucleosis was a postoperative complication in point of time of occurrence, although it is most likely an accidental concomitant. There was no history or indication that either patient had had infectious mononucleosis previously with recrudescence following operation.[13] Nor was there any evidence in either case that infectious mononucleosis was a cause of the appendicitis. No unusual lymphoid accumulation in the appendix was seen on microscopy, and the advanced inflammation and infection in the wall were typical of acute gangrenous and phlegmonous appendicitis.

The particular features which should suggest the possibility of infectious mononucleosis as the cause of unexplained, persistent postoperative fever are (1) general well-being in the patient's appearance despite the swings in temperature, (2) leukopenia, and (3) failure of physical and laboratory findings to account for the fever. Diagnosis, however, cannot be made until either the large mononuclear cell forms appear in the blood smear in increased numbers or the serum heterophil antibody titer becomes elevated.

Summary

1. Two cases are presented of infectious mononucleosis occurring after appendectomy for acute appendicitis and obscuring the interpretation of the postoperative course.

2. When other more common causes are not found to account for unexplained, persistent postoperative fever, infectious mononucleosis is a possible cause to be considered.

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Plan for Reducing Cost of Medical Education

Dr. Brian Bird, assistant professor of psychiatry at Western Reserve University, suggests in the June issue of the *Journal of Medical Education* that medical students be allowed to pay for their education after they have established themselves in practice.

In this way medical schools would be able to charge what the schooling actually costs, and would be able to raise teaching salaries, without resort to state aid. As private donations no longer cover the increasing gap between what a medical education costs and what a student can afford to pay, some method must be found to meet these growing deficits. Dr. Bird feels it would work no hardship on young doctors to defer payment of their tuition fees until they are earning a living.

Management of Psoriasis as a Metabolic Lipid Disturbance

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DURING World War I in Central Europe, which experienced an unusual shortage of edible fats and oils, it was almost impossible to obtain a sufficient number of individuals with psoriasis for demonstration to medical students. Not until after this period of privation did the disease resume its customary incidence. Previous to this era theories of its pathogenesis were more or less equally divided between heredity, neuropathy, parasitism, diathesis, and metabolic disturbance, but this apparent beneficial effect of a diet sparse in fats emphasized the importance of metabolism.

Etiology of Psoriasis

Heredity in medicine is an indefinite term. Certainly psoriasis cannot be interpreted as a nevus or nevoid disease, nor does it follow any pattern of inherent deficiency in the genes. Most dermatologists agree that it is familial, such prevalence varying from 5 to 43 per cent,[1] although Lane and Crawford[2] in a review of 231 cases found only 21 in which multiple occurrences were present in the family tree. They concluded that figures were not high enough to indicate any reliably regular or hereditary factor. Surely in a disease with an incidence of 2 to 12 per cent of all dermatoses (difference attributable to seasonal and climatic influences), one would expect to find more than one member in two or three generations of a reasonably large family.

Of course, a quarter of a century ago inherited rheumatic and gouty tendencies were often given causal significance. Is it not possible that heredity plays a role similar to that which exists in the cholesterinoses and other lipid disturbances? Here heredity seems of greater import than diet, alcohol, and chronic infection. Such conditions as hypertension, appendicitis, dental caries, carcinoma, pulmonary tuberculosis, leprosy, chronic alcoholism, peripheral vascular asthenia, and atopy are also noted for their familial incidence but are not in an exact sense heritable. It is on this basis that actuarial and life-expectancy tables are computed. Apparently it is the *conditions* which make these diseases possible; in other words it is the "*Liebesbeschaffenheit*" which is inherited. The existence of an hereditary factor *alone* as the cause of psoriasis is unconscionable.

The contention that infection, neuropathy, diet, vitamin, or endocrine imbalance alone causes psoriasis is also insupportable by any pathologic or anatomic evidence. On the contrary these factors alone or in concert are responsible for acute flares and for chronicity of the disease. If this be so, there must exist some physiologic function adversely affected by them. The most logical answer to this question is "metabolism." Just what exact phase of metabolism is at fault and in what respect is unknown. Carbohydrate, protein, and lipid metabolism have all been indicted by various investigators. The favorable response of the psoriatic to a total starvation regime has been facetiously explained on the basis that the body in its search for sustenance is compelled to subsist by remetabolizing in some obscure fashion the psoriatic scales. This amelioration during starvation may constitute an expression of the general adaptation syndrome of Selye. Studies show that acute, complete starvation acts as a potent stimulus, causing hypertrophy of the adrenal cortex and loss of lipids. If only sufficient protein is given, there may be a simultaneous significant increase in adrenocorticotropin production.

Since World War I evidence indicates that in patients with psoriasis there is a disturbance in lipid metabolism. Evidence seems to point to a qualitative rather than quantitative disturbance, absolute hypercholesterinemia being the exception rather than the rule. There is also an associated disturbance in carbohydrate metabolism in a sufficient number of patients to be significant. While there is no evidence showing that psoriasis is dependent on any specific disturbance in glucose metabolism, this dermatosis is approximately ten times as common in diabetics as in control groups. When one investigates the immediate family of the psoriatic, the incidence of diabetes increases considerably. Furthermore, abnormal glucose tolerance tests were found in psoriatics by Rost[3] and Moncorps and Speierer.[4]

Remote foci of infection, particularly streptococcal, seem contributory or possibly primarily responsible. Psoriasis and arthritis of the atrophic or rheumatoid types are so commonly associated (in 40 to 60 per cent of cases) that a pathogenetic relationship between the arthritic disease and cutaneous lesions cannot be disregarded. On several occasions the author has seen flares of discoid psoriasis or the appearance of an acute guttate efflorescence subsequent to or coexistent with an attack of acute streptococcal tonsillitis. Streptococcal agglutinins have been demonstrated in over 50 per cent of patients with psoriasis, a much higher percentage than is obtained in nonpsoriatics. The highest agglutination titers have been found in psoriasis guttata. The vesiculopustular "id" reaction, occurring chiefly although not exclusively on the palms and soles, is another feature favoring infection as a factor in this disease. I think these lesions bear the same relationship to psoriasis as the papulonecrotic tuberculide does to tuberculosis.

Another link between infection, psoriasis, and rheumatoid arthritis is the simultaneous improvement of both during pregnancy. This is so common as to justify its prediction. Equally common is the relapse of both after parturition.

It is not unusual for psoriasis to regress completely following cholecystectomy. Many years ago Erdmann stated it as his belief that psoriasis was related in some way to gallbladder infection or hepatic disease.[5]

Gruetz and Buerger[6,7] endorsed the concept that psoriasis is a consequence of some disturbance in lipid metabolism. To their satisfaction they proved their point by limiting the daily fat ingestion of patients to 20 Gm. with improvement in six weeks and complete disappearance of lesions in three to eight months. The practical impossibility of limiting fat ingestion to this figure without hospitalization of the patient or his strict medical supervision is apparent. Furthermore, resumption of a normal diet was invariably followed by recurrences. Madden,[8,9] Semon,[10] and others have reported similar results. On the contrary, Marchionini,[11] Dodds *et al.*,[12] and Wise and Sulzberger[13] were not particularly impressed by results, but this may have been due to secondary factors or inability to maintain patients on such a low-fat diet for sufficient time.

It may be difficult to accept the existence of a lipid disturbance. Many investigators have demonstrated the absence of hypercholesteremia and presence of a normal cholesterin tolerance test. These, however, are not reliable indices of normal lipid metabolism any more than simple hyperglycemia or glycosuria are sufficient to warrant a diagnosis of diabetes mellitus. In the xanthomatous diseases, indisputedly lipid disturbances, cutaneous lesions may occur in the absence of elevated blood cholesterin; the latter may even be depressed. Furthermore, the actual quantity of cholesterin in the xanthoma itself is not necessarily above normal. The incidence of psoriasis is high in hypothyroidism, xanthelasma, nephrosis, and other conditions featured by hypercholesteremia or hyperlipemia.

Treatment and Results Obtained by Various Authors

If one accepts the hypothesis, which is quite convincing, that individuals with psoriasis experience difficulty in metabolizing fats, and if we cannot successfully limit ingestion, it is logical to give medication to relieve or supplement hepatic and pancreatic function.

Initially substitutional therapy of this type was recommended by Stewart *et al.*,[14] Dragstedt *et al.*,[15] Walsh *et al.*,[16] and McHenry and Patterson[17] in the use of the insulin-free pancreatic lipotropic factor, lipocaic, choline, inositol, and related compounds. Stewart and his associates[14] treated six patients with lipocaic, curing 30 per cent and improving 70 per cent. Walsh, Dragstedt, and Becker[16] treated 23 patients with lipocaic (noninsulin-bearing pancreatic enzyme) with complete resolution of lesions in 31 per cent, improvement in 50 per cent, and failure in 19 per cent.

In a study of 155 patients over a period of ten years Gross and Kesten[18] reported unusual success using Granulestin (soy bean lecithin) and Acletin (a mixture of lipotropic substances); 14.8 per cent were cured, 18.7 per cent controlled, 42.5 per cent improved, and failure in 23.9 per cent. The reason for the addition of lecithin was its demonstrated ability to reduce pathologic hypercholesteremia in man.[18,19] This activity is probably due to the choline component of lecithin.

Campana and Gualandi[20] treated nine patients with crude desiccated pancreas, giving 25 Gm.

orally of the defatted powder daily over a period up to sixty days. In this short time the eruption in two cleared completely; in four the improvement was moderate, and in three there was no change. This is an improvement rate of 66 per cent.

Downing, Glocklich, and Messina[21] used intramuscular deproteinated pancreatic extract in 13 patients without such favorable results. They reported 8 per cent cured, 22 per cent improved, and no change in 45 per cent. This is not better than normal variation in intensity of the disease (36.2 per cent).

Becker[22] reported complete involution of lesions in about 30 per cent of patients and improvement in another 50 per cent following administration of lipocaic. Harris, Thurmon, and Bizzozero,[23] using Lipan, treated 40 patients and reported 15 per cent cured, decided improvement in 35 per cent, moderate improvement in 27 per cent, and inconclusive results in 23 per cent.

Present Series

Having on several occasions observed the regression and disappearance of cutaneous lesions on extirpation of an infected gallbladder and the elevation of the erythrocyte sedimentation rate, positive Hanger flocculation tests, and increased thymol turbidity tests in a large number of psoriatics, we became convinced that the care of these patients consisted briefly of the following measures: (1) removal of recognizable foci of infection, (2) a low-fat, high-protein diet, (3) abstinence from alcohol, (4) administration of lipotropic substances, and (5) facilitation of fat digestion.

One way to accomplish best the last two requisites is by giving large quantities of defatted hog pancreas. This is available as a powder (Lipan) possessing three times the amylolytic and tryptic activity required by the U.S.P. XIV.* Furthermore this pancreas contains lipase (fat-splitting enzyme), carboxypeptidase, inositol, lecithin, choline and methionine, its precursor, traces of vitamins and minerals. To each gram of the powdered pancreas is added 1,000 international units each of vitamin B_1 and vitamin D.

The high-protein diet is recommended since proteins exert a lipotropic effect probably because of the methionine they contain. Alcohol is interdicted because of its antienzymatic effect and its interference with absorption of the powdered pancreas. Furthermore, it is a common observation that patients with psoriasis who indulge to excess in alcoholic beverages are unusually refractory to almost any systemic medication.

In no instance was a strictly low-fat diet insisted upon since it is a practical impossibility to regulate the intake to an optimum of 20 Gm. daily without hospitalization or the services of a dietitian. The low-fat diet was as follows:

> *Omit:* Greasy soups; sausages and frankfurters; all fat meats, such as pork, mutton, fattened chicken, duck, goose; eels, herring, salmon, carp, and other "rich" fish; roe; egg yolk; all canned fish and meats; all cheeses except cottage cheese; all fats (bacon, butter fat, palmin, margarine, oil, cream, butter, whole milk, and the like).
>
> Meat may be roasted with some butter, but the fat must be removed from the gravy by letting it get cold.
>
> Cakes, cookies, napoleons, shortened pastries, pie crust, crullers, doughnuts, etc., and foods that are fried or cooked in deep fat (french fried) are not allowed.

Since the diet must be persisted in for weeks or months, a careful check of the patient's weight is essential. I think it may be said with a reasonable degree of certainty that no patient adhered strictly to the prescribed diet.

Patients were given a container of 180 capsules of Lipan (0.5 Gm.) and told to take two with each meal (three times daily) and an additional one with each between-meal and bedtime snack. If improvement was not evident after six or eight weeks, the dose at each meal was increased to three, making a regular total daily minimum of nine. To those patients in whom it was considered indicated and advisable, injections of crude liver were given, as well as B_{12}, thyroid, and pyridoxine hydrochloride.

In many patients, particularly those with associated rheumatoid arthritis and in some with psoriatic arthritis, studies were made of the intestinal bacterial flora, and an attempt was made to eradicate accessible major foci of infection. A few were given bacterial antigen injections.

Topical applications were used on most patients. These included petrolatum, a bento-

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* Lipan, fortified powdered pancreas, was provided for this study by Spirt and Company, Inc., Waterbury, Connecticut.

TABLE I.—SUMMARY OF RESULTS IN PRESENT SERIES

Results	Number of Cases	Per Cent
Remission	20	35.1
Improved	18	31.6
Failure	19	33.3
TOTAL	57	

nite-glycerine jelly, and other bland emollients to remove scale. In a few instances grenz radiation was given certain individual lesions. When topical medications or radiation therapy were given, they were restricted to specific areas or lesions so one could, by comparative observation, determine any difference in the rate of involution of these areas and those not topically treated.

In this study 57 patients with psoriasis are reported (Table I). These were observed for periods of three months to two years. Most of them had previously had topical and systemic medications before starting Lipan. The classification "remission" designates those patients in whom the psoriatic lesions disappeared and who were able to remain free or almost free while taking a "maintenance dose." Some of these, for some reason or other, stopped the Lipan and experienced a recurrence of lesions. It will be noted that the total number of cases improved and those experiencing remission of lesions was 66.7 per cent, well above the established minimum of 36.2 per cent.

Comment

This method of investigation is open to drastic criticism in that one is simultaneously using many therapeutic remedies of known effectiveness while attempting to evaluate one of potential effectiveness. Experience has shown that such procedure is a necessity, it being impossible without local therapy to keep a patient under internal therapy for sufficient time to evaluate the effect of lipotropic substances. Furthermore, in a disease of multiple and obscure etiology one cannot, and should not, limit any investigation to one remedy affecting only one phase or manifestation thereof.

The skeptic inquires as to how one can identify the remedy responsible for any improvement of the eruption. The approach to an accurate evaluation of Lipan therapy in this series was indirect but, nevertheless, accurate and logical. In the first place, no single remedy is sufficient for the treatment of all patients with psoriasis, nor do all patients respond to identical dosage. Between the years 1936 and 1941, while investigating capillary permeability in psoriasis, a complete world-wide review of the literature was prepared, covering publications in all languages over the previous hundred years. During this period records were kept on spontaneous variations in intensity of the eruption in over a hundred patients with psoriasis (67 were followed for two years). Most of these used plain petrolatum, a few nothing other than soap and water. Briefly 36.2 per cent enjoyed periods of improvement; in some, large patches underwent complete involution. The apparent reasons for improvement were attributed to climate, season, vacation, economic betterment, marriage, divorce, general health, endocrine therapy for other conditions, pregnancy, removal of infected teeth, tonsils, and, in six patients, cholecystectomy. In many no reason could be identified. Maybe it was psychosomatic. The significance of this study is that it shows that *any* method of therapy to be accredited must improve or cure better than 36.2 per cent of individuals.

Furthermore, in this present series, after the disease was under control and the patient rid of cutaneous lesions, except for possible nailplate changes, he was kept on a determined maintenance dose of Lipan alone. This might be one to three tablets daily. While not all on this maintenance regime remained free of lesions, a sufficient number did to indicate that benefit was attributable to nothing but the Lipan.

Conclusion

On the basis of these investigations it appears that psoriasis is a cutaneous expression of some obscure qualitative disturbance in lipid metabolism and is favorably influenced by the outlined dietary regime and the administration of desiccated, defatted pancreas. The reason for the failure of such a large number of patients to improve (33.3 per cent) is vague. Possibly some obscure focus of infection may be responsible. While infection as a cause has not been stressed, it is possible that this disease should be interpreted pathogenetically as an "id" and included with psoriasis arthropathica, Reiter's disease, keratoderma blenorrhagicum, and acrodermatitis continue (Hallopeau) as examples of the Arthus and Schwartzmann phenomena with liver damage.

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Excessive Oxygen Administration Believed Related to Eye Disease

Excessive administration of oxygen to premature infants is believed directly related to the development of a serious eye disease which may result in blindness, it was reported in the May 15 *Journal of the American Medical Association.*

The disease, called retrolental fibroplasia, may be controlled by severely limiting the concentration of oxygen given to premature infants, a restriction which does not appear harmful, in the opinion of Drs. Jonathan T. Lanman, Loren P. Guy, and Joseph Dancis, New York City. They said: "Retrolental fibroplasia was first recognized as a disease of premature infants in 1942; it is now first among the causes of blindness in children in the United States, and is the foremost problem other than death itself in the care of premature infants."

The doctors based their conclusions on a year-long study of 64 premature infants admitted to the Bellevue Hospital Premature Nursery. The babies weighed between two and four pounds at birth. Thirty-six of the infants were given a high concentration of oxygen in their incubators and 28 received a low concentration.

In the groups receiving a high oxygen concentration there were eight cases of irreversible retrolental fibroplasia, accordng to the doctors. Six of these infants are believed to have no useful vision, while two may have useful vision in one eye, they added. In the groups of infants receiving a low oxygen concentration, oxygen was administered only when breathing difficulty occurred.

According to the physicians, early reversible stages of the condition developed in 22 (61 per cent) of the infants receiving a high concentration of oxygen. Only two babies in the groups receiving a low concentration of oxygen showed early stages of the disease. All groups of patients received identical incubator care, formulas, and vitamin therapy. Twenty per cent of the groups receiving a high oxygen concentration died, compared with 30 per cent in the groups receiving low oxygen. The doctors pointed out, however, that five of the infants in the groups getting a low oxygen concentration died of causes not connected with oxygen therapy, thereby reducing the death rate to 20 per cent, also.

The correlation between oxygen therapy and the development of the disease is uncertain, the doctors said. They added that the condition may be caused by excessive oxygen damaging the developing retinal blood vessels and the nerve cells of the retina.

"In a comparison of liberal and restricted oxygen therapy in premature infants, irreversible retrolental fibroplasia appeared in infants in the group with high oxygen but not in the group with low oxygen. Reversible, vascular stage lesions occurred in both groups, but with nine times the frequency in the group with high oxygen concentrations. Excluding infants dying of recognized causes with no known relationship to oxygen therapy, the mortality rates in the groups with both high and low oxygen concentrations were the same."

CASE REPORTS

Acute Perforation of a Gastric Ulcer Following X-ray Examination with a Barium Meal

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ROSENTHAL[1] in 1916 was among the first to describe a perforation of peptic ulcer on the x-ray table following a barium meal. DeFonseka[2] in 1952 reported one case in which a duodenal ulcer perforated forty minutes after a barium meal, just as the patient was getting off the x-ray table. Eckman[3] reported five cases in which the time between perforation and examination by means of a barium meal was from three to thirty-six hours. Turner[4] in a series of 224 cases of acute perforations of the stomach, duodenum, and jejunum reported five patients who had a gastrointestinal series within a few days of perforation.

Singer[5] reviewed 36 patients who perforated following a barium meal. He felt that the number of cases published under appropriate titles was by no means representative of the actual incidence of perforation of peptic ulcer following a gastrointestinal series. This was indicated by the frequency with which perforation following x-ray is mentioned incidentally in cases presented for other reasons.

Case Report

R. S., a fifty-one-year-old man, was admitted to Fordham Hospital on May 2, 1953, in acute distress. He had an eighteen-month history of epigastric pain one hour after food and pain during the night. This was relieved by food. The patient had begun a gastrointestinal series at 9 A.M. on May 1, 1953, and, while being fluoroscoped, felt "something pressing in his stomach." This pressing sensation developed into pain of such severity that he could not return for the six-hour film. He returned home at once and felt the pain in the abdomen all through the day and night. At noon the next day he drank a cup of tea and felt something "give" and collapsed. His family doctor was called and arranged immediate hospitalization.

Physical examination revealed an acutely ill, obese, white male in severe pain and in shock. The pulse was thready and rapid at 132. Blood pressure was 92/40. The abdomen was tense with marked tenderness and rigidity over the entire abdomen, most marked in the upper abdomen. X-ray examination showed free air under the diaphragm indicating a ruptured hollow viscus. Barium was present in the stomach, terminal ileum, and colon from the cecum to the descending colon.

Patient was given meperidine hydrochloride (Demerol), 100 mg., and a transfusion of 500 cc. of whole blood was begun and was followed by 500 cc. of 5 per cent glucose in normal saline. In two and one-half hours his condition improved markedly so that operation could be performed.

A right upper paramedian incision was made, and muscle was split. As soon as the peritoneum was opened, there was a gush of green fluid containing a thick, grayish substance which appeared to be barium. This fluid was found throughout the peritoneal cavity, and as much as possible was aspirated. At the lesser curvature of the stomach near the pylorus was a perforation about 1 cm. in diameter. With each manipulation of the stomach the fluid previously described was seen to gush through the perforation. The perforation was closed with interrupted Atraumatic linen Lembert sutures on either side of its edges, and a portion of omentum was anchored over this area with linen Lembert sutures. A cigaret drain was inserted down to the site of the perforation through a separate stab wound.

The patient developed a left bronchopneumonia on the seventh postoperative day from which he recovered by the twelfth postoperative day.

Comment

Eckman[3] at the Duluth Clinic reported five perforations following barium examination in a series of 522 ulcer patients, an incidence of 0.9 per cent. Singer[5] at the Cook County Hospital reported four perforations which followed radiographic examination in over 5,000 ulcer patients over a ten-year period. The incidence of perforation here was 0.08 per cent. From these figures one can say that it is infrequent for peptic ulcer to perforate following a barium meal.

The relationship between perforation and radiologic examination is hard to evaluate. It is not intended to claim that the administration of barium is the etiologic factor in the production of the perforation. Jones[6] estimates that between 0.5 and 1 per cent of male ulcer patients will perforate spontaneously. Colp and Druckerman[7] feel that acute perforation is a fairly common complication of ulcer and probably is not seen in more than 2 per cent of patients suffering from peptic ulcer. Since the incidence of spontaneous perforation in peptic ulcer is not uncommon and since x-ray examination is frequently made, it is possible that the apparent relationship between barium meal and perforation may be only coincidental.

In all published cases of perforation following a barium meal, as in the present one, there has been a recent exacerbation of symptoms. It would seem, therefore, that all x-ray examination may do is to accelerate the perforation of an active ulcer.

Golden[8] warns that marked tenderness during fluoroscopic examination suggests peritoneal irritation over the ulcer and may be taken as a warning of the danger of perforation. Eckman[3] cautions patients where he suspects the likelihood of perforation following x-ray and may hospitalize some. It would seem that if radiographic examination is thought necessary in spite of acute symptomatology, extreme care should be taken.

Summary

A case of gastric ulcer which perforated within twenty-seven hours of a barium meal is presented. The frequency with which this occurs and the relationship between perforation and barium examination has been discussed.

2539 Holland Avenue

This case is presented with the kind permission of Dr. A. B. Sullivan, director, Second Surgical Division, Fordham Hospital.

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Viable Testicle Five Days After an Unreduced Torsion of the Spermatic Cord

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It is a well-known fact that torsion of the spermatic cord constitutes a surgical emergency. Many cases, however, go unrecognized until such time as the testicle is doomed to atrophy. Most authors place the interval for successful salvage of the organ between four and six hours after the onset of the torsion.[1-5] How to manage a case seen beyond this critical period is not universally agreed on. Some favor intervention; others do not, believing that since atrophy is to ensue anyway, surgical intervention has little to offer. On the other hand, at least two considerations make the latter program inadvisable. One is featured by the findings in the case herewith reported and emphasizes Campbell's[1] admonition that "expectant treatment should not be countenanced." The other is that expectant treatment ignores the fact that should a similar episode occur on the other side, a patient may well be left with functionless testicles. While unusual, such situations do occur and have been reported. Prophylaxis against the possibility of such an occurrence is therefore the exercise of sound judgment.

Case Report

W. P., thirteen years of age, presented the following history: Four days before, while at play, he suddenly stretched to reach for a ball. This maneuver was shortly followed by severe pain in the left groin. He felt nauseated and vomited once. He then felt better and was well enough to drive himself home on his bicycle. The pain in the groin persisted, although much diminished. A physician, who was called to see the patient, found minimal changes, consisting chiefly of very slight swelling of the left testicle. Rest was advised.

Two days later the swelling had increased somewhat, and the pain was still present. No other symptoms were noted. Consultation was sought. At the time the patient was seen he did not appear to be in any acute distress. Positive findings on re-examination were confined to the scrotal contents on the left. The left hemiscrotum was swollen. The testicle was retracted high in the sac. Its size appeared to be normal, although it was distinctly tender. The epididymis was located posteriorly, apparently in its normal relation to the testicle. There was an ill-defined, tender mass in the region of the upper pole of the testicle and epididymis which appeared to rest between these two structures. A diagnosis of torsion of the testicular hydatid was made and operation advised. The patient entered the hospital on the following day. On admission the only change in the findings of the previous day was that the epididymis was now enlarged in its entire extent. However, because of the absence of fever and urinary disturbance and the presence of a normal white and differential blood count, operation was performed.

Through a scrotal incision the tunica vaginalis was exposed and opened. Inside, a small amount of clear yellow fluid was present. The spermatic cord was rotated clockwise through a full 360 degrees. *The testicle was perfectly normal in color and texture despite the fact that the twist had been present for five days.* The epididymis was edematous, but its color was likewise normal. The vessels of the cord were prominent. The cord below the twist was edematous. The spermatic cord was untwisted, and because the testicle was perfectly viable, it was deemed inadvisable to remove it. It was therefore fixed to the scrotal tunics inferiorly with two simple interrupted silk sutures to prevent a repetition of the foregoing series of events. A small incision was then made on the contralateral side of the scrotum and the right testicle fixed in similar manner.

The patient's postoperative course was completely uneventful. He left the hospital on the fifth day after operation. He was last seen three months after operation at which time the size and texture of the left testicle were normal.

Comment

That the testicle should have been viable five days after an unreduced torsion of the spermatic cord is in itself unusual, but, of course, it is readily explained by the fact that, even though complete, the torsion was not a tight one and did not critically compromise the blood supply to the organ. The important point is that had surgical intervention been decided against, the increasing edema, which would have unquestionably taken place as time went on, would have prevented a spontaneous detorsion and ultimately produced enough vascular disturbance to cause infarction and gangrene of the testicle.

This case therefore illustrates the fact that a case of torsion of the spermatic cord, even though not seen or recognized early, should not automatically be considered hopeless from the standpoint of testicular salvage, for the mechanical details of the twist may be such that complete vascular occlusion is not present. As a corollary to this, it is felt that surgical exploration should not be withheld in these cases. Torsion per se does not mean infarction or gangrene of the testicle.

Summary

A case report is presented in which a viable testicle was found five days after torsion of the spermatic cord had occurred, the torsion meanwhile having been unreduced.

This report serves to emphasize the importance of surgical intervention in all such cases.

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ADDENDUM: The patient was re-examined six months later. The left testis was still normal in size and consistency.

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No period of history has ever been great or ever can be that does not act on some sort of high, idealistic motives, and idealism in our time has been shoved aside, and we are paying the penalty for it.—ALFRED NORTH WHITEHEAD

Interstitial Keratitis Treated with Cortisone

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INTERSTITIAL keratitis is due to congenital syphilis in 90 per cent of cases. It is usually associated with one or more other stigmas such as Hutchinson's teeth, rhagades, deafness, etc. It is characterized by deep (versus anterior) corneal infiltrates, corneal edema, lack of ulceration, deep adventitious vessels, and signs of iritis. Cases have been reported of interstitial keratitis due to tuberculosis, leprosy, trypanosomiasis, and Cogan's syndrome (seventh nerve involvement similar to Ménière's disease; leukocytosis).

Case Report

Mrs. J. M., a thirty-three-year-old Negro female, was first seen on July 14, 1953, complaining of blurred vision in the left eye, some redness of the eye, and slight photophobia. There was no history of trauma, and her general health had been excellent.

Her past history was significant. She had been given a complete course of treatment for congenital lues ten years ago while she was living in Florida. Six months following this treatment she developed interstitial keratitis in the right eye, which did not respond to treatment. A Wassermann test every six months since that time was reported as negative.

The examination of July 14, 1953, showed a yellowish-red opacity of almost the entire cornea of the right eye. Only 2 to 3 mm. of the periphery of the cornea was clear. A slit-lamp examination revealed a typical interstitial keratitis with a dense vascularization of the deep layers and blood cells coursing freely through the vessels (Fig. 1). Vision with best correction in this right eye was 20/200.

The left eye showed a sector-shaped area of opacity limited to the lower temporal quadrant of the cornea. There was only slight circumcorneal injection. Slit-lamp examination showed marked deep edema and dense infiltration of the posterior third of the cornea, heavy "greasy" mutton-fat posterior corneal deposits, and many wrinkles and folds of Descemet's membrane. The epithelium was intact. A few adventitious vessels were beginning to encroach onto the deep portion of the cornea. All this pathology was sharply limited to the opaque area. the remainder of the cornea being entirely normal (Fig. 2). This corneal opacity was just beginning to encroach on the pupillary area. Vision in this left eye was 20/25 without correction. There was an area of acute chorioretinitis also fairly sharply limited to the temporal quadrant of the fundus. Serology at this time was negative. A complete physical examination, dental examination, chest x-ray, and complete blood count were all normal. The patient also had characteristic Hutchinson teeth.

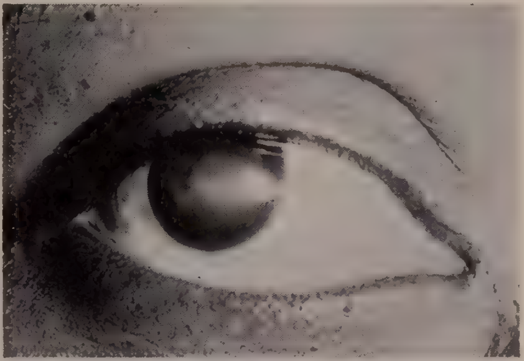

FIG. 1. Right eye. Interstitial keratitis of ten years duration. Heavy vascularization of posterior third of cornea with blood cells still visible as moving column in vessels.

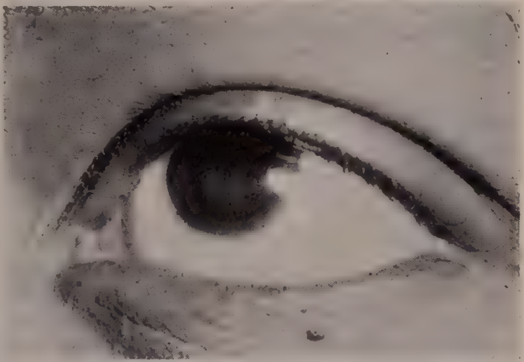

FIG. 2. Left eye. Acute interstitial keratitis in process of healing. Deep corneal infiltration and post-corneal deposits limited to one sector of cornea.

Treatment was by means of cortisone drops (1 drop of the 0.5 per cent suspension every hour) and 1 drop of 1 per cent atropine sulfate twice daily. After two weeks of this treatment the deep corneal edema and infiltration regressed rapidly, and by six weeks the cornea was completely clear except for two or three thin postcorneal deposits. By August 27, 1953, all pathology had entirely disappeared, and the cornea appeared normal in all respects. All medication was stopped at this time, and when the patient was seen three months later on November 14, vision in the left eye was 20/20 without correction, and slit-lamp examination showed a normal cornea.

Comment

There are several interesting features of this case:

1. Interstitial keratitis developed in the right eye following the completion of an intensive and apparently adequate course of antiluetic therapy.
2. The time lapse of ten years between involvement of the two eyes is unusual.

3. Since many cases of interstitial keratitis regress almost completely without treatment and because of the natural variability of the course of the disease, it is not claimed that cortisone was responsible for a cure in this case, but it did appear definitely to allay the intensity of the inflammation.

A Bad Parent Makes a Bad Child

Parents' unwitting sanction or indirect encouragement is a major cause of, and the specific stimulus for, such antisocial behavior as recurrent fire-setting, stealing, truancy, vandalism, unacceptable sexuality, and serious recurrent criminal behavior displayed by young delinquents or their adult counterparts, the psychopaths, in the opinion of Dr. Adelaide M. Johnson, Rochester, Minnesota, and Dr. S. A. Szurek, San Francisco.

This conclusion resulted from studies of delinquents and their parents carried out during the last decade, the doctors wrote in the March 6 issue of the *Journal of the American Medical Association.* The delinquencies under consideration were those arising in apparently "normal" families of good reputation, and not those largely determined sociologically in slum areas or juvenile gangs of any economic level, they stated.

"By means of study and concomitant treatment of the parents as well as of the child involved in the antisocial behavior, it becomes unmistakably evident that one or occasionally both parents derive unconscious, and less frequently conscious, vicarious gratification of their own poorly integrated forbidden impulses in unwittingly sanctioning and fostering such behavior in the child," the doctors said.

"In every patient brought for treatment, in whom simultaneous intensive study of the parents was possible, the child's defect in conscience was traceable to a like defect in the parents' own poor resolution of unconscious impulses to similar antisocial behavior. Thus, just as normal parents derive vicarious gratification from good behavior in their children, parents who have poorly integrated forbidden impulses apparently derive gratification from the bad behavior of their children."

Often a parent unconsciously may select only one child in the family to be the scapegoat for such feelings, the doctors pointed out. The formulas for the unconscious selection of the unfortunate scapegoat are multiple, as are the devious patterns for impressing him into his tragic role.

"A child's conscience is made, not born," according to the doctors. "It is not inherited ready-made, but is developed, especially during the first six years of life, primarily through identification in great detail with the total behavior of parents. This identification or mimicry embraces the conscious and unconscious operations of the parent. To an equal extent, conscience develops from the parent's conscious and unconscious image of the child and from their concepts and hopes for the child.

"The psychopathic personality or 'psychopath' of later years is the grownup delinquent child with defects in conscience, who is in court for theft, burglary, forgery, or worse. In every such instance providing us opportunity for careful study, a long history is revealed of parental sanction of antisocial offenses."

The doctors pointed out that children are masters at sensing parental interest or gratification, however subtle, at a tale of naughtiness. Even if punishment comes after the interest-arousing narrative, the damage has been done. If even disguised parental pleasure preceded the spanking, the child will repeat the performance. To please mother or father is worth the punishment, although the contradiction between seduction, through evincing pleasure, and the spanking is impossible for the child to reconcile, they said.

The unearthing of parental sanction for antisocial behavior in children is one of the most formidable challenges that confront psychiatrists, the doctors stated, adding:

"Treatment of the parent is fraught with difficulty. If the parent has provided conscious sanction of the child's delinquency, treatment is usually impossible. If the parental role was unconscious, the uncovering of the parents' problem is a miserable or hazardous ordeal, and at times the therapy requires hospitalization."

When parents become aware of the cause for their child's delinquency, they may develop neuroses, the doctors stated. Troublesome as these neuroses may be, they are preferable to antisocial behavior, with its threat of perpetuation through generations.

"It is advocated that there be a disseminated knowledge of these origins of delinquency, aimed at the erection of parental conscience barriers against the fostering of vicarious misbehavior, since such behavior may be transmitted from generation to generation through interpersonal living," the doctors stressed. "Individual neuroses that may result, regardless of their severity, are more amenable to treatment than is the delinquency complex."

Small Bowel Obstruction in a Three-Week-Old Twin

BERNARD J. FICARRA, M.D., ROSLYN HEIGHTS, NEW YORK

THE problem of intestinal obstruction is always with us. It attacks all age groups ranging from the very young to the very old. In spite of the voluminous literature on this subject the mortality remains quite high. The cause of this elevated mortality is due initially to the failure to recognize the seriousness of the malady, both from the point of view of the patient as well as the doctor, and, second, it is due to procrastination. This procrastination is manifested by the patient and, sad to relate, by his doctor. In adult patients the symptom complex is so well known that delay in securing treatment by the patient and the administration of proper therapy by the physician or surgeon is indefensible. In the newborn child difficulty in diagnosing incomplete, nonatretic obstruction and the delay in treatment are understandable. The following is a report of a case of small bowel obstruction in a three-week-old twin.

Case Report

Male twins were born of a multiparous mother. The delivery was normal in every way. Following birth the infants did well. However, the week following, one of the twins commenced to vomit several hours after ingesting his formula. His bowel movements were not altered. The formula was changed, and the situation appeared to be rectified for the next four days. On the fifth day the vomiting commenced again without any alteration in the bowel habits, which remained as before the vomiting. At about this time the nurse noted that the infant's right testicle was larger than the left. She informed the physician in charge of the patient of this testicular enlargement. He suggested a urologic consultation. The consultation was called because the pediatrician thought the infant might have a hydrocele or an incarcerated hernia. Examination by the consulting urologist did not confirm the presence of a hydrocele or an incarcerated hernia. The infant's symptoms subsided for a time following the urology consultation. However, when the infants were three weeks old, the twin under observation commenced to vomit again. When the vomiting persisted, a surgical consultation was requested. The surgical consultation revealed an acutely ill infant vomiting intermittently. The abdomen was visibly enlarged. Intestinal patterns were seen protruding in hills and valleys under the abdominal wall. Clinically it was an obvious instance of intestinal obstruction. Immediate surgery was advised.

After the administration of parenteral fluids the infant was subjected to an exploratory laparotomy. A lower right rectus muscle-retracting incision was made, and the peritoneal cavity was entered. A large amount of clear fluid emanated from the incision. The small bowel was markedly dilated from the terminal ileum upward. There was no evidence of strangulated or gangrenous intestine. The cause of the obstruction was a dense band across the terminal ileum about 6 cm. from the ileocecal valve. This band completely compressed the ileum at this point. The only procedure performed was a division of the band which bled freely. Postoperatively the infant did well and had an uneventful recovery.

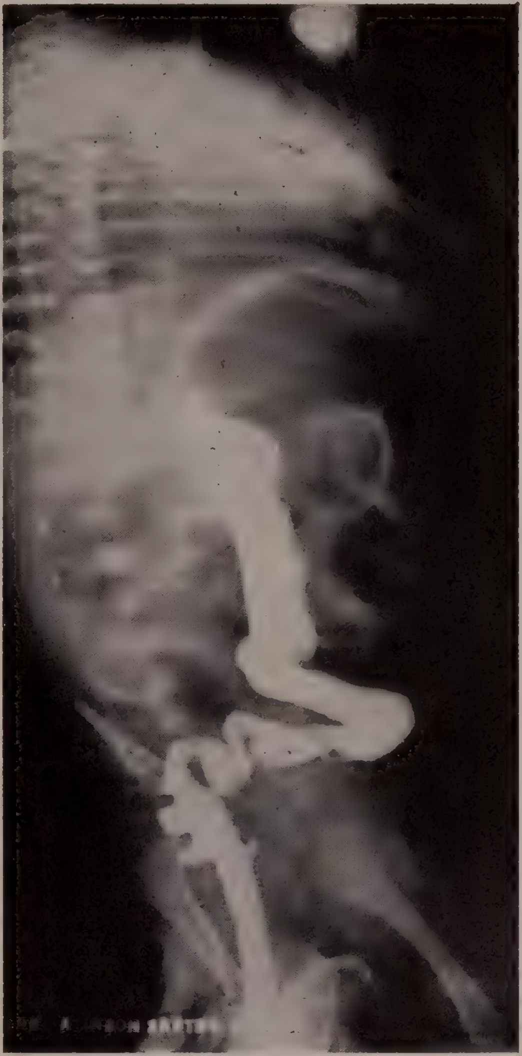

FIG. 1. X-ray demonstrates small bowel distention compatible with an intestinal obstruction. The barium was administered per rectum.

Roentgenography.—Prior to the surgical procedure the house officer ordered x-ray studies (Fig. 1). (Barium was administered by rectum. This is not a recommended procedure.) The roentgenologist's diagnosis was small bowel obstruction commencing in the lower ileum. The x-ray demonstrated multiple distended loops of small intestine. This picture suggested the possibility of an incomplete atresia of the lower ileum. The roentgenologist stated that it is often impossible to differentiate between a low ileal and ascending colonic obstruction on x-ray. For this reason the barium was administered rectally. It is preferable, however, to x-ray these babies in an upright position as well as in an inverted position.

Summary

1. A case report is presented of a three-week-old male twin who had a small bowel obstruction.

2. The obstruction initially was incomplete but after three weeks became complete.

3. The etiology of the obstruction was a congenital band across the terminal ileum.

4. Division of the band returned the bowel to normal function, and the infant made an uneventful recovery.

275 Warner Avenue

As Others See Us

Three newspapers in Ohio and Texas gave a hearty boost in 1953 to public recognition of the doctor's role in improving medical service in their communities.

A series of three articles titled "Physicians and Philanthropy" was carried in the *Cincinnati Enquirer* last July as detailed proof of the extra burdens of time and effort carried by doctors in their constant attempt to improve public health. In the first story, "He Only Charged Us—," James T. Golden, Jr. advises his readers to listen to the casual remarks of friends or strangers about their medical treatment. He bets they'll discover the remarks are most often concerned with the nominal sum the doctor charged. "Many of our M.D.'s," the article says, "are doing an even finer job than their patients realize, are giving time, energy, and often money in the service of the public and to professional improvement which ultimately benefits the public, too." The second article in Golden's series relates the free volunteer medical services available through the Academy of Medicine, including night and emergency telephone answering system and volunteer work in clinics. His third, "Some Very Special Groups," emphasizes the continued advanced training seminars in which physicians enroll, ward hospital staff volunteer service, and the fine work done by doctors' wives in community affairs.

"You Can Get a Doctor," published in the *Akron Beacon Journal* in July, is a fine example of press cooperation in presenting the doctor's answer to complaints that medical care sometimes is not available, especially in emergencies. The story makes prominent mention of the doctors' exchange phone number for night and emergency telephone service and urges families to choose their family doctor and to become acquainted with him before an emergency arises. "Obtaining the services of a family physician is not difficult. . . . A call to the Summit County Medical Society will bring a list of doctors willing to accept new patients," the story advises.

The Houston, Texas, *Chronicle* printed "Versatile, These Medics," in August by Elmer Bertelsen, staff science writer. The column, a collection of unusual items on physicians, hospitals, and medical lore, brings to light some interesting background information: The doctor who spent sixteen years in college classrooms as a student, now holds five degrees, three in medicine. . . .the sixty-year-old physician who once was flute soloist for the Houston Symphony. . . . the Houston surgeon who has held the national crow-shooting championship. . . .the fact that half the Harris County Medical Society membership (680 of 1,047) voluntarily serves on the Baylor University College of Medicine faculty.

THE MEDICAL WITNESS AND MEDICAL TESTIMONY IN NEGLIGENCE AND MALPRACTICE CASES

New York University College of Medicine

February 1, 1954

DISCUSSANTS

MAXWELL H. POPPEL, M.D., *Moderator*, Professor and Chairman, Department of Radiology, New York University College of Medicine
HON. HENRY CLAY GREENBERG, Justice, Supreme Court, State of New York
HENRY K. TAYLOR, M.D., Professor of Clinical Radiology, New York University College of Medicine
WILLIAM F. MARTIN, ESQ., Counsel, Medical Society of the State of New York
HARRY A. GAIR, ESQ.
THOMAS M. D'ANGELO, M.D., Malpractice Insurance and Defense Board, Medical Society of the State of New York
DELMAR KARLEN, Professor of Law, New York University School of Law

Hon. Henry Clay Greenberg:

I should like to assure my medical friends that the presence tonight of a large gathering of members of the legal profession did not come about through any conspiracy on my part engendered by fear. I do not believe that I need a police escort in appearing alone before men of science.

Coming here tonight reminds me of a very interesting story against the telling of which I have been admonished by my daughter, but it will illustrate precisely how I feel:

A young married couple had just left the festive table and had repaired to their hotel. The bellboy had placed everything in order. He received his tip, and then he departed. The young bride then turned to the groom, who was standing rather awkwardly in the center of the hotel room and asked, "How do you feel?"

He replied, "Mighty nervous, but mighty happy to be here this afternoon."

Had I anticipated such a large outpouring of the intellect of this community, perhaps I would have spent more time in the preparation of my remarks. Here too there comes to mind another charmingly true story:

About six months ago I was invited to attend a dinner in White Plains. I told the host that I don't like to travel by train. He said that I need not be concerned; that there was an elderly couple who reside within a block of me, and they would be happy to take me up; for all of which I was grateful. About six o'clock on the appointed day, this chauffeured car drove up to my hotel, and in the front seat were the chauffeur and the husband; in the rear seat was his wife. I was asked to get in beside her, which I did, of course, having no alternative.

On the way up she said, "Are you a judge?"

I said, "Yes."

She said, "What court?"

I said, "The Supreme Court," and she said, "The Supreme Court?"

I said, "That's right."

She replied, "If we had known *that*, we would have taken the big car!"

Next March will mark thirty years of experience in the courts. Whether I have benefited by that experience, only the unfortunate litigants and their counsel can tell, but in any event, I shall pass it on to you. Experience alone is not sufficient in the education or the development of an individual. They tell the story about the doctor who had practiced for sixty years in a small community in Indiana, and it was commonly talked about that he was a man of great experience, having practiced medicine for sixty years. The president of the medical society said, "Yes, that's right; he's had tremendous experience; he has gone on for sixty years making precisely the same mistakes."

I was warned by a number of my friends, both in medicine and in law, not to come here tonight because, they said, the doctors would be poised with their scalpel of criticism and intellectual assault unerringly pointed and which they would wield mercilessly against me. Not having a reputation for cowardice in my judicial work, I saw no reason to fear entrance into this arena. Indeed, I welcome this opportunity to clarify the atmosphere and to exchange views with men in a cognate profession. I think there has been altogether too much loose talk about the way physicians have been treated, or should I say mistreated, in the court. I believe that there has been a lingering tradition that some lawyers enjoy confusing a medical witness on cross-examination. I hope that before this evening is at an end, I will have won you over to a more generous appraisal of the legal profession and the judiciary.

First, a word about physicians. I share the view of Cardozo that:

> The physician is still the wonder worker, the soothsayer, to whose reading of the entrails we resort when hard beset. We may scoff at him in health, but we send for him in pain.
>
> No member of any other profession gives of himself to the service of the poor, suffering humanity more completely, more unselfishly, or more courageously. The physician, imbued with the high ideals and lofty aspirations of his sacred calling, has truly been called, "The flower of our civilization." Generosity he has, such as is possible to those who practice an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments, and, what are more important, Herculean cheerfulness and courage.

To all these must be added the great contributions which the physician has made to community welfare over and above his medical service. I am happy this evening to salute the physician everywhere, not alone for what he has done but for what he is striving to accomplish to alleviate suffering, to discover remedies for so many ills, and to give added life to human beings.

These views are shared by my colleagues on the bench, in varying degrees, to be sure. The doctor need not feel apprehension when entering the courtroom. The only thing a doctor need fear is lack of preparation and exaggeration or downright dishonesty. A physician's own integrity, his competency, and adequacy are the best and most secure armor against any onslaught of the most skillful legal advocate. If the physician's testimony is such as he can support and successfully defend before a jury of experts in his own field, he will confound the attorney and bring victory to his side.

To be sure, there is some overreaching of the physician by some attorneys, but the cases are comparatively few in number. The experienced and competent physician, certain of his ground, soon wins the judge and jury; the dishonest physician receives little consideration and is entitled to none. Fortunately, in my many years of experience, in the latter category there are but a handful. When an attorney oversteps the bounds, the court usually will afford all the protection that a physician requires.

Now, having paid homage, honest and sincere, I say to the medical profession: Let us go forward to the theme of the evening—the medical witness and medical testimony in negligence and malpractice cases. From here on my remarks will be rather extemporaneous, not because of a lack of consideration and preparation, but because I feel there should be a little more "at-home" talking, so to speak, "off the cuff," to doctors and for doctors about their testimony as witnesses in a courtroom. There are, as you know, generally speaking, two types of medical witnesses, the expert and the fact witness. The latter, the fact witness, may be and usually is of two types, the general physician, the family physician, and the specialist; and when I say specialist, I am again reminded of an interesting story told about two men who were graduated from Harvard Medical School:

One went out West and became the usual "horse and buggy" doctor. The other one came to New York, and he became a specialist. He was an ophthalmologist. Twenty years after they had both been practicing, the midwestern physician came to the city and met his friend, Jacques, the ophthalmologist. The New York physician said, "John, how are you faring?"

"I have a nice general practice. Oh," he said, "Jacques, I understand that you are a specialist. What are you specializing in?"

"Why, John, I'm an eye doctor."

His friend observed, "Is that so? Tell me, Jacques, which eye?"

The expert witness is usually unfamiliar with the intimate features of the case, that is, his knowledge comes only from what has been told him or through an examination for the purposes of trial. Most frequently he must rely on hearsay and answer the hypothetic questions. The fact witness is the attending physician, as is the specialist, who usually is called in when a situation exists which the attending physician feels he is not equal to. The rules which I shall speak about this evening apply equally to expert witnesses and fact witnesses. There are some distinctions, fine distinctions, to which I shall presently allude.

First, the expert witness. There are three things which should be demanded of every expert witness:

1. That he is absolutely honest, unbiased, and clear in his testimony.

2. That he have a real expert knowledge of the particular subject on which he is testifying.

3. That he study very thoroughly the case on which he expects to testify and prepare himself by looking up the opinions held and statements made by authorities and others who may have written on the subject, for the purpose of being able to show not only that he is familiar with the various opinions, but why he agrees with one and disagrees with the others, and why he disagrees with the ex-

perts called by the opposite side who attack his testimony or whose testimony he is attacking.

There is a school of thought which seems to condemn expert testimony, the thinking being that the plaintiff calls one expert and the defendant calls another, and the jury is required to determine where the credibility lies between these men. I think that the cross section of jurors that we have are able to cut through this maze of medical testimony, particularly if doctors speak, as most of them do, in simple language. It is understandable if the experts should disagree. There will be differences of opinion among experts of the highest character, rarely in regard to well-established facts, but often in regard to probable inferences from facts. Whilst entire agreement in matters of theory and speculation would be marvelous, concerning this alleged misfortune, it seems hardly becoming for the legal profession to indulge in severe criticism, since there is no profession so strongly characterized by differences of opinion on every subject, lawyers as well as judges constantly disagreeing, and the latter not infrequently overruling one another's decisions. If there were no disagreement, investigation and experiment would cease, and science, literature, and art would sink to a dead level of stupidity and laziness. If scholars and learned men had to come to a condition of unanimous agreement one hundred years ago, we should have none of the marvelous discoveries and inventions, none of the magnificent victories and triumphs in medicine and surgery that have distinguished and illuminated the closing years of the nineteenth century.

Ordinary men are quite capable of forming a trustworthy conclusion. I say, trustworthy, for that is all that can be expected or required. Comparatively few subjects of expert testimony are capable of absolute demonstration, and the judgment of a jury or an expert is ordinarily no more certain than that the conclusion in a civil case is probably correct, and in a criminal case that the accused is probably innocent or that his guilt is established beyond a reasonable doubt.

Finally, my belief is that the supposed evils of the present system are much exaggerated and, to a great extent, imaginary; that they are not to be cured by any remedy that has been or seems likely to be devised, and that, on the whole, it is best to let well enough alone.

I think the main difficulty presented in connection with the expert witness is that which stems from the fact that there is an impression among laymen, and many lawyers, that the expert will testify only to that which he is paid for. I am happy to say, in proud recognition of testimony which has come to my attention in a variety of capacities in court for many, many years, that most doctors are honest. Not only between fact witnesses, as I call them, is there such a wide margin of opinion but surely between experts. You will find in the field of radiology a Dr. Henry K. Taylor or a Dr. Poppel. At first flush it appears in reading these different shadings on the x-rays, the cloudy lines, and other signs that they differ radically as reasonable men of medicine can easily differ. But each can justify his conclusion, depending on how he interprets what he reads. I have not quarreled with the expert who honestly differs with the other expert. I have quarreled solely and simply with the expert who colors, who exaggerates, and who has no regard for the Hippocratic oath. I said in the beginning, and I repeat, there are very few in that category. It is like a rotten apple in a large barrel. One of those can give a stigma to the entire potential. I think it is in the interest of both the legal and medical professions that the bad apples be removed as quickly as possible.

The fact witness is one who is intimately familiar with the case; he examined, treated, and attended the patient; he has made a diagnosis; he has prescribed; he has perhaps recommended a specialist. He is the most important witness, medically speaking, and so much depends on his accuracy of observation, his prescriptions, his familiarity with complaints that his testimony generally is the backbone of the case. His responsibility is great, and he can weaken, yes even destroy, a good case by the type of testimony he gives on the witness stand.

To begin with, the witness should answer clearly, simply, and intelligently the questions put to him. He should always bear in mind that it is no part of his duty to volunteer statements. If he feels that his answer does not, as called for by the question, give the whole truth, he should ask the court for permission to explain his answer further, and most judges will allow the physician to do just that very thing.

I think what I am about to say might amuse you, but you have no idea how a manner on the witness stand, how the condition of your face, the way you dress, can have an important bearing on the testimony which you give, insofar as the credibility of the witness is concerned. I have had jurors say to me that they thought that this doctor's testimony was as sloppy as the clothes he wore. We are impressed so much by what we can see. Harry Gair used to say, "I would rather have a negligence case with one thumb off so the jury can see it, than all the expert testimony about neuroses and post-concussion syndromes, which, to most laymen, have no meaning, and certainly cannot be seen by the eye." The way questions are answered, the way the doctor treats even the most devastating cross-examiner, the attention to small things will bring victory to his side.

I cannot emphasize too strongly the absolute importance of keeping proper and accurate records. Now, I recognize, as all judges recognize, that the doctors who generally come into courts are the busy doctors, and sometimes it is difficult for them to maintain a set of books or records in the precise form which are kept by accountants in a business office. Yet a case can be won or lost by the presence or absence of accurate and adequate records. How often have I heard a lawyer say to a doctor in connection with a most insignificant phase of the medical side of the case, "Doctor, you didn't put down that the patient was coughing when she came to see you?"

Answer, "No."

"Didn't you think that rather important?"

Answer, "Yes, it was important."

"Now, why didn't you put it down?"

We who are trained and experienced know that a doctor observes everything medically. Put it down on record. It will save a medical witness many embarrassing moments on the witness stand because it is a practice of lawyers—and not a practice which should be persisted in—when he learns that a doctor who is stubborn in his testimony and will not yield and cannot be cracked, to try to beat him down on smaller matters and thus becloud the issue in a case. They tell a story in this connection:

A doctor came into court frequently in this community and always spoke with finality. The lawyer was unable to crack his testimony. In desperation, he said, "Doctor, one of your patients was Diamond Jim Brady?" The doctor nodded. "Doctor, where is Diamond Jim Brady?"

"He's dead."

"Doctor, I understand that another patient of yours was Lillian Russell?"

"Oh, yes."

"Where is Lillian Russell?"

"She's dead."

Well, the lawyer went down the line, mentioned ten or twelve prominent people who had been patients of the doctor and who had died. He tried to create the impression with the jury that every patient the doctor treated died.

Now, you and I know that with intelligent people there's nothing to it. Lawyers will employ tactics as a magician. He will try to get your eye away from the point, so he wipes his hands; in the meantime, there's something going on down here using the simplest trick. The same thing happens in cross-examination. The little things are asked and reasked—if the judge is not on his toes, asking, reasking; in the meantime, the jury forgets about the important part of the medical testimony, and the doctor is made to appear in not too good a light.

I have been told on a few occasions, and I repeat it only because you ought to be put on notice about it, that there are some doctors who keep two sets of records, one which represents their actual observations, findings, diagnosis, and prognoses and another for certain other purposes. I am told that this is the practice more frequently among the doctors who make it a custom to appear for the insurance carriers than doctors who appear for plaintiffs. I have never known personally where this has taken place in either category, yet the persistence with which the claim has been made—and I'm not one given to rumor or conjecture—nevertheless, the persistence with which it has been made leads me to believe that it may be true in a very limited number of cases. To you who have come here tonight, I want to admonish you: Never in any circumstances keep two sets of records, whether doing it for purposes of testimony or for purposes of escaping the consequences of the income tax collector. So, I say, try to keep your records accurately and as fully as possible, and you will make an impression every time.

The next point to bear in mind is to prepare for your testimony, even if you are a fact witness. Obviously, if you are an expert, surely you must prepare. When I say prepare, I don't mean embellish your case. I don't mean exaggerate. I don't mean dishonesty. It is your duty to the court to come on the witness stand with a full and complete knowledge of what you are going to testify to. I have seen so many doctors, busy doctors unfortunately, come into court, thumb through a record, thumb through the hospital records, and then go on the witness stand. I would much rather not go to the stand with the fact witness; I'd rather take my chances without him if it is possible. I say a doctor has no right to take the witness stand unless he is thoroughly prepared and, in addition, to explain his observations and his diagnosis.

One thing I beg of you, ladies and gentlemen—I know how difficult it is because lawyers are guilty of the same thing—that is, to use the terms with which the jury is familiar. Most jurors, and most judges for that matter, are not familiar with these medical terms, and therefore you ought to speak in simple terms, in terms so simple that even the judge on the bench can understand what you are saying. Now, that is important. It sounds big to use tibias, fibulas, transverse processes, and postconcussion syndromes, and such other terms as you hear generally in negligence cases. I don't think it demonstrates any medical erudition to praise yourselves by giving testimony through the use of those terms. All the judge wants to know is, did the man suffer injury; if so, what was the treatment, the diagnosis, the prognosis? Sometimes it is very difficult for judges to describe or obtain the very word that you want to explain yourself. Try to be calm, collected, and then you will make an impression on the court and jury that is beneficial.

Now, I have a few don'ts. Don't be one or more of the following: A conceited doctor who knows all the answers. You know the story, it is used so frequently, which is told about the lawyer when the doctor answers with such a finality of impression. He says, "Doctor, did you *ever* make *one* mistake in your life?" Well, now, a question usually asked like that, with the usual answer, proves devastating, and I think that the doctor should not try to show how much learning he has. The smug doctor. The pedantic doctor—God protect us from him—that too talkative or lecture room type of doctor. He doesn't testify; he lectures. In order to upset one, Bill, who happens to be of Irish extraction—I'm referring to Bill Martin, who is counsel to the Medical Society of the State of New York—asked him, "What did you do first after you got off the boat from Ireland?" This usually upsets the doctor. Make admissions if they are indicated and be ready to acknowledge an error. Don't create an impression that only yours can be the correct view. Be positive, of course, but not arbitrary. If you are being questioned about a subject which is not your specialty, simply state in calm and precise language that it is not your specialty and that you will answer it as best you can.

Make certain that your x-rays are properly indexed with numbers, names, and dates. I have seen so many of these x-rays challenged because of the absence of those facts and figures, and it is important for them to be handy at all times: First, it helps in the expedition of the trial. Second, it shows that you are a careful technician and doctor. And, third, it shows that you know your business, and that, after all, is the function of the man who comes into court with x-rays. I think it is devastating to a radiologist on the stand to have pointed out to him that the x-ray he is talking about did not even belong to the plaintiff who is suing in that particular case; that in the haste to leave his office, his nurse handed him the wrong ones, and he looked at them and gave testimony which hadn't the remotest relation to the issue before the court.

On cross-examination, if you are a specialist and you happen to be questioned about an authority, either say that you never heard of the authority—that is the safest position to take, although not necessarily the most sincere position—then the attorney will not be able to question you about it, or say that you agree or disagree and say politely why. Also if you are called as an expert or specialist, make sure to familiarize yourself with authorities, and be prepared to meet the issue at all times. I heard a doctor once testify, long before I ascended the bench, that he didn't need to read any of the authorities; he was recognized as the leading authority in that particular subject. I'm certain that surgeon did not make much of an impression on the jury.

Most negligence cases involve x-rays and orthopedics and myelograms; almost every case presents some sort of trauma or fracture; therefore, it is important that x-rays be taken, for example, after the happening of an event; if it shows a long history of arthritic changes, the doctor can tell immediately that that cannot be entirely due to the trauma since it developed too quickly. It is very important to have x-rays taken from time to time and even submit them to another expert to make certain that you have the accurate and proper reading and diagnosis. I think Dr. Taylor may tell the story, but I'll tell it:

We had a case where a back was involved, and this myelogram was used. It appeared that the fluid went in, stopped at a given point, and the doctor for one side contended that a disk was not functioning right, or something was wrong; the other side said, "You know, they didn't tilt the body enough to allow the fluid to go through, and it stopped at that point." I think, as a lawyer myself, that it could possibly happen! You must be prepared for such situations if you want to make an expert medical witness.

Don't get the reputation for being either a plaintiff's or a defendant's doctor. It has been told about a certain doctor in this community that he examines a patient in twelve minutes and dictates his conclusions in some sort of contraption in an automobile riding down to the next office to start the next procedure over. I heard that from dozens of lawyers. No doctor, no matter how skilled, can conduct an examination that quickly. Reflect on this line of cross-examination:

"Doctor, how long did it take you to examine this patient?"

"Thirty-five minutes."

"Could it have been twenty minutes, doctor?"

"Well, maybe."

"Could it have been twelve minutes, doctor?"

"Don't pin me down to minutes or seconds. I gave just as much time as I thought was necessary."

"This patient, doctor, complained of a, b, c, d, e, and f; you examined her as to all of these complaints in twenty minutes?"

"Yes."

"That's all, doctor."

You know what the jury will think about a situation like that. I know some doctors are more skilled than others, but there is an irreducible minimum that you cannot get around in conducting an examination of a patient.

Now, that generally gives you two witnesses, expert and fact and gives you generally my experience for many years about how doctors impress me, how favorably they influence jurors in verdicts by methods they adopt, and the manner they present on the witness stand. It is very important to get over to the jury: (1) that you are honest, (2) that you are careful, (3) that you are prepared, (4) that you have your records and support the testimony which you have given. Just as it is easy to get a reputation for being a plaintiff's or a defendant's doctor, so it is easy for you to create the reputation that no matter what you say, no one will think you are capable of any wrongdoing.

In September of this last year I sat in pretrial, and a case came before me. I said to the lawyers. "You seem to be at variance. I should like to send this case to my good friend, Dr. Henry K. Taylor. I have a high regard for him, and he will tell you about an incident why that regard went up as time went on." I sent this case up to Dr. Taylor. The plaintiff wanted $6,500. Dr. Taylor said there was no fracture. The case was finally settled for $350. Make certain that you have a careful and accurate diagnosis.

Senator Downing used to say, "If you get a reputation for getting up early, you can sleep all day, and people will still swear that you get up early." Get a reputation for honesty and ability, and no lawyer, no matter how skillful, will be able to weaken or destroy the efficacy of your testimony on the witness stand.

Malpractice has become important in the law today. For some reason or other which I am unable to explain, there is a large increase in malpractice cases. Perhaps too many doctors talk too loosely about what they found or what they thought they found; perhaps the newspapers have carried results of certain malpractice litigation, and people with feigned ills run to a lawyer in the hope that they may recover from the doctor.

We have gone a long way to soften the rigor of the ancient law which held a surgeon to strict accountability, so that if he caused loss of life or limb, he lost his hands. Today, the law approaches with sympathy and with understanding the difficult problems confronting a disciple of Hippocrates in the practice of his high calling. In the practice of his high calling it is essential, therefore, that in the interests of science and in order to promote the public health and welfare, the liability of a physician for the consequences of his professional acts shall be strictly limited, to the end that he shall not be made the prey of disappointed or ungrateful patients, on the one hand, nor of malicious or unscrupulous patients, on the other. In order to recover in a malpractice suit, the plaintiff is required to establish the following propositions, and each of them to the satisfaction of the court by clear and convincing evidence: that the relationship of physician and patient existed; that the physician violated some duty which he owed to the patient; that such violation of duty was the competent producing cause of the bad results complained of; and that the patient himself was free from any contributory negligence which was responsible for the resulting condition. A physician is not an insurer. He is not held to guarantee the success of his treatment. His duty is defined in the leading case of *Pike* versus *Honsinger* (155 New York 201, 209) as follows:

> Upon consenting to treat a patient, it becomes his duty to use reasonable care and diligence in the exercise of his skill and the application of his learning to accomplish the purpose for which he was employed. He is under the further obligation to use his best judgment in exercising his skill and applying his knowledge. The law holds him liable for an injury to his patient resulting from want of the requisite knowledge and skill, or the omission to exercise reasonable care, or the failure to use his best judgment. The rule in relation to learning and skill does not require the surgeon to possess that extraordinary learning and skill which belong only to a few men of rare endowments, but such as is possessed by the average member of the medical profession in good standing. Still, he is bound to keep abreast of the times and a departure from approved methods and general use, if it injures the patient, will render him liable, however good his intentions may have been.
>
> The plaintiff cannot succeed merely by establishing that the physician was guilty of a mistake of judgment. 'The rule requiring him to use his best judgment does not hold him liable for a mere error of judgment, provided he does what he thinks is best after careful examination.' (*Pike* v. *Honsinger*, supra, 210). Nor does the law exact of a physician generally that high degree of knowledge and skill usually possessed by a specialist. The standard by which he is judged is the skill and knowledge of the ordinary practitioner of his locality. Certainly these rules clearly and succinctly formulated by our highest court, should be ample protection for any conscientious, competent member of the medical profession.

Now, let me tell you of two cases to illustrate what I am talking about, and then I will close: A woman complained that one of the teeth in her lower jaw troubled her. She went to her dentist. He examined her mouth and said, "I think it's that tooth, but after all, it's an important thing to extract a tooth; I'm going to send you to a specialist," and he did.

She went to a specialist in surgery of the mouth, and he took an x-ray of two teeth and said, "Yes, those two teeth should come out," and he extracted them. It developed, however, that those were perfectly normal teeth, and if the doctor had taken what appears to me to be a most elementary precaution to x-ray at least this entire side of the mouth, he would have discovered that she had a badly impacted wisdom tooth. Fortunately, she was not damaged too much, and a small sum settled the case.

Another case which was tried by my late distinguished colleague, Judge Shientag, has become a landmark of the law: A girl was a cashier in Schrafft's, and in leaving the store one day she caught her thumb in the revolving door and smashed it a little bit. She went to see the doctor of the company, and then she went to the compensation doctor. It didn't seem to heal for a week or ten days—I think it was actually eighteen days—so she got worried, and the doctor to whom she first went was concerned about it, and then she went to the physician of the compensation carrier. He was a specialist in this type of work. She claims that she told the doctor that she had diabetes which would account for the finger not healing within fifteen or eighteen days time. She was given certain treatment, and she came back. The nail was removed; then she developed gangrene, and her entire thumb was amputated. Aside from the question of whether or not she told the doctor she had diabetes, aside from the question of whether or not it was his duty to look at the medical record, he should have been suspicious of such a long delay in healing and concluded that there was some blood involvement. Not this doctor. He was careless and indifferent. The result: A judgment of $6,000 was paid by him the same day it was rendered. Here was a case of a little smash on the finger, and he stated that he took the nail off twenty-five days later. All of you will agree that was a proper suit to be brought against the doctor.

Those are the two cases that stand out so clearly, but just before I finish I must tell you about a third case: A man was told that his wife ought not have any more children. In the family council it was decided that he should go through an operation rather than she. So he went to a physician or surgeon to have what is called a vasectomy performed. It was performed, and eleven months or so later the wife became pregnant. She sued because of the negligence of the doctor in the performance of his duty. She said she told her neighbors, relatives, and friends that she couldn't possibly have another child fathered by her husband. Now that she was going to have another child her friends and relatives would think that she had been running around the neighborhood. That case was tried before me without a jury. The husband testified that while the operation was going on, the surgeon had his hat on and was smoking a big cigar. It was hard to credit that story, but the lawyer—you know him very well, Bill Martin—thought if nothing else was true in the testimony offered by the woman and the husband, it was that this doctor had a hat on and a cigar in his mouth while performing this operation.

It was difficult to get an expert for the plaintiff in the case. The doctor testified to his method; plaintiff's attorney urged a preferable method. Both were medically correct. The case was dismissed. I think that was a proper demonstration of justice. At most, the doctor was guilty of error of judgment.

Thus, I have given you three examples of the things we have to contend with. I can tell you about many, many more of them. I say that the keeping of adequate records, treating every case as though you were just getting your first case, is important. Most malpractice cases concern doctors fifty years old and upward. If I am correct in that, it would seem to indicate indifference where men have established their reputations, perhaps getting a bit careless. Let me say this to you: You will be amazed to know that there are defendants in malpractice cases who represent what I referred to before as the flower of our medical profession, and you can only ascribe that to their busy office, to the improper attention to the particular cases, because it cannot be ascribed to any other factor.

I raised the question at dinner tonight, and apparently all agreed: A woman is operated on, and two months later she has pains on her right side. The doctor examines the x-rays, finds a foreign body, and a sponge is taken out, or some instrument. Should the second doctor inform some member of the family or the patient? How many doctors actually "kiss and tell"; I think it is the duty of a doctor, if for no other reason than to protect himself, to relate the accurate condition.

The paper which I have presented to you tonight, I am certain, will not go down with the papers of Jenner or Pasteur or Lister. I'm certain it will not go down with the distinguished papers of Dr. Osler or with the distinguished papers I have heard at the Academy of Medicine and the County Medical Society. What I have attempted to do here tonight is not to give you any technical rules; I don't want to be guilty of the same thing I'm complaining about on the part of doctors using language that is not so simple. I wanted to give you, first, my deep abiding affection for doctors. I happen to be at the present time a member of the Board of Trustees of the Hospital for Joint Diseases. I'm interested in medicine. It hurts me when, sitting on the bench, I see doctors assailed and hear so much loose talk. If I have given you certain ideas which may be helpful, I feel I have discharged my obligation, both to you and to myself.

Together our two professions can go forward to greater heights. Medicine can do much for law; law can do something for medicine. We two together come in contact with more people. We thus can influence more people. Hence our responsibilities are greater. We cannot shirk our duty, and we should not. Dedicated to ideals and to the community as the two professions are, we have it in our power to create a better community in which to live.

Dr. Henry K. Taylor:

I agree with all of Judge Greenberg's remarks. There was nothing with which I could differ. His comments, of course, are based on present-day methods.

The type of procedure which is in vogue at the present time consists of examination and cross-examination. Each witness is called by arrangement. The attorney and the witness get together and discuss the situation. If the expert's answers do not suit the attorney, he is not engaged. Likewise, the attorney is briefed by the doctor. All of this adds up to the fact that the expert is built up on one side, and an attempt is made to tear him down on the other. The tearing-down process is merely done to discredit him before the judge and jury. It has nothing to do with medical testimony and is merely a method of attempting to sway the judge and jury. The evaluation of medical facts in a case should not depend upon two attorneys fighting each other or haggling over a witness.

My idea is one purely from the medical standpoint. There should be one opinion for the benefit of the court. In other words, in any injury case the injury sustained by the claimant does not depend upon an argument or a discussion or a battle between two attorneys and two experts on the witness stand. To elucidate, if an individual is injured by an automobile, the injury sustained will be the same whether there was negligence on his part or no negligence on his part. Therefore, the evaluation of the medical facts has nothing to do with who contributed, in part or totally, as far as negligence is concerned. The question of negligence has nothing to do with the injury sustained, nor has it anything to do with the doctor on the witness stand. The question of negligence properly belongs to the attorneys and the court and not to the doctors, except in malpractice cases where the doctors can also determine negligence because that is within their province. My contention is that one opinion should be submitted to the court, and this opinion should be obtained from a rotating group of experts comprising a large panel. Ordinarily, the group may be composed of a radiologist, an orthopedist, and a neurologist. Those are the three who are usually found testifying in the average negligence case. Other specialists may be included, depending upon the type of case. This group of doctors can discuss the case, examine the claimant, evaluate the entire medical history of the case, and then submit a single opinion for the benefit of the court. This will neither minimize, nor will it exaggerate, the injuries sustained. It will be purely an evaluation of a medical problem and not one to determine negligence; it will be a medical opinion for the benefit of the court.

To call your attention to the fact that there is something unusual and not quite proper in our courtroom procedure is the fact that we have now as an experiment, the medical expert testimony panel, which I believe Professor Karlen will discuss. This panel was formed for two reasons, (1) to expedite cases and (2) to avoid a battle between the experts. This in itself is an indication that our present procedure, even though democratic, is not always productive of the whole picture. This experiment is being financed by the Sloan and Ford Foundations. In my opinion, the medical expert testimony panel does not solve the problem, but it is a step in the right direction. The reason I contend that the panel does not solve the problem is that if the two attorneys who agree to submit a medical problem to the panel are not satisfied with the opinion of the panel, the findings of the panel experts are not binding upon them; they then may revert to the battle between the attorneys and the experts in the courtroom. My contention is that this procedure, reverting to the battle between the experts in the court, should be avoided because the considered opinion of a group of a minimum of three to five doctors—and more if necessary, including all the necessary specialties—has more value than the opinion of a single individual. The considered opinion of a group of doctors is the same as the studying of a case in a hospital where there will be discussions, and perhaps even differences in idea, but there will be ultimately one opinion. After a fashion, the Workman's Compensation Board has a better approach than the present medical expert testimony panel, because with the Workman's Compensation Board impartial specialists are permitted to consult with each other on a case. This is not the practice with the medical expert testimony panel.

I should like to give a few experiences in order to show why I believe that one opinion for the court is the proper manner to evaluate the medical facts in any injury case, one which is just and fair:

1. Opposing medical experts agree on one opinion: A number of years ago I was called to testify in a case by the defendant, only to find that my former "chief" was appearing for the other side. I informed him that I would not testify in the case unless he would agree to a free discussion of the case before the judge in chambers. He agreed, and while we had opposing opinions at the outset of the discussion, we wound up with one opinion for the court. Neither he nor I testified. The case was settled. Both sides were satisfied. Incidentally, this happened in Judge Greenberg's court, and he was pleased as punch over the procedure.

2. Improper preparation by an attorney: I was called and not having been given the opportunity to view the films in advance of trial, was kept in the courtroom while the plaintiff's doctor was being cross-examined, unmercifully. I felt sorry for him because, in the eyes of everybody in the courtroom, the doctor was being discredited or, at least, made to appear so. He really squirmed. When the attorney for the defense terminated his cross-examination, he turned to the judge and informed him of my presence in the courtroom and requested a short recess so that I could examine the x-ray films before taking the witness stand. After viewing the x-ray films, I informed the attorney that several fractures were present and that the plaintiff's doctor was telling the truth. The attorney for the defense, during the recess, said to me, "What the — am I going to do with you now?"

I replied, "You told the judge that I was here. If you put me on the witness stand, I shall testify to the presence of fractures; and if you don't, the judge and jury will know why you didn't put me on."

He put me on the witness stand. I testified to the fact that fractures were present. I need not tell you what happened. Needless to say, that attorney never consulted me again.

3. The inadequacy of an attorney: After being cross-examined to the satisfaction of the attorney for the plaintiff, the attorney for the defense realized that there was more information which he should have obtained on direct examination. Not having done so, however, and not knowing what questions to ask, finally turned to me and said, "Now, will you tell the judge and jury anything else you wish to tell in this case."

I need not tell you that I could not offer anything more because the attorney for the plaintiff, while he lauded me, also informed the attorney for the defense, through his objection, that I could tell a lot, but that he would only permit me to answer questions.

4. Brutal and foul tactics on the part of an attorney: I see many films for opinions from both sides during the course of the year but seldom get to court since I am only called when there is no pathology present and where the other side claims a great deal of pathology. When I am in the witness chair, I do not object to a severe cross-examination attempting to nullify my testimony given on direct examination, provided it is done on a proper and fair level. I do object when an attorney in an attempt to break down my testimony uses methods which are manifestly unfair and foul. There occurs to me an incident which might be interesting.

An attorney was shouting and tauntingly shaking his finger at me, beefing and bellowing at me with insinuations and aspersions, and trying to discredit me beyond all reason when I became annoyed and felt as if I were sitting on a hot seat with small chance of checkmating his unseemly course of conduct. To calm myself, I withdrew a sheet of paper from my notebook and made a memorandum. This proved disconcerting to the examining attorney who insisted upon obtaining my memorandum. The judge concurred. I gave it to him. On reading it, his beefing and bellowing stopped; he looked chagrined; his whole attitude changed; he became silent and flushed. The judge then directed him to read aloud for benefit of the jury the memorandum he held in his hand. The memorandum read, "Keep your shirt on." All I was trying to do was to calm myself in the face of the unwarranted attack. This whole procedure acted as a boomerang. Both the judge and jury reacted quite hilariously, much to the chagrin of the quiescent attorney.

From the foregoing experience one can conclude:

1. Two doctors can agree on a medical opinion.

2. Discrediting a doctor on the witness stand is no indication of the medical facts in the case.

3. Inexperience on the part of the attorney is no reason why the true medical facts should not be brought out in court.

4. A beefing, bellowing, arrogant, loud-voiced attorney does not help in clarifying medical testimony.

5. Cases where medical findings were lost on (lay) juries: With the medical opinion from a rotating panel, unfair, unjust, and foul tactics in a courtroom would not occur. Considerable time and expense could be saved to everybody involved in the case. The public should not be put in a position to judge the battle between attorneys and medical men, particularly since lay people are not in a position to evaluate medical facts adequately.

In a Federal court, where before trial both sides are permitted an exchange of facts and study of x-ray films, an abnormal finding in the lower portion of the left chest was demonstrated, and because of the history of an injury, it was suggested that this might be a hernia, indicating that there may have been a rupture through the diaphragm. This could easily be verified by an examination of the stomach and intestines. At my suggestion this was performed. The examination, in my opinion, did not reveal a rupture of the diaphragm. The plaintiff's doctor insisted on the trial that there was a rupture of the diaphragm, although this had never been entertained before. I testified to the effect that it was my opinion that the pathology was a cyst in the lung, in no way related to the injury. Plaintiff, however, obtained a verdict.

A gastroenterologist (stomach specialist) made a diagnosis upon x-ray examination and mistook the interosseous ridge on one of the leg bones for a periostitis. He incorrectly called a normal anatomic finding a periostitis resulting from an injury. A verdict in plaintiff's favor was obtained in this case.

I could continue along this vein and give many more illustrations to show what I call the unfairness in arriving at the medical facts in any injury case. All things being equal, the chips will fall on the side of the attorney who is more conversant with courtroom procedures—to use Judge Greenberg's interpretation of some attorneys activities in the courtroom.

I have exceeded my time, but before I sit down, I should like to show you a number of x-ray films demonstrating normal anatomic findings, which, according to the definition of a fracture, could be very easily but fallaciously interpreted as fractures. The definition of a fracture is: "A solution in the continuity of bone." Radiographically, I shall show you many solutions in continuity of bone. They are all normal anatomic markings. Many of these have been described as fractures in our courts. Verdict has been given on normal anatomic findings. (*Slides on skull, cervical spine, shoulder, scapula, upper dorsal and lower lumbar spine were shown.*)

These x-rays showed various anatomic variations, anatomic markings, anomalies which conform to the definition of a fracture, "a solution in the continuity of bone," but which are not fractures; they are all normal findings. Time does not permit me to continue with my films to show you similar findings in other parts of the human skeleton.

To summarize—in my opinion, the best procedure to obtain the medical facts in any injury case is by a group of medical experts drawn from a rotating panel, which will study the case from all angles and arrive at a single opinion for the benefit of the court. This study is not to include the question of negligence or contributory negligence. The injuries sustained are the same, no matter who is or who is not negligent. The extent of the injuries should not be minimized by the defense nor exaggerated by the plaintiff. The true status of the medical facts of the case should be known to the court. Negligence is not to be determined by the doctors except in malpractice cases. They are in a better position to judge negligence on the part of one of their colleagues than is a jury composed of nonmedical or lay people. This in no way nullifies the so-called democratic courtroom procedures.

There is obviously something which requires a change in obtaining expert medical testimony; otherwise the experiment in vogue, the medical expert testimony panel, would not be in operation. While this is a step in the right direction, I do not believe that it goes far enough. To implement the present medical expert testimony panel, it should be enlarged so that rotating groups may thoroughly investigate, examine, and consult with each other, ascertain all the medical facts, and arrive at a single opinion for the benefit of the court. A group will eliminate all possible chances of prejudice for one side or the other; it will bar the unscrupulous; it will avoid battles between experts, experienced and inexperienced; it will eliminate unfair tactics in the courtroom and will save considerable time; it will be honest and fair for all parties concerned and certainly will help expedite the court calendar.

While I appear to be more for the defendant than for the plaintiff, that is not a fact. My opinion does not depend upon whether it is for the plaintiff or the defendant; it is a medical opinion based on the facts.

If a completely honest attitude prevailed in the courtroom at all times, there would be no need for the medical expert testimony panel; there would be no need for impartial specialists, nor would there be any need for my suggestion at this time for a rotating panel of a group of doctors.

It has always been my practice to prove my opinion whenever possible. In other words, if I maintain that a solution in the continuity of bone as demonstrated on an x-ray film is a normal anatomic marking, I always indicate that a second x-ray examination be made after a long interval of time. This will prove or disprove my contention. If the so-called solution in the continuity of bone persists, it is an anatomic marking; if it disappears, it was a fracture which healed. That is a procedure which I recommend to attorneys for both sides. If an individual has a fracture and it heals, the fracture line will disappear, and in the plaintiff's case this can be used as proof positive that a fracture was present.

I have done this repeatedly with skull injuries. If an individual has had an injury and a fracture is claimed, even though I may not believe it to be a fracture, I have advised x-ray re-examination after an interval of three years in order to determine whether a fracture was present. Normally, the average skull fracture should heal in less than three years. I am referring to fractures of the vault. If what was called a fracture persists for more than three years, then this so-called fracture was not a fracture, but a normal anatomic marking of either of the following: (1) vascular groove, (2) venous channel, (3) overlapping suture, (4) nonfused suture, (5) suture. It should be observed at this juncture that fractures on the base of the skull may not always be demonstrated radiographically.

Allow me to give an illustration bearing on x-ray re-examination: A famous theatrical personality was injured in an automobile accident, and because of the renown of the injured, the insurance company offered to settle the case immediately. However, because of my opinion, the original offer of settlement was withdrawn. On my advice a re-examination was made three years after the injury, and the films of the latest x-ray examination showed the same markings which were claimed as fractures. The nondisappearance of these markings verified my opinion that they were normal anatomic markings. Had they disappeared, it would have been proof positive of a healed fracture, and I would have so stated in my report.

Plaintiff's attorneys are not prone to have x-ray re-examinations made at intervals of time to prove the healing of fractures. Where I make such a recommendation to the defendant and the defendant is willing to go along with my idea of re-examination roentgenogrpahically, he must then get the plaintiff's attorney to agree. In the event the plaintiff's attorney refuses, an attempt may then be made to obtain a court order on this practice. This, of course, holds true for either side. A defendant can use this method to prove or disprove any allegations made by the plaintiff's attorney, and the plaintiff's attorney may use this practice to prove his contention that a fracture was present and healed.

A doctor in a case of a simple nasal bone, which had normal markings with groove for the artery at right angles to a variation of the thickness of the bone, called this a comminuted fracture. This is a common error, in which normal anatomic markings are incorrectly evaluated as fracture.

I used to be adviser to a preparation man of an insurance company, a taxicab insurance company. Whenever an accident occurred, they immediately sent their doctor out on the case. No matter what the injuries were, no matter how severe or how bad, he always reported, "There was nothing wrong." The result was that every case went to trial, and the preparation man of the insurance company was at his wit's end. So, when I came into the picture, whenever they had x-rays that they could get permission for me to see, the preparation man was first informed as to just what the injuries were—in other words, when fractures were present; they were so indicated; they were not minimized. I recall commenting at the time—referring to that doctor for the insurance company—that if he found a claimant decapitated, "walking with his head in his hands," *he* would have reported, "nothing wrong."

A doctor who was treating a patient brought films to me for an opinion. I directed his attention to a fracture of the cervical spine, which was heretofore overlooked. This resulted in a prompt change in treatment and management. The final outgrowth of the case was a liability suit for damages for injuries sustained. The injury resulted from a packing case falling from a height on to the patient's head while shopping in a chain store. In this particular instance, the plaintiff obtained the highest verdict (running well up in five figures) ever rendered in that borough.

An error in diagnosis is not malpractice. If a doctor makes a wrong diagnosis, that is not malpractice. But suppose you don't do something which you should do—that is malpractice. To illustrate, suppose you have a fracture case and you do not have an x-ray examination made; should something go wrong, that is malpractice. Suppose you did have an x-ray examination made, and you set the fracture.

After setting the fracture, an x-ray re-examination is necessary to make certain that everything is properly set. The omission of this second x-ray, should anything go wrong, is malpractice. An illustration follows.

A diagnosis was made of a cancer in a bone, and a fracture occurred through the lesion. Because the doctor thought that it was malignant and that the patient was "living on borrowed time and not long for this planet," he did not set the fracture. The doctor was proved wrong in his diagnosis because the patient recovered. He never had a cancer of bone.

Because the fracture was not set properly, the bones healed in an abnormal position which resulted in shortening, and now the patient has a short leg, walks with a decided limp, and requires a cane for assistance. Now, there are two problems here: (1) diagnosis and (2) treatment. The error in diagnosis is not malpractice. The omission of setting the fracture is malpractice.

Malpractice also depends on locality. What is good practice in a rural area may be malpractice in a big city. In other words, a fracture occurs in a rural area, far removed from x-ray equipment; even though there is no x-ray examination made before and after setting of the fracture, this is not malpractice only because x-ray facilities are not available. This same type of conduct in a big city is malpractice.

Also to illustrate malpractice as far as communities are concerned, it is only expected of the doctor to know what is known to most of the doctors in his neighborhood. In other words, the knowledge that is required of a doctor in a big city close to medical centers is tremendous compared with that of a doctor in a community where there are one, two, three, or a handful of doctors, where large hospitals and medical facilities are not available.

William F. Martin, Esq.:

At this late hour, no lecture on malpractice cases or claims that we have handled would be welcome, and perhaps it would be best if I just tell you a few of the interesting experiences that we have had.

An Irish child named *Lyman* was born the same day as a Jewish child named *Lipton* at the same hospital in the Bronx. Some days after birth a large number of friends of the Lipton family were gathered together at the Ceremonial Room in the hospital, and by mistake the *Lyman* baby was brought downstairs and circumcized. The hospital was sued for $250,000. The case achieved some publicity, and a small-town paper said that the only man in the world whose circumcision was worth a quarter of a million dollars was Hitler.

The hospital and the "Mohel" were the defendants in the action. A "technical assault" was all that was involved, but the plaintiff asked a great deal of money. We offered $200 on behalf of the hospital if the "Mohel" would pay another $50. The plaintiff said that the "Mohel" was a Park Avenue "Mohel" and was worth much more, but they finally took $100 from him, and the case was settled for a total of $300.

There were beads around the child's neck with its name on it, but in the excitement of the event nobody looked at the beads. The "Mohel" said that he was scrubbed up and could not break his technic by looking at the beads. The judge suggested that the next time he look at the beads before he scrubs up.

There is always a danger in trying a case involving malpractice, unless the jury is told specifically the nature of the disease for which the patient is being treated. An instance of this is the following: Many years ago, we had a case where a lady came from 100 miles away to visit a very dignified doctor who practiced in midtown Manhattan. He came to court in a cutaway coat. The lady plaintiff said that the doctor put a heat lamp on and burned her. He denied this. There was no permanency of injury. Neither plaintiff nor the doctor stated what she was being treated for. The jury was out an entire day, and the judge, who wanted to get away for the week end, sent a note into them late Friday afternoon asking them what was holding them up. They sent back a note which read, "We are very puzzled. We find both parties guilty of abortion. We don't know what to do. What do you suggest?"

So far as is possible, the simplest language should be used to describe the nature of a disease. After a long trial in which the disease involved was variously referred to as "carcinoma and cancer," the judge charged the jury with "You have been listening very patiently to a case involving the dread disease known as 'casanova of the stomach,' which I will hereafter refer to briefly as cancer."

I was very interested in Judge Greenberg's remarks about the handling of medical books in court. Briefly, the New York rule is that if an expert does not recognize a book as an authority, you cannot cross-examine him with quotes from that book. I had an interesting experience involving this rule of law: I had been cross-examining a medical witness from a textbook late one afternoon. Overnight, he must have become acquainted with the rule of law relating to textbooks. The next day, I tried to read to him from *Christopher on Surgery*, 4th edition. The case involved medical treatment at a copper mine in Chile. The doctor denied that Christopher was an authority. I tried to show him that the book was merely a collection of articles by experts and that the article on osteomyelitis, the disease in question, had been written by a professor of a Maryland medical school. He still denied that the professor was an authority. I asked him if he would agree that the treatment outlined as correct treatment, at least in the State of Maryland, should be efficient treatment "high in the mountains of the Andes." An objection to this question was sustained as argumentative. An associate of mine handed me a note to ask the witness for the name of the book with the orange-colored back that he had brought to court with him. After a little confusion, the book was produced which was found to be *Christopher on Surgery*, 5th edition. The doctor further stated that he had obtained it at the request of plaintiff's attorney from the library at the hospital where he did his surgery and that he brought it to court because the plaintiff's attorney had asked him to bring "an authoritative book." He then stated that while the 5th edition was an authority, the 4th edition was not. We asked no further questions of this doctor.

I have been with the attorney for the Medical Society of the State of New York since 1928. We have tried to adopt a consistent course of fair dealing with both our clients and our opponents. When you represent a large group of men, it is, of course, essential that you present their problems sympathetically and forcibly and that at the same time, obeying your duties as a lawyer, you be as fair and considerate of your opponents as their conduct permits. Many malpractice cases are wholly unjust and must be resisted to the utmost. A great deal of technical knowhow is involved but cannot be gone into at this point.

To the many doctors here, I would urge that they practice the Golden Rule with their patients—treat the patients as you would want to be treated yourself if you were in their place. As an instance, a fair rule of law has been established that the mere breaking of a needle is not negligence, but full disclosure of the fact that the needle is broken and that all or part of it remains in the patient must be made. We had an instance that a doctor elected to wait two or three days before telling his patient only to have her husband receive an anonymous letter, mailed the day of the operation, to the effect that a needle had been left in. We have seen many doctors who leave foreign bodies in their patients tell the patients as soon as they knew that such condition existed. The patients usually react in a fair and sympathetic fashion. We recently had a doctor who left two 7-inch clamps in a patient in the course of a desperately serious operation. The patient survived the operation. When he developed an obstruction, the doctor had x-rays taken and, as an emergency situation, immediately operated and removed the clamps. The patient made an uneventful recovery. On our advice he tried to tell the patient what had happened. He did say a mistake was made at the first operation which necessitated the second. The patient did not want to hear the details. He signed a release for his hospital bill, which release stated on its face that a mistake had been made but that the patient did not want to know the details. There was a situation where, by being fair and decent with the patient, everybody wound up pleased.

There has been a great increase in the number of malpractice cases brought in the State of New York. One of the reasons for this (and it is not just peculiar to malpractice cases) is based upon a *liberalization of the deposition procedures* so that the plaintiff can search out the facts in the case, pro and con. Sometimes the plaintiff decides to go on with the case and sometimes he drops it, but great expense is involved. The lawyer should be very clear that he has something before harassing other professional men with a malpractice suit.

While I do not have time to discuss the matter in detail, the courts are not in the main uncharitable to the medical profession. They do not allow recovery for an error in diagnosis, and they do not require the highest degree of care and skill from the doctor. The doctor should at all times do his best both from a legal and moral standpoint and should be fair in his financial dealings with the patient. He should always invite and certainly never discourage consultation. After all, practically every malpractice case involves a severance of the patient-physician relationship.

Harry A. Gair Esq.:

There has been presented to us another encroachment on the right to a trial by jury of the significant issues affecting the life and fortunes of our citizens. We are being told that medical testimony in court elicited from opposing sides develops into an unseemly controversy, and with a wealth of plausible reasons they seek to persuade us that all this controversy should be adjusted behind closed doors by a group of doctors, with the result that they would present a unified front, one opinion, which would dispose of that issue.

I have listened most carefully, and I must confess my confusion in the words of a well-known parable: A Chinese fisherman, off the Labrador coast, found fog very distressing for his business, and along with that he developed a detestation for lighthouses in its relation to fog. He would say, "Lighthouse, him no good for fog. Lighthouse, him blow whistles, him flash red lights, him ring bells, him raise hell; but fog come just the same!" With all the clamor raised by our friends and all the vigor of their explanations, the fog still is there; how shall opinions be made uniform, and how shall the clash of conflicting views be eliminated?

My friend, Dr. Taylor, in whose integrity I have the greatest faith, proposes to unify medical opinion. I assume that means to debate it all out before coming to court. But the jury should hear that debate. Dr. Taylor has shown us a number of films which are commonly misinterpreted as showing fractures. Would he change that view because some other expert challenged it? If the opposed view selects some esoteric detail in the film as disproving Dr. Taylor's opinion, would that compel him to scuttle his feelings in the matter? Why should it be assumed that because one testified for either plaintiff or defendant that he is dishonestly partisan? Does Dr. Taylor think if he testified for the plaintiff, he would be so partisan as to misread a film?

There must always be room for differences of opinion, and to reach a solution in a given case on a given issue the law provides for the adversary proceeding.

I subscribe to the idea that the democratic process here as elsewhere is the best. On a trial the clash of adversaries, prepared adversaries, is the most formidable weapon for cutting to the truth of medical as well as other issues. The doctors, like others, must be prepared to agree with Artemas Ward that "Ignorance ain't just not knowing things, but knowing so many things that ain't so."

It must be obvious that medicine contains a lot of tangibles and many intangibles. An amputation, a fever, blood pressure are tangibles. Before coming here, I thought a fracture was a tangible, but now I'm not so sure. Hemorrhage is a tangible, where you see it; but where you have to deduct it, it is an intangible. Headaches, backaches, and stomachaches are intangibles, and the causes of their existence and their permanency are intangibles, in that opinion must decide them.

If my client sustains a bad closed head injury and is permanently disabled thereby, shall I be foreclosed from presenting the intangible of his disability because a committee of doctors meeting out of my presence, and not subject to cross-examination, decide that he is not disabled and, in fact, was not really injured seriously in the first place?

We have been given an example of a situation where our distinguished speaker came to court on a medical issue, on which he was opposed by his chief. While sitting in court, he talked his chief into abandoning his views, admitting error, leaving the field thereby open to the other side. Where he finds cause for congratulations, I find room only for dismay. Maybe Dr. Taylor was more aggressive, a better debater. Maybe his chief had a stomachache and had no wish to argue. Maybe he just wanted to go home.

Have we come to the point that a minority view may not be presented and contended for? Are we so blinded to the glories of medicine that we forget that yesterday's heresy is today's creed? Behind closed medical doors any opinion that trauma could initiate any form of cancerous growth or cause coronary thrombosis might never survive to be heard in court. Why should it not be heard? In Germany the traumatic neurosis as a cause for disability compensation is denied as medically unsound. In this country it is to be decided on the facts of each case.

All this assertion that impartial medical testimony partakes of a sacrosanct quality and that submitting a medical controversy to an impartial body is a glorious way of arriving at truth is a psychologic aberration. On the controversies in medicine, specialists have opinions derived from their experience and their own cases. When sitting on a so-called impartial board, they bring their already formulated opinions with them. It is precisely those opinions which require challenging.

Dr. Taylor used an expression which I am afraid gives away the real reason why he so strenuously strives for his plan of presenting medical evidence. He let the phrase slip out that thereby one would not have to take the "hot seat." Precisely! Taking the witness chair and being prepared to have one's views challenged vigorously, with the necessity of supporting one's point of view, is psychologically difficult for many doctors. You see, they come from hospitals and offices where no one dare question their *ipsa dixit*. Truly we must always remember that in the Land of the Blind the one-eyed man is King, and he is simply afraid to trust himself to a more sighted environment.

This proposal is of a piece with the one more frequently heard that jury trials be abolished and issues be decided by a judge. It must be plain that judges and jurors too partake of the common heritage of bias, confusion, and self-interest. But to dilute those qualities by twelve is a valuable safeguard.

The doctor's dilemma in trying to avoid controversy in court, where all his preparation and study are in a forum of combat, reminds me of the shortcomings of preparation as the final guide to success. It's like the man who stuttered all his life, yet by dint of preparation became able to recite flawlessly that, "Peter Piper picked a peck of pickled peppers," but complained bitterly that he just couldn't work it into normal conversation.

To turn to something else. There must be cooperation between doctor and lawyer in presenting the medical data in court. Too often the doctor who treated the plaintiff is reluctant to appear, to go to the effort of concentrated study required to present his views of his patient. After all, while the doctor's aim is to help the patient recover from his injuries, the lawyer's is to help the patient recover for them. The composite aims are to make the patient really whole. The patient is entitled to that cooperation. It is part of medicine's great past that the researches into the organicity of the subjective complaints following head injury were due to the legalistic rejection of those symptoms under the diagnosis of neurosis. Friedman's vasomotor syndrome and the postconcussion syndrome signally testify to the cooperation between medicine and law.

That brings me to the suggestion to you as doctors that when you testify in courts, you do not hide behind a barricade of scientific attitude, to the extent that you forget that you are in a forum where you are endeavoring to persuade others. There is a world of difference between that and acting as a medical advocate, who admits nothing and asserts everything. The language of persuasion requires lucidity and simplicity. Of what use is it for a doctor to diagnose to the jury that the patient had an ossification of the cartilaginous plates between L 1 and L 2 and a spondylolisthesis of L 5 and S 1 and then furnish a translation to a mystified and amused jury, aided and abetted in their amusement by combined cries from court and counsel to speak English? Why? When all this could be couched in a simple statement that the structure of the spine had been distorted, throwing out of line the ligaments, nerves, muscles, and other soft tissues necessary to painless living. Psychologically, the Latin should come after the English.

I do not speak for nor condone crude, ignorant, or brutal examination of you doctors. You can always find an opportunity to turn the tables on such an examiner. Like the doctor I knew who had testified to the fractured patella and the need for long immobilization. The cross-examiner mockingly inquired if a roll of greenbacks would not suffice to cure the condition, to which the doctor, without batting an eyelash and in all somberness and deliberation, replied, "Well, if you made that roll thick enough and big enough so that it could immobilize the joint, that might do it."

A final word about the sincere advocate. He does not present a medical thesis or position in court of his own discovery. He stands in court on a platform constructed by others of your profession, able and distinguished. What has been revealed to him by research and practice and disclosed by him to you as his learned compatriots, we hold aloft as a light before our clients. That he may be in a minority sways us not at all because we are committed to the belief that the essence of truth is not statistics.

Hippocrates, hereditary patron saint of your profession, lived to be a hundred and seven. No wonder his aphorism has lived through the ages: "Art is long; time is short, the occasion fleeting, experience is fallacious and judgment difficult."

Dr. Thomas M. d'Angelo:

(*Addressing Judge Greenberg*) I'm an ophthalmologist; however, I specialize in both eyes—except in cyclops!

In 1953 one doctor in 26 in the State of New York had a claim or suit filed against him. How long can that continue? Can a doctor go on practicing his profession always feeling that an error of judgment may cause a patient to bring suit against him? It is this particular point I am going to bring to the attention of both lawyers and doctors. We doctors are prepared to pay in the happily few instances of definite negligence on our part. We feel that society has no right to blame a doctor for error of judgment. Acts of God will continue for all time. Why should you hold the doctor responsible for an honest error in judgment? I'll cite the following:

In electroshock therapy no matter how careful a doctor may be, a certain small percentage of patients undergoing shock treatment may get fractures by reason of the operation of the law of averages.

Occasionally an unfortunate paralysis may follow spinal anesthesia despite every precaution. It is true that some of them are caused by faulty solutions, but there are a few cases in addition to these, irrespective of all proper care on the part of the anesthetist, which have resulted regrettably in paralysis. These are some of the cases resulting in suit being brought for unsuccessful treatment.

Some of the new drugs in use today are potentially dangerous. They also do a lot of good. Such are the antibiotics, ACTH, and other forms of treatment. Some patients will not react in the usual manner to these drugs. The doctor has done everything possible to give them the proper treatment, but nevertheless the patient reacts unfavorably in spite of all necessary care and checks.

To doctors I say, a dissatisfied patient is a potential lawsuit. Give that patient real human consideration. Treat him as an individual (Mister Jones). Give him careful consideration. Make available to him the necessary diagnostic and therapeutic procedures that are common and average in your particular locality. Do not go beyond your experience and training in treating a case. Always ask for consultation when in doubt.

Professor Delmar Karlen:

We have heard one point of view expressed by Dr. Taylor and a contrary point of view expressed by Judge Greenberg. Judge Greenberg said, if I recall, that the method of handling medical information today is generally satisfactory, with both sides hiring, calling, and examining their own expert witnesses. Dr. Taylor expressed the view that that was a poor method; that a jury is incompetent to decide a question as to the nature and extent of injuries; that, therefore, the legal decision ought to be predicated upon an expert opinion which is given to the court and which the court has no say about whether it will accept or not. Under Dr. Taylor's view, at least the problem would not be put up to a jury.

Today, there is an experiment being conducted in this city to see whether there can be a compromise between the two points of view. Both sides are privileged to call their own witnesses and to examine them fully. However, if the judge at some point in advance of trial is able to see if there is going to be serious dispute about the medical issues, he may refer the case to an impartial doctor. If he does that, he takes advantage of this particular procedure. The judge himself does not know who the impartial expert will be; the lawyers do not; the whole matter is handled by a special office in the Supreme Court building. The doctor is chosen by rotation from a panel of distinguished medical men in the city. There are a number of specialists available and a number of doctors on each panel. The panels were made up by the New York Academy of Medicine and the New York County Medical Society.

When an impartial doctor receives a case, he examines the injured party and renders an opinion to the court. The opinion is used in an attempt to settle the case. If that cannot be done, the impartial expert may be called upon to testify at the trial, where he will be subject to cross-examination by both sides. The fee of the impartial expert is paid from a fund administered by the court. Neither side has anything to do with hiring or compensating the impartial expert.

The opinion of the impartial expert is not binding on judge or jury, as Dr. Taylor would have it. On the other hand, it gives some help to the jury, which is not available under present procedures, in arriving at the truth with respect to the medical aspects of the case. The impartial medical expert plan is a compromise, and perhaps a good one that is worth thinking about.

The Treatment of Premenstrual Tension by Electrolytes

Experience with over 300 women, also evidence presented by other investigators, supports the hypothesis that premenstrual distress or tension is due to water retention in the tissues.

Dr. J. P. Greenhill, Cook County Graduate School of Medicine, in the November, 1953, *International Record of Medicine and General Practice Clinics*, found the treatment of 1 Gm. ammonia chloride taken three times a day for twelve or fourteen days before beginning of menstruation most helpful. About 90 per cent of his patients and his associates found relief of symptoms with this therapy.

EDITOR'S NOTE: The following was presented at a celebration on December 6, 1953, in honor of the ninety-sixth birthday of Dr. Maurice J. Lewi, first secretary of the New York State Board of Medical Examiners. Dr. Lewi, also president and founder of the Long Island College of Podiatry, was a recent contributor to these pages with his "Medicine and Podiatry in New York State—A First-Hand History," which appeared in the February 15, 1954, issue of the JOURNAL.

Early Activities of the First Secretary of the Board of Medical Examiners—Dr. Maurice J. Lewi

STILES D. EZELL, M.D., ALBANY, NEW YORK

(*Secretary, New York State Board of Medical Examiners*)

As THE present secretary of the Board of Medical Examiners in this State, I am delighted to have an opportunity to be present on this occasion, for Dr. Lewi was the first Secretary of the Board when it was created by law in 1891. He very successfully conducted this work for over twenty years and did such a thorough job in planning the various activities of the secretary that little change in his procedures has ever been necessary.

It is interesting to go back sixty-three years in the old records and follow his work up to the year 1912. During this period of twenty-two years, 11,423 physicians were licensed to practice medicine in this State. The exact number of physicians in this State in 1890 is not known, and it is very likely that many physicians practicing in that period may never have become licensed. There is very ample evidence that Dr. Lewi conducted his work strictly in accord with the law, as well as extending his interest into the field of good moral character and adequate educational background. He had, in his considerations of the various types of medical schools existent at that time, much the same problem we have today in considering the multitude of foreign medical schools from which we now receive applicants. Thus Dr. Lewi was one of the early pioneers in the evaluation of medical education. It is a great tribute to Dr. Lewi that the Medical Practice Act of New York has served as a model for a great majority of other states when they set up or revised their regulations.

The first physician licensed in this State is Dr Leopold Stieglitz and he holds license Number 1. This license was dated December 1, 1891, and it was sent to him by American Express on January 15, 1892. He is currently registered. Dr. Stieglitz graduated at Heidelberg on July 1, 1891, presented satisfactory evidence of medical study on November 7, 1891, was advised to be ready for examination on November 7, and took the examination in New York City on November 10 to 13, 1891.

Eight physicians took this examination. All were graduates of foreign medical schools, and all passed the first time. Richard A. Heath, holder of License Number 2, had the highest average of the eight, 95.64 per cent. He had grades of 100 in anatomy, chemistry, and physiology. Dr. Stieglitz had four grades of 100. One candidate, Chester J. Caldwell, was not allowed to take the examination. The explanation was that he had insufficient medical education. He graduated at Hahnemann Medical College in Chicago in 1890.

The second examination in January, 1892, had ten candidates. P. M. Foshay of the University of Pennsylvania had an average of 98.04 per cent. One candidate was rejected for fraud, and the first recorded failure was Raphael Tito, a graduate of Naples in 1859. He refused to write the paper in anatomy and had a general average of 63.88 in the other subjects.

The first woman examined was Emma D. Wilcox. She had two years in the Homeopathic Medical College of Missouri and two years in the New York Medical College and Hospital for Women. She graduated in March, 1891. She had an average of 89.9 per cent.

Grades ran very high for about two years; then there was a gradual decline in averages to a fairly stable level for several years at about 88 per cent.

Several interesting notes occur in Dr. Lewi's original records. One candidate's paper in obstetrics was lost in the mail so he was given a special examination. Another note states that number 111 was cribbing in chemistry, and the examiner was instructed to refuse to grade his paper. No grade was entered. Candidate showed up a month later and got 88 in chemistry.

By 1893 (June) there were 60 persons examined. Eight were unsuccessful; five were rejected. The average failure rate for this period was about 13 per cent. In the May, 1894, examination 24 consecutive candidates received 100 in anatomy. Dr. Lewi made no note of fraud!

Examination records set up by Dr. Lewi are very similar to those in use today, except for typing. Dr. Lewi wrote all his records in longhand.

Dr. Lewi was not only the secretary of the Board, but he also acted as examiner for many of the papers. Some of his Board members were reluctant to give the necessary time to read the papers, and they simply sent them along to him.

Dr. Lewi was so busy getting other physicians licensed that he neglected to assign to himself the number 1 license. In fact, he lost his diploma sometime after 1877, and when he finally got around to getting a license for himself, there were 1,113 physicians already licensed. His present registration number is 50694. He refused to take the examinations and got a license by endorsement.

More celebrated is Dr. Lewi's record in other fields than that of licensure. His activity and interest in getting a medical practice act in the laws was intense, and he had great influence upon the legislation which was formulated in 1890. He was interested in standards in medical education, and out of the quandary of arguments and battles among the various medical sects of the 1890 period, he was able to persuade the legislators to pass an act which is essentially the body of our present Act. This was a fundamental necessity if progress was to be made later in eradicating the unapproved medical schools which blossomed all over the country. He had many conferences with a compatriot of his in this field, Dr. Abraham Flexner, and unquestionably deserves partial credit for the monumental work of Dr. Flexner in the field of medical education.

Dr. Lewi inspected the various medical schools in the State of New York in 1911, and he has recently turned over copies of these reports to the Education Department. He had an amazing foresight at that time into what was to happen in medical education, and he made recommendations and observations which have now become reality in the modern medical school. These reports are among the earliest formal inspection reports on medical schools, and to the degree that they are amazingly prophetic, they are priceless.

By 1912 he was satisfied that the groundwork for good future medical education had been laid, and it is a great tribute to his humility that he did not attempt to capitalize upon an achievement of such magnitude. Instead he saw an opportunity in another field and chose, with equal determination, to follow a duty in leadership which again has brought him great renown.

One of his great personal attributes has been perseverance, and in this he has sacrificed both fame and fortune. Going back over his records, one finds that he was meticulous as to detail and always careful to avoid favoritism in any form. He has maintained an active interest in medicine, and I think, secretly, he enjoys the fruits of his work. He has always stood for high standards, and he has lived long enough to see most of his dreams come true. Few men have been privileged to such a vast career, and indeed few men deserve such.

It is a personal privilege in continuing his early work to walk in the footsteps of an Olympian.

SELECTED REPRINTS

EDITOR'S NOTE: *Occasionally the editors of the* JOURNAL *find articles or editorials in other medical publications which seem to us so noteworthy that reprinting them for the information of the readers of the* NEW YORK STATE JOURNAL OF MEDICINE *seems to be indicated as a function of good medical journalism. These reprints will appear from time to time in this department.*

*Combating Ghost Surgery**

OLIVER K. KING

(*Former County Judge and Legal Chairman of the Medico-Legal Relations Committee*)

WHERE there is a wrong, there is a remedy. This is a juridical maxim. All too frequently we hear the layman exclaim, "There ought to be a law." Ninety times out of a hundred there *is* one—if somebody only takes the trouble to look it up.

Fee splitting among doctors (with certain exceptions not involved here) is illegal in New York. Section 6514 Subdivision 2(f) of the Education Law is as follows:

> "2. The license or registration of a practitioner of medicine . . . may be revoked, suspended or annulled . . . in accordance with the provisions and procedure of this article upon decision after due hearing in any of the following cases:
>
> "(f). That a physician . . . has directly or indirectly requested, received or participated in the division, transference, assignment, rebate, splitting or refunding of a fee . . ."

See also 1945 opinion Attorney General 192.

Fee splitting, although definitely illegal as to doctors, is entirely ethical among lawyers. The efficacy of the medical prohibition against it might be debatable. In the legal profession, it is encouraged—because we think it unwise to tempt the young, inexperienced lawyer into trying a case which is "over his head." To avoid such courtroom butchery, we permit him to retain competent trial counsel and still be entitled to a share of the fee.

There are certain qualifying circumstances, of course:

1. It should not cost the client more money.
2. The client should know about it—usually must know.
3. The "forwarding attorney" should contribute some work on the case.

We also recognize that a tax problem requires a tax expert; an Admiralty matter prompts the consultation of a Proctor; and a Patent problem can only be handled by a Patent lawyer.

And, too, we frequently encounter the situation in which a contract, a will, or other instrument should be in such form as to be enforceable in another jurisdiction. This requires retention of, and consultation with, counsel of such other jurisdiction. In this respect a medical expert has an advantage over a legal expert. A doctor who is qualified in New York as, let us say, a urologist is so qualified throughout the world.

The human body is the same in Astoria, Australia, and Albania. Unfortunately a lawyer in New York has but to travel a few miles westward (to New Jersey) or eastward (to Connecticut) to find that he is not a lawyer at all and that the attainments acquired by years of study are nullified. He can only appear in court by special permission and under the sponsorship of local counsel.

The medical prohibition against fee splitting conceivably could cause a doctor (with limited qualifications) to perform surgery when, except for the economic problem, he would advise the employment of a more highly qualified man. However, that is academic. In New York, at least, fee splitting between doctors is illegal, *supra*.

Ghost surgery, however, is a horse of an entirely different color. There is no justification whatever for it. It reeks of fraud and other wrongful factors.

Do I hear, "There ought to be a law?" There is. And an offense such as ghost surgery should be easy of detection. Any misconduct which requires for its secrecy the complicity or acquiescence of others will not be likely to be committed if penalties are swift and severe in event of detection.

The above-quoted section and subdivision of the Education Law is one weapon. If fee splitting is illegal, then, *ipso facto*, so is ghost surgery. There would be no ghost surgery if the fee could not be split. There would be no nourishment in it, no motive for it.

But there is another law, with more teeth in it, which ought to be invoked. Ghost surgery is an assault—a criminal assault—not only by the surgeon but by the anesthetist as well, if the anesthetist knows that the surgeon is a ghost. And likewise an intern or nurse assisting at the operation would be equally guilty if they knew the facts. (Sections 243, 244 Penal Law; "Courts and Doctors" by Stryker, P. 181; see also *People* v. *Steinberg*, 190 Misc. 413).

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* Reprinted from the *Westchester Medical Bulletin* 22: 13 (Mar.) 1954.

In my opinion it is second degree assault—a felony. Upon conviction this would require revocation of the offending doctor's license (*Education Law* 6514, Subdivision 1; also *Education Law* 6502).

Even though it were deemed a third degree assault, it would still be a crime, for conviction of which the Department of Education could revoke the license (*Education Law* 6514 Subdivision 2(b)).

That great jurist Benjamin Cardozo expounded the principle in *Schloendorff* v. *New York Hospital*, 211 N. Y. 125, 129, 130 as follows:

> "In the case at hand, the wrong complained of is not merely negligence. It is trespass. Every human being of adult years and sound mind has a right to determine what shall be done with his own body; and a surgeon who performs an operation without his patient's consent, commits an assault, . . ."

Now, of course, the law in its wisdom and reasonableness recognizes that, in emergencies, consent cannot be obtained. As Judge Cardozo puts it: "This is true except in cases of emergency where the patient is unconscious and where it is necessary to operate before consent can be obtained."

In the January 16, 1954, issue of the *Saturday Evening Post* appeared an article entitled "Patients for Sale." This article, written by Steven M. Spencer, carried a foreword of approval by Dr. Paul R. Hawley, Director of the American College of Surgeons. I quote:

> "The ghost surgeon may successfully keep out of the patient's sight, but he cannot escape detection by an alert hospital administrator. Several years ago the mother superior . . . became suspicious of a certain surgeon and his 'alignment' with two general practitioners. She stopped in one day at a patient's room and discovered that the patient was under the impression that her operation had been performed by one of these general practitioners.
>
> "'Why, he didn't operate on you,' said the mother superior. 'Doctor X did.'
>
> "'Well, for goodness sake, who is Doctor X?' the astonished patient asked. 'I've never even heard of him.'
>
> "The mother superior's suspicions of ghost surgery thus confirmed, she summoned the 'ghost' who offered no defense and was therefore promptly fired from the staff. He was also expelled, after a hearing, from the College of Surgeons."

(Why in Heaven's name didn't she telephone the office of the District Attorney?)

The foregoing seems to epitomize the discipline of the medical profession over itself. Expulsion from medical societies or disbarment from use of hospitals is the weapon used. Thus are created, by necessity, private hospitals or sanitariums manned by unethical and unscrupulous doctors.

Why not kick the scrubs entirely out of the profession? Revoke their licenses. I have asked this question of doctors many times. The answer is, "When we try to do that, they hire a member of your profession (a lawyer) and advance a sob story that they are being deprived of the means of earning a livelihood." In the vernacular, I reply, "So what?" The accused is entitled to counsel and to a fair hearing. The same "sob story" is advanced by counsel for every lawyer involved in disciplinary proceedings. Of course, a disbarment or a suspension deprives the offender of earning a professional living. So does imprisonment. The question is whether or not he is guilty. If so, he should pay the penalty. The greatest value to society in these matters is the deterring element. The medical profession ignores this principle, primarily because it tries to be a law unto itself. And, in this capacity, it has failed.

The bar falls far short of weeding out all offenders. Every lawyer will admit that. Sympathy, special influences, and other improper factors keep many lawyers licensed who ought to be disbarred or suspended. But at least we try. All disciplinary actions (and there are hundreds each year) are conducted by members of our own profession—grievance committees in the first instance, and then the courts. We do not achieve perfection but, repeating, we try.

Approving defamatory and derogatory magazine articles is not the answer. That is deplorable. Such articles not only publicize the iniquities, but, what is far worse, they advertise the helplessness of the profession to clean its own house.

Dr. Hawley, as director of the American College of Surgeons, in the above-mentioned approval of the *Saturday Evening Post* article, "Patients for Sale," made the following rather astonishing statement: "The expediency of informing the public that some doctors practice unethically has been seriously challenged. The American College of Surgeons believes not only that people have the right to this information but also that little improvement may be expected without their help."

When Dr. Hawley states that "little improvement may be expected without their (the public's) help," it seems to me that he presents an indictment of considerable severity against the entire medical profession. However, I will take him at his word. I am a member of the public to which he refers and am willing to "help" by pointing out the way in which these evils can be corrected, at least in New York State. And I am sure that so far as ghost surgery is concerned, you will find that it constitutes a criminal assault in every state of the Union.

The following authorities deal generally with the subject of surgical assault:

Mohr v. *Williams*, 95 Minnesota 261
Moss v. *Rishworth* (Texas) 226 S. W. 215
Pratt v. *Davis*, 224 Illinois 300
Rolater v. *Strain*, 39 Oklahoma 572
King v. *Carney*, 85 Oklahoma 62
Brennan v. *Parsonnet*, 83 New Jersey Law 20
Lurko v. *Larny*, 172 Michigan 122

Any surgical procedure is assault—assault with a deadly weapon—*except for the consent of the patient* or the parents, if the patient be an infant. It is true, as Judge Cardozo points out, that in emergencies, when actual consent is unobtainable, it may be implied. But if consent has been obtained by fraud, it is no consent at all. See *People* v. *Steinberg, supra.* The ghost surgeon lacks consent entirely and completely, fraudulent or otherwise. The patient has never seen him, never met him, never heard of him, and never been told that surgery is to be performed by him Hence the attack upon the patient's body by the "ghost" is without consent and is an assault—a criminal assault.

In discussing the subject of surgical assault with a medical friend recently, he said, "There have been instances—indeed it happened once to me—when a surgeon is himself stricken ill in the course of an operation and unable to continue. If the 'chief' or some other competent man immediately available steps in to finish the job, is he guilty of assault because he lacks the consent of the patient." My reply was, "Don't be silly."

Sometimes, too, I am told that a surgeon encounters a condition in the patient's interior which was not previously diagnosed and therefore was not anticipated. If his qualifications do not embrace the procedure made necessary by the unexpected discovery, he may (and should) summon the "chief" or any other qualified man immediately available to take over.

These would be "emergencies" clearly within the framework of Judge Cardozo's pronouncement, and the consent of the unconscious patient would be implied.

For some reason doctors generally seem to distrust the courts. I think such distrust stems largely from ignorance. If any doctor were compelled to read the reported opinions of the courts in a couple of dozen selected cases involving surgical assaults, malpractice, narcotics, abortions, and other subjects in which the medical and legal professions have become entangled over the years, I know he would be impressed by the evidence of understanding protection, and respect for the medical profession on the part of judges—as he would find it recorded in those decisions.

But I would not recommend such a course of reading for the ghost surgeon. Or—upon reflection—maybe I would. He would find no comfort in them, but he might, none the less, be benefited. He might be inspired to "go and sin no more." Or he might learn to know fear—fear of the law which he violates habitually.

Possibly you have an idea that only the patient can be heard to complain of ghost surgery. This is not true. Any citizen may (and should) report the commission of a crime to the district attorney and give testimony of his (or her) knowledge to the grand jury. A hospital superintendent, any doctor, nurse, or orderly, having knowledge of the facts, may (and should) do so. Failure so to do (especially on the part of the executive of the hospital) would be compounding a felony.

Now, of course, certain practical aspects will be encountered. If Dr. X, a ghost surgeon, has been detected and knows the matter has been reported to the district attorney, what will he do? Obviously he, and his fee splitting accomplice, will beat a path instantly to the doorstep or the bedside of the patient and try to make a "deal." If the patient can be persuaded to repudiate the statement (given perhaps to the hospital superintendent) as to non-consent and say, instead, that he (or she) *did* know about Dr. X and *did* consent that he do the surgery, of course the district attorney will then have no case and will be unable to procure an indictment. This might well happen if the surgery was entirely successful and the two miscreants agreed to waive all charges for their services.

But, even if Dr. X and his G. P. *particeps criminis* thus escaped the talons of the law, wouldn't it be fair to assume that the fright and mental anguish suffered might deter them, and others of their ilk, from repeating such adventures in the future?

I have mentioned the equal guilt of the anesthetist if he knows the surgeon is a "ghost." One of the subdivisions of Section 242 of the Penal Law is trained directly upon him:

> "A person who . . . (2) with intent thereby to enable or assist himself or any other person to commit any crime, administers to or causes to be administered to, or taken by another, chloroform, ether, laudanum, or any other intoxicating narcotic or anaesthetic agent . . . is guilty of assault in the second degree."

Do you want to stop ghost surgery and fee splitting? Then quit being namby-pamby about it. Put fear, fear of exposure, conviction, and revocation of license, into the offenders. The law and the machinery for its enforcement is at your hand. Use it.

Intellect is to emotion as our clothes are to our bodies: we could not very well have civilized life without clothes, but we would be in a poor way if we had only clothes without bodies.—
ALFRED NORTH WHITEHEAD

NECROLOGY

Hristofer Nicolay Albitsky, M.D., of New York City, died on May 3. Dr. Albitsky received his medical degree from Dorpat University in 1901.

Thomas Francis Duhigg, M.D., of New York City, died in the United States Naval Hospital, St. Albans, Queens, on May 26 at the age of seventy-six. Dr. Duhigg received his medical degree from Jefferson Medical College of Philadelphia in 1902 and served in the United States Navy for thirty years. He was a Diplomate of the American Board of Internal Medicine and a Fellow of the American College of Physicians. Dr. Duhigg belonged to the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Frederick S. George, M.D., of Syracuse, died on May 18 in the Crouse-Irving Hospital at the age of eighty. Dr. George graduated from Columbia University College of Physicians and Surgeons in 1899. He was an attending anesthesiologist at Onondaga General Hospital and served as treasurer of the same hospital.

Dr. George belonged to the Onondaga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

George Ronald Hornig, M.D., of Glen Head, died on June 2 at his home following a long illness. He was forty-three years old. Dr. Hornig received his medical degree from McGill University in 1938. He was an associate attending physician at the North Country Community Hospital and a junior attending physician at the Meadowbrook Hospital.

During World War II, Dr. Hornig served as flight physician in the fifty-sixth fighter group of the Eighth Air Force in England. He was a member of the Nassau County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Martin Alexander Kepes, M.D., of Yonkers and White Plains, died on May 27 of a heart attack in his office. He was forty-five years old. Dr. Kepes received his medical degree from Elizabeth University in Hungary in 1933. He spent part of World War II in a concentration camp and after the liberation was a physician for the United States Army of Occupation in Europe.

Dr. Kepes was Deputy Commissioner of Health for Westchester County. He belonged to the American Public Health Association, the Westchester County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Clarence Paul Oberndorf, M.D., of New York City, died on May 31 at the age of seventy-two. Dr. Oberndorf graduated from Cornell University Medical College in 1906 and interned at Bellevue Hospital. After postgraduate work in Europe under Drs. Theodore Ziehen and Emil Kraepelin, Dr. Oberndorf returned to this country to become one of the first psychoanalysts in private practice here. In 1911 he helped to found the New York Psychoanalytic Society.

Dr. Oberndorf was a Diplomate of the American Board of Psychiatry and Neurology. He was a member of the American Psychiatric Association, the American Neurological Association, the New York Society for Clinical Psychiatry, and the New York Academy of Medicine.

Dr. Oberndorf helped establish the psychiatric service at Mount Sinai Hospital and shortly before his death the hospital established the Clarence P. Oberndorf Visiting Psychiatrist Program in his honor. He had been a past president of the American Psychoanalytic Association, the New York Psychoanalytic Society, the New York Society for Clinical Psychiatry, the American Psycho-Pathological Association, and the Association of Medical Alumni of New York State Hospitals. Dr. Oberndorf was an associate editor of *The International Journal of Psychoanalysis*, the *Psychoanalytic Review*, and the *American Journal of Psychiatry*.

He also belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Douglas Palmer, M.D., of New York City, died on May 19 at the age of seventy. Dr. Palmer graduated from Cornell University Medical College in 1915 and interned at Bellevue Hospital. He was a member of the American Proctologic Society and was consulting proctologist at the Knickerbocker Hospital and the New York Infirmary. He was assistant attending proctologist at French Hospital and clinical professor at the New York Hospital proctologic clinic. Dr. Palmer belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John Michael Quinn, M.D., sixty-one, of Valley Stream, died on May 25 in Meadowbrook Hospital. Dr. Quinn graduated from the New York Homeopathic School of Medicine in 1920. He was an emeritus member of the medical staff of the South Nassau Community Hospital and associate attending pediatrician at Mercy Hospital. Dr. Quinn belonged to the Nassau County Medical Society and the Medical Society of the State of New York.

David Francis Ryan, M.D., of Katonah, died on May 23 at the age of thirty-nine. Dr. Ryan was a graduate of Columbia University College of Physicians and Surgeons in 1940 and served as a captain with the Thirty-second Division during World War II. He was an adjunct physician in internal medicine at Grasslands Hospital.

Dr. Ryan belonged to the Westchester County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

William Gilbert Terwilliger, M.D., of New York City, died on May 24 at the age of fifty-four. Dr. Terwilliger received his medical degree in 1929 from McGill University and interned at the New York Hospital. He was a member of the New York Academy of Medicine.

Dr. Terwilliger was medical director of the Grace Line from 1937 until 1953 and medical officer of the United States Public Health Service's Foreign Quarantine. From 1942 to 1945 he served in the United States Navy. At the time of his death he was attending surgeon at the New York Hospital Outpatient Department and was a member of the New York State Compensation Board. Dr. Terwilliger belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harry Franklin Van Loon, M.D., of Albany, died on May 21 at the age of seventy-one. Dr. Van Loon graduated from Albany Medical College in 1910. He was an adjunct attending surgeon at Memorial Hospital and belonged to the Albany County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Augustus B. Wadsworth, M.D., of Albany and Manchester, Vermont, died on June 1 at the home of his daughter in New York City. Dr. Wadsworth was eighty-one years old. He graduated from Columbia University College of Physicians and Surgeons in 1896. Before his retirement in 1945 he had been director of the Division of Laboratories and Research of the New York State Department of Health.

Dr. Wadsworth was a past president of the Association of Pathologists and Bacteriologists, the American Association of Immunologists, and the New York Pathological Society. He was also a member of the Society of American Bacteriologists, the American Society for Clinical Investigation, the Association of American Physicians, the American Public Health Association, and the New York Academy of Medicine. Dr. Wadsworth belonged, in addition, to the Albany County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Edward D. Wisely, M.D., of Richmond, died on June 1 at the age of seventy-nine after a long illness. Dr. Wisely graduated from Columbia University College of Physicians and Surgeons in 1896. He was a member of the original staffs of the Sea View and St. Vincent's Hospitals on Staten Island and had been assistant sanitary superintendent of the borough.

Dr. Wisely served for twenty-five years as secretary-treasurer of the Richmond County Medical Society. He also belonged to the Medical Society of the State of New York and the American Medical Association.

The Prediabetic Syndrome

Referring to a study in Capetown indicating that many women who later develop diabetes produce infants which are either large or dead, the author says that new evidence also implicates the "prediabetic father," at least insofar as birth weight is concerned. He cites (1) another study in Capetown involving 235 children of prediabetic or diabetic fathers and 147 children of control fathers and (2) a study of similar character in Boston. In both studies, there appeared to be a large proportion of 10-pound babies in the prediabetic father groups, as well as an apparent general tendency for the babies in these groups to be larger than those of the control groups. The difference, however, is not as marked as in the prediabetic mother groups. This new data, the author writes, suggests the possibility that the phenomenon is in part inherited, "linked in some way to the diabetic genetic constitution of either parent." The favored explanation—an excess of circulating growth hormone—the author views with skepticism. He says there is little evidence to support it and much against it.—*W. P. U. Jackson, M.D., Journal of Clinical Endocrinology and Metabolism, February, 1954*

MEDICAL NEWS

Postgraduate Course in Pediatric Allergy—A postgraduate course in pediatric allergy under the direction of Dr. Bret Ratner, professor of clinical pediatrics and associate professor of immunology, New York Medical College, Flower and Fifth Avenue Hospitals, Division of Graduate Studies, Department of Graduate Pediatrics, will be held from November, 1954, through May 25, 1955.

There will be 30 sessions which will meet from 9 A.M. to 4 P.M. The course consists of lecture-seminars, laboratory and clinical procedures, clinic work, ward rounds, and animal experimentation covering basic principles of diagnosis and treatment of allergy in children, and applied immunology.

Applicants must be certified in pediatrics or have the requirements for certification. Enrollment will be limited. Applications should be sent to the Office of the Dean, New York Medical College, Fifth Avenue at 106th Street, New York City 29.

A research fellowship in pediatric allergy is available and application should be made for it now.

Annual Assembly in Otolaryngology—The Department of Otolaryngology, University of Illinois College of Medicine, announces its Annual Assembly in Otolaryngology from September 6 to 11, 1954. The entire week will be devoted to surgical anatomy and cadaver dissection of the head and neck, and histopathology of the ear, nose, and throat. Under the direction of Dr. Maurice F. Snitman, registration will be limited.

Further information may be obtained by writing to the Department of Otolaryngology, University of Illinois College of Medicine, 1853 West Polk Street, Chicago 12, Illinois.

Albert Einstein College of Medicine—A drive to secure $100,000 for the establishment of a Dr. Nathan Savitsky Laboratory in Neurophysiology at the Albert Einstein College of Medicine, Yeshiva University, was recently started by a committee of Bronx doctors. Dr. Savitsky was known for his many original contributions to neurology and psychiatry and was also an active leader of many communal projects in the Bronx.

Members of the committee are Dr. William Karliner, who was associated with Dr. Savitsky for almost ten years, as chairman, and associate chairmen, Dr. Milton Goodfriend, Dr. Sidney W. Gross, Dr. Samuel Wagreich, and Dr. Frederick A. Wurzbach, Jr. Honorary chairmen are Dr. J. Lewis Amster, Dr. E. R. Cunniffe, Dr. Edward Flood, and Dr. Nathan B. Van Etten.

The cornerstone of the Albert Einstein College of Medicine was laid June 13, 1954. The first class is scheduled to be admitted in September, 1955, and Dr. Marcus D. Kogel, former New York City Commissioner of Hospitals is Dean. The College will be the initial unit of a medical teaching center, which will eventually include colleges of dentistry, nursing, public health, and postgraduate studies. Adjoining will be the 1,400-bed Bronx Municipal Hospital Center now under construction which will be affiliated with the College and serve as its clinical teaching center. In July, 1954, the 511-bed Van Etten Hospital for Chronic Diseases will open, and the General Hospital is scheduled to open January, 1955.

AMEF Grants "Awards of Merit"—Fifteen individuals and 17 organizations received the American Medical Education Foundation "Award of Merit" for outstanding service to the Foundation during 1953. The citations are awarded for "outstanding contributions to the preservation and continuance of the high standards of medical education in the United States of America." Among the organizations honored was the Medical Society of the State of New York.

American Medical Education Foundation—Contributors from New York State to the American Medical Education Foundation for the month of April were: *Albany*—Albany County Woman's Auxiliary; *Amityville*—Drs. Manoel De Bono, Joseph S. Gestal, Stanley G. Rau, and Andre Rolo; *Amsterdam*—Dr. P. J. Fitzgibbons; *Angola*—Dr. A. J. Cooper; *Astoria*—Drs. Guido Boccardi, Martin Dollin, Rosario M. Gualtieri, Henry J. Lange, Frank E. Pope, and P. A. Saponaro; *Babylon*—Drs. Vera Emanuel and K. C. Nicholas; *Bay Shore*—Drs. Frank R. Bussey, F. A. Cerzosimo, James E. Muncie, Bernard J. Ryan, Charles W. Shlimbaum, and Sol Shlimbaum; *Bayside*—Drs. Evelyn Apogi and Herbert Mendel; *Bellport*—Dr. Perry S. Horenstein; *Binghamton*—Drs. M. S. Bloom, Steven A. Mazar, and Harold C. Shulman; *Bronx*—Drs. P. Angelillis, S. B. Burke, W. G. Chorba, M. M. Eckert, J. Fein, M. A. Goldberg, D. Greenberg, M. Hoffmann, N. B. Juskowitz, H. M. Levine, J. Minkin, I. H. Schotter, A. S. Sebo, and S. S. Steckel; *Bronxville*—Drs. George W. Brooks, Edward P. Daly, Winslow Edgerly, and Charles G. Jackson; *Brooklyn*—Drs. Ralph Blumberg and A. S. Werner; *Buffalo*—Drs. W. F. Beswick, H. W. Culbertson, Erie County Woman's Auxiliary, J. A. Fahey, C. W. Greene, J. P. Hylant, J. W. Jordon, H. Osgood, J. E. Patterson, J. Phillips, H. M. Robins, E. E. Rudinger, and T. J. Syracuse.

Also: *Campbell Hall*—Dr. S. M. Schoenholz; *Central Square*—Dr. Edward C. Murphy; *Central Valley*—Drs. F. M. Bullard and T. W. Neumann; *Copiague*—Dr. Gino Giorgini; *Cornwall*—Dr. G. R. Dempsey; *Corona*—Dr. Walter J. Norris; *Coxsackie*—Dr. Elwood Weisenbur; *East Hampton*—Drs. William G. Abel, Francis L. Cooper, Jr., David Edwards, and Paul F. Nugent; *Eastport*—Dr. Joseph H. Kris; *Elmhurst*—Drs. Frank J. Cerniglia, Attilio Morpurto, and Salo Rosenbaum; *Farmingdale*—Dr. Albert N. Meyerstein; *Far Rockaway*—Dr. Harry Richman; *Flushing*—Drs. Joseph F. Ascione, P. A. Cioffi, T. M. d'Angelo, Amedo W. Pallone, Herbert H. Pomerance, Vincent F. Sarnataro, B. Shankman, Henry Shankman, Leo P. Skolnick, and M. E. Sullivan; *Forest Hills*—Drs. John J. Drucker, Alice Howitt, Bruno Rosenhain, Fannie I. Tomson, Joseph Van Dyne, Mandel Weinstein, and Selma Wertheimer; *Freeport*—Nassau County Woman's Auxiliary; *Fresh Meadows*—Dr. Norton M. Luger; *Geneva*—Dr. Kenneth T. Fairfax.

Also; *Germantown*—Dr. David S. Gerbarg; *Glendale*—Dr. William G. Lynch; *Goshen*—Drs. N. T. Keys, F. T. Seward, and N. H. Witt; *Greenport*—Dr. Percy J. Tuthill; *Hollis*—Dr. Albert E. Stahl; *Hollis Hills*—Dr. Milton H. Stapen; *Hudson*—Dr. Henry O. Little; *Huntington*—Drs. Richard M. Arkwright, Thomas J. Cacciatore, William L. Harris, William W. Heroy, Joseph G. Patiky, John L. Sengstack, William J. Turner, and Howard D. Wunderlich; *Irvington*—Dr. Donald R. Reed; *Islip*—Dr. F. R. Pitrelli; *Ithaca*—Drs. M. Burtt and Henry W. Ferris; *Jackson Heights*—Drs. Luba Krynski, Leo V. Rooney, S. S. Safir, and Kurt Walder; *Jamaica*—Drs. Harry Goldberg, T. Hofmeister, Irving Mayer, James P. McManus, Nino V. Panissidi, Daniel Porte, Francis G. Riley, Sydney J. Rose, Elias Rubin, John M. Scannell, Abram Sohmer, Jack Spivak, Conrad Stritzler, Vincent G. Tosti, and P. Waldman.

Also: *Johnson City*—Dr. Charles B. Steenburg; *Kew Gardens*—Drs. David Lerner, A. X. Rossien, Curt A. Schmeidler, and Sarah E. Worob; *Kinderhook*—Dr. Edward Urba; *Kings Park*—Drs. I. M. Rossman and Robert F. Wagner; *Kingston*—Drs. Shirley A. Collins, M. B. Downer, Francis E. O'Connor, and Edward F. Shea; *Larchmont*—Drs. Hugh McHugh and Frank L. Morton; *Lindenhurst*—Dr. Isaac Schlam; *Little Neck*—Dr. Francis X. Colassard; *Livingston Manor*—L. G. Denman; *Liverpool*—Dr. Herman L. Harding; *Long Island City*—Drs. Herbert Bermont, Reuben M. Dicker, Arthur Schneller, Edward Tartaglione, and Frank N. Valente; *Lockport*—Drs. John Crosby, James H. Donnelly, Jr., D. B. Fitz-Gerald, H. B. Fitz-Gerald, R. B. Fitz-Gerald, T. E. O'Brien, and Anna Wilfred; *Mamaroneck*—Drs. William Chester and Philip J. O'Reilly; *Maspeth*—Drs. Alfred R. Ernst, Anthony C. Reiger, and Anthony J. Stalkus; *Middletown*—Drs. P. H. Faivre, L. Gillman, W. J. Hicks, F. Hollenberg, S. S. Katz, H. Kulka, E. V. Pyle, L. Schlessel, J. Schloss, R. L. Schmitt, R. S. Spano, C. H. Thompson, Jr., L. S. Tieman, and S. L. Trues; *Monroe*—Dr. H. Hoffman; *Montgomery*—Dr. O. Ehrenhaft.

Also: *Mount Vernon*—Drs. William M. Affelder, David M. Gordon, and Milton B. Philips; *Newburgh*—Drs. A. S. Banks, C. J. Bivona, R. F. Crabtree, J. C. Donovan, C. E. Fallon, A. H. Fenton, C. W. Layne, J. W. McKeever, C. S. McWilliam, W. S. Montgomery, J. W. Overton, T. R. Proper, W. A. Shearer, P. Sherwood, F. Small, H. H. Snyder, G. J. Sprague, P. M. Traub, E. C. Waterbury, and I. Weiner; *Newfane*—Dr. Mable Carmer; *New Hyde Park*—Dr. Anthony N. Fazio; *New Rochelle*—Drs. Harry L. Chasserot, John F. Miller, M. W. Norton, C. A. Read, Howard Seidenstein, and Edward Varzos; *New York City*—Dr. J. I. Kushner; *Niagara Falls*—Drs. Morley Bernstein, L. Carlino, Karl Garten, Edwin Gates, Walter Jarzab, William Lewis, William McDermid, Frank Palumbo, Victor Pellicamo, C. Van Deusen, and William Vickers; *Northport*—Drs. Cyril E. Drysdale and J. W. Jacoby; *North Tonawanda*—Dr. Harry Bylebyl; *Oak Hill*—Dr. Laura Miller; *Ossining*—Dr. L. D. Redway; *Oswego*—Drs. Umbert Cimildoro, Grover C. Elder, and Kent W. Jarvis; *Patchogue*—Drs. David L. Jellinger and Edward Klane; *Pearl River*—Dr. Austin L. Joyner; *Port Chester*—Drs. Otto Gans, H. H. Gibb, Anthony R. Mascia, and T. West.

Also: *Port Jefferson*—Drs. Samuel Feinberg and Roswell S. Mills; *Port Jervis*—Drs. H. F. Murray, Jr., D. P. Schultz, and E. J. Walter; *Queens Village*—Drs. Sidney Diamond, Edward A. Muendel, M. D. Muendel, Sheldon Schwartz, Richard Thorz, and Paul J. Tomlinson; *Rensselaer*—Drs. Kenneth Gordon and D. E. Rowan; *Richmond Hill*—Drs. Isaac E. Edelman, Edward L. Glynn, Sophie Hirsch, Charles F. Meierdiercks, N. V. Montesano, Queens County Woman's Auxiliary, and Morris Wein; *Ridgewood*—Drs. Martin Sheehy, Robert Wachen, John F. Wolfram, and Bernath Weiss; *Riverhead*—Drs. J. M. Johnson, John A. Northridge, Arnold M. Wiesen, and Victor K. Young; *Rochester*—Dr. Ivan J. Gotham, Jr.; *Rockaway Park*—Dr. William E. Werner; *Rome*—Dr. Robert L. Ullman; *Rye*—Dr. John E. Gundy; *Saint Albans*—Drs. Philip Aronson and Edwin Robins; *Saugerties*—Dr. Robert A. McCaig; *Sayville*—Dr. Warren H. Eller; *Scarsdale*—Dr. Daye W. Follett; *Schnectady*—Drs. Louis Biagi, Joseph H. Cornell, Stuart F. MacMillan, Herbert Monheimer, P. W. Reynolds, C. F. Rourke, Schenectady County Woman's Auxiliary, Helmuth Simon, and T. W. Smith; *Scotia*—Dr. Phillip Parillo.

Shelter Island Heights—Dr. Donald F. Currie; *Slate Hill*—Dr. F. D. Myers; *Smithtown*—Dr. Alfred A. Scharbius; *Southampton*—Drs. Carnelo P. Cancellieri, William C. Gaynor, F. T. Kelly, Carver V. Livingston, Herman R. Ubler, and Kenneth B. Wright; *Springfield Gardens*—Drs. Morris Dickstein, Alfred H. Smith, Jr., and Rubin Solomon; *Staten Island*—Drs. Charles Accettola, Joseph Coyle, Dorothy Fisher, Irving F. Klein, Sidney Lang, Andrew Limauro, Gerald McCarthy, Thomas Quigley, Alfredo Santillo, Peter Timpone, Sr., Jesse Vogel, and J. Zoole; *Stony Brook*—Dr. Walter Sieling, Jr., *Suffern*—Drs. Frank J. Errico and Abraham Z. Freudenheim; *Sunnyside*—Dr. Joseph Shapiro; *Syracuse*—Drs. E. N. Boudreau, E. J. Delmonico, R. S. Dyer, Irving L. Ershler, Murray A. Grossman, Roy S. Moore, Jr., and John R. Ross; *Tarrytown*—Drs. Byron L. Sweet and Ralph T. Todd; *Troy*—Drs. Rudolph F. Amyot, Charles E. Bessey, E. Brown, R. L. Coletti, Eugene F. Connally, R. P. Doddy, Thomas P. Engster, James W. Fitzgerald, John P. Jaffarian, James L. Lanzillo, Sherman W. McIlmoyl, E. Palmer, Rensselaer County Woman's Auxiliary, Walter Z. Schwebel, John J. Squadrito, John J. Talin, David R. Tomlinson, William Trotter, and William B. Van Auken; *Tuckahoe*—Dr. John C. Seed; *Upton*—Dr. Lee E. Farr; *Utica*—Drs. James E. Compson, Harold H. Dodds, James I. Farrell, Samuel T. Rubino, and Alex J. Wysocki; *Walden*—Dr. F. Falkson; *Warwick*—Dr. H. R. Freisinger; *Waterville*—Dr. E. D. Battles; *Watervliet*—Drs. Eugene J. Hanratta, Jr., Oscar Lowey, and William A. Steward.

Also: *Wellsville*—Dr. F. H. McCarty; *West Brentwood*—Drs. John H. Gibbon and Edward W. Gray; *White Plains*—Drs. Dorothy Chayes and D. Egede-Nissen; *Whitesboro*—Dr. William H. Williams; *Whitestone*—Drs. C. J. Sohen, Arthur Schwartz, William Sharkey, and Joseph Warshaw; *Woodhaven*—Drs. Charles F. Blazsik and Anthony R. Palma; *Woodmere*—Dr. A. G. Silver; *Woodside*—Drs. Thomas Costigan, N. M. Kiraly, and Alfred E. Passera; and *Yonkers*—Drs. Gregory Chvartazky, Milton J. Eisen, and Isadore Rudnikoff.

Columbia University Field Workshop in Rehabilitation—A field workshop in rehabilitation teamwork, sponsored by the Department of Special Education, Teachers College, Columbia University, was held through June 25. The training course began on June 1. Supervision of field activities was under the staff of the Institute for the Crippled and Disabled and the class sessions were conducted by University personnel.

University of Illinois College of Medicine—The Department of Otolaryngology, University of Illinois College of Medicine, announces its basic science course in otolaryngology offered by its affiliated hospitals. A combined postgraduate course and residency, the 1954 to 1955 session will begin July 1, 1954. Other openings occur throughout the year. Residencies are available at either the Research and Educational Hospital or the Illinois Eye and Ear Infirmary, or a continuation of the training program may be arranged for at the Veterans Administration Hospital at Hines.

A stipend is offered on the following basis: First year residency, $1,320 annually; second year residency, $1,620 annually; third year residency, $1,920 annually.

Application forms are available on request to the Department of Otolarynglogy, University of Illinois College of Medicine, 1853 West Polk Street, Chicago 12.

Tobacco Industry Research Committee—Among the members of the Scientific Advisory Board of the Tobacco Industry Research Committee which is headed by Dr. Clarence Cook Little, director, Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine, is Dr. McKeen Cattell, professor, head of Department of Pharmacology, Cornell University Medical College, New York City. The committee is composed of major cigaret manufacturers, tobacco growers, and warehousemen, and the purpose of the Advisory Board is to consider proposals submitted for cancer research grants.

Brooklyn Hebrew Home for Aged—The Brooklyn Hebrew Home and Hospital for the Aged has been granted approval by the American College of Surgeons as a hospital specializing in geriatrics. Under Dr. Leo Gitman, who has been appointed executive medical director of the Home and Hospital, the work of the resident staff of physicians with that of the 125 visiting specialists in every branch of surgery and medicine will be coordinated. It is the aim that the Home and Hospital will become a great geriatrics center where the problems of the aged will be studied more intensively than in the past.

New York Society for Clinical Ophthalmology—The officers elected to serve for the 1954 to 1955 season of the New York Society for Clinical Ophthalmology are: Dr. Frederich H. Theodore, president; Dr. Bernard Kronenberg, vice-president; Dr. Jesse M. Levitt, recording secretary; Dr. Leon H. Ehrlich, corresponding secretary; Dr. Henry M. Kera, treasurer, and Dr. Abraham Schlossman, historian. Committee chairmen are: program, Dr. Max Chamlin; instruction session, Dr. Arthur Linksz; legislative, Dr. Benjamin C. Rosenthal, and membership, Dr. Howard Agatston. Dr. Bernard Fread, the retiring president, was elected to the advisory council.

Meetings—Past

St. Lawrence, Jefferson, and Lewis Counties Medical Societies

The annual picnic of the St. Lawrence, Jefferson, and Lewis Counties Medical Societies was held on June 3 at Edgewood, Alexandria Bay.

Dinner was served about 7 P.M. after an afternoon of sports.

Albany County Medical Society

Dr. David D. Rutstein, professor of preventive medicine, Harvard Medical School, discussed "Preventive Aspects of Clinical Medicine" at the May meeting of the Albany County Medical Society.

Nassau Pediatric Society

Dr. Irving Schulman, assistant professor of pediatrics, Cornell University, was the guest speaker at the scientific meeting of the Nassau Pediatric Society held at the Garden City Hotel in June. Dr. Schulman spoke on "Fetal and Neonatal Hemoglobin Synthesis—Theoretical and Practical Aspects."

Schenectady County Medical Society

The semiannual dinner of the Schenectady County Medical Society was held on June 3 at the Edison Club. A business meeting and cocktails preceded the dinner.

American Diabetes Association, Inc.

An open meeting of the Committee on Detection and Education of the American Diabetes Association, Inc., was held on Monday June 21, 10 A.M. to 12:30 P.M., in the Garden Room of the Fairmont Hotel, San Francisco, California. Dr. William H. Olmsted, St. Louis, vice-chairman of the committee, discussed the use of the St. Louis Dreypak as the principal subject of discussion.

Meetings—Future

American Occupational Therapy Association

The thirty-seventh annual conference of the American Occupational Therapy Association will be held at the Shoreham Hotel, Washington, D.C., October 16 through 22, 1954.

Personalities

Honored

Dr. John C. Dingman, at a testimonial dinner at the Villa Lafayette in Spring Valley, at which Dr. Robert L. Yeager, director, Summit Park Sanitorium, Pomona, presided, and Dr. Frederic Holcombe, speaker, House of Delegates of the Medical Society of the State of New York, presented a plaque from the Society. . .Dr. T. J. Goodfellow, at a dinner given by the board of managers and the medical staff of the Saratoga Hospital in recognition of his forty years on the staff.

Awarded

Dr. Edward M. Bernecker, administrator of hospital services, New York University-Bellevue Medical Center, an honorary doctorate in humane letters at the ninety-sixth commencement exercises of the New York Medical College, Flower and Fifth Avenue Hospitals.

Appointed

Dr. Henry L. Barnett, former associate professor of pediatrics, Cornell University Medical College, as professor and chairman of pediatrics at the Albert Einstein College of Medicine of Yeshiva University. . .Dr. Arthur J. Wallingford, chief of gynecology, Albany, St. Peter's, and Brady Maternity Hospitals, to the lay board of Holy Cross College.

Elected

Dr. Peter Marshall Murray, as president of the New York County Medical Society; Dr. Gerald D. Dorman, president-elect; Dr. Samuel Z. Freedman, vice-president, and Dr. Herbert S. Ogden, secretary.

Speakers

Dr. Wayne Barker, associate visiting psychiatrist, Riverside Hospital, and Dr. Rafael R. Gamso, medical superintendent, Riverside Hospital, at a one-day conference on drug addiction in May. . . Dr. John K. Lattimer, Urological Clinic, Columbia Presbyterian Hospital, and Dr. Perrin H. Long, Long Island College of Medicine, at the forty-ninth annual meeting of the American Urological Association in June . . . Dr. Basil C. MacLean, Commissioner of Hospitals, and Dr. Israel Magelaner, medical superintendent of the Kings County Hospital Center, at the commencement exercises of the Kings County Hospital School of Nursing in June. . .Dr. George T. Pack, New York City, at the annual meeting of the Minnesota Division of the American Cancer Society in Duluth in June.

New Offices

Dr. R. Russell Lang, formerly of Glasgow, Scotland, general practice in Utica. . .Dr. Nicholas Panin, general practice in Galway. . .Dr. Jerome A. Paparella, practice of internal medicine in Batavia. . . Dr. Milton T. Smith, general practice in Walton. . . Dr. Willis F. Weeden, in partnership with Dr. George Holton in Canadaigua. Dr. Joseph E. Allen, formerly of Norwich, Connecticut, practice of psychiatry in Fremont . . . Dr. Donald Hutchings, Penn Yan, general practice in Bath . . . Dr. Albert W. Fuss, Brooklyn, general practice in North Bellmore . . . Dr. J. Arthur Riesenberg, practice of pediatrics in Monticello . . . Dr. Porter H. Warren, general practice in Cornwall . . . Dr. J. Huston Westover, former intern at Mary Imogene Hospital, general practice in Cherry Valley . . . Dr. I. Robert Wood, Plattsburg, general practice and surgery, at Clifton Springs Clinic.

Reopens Office

Dr. John L. Ayer, general practice in Syracuse after serving in the U.S. Navy . . . Dr. John A. Matheson, Jr., general practice in Smithtown, following discharge from the Navy. Dr. James Leo McGrane, after an illness of several months, practice of obstetrics and gynecology in Schenectady.

CORRESPONDENCE

Further Discussion on Trichlorethylene for Analgesia and Anesthesia

To the Editor:

As medical director of a firm which is a major supplier of trichlorethylene for inhalation analgesia, I feel called upon to reply to the correspondence of Dr. William G. Niederland relative to "Trichlorethylene for Analgesia and Anesthesia?" which appeared in a recent issue of this Journal.[1]

No issue can be taken with the facts cited in connection with the dangers involved in the industrial uses of an industrial grade of trichlorethylene. These are self-evident. But their relevancy to the therapeutic use of a purified form of the agent is definitely open to question. The U.S. Dispensatory[2] states: "The symptoms reported in cases of industrial poisoning have been epileptiform seizures, paralysis, both motor and sensory, of the trigeminal nerve, and in several cases optic neuritis, with permanent loss of vision. None of these symptoms have been reported from its therapeutic use, even in the case reported by Eichert in which as much as 180 cc. was inhaled within a few days. It would seem fair to conclude that the toxicity of the commercial solvent may be due to other ingredients."

The symptoms of industrial poisoning by trichlorethylene are identical with those caused by the degradation products generated by the passage of trichlorethylene through soda lime, a procedure clearly contraindicated. This fact would seem to lend substantiation to the conclusions of the U.S. Dispensatory that trichlorethylene itself is not the offending agent.

Dr. Niederland presents no data which would tend to invalidate this conclusion. While he states "it is true that the great majority of all these toxic effects have been observed as industrial poisonings. . . ," he fails to introduce any evidence whatever that such neurotoxicity has been or can be produced by the administration of trichlorethylene in the manner discussed by Searles.[3]

In a recent study conducted in the Department of Anesthesiology at Duke University,[4] animals were maintained in an analgesic concentration of trichlorethylene vapor for eighteen hours a day over a period of three months. No evidence of toxicity was found in these animals at the conclusion of the study.

There is an extensive English bibliography on trichlorethylene including Ostlere's[5] report of experience with 40,000 administrations. Of neurotoxicity he states categorically, "we have never experienced any such complications." In recent years a great many American publications have also appeared on the subject. Stephen, Nowill, and Martin,[6] Pickrell *et al.*,[7] Sadove, Wyant, and Gittelson,[8] Brown and Fehlman,[9] Albert,[10] Madara and Libien,[11] Ennis,[12] Morgan, Cole, and Gorthey,[13] Sergent,[14] Flowers,[15] and Smith[16] represent but a partial list of authors. In none of their publications is neurotoxicity reported.

In the face of this impressive body of data pertinent to the clinical application of trichlorethylene as opposed to the irrelevant industrial data and the doubts and conjectures of Dr. Niederland, I find it impossible to arrive at the easy deduction which he invites his readers to make.

John B. Jewell, M.D.
Medical Director

Ayerst Laboratories
22 East 40th Street
New York 16, New York

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[1] New York State J. Med. 54: 844 (Mar. 15) 1954.

[2] U.S. Dispensatory, 24th ed., p. 1238.

[3] Searles, P. W.: New York State J. Med. 53: 1956 (Sept. 1) 1953.

[4] Nowill, W. K., Margolis, G., and Stephen, C. R.: In press.

[5] Ostlere, G.: Brit. M. J. 1: 195 (Jan. 31) 1948.

[6] Stephen, C. R., Nowill, W. K., and Martin, R. C.: North Carolina M. J. 13: 616 (Nov.) 1952.

[7] Pickrell, K. L., Stephen, C. R., Broadbent, T. R., Masters, F. W., and Georgiade, N. G.: Plast. & Reconstruct. Surg. 9: 345 (Apr.) 1952.

[8] Sadove, M. S., Wyant, G. M., and Gittelson, L. A.: Illinois M. J. 103: 95 (Feb.) 1953.

[9] Brown, S., and Fehlman, B. F.: Missouri Med. 50: 609 (Aug.) 1953.

[10] Albert, A.: J. Maine M. A. 44: 120 (May) 1953.

[11] Madara, J. S., and Libien, B. H.: J. M. Soc. New Jersey 50: 553 (Dec.) 1953.

[12] Ennis, E. H.: Bull. Sangamon County M. Soc., June, 1953, p. 183.

[13] Morgan, H. S., Cole, F., and Gorthey, R.: Nebraska M. J. 38: 119 (Apr.) 1953.

[14] Sergent, W. F.: J. Kentucky M. A. 51: 139 (Apr.) 1953.

[15] Flowers, C. E.: Am. J. Obst. & Gynec. 65: 1027 (May) 1953.

[16] Smith, G.: GP 5: 61 (Apr.) 1952.

To the Editor:

I feel compelled to answer the letter of Dr. W. G. Niederland, which appeared in a recent issue of this Journal. First, it is difficult to ascertain from the letter whether the writer is worried primarily about the effects of trichlorethylene on industrial workers, medical patients receiving this drug, or anesthesiologists administering the drug.

Before commenting on each of these categories, it should be emphasized, and perhaps Dr. Neiderland is not aware of this, that trichlorethylene which is used for medical purposes is prepared under most stringent regulations. That which is supplied to the medical profession is extremely pure and is so packaged that there is minimal possibility of breakdown products developing. On the other hand, that employed for industrial purposes may contain, or there may develop by oxidation processes, decomposition compounds which are potentially toxic. It is generally accepted that it is these breakdown products which are responsible for certain toxic manifestations which have been observed in industry.[1]

From perusing the industrial hygiene literature, one might become apprehensive over the potential toxic effects produced by the contaminant products in trichlorethylene. However, if precautions are taken regarding minimal exposure concentrations and adequate ventilation of areas concerned, it is unlikely that serious consequences will arise. A recent issue of the *American Pressman* indicates that trichlorethylene is safe for industrial purposes when such precautions are enforced. A publication of the Medical Research Council of London, England, in 1937[2] shows that rarely is trichlorethylene inhalation in industry a serious problem unless sufficient amounts are absorbed to produce unconsciousness. This circumstance will not arise if the drug is being employed as advised.

Dr. Niederland is concerned about "neurotoxic" complications arising in patients receiving this drug for analgesia. Trichlorethylene has probably been used in over two million patients in the last twelve years, and as yet there are no reports in the literature of peripheral nerve palsies, with the exception of those which occurred when decomposition products formed as a result of chemical interaction with soda lime.[3] Trichlorethylene now is not used in conjunction with soda lime. Anesthesiologists have sufficient experience to believe that when pure trichlorethylene is used, the risk of "neurotoxic" complications is remote.

Finally, Dr. Niederland is worried about the anesthesiologist himself. His solicitude is comforting. However, it should be recognized that we deal with habit-forming drugs every day of our lives, and if we wished to become addicted, there are many pleasant ways of doing so which are probably more convenient than sniffing trichlorethylene. It is difficult to believe that chronic exposure to this drug in its pure form, as supplied for medical purposes, will lead to "neurotoxic" complications. The writer has been exposed almost daily to vapors of this drug for seven years and still does not wear glasses, nor does he suffer from headaches. The only insomnia he has is directly related to letters such as the one under discussion.

C. R. Stephen, M.D.
Professor of Anesthesiology

Duke University School of Medicine
Durham, North Carolina

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[1] Ostlere, G.: Trichlorethylene Anaesthesia, London, E. & S. Livingstone, Ltd.

[2] Browning, E.: Toxicity of Industrial Organic Solvents, Report Number 80, Industrial Health Research Board of the Medical Research Council, London, 1937.

[3] McClelland, M.: Proc. Roy. Soc. Med. 37: 526 (July) 1944.

Comment by Dr. Niederland

To the Editor:

I wish to add a footnote to the above remarks. In my reply to Dr. Searles' recommendation of trichlorethylene for analgesia and anesthesia (March 15, 1954, issue of the Journal), I clearly stated not only my own adverse clinical experiences (as well as those of other authors) concerning *the industrial use of the drug*, but also quoted Searles himself who referred to ". . .the disadvantages of disturbances in cardiac rhythm" encountered in *the therapeutic use of the drug*, such as bradycardia, extrasystoles, pulsus bigeminus, and other manifestations of vagal overactivity. If these and other symptoms are only the result of other ingredients, I fail to see how the neurocirculatory manifestations have "been or can be produced by the administration of trichlorethylene in the manner discussed by Searles," to use Dr. Jewell's wording. Nor can I agree to regard 284 clinically reported cases of industrial trichlorethylene poisoning—26 of which were fatal—as "irrelevant industrial data," or that "the dangers involved in the industrial uses of an industrial grade. . .are self-evident." Unfortunately, for a very long time, these dangers were not self-evident at all, and I only wished that my "doubts and conjectures" regarding the drug, with or without ingredients, had been heeded earlier, i.e., in the early thirties when such adverse observations were first published by me and others. Perhaps, some serious poisonings could have been avoided. As recently as 1950, L. H. Cotter reported that the drug "has in the past been regarded relatively innocuous" until the observation of severe toxic manifestations caused this author to think of the compound in different terms.

There is no word in Dr. Jewell's remarks about the potential dangers of trichlorethylene addiction.

Addiction tendencies have been observed and described not only by K. Stueber and me but by industrial users of trichlorethylene themselves. That therapeutic users should be immune in this respect, especially in view of the recommended "self-administration" for analgesia, appears to me highly doubtful indeed. I agree with Dr. Stephen that no serious consequences will arise if adequate precautions are taken regarding minimal concentrations, etc. But do such safeguards exist, if the drug is recommended in these words: *There are several inhalers on the market which are well-adapted for the self-administration of trichlorethylene*" (italics added)? That in over two million patients no untoward effects were observed is probably quite correct. I clearly mentioned in my article that probably no danger exists if the drug is administered, under proper safeguards, to patients who receive it once or twice in a lifetime—or also, for that matter, more times, I may add. The notion that the drug has to be inhaled in amounts sufficient to produce unconsciousness, before it can be considered a serious problem, refers to acute poisonings only. More insidious, as I pointed out, are the chronic, initially imperceptible effects of frequent and prolonged inhalations which do not lead to loss of consciousness but to other changes described in detail in the monograph by K. Stueber. Whether these are due to the drug alone or to its various breakdown products, I can only mention that in the literature quoted by me (Wurth, Stueber, Hotter) such effects were attributed to the action of the compound as such.

I was happy, however, to learn from Dr. Stephen's letter that "trichlorethylene . . . for medical purposes is prepared under most stringent regulations." But *is it also used under such stringent regulations, especially when recommended for self-inhalation and self-administration?* Finally, it was most gratifying to learn that Dr. Stephen, after seven years of almost daily exposure to vapors of the drug, still does not wear glasses, nor does he suffer from headaches. I only hope that the knowledge of Dr. Stephen's excellent eyesight provides some comfort also to those who have developed retrobulbar neuritis, at least partial blindness, and other clinical complications in the course of their occupational work with the compound.

William G. Niederland, M.D.

18 East 81st Street
New York 28, New York

Illuminating Obfuscation

To the Editor:

In the May 1 issue of the Journal, you publish on page 1300 a letter from a correspondent.

You seem perplexed as to the relevance of the story detailed therein. It is puzzling to me that an editor of your eminence should have difficulty in applying the lesson it carries. Are you not often beset with the circumlocutions and fuzzy wording in some of the scientific articles submitted for publication to your eagle eye? Perhaps your correspondent, even though he be a chess player, was trying to introduce a plea to such writers to make their articles more intelligible to the average reader.

I am, Sir, with great respect,

Your obedient servant,
Theophrastus Sidebottom, M.D.

New Pamphlet Series Promotes Medicine's Story

To help you tell medicine's public relations story to your patients, the American Medical Association announces the publication of a series of four new leaflets describing medicine's scientific achievements, services to the community, and desire to provide high quality medical care to everyone.

Subjects of the four are:

(1) "Quack!"—explains the dangers of going to quack healers for medical treatment; (2) "Health Today!"—tells about medicine's progress in the past fifty years; (3) "On Guard!"—outlines the steps AMA has taken to evaluate drugs, and (4) "Why Wait?"—describes the best way to select a family doctor.

Available in quantity, these little pamphlets are suitable for distribution in your waiting room, as enclosures or as give-away material at schools and other general meetings. You may order either the entire series or individual leaflets without charge from your state medical society.

Department of

MEDICAL CARE INSURANCE

CONDUCTED BY GEORGE P. FARRELL, *Director*

BENEFITS paid for doctors' services during the three-month period ending March 31, 1954, in the New York State Blue Shield Plans, amounted to $8,212,830, covering 211,812 claims, as compared to $7,027,055 for the same period in 1953 for 171,936 claims, an increase in benefits of $1,185,775 and an increase in claims of 39,876.

During the same period membership increased by 135,060, to a total membership of 4,446,524 at March 31, 1954. Statistical statements follow.

TABLE I.—TOTAL MEMBERSHIP AND COMPARATIVE INCREASES FOR QUARTERS ENDING MARCH 31, 1954, AND 1953

By Types of Contracts	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown	Totals
Surgical								
Total Membership								
March 31, 1954	1,417,175	333,963	315,020	5,348	56,710	...	14,791	2,143,007
December 31, 1953	1,456,461	343,952	309,164	5,337	57,514	...	13,845	2,186,273
Comparative Increase								
March 31, 1954	−39,286	−9,989	5,856	11	−804	...	946	−43,266
March 31, 1953	−4,113	−2,283	12,012	−4,294	−4,510	...	1,080	−2,108
Surgical, In-Hospital Medical								
Total Membership								
March 31, 1954	1,627,068	127,713	...	65,446*	119,063	203,181	...	2,142,471
December 31, 1953	1,485,494	107,000	...	57,123*	119,256	200,417	...	1,969,290
Comparative Increase								
March 31, 1954	141,574	20,713	...	8,323	−193	2,764	...	173,181
March 31, 1953	84,314	13,257	...	36,524	3,658	10,278	...	148,031
Surgical-Medical (Home, Office, Hospital)								
Total Membership								
March 31, 1954	120,874	...	...	40,172	...	...	...	161,046
December 31, 1954	115,844	...	...	40,057	...	...	...	155,901
Comparative Membership								
March 31, 1954	5,030	...	...	115	...	...	...	5,145
March 31, 1953	7,466	...	...	−24,827	...	...	...	−17,361
Grand Totals								
Total Membership								
March 31, 1954	3,165,117	461,676	315,020	110,966	175,773	203,181	14,791	4,446,524
December 31, 1953	3,057,799	450,952	309,164	102,517	176,770	200,417	13,845	4,311,464
Comparative Increase								
March 31, 1954	107,318	10,724	5,856	8,449	−997	2,764	946	135,060
March 31, 1953	87,667	10,974	12,012	7,403	−852	10,278	1,080	128,562

* Indicates accumulated members with service type contracts; others in Syracuse plan on an indemnity basis.

TABLE II.—INCOME, GAIN, AND LOSS FOR THREE MONTHS ENDING MARCH 31, 1954

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown
Earned Premium Income	$8,280,261	$1,153,065	$994,703	$321,192	$360,976	$526,536	$40,871
Claims and Expenses Incurred	7,340,212	1,001,026	890,549	302,444	363,363	492,526	34,726
Gain from Underwriting	$ 940,049	$ 152,039	$104,154	$ 18,748	−$ 2,387	$ 34,010	$ 6,145
Underwriting Adjustments							
Deferred Maternity Benefits	...	−$ 20,000	−$ 28,528	...	...	−$ 1,000	...
Provision for Special Contingent Surplus	− 337,985	− 46,447	− 39,639	− 12,848	− 14,439	− 21,061	− 1,707
Profit and Loss Items	− 49,804	80	250	...	1,934	− 1,579	20
Total	−$ 387,789	−$ 66,367	−$ 67,917	−$ 12,848	−$ 12,505	−$ 23,640	−$ 1,687
Adjusted Gain from Underwriting	$ 552,260	$ 85,672	$ 36,237	$ 5,900	−$ 14,892	$ 10,370	$ 4,458
Gain from Investments	112,493*	8,629	3,136	1,690	5,379	3,900	...
Gain from Underwriting and Investments	$ 664,753	$ 94,301	$ 39,373	$ 7,590	−$ 9,513	$ 14,270	$ 4,458
Surplus Adjustments							
Provision for Epidemics and Other Contingencies	−$ 160,938	...	...	...	...	...	...
Organization Deposit Repayments Cancelled	...	$ 660	...	...	...	...	...
Increase in Unassigned Surplus	$ 503,815	$ 94,961	$ 39,373	$ 7,590	−$ 9,513	$ 14,270	$ 4,458

* $28,833, provision for addition to Special Security Valuation Reserve not included in Investment Gain.

TABLE III.—DISTRIBUTION OF EARNED PREMIUM INCOME AND AMOUNTS AVAILABLE FOR UNASSIGNED SURPLUS FOR THREE MONTHS ENDING MARCH 31, 1954

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown
Earned Premium Income	$8,280,261 100.00%	$1,153,065 100.00%	$994,703 100.00%	$321,192 100.00%	$360,976 100.00%	$526,536 100.00%	$40,871 100.00%
Incurred Claim Expense	$6,046,673 73.03%	$ 875,787 75.95%	$788,949 79.31%	$259,603 80.82%	$290,420 80.45%	$433,866 82.40%	$29,057 71.09%
Administrative Expense	$1,293,539 15.62%	$ 125,239 10.87%	$101,600 10.21%	$ 42,841 13.34%	$ 72,943 20.21%	$ 58,660 11.14%	$ 5,669 13.87%
Provision for Future Maternity Benefits	... ...	$ 20,000 1.73%	$ 28,528 2.87%	... ...	... ...	$ 1,000 0.19%	... ...
Provision for Special Contingent Surplus	$ 337,985 4.08%	$ 46,447 4.03%	$ 39,639 3.98%	$ 12,848 4.00%	$ 14,439 4.00%	$ 21,061 4.00%	$ 1,707 4.17%
Profit and Loss Items	$ 49,804 0.60%	−$ 80 −0.01%	−$ 250 −0.03%	... ...	−$ 1,934 −0.54%	$ 1,579 0.30%	−$ 20 −0.04%
Available for Unassigned Surplus	$ 552,260 6.67%	$ 85,672 7.43%	$ 36,237 3.64%	$ 5,900 1.84%	−$ 14,892 −4.12%	$ 10,370 1.97%	$ 4,458 10.91%

TABLE IV.—SURPLUS ACCOUNTS, MARCH 31, 1954

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown
Surplus, December 31, 1953							
Unassigned	$ 6,134,375	$ 523,691	$ 714,435	$182,848	$328,201	$259,079	$14,890
Special Contingent	4,742,623	663,472	393,274	140,366	353,594	249,257	5,305
Epidemics and Other Contingencies	1,170,369	...	...	...	...	...	...
Security Valuation Reserve	...	...	...	...	24,000	...	...
Total Surplus	$12,047,367	$1,187,163	$1,107,709	$323,214	$705,795	$508,336	$20,285
Credits							
Net Gain from Underwriting	$ 552,260	$ 85,672	$ 36,237	$ 5,900	−$ 14,892	$ 10,370	$ 4,458
Net Gain from Investments	112,493	8,629	3,136	1,690	5,379	3,900	...
Provision for Special Contingent Surplus	337,984	46,447	39,639	12,848	14,439	21,061	1,707
Organization Deposit Repayments Cancelled	...	660	...	...	...	...	...
Total Credits	$ 1,002,737	$ 141,408	$ 79,012	$ 20,438	$ 4,926	$ 35,331	$ 6,165
Segregated from Unassigned Surplus for Epidemics and Other Contingencies	$ 160,938*	...	...	...	...	...	...
Total Surplus, March 31, 1954							
Unassigned	$ 6,638,190	$ 618,652	$ 753,808	$190,438	$318,688	$273,349	$19,439
Special Contingent	5,080,607	709,919	432,913	153,214	368,033	270,318	7,012
Epidemics and other Contingencies	1,331,307	...	...	...	...	...	...
Security Valuation Reserve	...	...	...	...	24,000	...	...
Total Surplus	$13,050,104	$1,328,571	$1,186,721	$343,652	$710,721	$543,667	$26,451

* Included in Net Gain from Underwriting.

TABLE V.—CLAIM DATA (PAID BASIS)—YEAR TO MARCH 31, 1954, AND COMPARISON OF CLAIM INCIDENCE, MARCH 31, 1954 AND 1953

Plan Location and Type of Contract	Earned Premium Income	Claim Cost	Per Cent of Claim Cost to Earned Premium	Number of Claims	Average Cost per Claim	Claim Incidence per 1,000 Members per Annum 1954	1953
New York							
Surgical	$ 3,277,106	$2,299,456	70.17	37,232	$61.76	102.1	98.6
Surgical, In-Hospital Medical	4,240,135	2,853,450	67.29	49,794	57.31	131.1	127.7
General Medical	763,020	563,619	73.87	43,981	12.82	1,499.2	1,529.8
Total	$ 8,280,261	$5,716,525	69.04	131,007	$43.64	...	...
Buffalo							
Surgical	$ 749,982	$ 554,668	73.96	22,239	$24.94	262.1	243.2
Surgical, In-Hospital Medical	403,083	251,119	62.29	8,901	28.21	303.8	292.8
Total	$ 1,153,065	$ 805,787	69.88	31,140	$25.88	...	...
Rochester							
Surgical	$ 994,703	$ 707,140	71.09	15,952	$44.33	204.4	176.4
Syracuse							
Surgical	$ 12,771	$ 14,233	111.45	408	$34.88	305.5	197.7
Surgical, In-Hospital Medical	174,845	141,841	81.12	4,594	30.88	299.8	218.4
Surgical-Medical	133,576	100,420	75.18	5,314	18.90	529.8	259.9
Total	$ 321,192	$ 256,494	79.86	10,316	$24.86	...	...
Utica							
Surgical	$ 90,313	$ 85,088	94.21	3,818	$22.29	267.4	229.5
Surgical, In-Hospital Medical	270,663	214,823	79.37	9,712	22.12	326.0	273.6
Total	$ 360,976	$ 299,911	83.08	13,530	$22.17	...	...
Albany							
Surgical, In-Hospital Medical	$ 526,536	$ 405,412	76.99	9,393	$43.16	186.1	161.2
Jamestown							
Surgical	$ 40,871	$ 21,561	52.75	474	$45.49	132.4	121.6
Grand Total	$11,677,604	$8,212,830	...	211,812	...	...	...

Woman's Auxiliary

to the MEDICAL SOCIETY OF THE STATE OF NEW YORK

Auxiliary Officers Elected for 1954–1955

Mrs. Arthur L. Bennett of Buffalo was elected president of the Woman's Auxiliary to the Medical Society of the State of New York on May 12, 1954, by the House of Delegates at the 18th Annual Convention. Mrs. Bennett, the former Sally Minard, attended St. John's School, Mountain Lakes, New Jersey, the New Jersey College for Women, and the New York School of Secretaries, after which she worked for two years as secretary to the advertising manager of Crowell Publishing Company in New York City.

Following her marriage to Dr. Arthur L. Bennett, she interested herself in numerous community projects in Buffalo, among them the Red Cross, the Community Chest, the Junior Board of Buffalo General, Lafayette General, and Children's Hospital. Manager of a marionette troupe for the Buffalo Junior League for three years and a member of the board of the Women's Committee of the Buffalo Philharmonic Orchestra Society for six years, Mrs. Bennett is at present on the board of directors of the Buffalo Y.W.C.A. and head of the committee in charge of the three "Y" cafeterias; she is also a member of the board of directors of the Buffalo Federation of Women's Clubs and serves as chairman of the Health Committee of the Goodwill Industries Home Division.

Officers and Directors

In addition to the election of Mrs. Bennett, Mrs. Isadore Zadek of Bronxville was chosen president-elect. Other officers elected include Mrs. John Horner, Albany, first vice-president; Mrs. John H. Rainey, Troy, second vice-president; Mrs. Arthur F. Holding, Albany, treasurer; Mrs. Colgate Phillips, Bronxville, recording secretary, and Mrs. Clarence J. Durshordwe, Buffalo, corresponding secretary.

Members of the board of directors include the following: for three years—Mrs. Thomas M. d'Angelo, Flushing, and Mrs. Adolph H. Emerson, Brooklyn; for two years—Mrs. Harry I. Norton, Rochester, and Mrs. Arthur Gaffney, Clinton; for one year—Mrs. Harold B. Johnson, Buffalo, and Mrs. Herman W. Galster, Scotia. In addition, Mrs. Luther H. Kice, Garden City, is an honorary member of the board.

District Councillors

Chairman of the district councillors is Mrs. Walter A. Schmitz, Middletown. Councillors are as follows: First District—Mrs. Leif G. Jensen, Staten Island; Second District—Mrs. Joseph H. Kinnaman, Hempstead; Third District—Mrs. John J. Noonan, Watervliet; Fourth District—Mrs. Michael Slovak, Schenectady; Fifth District—Mrs. Milton W. Kogan, Oswego; Sixth District—Mrs. William Low, Johnson City; Seventh District—Mrs. Edward S. Platt, Auburn; Eighth District—Mrs. Maurice Sheldon, Olean; Ninth District—Mrs. Isadore Zadek, Bronxville.

Committee Chairmen

Chairmen of committees include the following: American Medical Education Foundation—Mrs. K. Wood Jarvis, Oswego; Archives—Mrs. Elliott V. B. Vurgason, Baldwin; Blood Banks—Mrs. Sydney L. McLouth, Corfu; Civil Defense—Mrs. Windsor R. Smith, Binghamton; Convention—Mrs. Joseph W. Madden, Eggertsville; *Distaff*—Mrs. John N. Dill, Yonkers; *Distaff* Circulation Manager—Mrs. Robert B. McKittrick, Yonkers; Finance—Mrs. Fred G. Jones, Utica; Historian—Mrs. Alfred S. Grussner, Schenectady; Legislation—Mrs. Charles M. Brane, Yonkers.

Also: Mental Health—Mrs. Albert M. Biglan, Central Islip; *National Bulletin*—Mrs. James Thompson, Rochester; Nurse Recruitment—Mrs. Benjamin Feuerstein, Brightwaters; Organization—Mrs. Walter T. Heldmann, Staten Island; Parliamentarian—Mrs. John L. Mason, Pulaski; Physicians' Home—Mrs. Edward P. Cummins, Cortland; Poster Contest—Mrs. Donald K. Binder, Schenectady; Press and Publicity—Mrs. Robert C. Hall, Clinton; Printing and Supplies—Mrs. Marion K. Colle, Catskill; Program—Mrs. William L. Gould, Albany; Public Relations—Mrs. Harry F. Pohlmann, Middletown; Revisions—Mrs. William Lavelle, Astoria; Recommendations—Mrs. Thomas Adinolphi, Schenectady; *Today's Health*—Mrs. Robert W. Hurd, Utica; Voluntary Health Plans—Mrs. Louis Harris, Brooklyn; Fall Conference—Mrs. Michael Blase, Menands; New York State Fair—Mrs. Charles T. Yarington, Moravia.

NEWS FROM THE MEDICAL SCHOOLS

Albany Medical College

Postgraduate Teaching Day—More than 300 area and staff physicians attended the Albany Medical College annual postgraduate teaching day in April.

Speakers for the day were Dr. George W. Thorn, Dr. Charles W. Lloyd, Dr. Thomas F. Frawley, Dr. Robert R. Wadlund, Dr. William H. O'Brien, Dr. Arthur W. Hengerer, Dr. John J. Gamble, and Dr. John J. Garrett.

Researcher Returns—Dr. Joseph T. Doyle, director, Albany Medical College Cardiovascular Health Center, returned in May from Italy where he had been assisting Dr. Ancel Keys, director of the Laboratory of Physiological Hygiene at the University of Minnesota, with his investigation of the relation between the fat content of the diet and the incidence of coronary heart disease.

American Academy of General Practice Scholarship Winner—Norman R. Bates, East Greenbush, New York, a senior, was awarded the $1,000 scholarship granted by the American Academy of General Practice. The scholarship is one of the Mead Johnson General Practice Scholarship Awards for 1955 and will be paid in twelve monthly installments while the winner is completing a residency in general practice.

New York University-Bellevue Medical Center

Activities—A farewell tea was given by a group of doctor's wives for 30 foreign students on May 5. On May 11, Miss Doretta Morrow and Mr. Alfred Drake were honor guests at a benefit luncheon and card party given by the Parents Association. Money raised will go to the New York University College of Medicine and the Student Aid Fund. The senior students were honored by their parents at a Candlelight Supper Dance on May 15. This was the first subscription dance to be given by the parents for the graduating class. The Class of 1954 Parents Association has pledged to raise $10,000 as a gift to the school for which a room at the College of Medicine will be named in honor of the 1954 graduating class. The room will be located in the new Medical Science Building at 30th Street which is scheduled to open for students in the fall of 1954.

United States Representative—Dr. Alfred Kestenbaum, associate clinical professor of ophthalmology, was chosen to represent the United States at the Nineteenth International Congress of Oto-Neuro-Ophthalmology, in São Paulo, Brazil, June 11 to 17.

University of Buffalo School of Medicine

New Chancellor—Clifford C. Furnas, director of the Cornell Aeronautical Laboratory affiliated with Cornell University, has been appointed Chancellor of the University of Buffalo to succeed Chancellor McConnell, and will assume his duties on September 1, 1954.

Lecturers—Dr. Oliver P. Jones, professor of anatomy, lectured in April at Wadley Research Institute and Blood Center, Dallas, Texas, and in May, Dr. Jones gave the dedicatory address in honor of Dr. Hal Downey at the Conference on Leukocytic Functions at the New York Academy of Sciences.

Dr. Ernest Witebsky, professor of bacteriology and immunology, participated in a symposium conducted by the American Medical Association in Atlantic City in May.

Elected—Dr. Erwin Neter was elected chairman of the division of medical bacteriology and immunology of the Society of American Bacteriologists at the annual meeting in May.

Annual Participating Fund for Medical Education—the Annual Participating Fund for Medical Education was launched on February 22 for the support of the Basic Science Departments of the Medical School. A meeting was held May 27 to extend the program to other counties of Western

New York and Pennsylvania, and eventually to other cities and states. In a three-month period, 800 Erie County physicians had pledged $80,000 annually.

The Fund is conceived as a permanent organization and will include representation from groups of alumni and other physicians who will serve to interpret the needs of the school to the physicians and the needs of the physicians to the school. An increased understanding between the profession and the school has been almost as important a result as the actual financial support. After the physicians have shown their willingness to do their part, lay support will be sought.

State University College of Medicine at New York City

Commencement—131 seniors received the degree of Doctor of Medicine at the College's ninety-sixth Commencement on Thursday, June 10, at the Brooklyn Academy of Music. Dr. Buell Gallagher, president of City College of New York, delivered the commencement address and Dr. Jean Redman Oliver, Distinguished Service Professor of Pathology, administered the Hippocratic Oath. This year's graduating class was the first to receive its entire medical education under the auspices of the State University of New York, with which the Long Island College of Medicine was merged in April, 1950.

Research Society—The Research Society of the State University College of Medicine at New York City wound up its year's activities at a meeting on Wednesday, May 19, with the installation of new officers and the awarding of prizes.

The 1954 to '55 officers are Dr. Jerome P. Parnell, assistant professor of anatomy, president; Dr. David M. Kydd, associate professor of medicine, vice-president, and Dr. Julius Belford, assistant professor of pharmacology, secretary-treasurer.

The annual Research Society Award for the best student research paper was granted to Mr. Marvin L. Gliedman of Brooklyn, Class of '54 for a paper on "Wound Healing and Wound Strength in the Limbus." In addition two prizes were awarded by the Society on behalf of the Section on Allergy of the Kings County Medical Society and Academy of Medicine. One of these went to Messrs. Elliott Senderoff of Passaic, New Jersey, and Howard Setleis of Brooklyn, both Class of '54, for a paper on "The Relationship of Changes in Blood Calcium and Potassium Content to Anaphylaxis in the Guinea Pig." The other prize went to Messrs. Samuel Horowitz of Dumont, New Jersey, and Eugene Bernstein of Manhattan, both Class of '54, for a paper on "The Influence of Hydrocortisone on the Antigen Antibody Reaction in Vitro."

Parents Association—The Parents Association of the State University College of Medicine at New York City wound up its year's activities at a meeting on Thursday, May 20, with the installation of new officers for 1954 to '55. Mr. Louis Pennisi of Brooklyn, treasurer, reported that the Association had collected $3,640 since January for its Scholarship Fund, $2,153 having been raised through direct contributions and $1,487 from the proceeds of a Spring Festival held on May 15 at the Brooklyn State Hospital auditorium. Mrs. Michael Holtzman of Elizabeth, New Jersey, president, reported that five students had received financial assistance from the Association this year—four through payment of complete tuition and the fifth through a loan.

Scientific Exhibits—AMA Meeting in San Francisco—The College was represented with two scientific exhibits at the annual AMA convention in San Francisco, June 21 to 25. One of these, entitled "Teaching Tumor Clinic," depicted a unique tumor clinic that has been established by the College at the Kings County Hospital. It showed a visible record system which permits immediate determination of the status of any single patient or group of patients. The function of the lay and medical personnel was graphically illustrated and the use of punch cards for statistical surveys and analyses was shown. Exhibitors were Dr. John G. Masterson, assistant professor of obstetrics and gynecology, and director of the Tumor Clinic; Dr. Louis M. Hellman, professor and chairman of the Department of Obstetrics and Gynecology, and Dr. Clarence Dennis, professor and chairman of the Department of Surgery. The other exhibit, entitled "Cardiac Excitability and Ventricular Fibrillation," was under the auspices of Drs. Chandler McC. Brooks, professor and chairman of the Department of Physiology and Pharmacology, and Brian F. Hoffman, assistant professor of physiology.

State University College of Medicine at Syracuse

Phi Delta Epsilon Lecture—Dr. Leo M. Davidoff, professor and chairman, Department of Surgery, Albert Einstein College of Medicine, delivered the annual Phi Delta Epsilon lecture on May 11.

Alpha Kappa Kappa Lecture—Dr. Arthur Purdy Stout, professor of pathology, Columbia University, director of laboratories, Francis Delafield Hospital, and consulting pathologist, Presbyterian Hospital, gave the annual Alpha Kappa Kappa lecture on May 18.

Masonic Foundation for Medical Research—Dr. H. C. Yeckel, professor emeritus of medicine, was elected president of the Masonic Foundation for Medical Research.

Visiting Lecturer—Dr. Harry Eagle, National Institutes for Health, was the visiting lecturer in pharmacology for two weeks.

BOOKS REVIEWED

Heredity in Health and Mental Disorder. Principles of Psychiatric Genetics in the Light of Comparative Twin Studies. By Franz J. Kallmann, M.D. Quarto of 315 pages, illustrated. New York, W. W. Norton & Co., 1953. Cloth, $6.00.

In this excellent volume, Kallmann has brought together and crystallized the results of a lifetime of study on the genetics of mental disorders. This well-written and well-illustrated book is an invaluable contribution to the field of mental diseases in particular, and to medicine and human heredity in general.

In his studies Kallmann made use of the twin study technic, in which he compared monozygotic twins with dizygotic twins, and at the same time studied their family background.

In the introductory chapter of 104 pages he demonstrates the great importance of heredity by showing the striking similarity between monovular twins from birth to old age, as contrasted with the life histories of dizygotic twins; he also gives a clear description of the main variations in body type and presents convincing evidence for an hereditary factor in longevity.

The second chapter, by using the twin study method, presents proof for a hereditary factor for manic-depressive psychosis and schizophrenia, and reviews the present state of knowledge concerning the genetic aspects of epilepsy, mental deficiency, and a variety of other neurologic disorders. He also shows that there is a hereditary factor in homosexuality and susceptibility to tuberculosis but little, if any, in criminality. As Kallmann points out, the demonstration of a hereditary factor does not necessarily lead to a fatalistic viewpoint, because it is possible to modify the influence of heredity by proper external means. Thus, the study of monozygotic twins who differ with respect to schizophrenia has led to methods of preventing the disease, or at least of ameliorating its course. In the final chapter, methods of differentiating monozygotic and dizygotic twins are described, also an excellent outline of blood group genetics. The chapter also contains a discussion of the eugenic aspects of mental health.

The volume should help to stimulate further interest in the subject for which there is need for financial backing, as Kallmann points out. The book should be read by all physicians who have occasion to treat patients with mental disorders and is a valuable addition to one's medical library.—A. S. Wiener

Frustrated Martyr. A Novel of a Medical Missionary in West China. By James Lincoln McCartney. Octavo of 349 pages. New York, Exposition Press, 1953. Cloth, $3.50.

This fascinating novel has its locale centered in old China but the story could have its counterpart in many other lands as well. The perplexing workings of the Chinese philosophy are so different from our own that any correlation is difficult. The tribulations and mode of living of the masses of China are presented in a most interesting manner. Interwoven in this pattern, the strange events in the career of the medical missionary make an equally interesting story. Altogether the book is most entertaining and may be highly recommended for truly enjoyable reading.—Jerome Weiss

Tumors of Bone. A Roentgenographic Atlas. By Bradley L. Coley, M.D., and Norman L. Higinbotham, M.D. Volume 21 of the "Annals of Roentgenology." Quarto of 216 pages, illustrated. New York, Paul B. Hoeber, 1953. Cloth, $10.

This book is one of the more illuminating of the monographic atlases of the *Annals of Roentgenology* which has appeared during the many years of their publication, for which the medical profession is greatly indebted to the publishers, Paul B. Hoeber, Inc.

For one interested in the radiographic appearance of bone pathology, the reviewer knows of no other series of x-rays better selected and illustrative of the pathologic entities. The radiograms are well-chosen and of outstanding quality and cover the field of tumor skeletal roentgenology quite completely. The radiologist and orthopedist will be particularly interested and may employ the work in a consultative manner. The authors have apparently thoroughly culled the library of the Memorial Hospital and succeeded in illustrating, and to a lesser degree describing, many of the pathologic entities to which the human skeleton may fall heir. The radiographic diagnosis of bone pathology is at best often difficult and at times most challenging, a fact recognized by the experienced authors who have succeeded to no small degree in presenting excellent examples of the various malignancies of bone. Many of the benign processes, often confusing in differential diagnosis, are also described and illustrated.

As a radiographic atlas of bone tumors, it will prove of great value for some time to come. It should occupy a commanding position in the library of the oncologist, the orthopedic surgeon, the radiologist, the pathologist, and those clinicians interested in that baffling group of cases to be diagnostically clarified by a profound knowledge of the diseased human skeleton.—Milton G. Wasch

Atomic Medicine. Edited by Rear Admiral Charles F. Behrens, M.C., U.S.N. Second edition. Octavo of 632 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $11.

This textbook is a source book crammed with data relating to all aspects of the impact of atomic energy upon biology and medicine. It consists of 22 separate chapters. Each is a self-contained essay on one aspect of atomic medicine by one of 20 experts in medicine and physics of the U.S. Navy. Most of the essays deal with the physics of atomic energy, the atomic bomb and its deleterious effects, and the instrumentation and methodology of isotope studies. A relatively small portion of the book deals with the clinical use of atomic energy in the diagnosis and therapy of disease.

Atomic Medicine will serve admirably for the graduate student, the researcher, and the expert who seek detailed information. However, it is much too complicated for the average physician who desires to learn the elements of this new and expanding field. As the editor acknowledges, there is considerable overlapping of information in the various essays and therefore scattering of data on one topic in separate parts of the book.—Martin Perlmutter

Thoracic Surgery and Related Pathology. By Gustaf E. Lindskog, M.D., and Averill A. Liebow, M.D. Octavo of 644 pages, illustrated. New York, Appleton-Century-Crofts, 1953. Cloth, $15.

This book covers the broader aspects of thoracic surgery, touching only upon the highlights of the subject. The nonsurgical aspects of this book, which should interest all concerned with thoracic surgery, are presented in more detail and in an informative manner. The book is well executed, readable, and well illustrated.—Lew A. Hochberg

An Atlas of Surgical Exposures of the Extremities. By Sam W. Banks, M.D., and Harold Laufman, M.D. Quarto of 391 pages, illustrated. Philadelphia, W. B. Saunders Co., 1953. Cloth, $15.

The authors have prepared this fine monograph for the benefit of residents, students, and the general surgeon who occasionally operates on the extremities. Most of the incisions illustrated are well standardized and any of the less well-known approaches are seen to be anatomically useful in the extremely carefully drawn illustrations that are presented.

The method of presentation makes this book exceedingly useful. The course of the incision is shown, then the layer by layer approach with emphasis on the danger spots at each level. The descriptions accompanying the drawings are short but contain all the necessary details with warnings as to the danger spots. The indications for each approach are presented.

The only questions this reviewer would like to ask apply to the advisability of making incisions right over the center of the medial malleolus as shown in the region of the ankle, since this is a poorly padded area subject to constant trauma.

The publishers and the authors are to be congratulated on putting out such a well-planned, useful book with clear, detailed but not cluttered, illustrations and with a very easily read text.—L. Katz

Epidemics in Colonial America. By John Duffy. Octavo of 274 pages, illustrated. Baton Rouge, La., Louisiana State University Press, 1953. Cloth, $4.50.

This is a study of epidemic disease in colonial America undertaken to identify the individual diseases and to determine what effects, if any, their occurrence had upon the development of the colonies. The diseases considered are small pox, diphtheria and scarlet fever, yellow fever, measles, whooping cough and mumps, respiratory diseases, as well as a mixed group of agues, fluxes and poxes that include such diseases as malaria, dysentery, typhoid fever, typhus, and venereal diseases. As to their effects, the author comes to no clear-cut conclusions. He recognizes that despite epidemics the colonies increased in wealth and population. He feels that the medical profession contributed little or nothing to this phenomenon, which may be attributed more significantly to economic progress and rising standards of living.—George Rosen

Recurrent Dislocation of the Shoulder. By James A. Dickson, M.D., Alfred W. Humphries, M.D., and Harry W. O'Dell, M.D. Octavo of 158 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $4.50.

This easy-to-read monograph is essentially a history of the operative treatment of recurrent dislocation. There is presented a necessary and adequate background of embryology, anatomy, and function as well as a detailed discussion of numerous operative methods, none entirely satisfactory.

The authors present an original, well-grounded, and simple method of treatment which in their hands has met with success. The book should be an attractive supplement to the orthopedic and traumatic surgeon's library. There is an excellent bibliography.—Max S. Rabinowitz

Plastic Surgery at The New York Hospital One Hundred Years Ago. With Biographical Notes on Gurdon Buck. By Herbert Conway, M.D., and Richard B. Stark, M.D. Octavo of 110 pages, illustrated. New York, Paul B. Hoeber, 1953. Cloth, $5.00.

This is a record and an appreciation of the work of Dr. Buck at the New York Hospital in the latter half of the eighteenth century with special reference to his skill in plastic surgery. Only passing mention is made of the so-called Buck's Extension to which this surgeon's name has been added. There has been included a remarkable series, well-illustrated, of various plastic operations performed by Dr. Buck, with a full description of the technic employed and the results obtained.

The 110 pages of the book are filled with interesting biographic information about Dr. Buck and the institution in which he did his work. We wonder what was the justification for including the discussion of the controversy with Dr. J. Marion Sims and the personal opposition to the founding of the Woman's Hospital of New York.—Joseph Raphael

[Continued on page 1994]

Eosinophil Count . . .

Common Denominator?

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COLLOIDAL SILICIC ACID INJECTION

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[Continued from page 1992]

Elementary Statistics with Applications in Medicine. By Frederick E. Croxton, Ph.D. Octavo of 376 pages, illustrated. New York, Prentice-Hall, 1953. Cloth, $10.

Frederick Croxton's newest publication on statistics is in the tradition of his previous works, well done and complete. In attempting to relate his *Elementary Statistics* to medical applications, he has missed the mark. Although he has used many medical illustrative problems, the text remains more complex than necessary for the physician, untrained in statistics.

The section on analysis of variance, however, is simply put and clearly illustrated. It appears that the volume was published not primarily for the physician but for the statistician interested in medical applications. It accomplishes its aim in a most acceptable manner—Schuyler G. Kohl

The Ciba Collection of Medical Illustrations. Vol. I. Nervous System. A Compilation of Pathological and Anatomical Paintings. Prepared by Frank H. Netter, M.D. Folio of 143 pages, illustrated. Summit, N.J., Ciba Pharmaceutical Products, 1953. Cloth, $6.00.

Volume I of the *Ciba Collection of Medical Illustrations* is a collection of drawings made by Dr Frank Netter, with accompanying text written by three specialists in the study of the nervous system. Dr. Abraham Kaplan, a New York neurosurgeon, discusses the gross anatomy of the spine and the central nervous system and the pathology of the central nervous system, Dr. Gerhardt von Bonin, professor of anatomy at the University of Illinois College of Medicine, takes up functional neuroanatomy, and Dr. Albert Kuntz, professor of anatomy, St. Louis University School of Medicine, presents the autonomic nervous system.

Besides being a most accurate artist, Dr. Netter's technics of schematic presentation based on a tremendous amount of medical knowledge make many of the complex anatomic relationships quite clear.

The text avoids the complicated descriptions which have made many of the standard textbooks the bane of medical students who have to learn neuroanatomy. The section on pathology contains a brief review of the clinical picture of various diseases of the nervous system.

This book is an excellent one for review of the subject for the student and for those who are preparing for examinations. For the practising physician who wants to brush up on neuroanatomy and pathology it is highly recommended.

The Ciba Company should be congratulated on having subsidized such a work.—L. Katz

Adjustment of Physical Handicap and Illness: a Survey of the Social Psychology of Physique and Disability. By Roger G. Barker, in collaboration with Beatrice A. Wright, Lee Meyerson, and Mollie R. Gonick. Second edition. Octavo of 440 pages, illustrated. New York, Social Science Research Council, 1953. Paper, $2.00 (Bulletin 55 revised 1953.)

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This volume, originating largely through the efforts of related disciplines, has much to offer the medical profession. It is a consideration of the "somatopsychologic relation between physique and behavior." Primarily a review of the important literature, it provides a "critical review and interpretation" of studies on physical size, muscular strength and motor ability, orthopedic disabilities, auditory impairments, visual impairments, and acute illness. The sections are well organized into appropriate areas including considerations of background experience, experimental data, and succinct summaries of research. A selected bibliography is provided for each subject, and a good index permits practical use of the voluminous material. This is a valuable source work for psychiatrists, psychosomaticists, and all others concerned with problems of the handicapped.—Robert W. Hillman

Back Down the Ridge. By W. L. White. Octavo of 182 pages. New York, Harcourt, Brace & Co., 1953. Cloth, $3.00.

On the jacket, this book is subtitled *The Story of What Happens to the Men Who Get "Clobbered" in Korea.* This is a record, by an expert reporter, at times in the soldier's own words, of how the injury occurred, the extent of the wounds, and the subsequent care of the patient. The reader is carried from the very firing line through first aid, the Mobile Army Surgical Hospital, "MASH," Base Hospital, and then back home. We feel certain that doctors and the laymen will find much to comfort them in reading what "MASH" means to the wounded and what it has done for morale and mortality.—Joseph Raphael

Ophthalmologic Diagnosis. By F. Herbert Haessler, M.D. Octavo of 387 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $8.00.

The author states that it is his purpose to select from the literature those ophthalmologic data that are necessary for diagnosis and to present them in an arrangement that makes them useful for the recognition of the nature of the ophthalmic disease.

The first five chapters are a well-composed discussion of the history and the routine physical examination of the eye, calling attention to the many abnormalities and evidences of disease that may occur in the eye and its functions.

The remainder of the book is devoted to elaborations of the various disturbances, always pointing toward the goal of accurate diagnosis.

The illustrations are diagrammatic and as such they are quite effective. This publication is novel in its presentation. It should prove itself of great value to students and general practitioners.—Mortimer A. Lasky

A Translation of Luigi Galvani's *De Viribus Electricitatis In Motu Muscular Commentarius*, Commentary on the Effect of Electricity on Muscular

[Continued on page 1996]

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[Continued from page 1995]

Motion. By Robert Montraville Green, M.D. Octavo of 97 pages, illustrated. Cambridge, Mass., Elizabeth Licht, 1953. Cloth, $4.00.

The subject of this review was born in Bologna, Italy, in 1737 and died in 1798. The number of his activities in many branches of science is legion, and many fundamental discoveries were made which have stood the test of time. His studies in animal electricity, specifically the electric excitability in the muscles of dead frogs, attracted wide attention. His interest in the study of electric phenomena is perpetuated in the name Galvanic Battery.

His report appeared in the seventh volume of the *Commentaries* published by the Bologna Institute of Sciences in 1791. Through the years this study always appeared in Latin. This is the first translation into English. One gets the impression that the translation is too literal; it does not read smoothly. Nevertheless, the subject matter is clearly and interestingly presented.

Galvani's career in teaching and research was a brilliant one that demanded all his time and effort to the exclusion of everything else. He lived and worked in the Napoleonic era. In the latter years of his life he became a noncomformist to the prevailing political trend of that period. As a result his positions in the University and the Institute were taken from him; this reduced him to dire poverty. He died in 1798. Thus, does history repeat itself through the ages.—S. R. Blatteis

Diseases of Women. By Robert James Crossen, M.D. Tenth edition. Quarto of 935 pages, illustrated. St. Louis, C. V. Mosby Co., 1953. Cloth, $18.50.

This textbook has stood the test of time. The first edition was published in 1907. This, the tenth, has been brought up to date by the younger Crossen. It is curious however that for treatment of dysmenorrhea, stem pessaries and operations for cutting wedges out of the posterior lip of the cervix, even into the peritoneal cavity, are still approved. And the McIntosh cup and belt pessary for genital prolapse is a real anachronism.

In every way a handsome textbook with a multitude of illustrations and references, it is recommended for practitioners and students.—Charles A. Gordon

Advances in Pediatrics. Editor, S. Z. Levine, M.D. Associate Editors, John A. Anderson, M.D., Margaret Dann, M.D., L. Emmett Holt, Jr., M.D., A. Ashley Weech, M.D., and Myron E. Wegman, M.D. Vol. VI. Octavo of 323 pages, illustrated. Chicago, Year Book Publishers, 1953. Cloth, $7.50.

This volume maintains the high standard set by previous publications of this series. It reflects the present interest in the problems of the fetus, the neonate, and the infant. A critical discussion of any one of these monographs would exceed the space allotted to this review.

Under Hemolytic Disease of the Newborn, the authors have summarized our present knowledge of Rh-Hr incompatibility as well as the more recent studies on ABO incompatibility. Although the immunologic and genetic aspects are fully discussed, the clinical phases are not neglected. The number of serologic tests is reduced to the minimum for clinical diagnosis and the indications for replacement transfusion and the various technics used are clearly described.

Dr. Ingalls presents suggestive clinical evidence in support of his contention concerning the importance of multiple stresses and trauma "concatination of events," occurring during the first trimester of pregnancy as a cause of congenital abnormalities in the fetus and the newborn, a suspicion which mothers and grandmothers have entertained for a long time. Dr. Ingalls suggests an elaborate program which should go a long way to clear up many "hunches" regarding the etiology of diseases and anomalies of the fetus and newborn.

This volume should have a wide circulation among medical students, pediatricians, and general practitioners.—Benjamin Kramer

The Epidemiology of Health. A New York Academy of Medicine Book. Iago Galdston, M.D., Editor. Octavo of 197 pages. New York, Health Education Council, 1953. Cloth, $4.00.

This is a most important and timely book. Based on the Eleventh Annual Eastern States Health Education Conference, it develops a concept that is new in general application, if not in formulation, of the epidemiologic approach to health. Fifteen chapters by authorities in a wide range of medical disciplines provide practical as well as theoretical illustrations of a "positive" epidemiologic methodology in relation to such diverse areas as tuberculosis, nutrition, and health education.

Together with a foreword by Howard Craig, an introductory chapter by Iago Galdston and three chapters on the "Evolution of the Epidemiology of Health" by John E. Gordon, they comprise a well-integrated, holistic pattern for the health promotion programs of an already recognizable future. This book is recommended to all students and practitioners of medicine, a virtual must for anyone concerned with a modern, yet classic perspective in the approach to disease and, especially, to health.—Robert W. Hillman

Anatomy and Surgery of Hernia. By Leo M. Zimmerman, M.D., and Barry J. Anson, Ph.D. (Med. Sc.). Quarto of 374 pages, illustrated. Baltimore, Williams and Wilkins Co., 1953. Cloth, $10.

This presentation is rather average. It does not read particularly easily. The diagrams for the most part seem the handiwork of an anatomist not a surgeon. This would reduce the value of the book to the practicing surgeon. For the medical student a textbook of anatomy is equally adequate. How it is possible to publish a volume on hernia without as much as listing the revered name of William Halsted in the index is beyond the comprehension of the reviewer.—Phillip E. Lear

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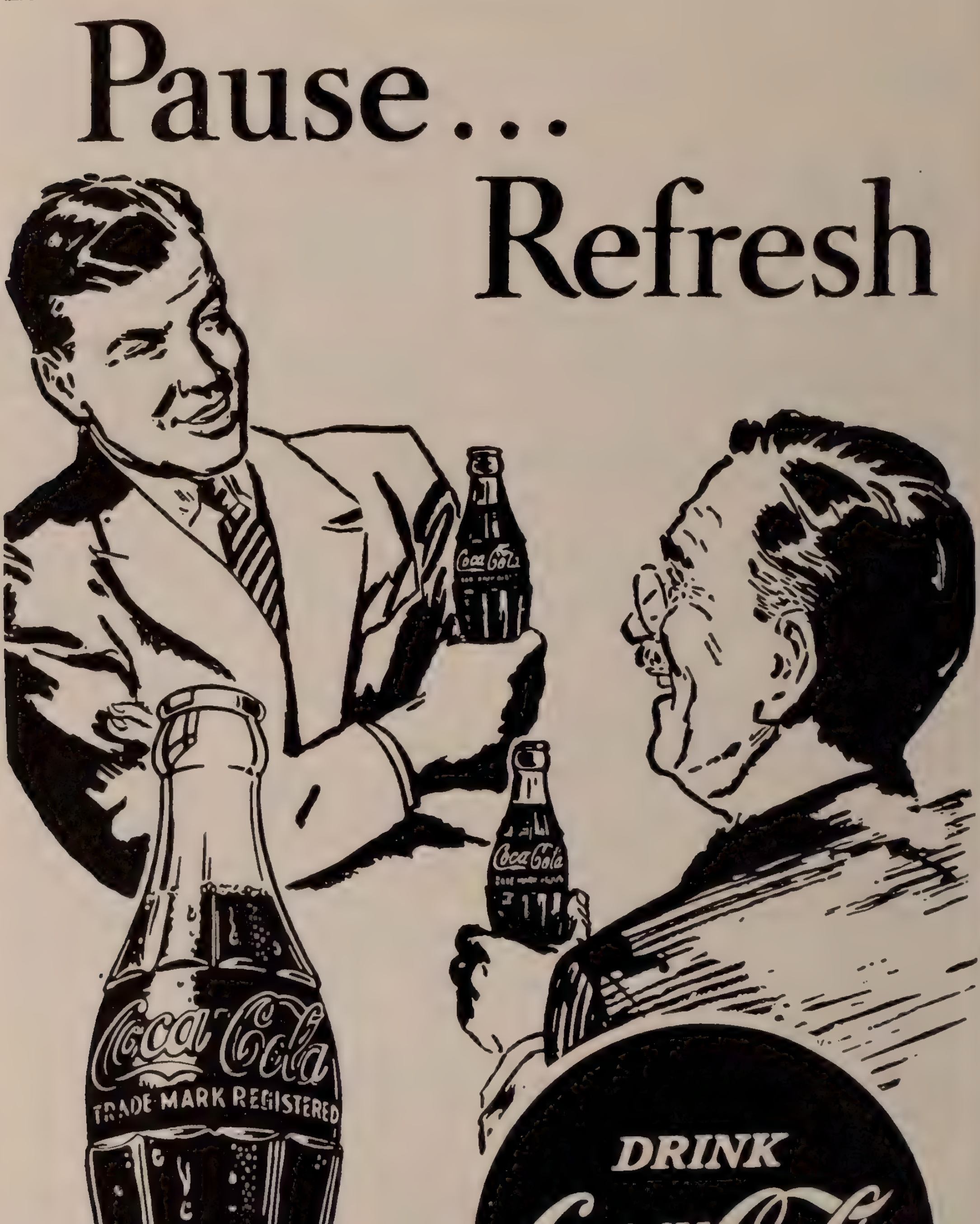
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1. Gourzis, J. T.; Sonnenschein, R. R., and Barden, R.: Alterations in Cardiovascular Responses of the Dog Following Rauwiloid, An Alkaloidal Extract of Rauwolfia serpentina, Proc. Soc. Exper. Biol. & Med. 85:463 (Mar.) 1954.

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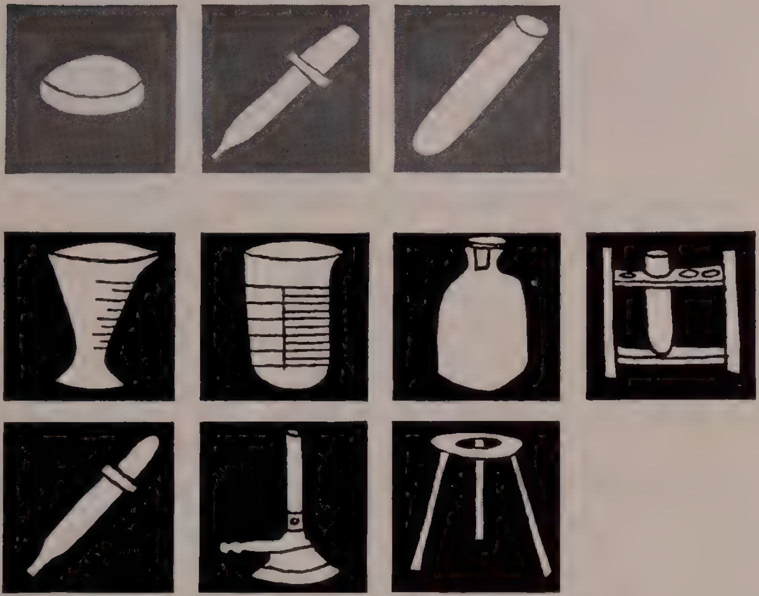

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2. Gray, C. H., and Millar, H. R.: Brit. M. J. *4824*:1361 (June 20) 1953.

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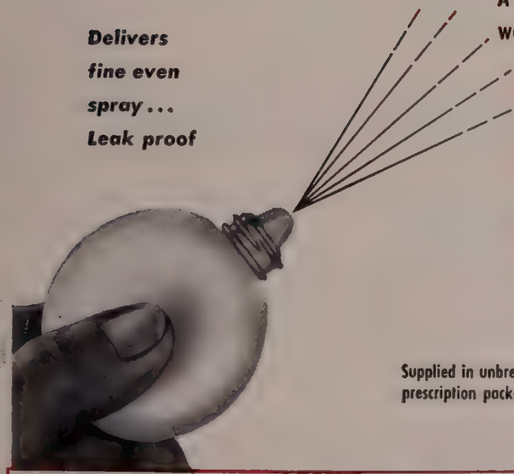

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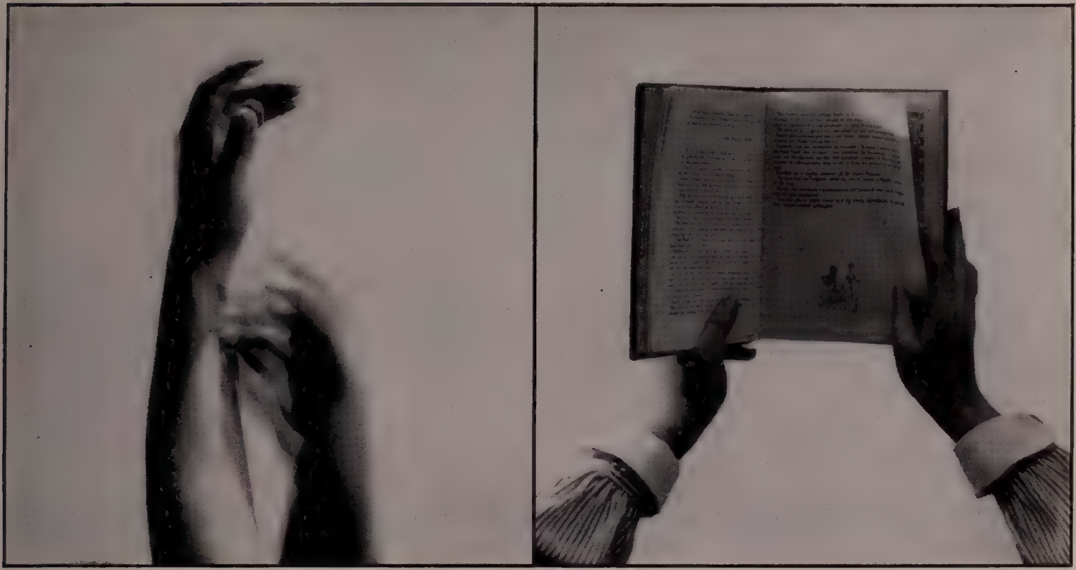

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the other is not disturbed by itching. The dermatitis venenata is permitted to clear rapidly and without annoying complications.

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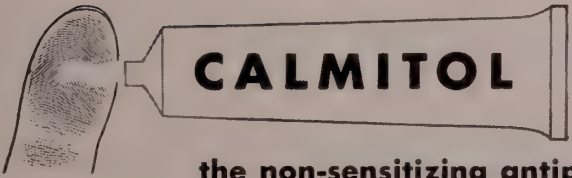

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1. Lubowe, I. I.: New York State J. Med. 50:1743,1950.

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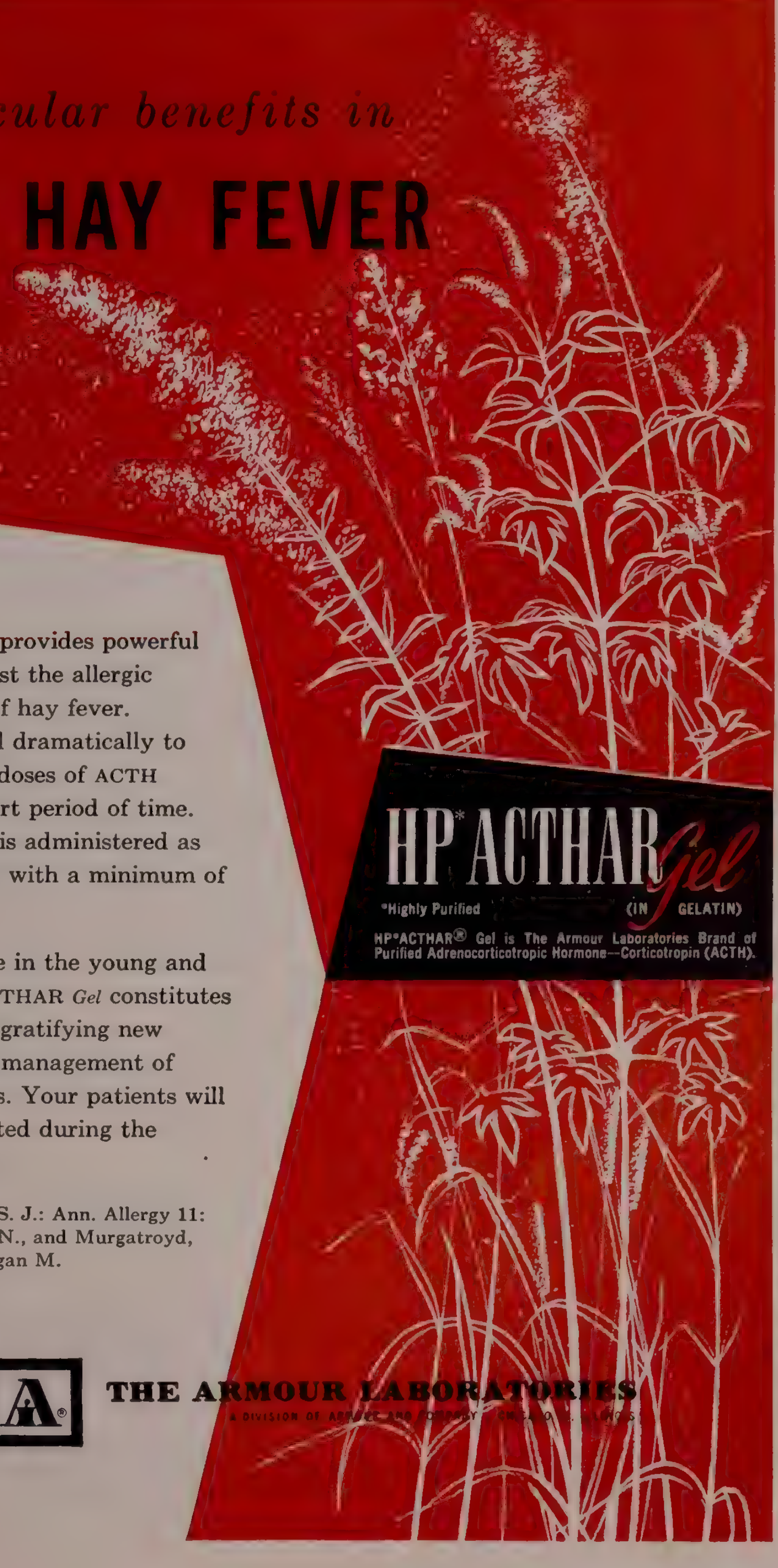

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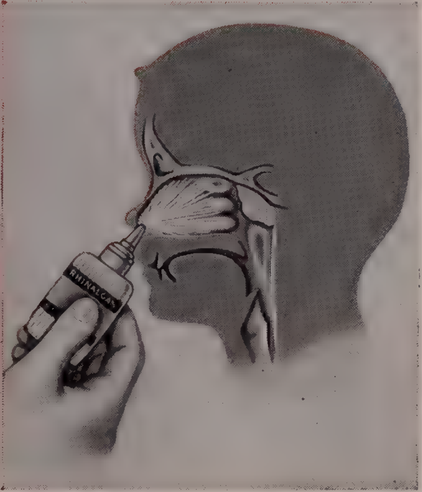

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2. Fox, S. L.: AMA Arch. Otolaryn., 53, 607-609, 1951.
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7. Kugelmass, I. Newton: Handbook of the Common Acute Infectious Diseases, 1949.

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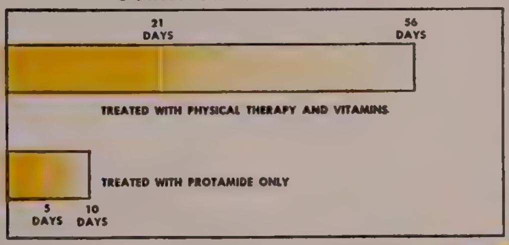

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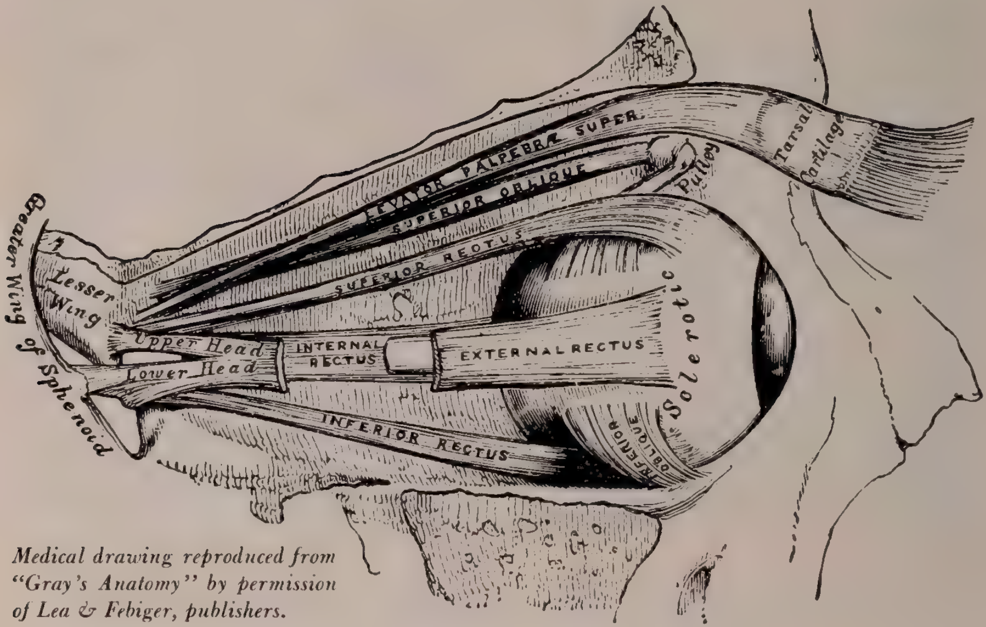
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[1] J. Pharmacol. Exper. Therap., 100:309, 1950.

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3 days' treatment…

AGE	SEX	Dura Symptoms before ACTH	(
11	F	24 hrs.	2
26	M	48 hrs.	12
48	F	96 hrs.	6
	M	72 hrs.	20
	M	5 days	1

otal Dose (units)	Days of Treatment	Initial Improvement
200	**3**	48 hrs
125	**3**	48 hrs
60	**2**	24 h
200	**3**	24
180	**3**	

nitial mprove-ment	Complete Relief	Remar
48 hrs.	96 hrs.	Gay &
48 hrs.	96 hrs.	Gay &
4 hrs.	72 hrs.	Gay &
hrs.	48 hrs.	Falk, Allen
	3½ days	& Bennet

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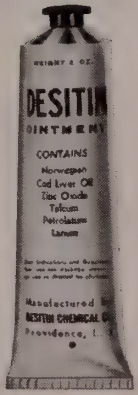

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1. Grayzel, H. G., Heimer, C. B., and Grayzel, R. W.: New York St. J. M. 53:2233, 1953.
2. Heimer, C. B., Grayzel, H. G., and Kramer, B.: Archives of Pediatrics 68:382, 1951.
3. Behrman, H. T., Combes, F. C., Bobroff, A., and Leviticus, R.: Ind. Med. & Surgergy. 18:512, 1949.
4. Turell, R.: New York St. J. M. 50:2282, 1950.

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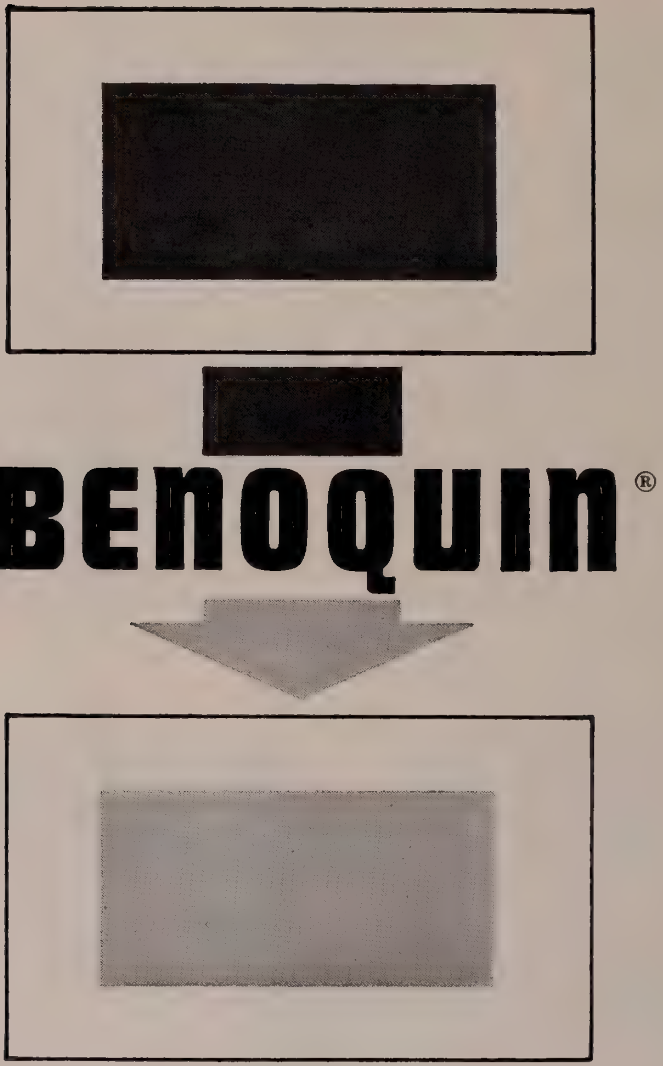

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1. Riseman, J. E. F. and Brown, M. G. Arch. Int. Med. 60: 100, 1937
2. Brown, M. G. and Riseman, J. E. F. JAMA 109: 256, 1937.
3. Riseman, J. E. F. N. E. J. Med. 229: 670, 1943.

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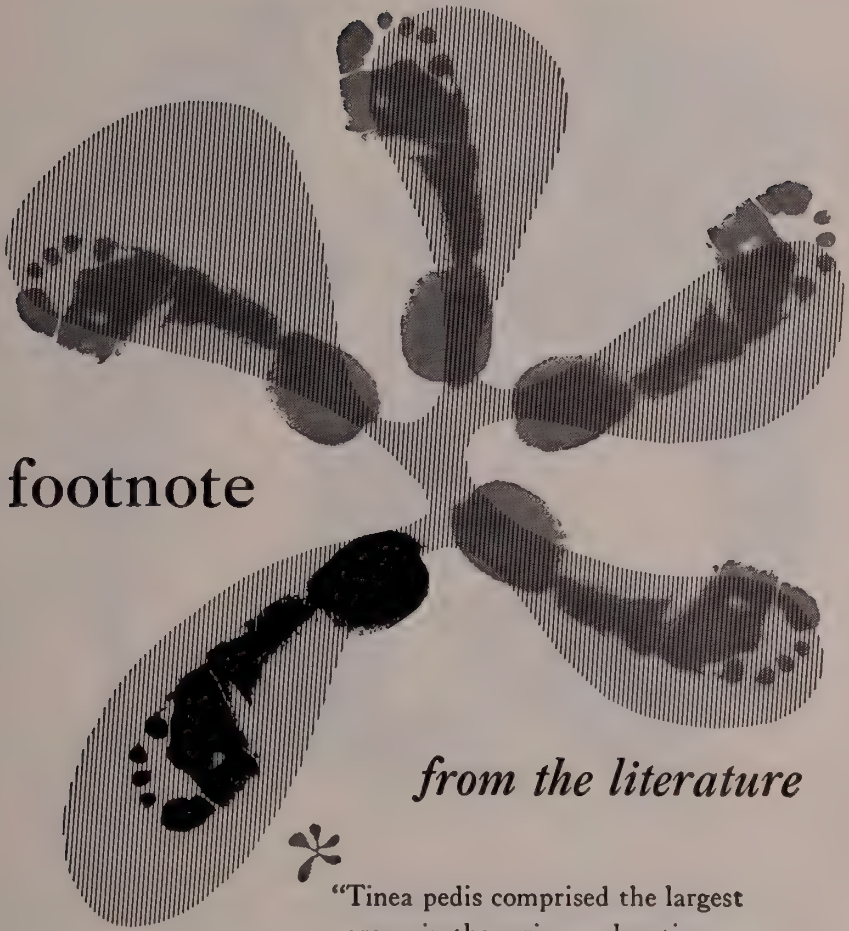

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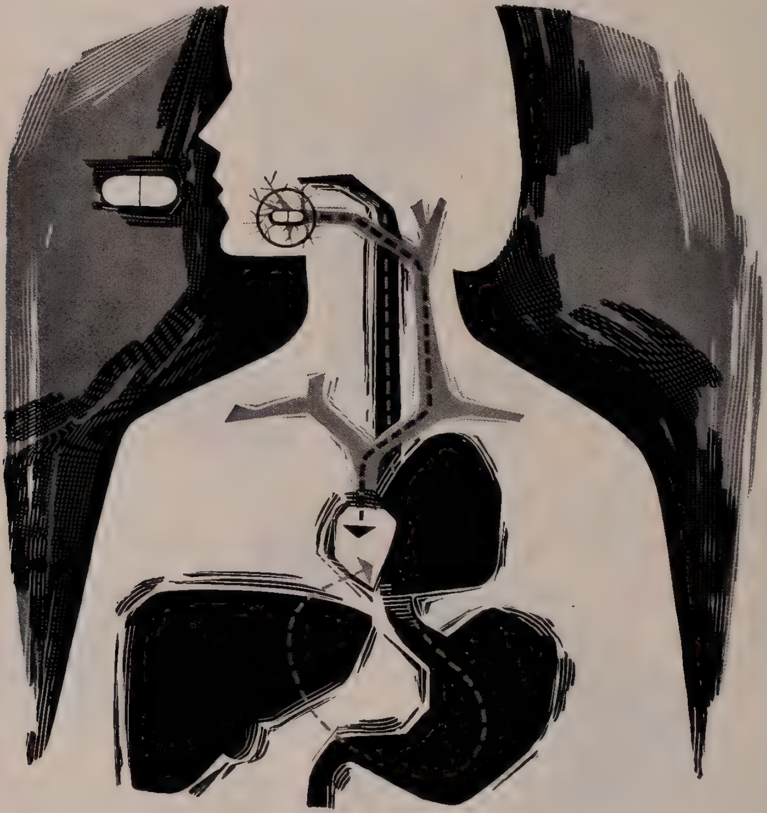

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[1] ÉSCAMILLA, R. F., AND GORDON, G. S.: J. CLIN. ENDOCRINOL. 10:248 (FEB.) 1950.

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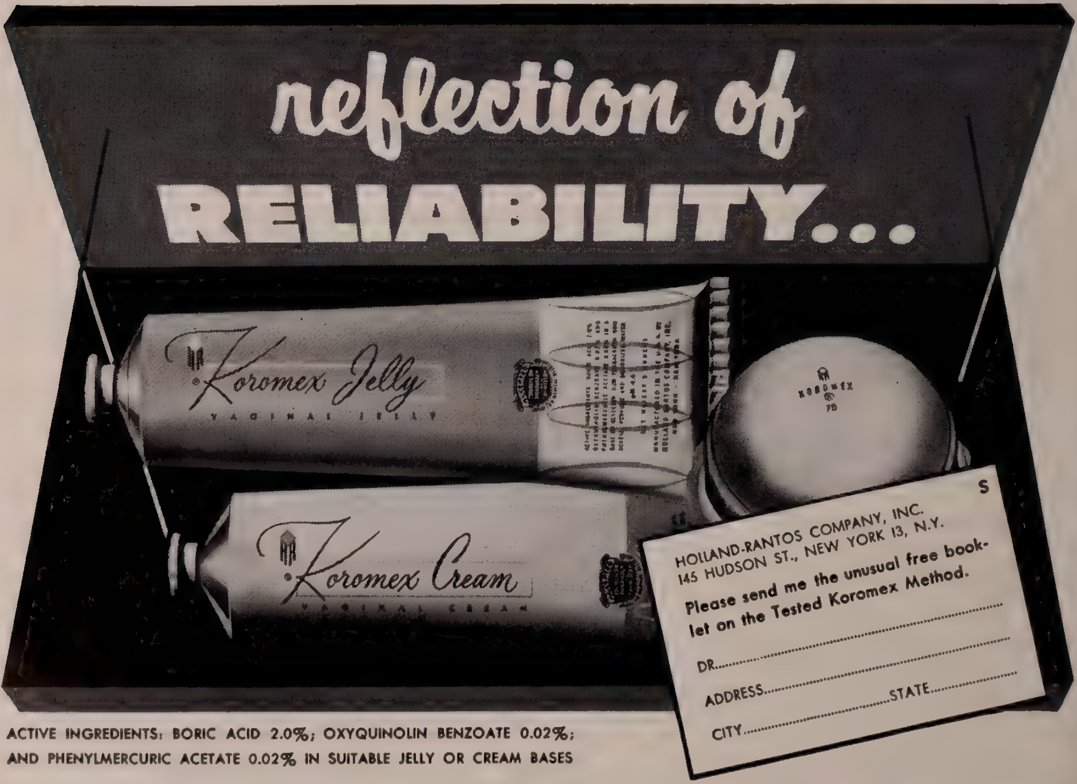

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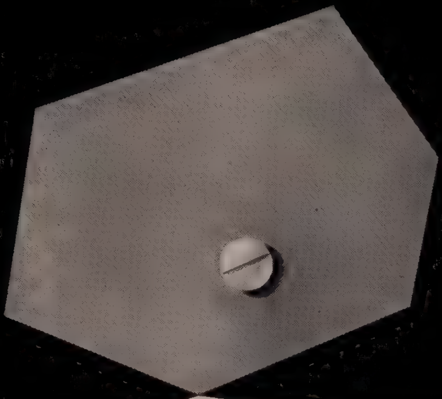

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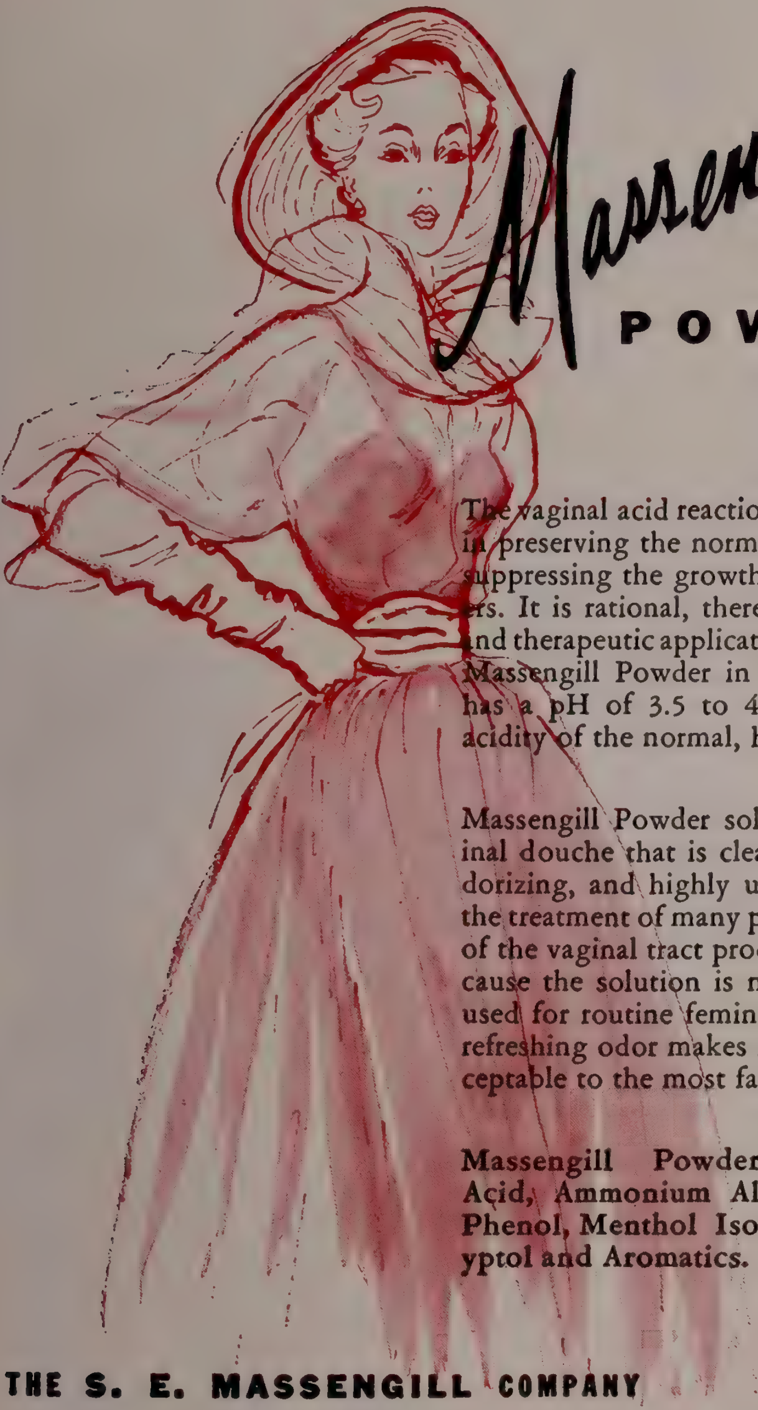

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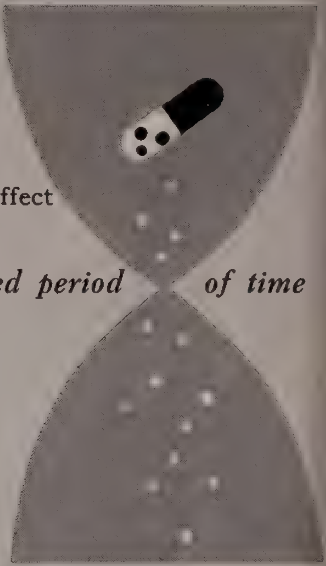

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EDITORIALS

New Procedure in Programming Annual Meeting Papers

Scientific papers read at the time of the Annual Meeting have, in the past, been published in the Journal by section arranged alphabetically. Thus all those on anesthesia would be published first, then those on chest diseases, dermatology, and so on. While this procedure had certain advantages, it was felt by the Publication Committee that a wider interest in each issue of the Journal could be attained by publishing one or more papers from several sections in each issue, thereby creating a variety of reader interest not formerly possible under the strictly alphabetic rule.

The editors and the Committee hope that this change will permit earlier publication of some papers which, under the old system, would have to wait as long as eight or nine months to appear in print. Under the new system the membership will find in each issue some scientific article on a specialty topic of interest not only to the specialists in that field but also to the general practitioner.

Panel discussions, round tables, and postgraduate lectures will continue as formerly to be published as a unit or symposium. It remains, however, to be said regretfully that some lecturers and discussants fail to have prepared papers at the time of the meeting. Obviously it is impossible for the JOURNAL to publish what does not exist. An effort is made by the JOURNAL staff to persuade such a participant to send in a paper after the meeting is over, but with little success, usually. Possibly lecturers and discussants are not always mindful that although they speak to relatively few members at the time they deliver their papers, they have a potential readership of some 25,000 persons when their papers are published in the JOURNAL. It might be helpful if chairmen of sections and sessions emphasize this more strongly to their lecturers in subsequent years.

This year, experimentally, an attempt has been made to tape record some postgraduate lectures and other meetings in order to make available material that would otherwise not be published. The process of transcribing and editing this material is lengthy. It remains to be seen whether or not it will be successful. A report will be made at a subsequent time to the membership. It is hoped that by this means much valuable discussion may be salvaged for the instruction of our readers.

Audio-Digest Foundation

A new modality for postgraduate teaching and distribution of the latest medical information is being developed by the California Medical Association on a nation-wide basis. National distribution of tape recordings of the latest medical information, a new method of communication, has been undertaken by the California Medical Association through its recently formed nonprofit subsidiary, Audio-Digest Foundation.

Using tape-recorded material, the Foundation makes available to doctors everywhere three "postgraduate services" designed to save their time while increasing the scope of their practice-useful knowledge. The basic service is the weekly issuance of a one-hour tape for general practitioners. On it are recorded 20 to 30 abstracts of the best in current literature embracing all medical fields. Articles are screened by a board of medical editors headed by Edward C. Rosenow, Jr., M.D., Pasadena, editor in chief. As a corollary service, Audio-Digest offers semimonthly digests in the fields of surgery, internal medicine, and obstetrics and gynecology. The third service is lectures and panel discussions on one-hour reels for individual or group purchase. Many of these lectures are illustrated by film strips made from the speaker's own slides.

"One of the most popular features about these recordings," Dr. Rosenow said, "is that they are of definite, practical, and immediate value to the physician. Much of the literature digested would not ordinarily come to the busy practitioner's attention. And the advantages of hearing world-renowned authorities in medicine and surgery at his own hospital staff meetings or in his own living room are obvious."

Reserve funds accruing from the distribution of these tapes are specifically earmarked by the California Medical Association for distribution among the nation's medical schools, through the A.M.A.'s Education Foundation.

Offices for Audio-Digest Foundation are at 800 North Glendale Avenue, Glendale, California. Mr. Jerry L. Pettis is executive director.

This new teaching medium should be of the greatest usefulness to busy doctors and perhaps later may prove to be an item of interest to improve attendance at meetings of smaller county societies. For instance, in addition to a local "live" program, an excellent "recorded" feature could be added using Audio-Digest material, all to the benefit of the A.M.A.'s Education Foundation.

Incidentally, some of the lectures and discussions at the 148th Annual Meeting this year of the Medical Society of the State of New York were tape-recorded by the staff of the JOURNAL to preserve for publication the remarks of speakers who do not have formal papers, also discussion from the floor which would otherwise be lost material. In this manner members who cannot, for one or another reason, attend those section and session meetings may read them in the NEW YORK STATE JOURNAL OF MEDICINE during the ensuing year. This is another improvement in the reporting service of the JOURNAL which should increase its usefulness to the membership through the years. Tape recording, it seems to us, has just begun to serve the medical profession. It is our understanding that a development of this art is under way whereby pictures also may be put on tape magnetically, requiring no chemical treatment and being instantly available for reproduction. Both sound and pictures may be erased and the tape recovered for reuse. This development of the art may well change the whole course of postgraduate teaching in the near future.

Editorial Comment

What Our Older People Do. An interesting and informative study has been made by the Metropolitan Life Insurance Company of the occupations of people past sixty-five years of age. It is revealed that a relatively large proportion of these are still actively at work.[1]

> However, the occupations typical of this period of life are somewhat different from those at the main working ages. In all age groups the people employed in industry far outnumber those in agriculture, but as the older ages are reached the proportion engaged in industry decreases while that in farming rises. As one would expect, the proportion self-employed in both industry and agriculture is higher at the older ages than at the younger. At the same time, many people who continue in employment in their later years reduce their activity to part-time work.

Shakespeare observed that "Crabbed age and youth cannot live together,"[2] and that may have been so in his time, but latterly, if news reports can be believed, it is youth that is more likely to be crabbed and old age going strong. Plutarch in his Roman Apothegms (25) reported Epaminondas as saying of a good man that died about the time of the battle of Leuctra, "How came he to have so much leisure as to die, when there was so much stirring?"

Thus the Metropolitan report of today was somewhat anticipated at least as far back as Plutarch's time. Says the *Bulletin* further:

> Contrary to the general impression that age sixty-five usually marks the end of productive life, fully three fifths of the men at ages sixty-five to sixty-nine are still employed. The proportion is almost two fifths at ages seventy to seventy-four, but drops to one fifth at ages seventy-five and over. For women, the corresponding proportions are, understandably, much smaller.
>
> During the most productive years of life—under age sixty-five—about nine tenths of the men in the labor force are engaged in activities outside of agriculture. At ages sixty-five and over, this proportion falls to about three fourths, reflecting the relatively greater withdrawal of industrial than agricultural workers from the labor force after age sixty-five. Among those who continue in industry past the threshold of old age, wage and salaried workers decrease in relative importance while the self-employed account for an increasing proportion of the total. Thus, the self-em-

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[1] Statistical Bull., Feb., 1954, vol. 35, no. 2.

[2] The Passionate Pilgrim, XII.

> ployed in industry constitutes only one tenth of those under age sixty-five, but the proportion rises to one fourth among those working at ages seventy-five and older. A similar situation exists for men engaged in agriculture. . .

The increase in the chances of survival to the older ages has brought into sharp focus the social and economic problems of the elders in our population. Although the average age of retirement, according to Social Security records, is about sixty-nine years, people who reach that age still have an expectation of life of about twelve years. To make adequate provision for this period calls for a program of savings and careful planning during the productive years.

Apparently one can count now only on the years after sixty-nine, those remaining one hundred forty-four months of average life expectancy for the indulgence of any remaining desire for contemplation.

Good or bad? Vote for one only.

Notice to Automobile Drivers. The Bureau of Motor Vehicles of New York State has announced plans following new legislation passed this year[1] to tighten health restrictions regarding the issuance of New York State drivers' licenses in an effort to keep physically risky drivers off the highways.

Henceforth, a motorist who has suffered fainting spells, diabetes, strokes, Bright's disease, excessive high blood pressure, or any heart ailment at any time during his life will be required to supply a physician's statement that he "is capable of operating a motor vehicle on the highways in safety."

James R. Macduff, State Motor Vehicle Commissioner, said the new restrictions went into effect on April 1 when renewals begin on 250,000 chauffeur licenses which expire May 31. They also will be imposed on applicants for new licenses and on persons applying for renewals of their private operators' licenses as they expire.

When an applicant has suffered any of the six afflictions named above within three years previous to his filing date, a permit will not be issued until the case has been reviewed by the bureau's safety division in Albany or New York.

All cases will be reviewed eventually, Mr. Macduff said, and if the physician's statement raises any question as to the individual's capacity to drive safely, a hearing will be scheduled, and the license may be suspended.

While these measures seem to be in the public interest, the physician supplying the required statement is seemingly confronted with a difficult choice. He is reportedly required to state that the applicant "is capable of operating a motor vehicle on the highways in safety." That seems to us to be a little more than anyone, physician or not, should be asked to do without qualification of one sort or another.

Former controls are to be continued, reportedly, to which the new ones will be added.

> Previously, applicants have been required only to indicate whether any disability had been suffered during the three-year period between the issuance of licenses. Strict controls over the issuance of licenses to persons suffering defects of hearing or vision, other physical disabilities, or deformities or a record of mental illness will be continued, Mr. Macduff said.
>
> No mention of penalties to be imposed upon persons found to have falsified their answers to the health questions was contained in today's announcement. Such persons, however, could be subject to prosecution for falsifying a statement and would lose their licenses automatically.
>
> The stricter measures, Mr. Macduff said, were needed to "reduce traffic hazards and hold down the rising toll of death and injuries on the highway."

On the whole, tighter restrictions for drivers seem to be a step in the right direction in view of the frightful and wholly unnecessary slaughter on the highway.

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[1] *Herald Tribune*, Mar. 26, 1954, p. 21.

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*Zelman, S.: Arch. Int. Med. *90*:141, 1952.

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SCIENTIFIC ARTICLES

The Hypometabolic State: A Clinical Entity

B. A. WATSON, M.D., CLIFTON SPRINGS, NEW YORK

(*From the Metabolic Service of the Clifton Springs Sanitarium and Clinic*)

A "TWILIGHT ZONE" exists between a normal individual and one with true hypothyroidism or myxedema which can be easily overlooked. The term "hypometabolic state" seems an appropriate designation for patients in this transitory phase between normalcy and myxedema. The author's interest in this condition was stimulated by McKean[1,2] during and after World War II. It is the purpose of this communication to report some of the more important facts and diagnostic criteria gained from the experience of attempting to differentiate the hypometabolic state and true hypothyroidism, or myxedema, over the seven-year period 1947 to 1953 inclusive.

Material

INCIDENCE AND SEX RELATIONSHIP.—During the years 1947 to 1953 inclusive a total of 14,998 patients was admitted to our medical service. During this time the diagnosis of hypometabolic state or mild hypothyroidism appeared 423 times in our records, an incidence of 2.8 per cent. However, on carefully reviewing all the records and eliminating all obvious cases of postoperative and previously demonstrated hypothyroidism, there were 201 cases, or 1.3 per cent of the total admissions, suitable for inclusion in this study. There were 154 females (1.03 per cent) and 47 males (0.3 per cent) in the group reported herewith.

AGE AND DECADE OF OCCURRENCE.—The average age of this group was 44.22 years (ages ranged from seventeen to seventy-nine years). Table I shows the incidence according to the decade of life of both males and females.

TABLE I.—INCIDENCE ACCORDING TO DECADE OF LIFE

Decade of Life	Number of Females	Number of Males
15 to 20 years	6	1
21 to 30 years	22	5
31 to 40 years	36	8
41 to 50 years	40	15
51 to 60 years	35	12
61 to 70 years	13	6
71 to 79 years	2	..
TOTAL	154	47

TABLE II.—SYMPTOMS IN ORDER OF OCCURRENCE

Symptoms	Number of Patients Females	Number of Patients Males	Per Cent
Morning fatigue and evening pep	131	36	83.0
Cold intolerance	95	24	59.4
Brittle or scaling nails	89	22	55.2
Dry skin	84	18	50.7
Lack of perspiration	77	21	48.7
Mild afternoon fatigue	39	19	28.7
Loss of libido	9	7	7.9
Menstrual disorders (in 108 menstruating females)	59	..	54.6
Irregular menses	37	..	...
Dysmenorrhea	22	..	...

Symptoms and Physical Findings

SYMPTOMS.—The commonest symptom and oftentimes the presenting symptom among this group was fatigue occurring in the morning, usually after a sound sleep. As the day passed, the patient felt progressively better except that in some instances midafternoon fatigue was noted. At night the patient felt the best of any time during the twenty-four-hour period. Table II lists

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, General Sessions, May 10, 1954.

TABLE III.—Admitting Complaints of 92 Cases

Complaint	Number of Cases
Fatigue	40
Gastrointestinal	22
Nervousness	7
Cardiac	6
Generalized aching	5
Skin irritation	3
Chest pain	3
Dysmenorrhea	2
Headache	2
Edema	2
Total	92

TABLE IV.—Patients Analyzed According to Weight and Sex

	Female	Male	Total
Overweight	45	20	65
Normal weight	83	21	104
Underweight	24	8	32
Total	152	49	201

the more common symptoms that were noted in the order of their occurrence.

Table III shows an analysis of the admitting complaints of 92 consecutive cases of the hypometabolic state.

The records of 192 patients accurately noted the onset of symptoms. The duration from onset to diagnosis averaged thirty-two and one-half months. Sixty-one patients had symptoms for one year or less with an average of 5.3 months (range from two to ten months). In 131 patients with symptoms present for more than one year the average duration was 3.9 years (range from one to eighteen years).

Physical Findings.—Listed below are the average and range of the awakening temperature, pulse, and blood pressure:

	Average	Range
Temperature	97.7 F.	96 to 98.6 F.
Pulse	64	48 to 88
Blood pressure	124/79	80/56 to 190/120

Table IV shows the patients divided according to weight and sex. Under and overweight are considered as 10 per cent or more under or over standard height-weight tables.

Basal metabolic rate determinations were made on a Sanborn metabulator machine after a twelve-hour fast and sleeping in the hospital the night preceding the test. Basal metabolic rates of 182 patients averaged minus 13. The range was minus 27 to plus 10. A total of 159 patients had basal metabolic rates of 0 or below and averaged minus 14. There were 23 above 0 with an average rate of plus 5.

The average blood cholesterol in 75 patients was 261 mg. per 100 cc., with a range from 121 to 465.

Commonly Associated Diseases

The more commonly associated diseases found in hypometabolic patients were as follows: Fifty-nine of 108 women who were menstruating had menstrual difficulties, 37 had irregular menses, and 22 had dysmenorrhea. All had symptomatic improvement with thyroid therapy. Three patients who had been unable to become pregnant over a period of two to four years became pregnant with adequate thyroid therapy.

Diagnosis

The diagnosis of the hypometabolic state should be considered when a patient complains of morning fatigue and evening alertness to the point where they frequently state, "I wish the day was beginning when I go to bed." If, in addition, a history of two or more of the following symptoms are present, e.g., cold intolerance (which may be indicated by habitual chilliness, need for extra blankets, desire for high room temperature, cold and often numb hands and feet) as well as brittle nails, dry skin, lack of perspiration, or menstrual difficulties (Table II), the disease should be suspected. When the physical examination confirms the presence of some or all of the symptoms and, in addition, a slow pulse and when a low awakening buccal temperature is found, the diagnosis becomes more secure. The basal metabolism done under truly basal conditions usually, although not always, may give partial if not complete confirmation in that it usually is at the lower limits of normal. The low serum-bound protein iodine is an excellent laboratory test if available. However, this test is not generally available. The blood cholesterol in our study was considered valueless as an adjunct to the diagnosis. There was no constant correlation between cholesterol levels and the basal metabolic rate.

Radioactive I^{131} has been used in our clinic on some of our patients, but it is too soon to make any positive statement as to its true value in the diagnosis of the hypometabolic state. This procedure too is available only in the larger medical centers, and most of the patients we are discussing are frequent visitors in the doctor's office. Clinical acumen still will make it possible to diagnose this clinical entity correctly. Escamilla[3] points out the value of using thyroid for a therapeutic trial in cases in which "the underlying hypothyroidism is mild or dubious."

Treatment and Results

Practically all patients had the typical fatigue syndrome and two or more of the other prominent symptoms and physical findings of the hypometabolic state before thyroid therapy was considered. Contraindications were acute cardiac failure and recent coronary occlusion.

The dosage employed in our series varied between 2 and 8 grains of desiccated thyroid (Armour's) daily. If the symptoms were relatively mild and the basal metabolic rate above minus 10, the initial daily dose was usually 1 grain of thyroid; if the symptoms were moderately severe and/or the BMR was below minus 10, thyroid, 1 grain after breakfast and lunch, was given. If the BMR was below minus 20 and the symptoms severe, the initial thyroid dose was 2 grains after breakfast and 1 grain after lunch. Actually, the severity of the symptoms rather than the BMR determines the amount of thyroid given. Thus a patient with mild symptoms and a BMR of minus 15 might be given only 1 grain of thyroid daily, and a patient with severe symptoms and a BMR of plus 5 might be given 2 or 3 grains of thyroid as the beginning daily dose. It has been our experience that if thyroid medication is given only after breakfast and lunch, untoward symptoms of medication are less likely to occur. A small number of patients in our series complained of thyroid upsetting them so that Proloid was substituted in the same dosage. Because it takes from ten days to two weeks for the full effect of the thyroid to occur, the initial dose was usually held constant for that length of time. Later it can be increased or decreased as clinical judgment indicates. However, if at the end of three or four days of thyroid therapy, the patient reports marked symptomatic relief, the physician should re-examine the patient to ascertain that the diagnosis of the hypometabolic state is correct.

Results of treatment were observed over periods varying from two months to four years. Of 201 patients, 117 recorded disappearance or marked improvement in their symptoms. A control group of 22 improved and felt well, and they were then told to discontinue medication; within one month they had a return of their symptoms, however, and thyroid medication was again instituted. Twelve were not improved, and in 50 no record of the results of treatment was available, or they had been observed less than two months.

The recognition of the hypometabolic state as a contributory factor to the production of the psychoneurotic or anxiety state in patients admitted to our neuropsychiatric service increased in proportion to the awareness of our psychiatrists to this syndrome. Thus, in 1947 to 1949 inclusive, hypometabolism was diagnosed in conjunction with other psychiatric diagnoses an average of four times each year. In 1950 to 1953 it averaged 15 times each year. It was found that thyroid therapy proved a valuable adjunct to psychiatric therapy in this group.

Anemia occurred in five patients in our series. It was of the hypochromic type and was resistant to iron and liver. However, the addition of desiccated thyroid corrected the anemia in all cases.

Case Reports

Before discussing this paper I should like to present three rather typical cases of the hypometabolic state, each one of which is fairly characteristic and occurred secondary to other diseases.

Case 1.—A female, age thirty-six, was admitted July 21, 1953, on the recommendation of her psychiatrist because of the excessive use of alcohol, nervousness, and diabetes. She had been a diabetic for ten years and was fairly well controlled by diet and insulin except when using alcohol, which she said had become increasingly necessary because of excessive social demands and marked fatigue which was most noticeable during her first few awakening hours.

She also had had marked cold intolerance for four years.

Physical examination revealed her height as 5 feet 8 inches, weight 143 pounds, blood pressure 110/84, and pulse 54. The examination was negative except for slight enlargement of the thyroid isthmus and a dry skin. The BMR was minus 17.

Therapy consisted of diet, insulin, and desiccated thyroid, 2 grains after breakfast and 1 grain after lunch. There was marked improvement of fatigue and dryness of the skin. Her cold intolerance disappeared; she achieved good diabetic control and stopped completely the use of alcohol. She was last seen in February, 1954, at which time she was feeling well.

Case 2.—A male, age twelve, was admitted January 11, 1954, with complaints of listlessness and lack of energy since September, 1953. In addition, on December 22, 1953, the patient had noted the onset of increased thirst, increased appetite, increased urination, and weight loss.

Physical examination revealed a height of 5 feet 4 1/2 inches, weight 141 pounds, blood pressure 102/62, and pulse 52. Laboratory examination revealed a fasting blood sugar of 260 mg. per cent and 4 plus glycosuria. He was treated by a restricted carbohydrate, low-fat diet, and in spite of his fasting and postprandial blood sugars returning to a normal level by January 29, 1954, he continued to be listless, markedly fatigued, and sensitive to cold. These symptoms were attributed to his diabetes.

However, when continuing normal blood sugars for two months still did not make the patient feel normal, a BMR was done and found to be minus 31. A diagnosis of coexisting hypometabolic state was made. Therapy consisted of diet and desiccated thyroid, 2 grains after breakfast and lunch. One month later (April 24, 1954) he was relieved of all of his hypometabolic symptoms and felt well.

CASE 3.—A male, age fifty-five, was admitted May 5, 1948, with history that since fracturing his right leg in 1943, he had had an anemia that did not respond to iron, liver, etc. He had noted fatigue since 1943, but several months prior to his admission he had noted, in addition, a markedly dry skin, lack of perspiration, cold intolerance, brittle nails, and loss of hair.

Physical examination revealed an obese, pale male, height 5 feet, 5 inches, weight 182 pounds, blood pressure 145/100, pulse 52. Laboratory tests revealed red blood cells 3,850,000 and hemoglobin 68 per cent. The BMR was minus 23.

Therapy consisted of weight reduction and desiccated thyroid, 2 grains after breakfast and 1 grain after lunch. In September, 1948, he had lost weight; his fatigue, dry skin, and cold intolerance had disappeared, and his hemoglobin had risen to 75 per cent. His blood pressure was 130/80. He continued on thyroid and was last seen on April 13, 1954; weight 148 1/2 pounds, blood pressure 130/80; symptomatically cured of his previous complaints; red blood cells 3,600,000, hemoglobin 75 per cent; taking desiccated thyroid 1 1/2 grains daily.

Comment

The fact that the average duration from the onset of symptoms to diagnosis of the hypometabolic state in our series averaged thirty-two and one-half months indicates that the disease is not being thought of. Case 3 demonstrates a hypochromic anemia of five years duration which did not respond to the usual therapy for the anemia, and yet the diagnosis of the hypometabolic state had not been considered. The incidence of 1.3 per cent among 14,998 consecutive medical admissions indicates that the disease is not uncommon. This figure compares favorably with Christman's[4] of 1.2 per cent.

The diagnostic criteria have been presented. It is felt that if a more careful history and physical examination are done, more cases will be recognized and treated. It will also be found that many of our chronically complaining patients, whom we have labeled hypochondriacs, anxiety tension states, psychoneurotics, etc., have this condition and respond well to thyroid therapy (Case 1). Escamilla[3] has pointed out the value of a therapeutic trial with thyroid, and Johnson *et al.*[5] have demonstrated that the thyroid gland usually returns to normal function two or three weeks after cessation of therapy so that permanent damage cannot be done by the careful administration of thyroid. However, the injudicious use of thyroid therapy without proper regard for the diagnostic criteria of the hypometabolic state is to be condemned as Greer[6] has pointed out the dangers of depressing thyroid function.

The prevalence of the hypometabolic state in the fourth, fifth, and sixth decades of life (Table I) is important, and it is felt that many geriatric patients have this condition which is undiagnosed and would definitely be improved by adequate thyroid therapy.

The importance of considering the hypometabolic state in conjunction with psychiatric patients has been pointed out, and Case 1 is a good example. Asher[7] has described dramatic results in 11 of 14 patients with severe mental disease treated over a period of four years.

Starr[8] has recently pointed out that the recognition of hypothyroidism is made difficult for the physician because the term does not necessarily refer to the pathologic condition of the gland but rather to an insufficiency of thyroid hormones in the tissues. Thus he advocates the serum-bound protein iodine determinations as the method of choice for detection of hypothyroidism. One must agree with Starr's thesis; however, there are few institutions capable or willing to carry out this test, and one certainly should not defer a tentative diagnosis and therapeutic trial with thyroid in patients suspected of this disease.

Finally, it must be recognized that the hypometabolic state can coxeist with other diseases (Cases 1 and 2), and if it is unrecognized and untreated, complete recovery of the patient will not occur.

Conclusions

1. The hypometabolic state occurred in 1.3 per cent of 14,998 patients admitted to a general medical service from 1947 to 1953 inclusive.
2. The important findings in 201 patients with this disease have been presented.
3. While not uncommon, this clinical entity is frequently overlooked; the time from onset of symptoms to diagnosis averaged over two and one-half years in our study.
4. The most important single symptom is marked morning fatigue and increased evening alertness. Other associated symptoms may be cold intolerance, brittle nails, dry skin, and in the female menstrual disorders. Common physical signs are bradycardia, lowered awakening buccal temperature, and dry skin.
5. The basal metabolic rate, while usually in the extreme lower range of normal, may not be diagnostic.
6. Physicians should consider the diagnosis of hypometabolic state before labeling a chroncially complaining patient as a psychoneurotic, hypochondriac, anxiety state, etc.
7. In the geriatric age group this condition is important since its highest incidence is in the fourth and fifth decades of life.
8. The hypometabolic state can coexist with other diseases, and if unrecognized and untreated, the patient will continue to have many complaints.
9. Therapeutic trial with desiccated thyroid can be judiciously tried for a period of one month in certain selected patients having definite clinical signs and symptoms of the disease.
10. Regardless of the basal metabolic rate results, the patient and not the test should be treated, e.g., once the diagnosis is established, give enough thyroid to alleviate the symptoms, regardless of the results of the basal metabolic rate.

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Unusual Book Tells Doctors' Stories

A revealing and amusing glimpse into the reasons men and women become doctors is provided in the newly-published *Why We Became Doctors*, by Dr. Noah D. Fabricant, Chicago physician and editorial associate of the *Journal of the American Medical Association.*

Because even surveys by the medical profession itself have ignored the question of motivation, Dr. Fabricant's collection of essays by 50 distinguished and articulate doctors fills a curious gap in the story of medicine. It includes some surprising answers by some surprising people: the elder Oliver Wendell Holmes, who thought he would make "a tolerable physician," and writers W. Somerset Maugham, A. J. Cronin, and William Carlos Williams, who found "life in the raw" and "the excitement of the chase" in medicine.

The book gives, in their own words, the stories of Dr. Blackwell, who once was "foolishly embarrassed" by all illness; of Havelock Ellis, who first wanted to be "nothing at all," and of a Russian who as a child cared for ailing storks, pigs, and chickens.

"This book, in short, is intended not only for doctors, medical students, and the many thousands of young men and women who eagerly look forward to a career in medicine, but also for the vast number of general readers everywhere who would like to know why and how their doctors came to be what they are," Dr. Fabricant says.—*A.M.A., June 4, 1954*

Marriage Counseling as a Medical Responsibility

IRVING J. SANDS, M.D., BROOKLYN, NEW YORK

(From the Department of Neurology, Columbia University College of Physicians and Surgeons, and the Neurological Institute, Columbia-Presbyterian Medical Center, New York City)

MARRIAGE, next to birth, is the most important event in human lives. It is the socially approved method for the propagation and preservation of the race. It is the accepted means of gratification of the most powerful of instincts and emotions. Marriage leads to the establishment of a home and the raising of a family, the recognized basic social unit. The chief attraction of members of the opposite sex is biologic in nature. Boy meets girl, and there ensues a chain of events which includes courtship, engagement, marriage, the building of a home, bearing children, the marriage of children, and retirement, thus completing the social and biologic cycle of a person's life.

This is a purely theoretic summary of a happy marriage. Broadly speaking a good marriage implies the gratification of the needs of each party to the marriage. It means working together, playing together, planning together, and participating together in most activities. It means implicit faith and confidence in each other's fidelity, loyalty, and devotion. It means working for the happiness of the partner and in every act thinking of what it will mean to the health and gratification of the partner's needs in their broadest sense. It implies tolerance and understanding, patience and devotion, even in the face of frustrating and disappointing experiences. A happy marriage means a stable family setting for the wholesome emotional development of the children and for the training of the next generation in healthy, wholesome interpersonal relationships. A happy marriage means the establishment of a home where respect for law and order and consideration for the next human's rights and privileges are developed and where a wholesome and healthy attitude to life and all of its vicissitudes may be developed. The password of a successful marriage is "together"—love together, live together, plan together, work together, and play together.

While it is said that marriages are made in heaven, they are contracted on earth and are subject to many mundane influences. The success of any given marriage will be in direct proportion to the degree of maturity of the principals involved. The personality of each individual will depend upon the physical, intellectual, psychologic, emotional, and instinctual development as modified by home environment, education, and training and integrated into one functioning unit. The degree of maturation of each component of the personality will reflect upon the behavior of the individual possessing such a personality in response to the demands of the environment in which he functions. The amount of femininity present in the woman and the amount of masculinity in the man will also influence the character of the marriage. Any defect or disturbance in the development or maturation in any of these personality components may cause a disturbance in the marriage and unhappiness to the contracting parties.

The historical mission of the physician has been to relieve human suffering, to restore health, and to prolong life whenever possible. Since any disturbance in marital relationships may cause extreme misery and suffering, it is the function of the doctor to deal with and to relieve that suffering. From time immemorial, the family physician has been the family friend. Not infrequently he has brought the contracting parties into the world and has watched them grow from infancy to childhood and to adulthood. He may know the home from which they come. Not infrequently he is cognizant of their strength and of their weakness, their assets and liabilities. For that reason, he may be called into consultation whenever unhappiness ensues from a disturbed marriage. Thus marriage counseling is truly a medical responsibility.

Marriage counseling may be premarital and, therefore, prophylactic or postmarital and, therefore, therapeutic. This is consistent with the general duties and responsibilities of the medical profession. In discussing the subject of mar-

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riage counseling, we naturally are faced with the following questions: Which people require counseling? What are the chief problems that generally face people and for which they need help?

In premarital counseling it may be either the parents or the principals who may seek the doctor's advice and opinion about certain problems. Parents are frequently disturbed over the background of the intended son-in-law or daughter-in-law. They generally are worried by the history of a case of mental deficiency, neurologic or psychiatric disorder, or of epilepsy in the family. Every physician will recall the frequency with which parents are faced with these questions and the disturbances that are caused by such situations. It is always advisable to explain to them the real nature of these various diseases and to assure them that the hereditary factor is not a clear-cut or a proved one and need not necessarily be a cause for preventing the marriage. Lay people have strange notions about the hereditary aspect of cancer, tuberculosis, diabetes, and other chronic disorders. It is, therefore, advisable to inform them of the true nature of these disturbances, and to assure them that they need not be hereditary in character and that it would be unfair to break up the marriage because of the presence of such chronic disorders in the family of any of the principals. The young people themselves may consult a physician for this very same reason but chiefly at the instigation of the parents or some other relatives.

However, the physician should be able to recognize that some disorders such as hemophilia, and certain neuropsychiatric diseases such as postencephalitic Parkinson states, and early schizophrenia, or serious glandular disturbances such as hypogonadism may cause serious disturbances in marital relationships, and he should exert all his effort to explain the seriousness of these conditions. The angelic look that frequently masks early Parkinsonism or schizophrenia may mislead either of the participants of the marriage and make them believe that that person is an exceptionally high type of individual, whereas in reality that person is the victim of a most handicapping chronic disease. There is a definite group of people suffering from certain somatic and emotional disorders that should be discouraged from getting married; at least these diseases should be candidly discussed when the people insist on getting married.

From time immemorial love has been regarded as the impelling force of marriage. There is considerable truth to the statement that a marriage based on love has a greater chance for happiness and stability than those that are contracted for other reasons. Love, like electricity, defies definition, and yet both are real. Sex and love are not synonymous, but sex does comprise a great part of love. Love means sex plus mutual respect, inspiration, help, and cooperation. It means mutual sharing of joy and of sorrow, of achievements and of disappointments, of success and of failure. It means more than that and more than words can describe. Freud said that a normal love life is the best preventative of a neurosis.

Until the end of the first world war, sex and what it implies were seldom discussed in public. It was a matter of poor taste to do so. It was taboo even in scientific circles. Following World War I there occurred powerful changes, political, social, and economic, that may be designated as revolutionary in character. There has also been a similar change in the attitude toward sex. In a large measure it is due to the emancipation of womanhood and the role that women have assumed in every field of human endeavor. For a long time it was thought that only men could enjoy sex relationship and that women must be acquiescent and passive partners in the act. Doctors had long recognized the fallacy of such an assumption, but very few dared to express themselves openly on the subject. Sigmund Freud was among the very first to prove that women are just as human as men and that they too crave gratification of their instincts.

The appearance of the Kinsey reports has had tremendous cultural and medical implications. These reports brought to light certain facts which have been known to the medical profession but have been rarely discussed openly. Basically these reports are truly scientific contributions and should be read by all intelligent people. They show that sexual relationships will occur wherever men and women congregate and whenever opportunities present themselves. Furthermore, they do describe certain differences between men and women. Thus they indicate that males develop the greatest virility at about twenty, and then it declines. In the female, however, the sexual peak is reached between thirty and thirty-five and is retained for a longer period than in the male. They have also pointed out that sexual gratification in men comes on with puberty and five or six years later in women. These differences in sex gratification may prove a source of discontent and unhappiness in married people; particularly is it true when there is a great difference in ages of the married couple. Generally the husband is older than his wife by five or six years, and at the time of the marriage he has long passed his peak of sexual power, while the woman has not yet attained it.

The act of defloration in the female may set up a chain of reactions either for a happy and satisfying sexual marital life or for a frustrating and disappointing one. Hence, it is a matter of practical value for the physician to discuss this subject with the engaged couple and explain to them the basic anatomic, physiologic, and psychologic implications of the act. Sex can be beautiful, and in most marriages, despite statements to the contrary, it is a gratifying and happy experience. Frigidity and impotence are certainly problems that come within the sphere of responsibility of the doctor. Not infrequently, it may be necessary for the general practitioner to seek the advice of the psychiatrist, obstetrician, gynecologist, genitourinary specialist, or the endocrinologist to help him solve these sexual problems. It must be remembered that in giving advice relative to sexual adjustment, the physician should at all times respect the various religious views on the subject. There are certain religious groups who have definite rules and regulations regarding sexual relationships, and the physician should always respect them.

It has been said that propinquity is the best matchmaker; certainly it is the greatest stimulus for sex relationship. Wherever men or women are denied approved sexual relationships for one reason or another and are thrown into association with members of the opposite sex, extramarital relationship is bound to happen among a certain number. This is equally true whenever marital sex relationships are frustrating and disappointing. Thus anything that tends to keep the husband and wife apart or cause prolonged separation, or whenever one or the other is thrown into continuous association with some member of the opposite sex, extramarital relationship is bound to occur, and this may become a disturbing and often a disrupting influence in marriage.

The previous training and experience, and especially home influences, of either of the marital partners modifies considerably the relationship of the people. Thus if either of the principals come from a broken or unhappy home where love and understanding have been denied, and whenever guidance and discipline have been neglected, emotional instability is apt to be present and marital adjustment made difficult. There is considerable difference of opinion in reference to the influence of premarital sexual relationships of women on their marital stability and happiness. There is one school of thought which maintains that such activities are expressions of emotionally unstable and insecure individuals. These individuals are unable to curb sexual stimuli or control sexual temptations when they arise, and they will be unable to manage temptations that may present themselves later on in other fields of human relationships. My own experience in dealing with many neurotic and psychotic people, especially those in the involutional period of life, has led me to conclude that premarital sexual activity by females leaves a blight on the emotional part of their personality. Moreover, these activities are a source of emotional conflict. At least a great many of these patients constantly speak of these acts and with considerable feelings of remorse.

On the other hand, there is another school of thought which insists that premarital sex activities by women may prove helpful in assuring a more satisfying marital sexual relationship and thus contribute to the development of family stability. They mention the case histories in the Kinsey reports and the views of the authors of these reports to support their own views. This school of thought says that we are now undergoing a revolutionary change in sexual morals. It may be well to call attention to the fact that change and progress are not synonymous and that all that is new is not necessarily good, nor all that is old necessarily bad. We must not ignore the lessons of history. We should recall the consequences of the New Order which the Nazis tried to establish in the 1930's and what the Japanese war lords produced by their New Co-Prosperity Sphere in Asia. The Ten Commandments are old indeed, and yet they comprise the greatest mental hygiene code and the best set of rules and regulations for ethical human relationships ever produced by mankind.

There is a fashion in marriage just as there is a fashion in clothing and other social phenomena. Thus it is now fashionable to marry young. In a great many instances the wife continues to work until the husband is able to earn a sufficient income to support the two. Not infrequently, even if there is a good income, the wife may continue to work because she finds it too much of a bore to be idle. It is important that people about to contract a marriage should discuss the economic situation with their parents or with a marital counselor. They should be taught the value of a family budget and make arrangements for a practical distribution of available funds so that the latter may be utilized to the greatest advantage. While it is claimed by some that the economic factors may cause serious marital problems, it is hardly proved by factual evaluations of the situation. Human beings are commonly faced with economic problems, and the mature individuals will meet these problems as they do any others. It is the immaturity of the people that is responsible for their failure to face the economic problems realistically and effectively. The way people met the problems arising from the economic depressions was dependent upon their emotional stability and maturity rather than upon the economic deprivation that they may have suffered.

It takes money to establish a home. Homes are now scarce. Few newlyweds are able to establish their own homes, and not infrequently they must live with in-laws. In this setting there is an opportunity to practice wholesome, healthy interpersonal relationships by each respecting the rights, responsibilities, and privacy of the others and by offering help without being officious. In some families the mother-in-law presents a real problem. She may try to dominate the activities of the newlyweds and to regulate their marital life, which may cause serious problems if not met adequately and realistically. The physician is in an excellent position to recognize the earliest signs of irritation in some of the members of this particular group and to institute remedial measures immediately. A frank discussion of the subject with the mother-in-law may in many instances prevent a serious marital disruption. This does not mean that there are no mothers-in-law who are of real help to the couples; on the contrary, most of them are very understanding and helpful.

It is fashionable now to have children in the early years of marriage, and frequently the reproductive period is terminated before thirty or thirty-five. Thus a large number of women have considerable leisure time as the children grow up. They may become so bored with their idleness that they become extremely neurotic and make unreasonable demands upon their husbands which the latter may not meet, and they may even seek compensation in extramarital affairs with other men. On the other hand, there are some women who are so tired with their household duties and activities that they are exhausted at the end of the day and, therefore, cannot give the emotional outlets to their husbands; this may be a source of marital discord. Modern urban life makes unusual demands upon people. The husband may be away all day working at his profession or occupation. He may come home tired and fatigued and may not give the expected attention to the wife. These are matters of practical concern to all interested in the preservation of the family life. Hence, in early marriage both the husband and wife should learn to participate jointly in communal affairs and religious and charitable endeavors and in civic enterprises. Religion tends to foster an optimistic and healthy outlook on life and is a cementing influence on family relationships. The man who is a member of a church and attends its functions regularly is apt to be a solid citizen, a loyal husband, and a devoted father. Attendance of religious services by the entire family is a great builder of morality and of morale and tends to create considerable emotional stability and security.

Continuous work tends to become a most enervating influence. Therefore, it is important for all human beings to engage in some form of diversion and entertainment. It is imperative that both husband and wife should have some common form of diversion. When young husbands spend their week ends in some athletic activity or when the wealthy husbands spend their week ends on the golf course and leave their wives at home with the children, there gradually ensues a sense of frustration and disappointment in the wives that contributes materially to unhappiness in family relationships. Therefore, early in their marital life they should plan for mutual participation in some sort of entertainment, play, or other activities. Surely, the vacation should be shared by both and with the children when they are young.

It is truly amazing how congested are our highways on week ends. So many people are on the move on Sundays. It is sheer rationalization to explain this phenomenon as the desire of people to go to the country or to places of amusements on week ends. There is a much deeper psychologic meaning to this. Symbolically, the home is feminine and the automobile masculine. May not the automobile and the home take over the age-old struggle between masculinity and femininity for the control of the family? This exodus from the home on week ends is truly a national week-end neurosis which afflicts a large segment of our population. The Sabbath is for rest, prayer, and meditation. Apparently the golf course is competing with the church for the possession of some people's souls. The good old-fashioned observance of the Sabbath, in all of its implications, may prove a strong force in fostering stable families and establishing satisfying and productive marriages.

Very early in life the husband and wife should learn to discuss each other's problems. The husband should discuss his day's activities, his business and professional work, and inform his wife of the changes that have occurred, of innovations that have been instituted, and of plans that are being made for the expansion of his professional or business interests. He should discuss with her his frustrations and his disappointments. This should be instituted early in marriage so that with the passing of years it will become habitual and a truly cementing influence. Too often is the wife kept ignorant of the husband's financial status, of his professional, business, or vocational interests, of his accomplishments or disappointments. Occasionally, the wife, who may also be a career woman, may come home tired, may ruminate about her day's work, and is unable to meet the husband in a manner expected by him. Occasionally some women become immersed in community projects or civic and charitable activities. They may be as actively occupied in an amateur way as the career women in a professional way. In either instance they eventually drift away emotionally from the husband and from the home, especially at the time when the children have grown up and the home no longer needs their continuous attention. Thus a stage may be reached where they find different and often conflicting interests so that they seldom meet each other except when they come home to sleep. Eventually the flame of love may die out, and they may turn to others for the attention or affection that their spouse fails to give.

I have intentionally omitted discussing neurotic conditions in the husband or in the wife that contribute to the unhappiness of either one of them and which may eventually lead to the disruption of the marriage. It is in itself a chapter that would take too long a time to discuss in this brief communication. Suffice it to say that the general practitioner in coming into the homes of people may detect changes in marital relationships that he may recognize as menacing to the stability of the marriage. Often he is informed of it by the husband and more often by the wife. He should try to institute therapeutic counseling if it is within his professional skill, or he may send them to some psychiatrist in whose ability he has confidence. Not infrequently psychotic behavior manifests itself in such a subtle manner as to escape early detection. However, the family physician commonly notices this change and may encourage the husband or the wife to seek psychiatric help for his or her respective problem.

Society at large is discussing the increasing incidence of delinquency and criminality. Juvenile delinquency is truly the expression of parental neglect and generally is the result of broken, deserted homes or of overindulgence on the part of ill-informed parents. The home is the place where physical and emotional maturity is developed, where the child learns the basic principles of a healthy and wholesome interpersonal relationship, where he learns to respect law and authority, and where he is guided in a pattern of behavior that will be acceptable to the environment in which he circulates and will gratify his own instinctual needs and desires. The home is the place where constructive discipline is contributed to the development of wholesome and happy personalities. The stable home is the result of a happy marriage. The home is the place where the family engages in cooperative living and where certain traditional customs and rituals prevail that play significant roles in the family's stability and have a tremendous influence on the success or failure of the marriage.

The family meal is truly a cooperative family project in which all members of the family participate and which offers an opportunity for good or bad interpersonal relationship. The dining room is the most common place in the home where the family congregates, where all participate in a common activity, and where the family is periodically held together for a definite period of time for physical and psychologic expressions. In some homes the family meal is but a means of refueling, where the food is gulped down, and then the members of the family run away to their respective fields of interest. Occasionally at the family dinner there is a good deal of bickering, nagging, and criticizing, and some members of the family may leave in anger or in tears. On the other hand, in many homes the family meal is a real occasion for wholesome exchange of ideas and experiences and for intellectual discussion of interesting subjects, each member contributing his own thought on the respective subjects. Furthermore, certain rituals, such as starting the meal with a prayer, furnish an atmosphere of calmness, security, and relaxation, which not only aids digestion but may also prove a prophylactic against gastric and duodenal ulcers. It is at the meal table that not infrequently anniversaries are celebrated, birthdays recalled, and wholesome rules of etiquette observed.

The family patterns of conversation in the home may contribute materially to the success or failure of a marriage and to the stability of the family. Language is the means of interpersonal communication, the expression of thoughts and of ideas, the method of suggestion, persuasion, stimulation, encouragement, or of the opposites. In a well-conducted home the conversation generally deals with the accomplishments, achievements, successes, or failures of the different members of the family, or current events, of plans or projects for the future, and of stimulating discussion of subjects of common interest. Each member of the family is given the opportunity to express himself and is allowed to give his opinion on every subject without any hindrance or interference of any kind. In such an environment respect for elders, for law, and for government is developed. Furthermore, it is the chief way of training youngsters in self-discipline and in the observance of the rights and privileges of others. Freud has long pointed out that the development of the super-ego, or the conscience of a person is through the incorporation of the prohibitions of parents, teachers, and elders, so that eventually this conscience takes over the disciplining, guiding, and prohibiting functions of the parents and teachers.

In many homes domestic animals make a significant and important contribution to the mental hygiene and stability of the marriage. In rural communities domestic animals play a great part in the sex education of the young. This is equally true, but to a lesser extent, in urban communities. Children notice the difference in the genitalia of the male and female dogs. They hear discussions regarding the behavior of dogs, and they gain insight into the subject of mating. They learn where puppies come from. Dogs are outlets for our affections. They are good friends of children and of old people. A child coming home from school is always greeted by the dog, even though his father may be away to business, or the mother may be occupied with some outside activities. People can love dogs without any inhibitions and without any shame. They can always scold the dog and react emotionally without any retort on the part of the dog. Dogs offer practical lessons in caring for the weak and the dependent. They afford companionship to many if that is denied by uncontrolled circumstances. President Roosevelt's complaint about the treatment that his dog Fala received from the President's political enemies had a deep emotional and prompt humane response. It is significant that very few teen-age delinquents have had dogs as their household pets. To a lesser degree, cats, birds, and even tropical fish have a definite and salutary emotional influence on the home and the members of the family.

Entertaining friends and visiting others are means of enriching our own emotional lives and of contributing to the happiness of others. In many instances all members of the family participate in the preparations for the entertaining of friends and of visitors. Visiting other people enables us to compare our own ways of living with those of others and may prove a source of enrichment of our own personalities. They are definite and positive contributions to the family's stability and to marital happiness. In certain homes the family has regular weekly or monthly meetings of the different members of the group to discuss matters of common interest and problems that may confront some of its members. Each problem is presented to all, and each one attempts to contribute to its solution. These meetings have been prevalent in the early immigrant groups, and now their children and grandchildren have formed family circles, such as cousins' clubs, to continue these most desirable meetings.

Summary and Conclusion

The stable home is the result of a happy marriage. A happy marriage is the result of a harmonious relationship between two mature people. Marriage is the greatest institution of civilized man. Hence, marital counseling is a constructive and necessary discipline. The family physician, by virtue of his traditional mission to heal the sick, to relieve human suffering, and to prolong life, is qualified to institute marriage counseling both as a prophylactic, premarital, as well as therapeutic, postmarital, measure. He is best qualified to call on specialists in other fields of medicine such as the obstetrician, the gynecologist, the endocrinologist, the genitourinary surgeon, and the psychiatrist whenever their special skills may be required in any given situation. Not infrequently, he will do well to get the cooperation of the minister, the social service worker, and other professional people to help him in many marital problems.

202 New York Avenue

Many Symptoms Falsely Blamed on Food Allergy

All that itches is not allergy. Although two or three out of every hundred persons have a serious sensitivity to food, many of the symptoms ascribed to allergy are not due to that at all, according to Dr. Samuel M. Feinberg, Chicago.

Many foods can cause irritation of the gastrointestinal tract or abdominal discomfort without being the result of an allergy. Allergy to foods will produce such symptoms as hives, eczema, asthma, nasal congestion, and headaches.

Almost every food is at least potentially capable of causing allergy, although a relatively small number of foods are responsible in most cases. The more important causative agents are wheat, eggs, fish, nuts, peas, beans, potatoes, onions, garlic, and milk. The amount of a food required to produce allergy symptoms varies considerably, Dr. Feinberg said, adding:

"The degree of sensitivity varies with different people and in the same person at different times. Fatigue, nervousness, tension, unhappiness, indigestion, or certain phases of the menstrual cycle may lower the tolerance and make one more susceptible."

Allergenic properties also can vary with the state of the food. Cooking and canning tend to destroy some of this activity. Highly refined foods and those with little protein content are least likely to produce allergy symptoms. "Since foods not only come in contact with the tissues of the digestive tract, but small portions of their allergenically active proteins are absorbed and finally circulate to every portion of the body, virtually no organ is exempt from possible reaction," Dr. Feinberg stated.

"But there is great danger in assuming that any ailment which cannot be explained otherwise is due to food allergy. The allergic person is as subject to other ills as the nonallergic person. Because a person happens to be allergic it must not be taken for granted that his every ailment can be explained by the allergy."

If a patient's symptoms are caused by food allergy, the final goal is to determine the cause of the allergy. Often the food can be identified by the patient, but in many instances careful inquiry by the physician may be necessary. Dr. Feinberg warned against "food fads" and "health crackpots" who claim elimination of certain foods from the diet will rid one of all types of food allergies. Such diets "frequently result in serious undernutrition and dietary deficiencies," he said, and may cause "underweight, weakness, fatigue, inability to concentrate, nervousness, irritability, and growth disturbances."—*J.A.M.A., February 5, 1954*

Treatment of Bleeding Esophageal Varices with Balloon Tamponage

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PORTAL hypertension, the cause of bleeding esophageal varices, is a relatively rare affliction that ranks deservedly high in clinical importance. There are few conditions the initial manifestations of which are more horrifying to a patient, and certainly hematemesis is an omen of grave pathology to any physician. A discussion of the treatment of bleeding esophageal varices embraces emergency, palliative, and definitive measures.

In evolving a plan for the emergency management of hemorrhage in portal hypertensive cases, it is essential that one keep in mind special pathologic factors that may seriously affect the control of hemorrhage and survival of the patient and that are not ordinarily encountered when dealing with gastrointestinal hemorrhage due to other causes, namely, the factors of increased venous pressure in the portal system and dyscrasias of blood clotting in portal hypertension.

With the onset of chronic portal hypertension, a system of collateral veins develops between the coronary veins of the stomach and the esophageal veins. As a result of excessive portal pressure, these veins become varicose and are subject to sudden rupture. Particularly is this true of varicosities of the esophagus which are exposed to the trauma of swallowing food or, being located within the thoracic cavity, are subjected to sudden changes in pressure as results, for example, from coughing.

When rupture of a varix has occurred, the presence of excessive venous pressure in the coronary esophageal collateral circuit maintains hemorrhage at the bleeding site, depleting the circulating blood volume to the point of incurring the risk of death of the patient from shock or, in cases of cirrhosis of the liver, inviting the calamity of liver failure.

Obstruction in the portal system, whether the site of block is within the liver due to cirrhosis or whether it is extrahepatic, results in congestive splenomegaly, which is regularly associated with a diminution of blood platelets. Since adequate blood platelets are known to be necessary in blood clotting, the presence of thrombocytopenia in portal hypertensive patients, if extreme, could be an important factor in the persistence of hemorrhage at the bleeding site.

The blood-clotting dyscrasia that arises from hypoprothrombinemia may seriously affect blood clotting at a site of injury. The formation of prothrombin may be severely curtailed in cirrhosis of the liver, a disease responsible for 75 per cent of the cases of portal hypertension.

In summary, when one fully evaluates the several factors contributory to persistence of hemorrhage at the site of rupture of an esophageal varix, one realizes well that clotting at the bleeding site cannot be left to chance. A realistic approach to the problem of emergency management of bleeding varices is twofold: the eradication of shock with restoration of blood volume and the institution of positive measures that achieve arrest of hemorrhage at the bleeding site, outlined as follows:

1. Treatment of shock
    - (*a*) Transfusions of whole blood (if delayed, employ plasma, human albumin, or one of the plasma expanders).
    - (*b*) Oxygen and other supportive measures.
2. Positive measures for the arrest of hemorrhage at the bleeding site
    - (*a*) Balloon tamponage.
    - (*b*) Esophagoscopy, packing with absorbable gauze—not a preferable procedure.
    - (*c*) Esophagotomy, suture of the varices.

In respect to measures for the arrest of hemorrhage at the bleeding site, balloon tamponage will be discussed.

Problems of Balloon Tamponage

An abundance of experience with balloon tamponage indicates that rupture of varices almost

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invariably occurs within the esophagus itself, as has been repeatedly demonstrated by the immediate cessation of hemorrhage following the inflation of a properly designed balloon within the esophagus.

At first glance the design of a satisfactory nasogastric tube-balloon assembly seems a relatively simple problem of mounting a globular stomach balloon and an elongated esophageal balloon upon a nasogastric tube with provision for their inflation. Following the passage of such a tube and introduction of air into the lower (stomach) balloon, one would seemingly feel sure of trapping all potential bleeding sites by simply pulling on the tube to bring the stomach balloon snug against the diaphragm, fix the tube at the nose with adhesive and, finally, inflate the esophageal balloon to a pressure known to be higher than portal hypertensive pressures.

Unfortunately, experience has shown that when employing a simple esophageal balloon, it is at the critical point of bringing up the balloon pressure to within a range exceeding that of portal pressure, i.e., within the range of arresting hemorrhage, that sudden decompensation of the balloon takes place with dissipation of the pressure. The mechanism invariably is as follows:

1. A substantial buildup of pressure within the balloon, the result of injecting air, of necessity causes some elongation of the esophageal balloon forcing its lower end downward into the stomach.

2. The lower end of the balloon, which no longer receives support from the wall of the esophagus, continues to expand with each injection of air. Thus is initiated a serious train of events.

The distal end of the balloon suddenly expands into a large, pear-shaped, intragastric sacculation causing a severe downward drag upon the nasogastric tube. This initiates esophageal spasm, much to the discomfort of the patient. Furthermore, any worth-while pressure within the esophageal portion of the balloon becomes rapidly dissipated into the intragastric sacculation. Adding more air to the balloon enhances the vicious circle, removing finally the last vestige of intraesophageal pressure because stretching of the nasogastric tube continues and the esophageal balloon may eventually herniate completely into the stomach. When the above has taken place, the procedure then becomes traction tamponage of the stomach not balloon tamponage of the esophagus.

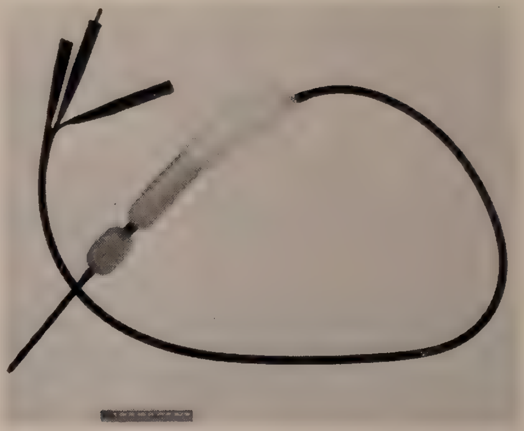

FIG. 1. A child-sized nasogastric tube with stomach and esophageal balloons inflated slightly. Note the reinforced portion of the esophageal balloon and the comparatively large tube compartment for gastric aspiration.

Figure 1 is a photograph of a child-sized nasogastric tube balloon assembly that has proved highly efficient in the arrest of hemorrhage from bleeding varices and is well tolerated by the average patient. The efficiency and good tolerance is attributable to the design of the esophageal balloon. It is plain to see that there is a difference in wall thickness between the lower and upper portions of the esophageal balloon. It is this all-important detail that distinguishes this nasogastric tube balloon assembly from all others, however similar they may appear at first glance.

It was natural that we should become greatly interested in balloon tamponage for the arrest of bleeding esophageal varices with the initiation of our study of portacaval shunting in the middle 1940's. Now as our experience approaches the 250 mark for shunted cases, we look back with thanksgiving and comfort to the particular occasion that suddenly enlightened us to the difference between traction tamponage of the stomach and balloon tamponage of the esophagus.

For the second time during a winter night in 1947, Dr. Robert Sengstaken[1] and I had failed to arrest bleeding in a fifteen-year-old girl following the passage of a nasogastric tube bearing a small stomach balloon and a simple elongated, esophageal balloon. There did not seem to be the slightest effect upon the bleeding esophageal varices, even though the stomach balloon was snugged up to the diaphragm and the tube fixed securely to the nose during the period of inflating the esophageal balloon. Furthermore, the child had severe retching and pain.

Finally it was decided to make a third try, and at the suggestion of Dr. Sengstaken the lower one third of the esophageal balloon was reinforced with an extra thickness of rubber. The results with a trial of this simple modification in the esophageal balloon were dramatic indeed. Inflation of the esophageal balloon was without discomfort, cessation of hemorrhage was complete, and the child promptly went off to sleep.

On first thought it appeared incredible that so slight a modification as reinforcing the lower end of an esophageal balloon could account for such a radical change in its efficiency. A simple observation made at the time gave the clue to the efficiency of the reinforced esophageal balloon, namely, the requirement of but 60 cc. of air injected into the balloon to raise the pressure above portal hypertensive levels. This compared with up to 400 cc. of air when employing the simple, unreinforced esophageal balloon. There is but one interpretation of the above observation (and this is readily provable by x-ray): The reinforced esophageal balloon remains within the esophagus during inflation, whereas the unreinforced balloon inevitably descends during inflation to form a large (400 cc.) intragastric sacculation.

The reinforced esophageal balloon, upon inflation, exerts an even pressure up and down the esophagus and has proved effective in the arrest of hemorrhage by direct compression of esophageal varices at the site of rupture. The attainment of an efficient method of true esophageal balloon tamponage is exceedingly important because the esophagus is the site of hemorrhage in the vast majority of the cases.

The early instructions and designs of nasogastric tubes bearing simple esophageal balloons, which when inflated give rise to all the dire consequences of traction tamponage, have served to confuse the simple technic of esophageal tamponage employing the reinforced esophageal balloon. For example, the great patient-comfort feature of the reinforced, self-retaining esophageal balloon is elimination of that dread downward drag of the tube, an inseparable feature of the unreinforced balloon. And yet one hears again and again of traction being applied to these tubes. Traction upon a tube bearing a reinforced esophageal balloon is unnecessary and undesirable in patients having bleeding from esophageal varices. If there is reason to suspect there is bleeding from a ruptured varix of the stomach wall (an exceptionally rare occurrence in our experience), the stomach balloon should be inflated with 300 to 400 cc. of air for traction tamponage.

Another common misunderstanding which we think is important is what should be the range of pressures employed in the esophageal balloon. Considerable thought was given to balloon pressure and other considerations in designing the self-retaining, reinforced esophageal balloon as follows:

1. The balloon must be of sufficient length to cover the varix-bearing area of the esophagus.

2. The diameter of the balloon in its undistended state should approximate that of the esophagus in physiologic distention. This is of importance in calibrating balloon pressure against pressure in the varices in terms of portal pressure.

3. The thickness of the rubber balloon wall. The highest portal pressure recorded at operation has a relation to the desired thickness of the balloon wall in its lower, reinforced area if one is to avoid sudden decompensation with saccular herniation of the lower portion of the balloon into the stomach. On the other hand, the wall thickness of the rest of the esophageal balloon must be near enough to that of the reinforced area to prevent any tendency to sudden sacculation when inflating the balloon to the upper known portal hypertensive range.

In view of the fact that we only occasionally record at operation portal pressures up to 44 mm. of mercury, we routinely do not exceed 45 mm. of mercury pressure in the esophageal balloon, and as soon as it is possible to empty the stomach of blood by repeated aspiration, the balloon pressure is decreased in stages to the more comfortable and usually adequate level of 25 to 35 mm. of mercury.

Since even these levels may exceed arteriolar pressures, we think consideration should be given to periodic deflation of the balloon, and this we recommend for five-minute periods at six to eight-hour intervals.

As was the case with unnecessary traction upon the tube, we hear of instances in which the esophageal balloon pressure has been kept at high levels, even to 60 mm. mercury, for sustained periods. One automatically thinks of these practices when word is passed around concerning a complication with esophageal balloon tamponage, such as ulceration of the esophagus.

Technic of Passing Nasogastric Tube-Bearing Balloons

A tube, of the design illustrated, when well lubricated and with balloons completely deflated is easily swallowed (with the aid of sips of water) by the average patient following procainization of the nasopharynx. Meperidine in 50- to 75-mg. doses is well tolerated in cirrhosis cases and affords adequate sedation. Passage of the tube in unconscious or anesthetized patients may be facilitated by employing a special wire stylet.*

In adults pass the tube to the 50-cm. mark, then rapidly inflate the stomach balloon with 100 cc. of air. Next, withdraw nasogastric tube until gentle contact of the stomach balloon is made with the diaphragm, and fix as follows: A fenestrated 1-inch cube of sponge rubber, which has previously been placed on the tube, is snugged up against the patient's nose and fixed to the tube with adhesive. By passing adhesive tape around the midportion of the cube of sponge rubber fixation is secured to the nasogastric tube. Then, the adhesive tape is spiralled distalward making a few turns around the tube itself. In this way the adhesive tape is removed from the softening effect of the nasal secretions and, of greatest importance to the comfort of the patient, there is no contact of the adhesive with the skin. A number of these fenestrated cubes may be prepared in a few minutes. All that is required is a sheet of sponge rubber approximately 1 inch thick, a pair of scissors, and a cork borer roughly the size of the nasogastric tube. Once the cubes are fenestrated, it is simple to slit out the hole on one side for passage around the nasogastric tube.

Maintaining Esophageal Tamponage

With the nasogastric tube secured as outlined above, inflation of the esophageal balloon immediately follows with up to as much as 45 mm. of mercury pressure. This figure exceeds slightly the highest portal pressure ever recorded by us, and since it is a level that is likely to cause exaggerated peristalsis in the average patient, it is our policy to lower the balloon pressure to a more comfortable level as soon as it is certain that bleeding has been arrested. The best way to make sure that the bleeding site has been controlled is for the doctor to stay on the job until the old blood has been cleared from the stomach. This may be accomplished relatively quickly by repeated injection of small amounts of water (20 to 30 cc.) with aspiration through the large central channel of the nasogastric tube. It is only when this has been achieved that a telltale trickle of fresh blood may be at once detected.

Certainly, one of the great errors committed in connection with esophageal balloon tamponage has been the assumption that the procedure, once the tube is passed, is automatic. Even with a special nurse in charge, during the first twelve hours of tamponage the doctor should make repeated checks on the patient. For example, it is usual for patients to develop spasm of the diaphragm during the act of passing the nasogastric tube bearing the deflated balloons. The doctor who returns to check the position of the balloons one or two hours later is likely to find that the level of the diaphragm has changed considerably. With relaxation of muscle spasm the diaphragm rises, and this requires a repositioning of the cube of sponge rubber following withdrawal of the nasogastric tube several centimeters, to bring the distal stomach balloon again in gentle contact with the diaphragm.

If, upon emptying the stomach of old blood and adjusting the balloon to the rising level of the diaphragm with relaxation of muscle spasm, there is no telltale evidence of bleeding in freshly aspirated gastric contents, a program for lowering the pressure in the esophageal balloon may be initiated. Drop the esophageal balloon pressure to a range between 35 to 40 mm. of mercury. Irrigation and aspiration of gastric contents for evidence of fresh bleeding are to be recorded hourly by the nurse, and if after two or three hours there is no evidence of bleeding, the esophageal balloon pressure may be reduced to the range of 30 to 35 mm. of mercury. Twelve hours after the initiation of balloon tamponage, if there is no evidence of recurrence of bleeding, the esophageal balloon pressure may be further reduced in the average patient to the range of 25 to 30 mm. of mercury. This range of pressure is adequate and well tolerated by the majority of the patients for an indefinite period. However, after maintaining this pressure for twenty-four hours, in some cases it is feasible further to reduce balloon pressure to a range from 20 to 25 mm. of mercury. At any rate the esophageal balloon should be kept inflated at a pressure that will prevent bleeding for at least seventy-two hours. In cirrhosis cases the tube should remain another twenty-four hours with the balloon deflated. On the fourth day the nasogastric tube with deflated balloons may be removed without recurrence of bleeding in the majority of cirrhosis cases. Certainly, the tube should be removed slowly, gently, after the patient is well sedated with meperidine.

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* These stylets can be obtained from the manufacturers of the tube, the Davol Rubber Company, Providence, Rhode Island.

Whereas we do not object to placing suction on the nasogastric tube during the first twelve hours, we do not consider it necessary, especially since efforts are concentrated on emptying the stomach as rapidly as possible by irrigation and manual suction. On the other hand, within twenty-four hours the stomach will usually tolerate tube feedings, first with water and progressing to high-protein, high-caloric fluids within forty-eight hours.

Problem Cases

Cirrhosis patients who continue to bleed beyond the usual four-day period of balloon tamponage may be considered "problem cases" because of the incidence of liver failure, and, therefore, clotting dyscrasia is high, their management difficult, and the outcome uncertain.

The availability of the blood bank has increased the incidence of the problem case, which has served to crystallize a unanimity of opinion regarding the inadequacy of transfusions alone in the treatment of bleeding esophageal varices in the cirrhotic patient. Any complacency the profession may have anticipated with the false sense of security the blood bank may offer has long since been dispersed with grim statistics. For example, Snell of the Mayo Clinic[2] has this to say: "The control of hematemesis remains a most serious problem. Only about 20 per cent of patients survive one year following their first hematemesis; the other 80 per cent die."

Failure to demonstrate a statistical reduction in the over-all mortality rate after an abundance of experience with transfusions over the years and conceding that the ready availability of blood has effected a dramatic reduction in the incidence of death from shock lead to the inescapable conclusion that there has been a commensurate increase in the deferred death rate. Now that it is evident that ready access to blood from the blood bank has effected a sharp change in the death timetable, it is pertinent that we discuss these changes as they relate to reorientation of our objectives in the emergency management of bleeding esophageal varices.

Every doctor now recognizes the necessity of prompt and absolute arrest of hemorrhage from a bleeding esophageal varix in cirrhosis patients if there is to be a maximum salvage of life. Doctors who have had much experience in depending upon transfusions alone for both the correction of shock and the arrest of hemorrhage realize only too well the uncertainty of the latter. The response to the administration of blood to patients in shock is consistently good. However, again and again we hear the following sad, sad story: With prompt revival of the patient by transfusions, vital signs stable, and what appears to be a satisfactory hematocrit, the attending doctor regulates a continuous intravenous blood drip, orders a repeat hematocrit in the morning, and retires. The following morning the hematocrit is found to be low, as evidence of persistence of bleeding, and the doctor realizes, perhaps too late, that the patient's liver has been exposed to hours of anoxia.

Since the establishment of the blood bank an abundance of experience has shown that blood transfusions alone cannot be depended upon to bring about cessation of hemorrhage at the site of rupture in a bleeding varix. Although the administration of blood is continued in such cases, there is a constant drain upon the circulating blood volume at the bleeding site. The resulting chronic anoxia disposes to a high incidence of liver failure which, with the onset of clotting dyscrasia, further impedes clotting at the bleeding site.

Accepting the above statistical facts brings us to the crossroads of decision. Are we going to incorporate in a plan for the emergency management of bleeding varices provisions for the concomitant use of positive measures for the arrest of hemorrhage, as, for example, balloon tamponage? Or are we to call for balloon tamponage only when we are on the threshold of a fully blossomed problem case?

It is our considered opinion that balloon tamponage should be initiated at the time the first transfusion is given, whenever possible. It is also our belief, on the basis of considerable experience, that if prompt balloon tamponage is made feasible in hospitals throughout the country, there will be a sharp decline in the incidence of problem cases.

Management of the Problem Case

As previously indicated, far more lives will be saved by preventing the occurrence of problem cases than can possibly be achieved by treating them. All too frequently hematemesis is the presenting symptom, and we are suddenly confronted with a grave emergency. We know nothing about the status of the liver in such cases, and certainly the institution of immediate balloon tamponage along with the administration of blood can do no harm. If the patient should happen to be bleeding from a peptic ulcer, the diagnosis is established forthwith. After the arrest of hemorrhage and restoration of blood volume, appropriate investigations of the status of the liver may be proceeded with. The appearance of mental torpor, jaundice, spider angiomata, and ascites with rapid enlargement of the liver may be taken as indications of the severity of liver damage in a given case and may serve to forewarn us of a possible tendency to persistence of bleeding beyond the usual period of tamponage.

A good history and physical examination may serve to establish the diagnosis of cirrhosis and often gives a clue to the status of the liver. How long the patient has been bleeding, an estimate of how much blood he has lost, and the severity of shock are all important in predicting the subsequent behavior of the liver in a cirrhosis case. A baseline prothrombin time, for comparison with those to follow, is most important, as are direct serum bilirubin determinations. This plan of emergency management affords the maximum protection we can offer a cirrhosis patient who has had the misfortune of sudden hemorrhage, and in our opinion he deserves no less.

When confronted with the prospect of a problem case with a tendency to persistent bleeding on the basis of evidence discussed above, one approaches the necessity of making a decision as to the future management of the case. The choice lies between opening the esophagus and suturing the varices or continuing with esophageal balloon tamponage. Our over-all success with the latter predisposes us to this choice on the basis of the following reasoning. The greatest majority of the problem cases with a tendency to persistence of bleeding have varying degrees of liver insufficiency as evidenced by a high incidence of blood-clotting dyscrasias. There is no denying that a decompensated liver increases the risk of esophagotomy. The presence of a blood-clotting deficiency may make the procedure technically more difficult to accomplish and certainly alters the likelihood of its success, the administration of hykinone notwithstanding. Unfortunately, decisions to operate too often are made under the duress of urgency which precludes accurate evaluation of damage done to the liver by the preceding hemorrhage. Thus, the patient may have the good luck to survive the operation only to succumb later from liver failure. It is the prevalence of this type of case and the inability to detect and evaluate properly such cases under the conditions prevailing at the time of decision to operate that deters us from recommending suture of varices of the esophagus in preference to balloon tamponage for the emergency control of hemorrhage.

It is our policy to detect the problem case as early as possible in order that we may forestall the calamity of a second severe hemorrhage by not deflating the balloons too soon or removing the nasogastric tube. As previously stated, one does well to be forewarned of a patient's tendency to bleed by noting and evaluating all the telltale evidences of approaching liver failure during the first forty-eight hours of tamponage. Deflation of the esophageal balloon for a twenty-four-hour period prior to removal of the tube at ninety-six hours, as is the usual routine, is deferred if there is the slightest suspicion that the patient may bleed.

On the other hand, tamponage may be continued at a comfortable pressure level between 20 to 25 mm. of mercury after the forty-eight-hour period, and tube feedings of a substantial amount may be proceeded with.

In some patients with large livers to begin with, additional swelling as a result of hemorrhage may seriously limit their stomach capacity; particularly is this so in patients who also have an enlarged spleen. Most of these patients will tolerate, without vomiting or distress, tube feedings in amounts up to 75 cc. per hour at the outset. Since it is essential and routine to take gastric samples for evidence of bleeding, feedings at hourly intervals create no problem. Even larger amounts of feedings may be tolerated if given slowly over a longer period of time. This observation encouraged us to use the Murphy drip principle in certain cases, employing the following formula: Protinal 100 Gm., Lanolac 150 Gm., amino acids 50 Gm., glucose 500 Gm., and water up to 2,200 cc. with the contents of a multiple vitamin capsule (Theragram) finally added. The above mixture is put through a good mixer and finally apportioned to 4 milk bottles in the icebox.

A satisfactory gravity drip is easy to assemble. A large glass syringe with the rubber bulb removed is employed as the reservoir. The drip is fashioned by passing a tapered glass tube through a rubber stopper of a size that will fit into the top of a second glass syringe. With this beginning it is simple to suspend the reservoir, connect it to the tapered glass tube with a short piece of rubber tubing, and then introduce the rubber stopper securely into the second glass syringe, directing the small end of the glass tube well down into the glass syringe. The latter is finally connected with the nasogastric tube with rubber tubing upon which is placed a regulating clamp. It is essential that the inner diameter of the end of the drip tube be at least 2.5 mm., and even then the feeding mixture must be agitated frequently to maintain a constant drip. Each feeding should be warmed before being given. If difficulty is encountered, the mixture may be further diluted to 2,400 or even 2,600 cc.

There are 3,000 calories in the 2,200-cc. feeding mixture outlined above, and if the patient tolerated only 50 cc. an hour, the caloric intake (1,600 calories) is considerably more than is practical to give parentally in twenty-four hours. The mixture is well tolerated, and in the average case may be injected at two-hour intervals, starting with 100 cc. and rapidly building up to 200 cc. per feeding. In a matter of three or four days the patient may be placed on nine feedings of 250 cc. each at two-hour intervals from 8 A.M. to 12 MIDNIGHT.

In addition to providing for 3,000 calories a day intake, the protein content is 142 Gm., carbohydrates 581 Gm., and fat 42 Gm. The low sodium content of the formula (0 to 85 mEq. per L.) is especially fortunate since many of the patients have some ascites. Whereas we have found the above formula satisfactory in the average case, should a patient develop cerebral symptoms suggestive of impending coma, the protein content of the formula can easily be cut down to 75 Gm. to lessen the ammonia content of the blood. The administration of cortisone in such patients has often been followed by improvement in their sensorium and a rather dramatic softening and reduction in size of the liver. Although there are no final decisions regarding the use of cortisone, certainly the state of mild euphoria that results from the administration of 50 mg. of cortisone at twelve-hour intervals is a boon to the management of the patient.

Duration of Balloon Tamponage

As would be expected, the period of balloon tamponage varies considerably from patient to patient. There is a sizable number of cirrhosis patients having severe portal hypertension in whom a remission of the disease has afforded the opportunity of parenchymal regeneration to the point of complete or almost complete restoration of liver function. Whereas the livers of such patients may tolerate better a given amount of blood loss, this too is affected by the severity of the portal hypertension, which, in turn, is a disposing factor to a tendency to bleed beyond the seventy-two-hour period of routine balloon tamponage.

Doubtless there are patients in the above group who would go through an operation for suture of their varices without undue risk, but how can one be sure which ones they are at the time a decision to operate is made? Again we prefer continuing with esophageal balloon tamponage, even in this group. Thus, after the lapse of a few more days in which more accurate data can be accumulated regarding the status of the liver, we can select with some surety the good risk patient for operation. Maintaining the patient's blood volume at a high level and stoking the liver with calories, proteins, and vitamins during the interim, we continue this regimen for a week or ten days more and then carry out the definitive procedure of portacaval shunting.

In that larger group of problem cases who show signs both of liver failure and severe blood clotting dyscrasia, as one might expect, the period of balloon tamponage may be exasperatingly long on occasion. Furthermore, in some of these patients we have documentary evidence that the portal pressure was in the low order of magnitude. Such was the case in the sickest patient we have ever had survive. The patient spent seven months in the hospital. He was deeply jaundiced on admission with Laennec's cirrhosis. During the first six weeks he was in and out of coma three times. He had ascites, and the soft tissue wasting was tremendous. His weakness was such that he could not turn himself in bed. This patient was tube fed and had constant esophageal balloon tamponage for seven weeks. As evidence of portal hypertension of a low magnitude, bleeding from the varices was consistently arrested by raising the esophageal balloon pressure to 260 mm. of water (20 mm. of mercury), compared to an average portal pressure for cirrhosis cases of 400 mm. of water (31 mm. of mercury).

Whereas it would appear that hypoprothrombinemia is not the sole cause of blood-clotting dyscrasia in cirrhotics, it is the only one we are able to quantitate easily in the laboratory, and naturally we are guided by the prothrombin time to a considerable extent in determining when to stop balloon tamponage. Although hykinone is of questionable worth, it is administered in 10-mg. doses daily.

In a number of patients the period of actual esophageal tamponage is not more than a week or ten days, but we have learned one important lesson: the danger of recurrence of bleeding from starting feedings by mouth too soon. As previously stated, it is our policy to tube feed these patients with a high-calorie, high-protein, high vitamin, and low-sodium formula. A return of strength and appetite, good diuresis, clearing of the ascites, diminishing tenderness and shrinking of the liver, and clearing of the jaundice are all good signs, taken with a consistent decline in the prothrombin time, that encourage us to release pressure in the esophageal balloon for increasing periods of time. When the prothrombin time has descended to the low twenties and routine gastric aspirations reveal no evidence of fresh bleeding after the balloon has been deflated for forty-eight hours, one is tempted to remove the nasogastric tube. But under no circumstances should this be done unless there is available a small plastic tube for immediate passage into the stomach through the other nostril, following removal of the balloon. Mead Johnson supplies a proper-sized plastic nasogastric tube especially suitable for this purpose since it is relatively atraumatic and unobjectionable to the average patient. Gastric aspiration can be made before feedings to detect bleeding. If the hematocrit remains stable and there is no evidence of bleeding over a five- to seven-day period, the patient may be permitted to take fluids in increasing amounts by mouth.

This transition from a large tube to a small tube, which is tolerated well by the patient, enables one to continue with a high caloric and protein intake, so necessary to the liver, without the risk that a fraction of the amount of food would cause if taken by mouth. Experience has taught us that it is safest to continue with tube feedings, permitting liquids only by mouth for many weeks if necessary, until there is every evidence of return of compensation of the liver, including the prothrombin time, to somewhere near normal limits. Upon final removal of the plastic tube the patient may be put on a soft, high-protein, high-calorie diet, with fat up to 70 Gm. a day for a period of ten days to two weeks. Then, with instructions to chew the food well and take small swallows, advance to a regular diet may be made.

The shepherding of a patient through a hemorrhage episode that has caused serious failure of the liver demands great watchfulness and constancy on the part of the doctor and great fortitude and a will to live on the part of the patient. With this combination and what it is possible to accomplish today, a patient has a very good chance of coming through alive. What if a given patient is tube fed for weeks; recovery is the really important thing. The patient cited as having seven weeks of tube feeding, for example, recovered in 1949. From the point of view of good health and liver chemistries his recovery has been as complete as any case I know. Furthermore, he carries on with a heavy work schedule as a publishing executive.

Summary

1. The treatment and management of patients with bleeding esophageal varices are presented. Failures with a simple esophageal balloon with traction tamponage are explained, and the efficacy and the importance of the reinforced, self-retaining, esophageal balloon with maintenance of a constant, even pressure balloon tamponage with uniform direct compression of the esophageal varices is stressed.

2. The technic for passing a reinforced esophageal balloon and the measures necessary for maintening efficient esophageal tamponage are discussed.

3. The availability of blood from a well-stocked blood bank may give a sense of false security and lead to disaster if blood replacement is used as the sole emergency treatment of bleeding esophageal varices. This per se will not arrest the esophageal bleeding.

4. Proper and efficient balloon tamponage of the esophagus should be initiated (and maintained) as quickly as the first transfusion is started, if at all possible. Only with a positive

and enthusiastic approach to the absolute control of bleeding by correct esophageal tamponage will the mortality and morbidity rates be favorably influenced in the over-all management of bleeding esophageal varices, particularly in the intrahepatic (cirrhotic) patients.

5. The importance of preventing further liver damage in the cirrhotic group by the prompt control of blood loss is stressed, and details of management of these patients are presented. A discussion of esophagotomy is given.

6. The practical dietary management of the cirrhotic patient with the reinforced, self-retaining esophageal balloon is presented, and the time intervals before removing the esophageal balloon are discussed in relationship to an elective portacaval shunt.

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Appraisal of the Coronary Patient as an Operative Risk

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A RECENT study[1] has shown that the life expectancy following recovery from the first attack of myocardial infarction is longer on the average than was indicated in earlier studies. Many of these patients may live long productive lives after the occurrence of a myocardial infarction. This factor, in addition to the increasing longevity of the population, will increase the frequency of the problem of whether or not to recommend surgery in such patients.

There are several factors that deserve consideration before advising surgery for patients with coronary disease, namely, an appraisal of the general condition of the patient, the necessity of the operation, and the operative risk. As a result of the recent rapid progress in anesthesiology, particularly the improved ability of the anesthetist to maintain and regulate a physiologic state, it seemed worth while to explore the progress on the operative risk in patients with coronary heart disease.

Material

This report is based on a study of 5,778 patients who underwent surgical procedures during the past five years at the New England Center Hospital.[2] The preoperative clinical findings were evaluated by members of the Department of Medicine, and the electrocardiographic records were interpreted under the supervision of Dr. Heinz Magendantz, cardiologist, New England Center Hospital. The patients were divided into three groups: Group I—517 patients with known coronary heart disease, Group II—1,107 patients with no history of coronary disease but with abnormal nonspecific electrocardiograms, and Group III—4,154 patients with no clinical evidence of heart disease. Sixty per cent of the operations were major pro-

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cedures, and 40 per cent were minor. The major procedures consisted of intra-abdominal, intrathoracic, and extra-abdominal operations. The minor consisted of cystoscopies, extremity operations, etc. The ages ranged from forty to ninety years and the mortality rate of the three groups was corrected for ages.

Findings

There was a total of 15 postoperative deaths from all causes in the series of 517 patients who had coronary heart disease, an incidence of 2.9 per cent. In the group of 1,107 patients who had no known coronary disease but with abnormal electrocardiograms, the postoperative mortality was 3.6 per cent. The postoperative mortality rate in the patients with no heart disease and normal electrocardiograms was 2 per cent. The cause of death was analyzed, and it was found that the postoperative death rate due to cardiac causes in patients with pre-existing coronary disease was 1.2 per cent as compared to 0.1 per cent in the patients without preoperative evidence of heart disease. This was found to be statistically significant. It was found that the length of time of anesthesia and surgery did not influence the mortality rate.

Inhalation anesthesia was used in all cases requiring intraperitoneal, intrathoracic, or major extraperitoneal operations. Spinal and regional anesthesia was used only for perineal and lower extremity operations. Cyclopropane was administered in 54 per cent of the cases as compared to ether in 8 per cent, thiopental, nitrous oxide, oxygen, and muscle relaxant 16 per cent, and thiopental, nitrous oxide, and oxygen 22 per cent. There was no statistical difference in mortality rate related to the anesthetic agent.

Comment

There are many reports stating that cyclopropane should not be administered to patients with coronary disease because it favors a high incidence of arrhythmias. A recent investigator[3] has shown that an elevated arterial carbon dioxide tension is the causative factor in producing arrhythmias and is not due to a toxic effect of cyclopropane on the myocardium. Our own findings are in agreement with those of Johnstone.[3]

Our results indicate that the risk of operation in patients with coronary disease is only slightly greater when compared with patients without heart disease of the same age group. This is made possible only when measures are taken to avoid myocardial ischemia. The factors that may precipitate a coronary episode during or following an operation are as follows:

CIRCULATORY DEPRESSION.—The major complication of deep levels of anesthesia is circulatory depression. Systemic arterial hypotension during ether anesthesia is mainly due to a direct myocardial depression.[4] During high spinal anesthesia it is due to a decrease in cardiac output and total peripheral resistance[5] During deep thiopental or cyclopropane anesthesia the chief circulatory disturbance is a disproportionate reduction in cardiac output.[6] These recent studies have shown that deep surgical anesthesia produces a deleterious effect on either the myocardium or peripheral circulation. These changes rarely occur during light levels of anesthesia.

RESPIRATORY DEPRESSION.—Deep surgical anesthesia is also accompanied by depressed ventilation. This impedes the excretion of carbon dioxide and leads to a state of respiratory acidosis. Toxic levels of carbon dioxide may ensue and predispose to cardiac arrhythmias and postoperative hypotension.

HYPOXIA.—The most frequent consequence of oropharyngeal obstruction and laryngeal spasm during anesthesia is hypoxia. Other causes of hypoxia are a decrease in the inspired oxygen tension, arterial hypotension, depressed ventilation, and shock.

SHOCK.—Shock, no matter how it is produced, may lead to the development of not only single but often multiple fresh coronary occlusions in the elderly patient, particularly those showing evidence of coronary arteriosclerosis.

MISCELLANEOUS FACTORS.—Straining, bucking, and coughing during the induction of anesthesia impede the venous return of the blood to the heart, which predisposes to acute hypotension. Any of these complications will lead to impairment of the coronary blood flow. Cardiac rate is usually increased during such conditions. When this occurs, the diastolic filling of the heart is reduced, resulting in a diminished cardiac output and coronary blood flow.

These complications tend to increase the work of the heart. The combination of these factors are additive and may eventually precipitate myocardial infarction. They can be avoided by the rapid and smooth anesthetic induction with thiopental plus a muscle relaxant followed by endotracheal intubation. The use of muscle relaxants permits the maintenance of light levels of anesthesia.

An anesthetic state necessary for major surgery can be maintained without incurring the factors that might precipitate a coronary episode provided the patient's respiration is actively "controlled." Ventilation is controlled by the anesthetist squeezing the anesthesia bag at a definite rate and rhythm, keeping the mean airway pressure within physiologic levels. With this method a minimum of the primary anesthetic agent is required, alveolar ventilation is kept within physiologic ranges, and the circulation is not depressed.

The crucial safety factors involved in anesthesia of all types are the control of the total amount of the anesthetic agent or agents administered, high oxygen saturation, prevention of accumulation of carbon dioxide in the blood, and adequate blood replacement.

However, it would be unfortunate if physicians gained the impression that patients with coronary disease are especially safe operative risks. They are safe risks only when they are considered unsafe. This implies close cooperation between the internist, surgeon, and anesthetist, and the results obtained in this study are attributed to this concept.

Conclusion

The postoperative mortality rate from all causes in 517 patients with coronary heart disease was 2.9 per cent as compared to a rate of 2 per cent in 4,154 patients with no clinical evidence of heart disease.

The death rate primarily due to cardiac causes following surgery was 1.2 per cent in the group of patients with coronary disease as compared to a rate of 0.1 per cent in patients with no heart disease.

Although there is no significant difference in the total death rate between the three groups, it is evident that the risk of myocardial infarction following surgery is somewhat greater in patients with coronary disease but not as great as reported by others.[7-9]

The magnitude of the risk, as shown by this study, should not contraindicate necessary surgery providing the proper precautions are taken during the administration of anesthesia to prevent the impairment of coronary blood flow and oxygenation.

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Post Office Urges More Careful Blood Packaging

An assistant postmaster in Chicago phoned my office recently and complained that many doctors are mailing blood specimens in glass vials placed in metal screw-topped cardboard tubes to private and governmental laboratories and, because of carelessness in screwing the tops on securely, the vials slip from the tubes, are broken, and the blood stains other mail. He pointed out one important fact from the doctor's viewpoint; if the postal employe reinserts the vials in the tubes, who knows whose blood goes into whose tube?

The assistant postmaster said the same trouble exists in other postal centers and urged us to publicize what he called "this dangerous nuisance."

He urged doctors to place an adhesive strip (not scotch tape) across the metal top and down the sides of the container to prevent the tops from coming off.—*Secretary's Letter, A.M.A., June 1, 1954*

Practical Approach to Management of Superficial Fungous Infections

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(From the Department of Medicine (Dermatology) of the Cornell University Medical College)

THE purpose of this paper is to present a practical approach to the successful management of the more common fungous diseases of the skin and its appendages. Discussion of the finer points of laboratory mycology will be avoided, and emphasis will be placed on grouping of the fungous diseases in such a way that management is often possible by clinical differential diagnosis and use of those special tests for which equipment may be available in the nondermatologist's office.

The first step in successful management is diagnosis. Often, determination of the etiologic fungus is not essential. Knowledge that a fungous disease is present and of the degree of inflammation is sometimes sufficient. The following diagnostic methods will be discussed: (1) differential diagnosis by clinical aspects, (2) Wood's light examination, (3) direct microscopic examination of skin scrapings, nail scrapings, or infected hairs, (4) culture for fungi, and (5) biopsy.

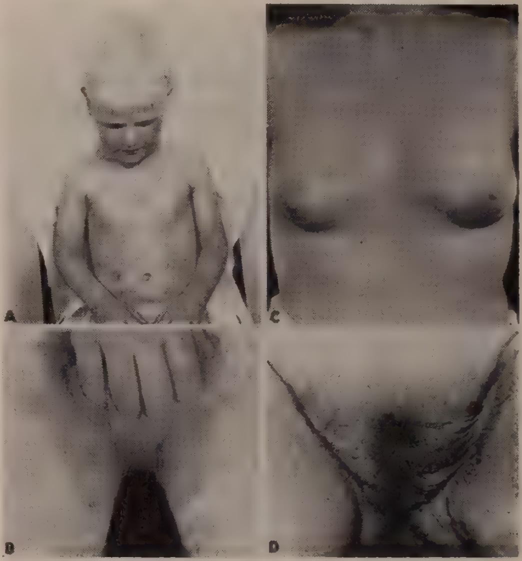

FIG. 1. Differential diagnosis of fungous infections of the body: (*A*) tinea circinata; (*B*) tinea cruris; (*C*) pityriasis rosea; (*D*) seborrheic eczema.

Differential Diagnosis by Clinical Aspects

A practical approach to the grouping of superficial fungous diseases is topographic rather than etiologic. The simplest classification would divide the fungous infections into four groups according to location: (1) the body (glabrous skin), (2) the hands and feet, (3) the nails, and (4) the hair.

BODY (GLABROUS SKIN).—This group would include tinea circinata (ringworm), tinea cruris, and tinea versicolor (Figs. 1 and 2). Tinea circinata and tinea cruris infections have the characteristic of advancing vesicular borders with a tendency toward clearing in the center. Varying degrees of inflammation may be present. Other dermatologic conditions confused with these fungous infections are pityriasis rosea, impetigo, secondary syphilis, psoriasis, and seborrheic eczema.

Pityriasis rosea is differentiated from tinea circinata in that the lesions of tinea circinata are usually more rounded, less symmetric, and do not have a tendency to line up according to dermatome. The progression of the lesions is also different. In tinea circinata there is usually an initial lesion which gradually enlarges, and new lesions appear peripherally. In pityriasis rosea onset is manifest by an oval lesion (herald patch) which does not enlarge peripherally. Five to eight days after the appearance of this lesion, smaller lesions appear symmetrically on the trunk and proximal parts of the extremities. The center of the lesion of pityriasis rosea shows a cigaret paper-like pseudoatrophy which is absent in tinea circinata.

Psoriasis is occasionally confused with tinea circinata, particularly when configurate with a somewhat elevated margin. However, when the psoriatic lesion is scraped, tiny micaceous scales

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, General Sessions, May 14, 1954.

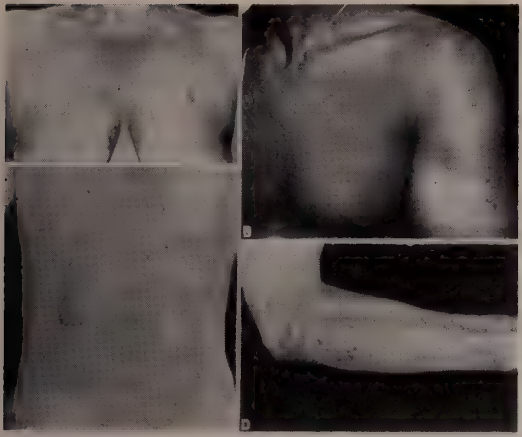

Fig. 2. Differential diagnosis of fungous infections of the body: (*A*) tinea versicolor (pigmented phase); (*B*) tinea versicolor (hypochromic phase); (*C*) psoriasis; (*D*) psoriasiform syphilid.

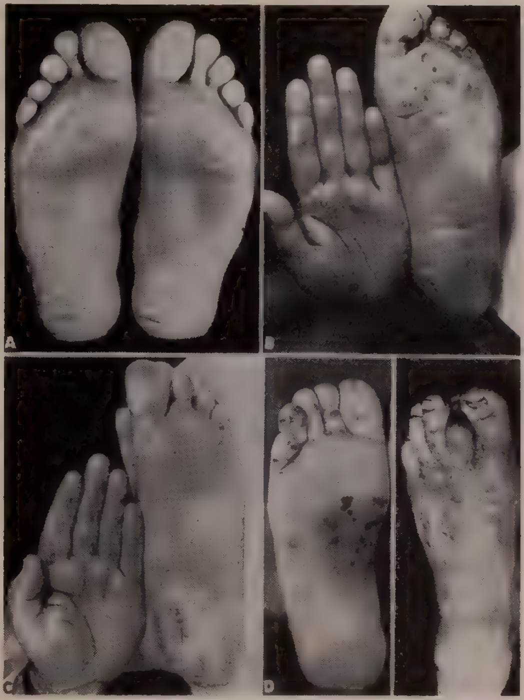

Fig. 3. Differential diagnosis of fungous infections of the hands and feet: (*A*) dermatophytosis (chronic); (*B*) dermatophytosis (acute) with "id"; (*C*) psoriasis; (*D*) contact dermatitis.

are obtained, and individual bleeding points are seen in the abraded area. With a hand lens it is also possible to see that there are no vesicles in the margins.

Secondary syphilis, particularly of the psoriasiform type, should be ruled out. In this eruption no vesicles are present, and the other signs of secondary syphilis, such as lymphadenopathy and positive serologic reaction, should be present.

Impetigo may be distinguished by the fact that the lesion of impetigo has no elevated margin but is exudative and covered with a golden-brown crust. Since this is also an infection, the progression is similar to that of inflammatory fungous disease.

Tinea cruris must be differentiated from seborrheic eczema. In seborrheic eczema there is no raised margin, the process is more diffuse, and small waxy scales are found.

Tinea versicolor is usually manifest by small, scaly plaques over the chest and proximal portions of the arms. In winter the lesions are slightly hyperpigmented (fawn-colored), but in summer the filtering effect of fungous elements in the scales of the affected areas on ultraviolet light cause the lesions to appear to be depigmented. Consequently, vitiligo and leukoderma due to substances such as agerite alba have to be ruled out. The hypochromia (or pseudoachromia) of tinea versicolor, however, is not complete as in vitiligo. In leukoderma the depigmentation may or may not be complete. It would be rare to see either vitiligo or leukoderma confined to the regional distribution of tinea versicolor. When it is, it is sometimes necessary to use the Wood's light fluorescence test to make the differential diagnosis. The scales of tinea versicolor show a yellowish fluorescence. A direct examination of the scrapings from tinea versicolor will show fungous elements. No cultural method is available for this fungus.

Hands and Feet.—This group includes those infections sometimes called tinea pedis, dermatophytosis or epidermophytosis, and the allergic reactions to these infections called "ids" or dermatophytids (Fig. 3). In the acute type there are vesicles, usually on the plantar surface, maceration, and fissuring or exudation between the toes. In the chronic or less inflammatory type there may simply be scaling and possibly fissuring of the skin between the toes and on the plantar surface. It is only in the acute type that the "id" reaction occurs. By far the most common type of "id" is a vesicular eruption of the palms and intertriginous surfaces of the fingers, bilaterally symmetric.

The acute type must be differentiated from contact dermatitis. Contact dermatitis usually

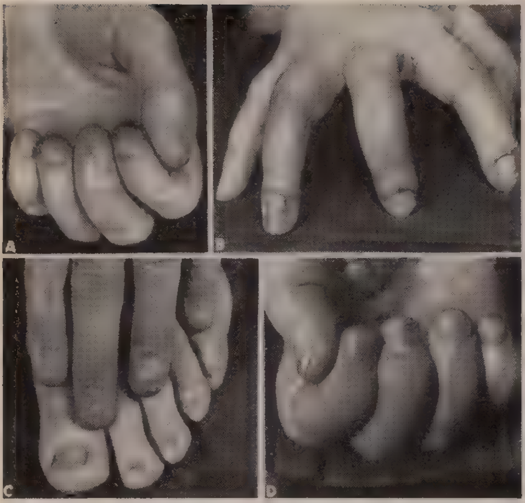

FIG. 4. Differential diagnosis of fungous infections of the nails: (*A*) onychomycosis; (*B*) onychomycosis (C. albicans type); (*C*) nail dystrophy; (*D*) psoriasis of nails.

occurs on the dorsa of the feet and hands rather than the soles and palms and in areas on which more pressure is applied. Frequently, the skin in the cleft of the toes is clear. Usually the vesicles are smaller in size than those in fungous infection and more evenly distributed throughout the eruption. Onset is usually more rapid. A history of possible contactants is valuable, particularly if information is obtained of a new pair of shoes being worn just previous to the eruption.

Nummular eczema occurs fairly frequently on the dorsa but may be present on the palms or the soles. The lesions of nummular eczema appear as coin-shaped patches with small vesiculopustules seen distributed evenly throughout the lesion. This is more frequent in winter than in summer, which is the opposite of fungous infections. Nummular eczema is often associated with emotional factors.

Dyshidrosis or pompholyx is another condition usually attributed to emotional factors which must be differentiated. In this condition the vesicles are fairly symmetrically distributed and may be on both palms and soles. It is sometimes difficult to differentiate this condition from the dermatophytid reaction, and scrapings from both the dyshidrotic lesion and the vesicle of the "id" reaction are negative for fungous elements. History of progression is helpful. In dyshidrosis onset is heralded by the appearance of small vesicles, which are very pruritic and appear to be under the skin. This is followed by a rupture of the vesicles and scaling over a seven- to ten-day period. The eruption is usually recurrent.

So-called pustular psoriasis (acrodermatitis pustulosa perstans) is frequently misdiagnosed as dermatophytosis. However, in pustular psoriasis the areas contain small, pinhead-sized pustules distributed throughout the lesions, and there is less tendency for the margin to spread than in dermatophytosis. Direct examination of scrapings, culture, or biopsy may be necessary.

Psoriasis of the palms or soles is another disorder which must be differentiated. Examination of other regions of the body (elbows, knees, sacral region, scalp, fingernails) for other psoriatic lesions is often helpful. In this condition also microscopic differentiation is often needed. Soft corns, warts occurring between the toes, and even secondary syphilis have been misdiagnosed as fungous infection of the feet.

NAILS.—Infection of the nails is known as tinea unguium or onychomycosis (Fig. 4). There are two main types of fungous disease of the nails: that caused by the usual organisms which cause dermatophytosis and that type caused by the yeast Candida albicans.

In the first type there is a slowly progressive dystrophy beginning at the distal end of the nail with loss of translucency, increased friability, and building up of subungual detritus. In the second type there is usually slight dystrophy along the edges of the nails with a gray or gray-green discoloration and some inflammation of the paronychial tissue.

Differential diagnosis is chiefly with psoriasis of the nails. When patches of psoriasis can be found elsewhere on the body, the matter is simplified. If only the nails are involved, there is a great deal of difficulty. It is typical of psoriasis for papules to develop in the nailbed and small pits to appear on the surface. In advanced cases of psoriasis the entire nail may be dystrophic, and microscopic or cultural differentiation may be necessary.

Other conditions which have been confused with fungous infection of the nails are onycholysis or separation of the nail from such substances as nail polish base coat and nail dystrophies on the basis of systemic disease or hereditary factors. In these last two conditions, however, the nail dystrophy is usually symmetric and involves all nails, whereas, in fungous infection

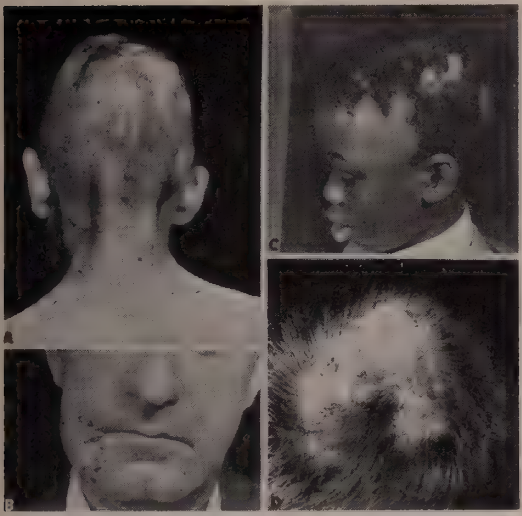

FIG. 5. Differential diagnosis of fungous infections of the hair: (*A*) tinea capitis; (*B*) tinea barbae; (*C*) alopecia areata; (*D*) seborrheic eczema.

it is usual for one or more nails to be completely unaffected.

HAIR.—This group includes tinea capitis (ringworm of the scalp) and tinea barbae (ringworm of the beard). Characteristically, the hair is broken off just above the skin line, and extension is peripherally (Fig. 5). In one type, however, which is still rare in this area, the hair may not be broken off, and there may be just a slight scaling of the scalp.

Alopecia areata is the most common disorder misdiagnosed as tinea capitis. In this condition, however, the hair falls out completely, and there is no stubble remaining on the scalp. The onset is also more rapid than in tinea capitis, and inflammation is absent. The cicatricial alopecias, such as those due to lupus erythematosus, alopecia cicatrisata, and pseudopelade, must also be differentiated.

However, in these conditions there is true atrophy of the scalp, no stubble remains, and even the follicular openings disappear from the central part of the lesion.

Perifolliculitis due to bacterial infection must be considered. In these conditions, when the hair is epilated, frank pus is seen.

In the type of tinea capitis in which there is not breaking off of the hairs but merely scaling, seborrheic dermatitis and psoriasis of the scalp are diagnostic possibilities. The scaling is not waxy, however, as in seborrheic eczema or piled up and micaceous as in psoriasis. The finding of seborrheic or psoriatic lesions elsewhere than in the scalp is also helpful in diagnosis.

Since the treatment of tinea capitis varies according to the etiologic fungous agent, it is essential to determine the exact type of infection. If fungous infection is suspected, the hairs should be planted on Sabouraud's medium and the specimen submitted to a competent mycologist or dermatologist for interpretation. The Wood's light examination is very helpful in that most types of tinea capitis show fluorescence. This method is excellent in screening out possible tinea capitis in school children.

Sycosis barbae due to bacterial infection is the chief condition which must be differentiated from fungous infection of the beard. Direct microscopic examination for fungous elements or culture is indicated in cases in which frank pus is not seen exuding from the follicular orifice when the hair is epilated manually.

Wood's Light

The Wood's light (filtered ultraviolet radiation) is a useful tool for the diagnosis of some superficial fungous diseases. There are now several compact lamps easily obtainable at a cost of less than $25. For management of fungous infection of the scalp (tinea capitis) the Wood's light is essential. The hairs containing the spores of most fungi which cause tinea capitis show a greenish-yellow fluorescence under examination by Wood's light, and this phenomenon is widely used in screening large groups of children for possibility of fungous infection of the scalp. It is not infallible, however, since there is at least one type of tinea capitis which does not fluoresce. In the treatment of tinea capitis the fluorescence test is used to identify the infected hairs so that they may be epilated and also to determine clinical cure. The other fungous infection in which the Wood's light is widely used is tinea versicolor. The areas infected with this disorder fluoresce with a yellowish color.

Direct Microscopic Examination

The direct microscopic examination of material obtained by scraping the skin or nails or manually epilated infected hairs is a simple procedure and requires no equipment not found in the usual medical office. For lesions on the skin it is merely necessary to cleanse the area with alcohol, gently scrape over the surface of the suspected area with a round blade scalpel, place the material obtained along the edge of the blade on the surface of a glass slide, add a few drops of 10 per cent sodium hydroxide solution, put on a cover slip, and in a few minutes examine under a microscope using the high-dry lens. With a little experience the fungous elements (mycelia and spores) can be differentiated from the nonfungous material or artefacts. A subdued light is required. This test is useful in determining whether or not a fungous infection is present; it does not determine the etiologic fungous agent.

Culture

When it is important to determine the etiologic fungous agent, culture is necessary. Material obtained similarly to the procedure for direct microscopic examination is smeared across the surface of a culture tube or petri dish containing Sabouraud's medium. For offices where cultures are done rarely, Dr. Walter Wilson of Los Angeles has devised small bottles containing the medium which can be stored air-tight for long periods of time and opened when needed.* The interpretation of the growth by colony characteristics or culture mounts is a specialized procedure so that it may be necessary to submit the culture to a mycologist or dermatologist for the definitive diagnosis.

Biopsy

A biopsy is seldom necessary for diagnosis of superficial fungous diseases. However, in cases where it is advisable, the Hotchkiss-MacManus stain should be specified when the specimen is sent to the laboratory.

Treatment

Selection of the proper medication is based on (1) state of inflammation, (2) depth of process, (3) region of body involved, (4) allergic status of patient, and (5) presence or absence of secondary pyogenic infection. The cardinal rule is "the more inflammatory the condition, the milder the treatment." In acute inflammatory disorders wet dressings are indicated. In subacute conditions or when the inflammation has subsided somewhat, lotions, solutions, or tinctures may be used. Ointments and strong medications are useful only in chronic cases or when the inflammatory phase has subsided. When the lesions are located in sensitive areas, such as the genital area, milder medications are indicated than for a similar eruption in a nonsensitive area such as the back. The formulary which follows is arranged to follow these principles of therapy. The medications are listed in general from the mildest at the top of the list to the strongest at the bottom.

WET DRESSINGS (FOR ACUTE INFLAMMATORY CONDITIONS)

1. Normal saline
2. Boric acid solution (saturate)
3. Burow's solution, 1:10 to 1:50
4. Zephiran solution, 1:1,000 to 1:20,000
5. Silver nitrate solution, 1:200 to 1:500
6. Bichloride of mercury solution, 1:1,000
7. Vleminckx's solution, 1:10 to 1:100

(Numbers 4, 5, and 6 are particularly useful in Candida infections)

INTERMEDIATE APPLICATIONS (FOR SUBACUTE INFLAMMATORY CONDITIONS)

1. Calamine lotion (2 per cent ammoniated mercury may be added)
2. Gentian Violet, 1 to 2 per cent solution
3. Propionic acid liquid (Sopronol)
4. Asterol tincture (Asterol)
5. Sodium thiosulfate, 10 to 20 per cent solution
6. Resorcinol, 2 per cent in 70 per cent alcohol
7. Castellani's paint
8. Mild tincture of iodine
9. Whitfield's lotion

(Number 8 is used chiefly in tinea versicolor)

OINTMENTS (FOR CHRONIC CONDITION OR POST-INFLAMMATORY PHASE)

1. Boric acid ointment, 2 to 10 per cent
2. Asterol ointment (Asterol)
3. Undecylenic acid ointment (Desenex, Timofax)
4. Propionic acid ointment (Sopronol)
5. Ammoniated mercury ointment, 2 to 10 per cent (salicylic acid 1 to 5 per cent may be added)
6. Sulfur ointment, 2 to 10 per cent (salicylic acid 1 to 5 per cent may be added)
7. Whitfield's ointment (one-fourth to full strength)
8. Salicylanilide ointment, 5 per cent
9. Tar ointment, 2 to 10 per cent
10. Anthralin ointment, 0.1 to 2 per cent
11. Chrysarobin ointment, 1 to 5 per cent

(Number 8 is used chiefly in tinea capitis)

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* Available through Derm-Medical Co., P.O. Box 8442, Los Angeles, California.

POWDERS (FOR PROPHYLAXIS OR ADJUNCTIVE TREATMENT)

1. Asterol powder (Asterol)
2. Undecylenic acid powder (Desenex, Timofar)
3. Propionic acid powder (Sopronol)

Adjunctive Treatment

1. For secondary, bacterial infection:
   - (*a*) Neomycin ointment
   - (*b*) Bacitracin ointment
   - (*c*) Sulfas or erythromycin by mouth

     (Penicillin is to be avoided, particularly in inflammatory fungous infections of the feet because of possible cross-sensitivity of Trichophyton organisms and penicillin. Aureomycin is contraindicated in infection due to C. albicans.)
2. Symptomatic relief: antihistamines for relief of pruritus

Physical therapy in the treatment of fungous infections includes the following:

1. Ionizing radiation—X-rays and radium have little if any direct effect on fungous infections. Beneficial effect is probably due to the action of the ionizing rays on the accessory inflammatory response of skin organs such as the sweat glands or on secondary pyogenic infection. The chief use of x-rays is in the temporary epilation of the scalp in the noninflammatory type of tinea capitis due to Microsporon audouini. This is a very specialized procedure and should be done only under the direction of a dermatologist skilled in this technic. For monilia infections, particularly monilial paronychia, weekly exposures of 50 to 75 r for four to six weeks are beneficial.

2. Ultraviolet irradiation—The use of ultraviolet rays for the treatment of fungous infections is limited. Any beneficial effect probably results from desquamation of the fungous-containing outer layers of the skin following an erythema dose of ultraviolet rays. "Cold quartz" type radiation is superior to the "hot quartz" type for this effect.

3. Refrigerants—Ethyl chloride or carbon dioxide "slush" may be used for a desquamative effect similar to that produced by ultraviolet irradiation.

Summary

An approach to the practical management of the superficial fungous infections by the nondermatologist is presented. A simplified classification according to topographic location is proposed. Differential diagnosis by clinical features is stressed, and the simpler diagnostic procedures are explained. Treatment principles based largely on the location of the lesions and state of inflammation are given, and a brief formulary is appended.

147 EAST 50TH STREET
66 EAST 66TH STREET

Indications for Exploratory Laparotomy in Obscure Clinical Abdominal Disease

FELIX WRÓBLEWSKI, M.D., GEORGE T. PACK, M.D., AND JOHN S. LADUE, M.D., NEW YORK CITY

(*From the Gastric and Medical Services of the Memorial Center for Cancer and Allied Diseases*)

THE purpose of this study is to present the preoperative, laboratory, and operative findings in 50 patients with unexplained persistent abdominal complaints and/or positive physical findings in an attempt to define the indications and limitations of exploratory laparotomy as a diagnostic procedure. In the patients under discussion diagnosis was obscure either because the clinical picture was equivocal or the laboratory and x-ray studies negative, questionable, or misleading.

Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, General Sessions, May 11, 1954.

TABLE I.—PERTINENCE OF LABORATORY AND X-RAY STUDIES TO FINAL DIAGNOSIS

	Benign	Malignant	Per Cent of Total
Laboratory studies			
Negative	14	14	56
Nonspecific	10	9	38
Consistent	1	2	6
X-ray interpretation			
Negative	9	13	44
Nonspecific	7	5	24
Consistent	8	7	30
Suggestive	0	1	2

Material and Method

Fifty patients were selected from among 300 subjected to exploratory laparotomy excluding 250 for the following reasons: (1) patients who had readily definable lesions by laboratory or x-ray studies, (2) patients who had not had adequate preoperative laboratory or x-ray studies which would have resulted in a definitive diagnosis, (3) any patient who had jaundice or a positive preoperative cytologic diagnosis from liver aspiration, cervical smear, etc., and (4) patients who had exploratory laparotomy for the purpose of deciding if their disease was operable. It should be noted that retroperitoneal air studies and intraluminal cytologic studies were not done in some instances when such procedures might have contributed to an accurate preoperative impression. All selected patients had unexplained abdominal pain except four each of whom exhibited an asymptomatic abdominal mass.

The histories and physical examinations of these patients were carefully reviewed for clues which might have led to an accurate preoperative diagnosis, and the laboratory and x-ray data were similarly scrutinized. In Table I the laboratory and x-ray studies are graded negative, nonspecific, consistent with the final diagnosis but not definitive, and suggestive but still not definitive. No attempt has been made to follow up these patients once the diagnosis was established or to discuss the further management of their disease states.

Results

The ages of the patients ranged from twenty-six to seventy-six (average 53.6); 27 were white females and 23 white males. No significant difference was noted in the group with benign or cancerous lesions as to the age or sex distribution. Benign disease amenable to surgical treatment was present in 21, malignant tumors in 25, and no disease was discovered in four patients. It is important to note that symptoms had been present during a period ranging from two months to nineteen years.

The histories given by 46 patients were significant only in that pain was the sole complaint leading to the diagnosis. Other symptoms exhibited by these patients such as heartburn, belching, dysphagia, nausea, vomiting, diarrhea, constipation, melena, and weight loss were unrelated to the final diagnosis. Constitutional symptoms were minimal, and, when present, were no more frequent among the patients with lymphoma than the other various diagnoses.

Table II lists the operative findings according to the locus of pain for the patients with benign disease and malignant tumors. In every instance there was an adequate anatomic and pathologic explanation for the pain in its particular location except in the four patients in whom no disease was found.

There were no physical findings pertinent to the final diagnosis except the presence of a palpable abdominal mass in 23 patients and/or abdominal tenderness in 15, 12 of whom also had abdominal masses. None of the patients was cachectic, and none exhibited peripheral adenopathy. Only one patient had a palpable spleen. There was no evidence of distant metastases in any instance. Except for anemia the associated disease states will not be discussed.

Table III lists the location of the abdominal mass and the type of benign lesion or malignant tumor found at exploratory laparotomy. Close correlation between the clinical abdominal findings and the anatomic lesion seen was the rule. In two patients abdominal wall masses were thought to be located intra-abdominally. One patient was thought to have ascites but was proved to have a huge pseudomucinous cyst arising from the left ovary.

The laboratory findings, including urinalysis, hemogram, sedimentation rate, stool examinations, blood chemistries, bone marrow studies, and aspiration biopsies, were, in general, of no help in establishing a correct diagnosis. For example, anemia was found in three patients with benign diseases and in four patients with malignant tumors. Bone marrow studies were normal in patients who were later proved to have lymphoma. Six patients had elevated fasting

TABLE II.—OPERATIVE FINDINGS ACCORDING TO LOCATION OF PAIN

Benign	Malignant
Epigastric (17 Cases)	
No disease (1 case)	Adenocarcinoma of stomach
Jejunal regional enteritis	Myosarcoma of duodenum
Interstitial pancreatitis	Carcinoma of pancreas (2 cases)
Pancreatic cyst (2 cases)	Retroperitoneal carcinoma, primary unknown
Amyloidosis of liver	
Chronic mesenteric panniculitis	Retroperitoneal rhabdomyosarcoma
Peritonitis lesser omental sac (unexplained)	
Osseous metaplasia of abdominal wall	
Pancreatitis	
Duodenal polyp	
Right Upper Quadrant (7 Cases)	
Abscess right lobe liver	Adenocarcinoma of pancreas (3 cases)
	Carcinoma of gallbladder
	Clear cell renal cancer, right
	Primary hepatoma
Left Upper Quadrant (6 Cases)	
Splenic abscess and infarct	Adenocarcinoma pancreas
Pheochromocytoma	Retroperitoneal reticulum cell sarcoma
Splenic infarct	
Foreign body reaction in abdominal wall	
Right Lower Quadrant (5 Cases)	
No disease (1 case)	Retroperitoneal lymphosarcoma
Ectopic right kidney	
Atrophic right kidney	Left ovarian carcinoma
Left Lower Quadrant (1 Case)	
....	Lymphosarcoma left ovary
Diffuse Abdominal (8 Cases)	
Chronic cicatricial inflammation of sigmoid	Reticulum cell sarcoma of stomach
No disease (1 case)	Adenocarcinoma of duodenum
Radiation fibrosis of ilium	Reticulum cell sarcoma, retroperitoneal
	Omental metastatic ovarian carcinoma (primary in small ovary)
	Reticulum cell sarcoma of ileum and cecum
No Pain (4 Cases)	
Retroperitoneal Müllerian cyst	Retroperitoneal lymphosarcoma
Pseudomucinous cyst of ovary	Adenocarcinoma of stomach

TABLE III.—LOCATION OF MASS AND TYPE OF LESION FOUND AT OPERATION

Benign	Malignant
Right Upper Quadrant (4 Cases)	
Pancreatic cyst	Primary hepatoma
	Clear cell carcinoma of kidney
	Adenocarcinoma of duodenum
Right Lower Quadrant (5 Cases)	
Ectopic kidney	Left ovarian cancer
Müllerian cyst, retroperitoneal	Reticulum cell sarcoma of ileum and cecum
	Retroperitoneal lymphosarcoma
Epigastric (8 Cases)	
Osseous metaplasia in wound	Metastatic omental carcinoma from small ovary
Lesser omental peritonitis	Lymphosarcoma
Pancreatic cyst	Carcinoma of pancreas
	Reticulum cell sarcoma of stomach
	Myosarcoma of duodenum
Left Upper Quadrant (3 Cases)	
Foreign body reaction in abdominal wall	Retroperitoneal reticulum cell sarcoma
	Adenocarcinoma of pancreas
Left Lower Quadrant (1 Case)	
....	Lymphosarcoma ovary
Diffuse Abdominal (1 Case)	
Pseudomucinous cyst of ovary	....

blood sugars, three of whom had benign lesions not involving the pancreas; two had carcinoma of the pancreas, and one had abdominal carcinomatosis due to a small ovarian cancer. Aspiration biopsy of the liver in three patients failed to establish a correct diagnosis.

Table I lists the diagnostic significance of x-ray studies divided according to the benign or neoplastic nature of the diseases. It is further subdivided into the group of patients in whom the findings were entirely normal (44 per cent; nine patients with benign and 13 with malignant lesions). In 12 (24 per cent; seven patients with benign and five with malignant lesions), the findings were nonspecific in that the diagnosis was not suspected or even localized. In 15 patients (30 per cent; eight patients with benign and seven with malignant lesions), the x-ray findings were consistent but not definitive in that the lesion was localized but not defined. For example, the x-rays in one patient showed a deformity of the duodenal loop which proved to be an extraluminal carcinoma of the duodenum. Another patient had a cecal filling deformity suggesting early carcinoma which proved to be a retrocecal appendix. In one case of neoplastic disease an x-ray diagnosis of carcinoma of the stomach was made in a patient who had reticulum cell sarcoma of the stomach.

Comment

Our data have demonstrated the folly of procrastination in the face of persistent complaints and positive physical findings in a situation where definitive diagnosis is impossible or at best problematic. Despite the most exhaustive questioning and careful physical examination the diagnosis may remain obscure, and it is often easy to find justification for conservative management. For example, persistent abdominal pain may be ascribed to spasm, constipation, allergy, or functional derangements. Under some circumstances the presence of a palpable mass may lead to a presumption that an inoperable lesion is present. Inasmuch as 42 per cent of our patients with the above obscure findings had benign and curable diseases, there is little justification for postponing exploratory laparotomy. In 50 per cent definitive diagnosis provided data permitting both curative and palliative treatment. Eighteen patients were considered to have inoperable carcinoma, but exploratory laparotomy proved that all had benign lesions, 14 of which were suitable for surgical correction and, of these, six had been considered to be hopelessly ill of incurable cancer.

On the other hand, eight patients were considered to have non-neoplastic disease who proved to have cancer, and four of these were resectable, two of whom were previously considered inoperable. Seventeen were classed as having inoperable cancer, but two had their cancers resected. Three proved to have lymphoma which was subsequently treated by irradiation. The remainder, as well as all patients subjected to exploratory laparotomy, survived the procedure without any evidence of untoward effect.

Seven patients were thought preoperatively to have benign lesions, and in three the exploratory laparotomy failed to show any evidence of disease. In these three patients and in one patient considered to have neoplastic disease the exploratory laparotomy showed normal operative findings. One patient had epigastric pain and x-ray findings consistent with the diagnosis of hypertrophied pyloric musculature. Another had right lower quadrant abdominal pain and a suggestive x-ray finding of early cecal cancer who proved to have a retrocecal appendix. A third had longstanding, diffuse abdominal pain with a preoperative diagnosis of anxiety state. The fourth had had a subtotal gastric resection for intractable epigastric pain, but exploratory laparotomy failed to reveal stomal ulcer or other abnormality. Diagnoses of chronic pancreatitis, pancreatic cyst, Müllerian cyst, and mesenteric panniculitis were made in the remaining four patients—which obviously could not have been made except by exploration.

Fifteen patients had had previous abdominal operations, ten for malignant tumors and five for benign ailments. Of the former, two had new primary cancers, two had recurrent carcinoma, two had lymphoma previously termed inoperable abdominal carcinoma, and four had benign lesions. Of the five considered to have benign disease two had previously overlooked cancer, one pancreatitis, one a duodenal polyp, and one had no disease.

From our study neither the type, location, nor severity of pain was helpful in deciding whether the lesions were benign or malignant. This is in keeping with the anatomic and physiologic basis of abdominal pain reported by others.[1] Other symptoms are even less definitive except for progressive weight loss which is suggestive of pancreatic disease or cancer but has also been noted in benign disease as a result of secondary or psychosomatic influences.[2]

The importance of a palpable abdominal mass has been discussed in the patients reported, and our findings support those of Butler and Bargen[3] who found that the presence of abdominal masses in the case of malignant tumors was somewhat more frequent than in benign diseases, but the differences were not statistically significant or clinically reliable.

Other laboratory data including hematologic, urologic, and chemical studies were rarely contributory in establishing the diagnosis or in differentiating between benign diseases and malignant tumors.

Although the conventional fluoroscopic and radiographic examination of the gastrointestinal tract remains the safest and the most informative study of the abdomen and neighboring structures, it is by no means absolute and has many inherent limitations. In many instances too much credence is attached to certain indefinite findings or to a negative study.[4]

Repeat roentgen studies of the gastrointestinal tract are often valuable, particularly when special technics are employed and if the radiologist is given some clue as to what to look for. Despite the most vigorous and skillful x-ray studies, however, conflicting or even fallacious impressions may cloud the correct diagnosis. It must be emphasized that 13 of the patients reported here had retroperitoneal tumors, six of which were pancreatic. These areas, lesions less than 0.5 cm. in size, and small bowel lesions are notoriously difficult problems in x-ray diagnosis.

Since we can visualize only the inside silhouette of the lumen of the organ studied, a mass lesion will not become apparent until it has either attained sufficient size to change the mucosal surface by stretching, ulceration, or induration or produces a secondary functional change. Extraluminal masses can be detected only if they are large enough and closely enough associated with the gastrointestinal tract to produce pressure defects. A negative or questionable x-ray study, therefore, in the presence of persistent symptoms is no contraindication to exploratory laparotomy.

In evaluating the patient with obscure abdominal complaints who has undergone previous abdominal surgery, one must be aware of the limitation of operating table observation, the confusing appearance at operation between some benign and malignant processes, and the association of the two. Extensive inflammatory reaction may simulate inoperable cancer, hence without histologic confirmation of neoplasm no such diagnosis should be accepted. Pancreatic cancer may be a localized nidus amid an extensive region of chronic pancreatitis. Lymphomatous disease may at operation present a picture not unlike extensive inoperable carcinoma, and without a histologic diagnosis the fruitful use of radiation therapy and chemotherapy may not be considered.

In a patient with previously and successfully treated intra-abdominal cancer, the appearance of obscure abdominal complaints is particularly challenging. Recurrent cancer is usually suspected, but unless one considers the possibility of a second primary cancer, a new benign process, or the occurrence of a benign but latent complication of the disease, the patient may be denied treatment because the situation has been appraised as hopeless. Exploratory laparotomy at times often presents the only accurate method of defining the presence and/or extent of recurrent abdominal neoplastic disease and of detecting latent postoperative or postirradiation complications of benign character. In every patient undergoing abdominal surgery, where possible, routine generalized exploration of the abdomen at the laparotomy is advised to detect early lesions and to exclude associated abnormalities which have been masked by a more apparent lesion.

Although the indications for exploratory laparotomy in the obscure abdominal syndrome remain ill defined, nevertheless, there is a place for this modality in the management of the obscure abdominal complaints when extensive laboratory and x-ray studies, including cytologic study, are negative. In the presence of persistent unexplained abdominal complaints associated with equivocal or negative diagnostic studies, exploratory laparotomy furnishes an unequivocal answer to diagnostic mystery leading to a quick, definitive diagnosis and final treatment.

Conclusions

1. Exploratory laparotomy was the only means leading to correct diagnosis in 24 patients who had unexplained abdominal pain as a symptom, in 22 patients who had abdominal masses associated with pain, and in two patients who had abdominal masses without pain. In none of these patients were the laboratory or x-ray studies diagnostic.
2. Half or 50 per cent of the patients had neoplastic disease which was amenable to curative or palliative treatment in 44 per cent of the cases.
3. Forty-two per cent had benign disease which was amenable to surgical treatment in 64 per cent of the cases.
4. In 8 per cent no disease was found.
5. Two to nineteen months elapsed from the onset of symptoms to definitive diagnosis which may have represented unwarranted delay in nine (18 per cent) patients proved to have inoperable cancer.
6. Persistent abdominal pain despite a battery of laboratory and x-ray studies or inconclusive findings on physical examination is sufficient justification for exploratory laparotomy.
7. None of the 50 patients subjected to exploratory laparotomy died as a result of the operation, and in no instance was the morbidity of significant duration.
8. Exploratory laparotomy, however, should be considered a last resort and should never be done unless complete laboratory, x-ray, and cytologic studies have failed to establish the diagnosis preoperatively.

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The Inverted "U" Wave in Coronary Artery Disease

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IN THE routine interpretation of the electrocardiogram little attention is paid to abnormalities of the "U" wave. Within the past two years we have encountered marked inversion of the "U" wave in association with coronary artery disease, particularly in early phases of myocardial infarction, during spontaneous anginal attacks, and during positive stress tests for coronary insufficiency. In our experience the inversion of the "U" wave has become an additional diagnostic aid for coronary artery disease.

It is because of the general unawareness of the significance of "U" wave abnormalities that we are submitting the following observations including a discussion and review of the literature.

Case Reports

The following case reports include those patients in whom the inverted "U" wave appeared early in infarction of the anterior wall of the myocardium.

CASE 1.—H. S., male, age sixty, was first seen on June 14, 1949, complaining of typical symptoms of angina of effort of six years duration. Physical examination was essentially negative. Blood pressure was 150/90. Electrocardiogram showed no significant abnormalities (Fig. 1). On March 24, 1950, he began having attacks of severe anterior chest pain, accompanied by pallor and sweating and lasting for several hours at a time. The electrocardiogram on March 26 showed low T_1, slightly depressed ST segments in leads II and III, absent R waves in CF_2, small Q wave and low R wave in CF_4, small Q wave, slightly elevated ST segment, and slightly inverted T wave in CF_6. A striking finding was the presence of deeply inverted "U" waves in CF_2, CF_4, CF_5, and CF_6 and slightly inverted "U" waves in lead I. Rather prominent upright "U" waves were present in leads II, III, and CF_1. The patient ran the usual course of myocardial infarction of moderate severity and made a good recovery. The electrocardiogram on April 20, 1950, showed the findings of an anterior wall infarction in the healing phase. The "U" waves had disappeared.

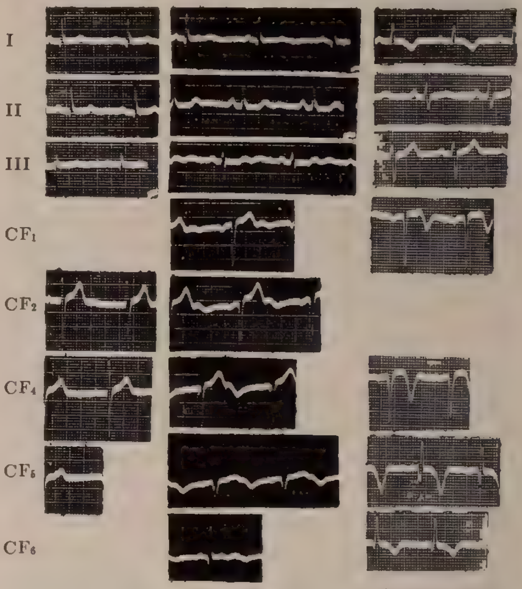
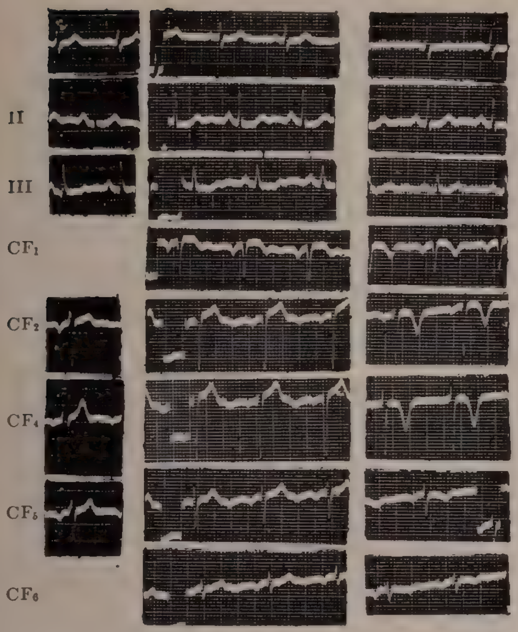


FIG. 1. Electrocardiographic findings in Case 1. (QRS complex retouched.)

CASE 2.—S. R., male, age sixty-five, was first seen on March 12, 1950, because of the complaint of mild pain in back of both shoulders and interscapular region lasting for hours at a time and occurring without relation to exertion or to anything else. This symptom had been present for about six months. The physical examination was negative. Blood pressure was 130/80. The electrocardiogram was normal (Fig. 2).

On August 17, 1950, he began to have attacks of severe pain in the anterior chest, extending into both arms and accompanied by pallor and sweating, lasting for several hours at a time. The electrocardiogram on August 19 showed depressed ST segments in leads II and III, absent or tiny R waves in CF_1, CF_2, and CF_4 with slightly elevated ST segments in these leads. Markedly inverted "U" waves were present in leads CF_2, CF_4, and CF_5;



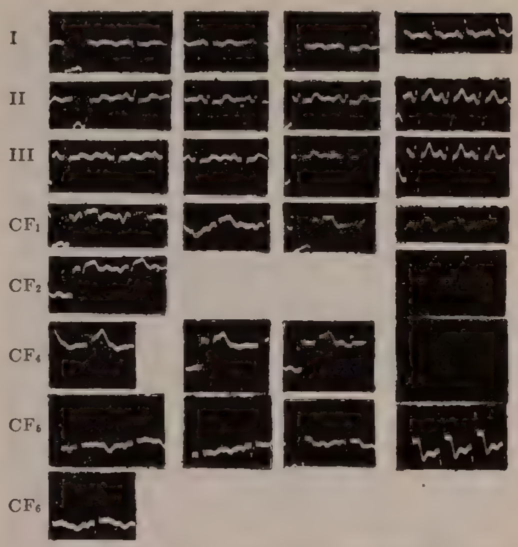
March 12, 1950 August 19, 1950 September 18, 1950

FIG. 2. Electrocardiographic findings in Case 2. (QRS complex retouched.)

upright "U" waves were present in leads II, III, and CF_1.

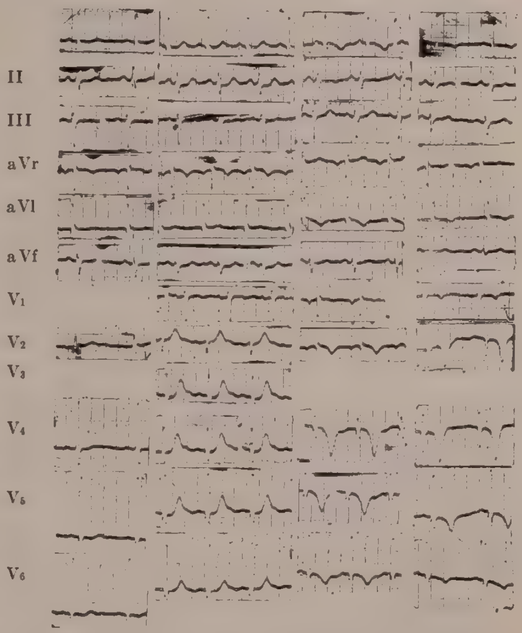
The patient had the usual clinical course of coronary of thrombosis moderate severity. The electrocardiogram on September 18 showed the findings of an anterior wall infarction. The "U" wave abnormalities had disappeared. The patient made a good recovery.

CASE 3.—F. B., female, age fifty-four, began having attacks of substernal pain radiating into the interscapular region and both arms on July 6, 1950, occurring both at rest and on walking and lasting from a few to fifteen minutes at a time. On July 9, 1950, the electrocardiogram during an attack of pain showed inverted "U" waves in leads I, CF_4, CF_5, and CF_6 (Fig. 3). When the pain subsided about fifteen minutes later, the "U" wave inversion was not so deep. The other electrocardiographic findings were suggestive of early anterior wall infarction. The following day the patient had an attack of severe chest pain, lasting many hours and requiring large doses of morphine for relief. The electrocardiogram on July 13 showed the typical findings of anterior wall infarction. One week later, cerebral embolization occurred, and the patient died two days later.



July 9, 1950 July 9, 1950 10 minutes later July 9, 1950 15 minutes later July 13, 1950

FIG. 3. Electrocardiographic findings in Case 3. (QRS complex retouched.)



September 23, 1951 October 1, 1951 October 3, 1951 November 8, 1951

FIG. 4. Electrocardiographic findings in Case 4. (QRS complex retouched.)

CASE 4.—D. S., male, age fifty-six, began having typical angina of effort in March, 1951. He had known of mild hypertension for several years. In September, 1951, the angina increased in severity, and he began having attacks at rest. Physical examination on September 23, 1951 was negative. The heart was normal in size on fluoroscopy. Blood pressure was 130/80. The electrocardiogram on

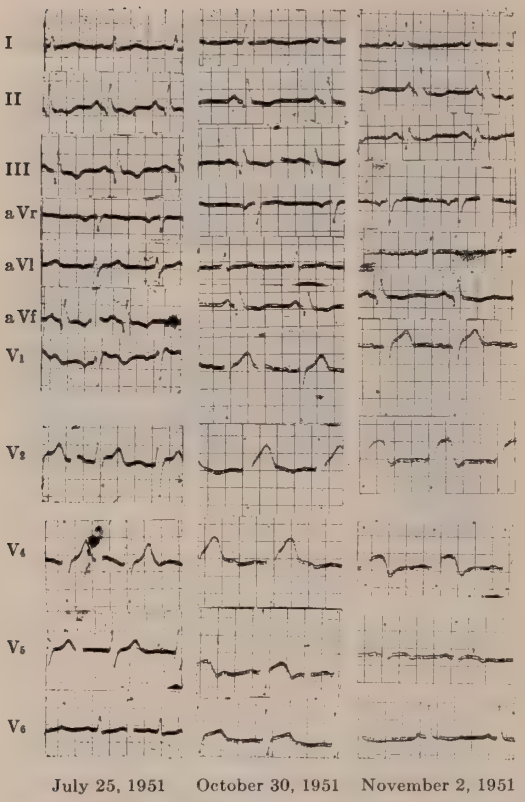


FIG. 5. Electrocardiographic findings in Case 5. (QRS complex retouched.)

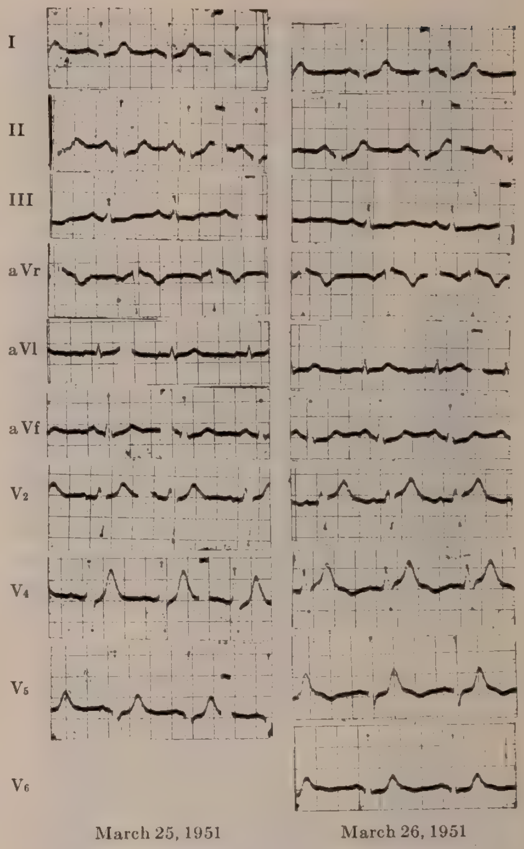


FIG. 6. Electrocardiographic findings in Case 6. (QRS complex retouched.)

September 23 showed left axis deviation, downward curving of the ST segments in leads I, II, V_4, V_5, and V_6; low T waves in leads I, V_4, V_5, and V_6; flat T in aVl and tall R waves in V_4, V_5, and V_6 (Fig. 4).

At 2 A.M. on October 1 he awoke with severe substernal pain accompanied by pallor and cold sweat. The pain persisted for many hours, requiring repeated injections of morphine to give partial relief. The electrocardiogram at 8 A.M. on October 1 showed some depression of the ST segments in leads II and aVf, slight elevation of the ST segment in aVr, and inverted "U" waves in V_3, V_4, V_5, and V_6. There was elevation in temperature for the next five days. The electrocardiogram on October 3 showed sharply inverted T waves in leads I and aVl and in precordial leads V_1 through V_6. There was a small Q in V_2 and V_4 and low R in V_4, indicative of anterior wall infarction. On November 8 the findings were essentially similar. The patient recovered, but angina of effort has persisted.

CASE 5.—A. I. B., male, age sixty-five, gave a history of coronary thrombosis in 1940 with anterior wall infarction from which he made a complete recovery. In 1946 he again had an attack of coronary thrombosis with posterior wall localization. Following this attack mild angina of effort persisted. The electrocardiogram on July 25, 1951, showed Q waves with inverted T waves in leads II, III, and aVf, the residual of the posterior wall infarction (Fig. 5).

On October 25, 1951, he began having frequent attacks of anginal pain at rest. Nitroglycerine gave prompt relief. The electrocardiogram on October 30 showed low T_1, slightly elevated ST segment, and slight terminal inversion of the T wave in V_5 and *inverted "U" waves in V_2 and V_4*; Q waves and inverted T waves in II, III, and aVf were present as before. On November 2, the typical findings of anterior wall infarction had developed. Very slight elevation in temperature was present for a few days after the tracing was made on November 2, 1951. During this illness he had only mild, short anginal attacks promptly relieved by nitroglycerine. On December 3, 1951, he died in his sleep.

CASE 6.—H. M., male, age forty-two, gave a history of severe anxiety neurosis of several years

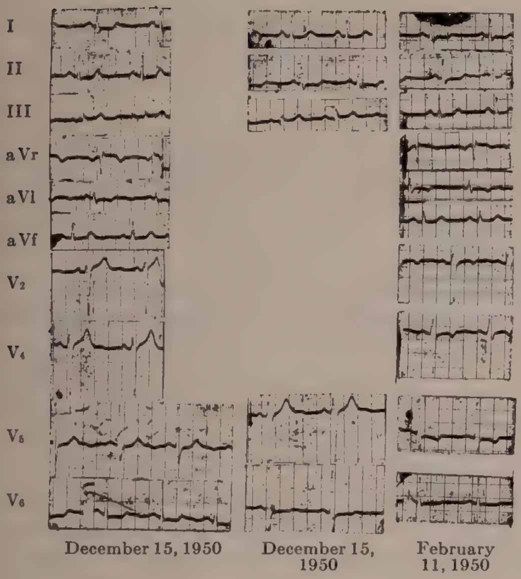


FIG. 7. Electrocardiographic findings in Case 7. The first tracing for December 15, 1950, was taken during an attack of spontaneous pain, the second a few minutes later after the pain had subsided. (QRS complex retouched.)

duration. He developed quite typical angina of effort syndrome about two weeks prior to first examination on March 25, 1951. The physical examination was negative. Blood pressure was 130/80. The electrocardiogram was negative except for some depression of the ST segments in leads II and V_4 (Fig. 6). The following day, shortly after an attack of pain at rest lasting about ten minutes, the electrocardiogram revealed markedly inverted "U" waves in V_4, V_5, and V_6. Slight depression of the ST segments in leads II and aVf were also present, but the striking abnormality in this tracing was the "U" wave inversion. Follow-up electrocardiograms are not available, but he has continued to suffer from angina of effort, and it is presumed he underwent an occlusive episode at that time.

CASE 7.—I. F., female, age fifty-two, gave a history of mild hypertension of eight years duration and angina of effort and occasionally at rest of about two months duration. The physical examination was negative. Blood pressure was 130/80. On December 15, 1950, during an attack of spontaneous pain the electrocardiogram revealed inverted "U" wave in leads V_5 and V_6 (Fig. 7). In addition, there was depression of the ST segments in leads I, II, and aVf. The inverted "U" wave disappeared in a tracing taken immediately after the pain had subsided following nitroglycerine. In this tracing ST segment depression was still present, and the T wave in V_5 had become slightly inverted. The subsequent tracing made on February 11, 1951, when the patient was feeling better and having only mild angina on considerable effort, showed inverted T waves in V_2, V_4, and V_5 and flat T wave in V_6. The ST segments in leads I and V_5 were depressed.

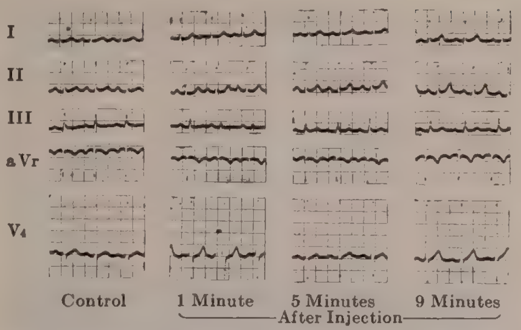


FIG. 8. Positive ergonovine test. Note "U" wave changes in V_4. (QRS complex retouched.)

Comment

We subjected a group of over 200 individuals suspected of having coronary insufficiency but with normal electrocardiograms to accepted stress tests, exercise tolerance[1] and ergonovine tests.[2,3] An inverted "U" wave was observed with fair constancy early in positive cases with either test. At times this was the only electrocardiographic change noted (Fig. 8), but more frequently ST and T wave abnormalities would appear simultaneously or in later tracings.

Inverted "U" waves have been observed in ventricular strain patterns, intraventricular block, myocardial infarction, and in states of coronary insufficiency. Twiss and Sokolow[4] found transitory inversion of "U" waves in four cases of coronary insufficiency. Solarz and Elek[5] mentioned rapid appearance and disappearance of abnormal "U" waves in two cases of angina pectoris. Palmer[6] noted the appearance of negative "U" waves in the tracings of patients with angina pectoris taken after exercise. The electrocardiograms of three of his patients showed no abnormalities other than inverted "U" waves. Zuckermann and Estandia Cano[7] observed inversion of the "U" wave in precordial leads during the ischemic phase of anterior wall infarctions.

It is evident from the above and our illustrative case reports that the presence of an inverted "U" wave lends strong support to a diagnosis of coronary heart disease, and a closer search for its presence may be clinically rewarding. Since the inverted "U" wave is observed early during an episode of myocardial infarction and during spontaneous or induced anginal attacks, it is probable that the inverted "U" wave is evidence of myocardial ischemia.

Summary and Conclusions

An attempt has been made to demonstrate the importance of an inverted "U" wave in the electrocardiogram of patients with coronary artery disease.

This has been illustrated early in cases of myocardial infarction and in coronary insufficiency states. It is our opinion that the inverted "U" wave is correlated with myocardial anoxia.

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Breathing Exercises Aid in Helping Persons Stop Smoking

Exercises which teach heavy smokers proper breathing when not smoking may help them stop smoking, according to Dr. William Kaufman, Bridgeport, Connecticut.

"Many heavy smokers find it impossible to give up smoking for more than a day or so, even though they realize that smoking causes their unpleasant or even alarming cardiovascular and bronchopulmonary symptoms," Dr. Kaufman wrote in the May 22 *Journal of the American Medical Association*.

"The patient may insist that, despite his tobacco-induced symptoms, the only time he feels emotionally relaxed and comfortable is when he is smoking." Dr. Kaufman said he found the reason heavy smokers feel uneasy when they try to give up smoking is that they do not breathe properly when they are not smoking. Instead of proper steady, deep breaths, heavy smokers take short breaths when not smoking. This results in an uncomfortable sense of breathlessness and pressure on the chest and may cause the individual to become uneasy, restless, tense, tired and anxious.

"As a result of these observations, it occurred to me that with breathing exercises, the heavy smoker might learn to breathe normally even when he was not smoking," Dr. Kaufman stated. "This would make it much easier for him to break himself of the tobacco habit.

"I have prescribed breathing exercises in which the patient is taught to breathe out and then in properly 16 times a minute. By practicing these breathing exercises for five minutes eight to ten times a day for a month, the patient gradually regains his ability to breathe in a manner that by inspection approximates normal pulmonary ventilation even when not smoking.

"Once a heavy smoker has acquired the habit of breathing properly, he can feel relaxed and comfortable when not smoking. After such preliminary training, 15 heavy smokers (each smoked over 50 cigarets a day) found it possible to stop smoking without experiencing undue difficulty. Each of these patients had tried repeatedly before to give up smoking permanently, but without success."

Aerosol Administration of Alevaire

I. Technics

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It is the purpose of this paper to present various simple procedures whereby the nebulization of Alevaire* can be incorporated with conventional inhalational therapy apparatus.

Alevaire is a nontoxic detergent solution which is used in the treatment of respiratory diseases complicated by viscid bronchopulmonary secretions. Alevaire has been used by Miller[1] and Ravenel[2] and has proved successful in the treatment of the following conditions: atelectasis in the newborn, spasmodic croup, bronchiolitis, acute laryngotracheobronchitis, chronic bronchitis, bronchopneumonia, cystic fibrosis of the lungs, asthma, bronchiectasis, and tuberculosis. In addition to the foregoing, we have successfully used Alevaire in the treatment of the following: secretions associated with bronchogenic carcinoma, pulmonary emphysema, patchy atelectasis developing as a sequelae to barbiturate poisoning, and in tracheobronchial crusting after tracheostomy.

Alevaire can be effectively administered through the use of a suitable nebulizer combined with one of the several types of oxygen therapy equipment commercially available. The use of the ordinary atomizing unit, however, is inadequate since the droplet size exceeds 3 microns in diameter. Droplets of such size are deposited in the upper respiratory tract and do not reach the lower pulmonary tree. The size of the droplet present in the mist or spray formed at the tip of a nebulizer outlet on the other hand is usually 1 to 3 microns in diameter.[3] Such droplets readily gain access to the lower respiratory tract.

Aerosol Alevaire for Pediatric Patients

Any of the conventional oxygen therapy hoods (Oxygen Equipment Manufacturer Corporation; Respiration Aids), may be used with one of the following nebulizers:

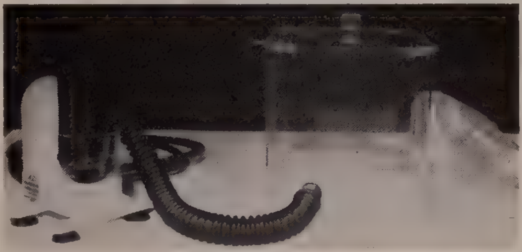

Fig. 1. Large reservoir type nebulizer connected with ordinary infant hood by corrugated rubber tubing.

LARGE RESERVOIR TYPE NEBULIZER (NATIONAL CYLINDER GAS CORPORATION).—This nebulizer can be used by merely inserting the corrugated rubber delivery tubing into a portable hood proper. Since oxygen is used to propel and nebulize the medication, only one source of oxygen is required; a flow of 8 L. per minute through the nebulizer is necessary. The Alevaire solution is poured into the bottle supplied with the nebulizer. This bottle acts as a reservoir and accommodates 500 cc. of solution. If the liter flow of oxygen is set at 6 L. per minute continuous aerosol therapy with Alevaire may be provided for a period up to thirty hours; if the flow rate of oxygen is 10 L. per minute and the initial supply is 500 cc., continuous therapy for twenty-four hours may be provided (Fig. 1).

SMALL RESERVOIR TYPE NEBULIZER (25 CC.; INHALATION EQUIPMENT CORPORATION).—The outlet stem of this nebulizer is inserted into one of the apertures of the hood, or the entire nebulizer may be suspended from the ice compartment of some oxygen hood (OEM). Twenty-five cubic centimeters of the Alevaire solution are instilled into the bulb of the nebulizer (Fig. 2). This will usually last three hours at an oxygen flow rate of 8 L. per minute. Before the nebulizer is refilled with a subsequent supply of Alevaire, the nebulizer should be rinsed thoroughly with water. This is done to prevent clogging of the capillary tubes in the nebulizer by the residue formed as a result of the nebulization of Alevaire. This form of therapy can be either continuous or

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* Alevaire was furnished through the courtesy of Winthrop Stearns, Inc.

FIG. 2. Small reservoir type nebulizer adapted to the aperture of an ordinary infant hood.

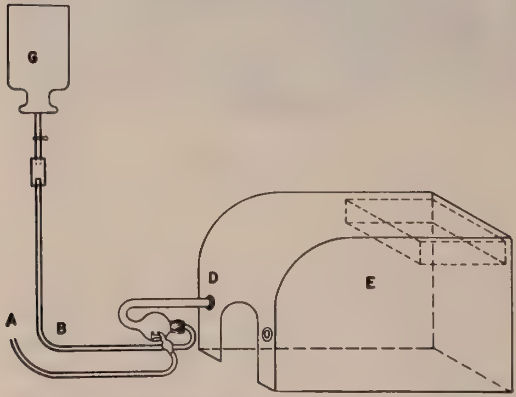

FIG. 3. Application of standard type nebulizer to ordinary infant hood: (*A*) tubing from oxygen supply to nebulizer; (*B*) tubing from drip reservoir (*G*) to nebulizer for maintaining a continuous supply of Alevaire solution; (*D*) inlet aperture of hood (*E*) adapted by rubber cuff to nebulizer delivery.

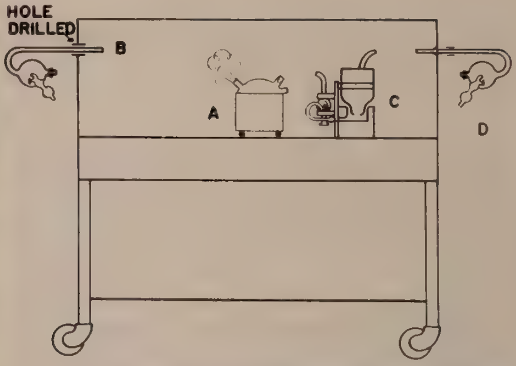

FIG. 4. Diagram of an incubator showing the various methods by which a nebulizer may be adapted to the unit to provide air Alevaire aerosol in the hood.

intermittent. When oxygen flows of 10 L. per minute or more are used, the Alevaire solution may be whipped into a foam and be expelled from the nebulizer as such. Therefore, in those occasional situations where more than 10 L. per minute oxygen flow is required, this technic is not recommended.

STANDARD NEBULIZERS (DEVILBISS, VAPONEFRIN, IEC).—Another method for the administration of Alevaire employs a standard 5-cc. nebulizer and a continuous drip. If the oxygen hood demands a flow of oxygen of 8 L. per minute, the drip regulator is set to furnish 16 drops per minute; if the oxygen hood demands a liter flow of 7 L. per minute, the drip regulator is set to deliver 14 drops per minute (Fig. 3).

COMMENT.—The administration of Alevaire by these methods does not in any way affect the concentration of oxygen in the apparatus used. The relative humidity is increased by 10 to 15 per cent above the humidity of room atmosphere. Mention is made of this fact to emphasize that Alevaire can be used effectively for cold humidification therapy as well as for its detergent properties.

Aerosol Alevaire in the Premature Nursery

Any of the conventional incubators equipped for oxygen therapy may be used with any one of the aforementioned nebulizers. These nebulizers can be adapted to an incubator by one of the following methods (Fig. 4):

1. Connecting the standard 5-cc. nebulizer to the oxygen inlet by a rubber sleeve.
2. Securing or placing either the standard 5-cc. or larger 25-cc. nebulizer within the hood proper.
3. Inserting the delivery tubing of the large reservoir type nebulizer (NCG; Mist-oxygen-Generator; IEC) into the portholes of certain incubators (Isolette; Gordon-Armstrong).

Aerosol Alevaire in the Adult Patient

The OEM Meter mask as modified by one of us (V.D.K.) is probably the most effective and simplest method for the administration of aerosol Alevaire to adults (Fig. 5). The procedure is as follows:

1. Remove the mica disk from inspiratory valve. If the mica disk is not removed, a greater effort must be exerted by the patient during inhalation and exhalation; this is probably due to the fact that the disk becomes saturated with Alevaire and swells. Although the OEM mask is essentially designed with the disk to diminish rebreathing and prevent carbon dioxide ac-

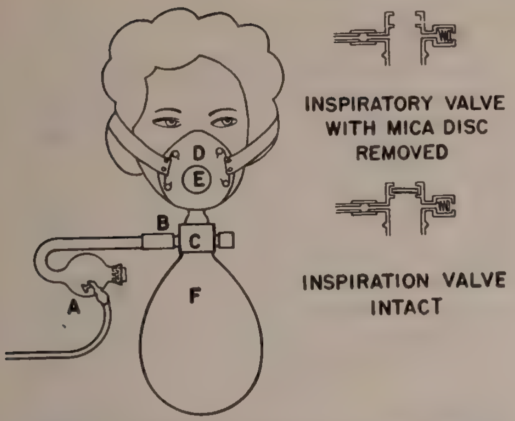

FIG. 5. Diagram of modified OEM mask adapted to standard type nebulizer: (*A*) nebulizer with tubing from oxygen supply; (*B*) rubber sleeve connecting nebulizer delivery arm to oxygen inlet of the mask; (*C*) safety valve; (*D*) mask proper; (*E*) flutter valve; (*F*) reservoir.

Cross section of valve shows mica disk in place. This is the disk which is removed for aerosol therapy.

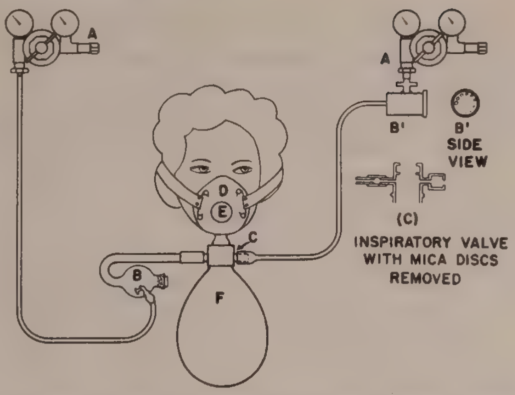

FIG. 6. Diagram of the modified mask meter equipped for aerosol therapy in the pulmonary emphysematous patient: (*A*) cylinder regulators; (*B*) nebulizer; (*B*¹) air mixing device; (*C*) safety valve; (*D*) facepiece of mask (mask proper); (*E*) flutter valve (exhalation valve); (*F*) reservoir.

Cross section shows inspiratory valve with mica disks removed.

cumulation, nevertheless, a patient receiving Alevaire therapy under the circumstances herein described, i.e., for short periods of time and with large flows of oxygen, is not endangered by carbon dioxide excess.

2. Attach nebulizer (any standard 5-cc. nebulizers) to the oxygen inlet of the inspiratory valve. This is done through the use of a rubber sleeve.

3. Instill 5 cc. of the Alevaire solution in the bulb of the nebulizer.

4. Set the flow of oxygen at 8 to 10 L. per minute depending on the patient's demands.

5. Carefully apply mask to patient's face. Allow twenty-five to thirty minutes for therapy. Three treatments per day at 10 A.M., 2 P.M., and 6 P.M. provide excellent results.

In the pulmonary emphysematous patient who cannot tolerate the administration of 100 per cent oxygen without risking disorientation or coma,[3] the above procedure must be altered to reduce the concentration of administered oxygen to 40 per cent. This can be accomplished by the following procedure (Fig. 6):

1. In addition to removing the mica disk of the inspiratory valve, remove the mica disk in the safety valve of the OEM mask.

2. Attach nebulizer to the oxygen inlet and another supply tube to the safety valve inlet. Two oxygen regulators or flow meters are required for this procedure. To one of the regulators or flow meters a concentration meter or air-mixing device is attached. This meter is set at 40 per cent. The oxygen supply tubing, which is connected to the safety valve inlet, is then connected on the other end to the air-mixing device or concentration meter. The flow of oxygen on the regulator is set at 2 or 4 L. per minute. To the other regulator a second oxygen supply tubing is connected, and the other end of this tubing is connected to the nebulizer. The oxygen flow on this regulator is set at 6 L. per minute.

As an alternate method for the administration of Alevaire to adults, any one of the conventional adult type of hoods and one of the aforementioned nebulizers may be used. However, to provide high concentrations of oxygen in the hood atmosphere, high liter flows of oxygen are required (10 to 15 L. per minute). In all nebulizers with the exception of the NCG nebulizer the Alevaire will be whipped into a foam and expelled into the hood. The NCG nebulizer works well with oxygen flow rates up to 15 L. per minute.

Ineffective Methods

NASAL CATHETER UNITS.—When Alevaire is placed into the humidifier jar of catheter unit through which oxygen is bubbled, the Alevaire solution will foam at the tip of the catheter. If the catheter is now inserted into the patient's oropharynx, the posterior pharynx becomes occluded, and some of the Alevaire may drip into the esophagus and into the trachea in the form of large drops which are irritating. Aerosol oropharyngeal insufflation by catheter and nebulizer has been used for infants and children.[4] However, it is usual for the aerosol particles of all sizes to condense in the catheter rendering this method ineffective.[5]

Oxygen Tents.—The atmosphere of the typical oxygen tent is cooled by passage over refrigeration coils or ice. At the same time this air is recirculated approximately fifteen times per minute. This combination of factors makes it difficult to saturate the atmosphere of a tent with moisture or air aerosol of Alevaire. In the iceless tents some of the humidity and its Alevaire will be deposited on the coils in the refrigeration unit, thereby interfering with the cooling mechanism. This may not be true of tents having filters in the ducts. In ice tents Alevaire will be deposited on the ice in the cooling chamber.

Summary

In the clinical use of detergent solutions, such as for the treatment of various pulmonary diseases, experience has been gained with methods of administration. Many technics have been employed, but only those which have proved effective, as well as simple and economical, are here described. Economy and simplicity are particularly manifest since no new apparatus is necessary; conventional inhalation therapy equipment has been used. The technics are reported so that they may be utilized by others.

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Annular Pancreas as a Cause of Duodenal Obstruction

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Sporadic reports on the subject of annular pancreas have appeared since its first description in 1862. Less than 100 cases have been reported up to now and these commonly in infants.[1–12] It is now being recognized with increasing frequency as a cause of duodenal obstruction in the adult. A correct preoperative diagnosis is unusual, although it should not be a difficult one to make. Symptoms and signs of duodenal obstruction in the infant or the adult which should alert the observer are repeated vomiting of gastric contents and bile, upper abdominal pain, the presence of a dilated stomach and duodenum, occasionally with visible peristaltic waves, and, above all, an x-ray film showing a distended stomach and duodenum with the distention coming to an abrupt end in the descending duodenum. This x-ray finding, the so-called "double bubble" sign has been cited frequently as a characteristic of annular pancreas, yet the roentgenologist often wavers with the diagnosis confronting him and may instead suggest the presence of a large duodenal diverticulum or duodenal obstruction of doubtful etiology.

The diagnosis in adults may present problems since many of the patients have symptoms suggestive of ulcer or pancreatitis. Peptic ulcer is not infrequently associated with annular pancreas, and patients may have bleeding episodes, melena or hematemesis, ranging from moderate

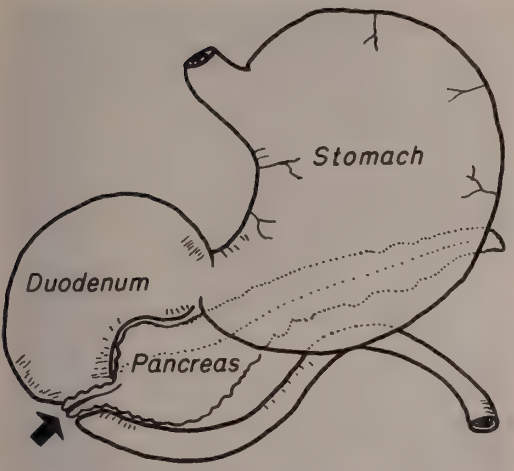

Fig. 1. Schematic drawing of usual findings in annular pancreas. Arrow indicates annular ring and course of its duct.

to massive in severity. A rather high incidence of recurrent pancreatitis is known to occur. It may at times then be difficult to dissociate the symptoms unless one recalls that two distinct syndromes may be present, ulcer or pancreatitis plus the basic congenital lesion.

Pathology

Annular pancreas is not to be confused with aberrant pancreatic rests which may be found anywhere in the gastrointestinal tract, particularly about the stomach and duodenum. In the latter location aberrant pancreatic tissue may also be a source of duodenal obstruction, usually intrinsic in nature. Annular pancreas is conceded to be a developmental anomaly resulting from failure of the ventral anlage of the pancreas to rotate with the duodenum during fetal growth. It presents itself as a ring of morphologically normal pancreatic tissue extrinsic to the gut, which usually completely encircles the duodenum and constricts its lumen (Fig. 1). A well-developed large duct is invariably present in this ring. Other associated congenital malformations are not uncommon.

Most of the case reports to date have been those of infants, and a considerable proportion are of necropsy findings where the anomaly was unrelated to the cause of death. Annular pancreas, therefore, may produce no symptoms throughout life. Why so many persons with this congenital error should begin to have symptoms late in adult life is an interesting speculation. Possibly it may be the consequence of repeated attacks of recurrent pancreatitis, found not infrequently in this condition, leading to thickening and fibrosis of the pancreatic ring and constriction of the duodenum with eventual duodenal cicatrization. Associated duodenal or gastric ulcer may also play a part in the evolution of this process. Duodenitis or gastritis with episodes of bleeding, at times severe in character, are not unusual and may result from the anomaly or contribute to its progression.

The ring itself may be densely fused with the duodenal wall but generally can be dissected off without trouble. The main problem is that there is no line of cleavage between the ring and the main body of the pancreas. How best to separate the annulus and its duct from the head of the pancreas is a worrying task. The consensus of opinion is that the duct system does not empty toward the left of the duodenum into the duct of Wirsung (a point noted at operation and also in keeping with its embryology), but rather that the duct originates in the left half of the ring close to the head of the pancreas and then proceeds, gradually enlarging within the ring to the right anterior to the duodenum, submerging behind the duodenum to discharge its secretions either into the main pancreatic duct, ampulla of Vater, or by separate orifice into the gut directly.

This course of the duct is important in surgical management if resection of the pancreatic ring is attempted since improper excision may leave behind a large amount of secreting pancreatic tissue deprived of the means of egress of its accumulating secretions. It has been recommended that dissection of the ring start well to the left of the duodenum and as close to the head of the pancreas as is feasible without injuring that gland or the pancreaticoduodenal vessels. Both ends of the ring that remain should be well secured with fine, nonabsorbable sutures, and particular care should be taken in separate ligation of the cut ends of the duct. Regardless of the cautions taken to close these structures, practically all reports stress the high incidence and gravity of pancreatic fistulas which may develop.

Operative Treatment

Because of the small number of cases that up to now have come to surgery and the lack of prolonged follow-up studies, there is no agreement on the best surgical procedure. Surgical therapy must be fitted to the patient. Many of these patients cannot tolerate the radical measures which should assure a cure, and the operator may have to content himself with a procedure which is less complete but which will assure him of a living patient.

Resection of the constricting ring alone is not often curative since the duodenal wall may be thickened and fibrosed to such an extent that release of the pancreatic noose may not result in an adequately widened duodenal lumen and the patient will continue to have obstructive symptoms. Disregarding the pancreatic ring and limiting the operation to one of various bypassing procedures has many advocates. There is a well-justified fear of initiating a pancreatic fistula with prolonged and often grave disability. Many surgeons at present favor a duodenojejunostomy since it is usually not difficult to perform because of the large size of the obstructed proximal duodenum, which may be as large as the stomach. Gastroenterostomy has been followed by some good results. However, there have been frequent failures, notably because this procedure may not adequately drain the duodenum above the obstructing band. The widely dilated proximal duodenum may behave like a blind pouch accumulating secretions and gastric contents. Furthermore, when associated peptic ulceration is present, as it so frequently is, gastroenterostomy may not be the answer. It seems that subtotal gastric resection is a more satisfying procedure.

Of late, opinions have been voiced that in addition to a bypassing procedure, a direct surgical attack on the constricting ring should be made. So many instances of chronic recurrent pancreatitis have been cited with this anomaly that elimination of this aberrant structure should help to avoid future pancreatic dysfunction. In addition, complete or at least partial release of the duodenal obstruction is thereby effected. There is no question that the patient is better off without this anomalous tissue. However, the risk of creating a pancreatic fistula must be carefully weighed.

Case Report

In the following case gastroenterostomy performed twelve years previously failed to relieve symptoms. This patient was treated by resection of the annular pancreas and subtotal gastrectomy.

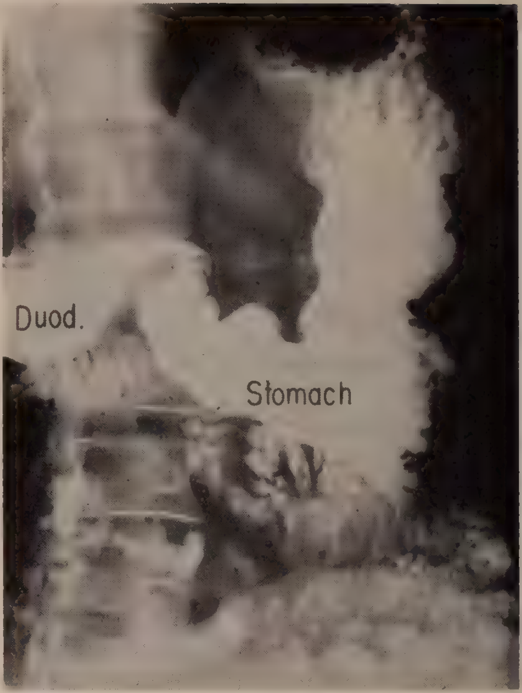

Fig. 2. Case of annular pancreas presented here showing the markedly dilated duodenum and a functioning gastroenterostomy.

A forty-three-year-old white nurse was admitted to Lutheran Hospital in November, 1953, because of weakness, abdominal pain, and chronic melena. In 1941 she had similar epigastric pain, vomiting, and intolerance to fried foods. A cholecystogram at another hospital revealed nonfunction, and cholecystectomy was done. At operation the surgeon noted an obstructing lesion of the duodenum, apparently not recognizing its nature and assuming that an ulcer was present. He advised the patient to return in three months for further surgery. At this time a posterior gastroenterostomy was performed. The patient continued to have the same symptoms and, in addition, had recurrent tarry stools which persisted, only intermittently relieved, to the present time. On several occasions she vomited small quantities of bright blood and five years ago had a massive hematemesis. A gastrointestinal series taken then was interpreted as showing a large duodenal diverticulum and possible duodenal ulcer. She had all the usual diets and medications without relief and entered the hospital at this time because she was no longer able to work. Roentgen studies revealed marked dilatation of the first and second portions of the duodenum, duodenal obstruction, and a functioning gastroenterostomy (Fig. 2).

A tentative diagnosis of marginal ulcer and annular pancreas was made. Considerable blood and protein deficits required preoperative correction.

At operation the duodenum down to its lower descending portion was found to be so dilated as to be indistinguishable from the stomach. The obstruction was found to be a band of pancreas about 1 cm. wide completely encircling the duodenum. This band was widely resected and found to have a large duct (2 mm. size) in its center. Resection of the ring resulted in slight but inadequate bulging of the constricted duodenum. The duodenal wall in this region appeared to be thickened and fibrosed. A gastrotomy was then done, and numerous mucosal bleeding points were noted about the gastorenterostomy stoma and in the distended proximal duodenum. The proximal and distal jejunal loops to the stomach were cut, jejunojejunostomy done, and a radical retrocolic Polya resection performed on the stomach. Patient had a very stormy postoperative course complicated by parotitis, thrombophlebitis secondary to infusions, and a temporary pancreatic fistula which drained for five weeks.

COMMENT.—Gastroenterostomy performed twelve years previously as a bypassing procedure failed to relieve duodenal obstruction due to annular pancreas in this case. Subtotal gastric resection and resection of the annular pancreas appeared to be effective in relieving the patient of her symptoms. At the present time patient is doing well and seems to have recovered completely.

Summary

Annular pancreas is a congenital anomaly which by extrinsic pressure may lead to duodenal obstruction in any age group. X-ray patterns demonstrating the so-called "double bubble," an air-filled stomach and upper duodenum in infants, or a marked duodenal dilatation in the adult are quite characteristic. Confusion may arise in differentiating this entity from (associated ?) peptic ulcer, large duodenal diverticula, or chronic pancreatitis.

The operative treatment at present is not standardized, principally becasue the total number of patients subjected to surgery has been too small to evaluate the end results. The type of surgical procedure used remains a matter of surgical judgment. The greatest hazard is still the creation of a pancreatic fistula if resection of the annulus is attempted. However, resection of the ring of anomalous pancreatic tissue is a highly desirable procedure in that chronic pancreatic invalidism may be avoided. At the present time gastric resection in addition to resection of the pancreatic ring seems to offer the best results.

999 BUSHWICK AVENUE

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The Challenge of Intravascular Clotting

After discussing physiology, etiology, pathogenesis and diagnosis of intravascular clotting, the authors review programs for prevention and treatment of this complication, which they say has a vastly greater incidence than is commonly realized. Effective treatment is still handicapped by difficulties of early diagnosis. Needed is an oral anticoagulant, the therapeutic level of which can be determined accurately without elaborate laboratory facilities, so that its effect can be safely counteracted when necessary.

—*G. Glenn Sawyer, M.D., and Frank M. Roberts, M.D., North Carolina Medical Journal, February, 1954*

Cat-Scratch Disease

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A CLINICAL entity characterized by subacute regional lymphadenitis, frequently following a scratch of a cat, was recognized about twenty years ago by Debré[1–4] in France and, independently, by Foshay[5] in this country. Hanger and Rose[6] in 1945 devised an antigen from material of a suppurating lymph node that gave a reaction on intradermal injection. Hanger and Rose, as well as Foshay, did not publish their observations, but the latter supplied antigen to Debré and his associates who continued their studies and first described the condition in 1950 under the title "La maladie des griffes de chat."[1–4] Mollaret, Reilly, Bastin, and Tournier[7–12] in 1950 and 1951 collected additional cases and succeeded in transmitting the disease to a human volunteer and monkeys. Furthermore, they described inclusion bodies in lymph nodes and in cutaneous inoculation granulomas and found a serologic relation between cat-scratch disease and lymphogranuloma venereum. They concluded that the etiologic agent of cat-scratch disease is a virus belonging to the lymphogranuloma-psittacosis group.

In a short period of time numerous additional publications of the newly recognized disease entity, comprising several hundred cases, appeared in Europe, India, Canada, and the United States.[13–47] Greer and Keefer[26] in 1951 were the first to publish the report of a case in the United States. The first major contribution in this country was made by Daniels and MacMurray[41] in 1952. The authors analyzed the findings in 60 patients residing in 15 states, Hawaii, and Canada.

As more reports appeared, the original concept of the disease as a benign, self-limited lymphadenitis with a primary skin lesion became modified and extended by the inclusion of manifestations relating to the eye,[41,49–53] the nervous system, [41,43,46,54] and also the respiratory tract.[33,41,48]

In the following, the current information available on this protean and ubiquitous disease is briefly reviewed, and the case of a patient residing on Long Island is related. To my knowledge, no previous instance of cat-scratch disease, proved by a positive reaction to the specific antigen, has been recorded in this area.

Epidemiology

Cat-scratch disease, or cat-scratch fever, can be traced most often to contact with or an injury inflicted by a cat. Debré and Mollaret[9,11] and his group, however, averred that the cat could be eliminated as the source of infection in 40 and 50 per cent of their cases, respectively. The latter, therefore, coined the noncommittal but histopathologically descriptive term, benign inoculation lymphoreticulosis. Such high incidence of nonfeline transmission has not been observed in this country. For example, in only five out of 60 cases (8.3 per cent) analyzed by Daniels and MacMurray[41] no history of contact with cats could be established. Other modes of inoculation have been described by various authors: scratch on thorns, wood splinters, or bone fragments and contact with or injury inflicted by a dog, wild rabbit, porcupine, or white mice. It has been suggested by Mollaret[7–12] that the virus is widespread in nature and that a main source of infection may be the cat's natural prey. Cats suspected of having transmitted the disease were, as a rule, healthy and did not react to intradermally injected specific antigen, thus indicating that they act as mechanical vectors of the etiologic agent.

Modes of Transmission

In most instances the skin is the portal of entry for the virus. Other modes of transfer, although rare, seem to be possible. Inhalation or aspiration was suggested by Mollaret's report[48] on a pharyngeal form of cat-scratch disease and by Daniels and MacMurray's[41] mention of the history of a patient who accidentally had sniffed cushions contaminated with cat urine. The conjunctiva is probably the site of the primary infection in cases presenting Parinaud's oculoglandular syndrome (see below).

Clinical Manifestations

The cutaneous form of cat-scratch disease is very often initiated by a primary lesion appearing from three to seven days after and at the site of the inoculation. This is usually an exposed area such as the hand, wrist, forearm, face, neck, or leg. The lesion may be single or multiple and may appear as an inflamed excoriation, an indolent ulcer, a papule, or a boil. While the gross features are not diagnostic, the location of the lesions at the site of a previous injury and its sluggishness in healing are characteristic.

The primary efflorescence is followed, after a variable time interval of from three to thirty days, by regional lymphadenopathy without evidence of lymphangitis. The location of the adenopathy depends on and is usually restricted to the nodes draining the area of the primary lesion; most commonly involved are the axillary nodes. Enlargement of lymph nodes unrelated to the site of inoculation have been encountered. The affected lymph nodes are tender and impressively large; the majority slowly decrease in size without manifest suppuration. Formation of abscesses, with or without subsequent drainage, occurs in approximately 30 to 40 per cent of the cases. The purulent material is sterile on bacteriologic and mycologic examination. General malaise, headache, nausea, and fever are common systemic manifestations. Occasionally, transitory skin eruptions of various types and at various locations have been encountered. Daniels and MacMurray[41] observed them in 10 per cent of their cases; Greer and Keefer's[26] patient had a vesicular rash on the arms; typical erythema nodosum was reported by Weill and Blas.[34]

Systemic manifestations of more serious nature have been noted in this country and also in France. One of Jambor and Emura's[46] two patients was lethargic and gave signs of meningeal irritation. The spinal fluid, however, was normal, and the patient recovered. Stevens'[43] patient had the neurologic signs and symptoms of encephalitis, including subsequent behavior disorder. Debré, Van Bogaert, and their associates[54] reported the case of a child with neuritic disturbances: "a slight reaction of the cerebrospinal fluid revealed the presence of encephalitis." Similar observations were made by Dépaillat Condat, Grossiord, and associates.[54] Daniels and MacMurray[41] quoted Debré's observations on three additional patients with encephalitis, one of whom did not recover.

With increasing knowledge of the disease, another variant has become known. Pesmé and Marchand (1950),[49] Lavergne and associates (1951),[50] and Clément and associates (1951)[51] in France and Cassady and Culbertson (1953)[53] and Peterson[41] in this country observed cases of a clinically well-defined conjunctivitis accompanied by marked enlargement of the preauricular lymph nodes, a symptom complex known since 1889 as Parinaud's oculoglandular syndrome and thus far ascribed to a variety of infectious agents including Leptothrix, Pasteurella tularensis, or a filtrable virus. In the cases quoted above, all the diagnostic tests were negative, but intradermal tests with cat-scratch disease antigen were positive, and the systemic manifestations were similar to those observed in the cutaneous form of cat-scratch disease. It is quite likely, therefore, that Parinaud's syndrome is a manifestation of cat-scratch disease, the conjunctiva being the portal of entry and the site of the primary infection.

Mollaret *et al.*[48] presented a fifty-three-year-old man with a subacute unilateral retropharyngeal abscess and swelling of the submaxillary lymph nodes of the same side. Microorganisms demonstrable by the usual culture methods and animal experiments were absent. The excised lymph nodes revealed histologic features, including granular corpuscles, considered to be characteristic of cat-scratch disease; the skin of the patient reacted markedly to the specific antigen. Lange[33] saw transient pulmonary infiltration in one of his three patients who gave the history of scratches and showed characteristic manifestations of cat-scratch disease. The value of this important observation is minimized by lack of intradermal testing.

Diagnosis

In the majority of instances historical data on a chain of events following a cat scratch or bite are suggestive of the disease. However, the absence of a history of a cat scratch or bite or of contact with a cat does not militate against the diagnosis. Furthermore, the primary cutaneous lesion may be absent or so inconspicuous as to be overlooked; if present, its clinical features are not diagnostic. The regional lymphadenopathy, although most often striking in size, may suggest a variety of other diagnostic possibilities, depending to some extent on its location. A pyogenous adenitis can be excluded by the bacteriologic identification of the causative microorganism in the exudate and the prompt response to most antibiotics.

The absence of lymphangitis distinguishes cat-scratch disease clinically from the lymphangitic form of sporotrichosis. Also, the identification of Sporotrichum schenckii by cultural and histologic methods and the positive skin test with sporotrichin are conclusive evidence for the latter. The clinical differentiation from tularemia is sometimes difficult. However, patients with tularemia react to Foshay's intradermal test, their serum agglutinates Pasteurella tularensis in high dilutions, and the organism may be detected in the bloodstream. The cervical form of cat-scratch disease may be confused with infectious mononucleosis, tuberculous lymphoma, Hodgkin's disease, or lymphosarcoma; the femoral type may simulate lymphogranuloma venereum. Laboratory studies including serologic, bacteriologic, and histologic methods and skin tests are necessary for accurate diagnosis; a slight increase in the leukocyte count and a moderate elevation of the sedimentation rate may also accompany the systemic manifestations of cat-scratch disease.

The histopathologic features of the lymph node are suggestive but not diagnostic; they have been said to be strikingly similar to those found in lymphogranuloma venereum. Mollaret, Reilly, Bastin, and Tournier[7–12] and subsequent investigators[41,55] have described a sequence of phases. The morbid changes start with peripheral reticuloendothelial hyperplasia, which progresses toward the center, and is followed, in the same order, by the development of focal, tubercle-like granulomas with necrosis and fibrosis. Suppuration may ensue. Ultimately the lymph node architecture is thoroughly distorted. Attempts at identifying or isolating microorganisms by bacteriologic or mycologic methods invariably fail; Winship[41] succeeded in demonstrating granular corpuscles as described by Mollaret *et al.*[7–12] While all laboratory tests seem to be helpful only in a negative sense, the main aid in the diagnosis of cat-scratch disease is the intradermal test with the specific antigen. This is contained in purulent or necrotic lymph node material obtained from a known case of cat-scratch disease which is prepared for use by diluting with four times its volume of sterile physiologic solution of sodium chloride, heating at 60 C. for two hours on one day and for one hour on the next. While the intradermal test with lygranum gives no reaction in cases of cat-scratch disease, a positive complement fixation test with this antigen has been elicited in approximately 50 per cent of the cases tested by Mollaret and coworkers[7–12] and in 25 per cent by Daniels and MacMurray.[41] Mollaret suggested that the positive test reveals the existence of an antibody, common and specific, for the viruses of the psittacosis-lymphogranuloma group. Its differential diagnostic potentialities, if any, have not yet been determined.

Prognosis

Hitherto, cat-scratch disease has been considered as benign and self-limited. With increased experience has come recognition of serious neuritic and encephalitic manifestations. The duration of cat-scratch disease, even if not complicated by unusual manifestations, may vary considerably. Complete recovery was described as occurring within several weeks to several months. While fever, if present, usually subsides within days or weeks, the enlargement of the lymph nodes may outlast the acute manifestations by months. In one of Jambor and Emura's[46] patients a mass, measuring 3 by 3 cm., was palpable eight months after onset of the disease.

Therapy

While no conclusive evidence can be adduced, it has been the impression of most observers that one or the other of the broad-spectrum antibiotics such as aureomycin, Terramycin, or Chloromycetin may shorten the course of the disease and prevent suppuration of the lymph nodes. Penicillin generally has been of no value except in a few febrile cases where it seemed to restore the temperature to normal. Suppurating lymph nodes may be aspirated. Draining and fistulous lymph nodes with no tendency to regression may be removed surgically.

Case Report

The patient, a thirty-one-year-old white male, was a veterinarian who had been practicing in Nassau County for two years. Two weeks before his first visit, he was scratched by a cat on the flexor surface of the right wrist. Since accidents of this type were frequent in his profession, he ignored

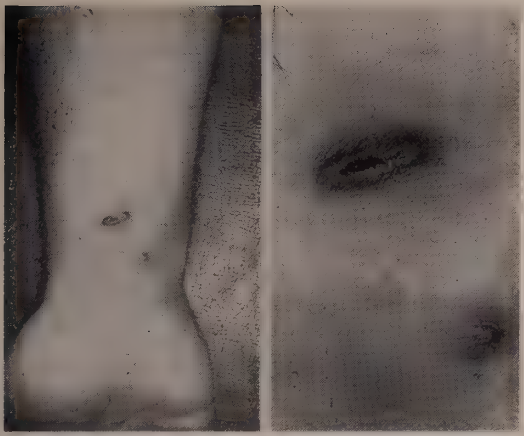

FIG. 1. Primary cutaneous lesions on the flexor surface of the right wrist, at the site of, and three weeks after a cat scratch. The larger, oblong papule is slightly ulcerated, the smaller folliculitis-like. Their clinical features are not diagnostic.

it, but he was aware that, in contrast to the usual course, this scratch did not heal and that, about five days after the injury, elevated scabby lesions formed which persisted. Approximately twelve days after the scratch he noticed a painful lump in his right axilla, his head started to ache, he felt ill and chilly, and the body temperature rose to about 101 F.

On the flexor surface of the right wrist there were two brownish-red papules, one 0.4 cm. in diameter and the other 1.4 by 0.4 cm.; the larger papule was slightly ulcerated, the smaller folliculitis-like; both were indolent and not attached to the underlying structures (Fig. 1). There was neither visible lymphangitis nor palpable swelling of the right epitrochlear lymph node. In the right axilla, beneath the anterior axillary fold, a plum-sized, well-defined, and movable round mass could be felt. The mass was painful upon moderate exploratory pressure, but the overlying axillary and pectoral skin was neither adherent nor inflamed; other lymph nodes were not palpable. The trunk and extremities were free from other skin lesions. On the buccal surface of the gum of the left lower jaw, there was a shallow, lentil-sized, painful ulcer surrounded by a narrow, erythematous areola.

The leukocyte count was 10,200, with 1 per cent eosinophils, the sedimentation rate 11 mm. in one hour (Westergren). No agglutination was obtained with Brucella abortus, Pasteurella tularensis, and Proteus X19. Heterophil agglutination for infectious mononucleosis was negative. The blood culture was negative.

Two different batches of cat-scratch disease antigen were obtained through the courtesy of Dr. Worth B. Daniels, Washington, D. C. About six weeks after the incriminated cat scratch, the test material was injected intradermally into the flexor surface of the right forearm. One test was negative; the other antigen produced a sharply marginated, flat, erythematous papule, 7 mm. in diameter, forty-eight hours after inoculation. Control tests with saline solution and lygranum were negative.

The patient received 1 Gm. aureomycin daily, taken at six-hour intervals in divided doses of 250 mg. each for a period of ten days. Four days after initiation of therapy, the temperature and the tenderness of the axillary lymph nodes had subsided. Twenty-six days after the first visit the lesions on the wrist were still visible, although in a state of regression, and the axillary lymph node had receded to an approximately cherry-pit-sized, movable, nontender mass, without having undergone suppuration or sinus formation.

Comment

This case presents the "classic" features of the benign cutaneolymphadenitic form of cat-scratch disease. Lymphangitis and skin eruptions, as well as signs of a more serious nature, were absent. The presence of an aphthous ulcer on the gum was probably coincidental. The axillary lymph nodes only were affected, and although their size was strikingly large, no suppuration and drainage ensued. The epitrochlear group was not involved, an observation borne out in numerous instances. The axillary nodes were implicated in 35 out of Daniels and MacMurray's 60 cases, the epitrochlear in ten and then only in association with the axillary node involvement.

The laboratory tests performed supported the clinical diagnosis in the sense of excluding other diagnostic possibilities. The diagnosis was confirmed by the positive skin test with a specific antigen. The patient reacted to only one of the two antigens supplied by Dr. Daniels, confirming the author's opinion that a negative test with a single antigen is not conclusive evidence against the diagnosis.

The subsidence of the systemic and clinical manifestations followed the administration of aureomycin. Whether or not this constitutes a cause-and-effect relationship is debatable. The impression of many observers, however, that aureomycin or one of the other broad-spectrum antibiotics is a valuable therapeutic adjunct makes it advisable to use these remedies.

The background of this case deserves special consideration. The patient acquired cat-scratch disease in his profession as a veterinarian. This group of people are, by nature of their work, exposed to frequent injuries inflicted by healthy and diseased animals. It is quite possible that more cases of this newly recognized disease will be encountered in their profession. There seems, therefore, to be an urgent need that they be alerted to an occupational hazard that, although benign in most instances, carries the potentialities of serious complications.

Summary

The current information on cat-scratch disease is briefly reviewed. Its clinical manifestations, including the rare variants relating to organs other than skin and lymph nodes, are discussed. Diagnosis, therapy, and prognosis are summarized.

The case of a patient residing on Long Island, the first instance on record in this area, is related. The infection occurred in a veterinarian following an occupational cat scratch.

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Nothing will ever be attempted if all possible objections must first be overcome. —SAMUEL JOHNSON

CASE REPORTS

Treatment of Lupus Vulgaris with Newer Drugs

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The therapy of lupus vulgaris up to 1946, when Charpy[1] and also Dowling and Thomas[2] recommended treatment with calciferol, remained a baffling problem. Previously, treatment consisted of Finsen-Lomhold ultraviolet lamp, x-ray, caustics, ointments, surgery, tuberculin injections, diet, vitamins, electrodesiccation, cryotherapy, etc. The results of these various forms of therapy, single or combined, were in some cases fair and in most cases poor. Those cases that healed left mutilating atrophic scars after long treatment.

The work of Charpy and Dowling and Thomas revolutionized the treatment of this disorder. Cornbleet[3] pointed out that the administration of streptomycin with calciferol brings about more rapid and curative results. Robitzek, Selikoff, and Ornstein[4] introduced a new form of chemotherapy of human tuberculosis with hydrazine derivatives of isonicotinic acid.

The good result obtained in the following case with these newer drugs and their combined use in similar cases may offer a solution to the therapy of this otherwise mutilating skin disorder.

Case Report

Mrs. E. G., a white married housewife of Russian descent, aged sixty-three years, first came to Mount Sinai Skin Clinic on November 18, 1932. Her history was that of a skin lesion on her left cheek which began as a small inflamed pimple at the age of eight years and gradually enlarged to a button size at ten years of age. It regressed and recurred from time to time during the thirty-two years before she came to our clinic. At that time the lesion was described as follows: "Center of left cheek there is a nodular, elevated, bluish-red, infiltrated skin lesion about $1^1/_2$ cm. in diameter. Submaxillary adenopathy present on left side." No definite diagnosis had been made, and no definite therapy was used prior to her admission to our clinic.

The patient was treated expectantly until February, 1933, when the lesion showed signs of spreading (Fig. 1). A biopsy was reported as "tuberculosis." She was referred for radiotherapy and received two erythema doses to the left cheek (125 kilovolts, 5 milliamperes, 3 mm. Al, 20 cm. distance), six such treatments in a period of nine months. Lesions regressed somewhat but did not heal completely.

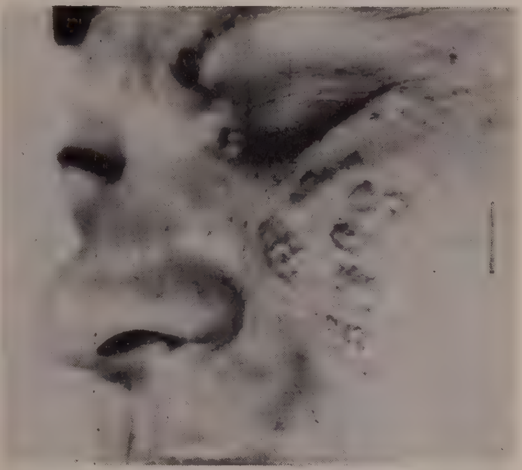

FIG. 1. February, 1933—Lesion shows signs of spreading.

In 1934 she was treated with fulguration on five occasions, one month apart. The lesions became flatter, softer, and crusted. In July, 1934, some activity was still present with some scarring. In May, 1935, there were new nodules on the left cheek which were fulgurated, and in August, 1935, she was much improved.

In March, 1937, a recurrence of the disease on the left cheek was treated with radiotherapy: one-half erythema dose, 3 mm. Al weekly, four doses. By May, 1937, the condition was worse with new nodules.

The patient was not seen again until October, 1940, when a tuberculin test was done: "tuberculin O.T. 1:100,000 intradermally, 3 plus reaction." Chest x-ray was negative. The patient was referred to the surgical service for excision of lesion and plastic repair with skin grafting, which she refused.

In 1941 various other methods of therapy were tried including intradermal injections locally of sodium propionate and later diphtheria toxoid into the lesion on the cheek (Fig. 2). Slight regression occurred. In 1942 remaining lesions were treated with dry ice (five such treatments). The lesion on the cheek now had assumed a tumor appearance. She was not seen from August, 1942, to May, 1951,

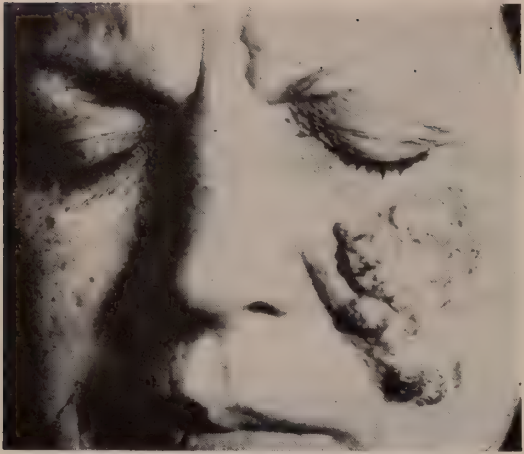

FIG. 2. Condition of lesion in 1941.

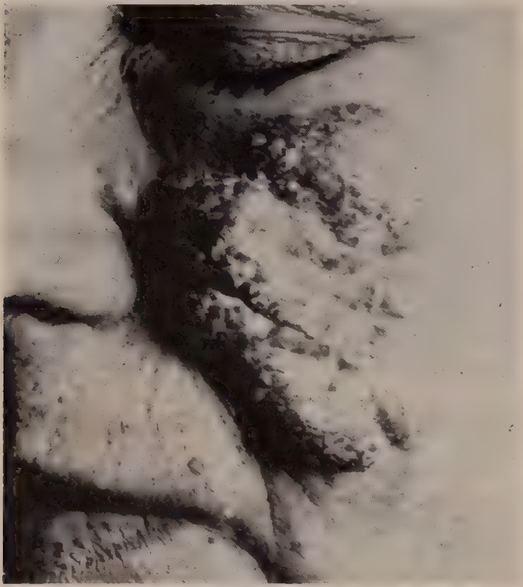

FIG. 3. Lesion much worse in 1951, diagnosed as lupus vulgaris tumidus.

when she returned to our Skin Clinic for further therapy. Then the lesion on the left cheek was much worse. Diagnosis was "lupus vulgaris tumidus" of left cheek (Fig. 3). No other lesions were found elsewhere on her skin.

A new form of therapy was tried on May 15, 1951. She was given calciferol (Drisdol) capsules, 50,000 units each three times a day, and injections of streptomycin, 0.25 Gm. intramuscularly twice weekly. She received 16 such injections and was then changed to dihydrostreptomycin, 0.25 Gm. intramuscularly twice weekly.* She received 80 such injections up to September, 1952, without any ill effects. The calciferol capsules were gradually reduced and stopped because on a few occasions the Sulkowitch urine test for calcium showed a moderate positive reaction. The lesions on the left cheek showed much improvement as time went on, becoming smaller, flatter, and softer. In October, 1952, all medication was stopped, and the patient was given isoniazid tablets, 50 mg. orally three times a day after meals. The lesions on the cheek continued to show marked, rapid improvement. There have been no untoward side-effects.

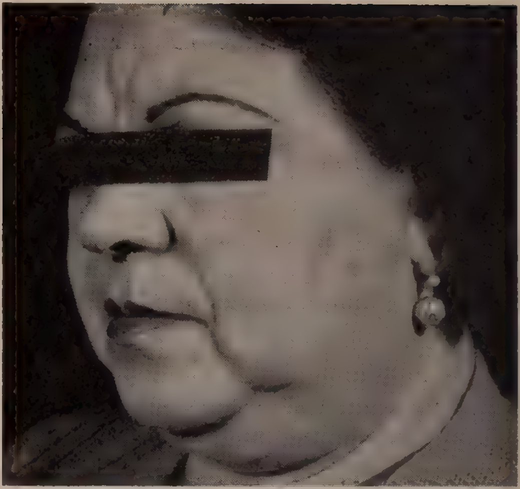

FIG. 4. December, 1953—Present excellent result.

In August, 1953, the patient was examined physically, and there were no pertinent findings. Weight was 180 pounds, blood pressure 180/80, Mazzini negative, sedimentation rate 30 mm. in one hour. Blood count showed hemoglobin 15.7 Gm., white blood cells 10,900 with polymorphonuclears (segmented) 68, bands 4, eosinophils 2, lymphocytes 23, and monocytes 3. The patient feels well and continues to take the isoniazid tablets, 50 mg. twice a day as a maintenance dose. The result as of December, 1953, is excellent (Fig. 4).

Summary

A case is reported of lupus vulgaris tumidus, previously not benefited by any known form of therapy, now greatly improved with calciferol, dihydrostreptomycin, and isoniazid.

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ADDENDUM.—April 20, 1954, the maintenance dose of isoniazid was reduced to 50 mg. once a day and on June 22, 1954, this was discontinued. The result to date is highly satisfactory with no evidence of recurrence.

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* The streptomycin and dihydrostreptomycin used in this case were given intramuscularly in order to control the dosage, and the dosages were reduced in an attempt to prevent any side-reactions such as nausea, dizziness, and eighth nerve involvement. This patient was a clinical ambulatory case, not hospitalized, while being treated.

Jejunal Tumor Simulating Bleeding Duodenal Ulcer

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(*From the Jewish Hospital of Brooklyn*)

It is often difficult to locate the origin of gastrointestinal bleeding, and it may remain obscure despite exhaustive studies. Indeed, exploratory surgery may fail to determine the bleeding site.

An important source of error in diagnosis and management arises when roentgen evidence of duodenal spasm and deformity is incorrectly interpreted as being due to duodenal ulcer. This trap is difficult to resist since peptic ulcer is the commonest cause of massive hemorrhage, occurring in 65 per cent or more of most reported series. However, one must never accept an x-ray finding of duodenal irregularity without reservation, and complete exploration of the gastrointestinal tract is mandatory in all cases of hemorrhage.

Cherry and Hill[1] collected eight cases of leiomyoma of the jejunum and added one of their own. All of these simulated duodenal ulcer because of the presence of bleeding, pain, and duodenal deformity on x-ray. In one case futile gastric surgery had been performed, and it remained for the postmortem examination to reveal leiomyoma of the jejunum as the cause of bleeding.

This report is presented as additional evidence of the clinical resemblance of both conditions. Leiomyoma of the jejunum is much less frequently encountered than is duodenal ulcer but should not be underestimated as regards the severity of blood loss it may cause.

Case Report

J. H., a sixty-three-year-old white male, was admitted to the Jewish Hospital of Brooklyn on March 20, 1951, with the chief complaint of "stomach ulcers" of ten years duration causing hemorrhages. He had been hospitalized elsewhere on at least eight occasions because of recurrent episodes of melena and shock, requiring numerous blood transfusions. Gastrointestinal x-ray examinations performed during previous hospital admissions had been repeatedly interpreted as demonstrating a duodenal ulcer. He suffered mild epigastric pain, relieved by Amphogel. The last tarry stool had appeared two weeks previously, and at the time of the present admission the patient was asymptomatic. Appendectomy had been performed twenty years ago.

The patient was obese. Blood pressure was 126/74 mm. Hg and the pulse rate 88 beats per minute. Abdominal examination was negative except for a healed right lower rectus scar.

Results of routine urinalysis were normal. The red blood count was 4,320,000 per cu. mm. with a hemoglobin of 77 per cent. The white blood count was 5,600 per cu. mm. with a normal differential count. The hematocrit reading was 38 per cent. Blood chemistry determinations were all within normal limits.

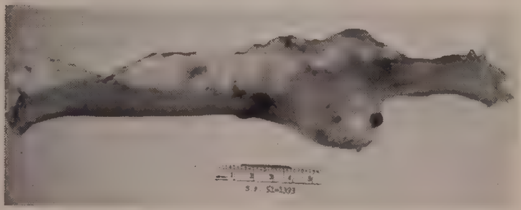

FIG. 1. Leiomyosarcoma of jejunum. A hemorrhagic cyst may be noted on the surface of the tumor.

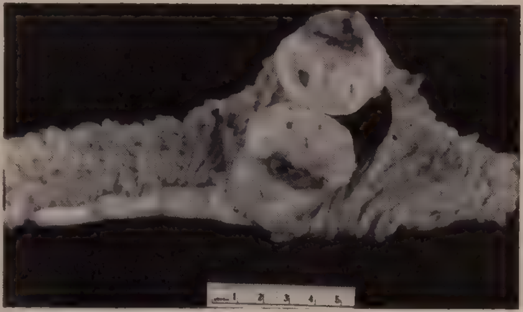

FIG. 2. Mucosal view with section of tumor demonstrating central ulceration. This was the source of repeated episodes of melena.

On March 23, 1951, laparotomy was performed through a transverse upper abdominal incision. To the surprise of the operator, examination of the stomach and duodenum revealed no abnormality. After freeing multiple adhesions secondary to the previous laparotomy, meticulous exploration of the entire intestinal tract was carried out. Sixty centimeters from the ligament of Treitz, an oval, moderately firm mass, measuring 4 cm. in diameter, was found projecting from the antimesenteric border of the jejunum. No metastatic involvement was evident. Twenty-one centimeters of jejunum, including the tumor, were resected, and an end-to-end jejunojejunostomy was performed. The postoperative course was uneventful, and the patient was discharged on the eleventh postoperative day. He has remained asymptomatic since.

On opening the specimen, the tumor was seen to project into and narrow the intestinal lumen. In the center of the mass was a sharply punched out ulcer measuring 2.5 by 1 cm. Histologic examination revealed interlacing bands of spindle-shaped cells, arranged in whorls. The cells varied in size, shape, and nuclear staining. Mitotic figures were fairly abundant. The tumor was reported as a leiomyosarcoma of the jejunum (Figs. 1 and 2).

Comment

Leiomyoma of the jejunum is often confused with duodenal ulcer when associated with bleeding, pain, and x-ray evidence of duodenal deformity. This x-ray finding alone should not necessarily be interpreted as signifying the presence of duodenal ulcer. Irregularity of the duodenum is often found associated with other visceral pathology and is probably due to reflex physiologic reaction on the part of the duodenum in the form of spasm. Since gastrectomy is advocated in some cases of gastrointestinal bleeding of undetermined origin, surely one must not be misled by incorrectly interpreted x-ray findings and omit thorough exploration of the gastrointestinal tract. Thus, other lesions, such as leiomyoma of the jejunum, will not be missed.

41 Eastern Parkway

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Carcinoma of the Gallbladder

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Carcinoma of the gallbladder occurs with one-tenth the frequency of carcinoma of the stomach. Its frequency, its lack of definite clinical symptomatology at an early stage, and its difficulty of precise diagnosis prompts this case report.

Case Report

A. P., a fifty-one-year-old, white, married, multiparous female, presented herself on August 28, 1948, for admission because of repeated attacks of epigastric and upper quadrant pain accompanied by nausea, gaseous eructations, and a feeling of epigastric fullness. These complaints were most frequent after ingestion of a fatty meal and had been present over a period of four years with increased severity and frequency in the past few months. The intensity of the pain caused her to seek relief. There was no history of jaundice, clay-colored stools, melena, or change in bowel habits.

Physical examination revealed normal findings except for distended abdomen. Gallbladder studies revealed presence of stones. Cholecystectomy was performed. Pathologic report revealed grossly the presence of a few small, faceted cholesterol stones. Microscopically, there was noted infiltration of mucosa and walls by few plasma cells, lymphocytes, and neutrophilic polymorphonuclear cells. In one area the mucosa revealed a nodular proliferation with glandular structure showing atypical proliferation. Several layers of cylindric cells showed hyperchromatosis, and numerous mitoses were noted. These atypical proliferating glandular structures penetrated beneath the mucosa (Figs. 1 and 2). Diagnosis was early adenocarcinoma of gallbladder, cholelithiasis, and chronic cholecystitis.

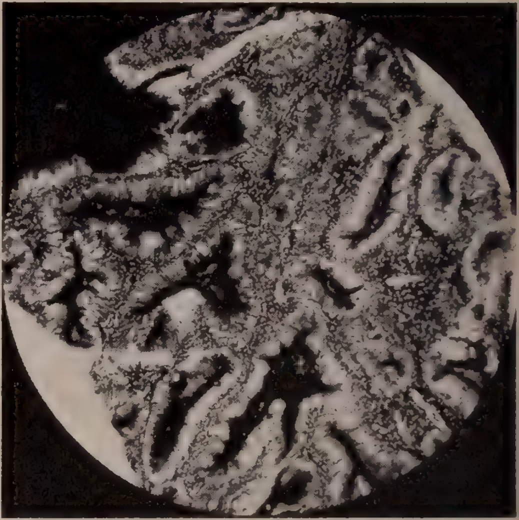

Fig. 1. Low-power magnification showing infiltration of atypical and malignant acini beneath mucosa.

The patient has been closely followed for more than five years and is at present in good health offering no complaints.

Comment

Carcinoma of gallbladder has been reported with a

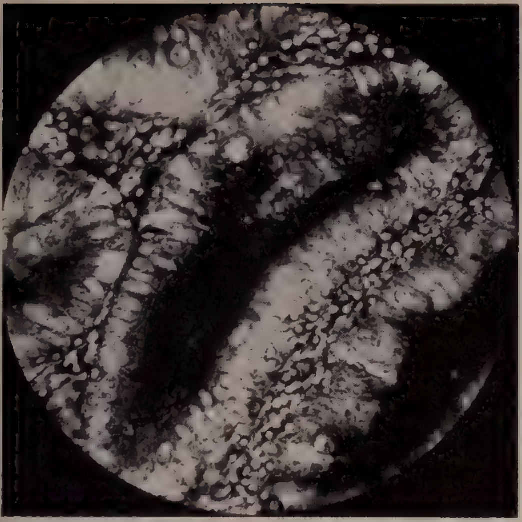

FIG. 2. High-power magnification showing detailed cellular atypism, hyperchromatism, and mitoses.

varying incidence depending on surgical or autopsy statistics. The surgical incidence is less reliable and has varied from 5 per cent of all diseased gallbladders in 1920 to 0.5 per cent in the late 1930's. Today, the figure is even less. In autopsy statistics the incidence is 0.4 per cent of autopsies or 3 per cent of all malignancies which are autopsied. One of the largest series of cases thus far reported is that of Kirschbaum and Kozoll[1] in 1941 from the Cook County Hospital, Chicago. These authors collected 55 cases of gallbladder malignancies in 13,330 consecutive autopsies from 1929 to 1940.

Carcinoma of the gallbladder occurs most frequently in the sixth and seventh decades of life, rarely being reported below the age of forty years. This age incidence would place carcinoma of the gallbladder in or near the category of carcinoma of the prostate and urinary bladder where the age incidence of occurrence or recognition is highest of all malignancies. The sex incidence is higher for females, being 3 or 4 to 1, a fact which may have some relation to more frequent occurrence of gallbladder disease in women.

This latter fact leads to the question of causative factors. It is a well-documented fact that gallstones occur in the vast majority of gallbladder carcinoma. Different authors report an incidence of 60 to 100 per cent. It is also interesting to note that in a few cases carcinoma has followed the removal of stones by surgery. Many have accepted the thesis that gallstones are carcinogenic agents, either by irritative phenomenon, radioactive phenomenon, or by virtue of the close chemical relationship of gallstones to proved carcinogenic agents. This thesis cannot be substantiated by careful experimentation. Insertion of these stones into guinea pig gallbladder has produced various inflammatory and hypertrophic phenomena but not true malignancies.[2]

It is also noteworthy that cholecystitis occurs in a high percentage of carcinoma of gallbladder. This fact is most probably related to the close association of cholecystitis and cholelithiasis, rather than cholecystitis and carcinoma. The histologic structure of carcinoma of the gallbladder is usually that of the scirrhous infiltrating type, giving rise to thick walls and reduction in caliber of the lumen. Less frequently polypoid and papillary forms are seen with possible complicating empyema of the gallbladder. Multicentric origins have been reported[3] with most frequent sites of origin in neck and fundus. Corresponding to the gross appearance, the most frequent microscopic picture is that of an infiltrating adenocarcinoma through the walls of the gallbladder. The more typical adenocarcinomatous picture may be lost in the presence of a scirrhous reaction.

Obstruction to the flow of bile is a common complication caused by (1) stricture, (2) plugging by polypoid mass, or (3) pressure of metastatic peribiliary nodes. To this may be added the initial factor of cholecystitis and cholelithiasis. Subsequent damage to the liver may be ascending cholangitis or metastases.

Metastases occur primarily to liver, regional lymph nodes, peritoneum, and the extrahepatic biliary system. Metastases by bloodstream to bones, lungs, and ovaries have been reported.

Summary

A case of carcinoma of the gallbladder has been presented. Its clinical and pathologic features have been discussed.

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The ability to discriminate between that which is true and that which is false is one of the last attainments of the human mind.—JAMES FENIMORE COOPER

Multiple Multicentric Superficial Basal Cell Epithelioma of the Scalp

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It is thought that it would be of general interest to record a case of multiple multicentric superficial basal cell epithelioma of the scalp. Although the overwhelming majority of malignant skin tumors occur on the scalp or the face,[1] the former is definitely not the site of predilection for neoplastic changes.[2,3] Most of the primary scalp malignancies are either squamous cell or basal cell epitheliomas. The latter develop in three types, of which the superficial basal cell epithelioma involves the scalp rather infrequently.[4,5] In a compilation listing 461 basal cell epitheliomas, McKee[4] did not record a single case involving the scalp. Our examination of the contemporary dermatologic literature did not disclose any cases of multiple superficial basal cell epithelioma of the scalp. One monograph dealing with cancerous and precancerous conditions of the skin, for instance, does not even mention superficial basal cell epithelioma.[6] In view of this apparently low incidence, it seemed desirable to report the following case.

Case Report

A. M., forty-eight years of age, was a blue-eyed, fair-complexioned, well-nourished white female. In 1930 a lesion on her anterior upper left chest was biopsied at a New York hospital and found to be basal cell epithelioma. She was treated with a single erythema dose of x-ray which apparently sufficed for the destruction of the tumor.

In 1949 while combing her hair she detected three pinhead-sized "pimples" on different parts of her scalp. She remembers them located over her left (two) and right (one) temple. Later, upon self-examination with the aid of mirrors, these "pimples" appeared to patient as "reddish spots covered with scabs" (scales?). In the same year she consulted three private physicians who thought her lesions might be those of psoriasis or lupus erythematosus. Three of the patches were treated by the use of x-rays, and for the others various ointments were prescribed. The therapeutic response to these measures was negligible. In March, 1953, after having observed the outcropping of new lesions, the patient visited the skin department of another New York hospital where the diagnosis of lupus erythematosus was again made, and local measures were advised.

In June, 1953, patient sought help from one of us (Dr. Mintzer). She denied any trauma to her scalp prior to 1949. She complained of her "sores" that were "scraped open by her comb almost every day." Besides the itching and the cosmetic impediment, the lesions produced only slight discomfort, and their growth progressed rather slowly. Patient stated that she never observed any nevi on her scalp. Once they appeared, none of her patches ever disappeared spontaneously.

Patient was in fine general condition. There were no cutaneous lesions anywhere except on the scalp. There were no metastases or adenopathy.[7] On the anterior upper left chest in the third costal interspace there was a half dollar-sized area of atrophied, depigmented skin which was firmly attached to the underlying tissues and was surrounded by telangiectatic vessels. On patient's initial visit careful scrutiny of her scalp disclosed nine separate lesions ranging in color from pale to deep red and in size from the diameter of a quarter to that of a pea. Location of lesions were as follows: two lesions over left temple, two lesions to left of vertex, one lesion above left ear, one lesion posterior to left ear near occiput, one lesion on right temple, and two lesions above and behind right ear.

To the palpating finger, the lesions felt rough and scaly. They consisted of dry, erythematous, and fairly well-circumscribed patches which were covered with fine adherent scales and exhibited depressed and atrophic centers. Most of the lesions characteristically had a fine, elevated, and rolled border. Upon inspection with a lens closely packed papules could be clearly discerned in this border. Patient stated that the patches were never more than slightly itching. X-ray of the skull and blood serology were negative.

Biopsy specimens were taken from several lesions, and all sections studied revealed a similar picture: "Arising from a thin and flattened epidermis from several points are small masses of basal cells. Palisade margin is intact. The cutis shows a reaction containing fibrosis" (Figs. 1 and 2). Microscopic diagnosis was multicentric superficial basal cell epithelioma. No melanin was found in our sections.

All lesions were destroyed by electrocoagulation and curettage under local anesthesia. One lesion over the left vertex did not respond to this therapy and was treated with 500 r at 100 kilovolts, unfiltered, every other day up to a total of 4,500 r with satisfactory result. Fractional irradiation was used for cosmetic reasons.

The prognosis is favorable. There has been no recurrence of any lesions or appearance of any new lesions eight and one-half months after institution of therapy.

Differential Diagnosis.—The problem of differential diagnosis presented by these lesions is shown in the following:

1. Lupus erythematosus: There were neither dilated nor plugged follicles nor "intolerable itching,

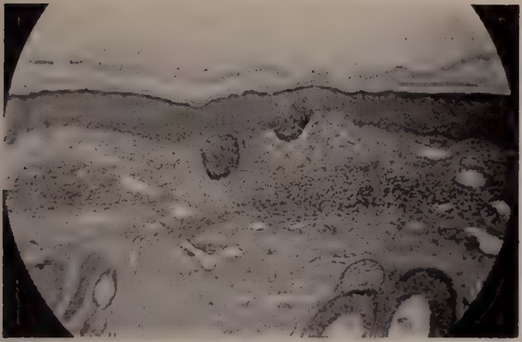

FIG. 1. Lesions diagnosed as multiple multicentric superficial basal cell epithelioma of the scalp.

a symptom peculiar to scalp involvement" by lupus erythematosus.[8]

2. Psoriasis: There were no loose, silvery scales with postauricular and/or external auditory eruptions.

3. Seborrheic dermatitis: There were neither flaky, branny, nor yellowish greasy scales. No lesions extended beyond the scalp to the ears, the folds behind the ears, the forehead, or the neck.

4. Bowen's disease: The lesions were dry and mildly inflammatory and had grown very slowly, reaching their present size over a period of several years. Furthermore, they exhibited a definite filiform border.

5. Extramammary Paget's disease: This disorder is exceedingly rare[9] or mistakenly reported as such. Our lesions were never exudative or infiltrated "as though they were a button in the skin."[10]

6. Pityriasis rubra pilaris: While this disease generally begins with erythematous scaly plaques on the scalp and later involves other areas on the body, the lesions in our case remained limited to the scalp.[8]

7. Syphilis: None of the characteristic features of the various stages of syphilis involving the scalp or hair were noted in this case. No ulceration, adenopathy, or alopecia were ever observed. Blood serology was negative.[11]

Comment

The clinical features of this case follow very closely the classic description of superficial basal cell epithelioma by Darier. The incidence of this disorder is 14:4 in favor of females.[3]

We agree with Madsen[12] that external factors, such as the x-ray treatment administered in 1949, played no significant etiologic role in the development of our patient's disease.

Anemnestically, one might speculate about previous arsenical ingestion and its subsequent etiologic significance. In this connection it is to be noted that the pentavalent form of arsenic, as contained in Fowler's solution, favors skin, hair, sweat glands, etc.[13] Moreover, "arsenic holds a ubiquitous place in modern life," and, therefore, this patient could have absorbed arsenic from a number of sources such as insecticide preparations, purification of water, beverages, foods, wall paper, colored confectionery wrapping paper, mothproofing preparations, etc.[14] On the other hand, it is very possible that the lesions before they came to our attention, actually were those of lupus erythematosus.

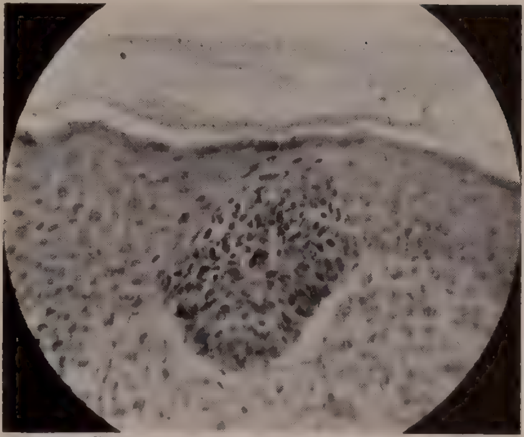

FIG. 2. High-power view of same lesion as in Fig. 1.

We must also point out that it is rather difficult to identify the stages of transition from noncancerous to precancerous to cancerous lesions.[15] Furthermore, it is to be noted that superficial basal cell epithelioma may coexist with psoriasis and that a case was reported where a clinically typical superficial basal cell epithelioma exhibited the histologic features of Bowen's disease.[3]

Small lesions, such as the ones in this case, may be treated by surgery, electrosurgery, chemosurgery, or irradiation. Some feel that epithelioma of the scalp, because of their highly differentiated cells, are radioresistant and consider excision the therapeutic measure of choice.[5,16] We also were appreciative of the fact that in irradiating this patient's scalp nine separate times, we might possibly damage the underlying osseous and cerebral structures.[17] Other authors prefer fulguration, curettage, and desiccation.[16]

As noted above, failure followed electrosurgery of one of the lesions. Whether this was a recurrence due to active epithelial cells remaining in the scar tissue or to an occurrence of new lesions we could not determine.

Summary

A case of multiple multicentric superficial basal cell epithelioma, a rare disorder, is presented with arsenical ingestion as a possible etiologic factor.

Incidence and differential diagnostic highlights are reviewed.

Electrosurgery followed by curettage is preferred over irradiation, especially in multiple superficial epithelioma, such as in the case presented.

The photomicrographs were taken by Mrs. M. Pikuritz.

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Use of L-nor-epinephrine in the Successful Treatment of Severe Shock Accompanying Drug Poisoning

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THE use of vasopressor drugs in the management of shock complicating acute myocardial infarction is an achievement of major importance. It is considered the most rational therapy at the present time.[1] However, no reference to the successful use of l-nor-epinephrine (Levophed) in cases of circulatory collapse attending drug poisoning has been found in the literature. An illustrative case was recently observed.

Case Report

A seventy-two-year-old retired physician was admitted to the hospital in extremis. Because of the dire condition in which the patient was found, only an inadequate history was obtained by the ambulance attendant. It was determined that the man had had two previous documented episodes of acute coronary occlusion. He had recovered uneventfully from both attacks. His condition was such that when he was lifted from the stretcher into the hospital bed, the nurse thought the patient had expired. Shallow respiration was noted, however. Heart sounds were barely audible; blood pressure levels of 52/36 mm. Hg were noted. Intravenous Levophed infusion was ordered. Four cubic centimeters of a 0.2 per cent Levophed solution were added to 1,000 cc. of 5 per cent glucose solution in distilled water and administered by slow intravenous drip. Satisfactory blood pressure levels were obtained almost at once and were maintained throughout. The pulse rate remained constantly normal between 85 and 95 per minute.

It became increasingly clear, even before an electrocardiogram was taken, that the shocklike state was caused by a condition other than acute myocardial infarction. The electrocardiogram revealed no evidence of recent coronary occlusion on serial examination. Therapy was continued, however, as long as blood pressure readings fluctuated. The patient responded well with complete recovery within four hours after he was found moribund. He began to converse with the nurse, showing no vestige of drowsiness or confusion.

One hour after admission, after treatment had begun, additional information was obtained by the family physician. It was discovered that the patient had taken thirty $^1/_2$-grain tablets of phenobarbital and most of the contents of a 30-cc. ampule of meperidine hydrochloride (Demerol), a sterile solution containing 50 mg. per cc. The ampule was known to have been full the night before and was found completely empty on the morning of admission. Even assuming that the patient had utilized part of the solution, a very conservative estimate would indicate that at least 1,200 mg. of Demerol had been taken subcutaneously. There is a case reported in the literature[2] in which a similar dose was taken in a suicidal attempt; however, no mention was made as to whether the drug was taken by mouth or by injection.

The ensuing hospital course was uncomplicated, and the patient was discharged a few days after admission.

Comment

Circulatory collapse bringing the blood pressure to critical levels is a dangerous complication, no matter what the cause of the shock may be. It is apparent that in an acutely damaged heart such danger is further dramatized. The underlying physiologic changes, however, are the same. They include, chiefly, lowering of the cardiac output and decreased venous return.[3] It is not within the scope of this report to discuss the corollary of events resulting from shock. It must be mentioned, however, that diminished pulse pressure obviously affects coronary blood flow. It thus becomes evident that a continued state of shock might readily have eventuated in myocardial infarct in a patient who previously had had two attacks. One of the pharmacologic effects of l-nor-epinephrine (Levophed) is an increase of the coronary blood flow.[4] It appears rational, therefore, to use the drug in any case of prolonged state of severe hypotension, particularly in patients with arteriosclerotic heart disease.

The ease and rapidity with which this patient recovered is another feature of note. It might be worth while to investigate this prompt restoration of normal state of mind from the psychiatrist's point of view.

Since there was no central cardiac disturbance present in this case, the prompt restoration of normalcy from a state of extreme emergency is less remarkable to the cardiologist.

Summary

A case of circulatory collapse following an attempted suicide is reported. Large doses of phenobarbital were taken by mouth, and at least 1,200 mg. of Demerol by hypodermic injection. Levophed infusion restored normotensive levels. Complete and prompt recovery was achieved four hours after treatment had begun.

117 Hart Boulevard

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A Family Doctor for Every Doctor's Family

The American Academy of General Practice is enlisting the support of the American Medical Association and other medical organizations in a project which is being given high priority support during 1954. The project is best described by the slogan, "A Family Doctor For Every Doctor's Family."

The academy undertook the project because it felt that, like the cobbler's children who have no shoes, the doctor's family may be getting the poorest medical care and attention. The idea first was formulated by Dr. Merrill Shaw, academy vice-president, who has been critically ill at his home in Seattle. In outlining the idea to the academy's board of directors, Dr. Shaw said he was convinced that physicians and their families receive "hopscotch" medical attention, neglect their own health, and seldom have a thorough check-up. He said that during his twenty years as a general practitioner he does not recall that a single doctor ever came to him for a physical examination. Dr. Shaw provided records to show that the country is losing many highly trained doctors at the peak of their careers. Many of the deaths are due to preventable illness. He estimated that more than half the doctors in private practice work sixty or more hours a week. Their failure to practice what they preach may result in many premature deaths.

The academy presently is leading a campaign, especially among women's auxiliaries of state and county medical societies, to have every physician arrange for the services of a family doctor for himself and his family.

NECROLOGY

Joseph H. Abraham,* M.D., of New York City, died on June 3 at his home at the age of eighty-three. Dr. Abraham received his medical degree from the University of Virginia in 1894. For many years he was a professor of otolaryngology at the Polyclinic Hospital and Postgraduate Medical School. A founder of the American College of Surgeons, Dr. Abraham was a Diplomate of the American Board of Otolaryngology; a member of the American Laryngological, Rhinological and Otological Society, and the New York Academy of Medicine. He was consulting laryngologist at the Hospital for Joint Diseases.

Dr. Abraham belonged also to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

George Arthur Blakeslee, M.D., seventy-four, of New York City, died on June 9 at his home. Dr. Blakeslee graduated from New York University and Bellevue Hospital Medical School in 1901. He was a member of the American Neurological Association, the New York Neurological Society, the New York Society for Clinical Psychology, the New York Academy of Medicine, and the Association for Research in Nervous and Mental Diseases.

Dr. Blakeslee was a consultant in neurology and psychiatry at University Hospital, a consultant in neurology at Beekman-Downtown, St. Elizabeth, and St. Francis Hospitals, and a consultant in neuropsychiatry at Harlem Hospital.

He belonged also to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Ernest Joseph Blumenthal, M.D., of Kew Gardens, died in the Jamaica Hospital on June 8 at the age of fifty-seven. Dr. Blumenthal received his medical degree from the University of Berlin in 1922. He came to this county in 1938.

Dr. Blumenthal was a member of the American College of Cardiologists and the Rudolph Virchow Society. He was an assistant attending physician in cardiology at Jamaica Hospital. Dr. Blumenthal belonged to the Queens County Medical Society and the Medical Society of the State of New York.

John D. Bowen, M.D., of Binghamton, died of cancer on May 8 in the Lourdes Hospital at the age of sixty-four. Dr. Bowen received his medical degree from the University of Pennsylvania in 1917. He belonged to the Pan American Medical Association, the Pan American Association of Ophthalmology, the Binghamton Academy of Medicine, and the Central New York Eye, Ear, Nose and Throat Society.

Dr. Bowen was consulting otolaryngologist and rhinologist at the Broome County Tuberculosis Hospital, consulting ophthalmologist at the Ideal Hospital, and consulting ophthalmologist, otolaryngologist, and rhinologist at the Binghamton City and Lourdes Hospitals. He was a member also of the Broome County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Carlton C. Curtiss, M.D., of Syracuse, died on May 21 at the age of sixty-four. Dr. Curtiss graduated from Syracuse University College of Medicine in 1915 and interned at the Rochester General Hospital. He belonged to the Onondaga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

D. R. Perry Heaton, M.D., of Rye and Lake Worth, Florida, died on June 15 in St. Luke's Hospital, New York City, at the age of sixty-nine. Dr. Heaton graduated from the Columbia University College of Physicians and Surgeons in 1909. He had been retired for the past fifteen years.

William Francis Heslin, M.D., of Brooklyn, died on May 22 at St. Mary's Hospital at the age of sixty-three. Dr. Heslin graduated from the Columbia University College of Physicians and Surgeons in 1918 and interned at Kings County Hospital. Before his retirement in 1949 he had been an attending physician at St. Mary's Hospital.

Dr. Heslin belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Perry Maurice Lichtenstein, M.D., of New York City, collapsed and died on June 14 after testifying in a civil suit in the Queens General Court House in Jamaica. He was sixty-eight years old. Dr. Lichtenstein graduated from Cornell University Medical College in 1910 and Fordham University Law School in 1920.

A pioneer in the field of forensic medicine, Dr. Lichtenstein was a consultant in forensic psychiatry at the Brooklyn State and Kings Park Hospitals, and a consultant in psychiatry at Kings Park Hospital. He was medical assistant to the District Attorney's office. In collaboration with Dr. S. M. Small, Dr. Lichtenstein wrote *A Handbook of Psychiatry* in 1943 and authored *A Doctor Studies Crime* in 1934.

He belonged to the New York County Medical

Society, the Medical Society of the State of New York, and the American Medical Association.

Henry Minsky, M.D., of New York City, died on May 24 of a cerebral hemorrhage while visiting in Rhinebeck. He was fifty-eight years old. Dr. Minsky graduated from the Columbia University College of Physicians and Surgeons in 1919 and interned at Lebanon Hospital. He was a Diplomate of the American Board of Ophthalmology, a Fellow of the American College of Surgeons, and a member of the American Academy of Ophthalmologists and Otolaryngologists, the New York Academy of Medicine, and the Brooklyn Ophthalmological Society.

Dr. Minsky was an attending ophthalmologist at the Mount Sinai and Hillside Hospitals and consulting ophthalmologist and surgeon at the Harlem and Liberty Maimonides Hospitals. He belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles Augustus Steurer, M.D., of Great Neck, died of a heart ailment on June 8 at the age of seventy-one. Dr. Steurer graduated from Long Island College Hospital Medical School in 1910 and interned at Jersey City Hospital, New Jersey. He was a member of the American Public Health Association. Dr. Steurer was consulting physician in communicable diseases at the Meadowbrook Hospital and was Deputy Health Commissioner of Nassau County. A charter member of the Nassau County Medical Society, Dr. Steurer also belonged to the Medical Society of the State of New York.

Malpractice INSURANCE AND DEFENSE BOARD

JOHN F. KELLEY, M.D., *Chairman*

Statement Concerning Motor Vehicle Law

Section 71-a of the New York State Vehicle and Traffic Law provides that a blood test shall be made by a licensed physician when requested by a police officer who has reason to believe that the driver of a motor vehicle is intoxicated.

The Deputy Superintendent of Insurance, at the request of the Governor's office, has informed the Medical Society of the State of New York that some difficulties have been encountered in persuading physicians to draw the necessary blood specimens. Many of the doctors approached have expressed the fear that they would not be protected by their malpractice insurance because the relation of physician and patient did not exist between the doctor involved and the person from whom the blood specimen was required.

This objection was submitted to the Malpractice Insurance and Defense Board, which held that the position of the doctor in this situation was substantially the same as that of a physician called by the police to treat a person injured in an automobile accident. It pointed out that nothing in the insurance contract of the Group Plan or that of any other malpractice insurance policy known to it would preclude protection on account of any suit or claim that might grow out of such service.

Furthermore, it is believed desirable in the interest of proper administration of the motor vehicle law that any member of the Society, who is equipped to draw the necessary blood, do so when requested by competent police officers.

This statement was approved for publication by the Council of the Medical Society of the State of New York at its meeting on June 10, 1954.

MEDICAL NEWS

The New York Academy of Medicine—The twenty-seventh annual graduate fortnight of The New York Academy of Medicine will be held from October 18 through October 29. Dr. Alexander T. Martin, president, the New York Academy of Medicine, will give the opening address.

The subject of the fortnight will be "Infections and Their Management," and there will be morning panel meetings, afternoon hospital clinics, as well as 21 evening lectures and scientific exhibits. The evening lectures will begin at 8:30 P.M.

Dr. Rene J. Dubos, Rockefeller Institute for Medical Research, will present the Ludwig Kast Lecture on "A Metabolic Approach to the Pathogenesis of Tuberculosis," and Dr. J. Burns Amberson, College of Physicians and Surgeons, Columbia University, the Harlow Brooks Lecture on "Current Methods in the Treatment of Tuberculosis" on October 18.

The Wesley M. Carpenter Lecture will be presented by Dr. Paul R. Cannon, University of Chicago Medical School, who will discuss "Alterations in Pathology in Infections Since the Introduction of Chemotherapy and Antibiotics," and Dr. Yale Kneeland, Jr., College of Physicians and Surgeons, Columbia University, will discuss "Acute Nonpurulent Meningitis" on October 19.

"Approach to Control of Poliomyelitis by Immunological Methods" will be discussed by Dr. Thomas Francis, Jr., University of Michigan, and and "Viral Hepatitis" by Dr. Roderick Murray, National Microbiological Institute, National Institutes of Health, Bethesda, Maryland, on October 20. On October 21, Dr. Robert J. Huebner, National Microbiological Institutes of Health, Bethesda, Maryland, will talk on "The Role of a New Group of Prevalent Viruses in Undifferentiated Respiratory Illness," and Dr. Colin M. MacLeod, New York University College of Medicine, on "Interactions of Host, Microbe and Chemotherapeutic Agent." "The Epidemiology of Hemoloytic Streptococcal Infections," Dr. C. H. Rammelkamp, Western Reserve University Medical School, and "The Use of Antibiotics for the Prevention of Rheumatic Fever," Dr. Gene H. Stollerman, Irvington House, will be discussed on October 22.

On October 25, Gladys L. Hobby, Ph.D., Research Division, Chas. Pfizer & Co., Inc., will talk on "Current Status of the Development of Antimicrobial Agents," and Dr. Louis Weinstein, Boston University School of Medicine, "The Complications of Antibiotic Therapy." On October 26, "Hormones and Infection" will be presented by Dr. Lewis Thomas, University of Minnesota Medical School, and "Staphylococcus Infections," by Dr. Vernon Knight, Vanderbilt University Medical School, Nashville, Tennessee.

"Low Resistance to Infections: Relationship to Abnormalities in Gamma Globulin," will be presented by Dr. David Gitlin, Harvard Medical School; "Present Day Considerations of the Rabies Problem," by Dr. Horace L. Hodes, Mount Sinai Hospital, and "Histoplasmosis," by C. W. Emmons, Ph.D., National Microbiological Institute, National Institutes of Health, Bethesda, Maryland, on October 27.

Dr. F. S. Cheever, University of Pittsburgh, will talk on "The Acute Diarrheal Disease of Bacillary Origin," and Dr. Calderon Howe, College of Physicians and Surgeons, Columbia University, "Evaluation of Diagnostic Tests in Infection," on October 28. The last day of the fortnight, Dr. Frank L. Horsfall, Jr., RockefellerInstitute for Medical Research, will discuss "Approaches to the Chemotherapy of Viral Infections," and Dr. Joseph E. Smadel, Army Medical Service Graduate School, Washington, D.C., "Antibiotic Therapy of Viral and Rickettsial Diseases."

Morning panel meetings will be held from 11 A.M. to 12:30 P.M. Scheduled dates, subjects, and chairmen are: October 18, "Fever of Undetermined Origin," Dr. Hamilton Southworth; October 20, "Local Use of Antibiotics and Proteolytic Enzymes in Surgical Infections," Dr. Louis M. Rousselot; October 22, "Management of Nontubercular Pulmonary Infections," Dr. Dickinson W. Richards; October 25, "The Management of Regional Infections," Dr. Yale Kneeland, Jr.; October 27, "Combined Medical and Surgical Treatment of Tuberculosis," Dr. Walsh McDermott, and October 29, "The Therapy of Amebiasis and other Parasitic Infections," Dr. Harry Most.

Medical officers of the Armed Services in uniform will be admitted without charge and interns and residents will be admitted without charge provided they present letters from their chiefs of service. Physicians who are not Fellows of the Academy can request programs by writing to Secretary, Graduate Fortnight, 2 East 103rd Street, New York City 29.

Life Insurance Medical Research Fund—The Life Insurance Medical Research Fund which receives contributions from more than 140 large and small United States and Canadian life insurance companies has announced the grants and fellowships to be devoted to heart disease research for 1954.

The grants to institutions in aid of research on diseases of the heart and arteries awarded in New York State are:

Columbia University College of Physicians and Surgeons—$20,900 for research by Dr. Andre

Cournand on cardiovascular function at rest and under stress and the effects of treatment, $5,500 to Dr. Zacharias Dische on heart muscle metabolism, and $13,200 for research by Dr. Beatrice Carrier Seegal on the effects of high fat diet on the blood vessels in kidney disease.

Cornell University Medical College—$18,150 for research by Dr. Robert F. Pitts on respiratory and kidney relations in regulation of the acid-base balance of the blood.

New York University-Bellevue Medical Center—$26,400 for research by Dr. Colin M. MacLeod on the nature and mode of action of streptococcal products.

Research Foundation of State University of New York Medical Center at New York City—$11,000 for research by Dr. Chandler McC. Brooks on the basic phenomena of excitation and response of the heart, and $8,800 for research by Dr. John M. McKibbin on the effect of lipotropic substances on the distribution of essential lipids.

Research Foundation of State University of New York Medical Center at Syracuse—$8,250 for research by Dr. Gordon K. Moe on heart muscle and reflex responses to epinephrine.

Postdoctoral Fellowships for 1954 to 1955 awarded to New York State doctors are: Dr. Irwin A. Almenoff, Brooklyn, for study with Dr. David Glick, University of Minnesota Medical School, Minneapolis, Minnesota; Dr. Eugene J. Gangarosa, Rochester, for study with Dr. Herbert R. Morgan, University of Rochester School of Medicine and Dentistry, Rochester; Dr. Thomas O. Gentsch, Merrick, for study with Dr. William W. L. Glenn, Yale University School of Medicine, New Haven, Connecticut; Dr. John B. Lyon, Jr., Buffalo, for study with Dr. A. E. Wilhelmi, Emory University School of Medicine, Atlanta, Georgia; Dr. William P. McCann, Rochester, for study with Dr. Albert L. Lehninger, John Hopkins University School of Medicine, Baltimore; Dr. Stanley N. Rokaw, Brooklyn, for study with Dr. E. M. Landis, Harvard Medical School, Boston, and Dr. David Schachter, New York City, for study with Dr. John V. Taggart, Columbia University College of Physicians and Surgeons.

The predoctoral fellowships were awarded to Franklin M. Harold, New York City, for study with Dr. I. L. Chaikoff, University of California, Stanford; Norman B. Marshall, Brooklyn, for study with Dr. Jean Mayer, Harvard School of Public Health, Boston, and Norman Strauss, New York City, for study with Dr. Gregory J. Jann, University of California School of Medicine, Los Angeles.

Hill-Burton Grants—The status of all Hill-Burton hospital construction in New York State at the end of May was: *Completed and in operation*—65 projects at a total cost of $54,938,499, including Federal contribution of $16,721,012 and supplying 3,359 additional beds; *Under construction*—12 projects at a total cost of $45,459,879, including Federal contribution of $6,557,506 and designed to supply 1,124 additional beds; *Approved but not yet under construction*—five projects at a total cost of $12,083,730, including $2,828,917 Federal contribution and designed to supply 733 additional beds.

American Urological Research Foundation, Inc.—The American Urological Research Foundation, Inc., which was organized and received its charter in April, 1952, has organized a comprehensive program of clinical and laboratory research on disorders of the genitourinary system which will be supported by a group of seven grants-in-aid to universities and medical centers throughout the country.

Among the grants awarded were: $2,500 for a study of urinary steroid patterns in the postadrenalectomy state to Drs. George W. Fish and Perry B. Hudson, Francis Delafield Hospital, New York City, and $5,500 for a study of the normal and abnormal ureter in humans and animals to Dr. John A. Benjamin, University of Rochester, Rochester.

The Foundation is devoted exclusively to research dealing with the problems relating to disorders involving the kidneys, bladder, prostate gland and genitalia. These include such common ailments as stone formation, prostatic obstruction in the aged, infections involving the urinary tract, such as pyelitis of pregnancy and pyelitis of infancy and childhood, Bright's disease, cancer involving the component parts of the genitourinary system, and the problems of sterility in both sexes.

Foundation of the American Society of Plastic and Reconstructive Surgery, Inc.—The sixth year of operation of the scholarship program of the Foundation of the American Society of Plastic and Reconstructive Surgery, Inc. announces that the number of plastic centers made available to the scholarship in the United States and foreign countries has more than doubled since 1953.

The program provides scholarships in America and abroad to residents in training and plastic surgeons who have been in practice no longer than five years. A recent development has been the arrangements made by the Foundation to sponsor an exchange of well-qualified men who are not award winners.

The Foundation of the American Society of Plastic and Reconstructive Surgery was incorporated in May, 1948, for the purpose of carrying out a program of wide professional interrelationship by establishing scholarships for study and training in plastic and reconstructive surgery here and abroad.

New York State plastic centers included in the Foundation's pool are New York Hospital, 525 East 68th Street, New York City, and Memorial Hospital, 444 East 68th Street, New York City.

International Academy of Proctology Award Contest—The Annual Cash Prize and Certificate of Merit Award Contest for 1954 to 1955 of the International Academy of Proctology will be presented at the annual convention dinner dance in March, 1955. The competition is open to all physicians of all countries and the best unpublished contribution on proctology or allied subjects will be awarded $100 and a Certificate of Merit. Certificates will be awarded also to physicians whose entries are deemed of unusual merit.

Entries are limited to 5,000 words, must be typewritten in English, and submitted in five copies. The International Academy of Proctology reserves the right to publish all contributions in its official publication, *The American Journal of Proctology*. All entries must be received no later than February 1, 1955, and should be addressed to the International Academy of Proctology, 43–45 Kissena Boulevard, Flushing, New York.

Americal College of Chest Physicians—The ninth annual postgraduate course on diseases of the chest sponsored by the Council on Postgraduate Medical Education of the American College of Chest Physicians, in cooperation with the respective state chapters of the College as well as the staffs and faculties of the local hospitals and medical schools, will be held October 18 to 22, 1954, at the Hotel Knickerbocker, Chicago, Illinois.

The seventh annual postgraduate course on "Diseases of the Chest" will be held at the Hotel New Yorker, New York City, November 8 to 12, 1954. These annual postgraduate courses endeavor to bring physicians up to date on recent advancements in the diagnosis and treatment of heart and lung diseases.

Further information may be secured by writing to the Executive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

Third International Congress on Diseases of the Chest—The third international Congress on "Diseases of the Chest," sponsored by the Council on International Affairs of the American College of Chest Physicians and presented under the patronage of the Spanish government will be held in Barcelona, Spain, October 4 to 8, 1954.

Among the New York State doctors participating in the Congress and their subjects will be: Dr. Harry E. Tebrock, "Berryliosis—Epidemiology and Toxicology"; Dr. J. Maxwell Chamberlain, "Segmental Resection for Tuberculosis (Experience with 500 Cases)," both of New York City; Dr. Charles E. Hamilton, Brooklyn, "A Twenty-Year Follow-Up of Cases of Minimal Pulmonary Tuberculosis"; Dr. Coleman B. Rabin New York City, "The Nature and Treatment of Bronchial Adenoma (Based on 79 Cases)"; Dr. Donald McKay, Buffalo, "Post-Sanatorium Management for Tuberculosis," and Dr. Edgar Mayer, New York City, "Treatment of Nonresectable Pulmonary Cancer—Primary and Metastatic."

Pediatric Section of the Kings County Medical Society—The officers of the Pediatric Section of the Kings County Medical Society for the 1954 to 1955 year are: president, Dr. Jacob J. Lichterman; vice president, Dr. Bernard Greenberg; secretary, Dr. Arthur L. Ruby; treasurer, Dr. David Dragutsky.

Smith, Kline & French—The pharmaceutical house of Smith, Kline & French was honored with a special citation on June 24 at the annual meeting of the American Medical Association in San Francisco. The citation was presented by Dr. Walter B. Martin, Norfolk, Virginia, president, for "Pioneering use of television in bettering the health of the nation," . . . "through color television programs for doctors". . . and the "March of Medicine" programs for the general public.

Trudeau School of Tuberculosis—The fortieth annual session of the Trudeau School of Tuberculosis, which ended its four-week course June 25, was attended by 36 doctors from six foreign countries and thirteen states. Among the guest lecturers were: Dr. Paul T. Chapman, Detroit; Dr. Ronald V. Christie, London, England; Dr. Richard V. Ebert, Chicago; Dr. James J. Feffer, Washington, D.C.; Drs. Jerome Hartz and Theodore E. Woodward, Baltimore; Dr. Robert H. High, Philadelphia; Dr. Edward M. Kent, Pittsburgh; Drs. Anthony J. Lanza, John K. Lattimer, James E. Perkins, and Kenneth W. Smith, New York City; Dr. Donald B. Miller, Burlington, Vermont; Dr. Laurence L. Robbins, Boston; Mr. Ivan Sabourin, Montreal; Dr. Oscar A. Sander, Milwaukee, and Dr. David T. Smith, Durham, North Carolina.

Marks One Hundredth Birthday—Dr. F. B. Streeter, Glens Falls, observed his one hundredth birthday in June. Dr. Streeter is the oldest living alumnus of Union College, having graduated in 1876, as well as the oldest living member of Kappa Alpha fraternity. In 1946 he served as the grand marshall of the Union College alumni procession and in the fall received the patriarch's key of the fraternity.

The eldest son of Dr. Buell G. Streeter, who was medical director of the Army of the Shenandoah during the Civil War, Dr. Streeter began his practice in Glens Falls following graduation from Albany Medical College in 1879. During his seventy years of practice, Dr. Streeter was health officer of the Village of Glens Falls and the Town of Queensbury, Warren County coroner, and a member of the medical staff at Glens Falls Hospital. His last public service was as medical examiner at Abraham Wing School, which he ended in May, 1946.

Meetings—Past

Ontario County Medical Society

A meeting of the Ontario County Medical Society was held on April 13 at the Geneva Country Club. Dr. Thomas Francis Frawley, the guest speaker, spoke on "Diseases of the Adrenal Glands."

Dutchess County Medical Society

The regular meeting of the Dutchess County Medical Society was held at the Hudson River State Hospital, Poughkeepsie, on May 5. Dr. William P. Locke spoke on "Medical Experiences in Vienna."

Harvard School of Public Health

A four-day conference was sponsored by the Harvard School of Public Health from June 9 through June 12. New York State doctors taking part in the conference on "Problems of Aging" were Dr. Leonard Mayo, director, Association of Crippled Children, who spoke on "Rehabilitation of the Older Person," and Dr. Frederic D. Zeman, chief of medical service, Home for Aged and Infirm Hebrews, in the panel discussion on "How Some Community Groups Are Facing the Challenge."

Geneva Academy of Medicine

Dr. A. Wilbur Duryee, professor of clinical medicine, New York University Post-Graduate Medical School, and chief, Peripheral Vascular Clinic, University Hospital, spoke on "The Management of Peripheral Vascular Disease" at the meeting of the Geneva Academy of Medicine on June 21. This was postgraduate instruction arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

Personalities

Awarded

Dr. Leona Baumgartner, New York City Commissioner of Health, an honorary degree of Doctor of Science from New York University.

Appointed

Dr. Joe Hamilton Cannon, as associate pediatrician at the Mary Imogene Bassett Hospital, Cooperstown . . . Dr. Jean A. Curran, former dean, State University of New York College of Medicine at New York City as associate executive dean of Medical Education of the State University of New York . . . Dr. John M. Cotton as attending psychiatrist at St. Luke's Hospital . . . Dr. Lester M. Fox, former assistant chief of the laboratory at Brooklyn Veterans Hospital, as director of laboratories of the Church Charity Foundation of the Protestant Episcopal Diocese of Long Island . . . Dr. Robert C. Hunt, Albany, as assistant commissioner in charge of the new community mental health service of the State Mental Hygiene Department . . . Dr. Anthony J. Lanza as professor emeritus of New York University-Bellevue Medical Center's Postgraduate Medical School.

Elected

Dr. Wendell Ames, Buffalo, president, New York State Public Health Association . . . Dr. Webster Moriarta, Saratoga Springs, president; Dr. James H. Bennett, Baldwinsville, first vice-president, Dr. Elton R. Dickson, Binghamton, third vice-president, and Dr. Thomas Snyder, East Syracuse, secretary-treasurer of the New York State Health Officers Association . . . Dr. Donald M. Hamilton, White Plains, secretary, Dr. Bernard Glueck, Jr., New York City, treasurer, and Drs. Clarence P. Oberndorf and Morris Herman, New York City, councillors of the American Psychopathological Association.

Speakers

Dr. Anne M. Bahlke, director, State Health Department Bureau of Medical Rehabilitation, in June at the annual teaching day and the fiftieth annual health conference of the New York State Health Department of Lake Placid . . . Dr. Earle G. Brown, Nassau County health commissioner, in May at a meeting in Westbury . . . Dr. Ralph T. Collins, Rochester, in June at the Finger Lakes Neuropsychiatric Society spring meeting . . . Dr. Frank L. Horsfall, Jr., Rockefeller Institute for Medical Research, in June at a two-day symposium on "Perspectives and Horizons in Microbiology" at Rutgers University.

Dr. Herman E. Hilleboe, State Health Commissioner, and Dr. Dan Mellen, Rome, president, Medical Society of the State of New York, at the fiftieth annual health conference of the New York State Department of Health in June . . . Dr. William S. McCann, physican-in-chief, Strong Memorial and Municipal Hospitals, Rochester, at the commencement exercises in June at Hobart and William Smith College . . . Dr. Basil C. MacLean, Commissioner of Hospitals, and Dr. Howard A. Rusk, director, Institute of Physical Medicine and Rehabilitation, at the opening of the Geriatric Rehabilitation Service on Welfare Island in June.

Drs. Bruno W. Volk, Abraham Saifer, and Abraham M. Rabiner, Jewish Sanitarium and Hospital for Chronic Diseases, New York City, in June at the sixteenth semiannual meeting of the Medical Advisory Board of the National Multiple Sclerosis Society, in Atlantic City . . . Dr. Ernest L. Wynder, chief resident in medicine, Memorial Hospital, at the health conference in June . . . Dr. Lawrence S. Kubie, New York Psychoanalytic Institute, clinical professor of psychiatry at Yale University School of Medicine, and Dr. Gregory Zilboorg, clinical professor of psychiatry, State University College of Medicine at New York City, at the fourteenth International Congress of Psychology, in Montreal in June.

New Offices

Dr. Joseph Kozower, general practice in Liberty . . . Dr. Frederick G. Schnabel, formerly of Nuremberg, Bavaria, general practice and internal medicine in Henrietta.

Department of
WORKMEN'S COMPENSATION

DAVID J. KALISKI, M.D., *Director, Bureau of Workmen's Compensation*
GERALD D. DORMAN, M.D., *Chairman, Council Committee on Workmen's Compensation*

MEDICAL SOCIETY OF THE STATE OF NEW YORK

Physicians Again Urged to File Prompt Reports

For nearly twenty years our Workmen's Compensation Bureau and our Committee on Workmen's Compensation have been carrying on an educational campaign aimed at the more than 24,000 physicians in this State who treat compensation claimants. We have tried with all the means at our disposal to bring home to physicians the great importance of full and prompt compliance with the provisions of the Workmen's Compensation Law concerning reporting and attendance at hearings.

Without prompt and detailed reports it is impossible properly to administer the Workmen's Compensation Law. The payment of compensation to an employe may be delayed or imperiled by failure of the treating physician to report. The physician's report may be the first indication to an employer or insurance carrier that an employe has been injured or suffers from an occupational disease. The details in the report will also indicate, among other important data, the extent of the injury and whether the patient is hospitalized or is ambulatory and should state, in the patient's own words, how the accident happened and where. The doctor's report, if timely, provides prima facie evidence of a condition that may be compensable under the Workmen's Compensation Law. It may be the first step in setting the wheels in motion to provide the injured worker with payments for time lost from work. If the report is sufficiently complete and detailed, it may result in compensation being promptly paid by his employer or the insurance carrier and may avoid or prevent controversy concerning the accident, notice, and causal relationship.

A sufficiently detailed report materially assists the employer or insurance carrier in determining the extent and severity of the injury, the possible need for consultation with the attending physician, and the amount of reserves to be set up to meet the employer's obligations for compensation and disability payments.

Now that the Chairman of the Workmen's Compensation Board has set up a new mechanism to simplify and facilitate the hearing of compensation claims, it becomes more certain that without the full cooperation of the medical profession there can be no hope of success in the great efforts that are being put forth in this direction. We shall summarize these new hearing procedures and regulations in a forthcoming issue of the NEW YORK STATE JOURNAL OF MEDICINE. We plead once again with the practicing physicians of this State to make a special effort to comply fully with the provisions of the Workmen's Compensation Law, Section 13-a(4) which we now quote in full:

> "(4) No claim for medical or surgical treatment shall be valid and enforceable, as against such employer, or employee, unless within forty-eight hours following the first treatment the physician giving such treatment furnish to the employer and directly to the chairman a preliminary notice of such injury and treatment, within fifteen days thereafter a more complete report and subsequent thereto progress reports if requested in writing by the chairman, board, employer or insurance carrier at intervals of not less than three weeks apart or at less frequent intervals if requested on forms prescribed by the chairman. The board may excuse the failure to give such notices within the designated periods when it finds it to be in the interest of justice to do so. Upon receipt of the notice herein provided the employer shall be entitled to have the claimant examined by a qualified physician at a place reasonably convenient to the claimant and in the presence of the claimant's physician, and refusal by the claimant to submit to such examination at such time or times as may reasonably be necessary in the opinion of the industrial* board, shall bar the claimant from recovering compensation for any period during which he has refused to submit to such examination."

The C-104 report should, if possible, be filed immediately after seeing the patient the first time or at least within forty-eight hours. The C-4 report should be filed within fifteen days after the first report.* We advise physicians to file C-14 progress reports in all protracted cases every three to four weeks, even though the carrier or employer does not request it. It is this report that keeps the employer or insurance carrier informed of the progress of the case, and in it the treating physician may comply with the provisions of Section 13-a(5) regarding written authorization for procedures such as physical therapy, surgical operations, and consultations costing more than $25 and x-ray and laboratory procedures costing more than $10. These requests may be made in the progress report or by letter. Specialists should report the details of consultations and especially complete examinations of referred patients on their letterheads and also should file the necessary reports if they take over the patient for treatment.

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* Workmen's Compensation Board is meant.

In our years of experience with the settlement and arbitration of medical bills, the objections most frequently raised by carriers to payment of a doctor's bill, is the failure to file reports at all or on time. Were insurance carriers and employers to avail themselves of the provisions of Section 13-a(4) and require a physician to appear before a referee in order to be excused for failure to file, our referees' calendars would be clogged with physicians asking for excuse. Perhaps the insurance carriers have been too lenient.

It is expected that in the future the carriers will heed the admonition of the Chairman of the Workmen's Compensation Board to withhold payment of doctors' bills until excused in cases in which they willfully and persistently fail or refuse to file reports or file them late. Prompt reporting, we repeat, is an essential part of the administration mechanism of the Workmen's Compensation Law without which the law cannot be properly administered.

Under the new procedures, when a physician's appearance is necessary before a referee or the Workmen's Compensation Board, the fact will be made known at a preliminary hearing. No testimony will be taken at this preliminary hearing. The party to present the physician will be expected to have obtained from the doctor in advance a certain date at least thirty days later when the doctor will be expected to appear at the trial hearing and render testimony. Here too the complete cooperation of the profession is necessary if the new procedures are to accomplish their goal. The fee for testimony of general practitioners has been increased from $10 to $15.

We call for the enthusiastic cooperation of the medical profession at this time with the Chairman of the Workmen's Compensation Board in her effort to speed up hearings and reduce the cost of administration of workmen's compensation. This is not only legal but a social obligation on the part of every physician who treats compensation patients.

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* File with the employer and the Workmen's Compensation Board if you cannot find out who the carrier is.

CORRESPONDENCE

Montefiore Hospital Invites Referral of Surgical Cases

To the Editor:

The Surgical Division of Montefiore Hospital has broadened the scope of its activities to include all categories of illness. It is especially interested in cardiovascular, pulmonary, pediatric, and neoplastic surgical cases. Within the past four years the Hospital has built a new suite of operating rooms, postoperative recovery suite, and remodeled facilities for patient care. A new diagnostic radiology suite has been built. The most current methods of radiation therapy including cobalt are available.

Approval for a four-year surgical residency training program has been obtained, and all house staff positions are filled.

These facilities and personnel are available for the care of ward patients with all types of surgical problems throughout the community. While the traditional emphasis on the problems of long-term illness continues at Montefiore Hospital, every case will be carefully considered, including the surgical specialties.

Members of the medical profession may refer patients with surgical problems for consideration for admission to the Hospital by telephoning the Admitting Office, KI 7-1000, extension 302.

The Hospital welcomes the attendance of interested physicians at all of its weekly conferences. Detailed information concerning the teaching program may be obtained by telephoning KI 7-1000, extension 317.

Elliott S. Hurwitt, M.D.
Chief of the Surgical Division

Montefiore Hospital
Gun Hill Road, Near Jerome Avenue
New York 67, New York

THE MONTH IN WASHINGTON

The controversial health reinsurance issue has come back into prominence and under conditions that make the whole question about as complicated as it can get. The bill would have the Federal government underwrite voluntary health insurance plans if they agree to experiment with risks not usually covered.

Although this measure is a major part of President Eisenhower's health program, it became bogged down in the House Interstate and Foreign Commerce Committee when widespread opposition developed. Then the committee chairman, Representative Charles E. Wolverton (R., N.J.), turned to one of his favorite subjects, a plan for Federal guarantee of private loans to health facilities for construction and equipment. This bill, however, was not supported by the administration.

In an effort to placate the opposition, Mr. Wolverton offered to eliminate a number of objectionable features from the mortgage guarantee bill. At the same time there were reports that he proposed to merge this bill with the administration-supported reinsurance bill. Meanwhile, Henry J. Kaiser made two special trips to Washington to help out his friend, Mr. Wolverton, by putting his weight behind the mortgage loan idea. That was not surprising, inasmuch as Mr. Kaiser had helped to draw up the bill, which would greatly benefit health centers such as those started on the West Coast by the Kaiser Foundation.

Mr. Kaiser, saying he was producing a film to promote the mortgage loan plan, went to the unusual extent of making a direct appeal to Washington news correspondents to write favorable copy about the bill.

While these Wolverton-Kaiser maneuverings were taking place on the mortgage bill, it became apparent that President Eisenhower was not ready to abandon the reinsurance idea. He called a number of executives of major life insurance companies to the White House to try to impress them with the merits of reinsurance and in other ways indicated he still wanted to see the bill passed this session. Secretary Hobby, whose original testimony for reinsurance had been restrained, also joined in the last-minute campaign. But it appeared the tangle might be too complicated even for Mr. Eisenhower to unravel before adjournment.

Most other parts of the Eisenhower health program were moving through Congress, even though some were off schedule. (Of the major bills, A.M.A. opposes only reinsurance.) Legislation to expand the Hill-Burton hospital construction program cleared what might have been a serious obstacle when it was reported out by the Senate committee. Compared with the House bill, the Senate bill gave more discretion to state health authorities in use of funds for constructing facilities for the chronically ill, for nursing homes, and for health centers. However, the Senate would require that funds earmarked for rehabilitation centers be used for the stated purpose. The Senate also would rule out the possibility of U.S. grants to centers devoted solely to treatment. Unless the facility could qualify as a diagnostic center or a diagnostic-treatment center, it could not be eligible under the Senate bill. This safeguard was not in the House bill.

Of the remaining legislation of interest to the medical profession, the status at this writing was about as follows: The doctor draft amendment, to strengthen Defense Department's hand in dealing with physicians who might be security risks, had passed the Senate, been reported by the House committee, and was almost a law. Also about to be enacted was a provision liberalizing medical expense deductions from taxable income. The long-dormant bill to transfer responsibility for Indians' health matters from the Indian Bureau in the Interior Department to Public Health Service in the Department of Health, Education, and Welfare was pointed toward enactment but might possibly be held up by objections of Senators from a few western states. The Interior Department had dropped its original objection.

The House-passed social security bill, with the compulsory coverage of physicians eliminated, was before the Senate Finance Committee, where anything could happen. Two bills of medical interest already had been passed by both houses and signed into law. One prohibits the shipment of fireworks into a state where fireworks are illegal, and the other relieves Army medical officers of the technical responsibility for supervising preparation of food.

A reassuring note was sounded by President Eisenhower when he forwarded to Congress the controversial International Labor Organization convention on minimum standards of social security with a recommendation that it not be ratified. His message said most of the points, including a suggestion for socialized medicine, were not proper subjects for the Congress to deal with.

Prepared by the Washington Office of the American Medical Association, Washington, D.C.

MINUTES OF THE COUNCIL

The following is a summary of the Minutes of the May, 1954, meeting of the Council of the Medical Society of the State of New York.

The Council met May 12, 1954, from 6:37 to 7:00 P.M. at the Hotel Statler, New York City. Dr. Dan Mellen, president, presided.

Election of Dr. Henry I. Fineberg as Councillor.—Dr. Henry I. Fineberg of Queens was nominated to fill the vacancy created by the election of Dr. Renato J. Azzari as president-elect. There being no other nomination,

it *was voted* to elect Dr. Henry I. Fineberg as councillor.

Secretary's Report

Dues Remission.—Upon recommendation of the secretary, the Council voted to remit annual State dues of two members for 1953 and 13 members for 1954 because of illness, to remit annual State dues of 20 members for 1953 and 42 members for 1954 because of service with the armed forces, and to rescind remission of 1954 dues of two members who were released from military service in 1953. It was also voted to request the American Medical Association to remit dues of two members for 1950, four members for 1951, two members for 1952, 16 members for 1953, 34 members for 1954, and one member for one half of 1954; to exempt four members from further payment of national dues because they are more than seventy years of age, and to rescind remission of 1954 dues of one member released from military service in 1953.

General.—Dr. Anderton reported: "Mr. Harry F. Wanvig, Indemnity Representative, has removed his office to Two Park Avenue, at 33rd Street, New York City (Murray Hill 4-3211).

"Your secretary and general manager has endeavored to function as directed during the past month. He takes pleasure in reporting to you that the Board of Trustees endorsed your recommendations for appropriations, on April 8, 1954.

"The day following your last meeting, your secretary spent the afternoon in Albany with President Andrew A. Eggston and Speaker Frederic W. Holcomb at the Convocation of the State Education Department. Proceeding thence to Rochester, Saturday, April 10, Dr. Eggston functioned as a judge, and your secretary as a critic, at the annual school children's poster contest of the Woman's Auxiliary, at the Rochester Academy of Medicine. Many posters from all parts of the State demonstrated the interest in and value of this contest. On April 13 your secretary attended the meeting of the Policy and Planning Committee of the Blood Banks Association of New York State, Inc. The following day, he attended the Coordinating Council on Nursing Problems and your General Practice Subcommittee of the Public Health and Education Committee. On April 15 I went to the legislation dinner of the Medical Society of the County of New York and, on April 21, joined in a formal inspection of the medical department of Lederle Laboratories, American Cyanamid Company, at Pearl River. On April 22 I conferred with President-elect Mellen at Rome and witnessed the presentation of a citation from the New York State Civil Defense Office of the New York State Health Department to the Revere Copper and Brass Company.

"On April 26 your secretary attended a meeting of the Moreland Act Commission, investigating the cost of workmen's compensation, with Dr. David J. Kaliski, director of your Workmen's Compensation Bureau. That midday, I attended a luncheon of the American Social Hygiene Association at the Hotel Statler. On April 27 your secretary took great pleasure in accompanying Trustee Walter W. Mott to the annual meeting of the Connecticut State Medical Society at Hartford. The following evening I attended a motion picture demonstration and buffet supper at the Institute for the Crippled and Disabled, 400 First Avenue, New York City. The next afternoon, I partook in a conference of the delegates of the Medical Society of the County of New York."

Nurse Advisory Council; Albany Regional Planning Commission.—Dr. Anderton stated: "In addition to names previously recommended, President Eggston, on April 14, 1954, suggested Dr. Christopher Parnall of Rochester for membership on the Nurse Advisory Council of the New York State Education Department, through Assistant Commissioner Robert C. Killough, Jr., to the Board of Regents. Dr. Eggston also recommended to Dr. James E. Fish, secretary of the Albany Regional Planning Commission, the names of Dr. Thomas O. Gamble, Albany, and Drs. William E. Gazeley and Joseph H. Cornell, Schenectady, for membership on his commission.

"I move, sir, that these recommendations be approved."

The recommendations *were approved.*

Appointments

Officers of Scientific Sections

It *was voted* that the president be empowered to appoint officers of new scientific sections.

Representatives to Annual Meetings of Other State Medical Societies

It *was voted* to empower the president to appoint one or more representatives to the annual meetings of the medical societies of the States of Pennsylvania, Vermont, Connecticut, and New Jersey.

Committees of the Council and Special Committees

The list of Council committee appointments, as submitted by the president, *was approved,* and the president was empowered to make any necessary changes.

Communications.—Dr. Anderton reported: "A letter of April 15, 1954, from the Nettleship Company of Los Angeles requests permission to use a study of malpractice insurance claims made by this Society in 1953 and encloses a copy of their proposed circular letter quoting the study."

It *was voted* to refer this to the Malpractice Insurance and Defense Board for opinion and report at the next Council meeting.

The Treasurer's report was approved.

Reports of Committees

Constitution and Bylaws.—Dr. Anderton reported for Dr. Frederick W. Williams, chairman, as follows: "The amended constitution and bylaws of the Fifth District Branch were passed and accepted by this Council. The Executive Committee of the Branch took exception to the fact that the treasurer was required to be bonded, on the ground that he has very little monies to handle since most of the bills are paid in the New York office, and that it would be an unnecessary expense. After a conference with legal counsel and with Dr. Williams for the Committee, it was decided not to insist on that in their constitution and bylaws.

"I move the acceptance of this recommendation from the Committee on Constitution and Bylaws."

Acceptance *was voted.*

Workmen's Compensation.—Dr. Gerald D. Dorman, chairman, stated: "By the act of the Legislature the Medical Appeals Unit of the Workmen's Compensation Board has been moved into the department of Miss Mary Donlon, chairman of the Workmen's Compensation Board, instead of being under the Industrial Commissioner. The Medical Appeals Board is now an advisory board and is not an appeal board because it is only advisory to Miss Mary Donlon. She will have the appointment of the members of that Board. Under the law, which was not changed except to shift the department, it was placed under her. For the last nineteen years Dr. Albert Bailey has been the one osteopathic physician on that Board. He would like to complete one more year so that he has twenty years of service and has asked for our support. He is the recommendation to the Governor of the Osteopathic Society of New York and requests our support. I would like to request the authorization of the Council of the State Society, as chairman of the Committee on Workmen's Compensation, to send a letter to Governor Dewey endorsing Dr. Bailey. I so move."

Authorization *was voted.*

Medical Society of the State of New York

Council Committees 1954-1955

Constitution and Bylaws
Frederick W. Williams, Bronx, *Chairman*
Norman C. Lyster, Norwich
Homer L. Nelms, Albany
James R. Reuling, Bayside, *Adviser*

Convention
Thomas M. d'Angelo, Jackson Heights, *Chairman*
W. P. Anderton, New York City
Maurice J. Dattelbaum, Brooklyn
Thomas E. Alexander, New York City, *Adviser*

Arrangements Subcommittee
William J. Orr, Buffalo, *General Chairman*

DINNER AND DANCE
Elmer T. McGroder, Buffalo, *Chairman*
Wilfrid M. Anna, Lockport
George C. Brady, Buffalo
Henry J. Brock, Buffalo
Thomas S. Bumbalo, Buffalo
Matthew J. Callanan, Buffalo
Martin L. Gerstner, Buffalo
A. Sager-Green, Williamsville
Mario C. Gian, Buffalo
Thurber LeWin, Buffalo
Robert C. McDowell, Buffalo
M. Luther Musselman, Buffalo
G. Newton Scatchard, Buffalo
Harvey C. Schneider, Buffalo
Ralph Upson, Buffalo
Robert Warner, Buffalo

GUEST RECEPTION
Stephen A. Graczyk, Buffalo, *Chairman*
Edgar C. Beck, Buffalo
Antonio F. Bellanca, Buffalo
William F. Beswick, Buffalo
Charles M. Dake, Jr., Niagara Falls

Harriet Hosmer, Buffalo
W. Yerby Jones, Buffalo
Stockton Kimball, Buffalo
Lester S. Knapp, Buffalo
Richard A. Loomis, Ellicottville
Sydney L. McLouth, Corfu
Clyde L. Randall, Buffalo
Samuel Sanes, Eggertsville
George E. Slotkin, Buffalo
Herbert E. Wells, Lackawanna
Clyde L. Wilson, Jamestown

Motion Picture and Television Subcommittee
John H. Talbott, Buffalo, *Chairman*
Colgate Phillips, Bronxville, *Cochairman*
E. Dean Babbage, Buffalo
Lester L. Coleman, New York City
Samuel Zwerling, Brooklyn

Scientific Awards Subcommittee
Charles D. Post, Syracuse, *Chairman*
Harold F. R. Brown, Buffalo
Morris Maslon, Glens Falls

Scientific Exhibits Subcommittee
William L. Watson, New York City, *Chairman*
Beverly C. Smith, New York City, *Cochairman*
John J. Clemmer, Albany
Maurice J. Costello, New York City
Harold B. Davidson, New York City
Shirley C. Fisk, New York City
Ernest Witebsky, Buffalo
Ramsay Spillman, New York City
J. G. Fred Hiss, Syracuse

Scientific Program Subcommittee
Alfred P. Ingegno, Brooklyn, *Chairman*
Julius E. Stolfi, Brooklyn, *Associate Chairman for General Sessions*
William F. Lipp, Buffalo, *Associate Chairman for Postgraduate Lectures*
M. Luther Musselman, Buffalo *Associate Chairman for Round Table Discussions*
Committee personnel also includes chairmen of scientific sections and sessions

Dental Health (Joint Committee of the State Medical and Dental Societies)
Medical Society of the State of New York
Fred S. Dunn, New York City, *Chairman*
Robert M. McCormack, Rochester
Douglas B. Parker, New York City

Dental Society of the State of New York
Charles W. Pankow, Buffalo
Earle M. Crysler, Watertown
William F. Harrigan, Rockville Centre

Economics
Renato J. Azzari, Bronx, *Chairman*
Arthur H. Diedrick, Port Chester
Gerald B. Manley, Geneseo

Medical Expense Insurance Subcommittee
Carlton E. Wertz, Buffalo, *Chairman*
Leo E. Gibson, Syracuse
C. Otto Lindbeck, Jamestown
William J. McAuliffe, Cortland
Fred M. Miller, Jr., Utica
Lyle A. Sutton, Albany
Matthew E. Fairbank, Rochester
George P. Farrell, New York City, *Adviser*

Public Medical Care Subcommittee
Scott Lord Smith, Poughkeepsie, *Chairman*
William G. Childress, Valhalla
William E. Gazeley, Schenectady
Charles D. Post, Syracuse
Roswell L. Schmitt, Middletown

Ethics, Questions on
Thurman B. Givan, Brooklyn, *Chairman*
Frank LaGattuta, Bronx
Ezra A. Wolff, Forest Hills

Finance
Maurice J. Dattelbaum, Brooklyn, *Chairman*
Thomas M. d'Angelo, Jackson Heights
Frederic W. Holcomb, Kingston

Hospital and Professional Relations
Harold F. R. Brown, Buffalo, *Chairman*
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(The following books were received during the month of May, 1954)

Psychology, the Nurse and the Patient. By Doris M. Odlum, D.P.M. (Eng.). Second edition. Duodecimo of 168 pages. London, "Nursing Mirror" (New York, Philosophical Library), 1954. Cloth, $4.75.

The Atom Story. Being the Story of the Atom and the Human Race. By J. G. Feinberg, M.Sc. With illustrations by Lewis. Octavo of 243 pages, illustrated. New York, Philosophical Library, 1953. Cloth, $4.75.

Fifty Years of Medicine. By Lord Horder. Duodecimo of 70 pages. New York, Philosophical Library, 1954. Cloth, $2.50.

Annual Review of Medicine. Edited by Windsor C. Cutting, M.D. Henry W. Newman, M.D., Associate Editor. Vol. 5. Octavo of 490 pages, illustrated. Stanford, California, Annual Reviews, 1954. Cloth, $7.00.

A Curriculum for Schools of Medical Technology. Edited by Israel Davidsohn, M.D. Associate Editor, Kurt Stern, M.D. Third edition. Quarto of 122 pages, illustrated. Muncie, Indiana, Registry of Medical Technologists of the American Society of Clinical Pathologists, 1953. Paper, $3.00.

The Medical Clinics of North America. New York Number. May, 1954. Octavo, illustrated. Philadelphia, W. B. Saunders Company, 1954. Published bimonthly (six numbers a year). Cloth, $18 net; paper $15 net.

Newer Concepts of the Causes and Treatment of Diabetes Mellitus. Proceedings of the Symposium on Diabetes Sponsored by the New York Diabetes Association and held at Memorial Hospital and The New York Academy of Sciences, New York City, October 8, 1953. Octavo of 181 pages, illustrated. New York, The National Vitamin Foundation, 1954. Paper, $2.50.

Handbook of Cardiology for Nurses. By Walter Modell, M.D., and Doris R. Schwartz, R.N. Second edition. Octavo of 320 pages, illustrated. New York, Springer Publishing Co., 1954. Cloth, $4.25.

A Synopsis of Anaesthesia. By J. Alfred Lee, D. A. (Eng.) Third edition. Duodecimo of 483 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $3.50.

The Eczemas. A Symposium by Ten Authors. Edited by L. J. A. Loewenthal, M.D. Quarto of 267 pages, illustrated. Edinburgh, E. & S. Livingstone (Baltimore, Williams & Wilkins Co.), 1954. Cloth, $7.50.

Surgical Urology. By R. H. Flocks, M.D., and David Culp, M.D. Illustrated by Paul Ver Vais. Octavo of 392 pages, illustrated. Chicago, Year Book Publishers, 1954. Cloth, $9.75. (A Handbook of Operative Surgery)

Illustrated Review of Fracture Treatment. By Frederick Lee Liebolt, M.D. Quarto of 229 pages, illustrated. Los Altos, California, Lange Medical Publications, 1954. Paper, $4.00.

Song of Life with Variations. By H. Ameroy Hartwell, M.D. Octavo of 371 pages, illustrated. Boston, Bruce Humphries, 1953. Cloth, $5.00.

Symposium on Protein Metabolism. Proceedings of the Nutrition Symposium held at the University of Toronto, Toronto, Ontario, Canada, October 30, 1953. A. E. Axelrod, J.R. Beaton, Paul R. Cannon, M.D., Bacon F. Chow, *et al.* Octavo of 107 pages, illustrated. New York, National Vitamin Foundation, 1954. Paper, $1.50 (Nutrition Symposium Series #8)

The Science Book of Wonder Drugs. By Donald G. Cooley. Illustrated by William Draut. Duodecimo of 247 pages, illustrated. New York, Franklin Watts, 1954. Cloth, $2.95.

A Synopsis of Children's Diseases. By John Rendle-Short, M.B. (Cantab.). Duodecimo of 608 pages. Bristol, John Wright & Sons (Baltimore, Williams & Wilkins Co.), 1954. Cloth, $7.00.

The Causes and Treatment of Backwardness. By Sir Cyril Burt, D.Sc. Octavo of 128 pages. New York, Philosophical Library, 1953. Cloth, $3.75.

Parkinsonism and Its Treatment. Edited by Lewis J. Doshay, M.D. Duodecimo of 152 pages, illustrated. Philadelphia, J. B. Lippincott Co., 1954. Cloth, $3.00.

Handbook for Diabetic Children. [Third edition]. By Alfred E. Fischer, M.D., and Dorothea L. Horstmann. Octavo of 64 pages. New York, Intercontinental Medical Book Corp., 1954.

Reserpine (Serpasil) and Other Alkaloids of *Rauwolfia Serpentina:* Chemistry, Pharmacology, and Clinical Applications. Fredrick F. Yonkman, M.D., and Frank L. Mohr, M.D., (Conference Chairmen), *et al.* Octavo of 141 pages, illustrated. New York, New York Academy of Sciences, 1954.

Paper, $3.00. (*Annals of the New York Academy of Sciences*, v. 59, Art. 1)

The Synthesis and Physical-Chemical Properties of New Aromatic Amidines. By Martin Kuna, M.S., and M. J. Kopac, Ph.D. Octavo of 32 pages. New York, New York Academy of Sciences, 1954. Paper, $1.00. (*Annals of the New York Academy of Sciences*, v. 58, Art. 3)

The Meaning of Social Medicine. By Iago Galdston, M.D. Octavo of 137 pages. Cambridge, Massachusetts, published for The Commonwealth Fund by Harvard University Press, 1954. Cloth, $2.75.

Studies in Schizophrenia. A Multidisciplinary Approach to Mind-Brain Relationships. By the Tulane Department of Psychiatry and Neurology. Reported by: Robert G. Heath, M.D., Chairman, and twenty-two associates. Octavo of 619 pages, illustrated. Cambridge, Massachusetts, published for the Commonwealth Fund by Harvard University Press, 1954. Cloth, $8.50.

BOOKS REVIEWED

Diuretic Therapy. The Pharmacology of Diuretic Agents and the Clinical Management of the Edematous Patient. By Alfred Vogl, M.D. Octavo of 248 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $5.00.

Diuretic Therapy is an excellent book. It is practical in that it contains specific detailed plans for the management of patients with edema. Most of the space is devoted to the use of mercurial diuretics because of their greater importance, but the use of other drugs is well-covered. The book is also valuable because of its presentation of the present state of our knowledge concerning the formation of edema and of the action of diuretic drugs. The sections devoted to the low-salt syndrome and the mercury-fast state are particularly good. The book is an excellent reference work for the whole subject of diuretic therapy and is highly recommended.—Edwin P. Maynard, Jr.

Symptoms of Visceral Disease. A Study of the Vegetative Nervous System in Its Relationship to Clinical Medicine. By Francis M. Pottenger, M.D. Seventh edition. Octavo of 446 pages, illustrated. St. Louis, C. V. Mosby Co., 1953. Cloth, $7.50.

As long ago as 1919, before the term "psychosomatic medicine" became so popular, Pottenger wrote the first edition of his *Symptoms of Visceral Disease.* Even then he realized that "There is a patient who has the disease as well as the disease which has the patient." This is the caption which heads the present seventh edition.

The need for the present edition is the growing realization that the deeper we delve into the mysteries of medicine, the more important the patient becomes. To those who are interested in the "why" of the complaints of their patients, this book offers the explanations. It continues to be written in a clear and easy-to-read fashion. The explanations are easy to follow. All physicians, regardless of the type of medicine they practice, should have this volume as a ready reference on their shelves. It is highly recommended.—Joseph L. Abramson

Visceral Circulation. Editor for the Ciba Foundation, G. E. W. Wolstenholme, M.B. (Eng.). Assisted by Margaret P. Cameron, M.A., and Jessie S. Freeman, D.P.H. (Eng.). Octavo of 278 pages, illustrated. Boston, Little, Brown & Co., 1953. Cloth, $6.50. (A Ciba Foundation Symposium.)

This volume is packed full of reports, theorizations, and speculations on the newer concepts of circulation. The symposium includes an international aspect of workers in the field from eight different countries, such as anatomists, physiologists, pharmacologists, biologists, biophysicists, biochemists, and clinicians in medicine, surgery, and anesthetics. The ground covered includes visceral vascular architecture, the laws of physics and flow in blood vessels, general and regional blood flow regulation, and the interaction of the general and visceral circulation.

Twenty-six papers are presented in original form by the experts in their particular field followed by open discussions to clarify, disagree with, or supplement the experiments, opinions, and theories, together with their clinical applications.

Hypotheses are of the utmost value in investigation as long as we realize their evanescent and incomplete character and they should not be mistaken for facts, which must be considered in a critical light constantly seeking for flaws in our present ideas. The volume covers a wide field and reveals the problems, ideas, and doubts to one another to mutual advantage, especially in that a great deal is learned about various technics in use by different workers in different fields using better technics than their predecessors—Hugh L. Murphy

Diseases of Metabolism. Detailed Methods of Diagnosis and Treatment. Edited by Garfield G. Duncan, M.D. With contributions by Walter Bauer, M.D., Hugh R. Butt, M.D., Abraham Cantarow, M.D., Frank Alexander Evans, M.D., *et al.* Third edition. Octavo of 1,179 pages, illustrated. Philadelphia, W. B. Saunders Co., 1952. Cloth, $15.

This third edition of a well-recognized textbook on metabolic diseases and disorders is a veritable bible on the subject. It is penetrating, significant, encyclopedic, yet concise. As a reference book, it leaves nothing wanting; as a textbook it covers the subject well. It is still a "must" not only for medical students but for the busy practitioner of medicine who must run as he reads. Dr. Duncan and his carefully selected collaborators have done a noteworthy piece of work in collating a difficult subject. —George E. Anderson

Rose and Carless' Manual of Surgery. For Students and Practitioners. By Sir Cecil Wakeley, M.Ch. (Eng.). Assisted by eighteen contributors. Eighteenth edition. 1,471 pages, illustrated. Baltimore, Williams & Wilkins Co., 1952. Cloth, $12.

Because of the many advances in surgery during the past decade, the eighteenth edition of this *Manual* became a necessity lest the text lose its standing among works of front rank. Accordingly, Sir Cecil Wakeley, in collaboration with 18 eminent colleagues, mostly from Kings College Hospital, has compiled a general text of 52 chapters.

Less important data have been deleted. Apropos of the increasing importance of the basic sciences, physical, chemical, and physiologic criteria have been given commensurate attention. Similarly, modern ideas have been emphasized in dealing with electrolyte and water balance and chemotherapy. Besides the conventional subjects, the *Manual* contains new chapters on the use of physical agencies, plastic surgery, and the treatment of burns. Added prominence has been given to the factor of trauma in etiology. Principles of treatment have been outlined. Technical details, however, have been properly reserved for works in operative surgery. While clinical data have been emphasized as of primary importance, somewhat greater use might well have been made of the contributions from the laboratory. Incidentally, the student interested in collateral reading might regret the omission of references generally listed in similar works.

The diction is clear, brief, and precise. Once again the work reflects the smooth style of British medical writers. This new edition should maintain its position as a standard work for both students and practitioners.—Arthur Goetsch

Fundamentals of Biochemistry in Clinical Medicine. By Niels C. Klendshoj, M.D. Quarto of 276 pages, illustrated. Springfield, Ill., Charles C Thomas, 1953. Cloth, $12.75.

Among the volumes on biochemistry, this is a rather unusual one. It is written, primarily, for the practicing physician, and covers an extremely wide range of subjects related to the chemical aspects of the body. It includes a chapter on atomic structure and leads up to the history of the use of isotopes in the study of metabolic phenomena. There then follow excellent chapters on molecular structure, acid base balance, composition of body fluid, the role of enzymes in physiology, and, finally, the biochemistry and physiology of lipids, proteins, and carbohydrates. The balance of the book is devoted to the biochemical aspects of the physiology and pathologic physiology of many organs and systems, including the liver, kidney, and glands of internal secretion such as the pituitary, thyroid, pancreas, and adrenals. The material is well written, clearly presented, and with much brevity, thus making it a valuable review for a busy general practitioner who is interested in bringing himself up to date on these basic sciences.—W. S. Collens

Proceedings of the First and Second Medical Conferences of the Muscular Dystrophy Associations of America, Inc. Held in New York, N.Y., April 14–15, 1951 and May 17–18, 1952. Edited by Ade T. Milhorat, M.D. Octavo of 128 pages, illustrated. New York, Muscular Dystrophy Associations of America, 1953.

This is an excellent collection of reports by eminently qualified scientists in the field. The brevity of the papers and the concise manner in which the phases of this problem are presented are commendable. An encouraging note can be found in the successful treatment of the menopausal group of patients with muscular dystrophy with a maintenance dose of cortisone.—Irving Greenfield

Sexual Behavior in the Human Female. By the Staff of the Institute for Sex Research, Indiana University. Alfred C. Kinsey, Sc.D., Clyde E. Martin, Wardell B. Pomeroy, Paul H. Gebhard, Ph.D. (Anthrop.), Research Associates. With nine research assistants. Octavo of 842 pages, illustrated. Philadelphia, W. B. Saunders Co., 1953. Cloth, $8.00.

The second volume in the Kinsey series has finally arrived, heralded by what must surely be the greatest display of fanfare and publicity in the history of the making of books. This hullabaloo, coupled with the annoying manner in which a work of such scientific pretensions was presented to the press and public, is almost enough to prejudice the reviewer unfavorably in advance. A similar factor is the silly pretentiousness of the title, one might almost say, its arrogance, which would lead one to suppose that it was a definitive study of sexual behavior in the human female rather than a detailed report on a comparatively small and selected group of American women. Let it be said at once, therefore, that the Kinsey report is, within its limits, a successful achievement, highly creditable to its authors. Properly read and digested, it will be an invaluable source book for many years for physicians, sociologists, psychologists, penologists, and workers in related fields. As a physician, I would have wished for a more modest title and the label of "a preliminary report" as is customary in the case of fragmentary reports of work-in-progress published in reputable scientific journals.

The report, like its predecessor, is vulnerable with regard to the validity of its statistics. As has been pointed out in numerous other reviews, the selection is weighted in the direction of white Protestant and Jewish women. The authors stress that they made every effort to include sizable groups of individuals including all members of the group; nevertheless, a serious second error has crept in, the "error of the volunteer." No statistical study can be considered valid which does not include a "captive" group which may even have to be coerced into answering the questionnaire. Other errors, such as failure of memory, wishful thinking, etc., are easy to handle and will undoubtedly tend to diminish in subsequent editions, since they seem to be adequately assessed by the Indiana workers.

The authors disclaim any intention of rendering judgment, but, even more strikingly than in the first report, judgment, even of a moral nature, has been allowed to insinuate itself. One may well take issue, too, with the use of a number of terms such as sexual outlet, perversion, orgasm, sexuality, which are variously loosely defined or poorly equated.

A vast amount of the information will still be most useful to students. The feeling, already strongly suspected by every practicing male, that there is a difference in the nature of sexual behavior between men and women, is re-enforced. Much of this information will be found of value to suitors and husbands.—Milton Plotz

Respiratory Diseases and Allergy. New Method of Approach. By Josef S. Smul, M.D. Octavo of 80 pages. New York, Medical Library Co., 1953. Cloth, $2.75.

In this small volume of 75 pages, the author presents his views to prove that 20-odd respiratory diseases, ranging from "neurosis of the respiratory tract" to "fetid bronchitis," are all due to allergy. Skin tests are not considered necessary. Treatment, in all cases, consists of eliminating milk, cream, cheese, and sugar from the diet and injections of ragweed, dust, and catarrhal combined vaccine.—Max Harten

Michael Servetus. A Translation of His Geographical, Medical and Astrological Writings with Introductions and Notes. By Charles Donald O'Malley, Ph.D. Octavo of 208 pages, illustrated. Philadelphia, American Philosophical Society, 1953. Cloth, $3.00. (Vol. No. 34 of the Memoirs of the American Philosophical Society.)

Four hundred years ago Servetus published a theologic treatise, *Christianismi Restitutio*, vigorously announcing his disagreement with Christianity as then preached and practiced. He attempted to arouse sufficient sentiment for the purpose of restoring Christianity. History records many such attempts. The treatise was considered completely heretical, and this played an important part in determining his execution at the stake.

Of all his many activities which included theology, geography, and astrology, medicine occupied most of his time and attention. In a translation of his works in medicine is a treatise titled *The Syrups*. In this book of 208 pages under review, 108 pages are devoted to this subject. A perusal of it will impress one with the depth of ignorance of that period in matters medical.

His interest in the problem of the movement of the blood from the right ventricle to the left, a problem that Galen had previously explained by having the blood sweat through minute openings or pores in the septum, resulted in the announcement that "the transit occurred by a long course through the lung."

His discourse on medicine is so intertwined with theologic concepts, that much of it becomes a *reductio ad absurdum*. This small volume will attract the attention of those interested in the historical aspects of medicine.—S. R. Blattels

Diseases of Women. By Ten Teachers. Under the direction of Frederick W. Roques, M.D. Edited by Frederick W. Roques, M.D., John Beattie, M.D., and Joseph Wrigley, M.D. Ninth edition. Octavo of 480 pages, illustrated. London, Edward Arnold & Co. (Baltimore, Williams & Wilkins Co.), 1953. Cloth, $6.50.

This volume represents a compendium of treatises from ten English authors on the various aspects of gynecology. Though in appearance a somewhat smaller volume than many current American textbooks, its finer print gives it equal content. Terminology is sufficiently similar to permit easy comprehension by American readers. It follows in the order named, gynecologic embryology, congenital anomalies, symptom complexes, disease or pathologic entities, and last and rather briefly, operative procedures. Not so elaborately illustrated as some American texts, its illustrations are nevertheless well chosen and adequate. It is for the most part well up to date in thought and therapy and very much in line with American ideas.—J. Thornton Wallace

Modern Clinical Psychiatry. By Arthur P. Noyes, M.D. Fourth edition. Octavo of 609 pages. Philadelphia, W. B. Saunders Co., 1953. Cloth, $7.00.

Psychiatry is now riding the crest of a wave of popularity. Medical schools, academic universities, and many other institutions of learning have in their curricula courses dealing with many phases of psychiatry. Many books are published on different aspects of psychiatry, let alone the thousands of articles appearing in medical, sociologic, nursing, and psychologic literature. It is, therefore, a great satisfaction to review a book that deals with the basic subject of psychiatry, the various psychiatric syndromes, and the different manifestations of the various

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types of psychoses as seen in the rich experience of an old and seasoned psychiatrist.

In this fourth edition the author has included the latest classifications of the psychoses and has incorporated the various contributions made in the field of dynamic psychiatry and personality development. It is indeed a very valuable book, one that would appeal to both students and general practitioners, and should be found on the bookshelf of every psychiatrist. Jurists, lawyers, and all others who are interested in medico-legal aspects would find this book a very helpful one. Psychologists and sociologists would do well to study this book. The intelligent and educated person who is interested in human behavior and its abnormalities would find this book most informative. It is, therefore, highly recommended to all students of psychiatry.—Irving J. Sands

Pediatric Gynecology. With Sections on Urology and Proctology. By Goodrich C. Schauffler, M.D. Third edition. Octavo of 318 pages, illustrated. Chicago, Year Book Publishers, 1953. Cloth, $7.50.

While the earlier editions of Schauffler's *Pediatric Gynecology* represented an earnest and successful effort to focus attention on an important and somewhat neglected phase of gynecologic practice, the third edition of this work constitutes a more complete and modern survey of the problems of pediatric gynecology. The author's perspective of totality in covering the subject has resulted in a presentation of all phases of the problem, beginning with a chapter on embryologic orientation, which has good clinical application. Aside from minor controversial points in the social and psychologic aspects of the subject, the author's presentation is factual and based on sound clinical experience. The chapters on urologic, proctologic, and general surgical phases of pediatric gynecology are noteworthy for their practical application. The 76 illustrations supplement to advantage the concise structure of the text. Until the general textbooks of gynecology are enlarged to include adequate presentation of the subject, Schauffler's *Pediatric Gynecology* offers an essential guide and reference manual for the proper solution of the problems of the younger group of gynecologic patients.—Alfred A. Schenone

Salt and the Heart. By Edward T. Yorke, M.D. Octavo of 83 pages. Linden, N.J., Drapkin Books, 1953. Cloth, $3.45.

This is a brief monograph, well edited and well printed, for the benefit of the lay person who needs to be on a salt-restricted diet.

All of the information is sensible and the material on the salt-poor foods and their preparation may be safely put into the hands of the intelligent patient.—Milton Plotz

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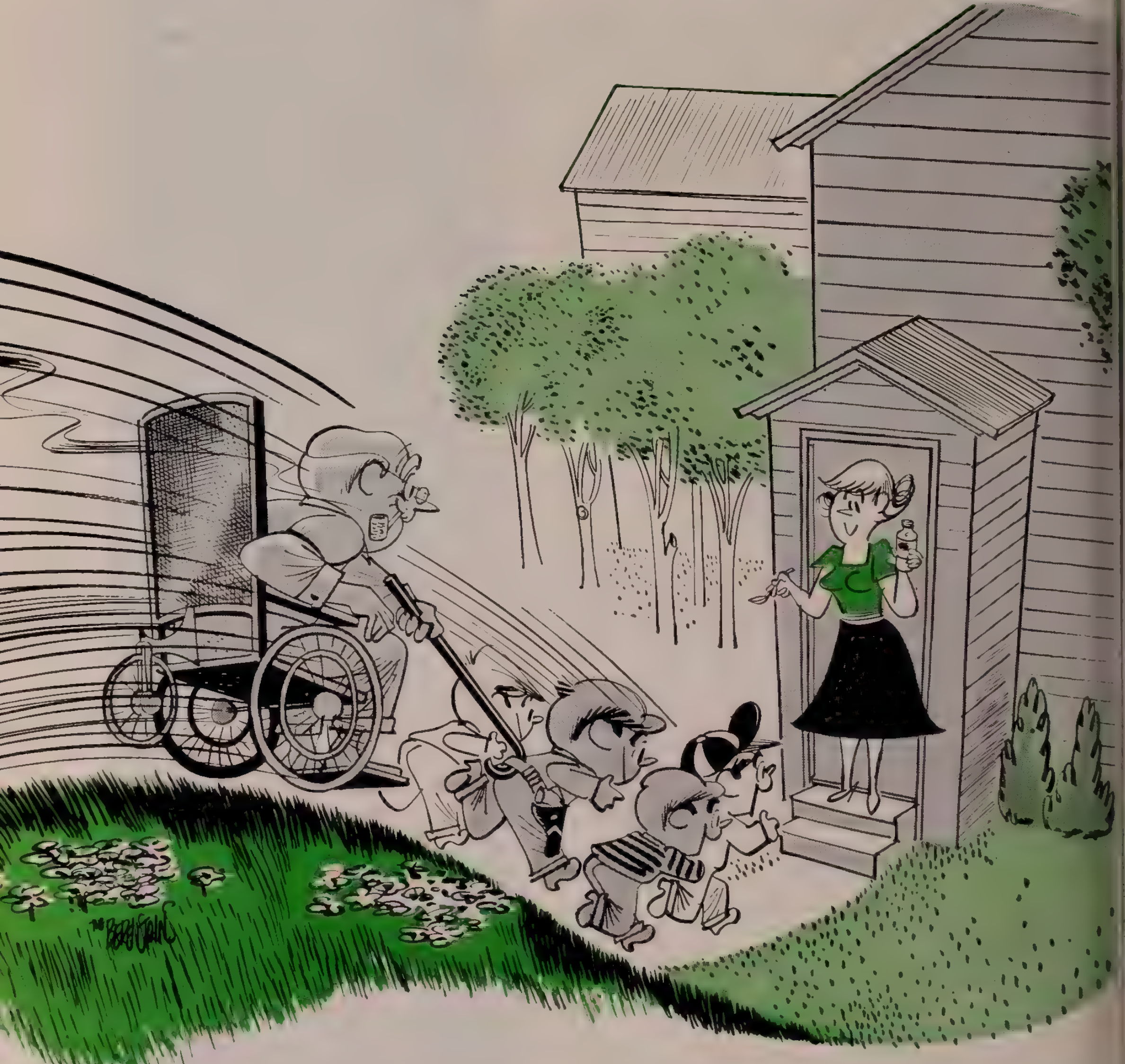
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1. Sulzberger, M.B. *et al.*: *J.A.M.A.* **151**: 468, Feb. 7, 1953
2. Smith, C. C.: *A.M.A. Arch. Dermat. & Syph.* **68**: 50, July, 1953

SUPPLIED: Topical Ointment of Hydrocortone Acetate: 1% and 2.5%, 5-Gm. tubes.

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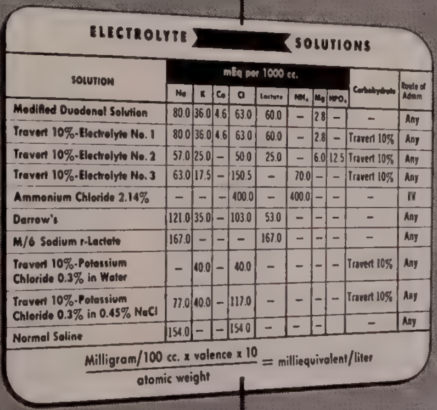

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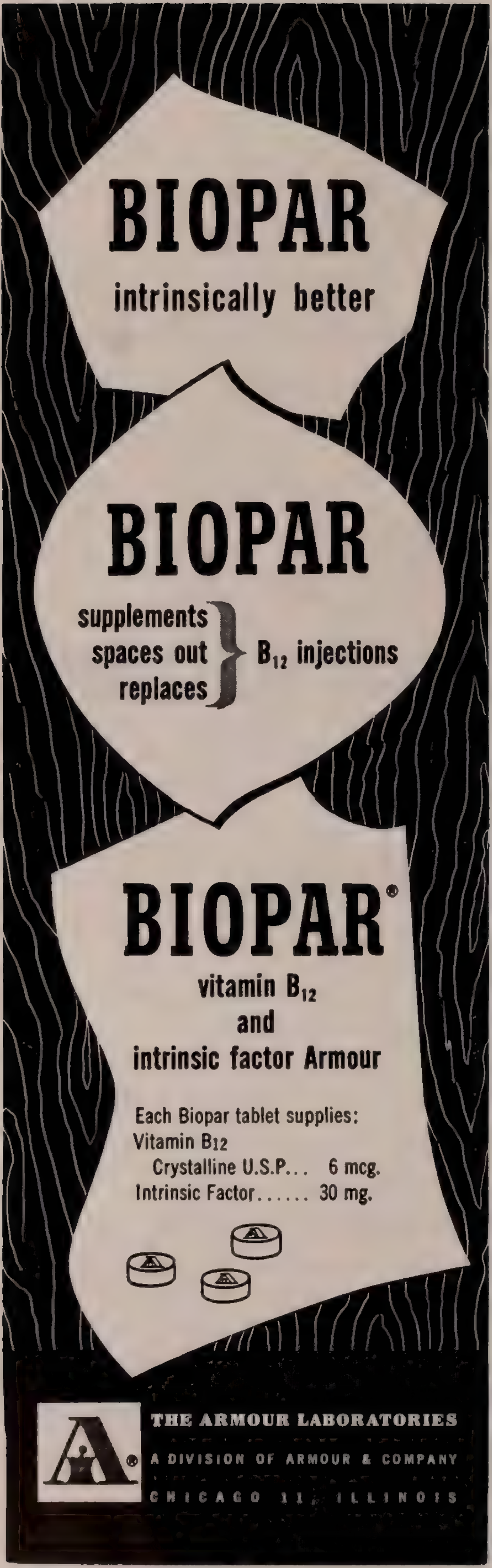

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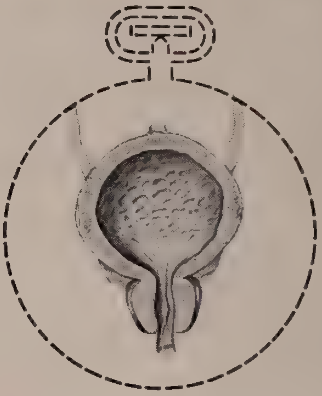

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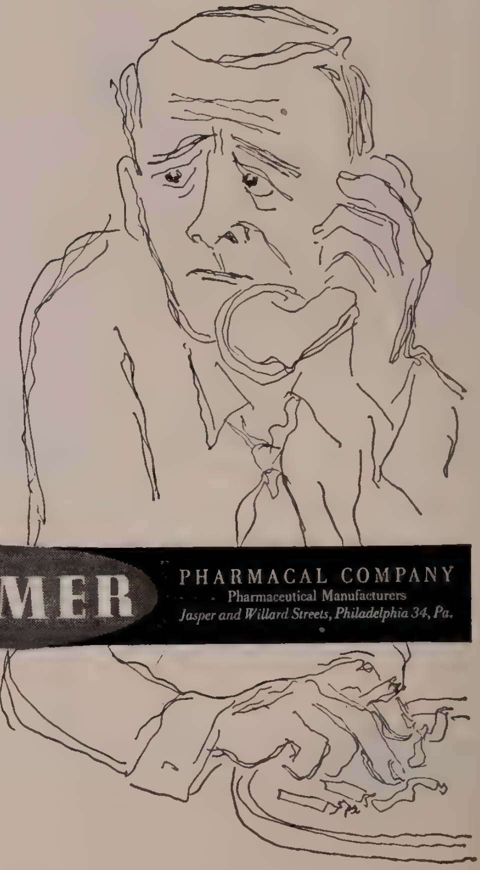
Supplied, on prescription only, in bottles of 100 and 1,000 tablets.



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Jasper and Willard Streets, Philadelphia 34, Pa.

1. Krantz, J.C. & Carr, C.J.: Pharmacological Principles of Medical Practice, Williams & Wilkins Co., Baltimore, Md., 1951.

2. Goodman, L. & Gilman, A.: The Pharmacological Basis of Therapeutics. The Macmillan Co., New York City, 1941.

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To avoid excitation and insomnia, Pentobarbital is the ideal daytime sedative. It counteracts over-stimulation by Methamphetamine, but does not diminish the anorexigenic action.

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Obedrin tablets contain adequate amounts of vitamins B_1 and B_2 to supplement the 60-10-70 Basic Diet, but not enough to stimulate the appetite.

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BULK NOT NECESSARY

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Semoxydrine HCl (Methamphetamine HCl)	5 mg.
Pentobarbital	20 mg.
Ascorbic Acid	100 mg.
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Riboflavin	1 mg.
Niacin	5 mg.

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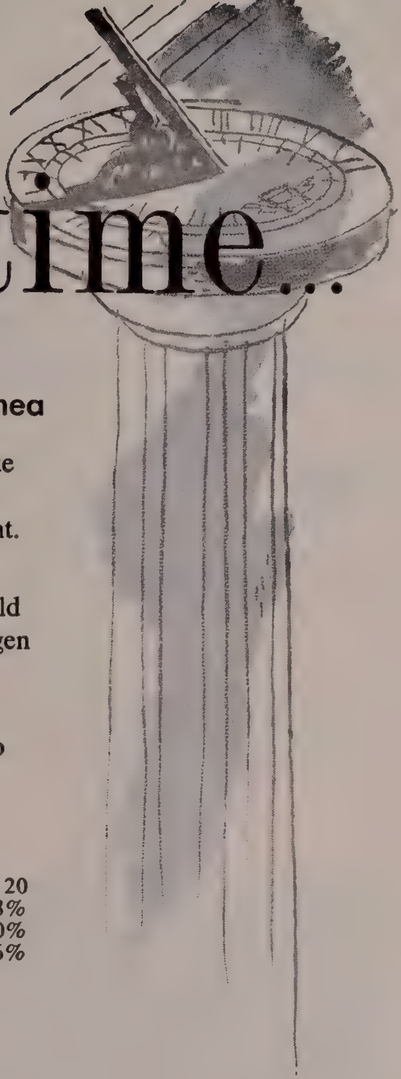

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"The digestion of protein is little affected. The child with diarrhea continues to absorb and retain nitrogen and may even do so when moribund."[2]

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"In the presence of diarrhea, fats are most likely to escape absorption, as much as 25% or 50% being lost by way of the bowel."[1]

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Hi-Pro–3 tablespoonfuls Water–6 ounces	=	Calories per fluid ounce	20
		Protein	6.8%
		Fat	2.0%
		Carbohydrate	5.6%

[1] Jeans, P. C. & Marriott W. McK. Infant Nutrition; 4th ed.
[2] Holt, E. M. Diseases of Infancy; 11. 223.

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HIGH PROTEIN
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A mixture of whole milk, separated milk, and separated milk from which a portion of the lactose has been removed
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1. Rev. Gastroenterology 20:744 (Oct.) 1953; abstract in J. A. M. A., 153:1580 (Dec. 26) 1953.

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1. Buxton, C. L., and Vann, F. H.: New England J. Med. 236: 536, 1948.
2. Cushney, A. R.: Textbook of Pharmacology and Therapeutics, ed. 10, Philadelphia, Lea & Febiger, 1943, pp. 436-437.

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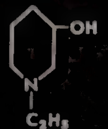

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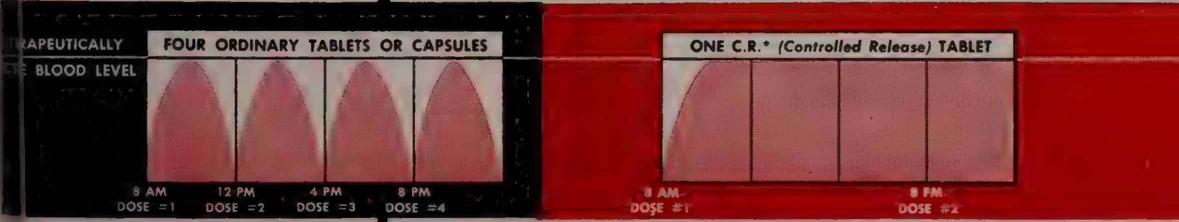

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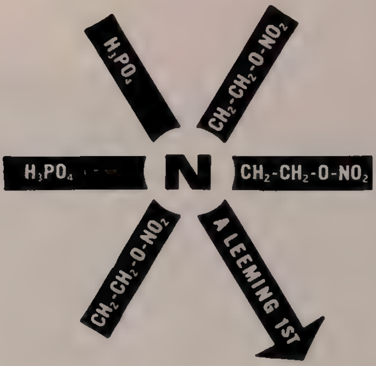
Angina pectoris prevention



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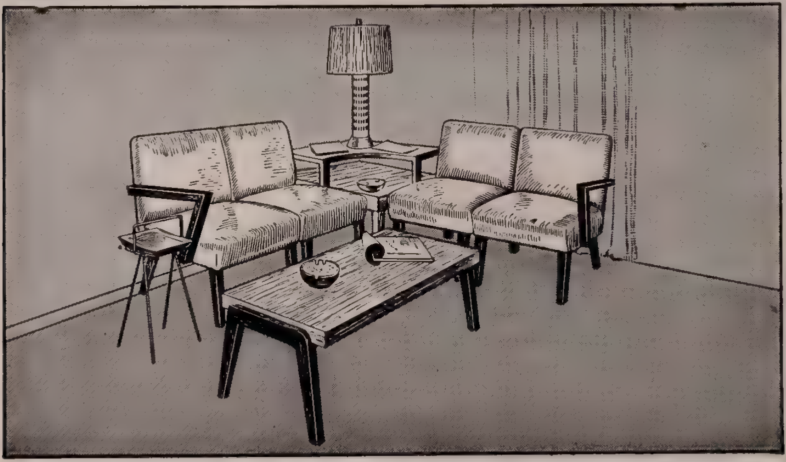

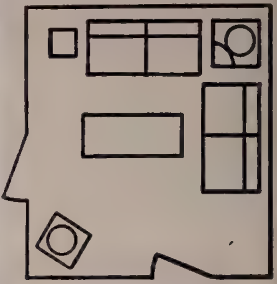

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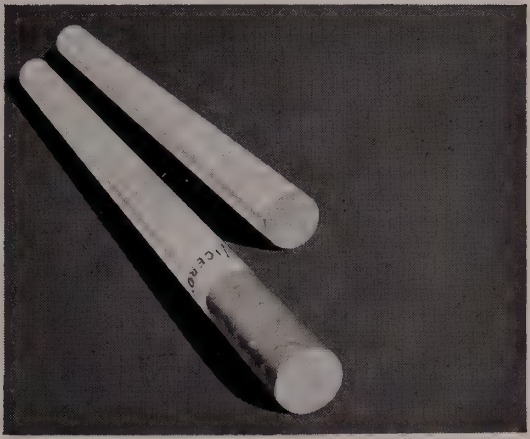

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(1) Lawrence, E. D., W. J. Surg., Ob. & Gyn., 58, 236-7, 1950.

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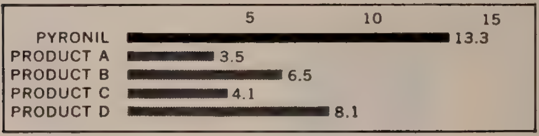

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*Proc. Soc. Exper. Biol. & Med., 80:458, 1952.

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EDITORIAL

U.M.S. and the Code of Professional Conduct

An important announcement was issued recently over the signature of Louis H. Bauer, M.D., new chairman of the board of U.M.S. For the information of our membership we quote the announcement and the supporting section of the New York State Education Law. It is of the utmost importance that our readers study this section of the Education Law. Says Dr. Bauer:

"When two physicians perform a service covered by U.M.S. contract, and each physician renders a medical report of the service personally performed, U.M.S. will make prorated payment of the U.M.S. allowance in accordance with the mutual agreement. Each is paid for the services which he has performed, and for which he has submitted a claim on the proper form.

"This is not a violation of the code of Professional Conduct of the Medical Society of the State of New York, nor of the Education Law of our state."[1]

"Proration was made legal to cover the exceptional case wherein the lack of proration would work a hardship on the patient, for example, where the surgeon is at a distance from the patient or where the services of two surgeons are absolutely necessary.

"Any other interpretation is twisting the law so as to use it as a subterfuge for fee-splitting.

"So far, only one tenth of one per cent of claims processed by U.M.S. have been prorated. This would seem to be about the amount that would be expected if only the exceptional case is so handled."[2]

That the above may be thoroughly understood we append the appropriate section of the Education Law of New York State:

Section 6514, Sub. 2(f):

"(f) That a physician, osteopath or physiotherapist has directly or indirectly requested, received or participated in the division, transference, assignment, rebate, splitting or refunding of a fee for, or has directly or indirectly requested, received or profited by means of a credit or other valuable consideration as a commission, discount or gratuity in connection with the furnishing of medical, surgical or dental care, diagnosis or treatment or service, including x-ray examination and treatment, or for or in connection with the sale, rental, supplying or furnishing of clinical laboratory services or supplies, x-ray laboratory services or supplies, inhalation therapy service or equipment, ambulance service, hospital or medical supplies, physiotherapy or other therapeutic service or equipment, artificial limbs, teeth or eyes, orthopedic or surgical appliances or supplies, optical appliances, supplies or equipment, devices or aid of hearing, drugs, medication or medical supplies or any other goods, services or supplies prescribed for medical diagnosis, care or treatment under this chapter, except payment, not to exceed thirty-three and one-third per centum of any fee received for x-ray examination, diagnosis or treatment, to any hospital furnishing facilities for such examination, diagnosis or treatment. Nothing contained in this chapter shall prohibit physicians from practicing medicine as partners nor in groups nor from pooling fees and monies received, either by the partnerships or groups or by the individual members thereof, for professional services furnished by any individual physician, member, or employee of such partnership or group, nor shall the physicians constituting the partnerships or groups be prohibited from sharing, dividing or apportioning the fees and monies received by them or by the partnership or group in accordance with a partnership or other agreement; provided that a certificate of doing business under an assumed name shall have been filed pursuant to section four hundred forty or four hundred forty-b of the penal law, and provided further that no such practice as partners or in groups or pooling of fees or monies received or sharing, division or apportionment of fees shall be permitted with respect to medical care and treatment under the workmen's compensation law except as expressly authorized by the workmen's compensation law. (Amended by L. 1947, ch. 722; see L. 1947, ch. 820, sec. 3.)"

Supplementing Dr. Bauer's statements quoted above regarding the proration of U.M.S. allowances, the following is the text of an amendment, enacted in 1954, to that same section of the law:

"...Nothing contained in this chapter shall prohibit a medical expense indemnity corporation pursuant to its contract with the subscriber from prorationing a medical expense indemnity allowance among two or more physicians in proportion to the services rendered by each such physician at the request of the subscriber, provided that prior to payment thereof such physicians shall submit both to the medical expense indemnity corporation and to the subscriber statements itemizing the services rendered by each such physician and the charges therefor."

Habit is the deepest law of human nature.—Thomas Carlyle

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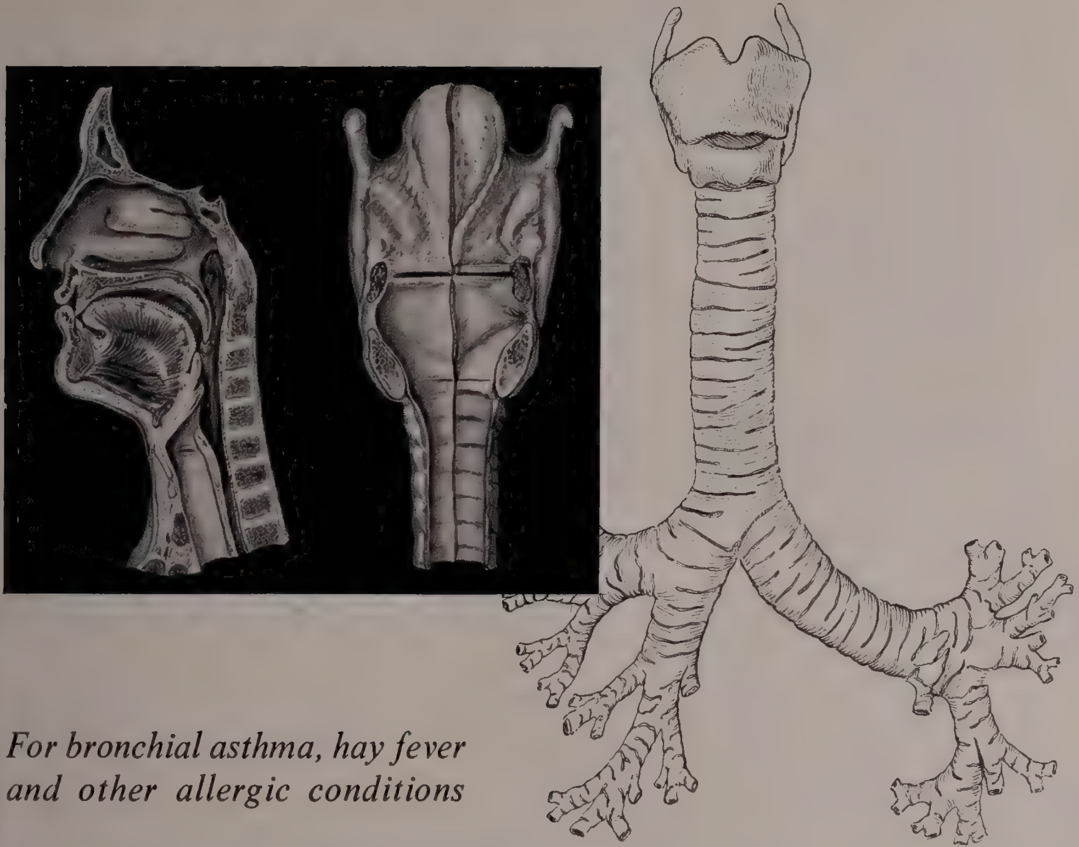
[1] U.M.S. Bulletin, May, 1954, vol. 9, no. 5.
[2] *Ibid.*, June, 1954, vol. 9, no. 6.



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III. RATIONALE:
- a. Diphenhydramine, Searle, 37.5 mg. Antihistaminic of recognized high potency and extensive clinical background.
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IV. RECOMMENDED DOSAGE:
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V. PRECAUTIONS:
- a. Some few patients may experience drowsiness from diphenydramine in spite of stimulation from Aminophyllin and racephedrine. They should be warned against driving automobiles and similar pursuits.
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1. Russek, H. I.; Urbach, K. F.; Doerner, A. A., and Zohman, B. L.: J.A.M.A. *153*:207 (Sept. 19) 1953.
2. Humphreys, P., *et al.*: Angiology 3:1 (Feb.) 1952.
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SCIENTIFIC ARTICLES

Practical Method of Rehabilitation of Insulin Function in Diabetes

The Six-Minute Insulin Responsiveness Test

GEORGE E. ANDERSON, M.D., F.A.C.P., BROOKLYN, NEW YORK

(From the Department of Medicine, State University of New York College of Medicine at New York City, and the Brooklyn Hospital)

THE establishment of normal blood glucose in a diabetic patient does not necessarily mean that the individual's intrinsic insulin mechanism is functioning to best physiologic advantage. The dosage of extrinsic insulin which had regularly been given to produce the "perfect" glycemia may in fact have been so large that as a result the patient's own defective insulin-producing mechanism was actually driven into the state of being suppressed by the hormone. This suppression is frequently determinable by laboratory procedure (an insulin responsiveness test). In practically all endocrine systems the *complete* or excessive substitution from without for a lame hormonal function tends to suppress what may remain of that function.[1-10]

The normal physiologic stimulus to insulin production and function is ingested carbohydrate,[11-13] but carbohydrate can act as a stimulus only in an individual who has not already been overwhelmed by this very stimulus,[5,14] one who has not become refractory to stimulation by glucose. The patient who has long sustained an unrelenting hyperglycemia has usually long since passed beyond the stage of responsiveness to glucose. As in the frog-muscle preparation steadily exposed to galvanic stimulation, a refractory state ultimately develops in the uncontrolled diabetic, which can be reversed, if at all, only by a forced abeyance of the fatiguing factor, namely, by an adequate break in the persistent hyperglycemia. Once this has been accomplished, physiologic stimulation of the intrinsic insulin mechanism by carbohydrate ingestion again becomes possible.

When this dramatic clinical change does occur and that it has occurred are indicated by the use of a six-minute test for responsiveness (sensitivity) to insulin on the part of the body. This test in which glucagon-free* insulin is used has been described in detail elsewhere,[15-17] but, in brief, it is carried out by administering intravenously in the fasting state 3 units of glucagon-free insulin and by testing for venous blood glucose levels at two, four, and six minutes after the insulin injection. Within this period "normal," nondiabetic, nonobese individuals usually drop from 6 to 26 per cent of their original fasting level. Those nondiabetic persons who show an initial minimal normal (or lower) blood glucose fasting level may within the first two to four minutes of the test show a preliminary rebound to well above the fasting level; this rebound in all probability represents a normal homeostatic stabilizing mechanism aimed at keeping the glycemia from going too far below the normal for that individual. This rise above the fasting level, however, rapidly gives way in normal individuals to a tendency to fall within the six minutes of the test. Such fall will, of course, be minimal but is still in all probability a normal phenomenon.

The obese adult type of diabetic before treat-

Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, General Sessions, May 11, 1954.

* Glucagon is a name applied to hyperglycemic-glycogenolytic factor (HGF) present in commercially available insulin in this hemisphere. It has been isolated from such insulin. It is thought to be a hormone product.

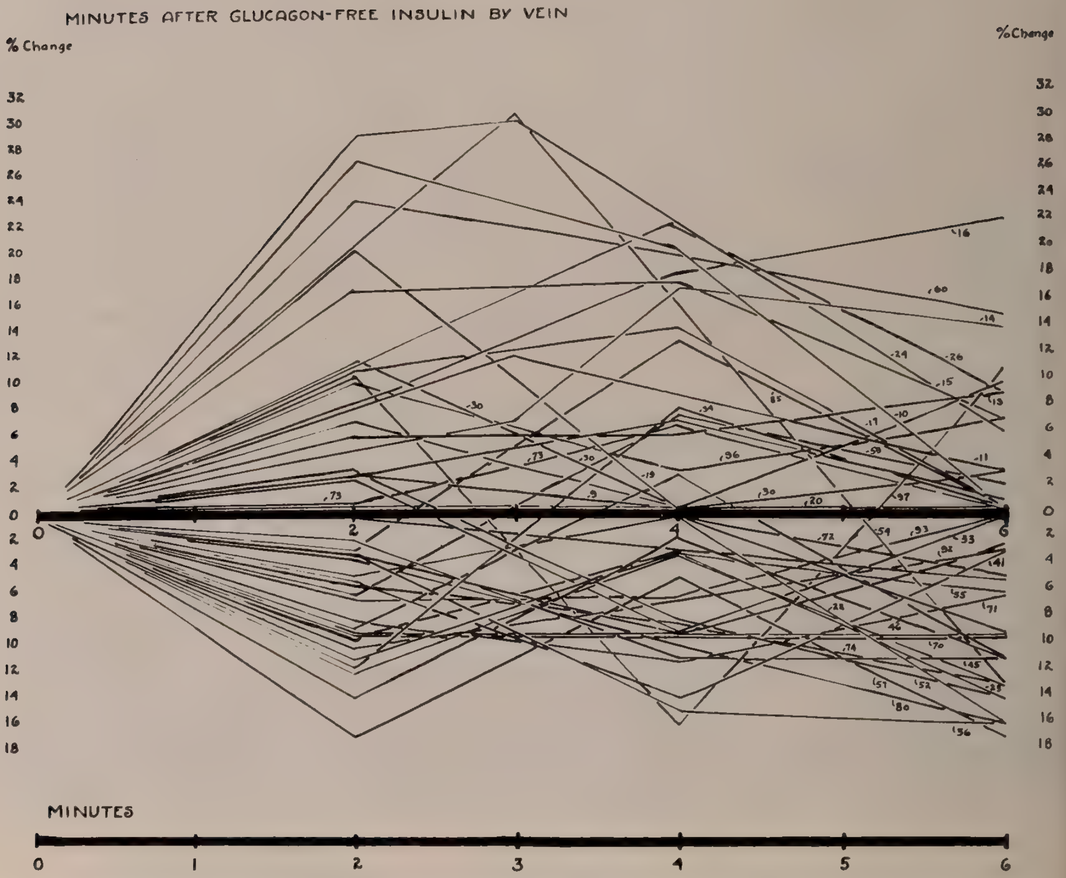

FIG. 1. Six-minute glucose curves of 40 individuals (diabetics) poorly responsive to glucagon-free insulin. (Readings recorded as percentage change of blood glucose above or below fasting level.)

ment showed (in 93 per cent of random obese diabetics studied) a rather flat six-minute glucose curve or even a frank rise above the fasting level throughout the six-minute period of the test (Fig. 1). By contrast, the juvenile type of diabetic at any age, unless markedly out of control, registered a prompt and precipitous fall in blood glucose, usually within the first two minutes of the test, obviously a sharp responsiveness to glucagon-free insulin (Fig. 2). These findings are in keeping with the prevailing thought that the juvenile type of diabetic at any age when under fair control is usually "sensitive" or responsive to insulin. With adequate control most of the poor responders among juveniles become sharply responsive. There is a tendency for the juvenile type of patient to become over-responsive.

Incidentally, the juvenile type of diabetic is thought usually to suffer predominantly from an "absolute" deficiency of insulin. Presumably, his beta cells are unable to make a "normal" amount of insulin. This deficiency is probably the end result of his dominant lack of beta-cell tissue arising from destruction or degeneration of such tissue. The obese adult type of diabetic, on the other hand, is thought to suffer primarily not from an "absolute" deficiency of beta cells but rather from an excessive and steady load demand which is constantly being placed upon these cells. The resulting deficiency is insufficiency in a "relative" sense. Bornstein[18,19] and Anderson[11] have independently shown that these diabetics usually have present in their blood considerable of the insulin (or blood glucose-reducing) factor, as opposed to the juvenile type of diabetic, who generally shows little or none of this factor to be present. Presumably, in the obese adult type there are present in the blood one or more anti-insulin factors which create exorbitant production demands for insulin, which demands the body is unable to meet. Insulin "bankruptcy" results. Obesity, adrenal cortex tumor, or pheochromo-

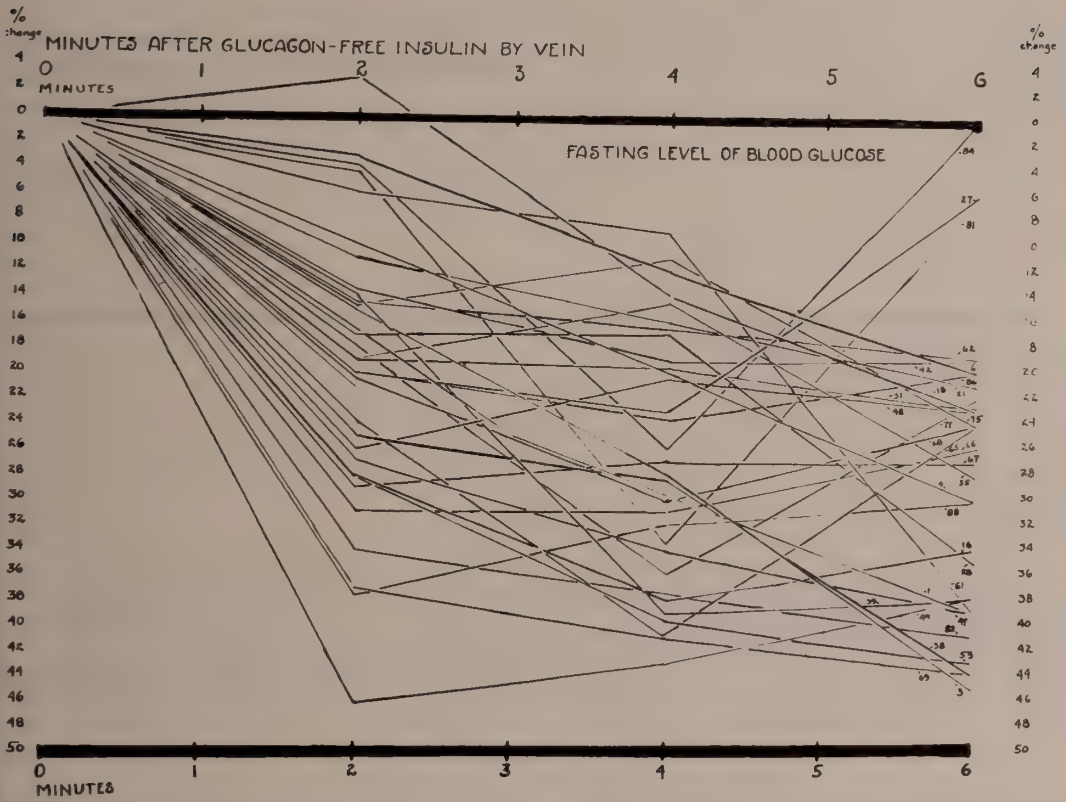

FIG. 2. Six-minute curves of 33 individuals (diabetics) responsive to glucagon-free insulin. (Readings recorded as percentage change of blood glucose above or below fasting level.)

cytoma each produces a demand state which can frequently be corrected. The removal of any one of such existent factors before dominant "absolute" insufficiency has supervened results in clinical improvement in the diabetes in direct proportion to the extent to which the beta-cell tissue has survived the prolonged excessive demand state. These individuals tend to be rather "insensitive" to insulin and certainly do not "respond" except sluggishly or belatedly to the small test doses of glucagon-free insulin given by vein. Whatever may be the mechanism involved, these patients are, accordingly, poorly or even nonresponsive to the insulin within the first six minutes after its administration. Presumably, one or more factors present in their bodies prevent a normal fall in blood glucose, As has been amply demonstrated clinically, when the excessive body weight is reduced, the glycemia and glycosuria frequently disappear,[20,21] even without the use of extrinsic insulin. The six-minute test in these patients then usually shows re-

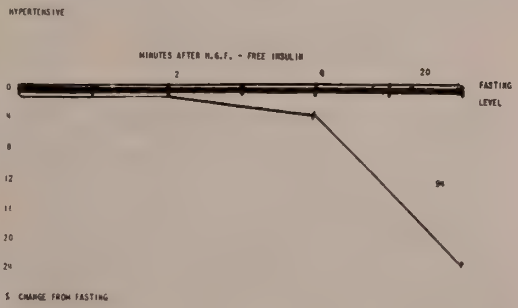

FIG. 3. Obese adult type (no insulin)—G. E., age sixty-six, hypertensive and a known diabetic for one year, had maximum weight of 165 pounds one year before; normal weight was 129 pounds.

Curve #20 was taken on November 9, 1953, after one year of free diet with poor control; fasting glucose 159 mg. per cent; weight $147^1/_2$ pounds. Note no drop in blood glucose during entire six-minute period.

Curve #94 was taken approximately three months later on February 2, 1954. Patient had been on measured diet without insulin during this period with weight 136 pounds and fair control; fasting glucose 164 mg. per cent; diet included carbohydrate 180, protein 78, fat 45, calories 1,437. Note drop in blood glucose after the second minute.

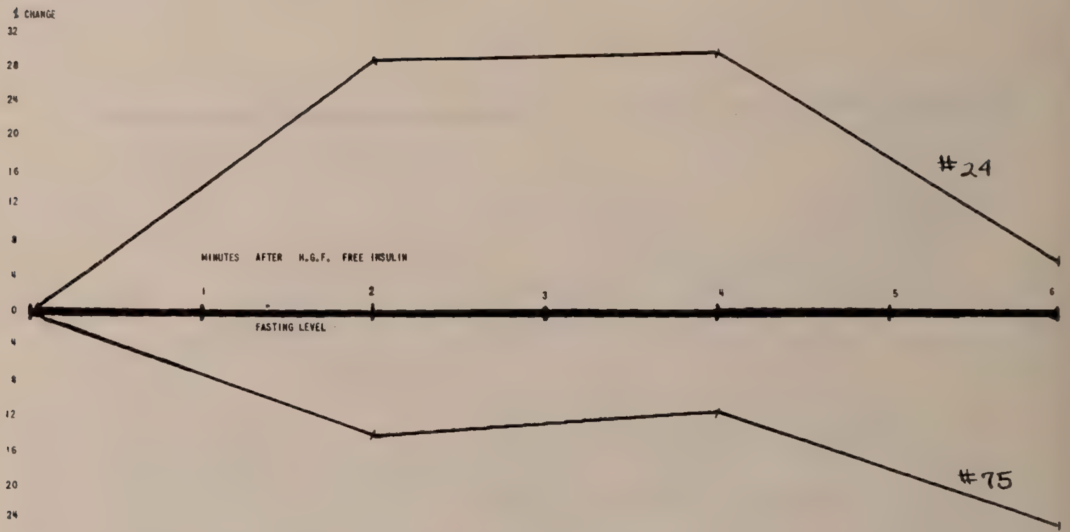

FIG. 4. Obese adult type (influence of diet)—G. A., age seventy-five, a known diabetic for ten years, had been taking insulin for ten years. Maximum weight was 200 pounds ten years ago; normal weight 141 pounds.

Curve #24 was taken on December 17, 1953; weight 131 pounds; diet was carbohydrate 180, protein 116, fat 55, calories 1,679; NPH insulin 8 units and regular insulin 6 units. This curve shows lack of responsiveness to insulin. The fasting level was taken eight minutes after suprarenal activity had spent itself.

Curve #75 was taken on January 26, 1954; weight same; diet was carbohydrate 220, protein 120, fat 55, calories 1,855; insulin same. Control was good throughout. This curve represents stimulation of the intrinsic mechanism by ingested carbohydrate.

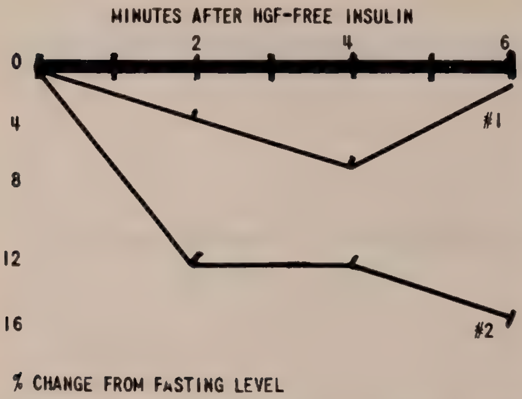

FIG. 5. Adult type (influence of control without insulin)—A. L., female, age seventy-five, a known diabetic for ten years, had maximum weight of 132 pounds ten years ago; normal weight was 137 pounds.

Curve #1 was taken on December 11, 1953; fasting glucose 226 mg. per cent; weight had been constant for one year at 116 pounds, 15 per cent underweight; diet was carbohydrate 200, protein 80, fat 66, calories 1,664; no insulin.

Curve #2 was taken four months later on April 5, 1954; fasting glucose 226 mg. per cent; weight 114 pounds (2-pound loss); no insulin; sugar control is better but still not good. Even though the glucose control is still not perfect at the time of second curve, with slow loss of weight and better glucose control there is decided improvement.

sponsiveness to glucagon-free insulin. Occasionally, however, the curves do not improve until after the restricted diet which caused the weight loss has been readjusted so that at the same caloric level the content of carbohydrate has been stepped up. As the carbohydrate is increased, of course, the fat must be decreased *pari passu* if the caloric value is to be kept constant. With increase in the carbohydrate ingested, the nonresponsive or poorly responsive six-minute glucose curves will frequently change to the drop characteristic of the nondiabetic, nonobese individual (Figs. 3, 4, 5, and 6). This falling tendency is, however, easily reversible in the patient by a "cold," an infection, marked anxiety, or by a prolonged break in sugar control (Figs. 7 and 8).

The juvenile type of diabetic markedly out of glucose control also tends to become poorly responsive to glucagon-free insulin. Like the obese individual, when he acquires the burden of overweight, his responsiveness to insulin suffers. When under reasonably good glucose control, his tendency is, however, to be sensitive, responsive, or even over-responsive to extrinsic insulin; correction of a superimposed obesity, the "relative" burden, serves to return him to the characteristics of the juvenile type of six-minute insulin-responsiveness curve.

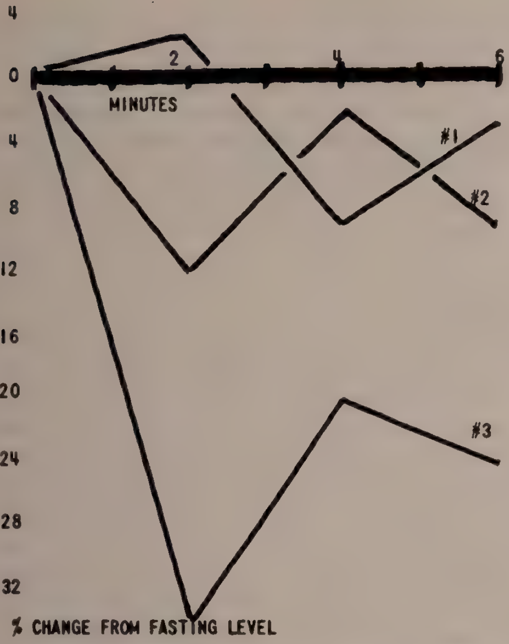

Fig. 6. Adult type (influence of control with diet and insulin)—A. S., female, age fifty-eight, was a known diabetic of twelve years duration. Maximum weight was 158 pounds eleven years ago; normal weight 130 pounds.

Curve #1 was taken on December 21, 1953, after patient on a measured diet for six months; fasting glucose 318 mg. per cent; weight 118 pounds; diet was carbohydrate 180, protein 116, fat 55, calories 1,679; NPH insulin 40 units. Diet was not conscientiously followed, and control was poor.

Curve #2 was taken five weeks later on February 12, 1954; fasting glucose 360 mg. per cent; weight same; diet was carbohydrate 220, protein 118, fat 40, calories 1,712; NPH insulin 50 units. Control was still poor.

Curve #3 was taken on February 27, 1954; fasting glucose 154 mg. per cent; weight 120 pounds (2-pound gain); diet the same but more conscientiously followed; NPH insulin 50 units, regular insulin 10 units. Control was much improved.

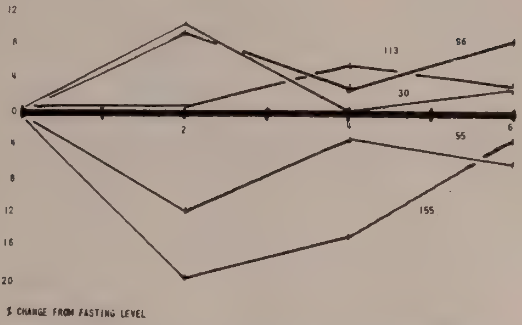

Fig. 7. Obese adult type (influence of diet, infection, control)—J. C., age seventy-four, was a known diabetic for twenty-four years; patient also had peptic ulcer and peripheral vascular disease. Maximum weight was 225 pounds twenty-five years ago; normal weight 162 pounds.

Curve #30 was taken on December 19, 1953; fasting glucose 122 mg. per cent; weight 162 pounds, a gain of 3 pounds in six months; diet was carbohydrate 180, protein 116, fat 80, calories 1,900; protamine zinc insulin 10 units.

Curve #55 was taken three weeks later on January 8, 1954; fasting glucose 159 mg. per cent; weight down 4 1/2 pounds in nineteen days to 157 1/2; diet was carbohydrate 220, protein 120, fat 67, calories, 1,980; insulin same.

Curve #96 was taken on February 2; fasting glucose 140 mg. per cent; weight same; diet was carbohydrate 250, protein 123, fat 52, calories 1,968; patient had a chest "cold" at this time.

Curve #113 was taken on February 12; fasting glucose 175 mg. per cent; weight 156 1/2 (1-pound loss); diet and insulin same; chest "cold" still present. Control poor and patient unresponsive despite elevation of dietary carbohydrate.

Curve #155 was taken on March 1; fasting glucose 169 mg. per cent; weight 155 (1-pound loss); diet same; NPH insulin 15 units. Following recovery from the chest cold the patient was again responsive, and control was better.

When the juvenile type of diabetic is exposed, over prolonged periods of time, to excessive stimulation of his own intrinsic insulin mechanism by large carbohydrate ingestion with recovery periods in hyperglycemia adequate to permit of his being susceptible to such stimulation, he becomes labile or "brittle." This unstable state, originally described by Woodyatt of Chicago, is characterized by precipitous rises and falls in blood glucose within very brief periods of time. These episodes are attended by unpredictable insulin reactions, usually severe and not adequately explained. Figure 9 shows six-minute glucose curves in eight such individuals. Sharp falls and rises in blood glucose will be noted within six minutes after the insulin administration. Such curves can be improved in the direction of normal by the use of diets which are less stimulating to the intrinsic insulin mechanism, namely, diets relatively higher in protein and fat but lower in rapidly available carbohydrate.

What is a "stimulating" type of diet? A diet which carries carbohydrate over 150 Gm. (between 150 and 300 Gm.)[5,14] is stimulating for the average diabetic, provided the total caloric value of that diet is precisely at or slightly below the minimal basic fuel needs of the individual (usually about 25 calories per Kg. at the patient's *normal* weight). Such a diet of necessity must sacrifice its fat content in favor of carbohydrate. As the patient comes under glucose control (as is indicated by normoglycemia with decreasing extrinsic insulin needs and by improvement in his

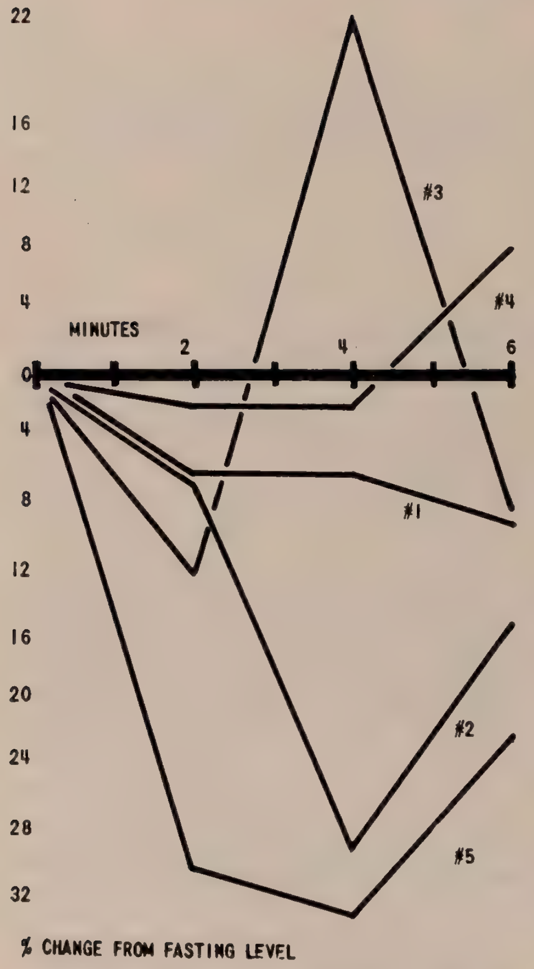

Fig. 8. Obese adult type (influence of control and anxiety)—J. F., male, age twenty-seven, was a known diabetic for four years. Maximum weight was 200 pounds eight years ago; normal weight 163 pounds.

Curve #1 was taken on December 11, 1953; fasting glucose 318 mg. per cent; weight constant at 160 pounds for six months; diet was carbohydrate 250, protein 100, fat 100, calories 2,300; protamine zinc insulin 35 units. Control was poor on a diet too high in calories.

Curve #2 was taken on February 9, 1954; fasting glucose 159 mg. per cent; weight same; diet was carbohydrate 170, protein 115, fat 76, calories 1,724; NPH insulin 35 units. Control was better on a diet lower in calories.

Curve #3 was taken on March 12; fasting glucose 179 mg. per cent; weight, diet, and insulin same. Control was poor; patient had been worried for three weeks over a new job.

Curve #4 was taken on April 9; fasting glucose 177 mg. per cent; weight same; diet was carbohydrate 210, protein 118, fat 57, calories 1,825; NPH insulin 45 units. Anxiety persisted, and control was still poor.

Curve #5 was taken on April 23; fasting glucose 105 mg. per cent; weight 161½ pounds; diet was carbohydrate 210, protein 118, fat 47, calories 1,735; NPH insulin 50 units. The patient was now adjusted to new job and happy again; control was good and there was normal responsiveness.

responsiveness to insulin with the six-minute test), his daily caloric intake is progressively increased to meet (but never to exceed) his fuel needs. At this stage he represents a patient whose intrinsic insulinogenic mechanism has been coaxed back into physiologic function rather than "drowned," as it were, by excessive extrinsic insulin administration (suppression).

Comment

Clinical diabetes in the final analysis is insulin insufficiency, either "relative," or "absolute," or more usually a combination of both with one or the other predominating. By "relative" insufficiency is understood not a fundamental inability of the body to make insulin but rather its inability to meet the excessive demands imposed on the body for insulin production. By "absolute" insufficiency is understood an inability of the body to elaborate insulin as it should, mainly by virtue of destruction of the insulin-producing beta cells themselves.

The adult type of diabetes is characterized, of course, by its occurrence mainly in obese adults, most commonly at about the time of menopause (in both female and male). These patients presumably do not suffer essentially from an inability to make insulin but from the extravagant demands constantly being placed on their mechanisms to produce insulin. Under such long-continued and strained demand, the insulinogenic mechanism goes into "bankruptcy," i.e., the production mechanism ultimately cannot meet the unrelenting demands which are being imposed on it. Moreover, these patients show a poor responsiveness not only to the insulin which they themselves produce but also to insulin injected from without. They usually still have considerable insulin[19] (or blood sugar-reducing agents) in their blood at the time when treatment is initiated, but they seem to have reduced sensitivity or responsiveness to such insulin. When properly treated, these patients characteristically do not require insulin from without except during complicating episodes such as infection; they usually respond dramatically and come under good "sugar control" merely by reduction of their excessive body weight or by removal of a pheochromocytoma,[14] an adrenal cortex tumor, or a pituitary adenoma, when one of these exists as the factor making the excessive "relative" demands on the insulinogenic mechanism. With reduction of the constant "rela-

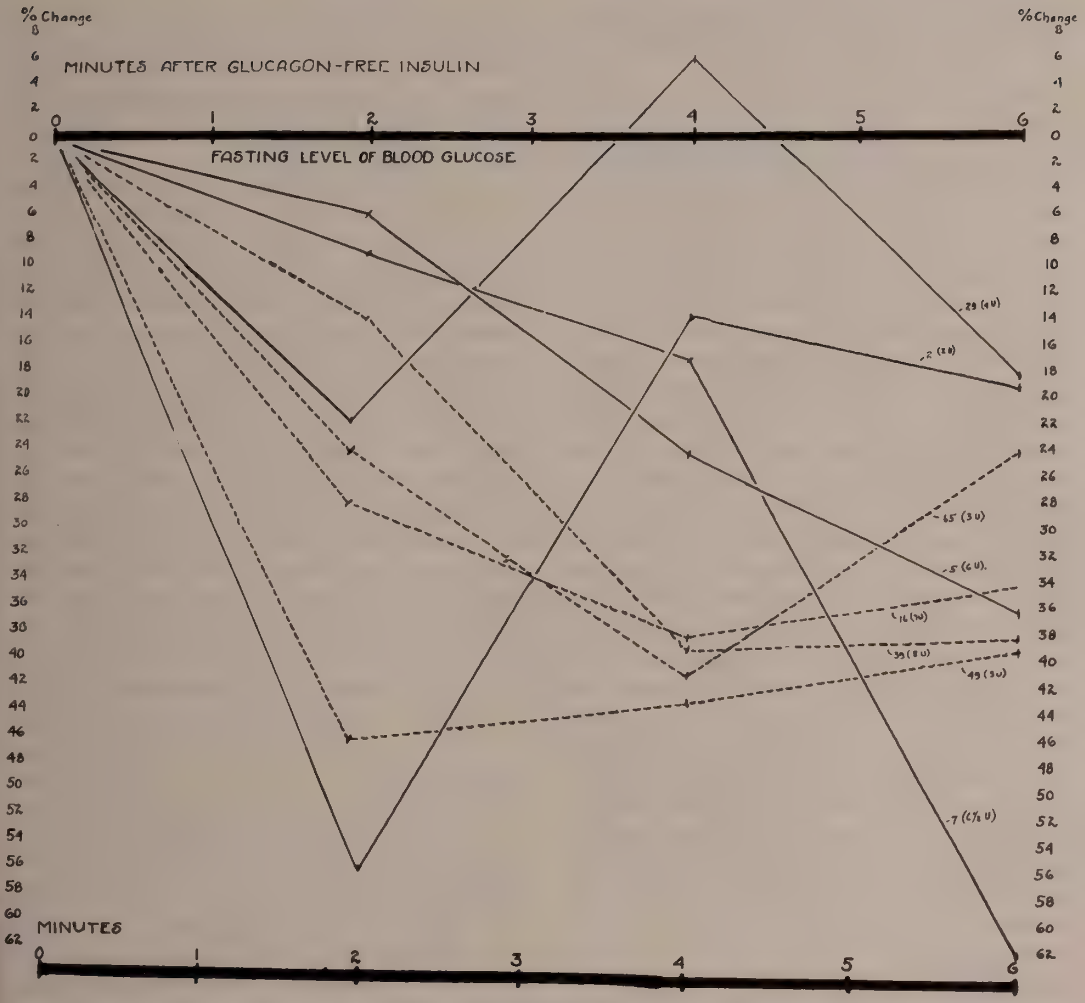

FIG. 9. Six-minute glucose curves of labile ("brittle") diabetics sharply responsive to insulin with marked rebound (Readings recorded as percentage change of blood glucose above or below fasting level.)

tive" demand on the insulin-producing mechanism, for example, by correcting the obesity, these individuals usually again become normally responsive to insulin as is indicated by the six-minute insulin-responsiveness test. By relatively increasing their carbohydrate intake with a mildly decreased total caloric ingestion, they can be converted to normal responsiveness to insulin, rehabilitated as it were.

The obese adult diabetic usually being poorly responsive to insulin often requires much larger doses of insulin, whenever insulin does become necessary, than does the juvenile type of patient. The obese adult type is rather resistant to ketosis and to diabetic coma, being precipitated into these states only by grave dietary indiscretions or by severe complicating disease such as fever, infection, hyperthyroidism, or by any other condition increasing markedly his metabolic rate. In coma he is frequently so resistant to insulin that he may require thousands of units to overcome the anti-insulin factors presumably blocking insulin-effect and producing poor responsiveness.

The counterpart of the obese adult diabetic is the juvenile type of patient, who usually suffers predominantly from an "absolute" insufficiency of insulin. It is thought that this deficiency results from a *rapid* burning out of his beta-cell tissue, presumably by pituitary growth factor in the presence of an adequate adrenal cortical system. The evolution of the juvenile type of diabetes is, accordingly, not one of slow attrition as in the obese adult type but rather a fulminating onslaught by rapidly depleting factors. These individuals are normally responsive (sensitive) to insulin but rapidly, frequently in months rather than years, become over-responsive to insulin, especially when therapeutically neglected or overstimulated by excessive carbohydrate ingestion. Then, small doses of insulin produce profound drops in blood sugar, insulin shock, and the state of "brittleness." These individuals easily go into ketosis and diabetic coma. They are characteristically wiry, nonobese individuals with earmarks not of hypopituitarism but of a hyperpituitary tendency, e.g., gaunt build, rawboned, often tall, and often with mental precocity (in youngsters). This type of diabetes may occur at any age despite the descriptive term "juvenile type." The "brittle" type of diabetes most commonly occurs in these patients. Their blood shows paucity of insulin[19]; the weight of their islet tissue is lower[22,23] than normal. They obviously should be protected against superalimentation and obesity which only add "relative" demands to their already embarrassed and incompetent insulin-producing mechanisms. They should, in addition, be protected from the overstimulation of excessive dietary carbohydrate. As the "absolute" insulin insufficiency in these patients increases, responsiveness to insulin progressively increases until "brittleness" supervenes.

Conclusions

1. Clinical diabetes is insulin insufficiency, "relative" or "absolute," but usually a combination of both with one or the other in predominance.

2. The obese adult type of diabetic usually suffers predominantly from a "relative" deficiency of insulin; the juvenile type of diabetic at any age suffers predominantly from an "absolute" insufficiency of insulin. These two major types of diabetes can usually be differentiated clinically. The differentiation is important therapeutically.

3. A six-minute insulin-responsiveness test utilizing glucagon-free insulin by vein shows characteristic responses in both of these two major types of diabetes (272 curves studied to date). The obese adult type of diabetic before adequate therapy usually shows poor responsiveness or nonresponsiveness to glucagon-free insulin on the six-minute test. This nonresponsiveness or poor responsiveness to insulin can frequently be converted to normal responsiveness (in 80 per cent) by adequate therapy—a rehabilitation of insulin function.

The juvenile type of diabetic tends to be normally or even excessively responsive to glucagon-free insulin. With proper dietary measures his overresponsiveness can frequently be stabilized. This improvement or rehabilitation is likewise measurable by the six-minute responsiveness test to glucagon-free insulin.

4. The inability of an individual to "respond" normally to extrinsic insulin (in the sense of presenting only a short or even no latent period of inaction and a sharp downward response) may precede decompensation of the intrinsic insulinogenic mechanism, which is indicated by an abnormal glucose tolerance test and abnormal, casual, isolated blood glucose determinations. In this sense the six-minute test becomes a more delicate index of impending or potential clinical diabetes than is either of the latter tests.

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Treatment of Exophthalmic Goiter

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THE advent of newer effective methods of treatment of exophthalmic goiter necessitates evaluation of such procedures and comparison of them with older types of treatment. Variations in the apparent applicability to different cases of the different methods under study usually make it inadvisable to study concurrent series of cases in which each of the different methods is used. Any evaluation of such technics, therefore, is necessarily somewhat prejudiced by the opinion of the observer, the facilities available to him, various circumstances regarding the patients being treated, and the relative skills of those collaborating in the treatment.

Three methods of treatment will be considered: (1) thyroidectomy after preparation with either Lugol's solution or antithyroid drugs, (2) use of antithyroid drugs alone, and (3) use of radioactive iodine. Because of the comparative newness of the latter two methods of treatment, attitudes regarding them are constantly changing. Different philosophies regarding therapeutic methods and regarding the disease itself also affect the investigator's choice of treatment. My attitudes, therefore, may be different from the attitudes that many physicians hold. It is perhaps fortunate that such differences exist for, because of them, combined experience will allow an earlier determination of the most effective methods of treatment.

The primary objectives of the treatment of Graves's disease are a high incidence of control of the disease, rapidity of control, and low mortality and morbidity rates. These objectives may be modified by various factors; for example, the need for rapid control of hyperthyroidism is greater in those patients who have failing hearts than in patients who are otherwise in good health. Different attitudes exist regarding the urgency for rapidity of control of hyperthyroidism. My colleagues and I have been impressed by the observation made years ago that the risk of surgical treatment was directly proportionate to the duration of hyperthyroidism. We have interpreted this fact to indicate that prolonged hyperthyroidism may cause serious damage to the person sustaining it. To my mind, this is a far more important consideration than, for example, the incidence of post-treatment myxedema, whose incidence is affected to a certain degree by the choice of method of treatment and by the speed of efficacy of the treatment. The treatment of myxedema can be carried out so easily and effectively that I should prefer accepting a high incidence of post-treatment myxedema rather than a slow control of hyperthyroidism.

Thyroidectomy

Partial thyroidectomy for years has been a widely used and highly effective method of control of exophthalmic goiter. After proper preparation it can be carried out with minimal surgical mortality except in complicated cases. It is followed by postoperative myxedema in less than 5 per cent of cases and by recurrence or persistence of hyperthyroidism in somewhat more than 5 per cent of cases. The incidence of parathyroid insufficiency or of injury to the recurrent laryngeal nerves, resulting in paralysis of the vocal cords, is extremely low in the hands of skillful surgeons. In the majority of patients so treated the basal metabolic rate has decreased to normal or nearly normal levels within three weeks after resection of most of the thyroid gland. Therefore, this must be considered as a rapid and highly effective method of control.

Three circumstances in particular increase the risk of surgical treatment of exophthalmic goiter. These are (1) high intensity of the disease, (2) long duration of hyperthyroidism, and (3) associated complicating diseases. The risk of surgical treatment is also greater in those patients who have recurrent Graves's disease, in which, after second resection of the thyroid, the danger

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* The Mayo Foundation is a part of the Graduate School of the University of Minnesota.

of injury to a recurrent laryngeal nerve or of postoperative parathyroid insufficiency is increased to some extent.

The risk of surgical treatment may be modified by the choice of preoperative preparation. In some institutions it is a routine procedure to prepare all patients who have Graves's disease for thyroidectomy by the administration of antithyroid drugs until the patient is in a euthyroid state. My associates and I have followed a different program. Pemberton[1] has reported that by grading surgical risk before the operation, he could segregate a relatively small group of patients who had Graves's disease in which 81 per cent of the surgical deaths were to be found. In the group without recognizably increased surgical risk, it has been our experience that after preparation with Lugol's solution thyroidectomy can be carried out with no greater risk than that in patients who have adenomatous goiter without hyperthyroidism. In other words, in these circumstances hyperthyroidism itself does not increase the risk significantly. We have not felt justified, therefore, in holding such patients for prolonged periods of preparation. However, when the severity of hyperthyroidism is sufficient to increase the surgical risk, we prefer to prepare the patient with antithyroid drugs followed by Lugol's solution since we have considered that this program provided a substantial increase in safety to the patient.

Antithyroid Drugs

The development by Astwood[2] of the use of antithyroid drugs in the treatment of Graves's disease has been a great contribution. Administration of these drugs may be considered in two categories. The first already has been mentioned, namely, use of antithyroid drugs in preoperative preparation. The second is their use as total treatment in Graves's disease. Our experience in this regard has been far less extensive than that of some others. This is, in part, dependent on the nature of the practice at the Mayo Clinic. Most of our patients come from a distance and cannot easily remain for long periods under medical observation; it is not feasible for them to return frequently. Other workers have reported success with the use of antithyroid drugs in bringing about complete control of Graves's disease; however, after cessation of their use, recurrences have been noted in a rather large percentage of cases. Solomon and associates[3] found that of 101 hyperthyroid patients studied for four years after conclusion of a course of antithyroid drugs, 55.5 per cent remained euthyroid. Second and third courses of treatment increased the number of remissions to 70.3 per cent. McCullagh and Cassidy[4] found that of 60 patients studied from four to six years after treatment with propylthiouracil, 40 were in remission.

The incidence of reactions such as fever, rash, leukopenia, and agranulocytosis after use of antithyroid drugs has varied with the drug used. The incidence has been extremely low after administration of propylthiouracil and some others. However, because of even the small possibility of reaction, we have been hesitant about administering any of these drugs to patients who are not under frequent observation. Also, it has been our experience in a small number of patients that use of these drugs for patients who have recurrent exophthalmic goiter, persons in whom the avoidance of subsequent surgical treatment would be particularly desirable, has been followed by an even greater incidence of recurrence than in those primarily treated. This is due presumably to the greater persistence and intensity of the cause of exophthalmic goiter in that particular group of patients; this already has been demonstrated in these patients by the fact that the disease has recurred after surgical resection of the thyroid. Another circumstance that has influenced our attitude is that we have seen occasional patients who, through their own neglect, have received inadequate treatment for considerable periods and who, therefore, have been chronically ill with Graves's disease. This experience has inclined us to the use of more definitive treatment while the patient could be kept under observation.

Radioactive Iodine

Radioactive iodine first became available for the treatment of exophthalmic goiter when I^{130} was prepared in the cyclotrons at the Massachusetts Institute of Technology and at the University of California. This substance was used as early as 1941 for treatment in Boston by Hertz and Roberts[5] and in Berkeley by Hamilton and his associates[6] in relatively small groups of patients who had exophthalmic goiter. In 1946, I^{131}, an isotope of iodine having a half-life of eight days, became available for physicians generally.

Many groups have studied this isotope as a therapeutic agent, and at present several thousands of patients who had Graves's disease have been treated with radioactive iodine throughout this country and abroad.

General Factors.—The amount of radiation delivered to the thyroid gland by the I^{131} that it collects depends on various factors, the most important of which are the size of the thyroid, the size of the administered dose, and the percentage of it that is collected by the thyroid, as well as the speed with which the radioiodine is lost from the thyroid gland, either by secretion or in any other manner. Some of these factors can be determined with accuracy; others cannot. The clinical estimate of thyroidal size is extremely inaccurate. This is particularly true in patients who have large goiters and in patients who have recurrent Graves's disease after previous thyroidectomy. Particularly in the latter group, if the enlargement of the thyroid is slight, small errors in the estimate of thyroidal size are of great importance. Unless the size of the gland can be estimated more accurately, there will always be difficulty in establishing proper dosage. Work with the gammagraph,[7] a scintillation counter that records the size of an area collecting radioiodine, may result in more accurate estimate of thyroidal weight than can be made by physical examination, but this has not been established as yet. The amount of collection of radioiodine by the thyroid can be determined with accuracy, as can the rate of loss of radioiodine by the thyroid. It is possible that considerable individual variability may be present in the response of different thyroids to radiation, although this fact cannot be determined precisely at present. However, the importance of more accurate determination of dosage is such that studies of all variable factors should be continued in an attempt to allow better evaluation of it. It is the custom in our clinic to give each patient who is being considered for treatment with radioactive iodine a tracer dose of radioiodine and to base the size of the therapeutic dose on the amount of the tracer that is collected.

Reactions.—Various reactions have been reported after administration of radioiodine in therapeutic doses. In the treatment of exophthalmic goiter we frequently have noted slight tenderness over the thyroid gland appearing a few days after administration of the dose. Slight fever and leukopenia occurred in one patient. Significant increase in hyperthyroidism has not occurred in any of our patients; this may be due, in part, to treatment with Lugol's solution starting two or three days after the administration of radioiodine. This program has been followed in the majority of our patients in whom hyperthyroidism was severe. Significant or persistent leukopenia, such as has occurred rarely after large doses of I^{131} administered in the treatment of carcinoma of the thyroid, has not been seen in any of our patients who had Graves's disease and who received radioiodine.

Results.—In most patients improvement starts after three or four weeks. The patient is frequently euthyroid within two months of the time of treatment. Some effect may persist for a longer period, however; whether this is due to a progression of the effect of radiation or to some other factor is not clear. Chapman and coworkers[8] have noted progressive improvement over a period of a year after the administration of I^{131}. The duration of effect is, of course, important in determining the frequency of dosage. We have hesitated to give a second dose of radioiodine for at least two, and preferably three, months after the first dose; if the patient is still frankly hyperthyroid at that time, we usually give a second dose. Review of the 478 patients who had Graves's disease and who received radioactive iodine at the clinic up to July 1, 1953, showed that 419 had but a single dose, whereas 52 (10.9 per cent) required two doses and seven (1.5 per cent) have required three doses. Perhaps in our desire to bring the disease under control rapidly, we have given subsequent doses to some patients who would have become euthyroid without them.

The reduction in the basal metabolic rate and the disappearance of clinical manifestations of hyperthyroidism usually have been accompanied by diminution in size of the thyroid gland.

Dosage.—Early in our experience with radioiodine, we gave as an initial dose an amount that would allow the thyroid to collect 200 to 250 microcuries per estimated Gm. of tissue. This figure was based on urinary excretion data and, when based on thyroidal collection data, was the equivalent of about 190 microcuries per estimated Gm. Chapman and associates have used 160 microcuries per estimated Gm., and different doses have been used by different observers. At present we are varying our dosage depending on the urgency of control, our average dose still being about 200 microcuries collected per estimated Gm. based on thyroidal collection. In patients who have serious cardiac disease, we often give larger than average doses, realizing that myxedema frequently will be produced but trying to obtain the most rapid control possible. In patients who have severe exophthalmos we have inclined to smaller doses, fearing progression of the exophthalmos if the basal metabolic rate is reduced too far. Whether our apprehension in this regard is justified, I cannot say, for we have seen progression of severe exophthalmos in a few patients so treated, and we frequently have seen slight increase in proptosis after administration of doses of I^{131} that have not induced myxedema.

In the earliest series of 40 patients studied at the clinic, my associates and I reported the results from a single dose of I^{131} as good in 27 patients, fair in eight, and poor in five.[9] In the eight patients who had fair results, a second dose controlled the disease; in the five patients who had poor results, inadequate amounts were used. As more experience has been gained, we have used radioiodine more effectively; subsequent observations incline us to the belief that adequate doses of I^{131} will control Graves's disease in any patient whose thyroid gland collects radioiodine in adequate amounts. This experience is similar to that of other workers in the field. We have seen recurrences of Graves's disease in about 5 per cent of patients and have induced myxedema in more than one fourth of our patients. As has been noted, this high incidence of myxedema is due to our desire to bring about rapid control of hyperthyroidism in selected patients. It is, of course, related to the fact that nearly 90 per cent of our patients who have Graves's disease have had the disease brought under control with a single dose of I^{131}. Total doses in our patients have varied from 2.5 to 50 millicuries and have averaged 8.96 millicuries.

Effects on the Thyroid.—The effect of radioiodine on the thyroid gland has been demonstrated by Chapman's group who have biopsied the thyroids of 44 patients previously treated with radioiodine. These studies indicated that thyroid glands exposed to radioiodine may be the seat of fibrosis, cellular damage, and bizarre nuclear forms. They also indicated that the remaining cells are often hyperplastic. Dailey and associates[10] studied the thyroid glands from 23 hyperthyroid patients who had received I^{131}; they found lesions resembling Hashimoto's thyroiditis more frequently than in nonirradiated glands. They also found follicular atrophy and fibrosis. They did not think that the pleomorphic and hyperchromatic alterations of epithelial cells were related to irradiation. They also found hyperplasia in some cases. In neither of these studies were there found malignant changes that could be attributed to radioiodine.

The wide variation in the effect of therapeutic doses of radioiodine suggests, as already mentioned, that considerable individual variability is present in the effect of a given amount of radiation on different thyroid glands. Werner and associates[11] have noted subsidence of hyperthyroidism after use of I^{131} tracers incorporating individual doses no larger than 100 microcuries and with total doses varying from 220 to 500 microcuries. We have seen myxedema after doses as small as 158 microcuries per estimated Gm. of tissue and recurrences after doses as large as 494 microcuries.

Concern about the carcinogenic effect of radioiodine has varied greatly in the minds of different investigators. Final conclusions regarding this apprehension can be resolved only after the substance has been given to a large number of patients over a long period. However, the absence of any reports of carcinoma developing in the thyroids of patients previously treated with radioiodine is comforting and reassuring to some degree. Carcinoma has been found in nodules in the thyroids of patients previously treated with radioiodine but only in nodules that had been present prior to the treatment. This fact is not a condemnation of radioiodine but is rather a condemnation of treatment by radioiodine of patients whose thyroid glands contain nodules, for the presence of carcinoma in nodules in the thyroid gland cannot be determined with accuracy by clinical examination alone.

Concern over possible carcinogenesis has appeared to my colleagues and to me to be of sufficient significance that, at the present time, we have limited the use of therapeutic doses of radioiodine for Graves's disease to patients more than fifty years of age and to those younger persons in whom the risk of thyroidectomy is excessively great. The latter category includes, for example, patients who have serious independent cardiac disease and patients who have recurrent exophthalmic goiter after one or more surgical attempts to control the disease.

Comment.—In the therapeutic use of radioiodine the physician must keep in mind not only those things which must be done for the protection of the patient but also those things which should be done for the protection of persons who are handling the substance. These measures are well established, and the information about them should be thoroughly understood by anyone who intends to use radioiodine.

If I were to try to foresee the future place of radioiodine in the treatment of exophthalmic goiter, my prediction would be that it will be the treatment of choice in patients who have Graves's disease and whose thyroid glands do not contain nodules, providing that time demonstrates the lack of significant carcinogenic effect of the substance and, of course, providing that a more physiologic means of treatment of this disease does not become available. Treatment with radioiodine is destructive and unphysiologic, just as surgical treatment is, but it can be carried out without serious reaction and with great effectiveness.

Summary and Conclusions

Surgical treatment of hyperthyroidism has the advantage of greatest speed of control of hyperthyroidism and in suitable cases carries minimal risk and a low incidence of recurrence. Antithyroid drugs provide less rapid control than do surgical measures, avoid the risk of mortality and morbidity inherent in surgical treatment, but are not so definitive or effective as either surgery or radioiodine. Radioiodine is less rapid than operative therapy and is more frequently effective than antithyroid drugs; however, uncertainty remains about the possibility of its carcinogenic effect. It appears, therefore, that all methods of treatment may find applicability in any large group of patients who have Graves's disease. Because of our situation and our philosophy regarding this disease, my colleagues and I tend to the following program, modifying it to fit special circumstances and because of additions to our knowledge of the disease and methods of treatment:

1. Patients who have mild or moderate forms of exophthalmic goiter and who are less than about fifty years of age can be treated conservatively and satisfactorily with Lugol's solution and surgical resection of the thyroid.
2. Patients who have severe hyperthyroidism that is otherwise uncomplicated and who are less than about fifty years of age can be treated effectively with propylthiouracil, Lugol's solution, and surgical resection.
3. Patients more than fifty years of age, those who have severe complicating disease, those who have recurrent exophthalmic goiter after previous resection, and those who have extremely small glands appear to be suitable for treatment with radioiodine; in this group radioiodine has demonstrated its great effectiveness as a therapeutic agent.

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My interest is in the future, because I am going to spend the rest of my life there.
—Charles F. Kettering

Werner's Syndrome

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Every day the world grows relatively smaller due to improved methods of transportation which have been developed by physical science. People are no longer confined to the isolated islands and remote valleys which led to intratribal and even intrafamilial marriages. Consequently, diseases with consanguinity in the background, such as Werner's syndrome, are going to be much less common in the future. The importance of a medical curio, like Werner's syndrome, lies (1) in its proper identification and (2) in the study of the presenting glandular deficiencies.

The two varieties of progeria in the adult which are of great interest to the dermatologist were described by Werner[1] and Rothmund[2] with occasional cases published at rare intervals thereafter. Thannhauser[3] reviewed the literature on the subject and listed the classic features of Werner's syndrome, Rothmund's syndrome, cataracta dermatogenes (neurodermatitis) type Andogsky, progeria in children (Hutchinson-Gilford's syndrome), myotonic dystrophy, and hereditary ectodermal dysplasia (McKay-Davidson). More recently Irwin and Ward[4] set the total number of reported cases of Werner's syndrome at 57. Since then two cases have been added,[5,6] bringing the total to 59.

The outstanding clinical characteristic of Werner's syndrome is that the patient is normal at birth and goes through an apparently normal childhood. It is only at puberty that the stunted growth is noticed. Still later, the underdevelopment of the external genitalia may become apparent. Libido and sexual activity are present in most of the young males, although a majority are headed for an early climacteric. Similarly, normal periods, and even pregnancies later, are encountered in the young females, but many will have amenorrhea and most of them a precocious menopause. Other sex-linked deficiencies include a permanently high-pitched voice in the male, changes in the vocal cords, and sparse hair growth in the axillary and pubic regions.

A close observation in the postpubertal youngster reveals that the muscles are poorly formed, giving the limbs an infantile size. Even more striking is the almost total absence of the subcutaneous tissue. As a result, the integument becomes drawn over the bony prominences causing the folds and creases to disappear. There is an associated loss of lanugo hair, and sweating is diminished. The skin over the extremities looks pale, shiny, and atrophic, not unlike that of scleroderma. These findings are far more common and more advanced on the lower extremities, and the hands may even escape the process. The weakened skin readily succumbs to minor insults, resulting in atonic shallow ulcers which heal slowly. Ulcers and keratoses with hard, flat, painful excrescences occur around the malleoli; corns and calluses are frequently seen side by side on the weight-bearing surfaces. The nails show changes varying from longitudinal striations and brittleness to marked thickening. The tightly bound skin may cause the underlying interphalangeal, metatarsal, tarsal, and ankle joints to have limited motion or to become ankylosed. The other outstanding features of the syndrome may be listed as those more related to premature senility. It is as though the patient went directly from childhood to old age without ever enjoying the fruits of maturity. On the face the process gives the appearance of a newly hatched bird or of a very old person. The skin is stretched over the malar prominences and nose, with deep wrinkles radiating from the outer angles of the eyes and surrounding the lips. The senile arc of the pupil, gray hair, missing teeth, and earlobes projecting from the sides of the face complete the strange picture of a large head on a short skinny frame. The intellect is normal, however.

The clinical picture in Werner's syndrome may bear all the components listed, or it may be limited in its scope. The incomplete syndrome, termed forme fruste, is met with in brothers and sisters of patients with the full syndrome.

The lifespan of the patients may be cut short by congestive heart failure or cerebral accidents.

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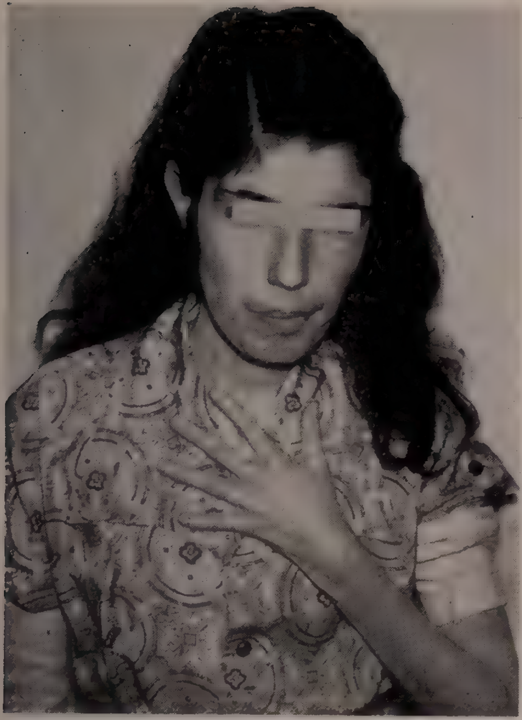

FIG. 1. Note the tight appearance of the skin covering the nasal and malar bones, the wrinkling around the eyes and lips, the projecting earlobes, and the slim wrists and hands.

The majority of the patients reach the fifties or sixties, handicapped as they may be by complications arising from advanced arteriosclerosis of the lower extremities and/or diabetes mellitus.

We are very fortunate to have a patient with Werner's syndrome under our care. She was referred to the Dermatology Department of the New York Polyclinic Medical School and Hospital by Dr. Dominic Romano. We are hopeful that this patient belongs to the group that has the better prognosis regarding complications and longevity.

Case Report

Miss S. S., a twenty-eight-year-old Puerto Rican female, came to our clinic on April 24, 1953. She was complaining of sores on the ankles and painful corns on the soles. The patient stated that she was born a normal baby and that her physical development had been satisfactory all through childhood except for chronic underweight. She was never afflicted with any serious infection or organic disease. She recalled that she stopped growing around the age of twelve years. Her menstrual periods were very scanty and irregular. She lived with her family until recently; she now does her own house work, but she has never engaged in any gainful occupation. Her intelligence seemed to be average.

Her present troubles began about five years ago when, following an injury to the left ankle, she developed a painful, slow healing ulcer. Subsequently, she had other similar sores around her ankles with one usually in the process of healing as another one was forming. More recently, thickening on the soles developed, which rendered her walking quite difficult.

Her father died twenty years ago and was supposed to be "skinny like me"; her mother and six brothers are living and well. No family history of lues, diabetes, or physical stigmata of progeria was obtained. No consanguinity between her father and mother could be ascertained by us from the patient, and no other members of the family could be contacted by us.

PHYSICAL EXAMINATION.—The patient was a poorly developed, slender, and short female with a medium complexion. She weighed 27.7 Kg. (61 pounds) and measured 144.8 cm. (57 inches) in height; the blood pressure was 110/70 mm. of mercury, and the pulse rate was 74 per minute.

Her facies bore striking features of senility. There was a generalized loss of subcutaneous tissue and a decrease in muscular substance causing a thinness of the nose and conveying a tight appearance to the skin covering the nasal and malar bones. Wrinkling and exaggeration of the cutaneous folds were seen around the eyes and especially around the lips, which were pale, thin, and pursed (Fig. 1). The scalp hair was light brown, soft, straight, and of good quality with no recession of the hairline or alopecia. However, there were some canities, and the eyebrows and eyelashes were sparse and short. The whole face had a fine covering of lanugo hair. The auricles were of normal size and projected from the side of the head. The ears, nose, throat, and vocal cords were normal, and the teeth were well formed with none missing. The lens in both eyes showed posterior cortical opacities.

The breasts and the nipples were underdeveloped with a decreased amount of hair being present in the axillae and pubis. The abdomen was flat.

The extremities appeared slim and longer than average for the patient's height (Fig. 2). The thinness of the bones and the lack of muscular structure were quite striking. The circumference of the wrist measured 11 cm., the knee 25 cm., and the ankle 15 cm. The upper extremities had a normal skin covering with a fair amount of lanugo hair, and the fingernails grew normally. There were marked changes over the lower extremities. The skin was drawn and taut over the ankles and toes giving a shiny, dry, and atrophic appearance. It could not be pinched between the fingers, and no subcutaneous fat was felt. The toenails were thickened.

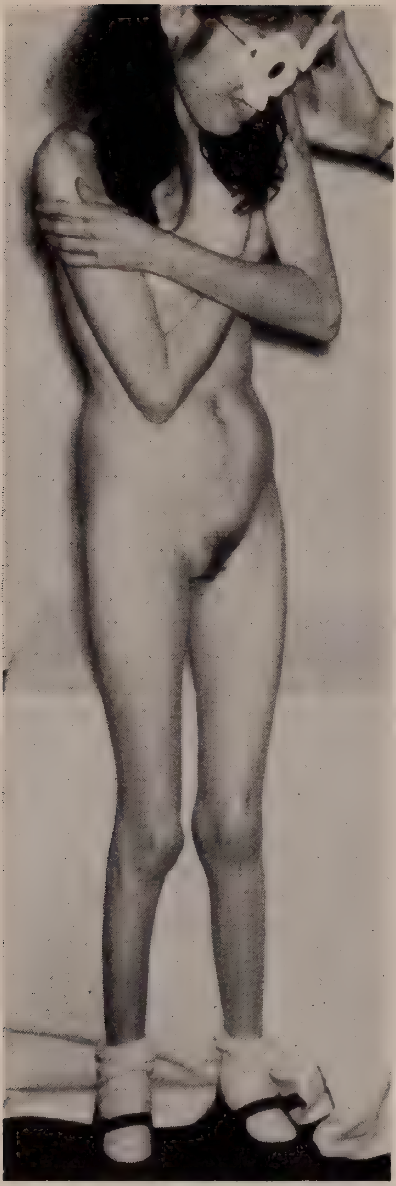

FIG. 2. The limbs are slim and elongated, and there is a decreased amount of hair in the pubic area.

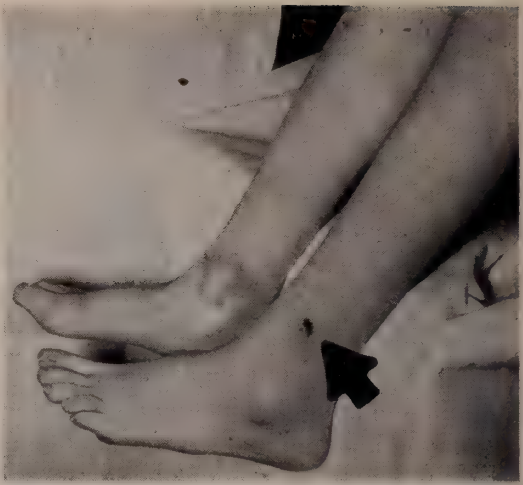

FIG. 3. Note the drawn and taut skin, the thickened nails, the keratotic lesion over the left, lateral malleolus (arrow), and the atrophic scars with pigmented border.

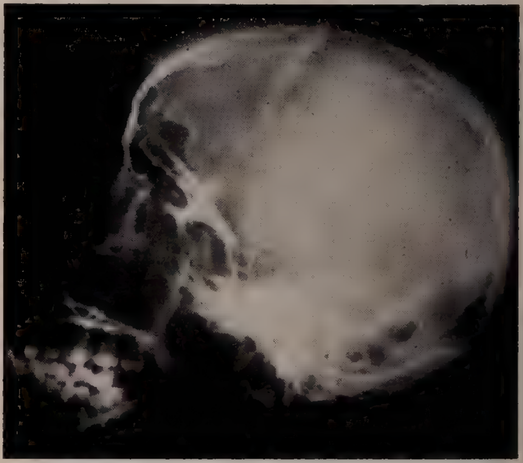

FIG. 4. Small sella turcica, large clinoid processes with almost complete bridging over the sella.

There was a complete lack of hair and follicles. The sweating was decreased. On the left lateral malleolus there was a hard, heaped-up, tender keratotic lesion, 1$^1/_2$ cm. in diameter, raised $^1/_2$ cm. above the skin surface. On the internal aspect of the left ankle there were depressed, depigmented scars, 3 cm. in diameter and smaller, surrounded by a pigmented border (Fig. 3). On the soles, at the points of weight-bearing over the metatarsal arch, there were keratotic lesions. Normal pulsations were present in the pedal and the posterior tibial arteries. The motions in the toes were absent, and those in the ankles were greatly limited. The rest of the skeletal system showed free movement but greatly reduced muscle power. The patient had a shuffling gate because of the pain from the calluses and because of the partially ankylosed joints.

X-RAY STUDIES.—In the shaft of the left tibia and fibula there are several poorly defined areas of decreased density; no calcifications in the blood vessels were noted. In the skull the structure of the bone was within the limits of normal, the sella turcica was in the lower limits of normal size, and the clinoid processes were larger with almost complete bridging over the sella (Fig. 4).

ELECTROCARDIOGRAPH.—Sinus tachycardia, nor-

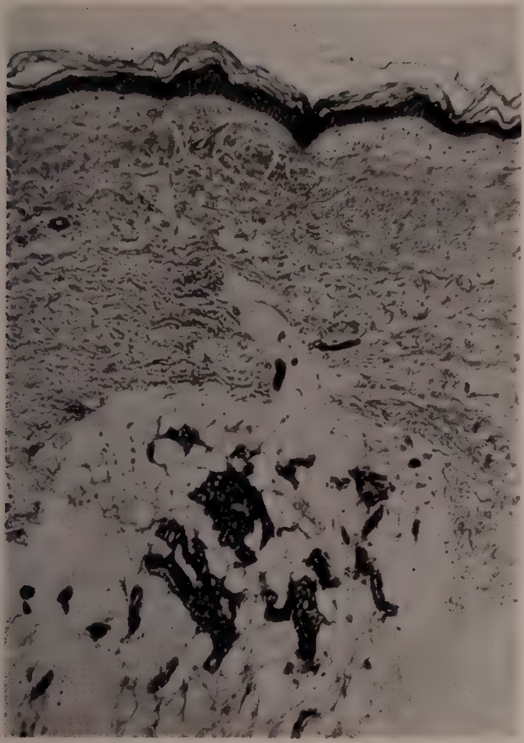

FIG. 5. Biopsy of skin from the ankle. Note the atrophy of both the epidermis and dermis, the thinness of the corium, and the lack of arteriolar changes (low power magnification).

mal auriculoventricular conduction time, low voltage in leads R_1 and CF_5, and depressed segments in leads II and III were seen. The conclusion was hypothyroid pattern.

BIOPSY FROM THE RIGHT LOWER LEG.*—The epidermis was noticeably thinned. Its base was flat due to the absence of rete pegs. There was moderate hyperkeratosis and an increase in melanin pigment in the basal cell layer. The fibrous connective bundles were atrophic and somewhat frayed. Sclerosis, homogenization, or fibrinoid changes were not present. The elastic fibrils were swollen and showed slight basophilia in the hematoxylin and eosin stain. The capillary vessels were sparse. The larger vessels did not show intimal proliferation. There were no signs of inflammation. The width of the corium was decreased. A few sweat glands were present, and these showed evidence of degenerative changes; there were hyalin casts present in some of these glands. No sebaceous glands were seen (Fig. 5).

The findings were those of a simple, noninflammatory atrophy. The histologic picture was not specific for any single entity. It was, however, compatible with an endocrinologic disorder such as hypopituitarism.

LABORATORY DATA.—Urinalysis was normal. Blood serology for syphilis (Kahn) was negative. Hemogram indicated hemoglobin 11 Gm., red blood cells 4,300,000, white blood cells 9,950 with differential blood count of polymorphonuclear cells 56 per cent, monocytes 5 per cent, lymphocytes 33 per cent, and eosinophils 6 per cent. Glucose tolerance curve showed 100, 174, 110, and 118 mg. per cent. Blood chemistry showed alkaline phosphatase 6 units, acid phosphatase 4 units, potassium 4.2 mg. per cent, calcium 10.9 mg. per cent; total proteins 8.5 Gm. per cent, albumin 4.9 Gm. per cent, globulin 3.6 Gm. per cent; total cholesterol 224 mg. per cent. Calcium measured 50 mg. in a twenty-four-hour urinary specimen. Total eosinophil count was 242; four hours after 25 mg. ACTH by intramuscular injection it was 212. Test for 17-ketosteroids in a twenty-four-hour urinary specimen showed 13 mg.

From the accompanying table, modified from Thannhauser,[3] it can be seen that our patient presents the classic features of Werner's syndrome except calcifications of the blood vessels and diabetes mellitus. Among the laboratory data the high-normal blood cholesterol and the electrocardiographic pattern reflect a lowered thyroid secretion. The poor eosinophilic response to ACTH administration bespeaks a depressed suprarenal secretion. The small, almost completely bridged over pituitary gland, as demonstrated in the skull x-ray, is significant. Clinically, the patient is most distressed by the calluses on the soles. They have been shaved down, and sponge rubber insoles were inserted in her shoes with fairly good results. The most serious problem in the near future will be the bilateral cataracts.

Comment

Werner's syndrome occurs as a recessively transmitted hereditary disease.[7] The patient's parents are blood relations, often first cousins.

There is a strong feeling that the pituitary gland is directly or in conjunction with the other glands responsible for the essential changes. Indications that there are grave disruptions in the chain of endocrine glands are plentiful. The study of the etiology of the syndrome requires an analysis of its various features, which may be divided into five groups: (1) the early arrest of the skeletal growth, (2) the incomplete development of the sexual organs, (3) the poorly formed muscular system, the absence of subcutaneous fat, and

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TABLE I.—Differential Diagnosis of Progerias*

Symptoms	Werner's Syndrome	Rothmund's Syndrome	Hutchinson-Gilford's Syndrome	Patient S. S.
Heredofamilial occurrence	3	3	0	2
Age of onset	12 years	3 to 4 months	2 to 5 months	12 years
Skin changes	4	4	4	4
Tightly drawn	4	0	1	4
Atrophic skin	4	2	2	4
Telangiectasia	1	4	0	1
Scaling	2	4	1	0
Pigmentation	1	3	1	2
Ulcers	4	0	0	4
Canities of scalp hair	4	0	0	2
Muscle atrophy of distal parts	3	?	4	4
Atrophy of subcutaneous tissue	3	?	3	3
Diffuse arterial sclerosis	3	?	4	0
Bilateral cataract	4	4	0	4
Age of onset	20 to 40 years	3 to 4 years		28 years
Osteoporosis	3	0	2	2
Joint deformity	3	1	3	1
Sexual underdevelopment	4	2	3	3

* Modified from Thannhauser.[3] Symptoms are graded 1 to 4 according to severity; (?) means an equivocal finding.

the premature aging of the vascular tree, (4) the diseased skin, and (5) the cataract.

Early Arrest of Skeletal Growth

The arrest in the development of the bony system is the most striking phenomenon and the first one to appear. The skeletal growth and maturation are recognized to be under pituitary control.[8,9] This premise offers a logical connecting link between pituitary defects and the skeletal changes in Werner's syndrome.

Notwithstanding the fact that thyroid hypofunction, noted in some degree in certain patients with Werner's syndrome, may also cause retarded growth; however, hypothyroidism in the young is associated with a marked delay in the epiphyseal ossification, a relative shortness of stature, and cretinism. When the shortness is caused by gonadal hormones, it is a result of oversecretion; there is early epiphyseal closure, and there are accompanying signs of sexual precocity. A panpituitary syndrome may equally be suspected in growth problems. In this condition the abnormal developments commence promptly, once the maternal hormones have ceased to exert their influence upon the infant. The skeletal maturation suffers a marked delay in the grade-school child, and the hair fails to grow in the axillae and the pubic region in the pubertal teen-ager. There are recurrent attacks of hypoglycemia.[10]

Unfortunately, the patients with Werner's syndrome have not been followed through the most important years of adolescence, and speculation must be based on impressions made in retrospect alone. After the exclusion of other known mechanisms, as elaborated upon, and by placing the arrest in development in the early teens on historical evidence, it can be postulated that the precocious cessation of growth may be brought on through the premature exhaustion of the pituitary growth hormone.

Incomplete Development of Sex Organs

The development of the müllerian and wolffian ducts progresses through early childhood under genetic influences. The anterior pituitary hormone is instrumental in achieving the formation of the testes and ovaries.[11] In the absence of adequate pituitary secretion the gonads remain infantile and do not promote the development of secondary sex characteristics. The failure of the secondary sex characteristics to pass a rudimentary stage in Werner's syndrome is a rather constant phenomenon. It follows the arrest in the skeletal growth in time as well as in importance.

The failure of the deeper voice to develop and the low or raucous tones may be due to inadequacy in the amount of circulating androgens too.

Poorly Formed Muscular System, Absence of Subcutaneous Fat, and Premature Aging of Vascular Tree

There is considerable reduction in the volume of the muscle bundles and in the subcutaneous substance, and there are degenerative changes in the arteries. It is known that the endocrine glands may govern the assimilation of proteins and the retention of nitrogen.[12] Both of these are vital in the nutrition during adolescence when muscles and subcutaneous tissue are built. Both of these are indispensable for the maintenance in good working condition of the vascular tree throughout life.

Gain in the muscular volume and in the subcutaneous padding in some cases of Werner's syndrome while on ACTH, cortisone, thiouracil, or testosterone therapy bears witness that the assimilation of proteins and fats is strongly dependent here upon hormonal components, be it pituitary, suprarenal, thyroid, or gonadal secretions. The same reasoning of faulty hormonal supplies, relative to the changes taking place in the arterial wall, would be incomplete without including the pancreatic hormones. Insulin is often diminished in amount, and diabetes mellitus is a common occurrence in these patients.

Diseased Skin

The skin of these patients is lacking in its natural supports, the muscles and the hypoderm, from within; it is devoid of the protection of regular hair growth and of normal sebaceous secretion from without. It exhibits a thin, shiny surface; it appears devitalized. We could conceive that the enumerated physical and physiologic adversities are severe enough to provoke the atrophy, the ulcers, and the keratoses. Yet, it is a fact that the skin undergoes atrophic changes in the final phases of acromegaly when the pituitary gland reaches its stage of complete exhaustion. Also, similar changes are seen in people of advanced age, when the gonads have ceased functioning, and there are atrophic striae appearing during pregnancy when the hormonal balance is under great and prolonged stress. Such lines of reasoning could ascribe the cutaneous changes in Werner's syndrome to endocrine dysfunction whether we accept the first, indirect, or the second, direct, hormonal mechanism.

Atrophic skin, as an end result, is seen in several dermatologic conditions. The picture found in scleroderma, dermatomyositis, acrodermatitis chronica atrophicans, and Raynaud's disease is not unlike the one seen over the extremities in Werner's syndrome. However, the forces at work in these diseases are of a different nature, and they operate through different channels. A toxic process most likely causes changes in the arteriolar wall in scleroderma; an inflammatory reaction due to infection or allergic factors may prevail in dermatomyositis and acrodermatitis chronica atrophicans; a neurovegetative imbalance with vascular spasm is probably at fault in Raynaud's disease.

Because of the close resemblance in the gross appearance of the skin in scleroderma and Werner's syndrome, patients with Werner's syndrome used to be, and still are, described as cases of "progeria with scleroderma." It is true that scleroderma-like changes are seen in these patients, but hyperkeratotic lesions are not features of scleroderma; deep folds and wrinkles of the face do not occur in acrosclerosis.

The histologic findings emphasize their distinctly different nature:

1. In Werner's syndrome the epidermis is thin with flattening or complete disappearance of the papillary bodies; some hyperkeratosis is always present, and there is increase in the pigment in the basal cell layer. The cutis shows loss of substance; the collagen fibers are reduced in number, exhibit moderate swelling and a somewhat disorderly arrangement, but there are little or no tinctorial changes and especially no vascular changes. The pilosebaceous apparatus is absent, and the sweat glands show degenerative changes.
2. In scleroderma the epidermis shows identical atrophic changes. The examination of the cutis differs from that in Werner's syndrome by revealing no decrease in the number and size of the collagen bundles. The fibers are undergoing homogenization and extensive degenerative changes which can be demonstrated with the basophilic staining reaction. The small vessels show proliferation of the intima, and there is a slight perivascular infiltration by small, round cells. The pilosebaceous apparatus and the sweat glands are missing.

Reed *et al.*[6] add a new point with their recent studies stating that the amorphous material adhering to the collagen fibers, seen under the electron microscope, is "granular and so profuse that it obscures the fibers in Werner's syndrome; the same material has a fluffy appearance in scleroderma."

Cataract

It is an arduous task to attempt to give an explanation for the precocious cataract formation, which is a degenerative process and not an arrest in growth or development. In the absence of any disease an endocrine etiology has to be given first choice in people below fifty years of age. Even in senile cataracts, which appear at a time when the gonads have already closed their life cycle, a hormonal withdrawal may be suspected.[13,14]

The pathology of the lens can be correlated with an interference in the calcium metabolism, relevant of a disturbed parathyroid function. In endocrine cataracts the opacities, mostly saucer shaped, are located under the capsule at the anterior or posterior pole. This picture is unlike the one seen in the aged or in the diabetics suffering with cataracts. The precipitates in the lens, seen after the accidental removal of the parathyroid glands in thyroidectomies or in conjunction with clinical and even subclinical tetany, have established the parathyroid hormone as the prevalent factor in this pathologic development.

While cataract is not a feature in diseases of the pituitary gland, the pathology of the lens in Werner's syndrome fits in with the picture of endocrine cataract. It may very well be due to a parathyroid dysfunction under the influence of a disturbed chief gland.

Anatomic evidence further corroborates the hypothesis that the anterior pituitary gland is the site of pathologic developments. X-ray studies in the living have shown sella turcicae of abnormal size and shape or abnormal clinoid processes. Tumors and cysts of the gland had been found at postmortem examinations.

In contradistinction to the evidence brought forward in the foregoing discussion favoring an anterior pituitary gland defect for the etiology in Werner's syndrome, it could be conceived that a germinal defect acts upon the embryologic layers, the ectoderm and the mesoderm.[15] According to the critics of a glandular etiology, a complex action of the genetic forces on structures during their incipient stage of growth is expressed in the course of time in an altered cycle of evolution and dysgenesis. Such theory, if substantiated, would serve to explain why the epidermis and its adnexae and the lens, deriving from a defective ectoderm, are of inferior quality and consequently wear out prematurely and why the bones, the muscles, the hypoderm, the dermis, and the vascular tree, taking their origins from an equally defective mesoderm, exhibit weaknesses and imperfections and are unable to perform their functions properly.

Relationship to Other Diseases

Before closing a comprehensive discussion on Werner's syndrome, it should be stated that no broad line of demarcation can be drawn between this syndrome and pituitary dwarfism. The postulated common etiologic background knits the short individuals into one close family.

A calculated relationship must also embrace the infant stricken with Hutchinson-Gilford's syndrome.[16] If a transposition of a progeric infant into a young adult were effected, it would be easy to justify the name given to patients with Werner's syndrome, progeria in the adult. The single features are projected proportionately, and the patient's appearance is essentially the same with an early and a delayed onset in the two conditions, respectively. Differences such as the lack of pressure ulcers in the progeric child can be easily understood if one takes into consideration that infants and little children are watched and protected from outside trauma; others, like the cataract in Werner's syndrome, are complications of the third or fourth decades of life, not attained by the fragile progeric infant. Only the hereditary element of Werner's syndrome is missing in Hutchinson-Gilford's syndrome.

While Rothmund's and Werner's syndromes are recognized to be intimately related, they are both designated as progeria in the adult. Further studies and developments may prove just as clearly that the pictures in progeria in the child and progeria in the adult are the same, their frameworks accounting for the narrow margin of difference.

Conclusion

We have to admit that the laboratory tests carried out in patients with Werner's syndrome have shown little deviation from the normal. It is also true that unusual laboratory data are the sole unequivocal expressions of a diseased gland. Yet the lack of such data should not invalidate an impression gained by the sound appraisal of a patient's signs and symptoms. The weighing of the physical findings and the observation of the patient through the years should remain the fundamental diagnostic criterion.

Therefore, with the minor changes in the fields of thyroid, parathyroid, gonadal, adrenal, and pancreatic activities and with the widest and most obvious involvement in the domain of the anterior pituitary gland, it seems to be logical to interpret Werner's syndrome as a primary pituitary syndrome, commanding secondarily a pluriglandular syndrome. The normal appearance of these patients at birth and through the ensuing years is strong proof that the abiotrophic process is not active until a later stage of the individual's life is reached, when hormonal influences alone guide growth and development. The groups of developmental aberrations make it appear as if a defect inherent in the germplasm exerted its influence through the anterior pituitary gland, as if the timetable of life had been advanced by this innate defect. The patient with Werner's syndrome is destined for an early senescence.

Summary

The clinical features of Werner's syndrome are described.

A case history is presented.

A differential diagnosis in the histology between scleroderma and Werner's syndrome is offered.

A primary pituitary gland deficiency as the etiologic factor in Werner's syndrome is suggested.

Attention is called to the close relationship between Werner's syndrome and Hutchinson-Gilford's syndrome.

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Discussion

Joseph J. Russo, M.D., *Albany.*—Drs. Kallos and Ruppe are to be commended not only for exhaustive clinical and laboratory study of their case of Werner's syndrome but also for their convincing elaboration of the etiology of this and related herodofamilial syndromes characterized by premature aging, dwarfism, and cataract. In their detailed discussion they have incriminated the anterior pituitary and have most clearly described the pathogenesis of the main signs of Werner's syndrome on the basis of direct or indirect dyspituitarism. They have with equal success eliminated the other glands of internal secretion as primarily etiologically responsible.

As for Rothmund's syndrome the clinical picture is explained on the same basis, the difference being that the dyspituitarism begins in infancy rather than in the second and third decades, with the consequent development of the cardinal signs at an earlier period than in Werner's syndrome. To me it appears that progeria of children with nanism (Hutchinson-Gilford's syndrome) should be identified clinically and etiologically with Rothmund's syndrome in spite of the absence of cataract in the former. I would not relate cataracta dermatogenes with the above syndromes, particularly because the signs of progeria are absent.

Because of the involved interrelationships of the glands of internal secretion and because primary dysfunction of one of these glands produces disturbances that are similar to those resulting from dysfunction of the others, the clinical dermatologist is venturing far afield as he delves into the amazing complexities of the endocrinopathies. While investigation of such would appear to be the exclusive domain of the endocrinologist, I am more than pleased to conclude that the essayists have invaded this sacrosanct sphere with a most plausible temerity and have emerged with a more than plausible success.

Andrew Kallos, M.D., *Closing Remarks.*—I wish to thank the discussants for their kind comments and interesting remarks. I would like to say a few words about the difficulties encountered in our work on Werner's syndrome.

In patients with Werner's syndrome we are witnessing an infrequent combination, that of hormonal deficiencies and cutaneous abnormalities. An obvious interrelationship existing between the endocrine glands and the cutaneous surface opens up a vast field in which we do possess special knowledge, but still a great deal remains unexplored. While a considerable amount of work has been done in studying skin biophysiology and a great number of experimental studies are in progress, numerous questions are awaiting an answer.

One of the most frequent dermatologic findings associated with glandular syndromes is a change in the hair growth. Hirsutism, an excess in the hair growth which follows the male pattern, can be brought on by adrenocortical hypersecretion or by a masculinizing tumor of the ovaries. The unwanted hairy crop of similar appearance in the postmenopausal female could, however, not be explained through the same hormonal mechanism. Also, there is an increase in the hair over the chest and abdomen, the nose, and earlobes in the postclimacteric male, when the circulating male hormones have already fallen off. Even the commonly used terms of "male pattern" or "sex-linked distribution" in the growing hair have to be explained since the pilosebaceous apparatus, as we understand it today, functions uniformly at the skin level. The governing selective regional impulses must, therefore, emanate from a higher, as yet unknown, level.

The physiochemical mechanism of pigment formation is becoming clearly established, but the hormonal components steering these enzymatic activities have to be decided upon. In uterine chloasma, pigmentation is thought to be of ovarian origin. In pregnancy the burden of responsibility rests with the overly activated pituitary-adrenal system.

In Addison's disease with its very marked pigmentation there is a complete failure of the adrenal gland, and the etiology of this pigmentary change must be sought in the pituitary gland. In the course of primary thyroid disease hyperpigmentation may appear whether the gland is hyper- or hypoactive.

Such contradictory hormonal aspects render our avenue of approach to the study of syndromes with endocrine etiology quite difficult. But the same difficulties should serve as a challenge to the dermatologist and ought to stimulate the investigation of cutaneous changes under hormonal influences.

It is regrettable that infants born with stigmata of endocrine deficiency or developing them during childhood do rarely enjoy the benefits of a dermatologic follow-up. We are referring here to patients with Hutchinson-Gilford's syndrome in particular. Observing the growing individual would allow the dermatologist to gauge these cutaneous changes and to correlate them with the respective state and with the developmental pattern of the abnormal glandular physiology. The morphologic and histologic details in the skin accompanying endocrine syndromes collected and recorded in this fashion would not only widen the scope of knowledge of dermatologists, but this information could also be used with good advantage by internists or endocrinologists in establishing the correct diagnosis in difficult cases.

We hope that these closing words will not be the last words on Werner's syndrome, even though we have to recognize that we are treading here on a steep road with the top of the hill not yet in sight.

Radioactive Iodine and the General Practitioner

With proper emphasis on case selection, radioactive iodine can be used by the general practitioner both as a diagnostic aid and as a therapeutic modality through radioisotope laboratories operated under authorization by the Atomic Energy Commission. Uptake of iodine by the thyroid gland is the same for the isotope as it is for any other iodine atom, so that twenty-four hours after administration of a minute amount orally, the function of iodine uptake by the gland can be specifically measured. Therapeutically, it is given internally in larger quantities, constituting a form of radiation therapy which produces a permanent and usually noncomplicated effect.

Radioactive iodine therapy produces better than 98 per cent desirable results in Graves' disease. In toxic adenoma, control of toxicity preoperatively rates better than 98 per cent in desirable results; while in inoperative cases, 35 per cent of the nodules will shrink. In nontoxic adenoma, the procedure is useful only when the patient is a poor surgical risk due to other causes. Shrinkage of the gland occurs in about 20 per cent of the cases with minimal side effects. A small percentage of cases of carcinoma of the thyroid appear to have been helped, but there has been insufficient time for statistical evaluation.

—Robert W. Willmont, M.S., and Thomas G. Hobbs, M.D., Journal of the Kentucky State Medical Association, December, 1953

Nonrebreathing Systems in Pediatric Anesthesia

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THE administration of general anesthesia should trespass as little as possible on the physiologic reserves of the body. This principle applies to all functions and at all ages. It is a consideration of prime importance in comparing the value of different anesthetic technics and forms the basis of the present discussion of inhalation methods in children. Particular emphasis will be laid on ventilation because a normal respiratory exchange is the foundation of safety *par excellence* in anesthesia.

The respiratory system of children is not only smaller in size than that of adults, but it also has a smaller functional reserve. To illustrate the effect of the smaller anatomic scale, one may cite the well-known fact that in infants laryngeal edema obstructs respiration much more rapidly than in adolescents (Table I). The smaller respiratory reserve of infants is partly a consequence of their high metabolic rate. Although the tidal volume and vital capacity of an infant are about the same as those of an adult relative to body weight, the infant has a metabolic rate, i.e., an oxygen consumption more than twice as high. To satisfy this demand, he breathes two and one-half times as fast (Table II).

The ratio of vital capacity to tidal volume is fairly constant at all ages, being about eight to one. Thus, seven eighths of the vital capacity may be looked on as a reserve available in emergency, although at best barely enough to last two minutes in a healthy adult. In babies, when this reserve is called upon, it is used up more than twice as fast as in adults because of the higher metabolic rate. This may explain why children who hold their breath turn blue more quickly than grownups.

Because their respiratory reserve is so small, it is particularly important to stress the ease with which deficiency of ventilation can be detected and corrected when making comparisons between different anesthetic technics in children. A decrease of 10 cc. in tidal volume must be readily observable. Small though it is, such a decrease in a newborn would represent a reduction of more than 50 per cent in ventilation (Table III).

TABLE I.—EFFECT OF EDEMA ON LUMEN OF LARYNX AT DIFFERENT AGES*

			Area of Lumen		
Sex	Age	Anteroposterior Diameter of Larynx (Mm.)	Normal (Sq. Mm.)	1 Mm. of Edema (Sq. Mm.)	Per Cent of Decrease
Male and female	Infant	7	37	19	49
Male and female	1 year	85	54	32	40
Male and female	5 years	10	75	48	36
Female	15 years	14	147	108	27
Female	Adult	17	216	168	22
Male	Adult	23	399	331	17

* Modified from Eckenhoff.[1]

TABLE II.—RESPIRATION IN RELATION TO BODY WEIGHT*

Age	Relative Weight	Respiratory Rate	Tidal Volume (Cc.)	Vital Capacity (Cc.)	Metabolic Rate (Calories per Kg. per Hour)
Mature infant	1/20	44	19	170	2.3
Premature infant	1/40	58	12	. . .	2.6
Adult (70 Kg.)	1	18	450	3,500	1

* Adapted from Clement A. Smith.[2]

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TABLE III.—Ventilation at Different Ages*

Age	Minute Volume (Ml.)	Respiratory Rate	Tidal Volume (Ml.)
Premature[2]	713	58	12
Newborn[2]	838	44	19
1 day[3]	734	41	19
2 days[3]	757	43	18
3 days[3]	817	40	19
5 days[3]	776	41	19
7 days[3]	943	44	19
9 days[3]	989	49	21
11 days[3]	1,144	47	25
3 months[4]	1,100	45	25
6 months[4]	1,500	41	36
1 year[4]	2,200	37	60
3 years[4]	2,900	30	95
6 years[4]	3,200	27	118
11 years[4]	4,200	24	175
14 years[4]	5,000	22	227
Adult	6,150	15	410

* Compiled from Clement A. Smith,[2] Deming and Hanner,[3] and Brock.[4] Superscript numbers in the age column indicate the specific reference source of the accompanying information.

With this criterion in mind, available methods may be classified into two groups according to the absence or presence of a breathing bag. The first, or no-bag group, consists of open and semiopen methods and includes open-drop and insufflation technics. Open-drop has the advantage of using simple equipment. Insufflation actually reduces respiratory dead space, but neither of these methods allows proper control of ventilation. This criticism is also a partial limitation of Ayre's system. In this group, estimates of respiratory exchange have to be made by watching or palpating the excursions of the chest and abdomen, by feeling the expiratory current of air against the palm, or by the character of the breath sounds. However, such observations are rather crude and may be misleading. Respiratory movements may be present without respiratory exchange. The patient's breathing may be inaudible in the hubbub of the operating room and his airway inaccessible to the anesthesiologist's hand.

In the second group, comprising closed or semiclosed systems, observation of ventilation is greatly facilitated because of the inclusion of a breathing bag. The bag provides a more exact and continuous picture of tidal exchange and enables any deficiency to be corrected at once by manually assisted respiration. However, these advantages are accompanied by a fresh difficulty, that of carbon dioxide elimination. Three methods of dealing with this problem have been developed.

1. In the partial rebreathing system which is favored in England, where Boyle's machine is popular, a high rate of gas flow is maintained to dilute the expired gas. Nevertheless, elimination of carbon dioxide remains incomplete.

2. In absorber systems carbon dioxide is removed by a chemical. In the to-and-fro circuit there is often a quite considerable dead space between the patient's airway and the absorber, enough to contraindicate this technic in infants. Furthermore, in young patients to-and-fro absorption may heat the gases sufficiently to cause hyperpyrexia. Circle absorber circuits are cooler but require valves which may introduce an added resistance. Also the circle of corrugated hose, being elastic, tends to buffer the tidal movements of gas in and out of the bag so that the bag lags behind the chest movements. Where respiration is rapid, this lag could be significant. This also accounts for the rather doughy feel of the circle bag as compared with the to-and-fro.

3. In nonrebreathing systems carbon dioxide elimination is obtained by discharging all the expired gas into the atmosphere. Fresh gas is drawn from the reservoir with each inspiration.

This was the system used in Morton's inhaler at the birth of ether anesthesia in 1846. Morton's apparatus was designed by a physician, Augustus A. Gould.[5] It was physiologically soundly conceived. Unfortunately, Morton's attempt to patent his discovery discouraged others from adopting his apparatus in America and was responsible for the wide adoption of the open-drop method in this country. In England, on the other hand, ether inhalers became the vogue, and many models soon appeared embodying the nonrebreathing principle. At first these were fitted with a mouthpiece. Sibson in 1847 designed a face piece which covered both nose and mouth. Snow introduced a facepiece with built-in valves, and this type of nonrebreathing mask continued in use until nitrous oxide was reintroduced into general anesthesia about 1870. The nonrebreathing system was wasteful of gas. This did not matter as long as atmospheric air was used to vaporize ether, but in 1877 when Clover perfected his nitrous oxide-ether sequence, partial rebreathing was substituted for nonrebreathing because of the need to economize gas. This was done simply by omitting the inspiratory valve leaf.

Nonrebreathing systems remained in dis-

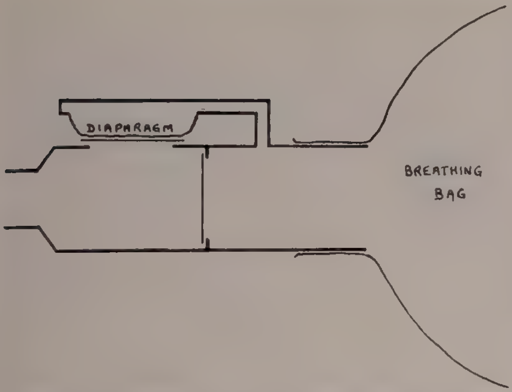


Fig. 1 Diagram of new nonrebreathing valve. Sealing of exit orifice during assisted respiration is automatic.

use until 1948 when Leigh demonstrated their practicability in pediatric anesthesia. Valve assemblies were developed by Digby Leigh[6] and by Stephen and Slater[7] with a dead space less than the oropharynx of a newborn infant and offering negligible resistance to respiration. Attached to an endotracheal tube, these valves provide completely physiologic elimination of carbon dioxide and unlike absorber systems do not cause heat retention. On the other hand, they suffer from certain disadvantages inherent in all nonrebreathing systems. The bag gives direct information about inspirations but none about expiration. A flow of gas at least equal to the respiratory minute volume must be maintained. This is not prohibitively costly in the case of oxygen and nitrous oxide but becomes extravagant with expensive agents like cyclopropane. Further, where flammable agents such as ether, ethylene, or cyclopropane are employed, their free escape into the atmosphere introduces an explosion hazard.

In addition, if an endotracheal tube is used, there is a tendency towards inspissation of any secretions present in the tube. This effect arises especially during controlled respiration and in a narrow tube can cause a considerable degree of obstruction. The explanation seems to be as follows: Gas squeezed into the lung by compression of the bag comes fresh from the tanks on the machine. It contains no water vapor and, therefore, tends to dry the tube and anything present inside it. Although expired gas is saturated with water vapor, it does not completely neutralize the drying effect of inspiration because some of the expired gas escapes around rather than through the tube.

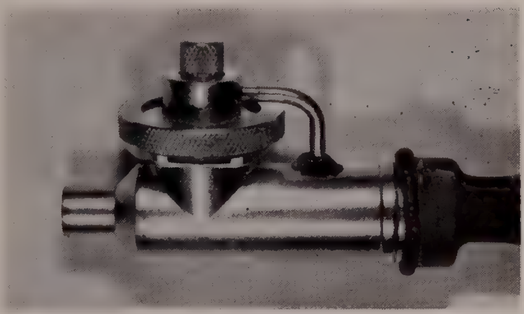


Fig. 2 The valve, as manufactured by Ohio Chemical and Surgical Equipment Co.

Case 1.—A child, three months old, was undergoing an operation for cleft palate. Anesthesia was administered through a nasotracheal tube and nonrebreathing valve. Toward the end of the operation moist sounds were heard, and assisted respiration became more difficult to perform. A suction catheter could not be passed into the trachea. However, the operation was completed without mishap. After extubation a film of dried blood was observed inside the lower end of the tube, reducing the lumen by at least half. Presumably blood from the operative field had trickled around the tube into the trachea, entered the tube from below, and become inspissated in the manner described above. Convalescence was uneventful.

This incident should not be construed as an argument against using assisted respiration in nonrebreathing systems. Safety in this case was maintained only because respiration could be assisted adequately in spite of a partial obstruction in the airway. It should rather be looked on as a warning to remove mucus and the like from the airway as soon as it collects.

It would be desirable to humidify the inspired gases, but the laws of physics do not favor the attempt. The inhaled mixture would have to be warmed to body temperature before being humidified, since cold gas can hold little moisture. Even if this were done, the saturated gas would then have to be maintained at 37 C. throughout its course to the patient. To do this effectively would require rather elaborate apparatus. In practice, obstruction due to dried secretions is unlikely to arise except in the narrowest endotracheal tubes and can be prevented by proper premedication and prompt suctioning out of tracheal moisture.

Nonrebreathing systems have the major advantage of permitting assisted or controlled respiration. On presently available valves, this is done by compressing the breathing bag and simultaneously occluding the exit orifice with a finger. This maneuver occupies both hands of the anesthesiologist and is not easy to perform gently. It may be almost impossible when the patient is face down, as in some neurosurgical procedures.

A valve has recently been described in which these difficulties are overcome.[8] In this valve the exit orifice is occluded automatically whenever the bag is compressed. It consists essentially of a conventional nonrebreathing assembly surmounted by a slack diaphragm (Figs. 1 and 2). Pressure in the breathing bag is transmitted to a diaphragm covering the exit orifice. When the bag is squeezed, the diaphragm becomes distended and occludes the exit. When pressure on the bag is released, the diaphragm becomes slack, and expired gas is allowed to escape. If desired, automatic closure can be interrupted by opening a slot in the diaphragm chamber. The assembly then functions in the same way as any conventional nonrebreathing valve. This valve operates equally well upright, on the side, or upside down. Respiration can be assisted or controlled with the same ease as in absorber circuits and with even greater delicacy because the damping effect of space between the bag and the patient is decreased. The anesthesiologist palpating the bag is able to detect very small changes in tidal volume, a feature of great importance when dealing with tiny patients. With other nonrebreathing valves assisted respiration involves a maneuver requiring a good deal of conscious effort and attention. With the new valve, manipulations being the same as in absorber systems, assisted respiration can be performed indefinitely without fatigue.

The new valve has been in use for a period of one year in over 80 cases of endotracheal anesthesia for major surgery in children, including seven cardiac and eight intracranial operations. Induction was usually performed by the open-drop method using a vinyl ether-ethyl ether sequence. After intubation the nonrebreathing valve was attached and anesthesia maintained with ethylene and ether, or with nitrous oxide and intravenous thiopental-meperidine when nonexplosive technic was required. No anesthetic complications occurred in any of these patients. The youngest was one day old. It is believed this new valve contributed materially to the safety of the patients, as it undoubtedly did to the comfort of the anesthesiologists. The convenience of the valve is especially apparent when access to the region of the mouth is difficult. In operations on the head or neck, draping requirements may bar the anesthesiologist from readily handling a nonrebreathing valve, particularly when the patient has to be positioned face down. In these circumstances assisted respiration with a conventional valve may be something of a gymnastic feat. The new valve allows the anesthesiologist to confine his attention to the bag, which is always easily accessible. The resistance and dead space of the new valve are not significantly different from those of conventional models. This is further attested by the uniformly even course of anesthesia, of which the chart in Fig. 3 is a representative example. Dr. Louis R. Orkin of the Department of Anesthesia, New York University Post-Graduate Medical School, has kindly measured the resistances of the valve at various rates of flow. The figures, which will be published elsewhere, are almost identical with those of a Stephen and Slater's valve.

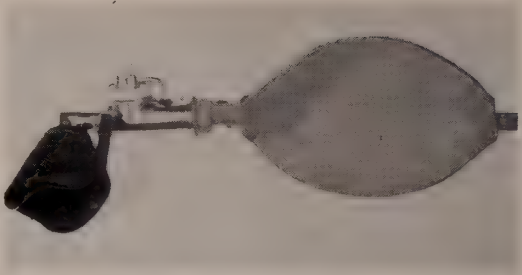
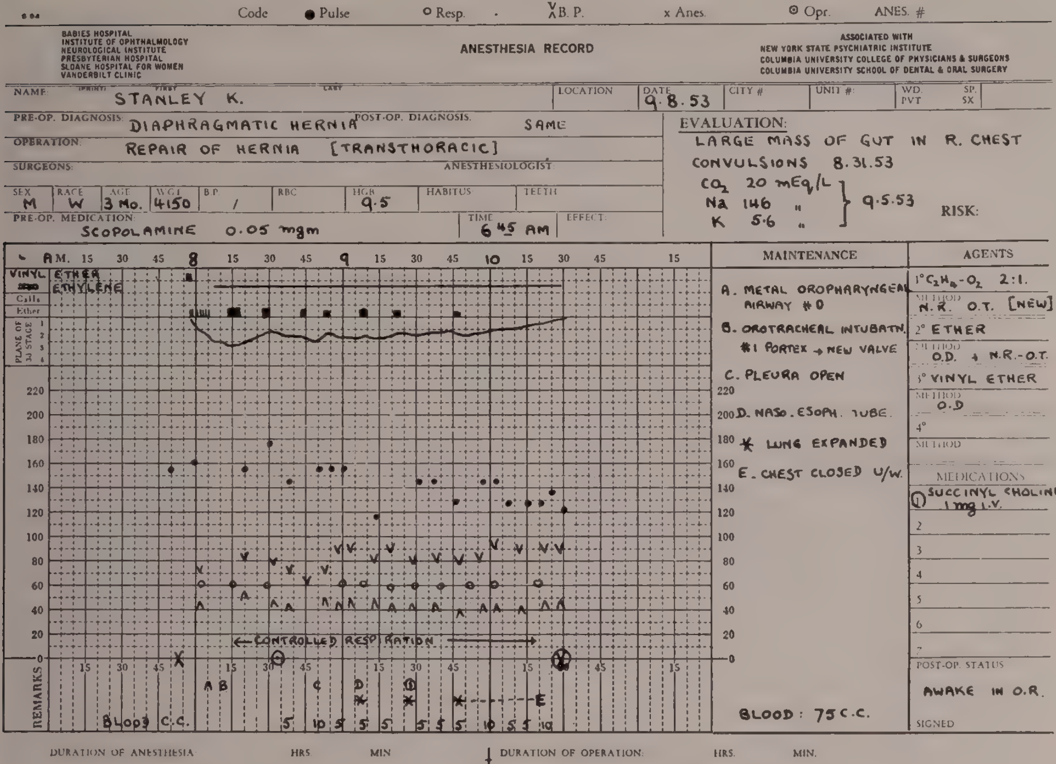


FIG. 3 Mask, valve, and bag form a convenient resuscitator.

For older children and adults the valve can be fitted into a face mask through a Rovenstine angle (Fig. 4). The combination of mask, valve, and bag also constitutes a convenient and efficient portable resuscitator. It can be connected readily to any source of oxygen, and artificial ventilation can be maintained for hours without fatigue. An adult has been carried for eighteen hours in this fashion. Left attached to a patient who is breathing spontaneously, the assembly provides a demand oxygen supply with no possibility of rebreathing.

Summary

Small departures from normal are of relatively greater importance in children than in adults. This is particularly true of respiration. With open-drop or insufflation methods of anes-



Code ● Pulse ○ Resp. $\overset{\vee}{\wedge}$B. P. x Anes. ⊙ Opr. ANES. #

BABIES HOSPITAL
INSTITUTE OF OPHTHALMOLOGY
NEUROLOGICAL INSTITUTE
PRESBYTERIAN HOSPITAL
SLOANE HOSPITAL FOR WOMEN
VANDERBILT CLINIC

ANESTHESIA RECORD

ASSOCIATED WITH
NEW YORK STATE PSYCHIATRIC INSTITUTE
COLUMBIA UNIVERSITY COLLEGE OF PHYSICIANS & SURGEONS
COLUMBIA UNIVERSITY SCHOOL OF DENTAL & ORAL SURGERY

NAME: STANLEY K.
LOCATION:
DATE: 9.8.53
CITY #:
UNIT #:
WD. PVT
SP. SX

PRE-OP. DIAGNOSIS: DIAPHRAGMATIC HERNIA
POST-OP. DIAGNOSIS: SAME
OPERATION: REPAIR OF HERNIA [TRANSTHORACIC]
SURGEONS:
ANESTHESIOLOGIST:

SEX	RACE	AGE	WGT	B.P.	RBC	HGB	HABITUS	TEETH
M	W	3 Mo.	4150	/		9.5		

PRE-OP. MEDICATION: SCOPOLAMINE 0.05 mgm
TIME: 6 45 AM
EFFECT:

EVALUATION:
LARGE MASS OF GUT IN R. CHEST
CONVULSIONS 8.31.53
CO_2 20 mEq/L
Na 146 "
K 5.6 "
} 9.5.53
RISK:

MAINTENANCE
A. METAL OROPHARYNGEAL AIRWAY #0
B. OROTRACHEAL INTUBATN. #1 PORTEX → NEW VALVE
C. PLEURA OPEN
D. NASO. ESOPH. TUBE.
✱ LUNG EXPANDED
E. CHEST CLOSED U/W.
BLOOD: 75 c.c.

AGENTS
1° C_2H_4-O_2 2:1.
METHOD: N.R. O.T. [NEW]
2° ETHER
METHOD: O.D. + N.R.-O.T.
3° VINYL ETHER
METHOD: O.D
4°
METHOD:

MEDICATIONS
① SUCCINYL CHOLINE 1 mg I.V.
2
3
4
5
6
7

POST-OP. STATUS: AWAKE IN O.R.
SIGNED:

DURATION OF ANESTHESIA HRS. MIN. DURATION OF OPERATION: HRS. MIN.

FIG. 4 Clinical course during use of new valve.

thesia, deficient ventilation is not readily detected, and little can be done to improve it quickly. In closed methods, by contrast, the breathing bag allows early recognition and correction of hypoventilation. In the latter group a nonrebreathing technic is preferred for young children because it affords complete carbon dioxide elimination and there is no tendency to heat retention. With conventional nonrebreathing valves assisted respiration may be tiring and occupies both hands of the anesthesiologist. A newly developed nonrebreathing valve enables respiration to be controlled with ease and accuracy using only one hand.

2400 SEDGEWICK AVENUE

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Discussion

Charles M. Landmesser, M.D., *Albany.*—Dr. Fink is to be congratulated for his very interesting paper. He has outlined and analyzed very nicely the various factors in problems of respiratory physiology which are associated with pediatric anesthesia. Surely, we all must be convinced by now that the respiratory reserve is relatively small in children, especially so in infants, and that any method which can help us to detect and correct deficient ventilation during inhalation anesthesia in children is to be welcomed.

Certainly, the open-drop and insufflation technics which Dr. Fink has reviewed have their rightful advantages of simplicity and utility, and for obvious reasons their relatively wide use in pediatric anesthesia undoubtedly will continue. However, even with open methods one wonders how efficiently carbon dioxide is eliminated from a child, or from anyone for that matter, who is breathing spontaneously and without assistance under the influence of general anesthesia. Is it not possible that like the narcotics all general anesthetics depress the respiratory center and raise its threshold to carbon dioxide? If so, then what appears to be a normal degree of respiratory activity for an unanesthetized individual actually may represent inadequate ventilation when it manifests itself during anesthesia. In other words, the same degree of respiratory activity which represents the response of a normally sensitive respiratory center to a normal carbon dioxide tension in the absence of anesthesia may, in the presence of anesthesia, represent the response of a depressed respiratory center to an elevated carbon dioxide tension. Should this prove to be the case and if carbon dioxide retention during anesthesia is not to be tolerated, then it becomes imperative that provision be made for artificial ventilation as an integral part of the maintenance of inhalation anesthesia.

The breathing bag of a closed or semiclosed system provides the means for artificial ventilation, and, as Dr. Fink has mentioned, it also facilitates the detection of ventilatory deficiencies. The various methods of providing for the elimination of carbon dioxide from such systems have been described in detail by Dr. Fink. In addition to the respective shortcomings of each of these methods, as noted by Dr. Fink, I should like to emphasize that hyperpyrexia resulting from closed carbon dioxide absorption systems is due not so much to rebreathing of heated gases per se as it is to the rebreathing of a hot atmosphere saturated with water vapor. Such an atmosphere prevents the evaporation of water from the lungs which normally dissipates about 10 per cent of the body's heat loss in contrast to about 1 or 2 per cent dissipated by warming respired air to body temperature. According to body temperature studies in anesthetized man reported by Drs. Clark, Orkin, and Rovenstine,[a] the temperature throughout a to-and-fro absorption system becomes hotter than that of the exhaled gases. The heat gained by the body is due only in part to the warming effect of the hot gases themselves. Condensation of water within the lung and airway during inspiration when hot gases saturated with water vapor are cooled to body temperature is an even greater factor. Not only does a closed absorption system prevent normal loss of heat and water vapor from the lungs, but due to the chemical reaction between carbon dioxide and soda lime, exogenous heat and water vapor are added to the system continuously. In view of these facts, it is interesting that a note entitled "Water Intoxication in Closed-Circuit Anesthesia" recently appeared in the *Lancet*[b] suggesting that under certain circumstances water retention as well as overheating may lead in extreme cases to convulsions, coma, fever with profuse sweating, and other signs of water intoxication. The hazard of water accumulation due to rebreathing in anesthesia has been stressed also by Cole[c] and mentioned even more recently by Baumgarten and Betcher.[d]

Nonrebreathing systems incorporating a two-way valve and a reservoir bag overcome most of the disadvantages of closed or semiclosed systems, and they still permit assisted or controlled respiration. However, the Digby Leigh and Stephen and Slater type valves require a two-handed maneuver for artificially ventilating the patient, and this puts the anesthesiologist at a technical disadvantage of having no hand free for other important functions such as palpating the pulse, determining the blood pressure, regulating parenteral fluids, recording data on the anesthesia record, etc. Dr. Fink's ingenious modification of the conventional nonrebreathing valve to overcome its one annoying disadvantage should help the nonrebreathing method now to become just as popular from the technical standpoint as it already has become from the physiologic standpoint. The adaptability of Dr. Fink's valve to a face mask, a further advance over the conventional nonrebreathing valves, should make it a very useful nonrebreathing system for many additional anesthetic purposes, such as rapid lung washout of nitrogen during induction, safe and simple administration of agents incompatible with soda lime, and, as Dr. Fink mentioned, efficient portable resuscitation requiring only a source of oxygen.

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[a] Clark, R. E., Orkin, L. R., and Rovenstine, E. A.: J.A.M.A. **154**: 311 (Jan. 23) 1953.

[b] Unsigned Annotation: Lancet **1**: 303 (Feb. 6) 1954.

[c] Cole, F.: J.A.M.A. **151**: 910 (Mar. 14) 1953.

[d] Baumgarten, O., and Betcher, A. M.: Anesthesiology **15**: 188 (Mar.) 1954.

Effect of Long-Acting Local Anesthetics on Nerve Tissue

Drs. Walter Mannheimer, Philip Pizzolato, and John Adriani, of the Louisiana State University, reported in the January 2 issue of the *Journal of the American Medical Association* that some long-acting local anesthetics cause anesthesia by nerve destruction rather than by anesthetic block.

Alcohol, phenol, and Efocaine, and the vehicle in Efocaine were found to destroy both muscle and nerve tissues in both rats and dogs. The effects of injected isotonic sodium chloride solution in controls were benign. Two per cent Xylcocaine, 2 per cent procaine hydrochloride, and Dolamine, caused no damage after intramuscular injection and transient changes on intraneural junction.

Probable Mechanism of Bowel Content Deodorization by Chloresium Ingestion

A Confirmatory Bacteriologic Study

OSCAR J. COREN, FAR ROCKAWAY, NEW YORK, AND ROBERT D. BARNARD, M.D., LAURELTON, NEW YORK

THE chlorophyll-derived alkali dihydroporphyrinates referred to as "water-soluble chlorophyll derivatives" or "chlorophyllins" have a broadly entrenched therapeutic history in Europe following their introduction there by Buergi.[1] American use may properly be credited to Gruskin.[2] Employing the soluble cupri-complex, later designated as Chloresium, he observed rapid abatement of odor in ulcerous lesions. Gruskin attributed this to an "antiproteolytic" and "antiputrefactive" property of the pigment.

While considerable debate attends observations in chlorophyllin pharmacology, that having to do with bowel deodorization in ingesting subjects has been clearly positive. Casual observation of any colostomy subject who, after years as a recluse, can now sit among his friends for an evening at cards or the theater renders clear refutation to isolated chemical experimentation purporting to prove chlorophyllin inert in this regard. There is, of course, adequate evidence that chlorophyllin does effect certain contact deodorizations; present research revolves around the mechanism rather than the fact itself. However, the apparent controversy as to whether chlorophyllin does or does not deodorize bowel content is of direct concern to the physicians because thousands of ileostomy or colostomy subjects are under their supervision. They are acquainted with the real or imagined social handicap under which some such patients might labor, and even if imagined, this handicap poses a definite mental hazard. If some simple modality is availing against this hazard, it deserves exploitation in the patient's interest, and on this basis the probable mechanisms of chlorophyllin deodorization are also of interest because rational medical use of any product is contingent on an understanding of its mechanism.

Chlorophyllin deodorization has variously been ascribed to (1) catalytic oxidation or reduction of volatile odoriferous materials, (2) stoichiochemical combination and fixation of these materials, and (3) "antibacterial" effect wherein the porphyrin is presumed to act like an antibiotic and to vitiate production of odorous materials by bacteria. Pooling of available evidence indicates that these mechanisms are not mutually exclusive and that, in fact, all may be simultaneously operative in varying degrees. However, this report deals with data that support the last as an operative mechanism in the stool deodorization accompanying chlorophyllin ingestion.

The possibility that water-soluble chlorophyllins, although usually devoid of frankly germicidal or disinfectant properties, might alter bacterial metabolism was originally suggested by Gruskin.[2] Credence was given this thought by our own observation that patients ingesting Chloresium would frequently develop a gram-positive, saccharolytic intestinal flora preponderance (lactobacilli and streptococci).[4] Since saccharolytic organisms are dynamically antagonistic to the usual adult flora of gram-negative proteolytics, we had to assume that Chloresium either enhanced the growth of the former, or metabolically curtailed the latter type of bacteria. During the period of observation on patients, two significant reports having direct bearing on the choice of these alternatives appeared in the literature. In 1952 von Wasielewski and Albrecht[5] and in 1953 von Dobenek[6] showed that Proteus vulgaris reverted to an obligate saccharolytic metabolism in the presence of various chlorophyllins. This reversion was accompanied by a cessation of hydrosulfide production, and cultures of this organism which otherwise invariably emit an extremely offensive fecal odor became practically odorless when incorporating chlorophyllin. From von Wasielewski and Albrecht's exhaustive study of the patterns of peptide disjunction in the

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This study was assisted by a grant-in-aid from the Rystan Company, Inc., Mount Vernon, New York.

presence and absence of chlorophyllin, the likelihood that hydrogen sulfide production by P. vulgaris was merely masked by stoichiochemical combination with chlorophyllin was highly remote. That possibility has likewise been ruled out of the in vivo effect of chlorophyllin on bowel proteolytics by our own preliminary experiments in which we have administered 50 to 100 mg. daily to patients. After procuring standardized stool deodorization, the putrefactive adult stool odor could be reinstituted in the presence of the same concentration of chlorophyllin by administration of an opiate or barbiturate. Evidently, efficacy of chlorophyllin deodorization depends on factors within the bowel other than its concentration. Intestinal bacterial metabolic fluctuations may also be involved.

Because of the bearing of the observations of von Wasielewski and Albrecht, as well as those of von Dobenek, on the emerging uses of intestinal flora modifying agents, these observations have been subjected to confirmatory study and extended to other enteric hydrosulfide-producing bacteria.

Experimental Method

Cultures of four hydrosulfide-producing, non-indole-producing enteric organisms were grown on S.I.M. agar and triple sugar-iron agar. The two media were made up to contain 0.0001, 0.001, and 0.01 per cent Chloresium. Transplants were made, slant and stab, of nutrient agar grown strains of Bacillus proteus and Salmonella dysenteria, typhosa and schottmulleri.*

Readings were made of (1) motility, (2) growth, (3) gas and acid, (4) hydrosulfide, and (5) indole production (even though all tested organisms are not ordinarily producers of the last metabolite).

Results

Results are tabulated quantitatively. Aside from a sharp diminution in hydrogen sulfide production by all organisms after the second transplant to those chlorophyllin-containing media with the higher initial concentrations of the porphyrin (0.001 and 0.01 per cent), certain other observations can be made. Chlorophyllin was decolorized by the growth of these organisms throughout the medium in the instances of the two lower concentrations (0.001 and 0.0001 per cent) and on the slants of the highest concentration. In the latter instance hydrogen sulfide (or sulfhydryl) inhibition could be seen best, even though unmodified chlorophyllin was not present (Fig. 1).

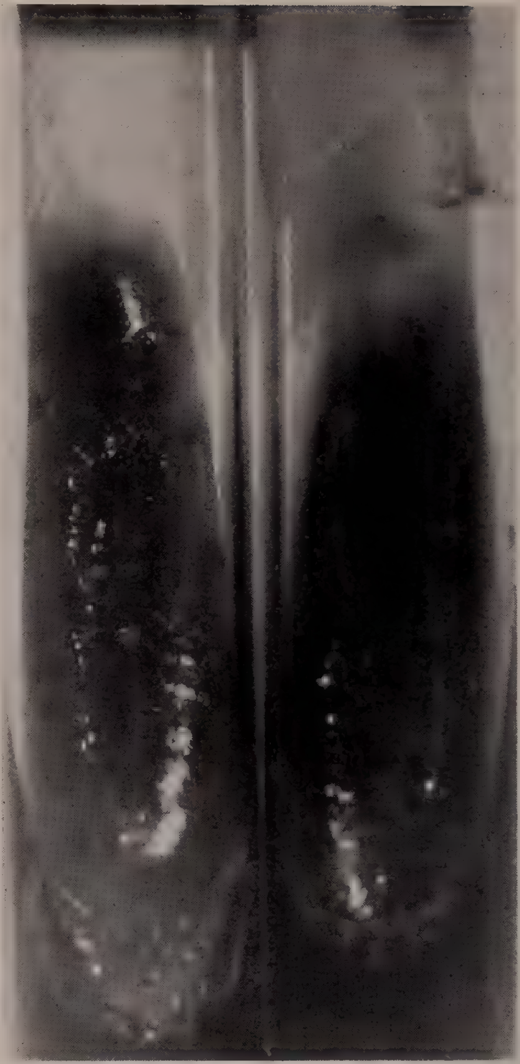

Fig. 1. Slant appearance of cultures on triple sugar-iron agar (*A*) incorporating 0.01 per cent and (*B*) without water-soluble chlorophyllin. The darker appearance of (*B*) is due to the ferric sulfide from liberated hydrosulfide ion. Although having (in this instance) a heavier surface growth, (*A*) is paradoxically lighter than (*B*) because of failure of this ferric sulfide production and the decolorization of chlorophyllin in this portion of the culture.

No overt effect on bacterial growth or other

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* Generously supplied by Dr. Arthur R. English of Charles Pfizer and Company, Brooklyn, New York,

TABLE I.—EFFECT OF CHLOROPHYLLIN ON ODOR AND HYDROSULFIDE PRODUCTION BY ENTERIC ORGANISMS

Organism	Chlorophyllin Concentration	S.I.M. Medium Transplant										Triple Sugar-Iron Medium Transplant									
		0		1		2		3		4		0		1		2		3		4	
		H_2S	Odor	H_2S	Odor	H_2S	Odor	H_2S	Odor	H_2S	Odor	H_2S	Odor	H_2S	Odor	H_2S	Odor	H_2S	Odor	H_2S	Odor
S. enteritidis	0.0	2	3	3	3	2	3	2	3	3	2	2	2	2	4	3	2	3	3	2	3
	0.01			2	0	1	0	0	0	1	0			2	0	1	0	0	0	1	0
	0.001			3	0	1	0	0	0	<1	0			2	1	1	0	2	0	1	0
	0.0001			3	1	<1	0	1	0	0	0			2	1	2	1	1	0	1	0
S. paratyphi B	0.0	3	2	3	2	2	2	3	2	2	2	3	2	3	2	2	2	3	2	3	2
	0.01			3	0	2	0	1	0	<1	0			2	0	1	0	<1	0	<1	0
	0.001			3	0	3	0	1	0	1	0			3	0	2	0	1	0	<1	0
	0.0001			3	1	3	<1	2	<1	1	0			3	<1	2	<1	1	<1	<1	0
S. typhosa	0.0	2	2	1	2	2	2	1	2	1	2	2	2	2	1	2	2	2	2	2	1
	0.01			2	0	1	0	<1	0	0	0			2	0	1	0	1	0	0	0
	0.001			2	0	2	0	1	0	1	0			2	0	1	0	1	0	<1	0
	0.0001			2	0	2	0	2	0	1	0			2	0	2	0	1	0	1	0
P. vulgaris	0.0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	0.01			3	0	3	0	2	0	1	0			4	0	2	0	2	0	1	0
	0.001			4	0	3	0	3	0	1	0			4	0	3	0	1	0	1	0
	0.0001			3	1	3	<1	3	<1	2	<1			4	1	2	1	2	0	2	0

parameters than hydrogen sulfide production was found; it appeared that "swarming" by Proteus was less evident in the medium containing 0.01 per cent chlorophyllin.

Reinoculation of each organism from chlorophyllin-containing medium back to the original chlorophyllin-free medium after four further transplants evoked usual hydrogen sulfide production.

Cultures of each of the four enteric organisms tested had a "fecal" odor when not containing chlorophyllin. This was most obnoxious in the instance of P. vulgaris cultures, but in no case was indole detected.

There was *entire absence of any detectable odor in any culture containing chlorophyllin*, even in those instances (first and second chlorophyllin transplants) where hydrogen sulfide production could be detected by the ferric indicator incorporated in the medium used, as well as in those instances where the pigment had been decolorized by bacterial action.

Cultures of Endamoeba histolytica* did not develop a putrescent odor when grown on horse serum, rice powder agar containing 0.001, 0.01, or 0.1 per cent chlorophyllin.

Since these cultures are never bacterially sterile, it was not feasible to determine the origin of the odor in chlorophyllin-free medium, but the abeyance of odor production in the presence of chlorophyllin was as striking as in the case of the enteric bacteria.

Comment

Evidently, deodorization by chlorophyllin of cultures of enteric organisms cannot be accounted for entirely on the basis of stoichiochemical combination. The iron content of either of the media employed is capable of such combination with 3,000 times the amount of hydrogen sulfide that could theoretically combine (stoichiochemically on a 1:1 basis) with the chlorophyllin content of the least supplement of pigment added to any culture; yet deodorization was complete without evident saturation of the iron in all instances. More remarkable was the observation on completion of deodorization by decolorized chlorophyllin; this argues against the necessity for intactness of the chlorophyllin molecule to effect deodorization. With the postulation by Mitchell that chlorophyllin deodorization of volatile sulfhydryls is a catalytic process, there is, of course, no explanation of the reactive groups involved so that the ultimate mechanism of loss of odor in cultures manifesting hydrogen sulfide production remains inexplicable.

In those instances where the internal (ferric) indicator shows the absence of sulfhydryl production, the deodorization mechanism can reasonably be ascribed, in part at least, to a change in bacterical metabolism induced by the presence of the pigment. Here, again, responsible reactive groups are unassignable, but the nature of the action definitely classifies water-soluble chlorophyllin as an "antibiotic." Definition in that category is as difficult as definition of "antibiotic," but descriptively chlorophyllin possesses "antibiotic" attributes; it can change the metabolic orientation of certain organisms since it is devoid of "protoplasmic poisonous" properties.

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* Generously supplied by Dr. B. H. Kean, New York City.

This raises an interesting point with regard to the reputed action of antibiotics in general. Classic antibiotics have been screened on the basis of their bacteriostatic effect. The presence or absence of growth-inhibiting effects or concentrations were held to determine clinical utility of the antibiotic. Thus, streptomycin, which ordinarily permits growth of micrococci and other nonmycobacterial gram-positive organisms, was ruled dogmatically to be clinically inapplicable against infections by the latter. This deduction has not been borne out by clinical experience. The discordance between in vitro and in vivo "efficacy" as ordinarily determined is pointed up by recent reports on the newer antibiotics. Staphylococci originally susceptible to griseomycin, on acquiring resistance, became coagulase negative and more exacting in growth requirements.[7] But 200 mg. per ml. would not actually restrain growth.

In other words, the antibiotic's effect on these bacteria was not to arrest their growth; it was to alter their metabolism. Was pathogenicity altered? And is it possible that screening procedures for elucidating promising antibiotics should consist of a study on the metabolic alteration in the test organism rather than on growth inhibition? These questions deserve attention.

Just what portion of colon content deodorization is to be ascribed to this metabolic alteration after chlorophyllin ingestion remains unclear. The culture medium system of lower bowel content is much more complex than that of the in vitro system studied. Yet it is remarkable to find that 0.001 per cent chlorophyllin here abolishes all odor, while a sensible reduction is accomplished, even in the case of proteus, by one part per million of the porphyrin. These figures are instructive. Considering the lower bowel contents to be about 1 quart, an effective deodorization concentration would necessitate 10 mg. of dispersed chlorophyllin therein. Clinical experience indicates that about five to ten times this amount must be daily ingested by the patient on an ordinary diet to effect deodorization, and it may be presumed some is lost on its way to the colon by enteric absorption which is now known to occur in the case of the water-soluble chlorophyll derivatives.

In a recent report on the physical chemistry of chlorophyllin solutions and films as to their deodorizing properties, Hainer,[8] by calculations around colligative properties, has concluded that the pigment displays surface adsorption; it is, in fact, a "super-charcoal," effective in water solution or in films. Its colloidal dispersion in either instance offers an enormous surface for such adsorptive phenomena. In addition, it is a polyelectrolyte or, in more familiar terms, a "micro-ion exchange resin." This feature of chlorophyllin constitution can readily be adapted to explain the heparin-like qualities it exhibits, both in vivo and in vitro,[9] heparin also being a polyelectrolyte. Hainer's finding promises to exlpain many hitherto puzzling effects of these pharmacodynamically active pigments.

The present report merely confirms the results of certain phases of bacterial metabolism rendered by prior investigators and lends credence and rationality to those reports on actual bowel deodorization in ingesting subjects with which the literature is replete.[10–12]

Summary and Conclusion

Because of the importance to the colostomy or ileostomy patient of bowel content deodorization by ingested "water-soluble chlorophyll derivative" preparations and to the physician of its mechanism, a study was undertaken to examine a theory that this deodorization is due to a change in enteric bacterial metabolism.

Four ordinary hydrogen sulfide-producing species were found to curtail this production when grown in the presence of the order-of-magnitude concentration of chlorophyllin extant in the bowel after ingestion of bowel deodorant doses. One mechanism of this deodorization is, therefore, agreed to be due to a change in bacterial metabolism wherein certain enteric organisms revert from a status of hydrogen sulfide producers to nonproducers.

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Addendum

After this manuscript was submitted, several reports extending its implications have come to our attention. Zirm and Kilches[a] demonstrated a sharp drop in enterogenous indicanemia and indicanuria following chlorophyllin ingestion by humans. They explain this by reversion from indole production of intestinal bacteria. Takeda and his coworkers,[b,c] in the magnificent researches opening a new field, found Pseudomonas fluorescens, a human intestinal variant of "B. pyocyaneus," to elaborate a material *biologically indistinguishable from ACTH*. Nelson, O'Connell, and Haines[d] found this "adrenocorticotropin" in certain antibiotic-residue commercial animal feed supplements, in a strain each of lactobacilli, Escherichia coli, B. subtilis and licheniformis, and in serratia marcescens. These are indole nonproducers, and all may be human intestinal tract commensals. Serratia (B. prodigiosus), classified by some among the enterobacteracae, has, curiously enough, long been a constituent of the Coley vaccine developed for the treatment of certain neoplasms.

ACTH-like activity has recently been demonstrated on hypophysectomized rats after either oral or parenteral administration of that particular streptomycin fermentation residue originally reported[e] as yielding "adrenocorticomimetic" and "corticotherapeutic" effects in humans. Systemic absorption from the bowel of bacterially derived adrenocorticotropins may also be presumed. That this or similar contributions from fecal bacteria are not purely passive flows from the results of an ancillary study.[f] Weanling rats on a milk diet were not protected from aminopterin poisoning by allowing autocoprophagy but were so protected by permitting access to the feces of nonpoisoned rats or to those of aminopterin-fed rats simultaneously receiving protective doses of oral chlorophyllin. Rats receiving aminopterin and not permitted to heterocoprophagize are protected by chlorophyllin, Terramycin, or antibiotic-residue ingestion.

At least one explanation seems forthcoming for "hormonal" effects long reported to accompany antibiotic administration and for whose detailed accounts we must properly credit Blaich and his coworkers[g] in Germany. Domestically, in spite of our propensities for antibiotic overtreatment, or possibly because of them, antibiotic-induced intestinal population changes have received scant attention and then only when moniliasis or staphylococcus enteritis emerged. This narrowness is unproductive, first, because the "adrenocorticotropin elaboration" theory does not as yet explain all the effects we have noticed from intestinal flora modification, and, second, because antibiotic therapy will not approximate rationality until these effects are elucidated. Obviously the fact that certain intestinal saccharolytic strains of bacteria may elaborate "ACTH," while obligate proteolytics appear not to do so, cannot be lightly dismissed in view of the additional fact that the odorless stool attendant on mycin or chlorophyllin ingestion has a predominantly saccharolytic bacterial content.[h] Pronounced corticomimetic phenomena have not followed this reversion in healthy subjects; they have in subjects with serious adaptation disease.[i] Perhaps it should be insisted that fecal flora reversion, such as is carried out for colostomy deodorization, be medically supervised.

Philosophic connotations of an adrenocorticotropin from intestinal bacteria are still conjectural but nonetheless interesting. Peptic digests of pituitary ACTH have been known to retain activity, and some recent studies indicate that the active peptide is much smaller than was thought to be the case formerly. That some mammals may require an intestinal-bacterially synthesized, particular peptide linkage as the prosthetic group for the final, hypophyseal elaborate may not be out of keeping with other, known examples of "vitamin"-hormone relationships. Pending the outcome of current investigations around the last point, this addendum is intended to keep those interested abreast of a rapidly evolving series of developments. It would at the same time be incomplete were we not to confess that whatever minor impellation we may have given this evolution was mainly due to the broad general biologic knowledge, the unique combination of both inductive and deductive reasoning powers, and the tactful guidance of Dr. Elliott R. Weyer.

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Teratomas of the Lumbar and Sacrococcygeal Regions

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LUMBOSACRAL teratomas are seldom encountered among the teratomata of the lower spine. Although there have been a great many reports of single cases, of several cases, and of large series of cases of sacrococcygeal teratomas, the incidence of teratomas in the lumbosacral region is strikingly low. Thus, the occurrence of a lumbosacral teratoma together with unusual clinical and pathologic features warrants its description.

In the process of reviewing the literature on the subject of lumbosacral and sacrococcygeal teratomas some interesting facts were noted regarding the sex distribution and origin of teratomas in this area, and, consequently, these observations are presented.

Teratomas in the Literature

Upward of 182 cases of sacrococcygeal teratomas (as defined by Ewing[1]) were found by the author in a search of the literature which is so diversified in classification as to make an exact tabulation of all the teratomata of the sacrococcygeal region beyond the scope of this publication. These published cases of teratomata have included the postsacral, presacral, sacrococcygeal, retrorectal, and retroperitoneal types and, moreover, have also included dermoids, epidermoids, pilonidal sinuses, fetal inclusions in various stages of development, and other kinds of tumors. (The generic term "teratomata" is used in this report to designate this list of tumors and defects.) Large compilations of sacrococcygeal teratomas have been made.[2–9] In addition to the 182 or more cases of sacrococcygeal teratomata, six cases of teratomas in the lumbosacral area have been reported by Steinke,[10] Frazier and Allen,[11] Sonntag,[12] Aloi,[13] Bucy and Haymond,[14] and Parini.[15] Lumbosacral teratomas occurring intradurally have been reported more frequently by Kubie and Fulton,[16] Hosoi,[17] and Ingraham and Bailey.[18] There are but few records giving the incidence of the occurrence of sacrococcygeal teratomata. Their rarity is emphasized by the figures of Calbet[19] who stated that sacral tumors (all varieties) occurred once in 34,582 births and of Whittaker and Pemberton[20] who noted that sacral tumors occurred in one out of every 40,000 registrations at the Mayo Clinic.

The author has observed that of the extradural sacrococcygeal teratomas reported in the literature, the overwhelming majority have been so large and so obvious, weighing from 100 Gm. to 31 Kg., as to make their early removal desirable, preferably in infancy, from the cosmetic as well as the medical aspect. However, if teratomas are small enough and not intraspinal, their presence either pre- or postsacrally may give rise to minor symptoms only or may remain virtually symptomless and thus coexist unsuspected with the entire life of the host. Thus, it is the opinion of this author that these teratomatous growths occur much more frequently than the above incidence figures indicate.

Origin of Teratomas

Most authorities agree that these congenital teratomas arise during the development of the embryo in the third month of fetal life or later and are almost always in the midline of the body, but few agree on their origin. The theories which have the greatest number of adherents are those which state that teratomas originate from (1) budding of embryonal tissues; (2) totipotent aberrant or misplaced sex cells; (3) multipotent material of distinct regional stamp and reproducing the organs of this region; (4) fertilized ovum attached to host; (5) the proximity of the fovea coccygea and the coccygeal vestiges of the

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neural canal, the neurenteric canal, and the postanal gut in the embryo providing the opportunity for anomalous formations and possible formation of teratomas; or (6) isolated nearly totipotent blastomeres (such isolated blastomeres have as yet not been found) or from early budding of the blastoderm. Not one of these theories and no experimental work in the field of teratology has produced a conclusive answer as to how these teratomas originate.

Sex Susceptibility of Teratomas

It is interesting to note that the ratio of females to males is 100 to 43 in the 143 cases of teratomas where the author found the sex specified. These figures have been derived from cases reported all over the world for the past sixty years and include all teratomas in the lumbar-sacrococcygeal region exhibiting tissues or organs derived from all three germ layers. Because the method of reporting cases is truly random, the probability of the susceptibility can be calculated. For 100 females and 43 males the probability is 99.6 per cent that there is a sex bias and only 0.4 per cent that there is no sex preference.[21] Hence, the evidence is quite conclusive that there is a sex differential in susceptibility of large teratomas in the lumbar-sacrococcygeal region.

In reviewing the data one is instantly struck by the fact that these figures are for *large* teratomas in the females as against *large* teratomas in males in the lumbar-sacrococcygeal region. This being the case, where are the reports for teratomas of smaller size in either sex? Do they occur? All nature proceeding in an orderly fashion, mightn't it be expected that there would be many more small teratomas than the large teratomas which are being consistently reported? In this respect it would be of interest to report the occurrence of small size teratomas.

Using the data now available, one might postulate two lines of development for this situation: (1) that teratomas occur more frequently in females than in males, and (2) that the teratomas originate with equal frequency in both sexes but ultimately grow more rapidly, attaining a larger size, with greater frequency in the female than the male. One may conjecture that the maternal hormones may have a different effect upon a female fetus than upon a male fetus and that the rapidity of growth of the teratoma may be influenced by the maternal hormones.

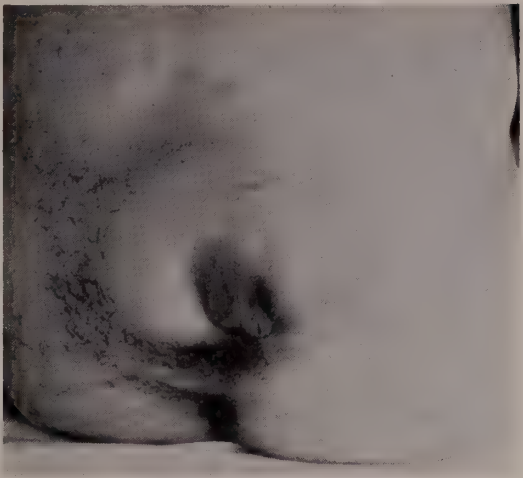

FIG. 1. Lumbosacral teratoma.

Case Report

A fifty-five-year-old white man complaining of ulcers of the right foot and ankle of three weeks duration was admitted to the hospital on December 8, 1948. These ulcers first appeared in 1943 together with numbness and some loss of feeling in the distal portion of the right leg and foot. The ulcers recurred once in 1944 and twice in 1948, the last recurrence being the cause of the patient's hospitalization. The lesions appeared as vesicles which developed into superficial ulcerations within twenty-four hours and healed in three to seven weeks on topical medication. The patient stated that he did not recall any injury to the foot or leg.

The physical examination was generally negative except that between the levels of the fourth lumbar and first sacral vertebrae there was a mass, 12 cm. in diameter, with a chronically draining sinus which had been present since birth (Fig. 1). The patient stated that the secretion which started about the age of twenty-four years became more copious during coitus. The patient had nocturia three to five times a night without other urinary disturbances. Three trophic ulcers were present on the distal portion of the right leg and foot and one gangrenous ulcer on the plantar surface between the fourth and fifth toes. The neurologic examination revealed that the cremasteric, patellar, and upper extremity reflexes were normal while the abdominal, Achilles, and plantar reflexes were absent bilaterally. Sensation was normal in the left lower extremity but diminished on the right from the gluteal fold to the midleg posteriorly and from the knee to the midleg anteriorly. It was completely absent from the midleg to the tips of the toes anteriorly and posteriorly.

The roentgenologic examination of the vertebral column revealed spina bifida occulta of the fifth

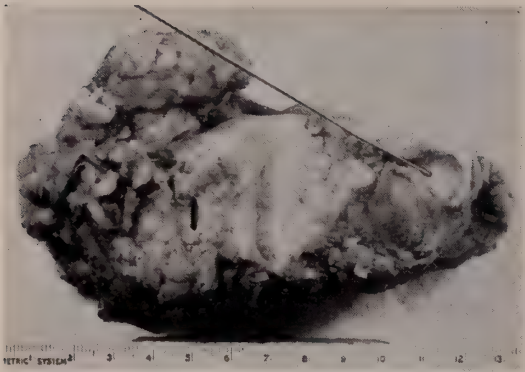

FIG. 2. Postoperative specimen of the teratoma. The probe is in the sinus tract of the trachea.

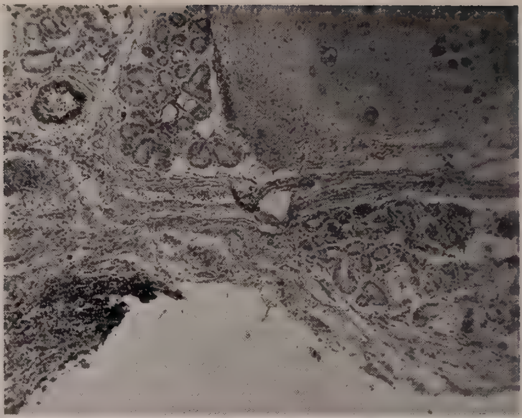

FIG. 3. Trachea from teratoma illustrating adult type of tissue.

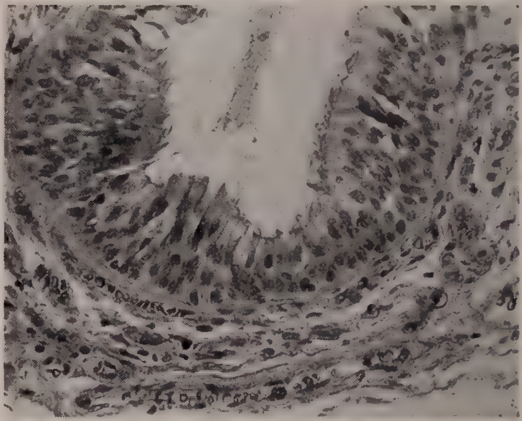

FIG. 4. Ciliated columnar epithelium interspersed with goblet cells lining some of the cysts in the teratoma. (Hematoxylin-eosin stain)

lumbar and first sacral vertebrae with sacralization of their left lateral masses. The laboratory studies showed that the erythrocyte count was 4,000,000 per cu. mm.; the hemoglobin 10.5 Gm. per 100 ml. (67 per cent); the leukocyte count was 4,600 per cu. mm. with a differential count of 55 per cent neutrophils, 36 per cent lymphocytes, 3 per cent monocytes, 5 per cent eosinophils, and 1 per cent basophils; no abnormal cells were seen. Fasting blood sugar was 91 mg. per 100 ml. Blood Kahn was negative. Other blood tests were normal. Urinalyses gave normal values except for numerous white blood cells per high power field.

A clinical diagnosis of teratoma of the lumbosacral region associated with spina bifida occulta, meningocele, and trophic ulcers of the right leg and foot was made.

An operation was performed on January 6, 1949. The mass and accompanying meningocele were dissected through the defect in the upper sacral segment into the canal, ligated at the base, and excised. Recovery was uneventful. The ulcers became almost completely healed; the urine became free of pus cells, and some sensation returned to the right leg and foot. The patient was discharged on January 25, 1949. At the follow-up examination three weeks later the ulcers were healed.

PATHOLOGIC FINDINGS

Gross Examination.—The specimen was an ovoid, trabeculated, rubbery mass, measuring 13 by 8 cm., embedded in fat and subcutaneous tissue. Yellowish nodules, fragments of cartilage, and several small grayish cysts adhered to the surface, one cyst being embedded in the mass. Some cysts were lined with cartilage, while others were lined with a thin, smooth, glistening membrane, and all were filled with turbid, mucoid material. These cysts were continuous with a cartilaginous cylinder resembling an imperfectly developed trachea traversed by a centrally placed capillary sinus tract 1 mm. in diameter ending distally in a bulbous space 1.5 cm. in internal diameter simulating larynx (Fig. 2). This cartilaginous cylinder was covered with a thin, wrinkled, and darkly pigmented skin and projected, appendage-like, for a distance of 5 cm.

Microscopic Examination.—Sections revealed dense, fibromuscular stroma with numerous cysts, glands, cartilage, vascular channels, nerve bundles, and fat (Fig. 3). The cysts, bronchi, and trachea were lined with several layers of columnar to squamous epithelium supported by a thin basement membrane. In some places the columnar cells were ciliated and were interspersed with goblet cells (Fig. 4). The cells had a pink-staining cytoplasm and oval nuclei with a moderate amount of chromatin. Within the submucosa there were diffuse and focal collections of lymphocytes. The lumina were filled with serum and desquamated epithelial cells. The trachea was made up of well-formed, adult, hyalin cartilage and mucous glands. Other glands, scattered through the stroma, varied in size and structure. Some resembled thyroid tissue in that they were lined by cuboidal to tall columnar epithelium and were filled with colloid; others resembled prostate lined by a single layer of tall columnar mucous-containing epithelium. Some of the glandular structures simulated imperfectly formed intestinal tissue, while others resembled seminal vesicles. Several of the blood vessels were thick walled; others were angiomatoid and were lined with flattened endothelial cells. The nerve trunks were in conglomerate bundles and were embedded in fat. The subcutaneous tissue contained an epidermoid cyst which was lined with a thin layer of squamous epithelium and was filled with keratin. The overlying skin was lined with a thin layer of epithelium, the basal layer of which was pigmented with melanin.

Comment

The microscopic picture of this extradural, extramedullary, postsacral tumor of the lumbar region is that of a disorderly arrangement of embryonal and adult tissues derived from all three germinal layers: nerves, epidermoid cyst (ectoderm); bronchial epithelium (entoderm); cartilage, muscle (mesoderm). The tumor can be classified as a "sacral teratoma," a bulky mass, a complex tumor derived from all three germinal layers lying on the dorsal surface of the sacrum in which there are "definite organs or their rudiments which cannot well be referred to neighboring structures."[1] It is easily distinguished from Ewing's "sacrococcygeal teratoid tumors"[1] which are highly fatal, *presacral* complex tumors containing recognizable structures, but not organs, derived from all three germ layers. However, "sacrococcygeal teratoid tumors" are defined by many other authorities as those derived from two or even one germinal layer or derived from all three germinal layers but manifesting evidence of only one or two layers due to overgrowth or suppression of growth of one or two layers. Ewing[1] also regards the term "teratoid" as being applicable to designate a tumor less complex than a "teratoma."

The teratoma presented in this publication was predominantly solid, being only about one-tenth cystic. In its outward appearance it resembled the male genital organ. (The patient had always thought that he had been endowed with two genital organs!) This impression was suggested by the shape of the teratoma which was that of an ovoid with a projecting hollow cartilaginous tube covered with skin (Fig. 1). Macroscopically, the ovoidal portion contained a grapelike cluster of small cysts at the base of the cartilaginous tube giving the impression of a bronchus split into many small sacs filled with mucoid material. The cysts were lined with stratified squamous epithelium which gradually changed to ciliated. In other areas ciliated epithelium appeared to be lining a structure resembling a seminal vesicle. Since ciliated epithelium also lines many canals in the embryo, it is generally found in teratomas of the lumbar and sacrococcygeal regions which often contain embryonal tissue.

Lumbosacral and sacrococcygeal teratomas can give rise to diverse symptoms. In the case presented by the author, the symptoms were neurologic and hormonal. Since the spinal cord has reached its maximum length at birth, any further growth of the vertebral column must cause the spinal cord to recede cephalad. The lumbosacral teratoma described in this paper being extramedullary and extradural remained in the same position as growth proceeded, causing traction on the dura and probably compression of some nerve roots. Long-continued interference with or pressure on the spinal cord or on the nerve roots may finally cause motor and sensory disturbances and trophic ulcers. Thus, the anesthesia and the trophic ulcers of the lower extremities present in this patient may have been due to a slow process, taking years to develop, of tensing and stretching of the meninges with resultant compression of the nerve roots. That the anesthesia and ulcerations were greater on the patient's right side can be accounted for by the tumor being attached to the dura by a long pedicle on the right side. From the hormonal aspect of the symptoms, the teratoma with its glands and various types of cells, all having the same nerve and blood supply, could easily react to nervous or hormonal stimuli and consequently produce secretion. The patient thought that this secretion appeared in greater quantity during sexual excitement.

Summary and Conclusions

A case of an extradural, extramedullary, dorsal lumbosacral teratoma in an adult associated with spina bifida and meningocele, causing leg anesthesia and trophic leg ulcers, has been presented. While this appears to be the seventh case of a lumbosacral teratoma reported in the literature, it is inferred that neither lumbosacral nor sacrococcygeal teratomas are as rare as supposed. The literature on lumbosacral and sacrococcygeal teratomas has been reviewed and discussed.

From the reports of 143 cases in the literature it was calculated that there is a decided preference for large teratomas in the female as against large teratomas in the male in the lumbar-sacrococcygeal region and that this sex bias is statistically significant.

Inasmuch as cases of small-sized lumbar-sacrococcygeal teratomas are now conspicuously lacking in the literature, their occurrence should be reported.

The author wishes to acknowledge with thanks the aid of Dr. Bernard Epstein, assistant professor of mathematics at the University of Pennsylvania, who kindly analyzed the data on the sex distribution of teratomas in the lumbar-sacrococcygeal region.

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Antibiotic Combinations and Resistance to Antibiotics

Observations on the development of resistance by strains of Staphylococcus, Enterococcus, and Streptococcus viridans to penicillin, streptomycin, chloramphenicol, Terramycin, and erythromycin show that development of resistance may be depressed or delayed but not prevented.

Resistance develops most regularly and rapidly to streptomycin. Erythromycin and penicillin run a close second, except in some of the streptococcal strains, which show only small increases in resistance to penicillin. Although resistance to Terramycin developed quite regularly, it was usually of a degree lower than streptomycin, erythromycin, and penicillin. Repeated exposures of the bacterial strains to chloramphenicol results in slight or no increase in resistance.

Subcultures in pairs of antibiotics result in increased resistance but of a lower degree than that noted when the strains are exposed to a single antibiotic agent. If resistance to one agent was relatively high and to the other relatively low, when the two are mixed the development of resistance corresponds more nearly to the latter.—*Samuel S. Wright, M.D., and Maxwell Finland, M.D., Journal of Laboratory and Clinical Medicine, December, 1953*

Appraisal of Methium Chloride with Rauwolfia in Ambulatory Hypertensive Patients

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PRESENT-DAY treatment of essential hypertension is based on the hypothesis "that a decrease of blood pressure to or towards normotensive levels is desirable and beneficial."[1] Great interest was aroused in hexamethonium compounds when Paton and Zaimis[2] in 1948 pointed out the possibility of their clinical usefulness in hypertensive and vascular disease. This interest has resulted in the accumulation of a rather extensive literature. The majority of investigators found them to be the most powerful and, by comparison, the longest lasting agents in the treatment of hypertension. This is particularly true in the problem of treating the premalignant and malignant stages of the disease. There can be no doubt as to the ability of hexamethonium salts, administered parenterally or orally, to lower blood pressure. However, despite their unquestioned activity they do not constitute the theoretically ideal antihypertension agent, applicable in all cases. Many investigators have observed that none of the various hypotensive agents is wholly specific against the apparently multiple causes of essential hypertension. For better results, especially in the more resistant cases, hexamethonium is employed as the keystone of treatment in combination with other hypotensive drugs. According to Wilkins[3] "there seems little question that hypotensive drugs and, for that matter, sympathectomy and dietary treatment, are more effective in combination than alone."

In view of these observations the present study of the treatment of ambulatory patients with essential hypertension was undertaken for the purpose of evaluating the efficacy of a combination of two hypotensive agents, i.e., Methium Chloride (hexamethonium chloride) and Rauwolfia serpentina. Pharmacologically, hexamethonium's ability to lower the blood pressure is due to its blocking the transmission of nervous impulses through the sympathetic ganglia.[4] On the other hand, Rauwolfia presumably has a central "sympatholytic" action.[5] Thus, two distinctly different but supplementary mechanisms are utilized to effect a reduction in blood pressure levels.

In the initial stages of this investigation the two drugs were given separately. As the study progressed, it was decided to incorporate the drugs into one tablet in order to simplify their administration. The resultant compound was designated as W1022.* Each tablet contained 125 mg. of Methium and 25 mg. of the whole powdered root of Rauwolfia.

Clinical Material and Procedure

The findings in this study are based on observations of the effects of the administration of compound W1022 to a total of 14 patients with hypertensive disease of varying severity over a period of ten to forty-two weeks. They were referred to the outpatient Hypertensive Clinic of the Methodist Hospital from the medical and cardiac outpatient services. All were females. The ages ranged from forty to eighty-three years. The average control blood pressure in the supine position was 196/111 mm. Hg. A number of these patients had been under observation for a year or more and had received various forms of medical treatment for hypertension. All carried on their usual activities.

The diagnosis was established by conventional examinations. These comprised a thorough history and a complete physical, including eyeground examinations. The laboratory routine included a complete blood count, urine analysis, and blood urea nitrogen determination. To ascertain the status of kidney function, the phenolsulfonphthalein excretion and the Fishberg concentration tests were performed. In addition, each patient was examined fluoroscopically and received a roentgenogram of the chest and an electrocardiogram.

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* Compound W1022 was supplied through the courtesy of Warner-Chilcott Laboratories.

The control blood pressure for each ambulatory clinic patient was calculated by averaging the basal blood pressure figure and those obtained over a period of three to four weeks prior to the administration of compound W1022 while on a placebo regimen.

The basal blood pressure figure was obtained by having the patient remain at bed rest for forty-eight hours prior to the clinic appointment. On arrival at the clinic the patient rested one hour in the supine position. Five blood pressure readings one-minute intervals were then taken. The lowest reading was considered to be the basal blood pressure.

In computing the control blood pressure for patients who had been on various other forms of therapy for more than a year, a lower reading was chosen if any previous regimen produced one.

Blood pressure figures considered as a therapeutic result of treatment with compound W1022 are based upon *mean* blood pressure as defined by Miller *et al.*:[6] diastolic pressure plus one third of pulse pressure.

The initial daily dosage was usually one tablet of W1022 taken four times a day before each meal and at bedtime. The therapeutically effective dosage of the compound was ascertained by the hypotensive response to gradual augmentation of the initial dosage. In other words, the daily dosage was progressively increased, at weekly intervals, by one additional tablet until a satisfactory lowering of the blood pressure had been achieved or the appearance of side-reactions obviated further increases. To avoid or minimize postural hypotension the blood pressure reading in the standing position was used as a guide in the weekly adjustment of the dosage plan.

The criteria for a clinically good response were defined as follows: (1) The patient's *mean* blood pressure decreased by 20 or more in either the standing or supine position and (2) the hypertensive signs and subjective complaints were alleviated. The patients were informed of all the possible effects of the treatment. Bowel hygiene was particularly stressed. The patients were instructed to report any unusual symptoms.

Results

The results obtained in the treatment of 14 ambulatory hypertensive patients with compound W1022 were evaluated on the basis of the aforementioned criteria. A summary of the compound's hypotensive effect is presented in Figs. 1 and 2. A significant reduction in the *mean* blood pressure (20 or more) was effected in 78.6 per cent of patients on standing. In the supine position a significant reduction occurred in 64.3 per cent of cases. Moreover, it was observed in the course of the study that the hypotensive effect of the compound was, with one exception, always greater upon the systolic than diastolic pressure, regardless of the patient's position. Furthermore, no postural hypotensive episodes were noted during the treatment period with the dosage employed.

The average daily maintenance dosage which maintained a significant response was eight tablets of compound W1022, representing a daily intake of only 1,000 mg. of Methium and 200 mg. of whole powdered root of Rauwolfia. Thus, a satisfactory hypotensive effect was achieved with less than half of the usual dosage requirements for Methium and somewhat less for Rauwolfia. Apparently, this can be attributed to the augmentative qualities of the two components. It was interesting to note that because of the smaller dosage of Methium required, the occurrence and intensity of physiologic side-effects were markedly reduced.

A gratifying result with W1022 therapy was the pronounced relief of subjective symptoms. Except for one patient who complained of joint pains prior to therapy, all patients said that they "felt better." Generally speaking, headaches, dizziness, blurred vision, dyspnea, and palpitation due to hypertension were alleviated. In five patients with pretreatment anginal syndromes the frequency and severity of the attacks subsided substantially.

Objective evidence based on evaluation of electrocardiograms and x-rays before and after treatment showed that no patient with initially normal findings developed abnormalities or that abnormalities previously found progressed. Hypertensive retinopathy regressed in two instances. Comparison of the pretreatment phenolsulfonphthalein and Fishberg values with those obtained at the termination of the study did not reveal significant changes in kidney function.

In this study the side-effects attending the administration of compound W1022 over a period of ten to forty-two weeks were minimal and of benign nature. Typical of these side-effects, all of which were transient in character, were dizziness and nausea on occasion. Three epi-

				PERIOD OF TREATMENT							
Case No.	Sex Age	Control B.P. mm Hg.	MEAN Control B.P.	Weeks	Drug-Induced B.P.—mm Hg.	Drug-Induced MEAN B.P.	Total Daily Dosage	Decrease in B.P. mm Hg.	Decrease in MEAN B.P.	Side Effects	Secondary Improvements
1119	F	St. 180/106	131	20	140/90	107	6 tab.	40/16	24	Slight nausea and slight constipation on occasions	Anginal attacks diminished in frequency and severity
	62	Su. 180/109	133		150/90	110		30/19	23		
25294A	F	St. 192/105	134	14	165/70	102	7 tab.	27/35	32	None	Anginal attacks diminished in frequency and severity
	58	Su. 205/105	138		180/80	113		45/25	25		
13971	F	St. 225/102	143	36	160/75	103	8 tab.	65/27	40	None	
	63	Su. 240/112	155		180/92	121		60/20	34		
1896A	F	St. 195/115	142	33	145/90	108	6 tab.	50/25	34	Occasional dizziness	
	55	Su. 200/110	140		170/95	120		30/15	20		
24778A	F	St. 195/107	136	33	140/100	113	8 tab.	55/7	23	None	
	56	Su. 196/125	149		180/120	140		16/5	9		
27427A	F	St. 180/120	140	19	170/120	137	8 tab.	10/0	3	Episode of constipation	Regression of retinopathy
	73	Su. 220/140	167		170/120	137		50/20	30		
2426A	F	St. 180/80	113	10	124/70	88	7 tab.	56/10	25	None	
	83	Su. 203/100	134		142/75	97		61/3	37		
19081A	F	St. 200/115	143	42	168/100	123	8 tab.	32/15	20	Generalized arthritic pains	Anginal attacks diminished in frequency and severity
	50	Su. 187/105	132		165/100	122		22/5	10		
5218	F	St. 197/104	135	28	160/95	117	10 tab.	37/9	18	Slight wheezing	
	64	Su. 200/100	133		180/95	123		20/5	10		
24648	F	St. 190/110	137	35	160/90	113	8 tab.	30/20	24	Occasional dizziness	Anginal attacks diminished in frequency and severity.
	68	Su. 194/111	139		140/80	100		54/31	39		
21891	F	St. 183/112	136	35	165/108	127	9 tab.	18/4	9	Occasional slight nausea	Anginal attacks diminished in frequency and severity
	58	Su. 182/113	136		165/108	127		17/5	9		
16846	F	St. 187/110	136	32	120/80	93	8 tab.	67/30	43	Dizziness and slight constipation on occasions	Regression of retinopathy
	45	Su. 188/112	137		140/80	100		48/32	37		
30081	F	St. 190/115	140	34	150/98	115	8 tab.	40/17	25	Occasional headache	
	40	Su. 180/110	133		150/98	115		30/12	18		
1EBH	F	St. 200/105	137	12	138/94	109	9 tab.	62/11	28	None	
	52	Su. 180/110	133		150/90	110		30/20	23		

FIG. 1. Blood pressure and clinical response to treatment with W1022.

Decrease in **MEAN** B. P.		Standing		Supine	
49-40	Significant Response	2	78.6%	0	64.3%
39-30		2		5	
29-20		7		4	
19-10	Inadequate Response	1	21.4%	3	35.7%
9-0		2		2	
	Total number of patients	14		14	

FIG. 2. Results of W1022 therapy in 14 patients with hypertensive cardiovasular disease.

sodes of mild, temporary constipation were also reported. In our opinion one case of generalized joint pain was due to a coexistent arthritic disorder rather than use of the drug combination. In no instance was it necessary to discontinue the medication because of side-effects. Development of tolerance was not observed even in patients treated up to forty-two weeks.

Summary

1. Methium Chloride with Rauwolfia, an experimental compound designated as W1022, has been administered to 14 ambulatory patients with hypertensive vascular disease of varying severity for a period of ten to forty-two weeks.

2. Compound W1022, in the dosage employed, proved to be effective in lowering the blood pressure and maintaining the reduction in 78.6 per cent of patients in the standing and 64.3 per cent in the supine position.

3. In nearly all patients pronounced relief of subjective symptoms due to hypertension resulted from the administration of compound W1022.

4. There was no progression of previously observed physical abnormalities.

5. In two instances there appeared to be improvement in the retinopathy noted before the start of treatment.

6. Side-effects due to the ingestion of compound W1022 in the dosage given were minimal, mild, and of transient nature.

7. To avoid or minimize postural hypotension, the blood pressure reading in the standing position was used as a guide in the weekly adjustment of the dosage plan.

8. No toxic reactions were observed.

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Erythromycin as an Aid in the Management of Aleukemic Myeloblastic Leukemias

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(*From the City Hospital*)

In severe cases of aleukemic myeloblastic leukemia, the peripheral white count is very low and is composed mostly of lymphocytes. Very few granulocytes or monocytes are present, and the diagnosis rests entirely on the finding of myeloblastic infiltration of the bone marrow.

The management of these cases is very difficult since the platelets are usually also low. Naturally, the use of x-ray, radioactive isotopes, or bone marrow-depressing drugs is contraindicated. The mainstay of treatment is transfusions and ACTH or cortisone. With the absence of granulocytes in the peripheral blood, these patients are subject to infections, and it is necessary to administer antibiotics. Sulfa drugs are contraindicated because of the low granulocytes and platelets. Aureomycin and Terramycin may cause intestinal disturbances, and penicillin has a limited spectrum. For this reason erythromycin was used whenever these patients showed signs of infection or ran an unusual temperature. The following is a brief report of three cases in which erythromycin was of value.

Case Reports

Case 1.—F. L., a white female, age sixty-five, was first seen in February, 1951. Blood count was as follows: hemoglobin 42 per cent; red blood cells 2,600,000; white blood cells 1,100 with lymphocytes 95 per cent, polymorphonuclears 3 per cent, monocytes 2 per cent; platelets 90,000. Bone marrow showed myeloblastic infiltration. The spleen and lymph nodes were not enlarged. The patient's temperature was 102 F.

The patient was started on blood transfusions and aureomycin, 250 mg. three times a day. The patient's condition improved, the temperature dropped, but after a week gastrointestinal symptoms developed, necessitating the stopping of the aureomycin. The temperature then started to rise again, and Terramycin was administered, 250 mg. three times a day, together with blood transfusions. There was again a good response with a temperature drop, but the drug had to be discontinued after ten days because of nausea and vomiting.

Erythromycin, 100 mg. three times a day, was now begun, and the fever was again controlled. This was kept up for one month during which time several blood transfusions were also administered. There were no gastrointestinal symptoms. The patient now remained afebrile for two months, after which time the temperature again began to rise. Erythromycin was again administered together with blood transfusions for three weeks with good results. Again there was another month's remission, following which there was another rise in temperature which was once more controlled in a similar way by erythromycin. These episodes recurred at irregular intervals for a period of sixteen months during which time she received a total of 32 blood transfusions. Finally, the fever and anemia did not respond to therapy, and the patient expired in June, 1952.

Case 2.—E. R., a white female, age fifty-one, was first examined in May, 1951. Blood count was as follows: hemoglobin 50 per cent; red blood cells 2,900,000; white blood cells 900 with lymphocytes 100 per cent; platelets 80,000. Bone marrow showed myeloblastic infiltration. The liver, spleen, and lymph nodes were not enlarged. The patient's temperature was 103 F.

The patient was started on blood transfusions and aureomycin. Improvement was noted, but gastrointestinal disturbances after two weeks necessitated discontinuance of the drug. Cortisone, 100 mg. a day, was started. An improvement was noted. After one month the temperature rose again, and erythromycin, 100 mg. three times a day, together with blood transfusions was started. This was kept up for one month with no bad effects, and the patient remained comparatively well for the next three months.

Then there was a severe relapse with anemia and high fever. Transfusions, erythromycin, and cortisone were again begun with good results for the next month.

At this time the temperature started to rise again, the anemia persisted, and despite a total of 23 transfusions the patient expired a month later.

Case 3.—M. S., a white female, age thirty-one, was first examined in January, 1951. Blood count was as follows: hemoglobin 38 per cent; red blood cells 2,400,000; white blood cells 1,200 with lymphocytes 97 per cent and polymorphonuclears 3 per cent; platelets 60,000. Bone marrow showed infiltration by myeloblasts. The spleen was just palpable, but there was no enlargement of the lymph nodes. Temperature was 104 F.

The patient was started on blood transfusions, cortisone, and erythromycin with good results. This therapy was kept up for one month with no untoward results. The patient then remained well for six weeks after which time there was a recurrence of symptoms.

Blood transfusions and erythromycin were started again and kept up for the next six weeks with good response. The patient then remained in a state of remission for another month.

Fever and anemia then became more severe and could no longer be controlled. The patient expired in February, 1952.

Comment

Leukemia, especially the aleukemic myeloblastic type, is frequently accompanied by febrile episodes. The reason for this temperature rise is unknown, but it may be caused by the leukemic process itself or by associated infections. Therapy by means of transfusions and antibiotics frequently stops these periods of fever.

In the above cases the combination of transfusions and erythromycin was helpful in reducing the temperature and shortening the periods of fever. There were no untoward results from the erythromycin which makes it a valuable aid in the management of this type of leukemia.

19 East 80th Street

Arterial Banks: An Essential Feature of Arterial Homografts

Surgical technics in replacing resected vascular segments have reached a degree of efficiency and safety that make it unnecessary to justify such procedures. These advances include more refined technics in anesthesia, better methods of asepsis, and perfection of pre- and postoperative care, including the use of antibiotics. Studies, beginning with those of Carrel reported in 1912, indicate that the grafts do not persist as living structures, but rather serve as scaffolds later replaced by fibrous tissue. Apparently the graft is soon lined with a thin fibrin-like layer which seems to discourage clotting and act as a basis for the new endothelial ingrowth.

The length of the graft, says the author, appears to make no difference in the end result. The process appears to be similar to that observed in experimental correction of auricular septal defects by polythene sheeting. While it is possible that these replaced segments will undergo degenerative changes at some unknown future time, this would not appear to be a valid objection to using them as a life-saving measure at present.

After surveying the literature on the results of arterial homografts by others, the author discusses indication, technics of preservation, and the future of arterial grafting. Concerning the latter, he touches upon experimental work now in progress, relating to use of plastic prostheses in vascular segmental replacement. If these experiments succeed, he says, it is reasonable to anticipate that the substitute segment can be more accurately fashioned to fit the pattern of the defect than is now possible. In addition, it will do away with the trouble and expense of collecting, storing, and transporting homografts.—*H. Reichard Kahle, M.D., Bulletin of the Tulane University Medical Faculty, February, 1954*

CLINICOPATHOLOGIC CONFERENCE

MEDICAL SOCIETY OF THE COUNTY OF ERIE

WESTERN NEW YORK STATE HEART ASSOCIATION

Conducted by A. H. AARON, M.D. OCTOBER 27, 1953

DR. A. H. AARON: We are indeed fortunate that in the presentation of our Clinicopathologic Conference tonight the differential diagnosis will be presented by Dr. Harold Feil, Clinical Professor of Medicine at Western Reserve University School of Medicine and Chief of the Cardiovascular Service at Lakeside Hospital, Cleveland, Ohio.

The case presentation will be given by Dr. Walter T. Zimdahl, and the pathologic findings will be described by Dr. Samuel Sanes.

Case History

DR. WALTER T. ZIMDAHL: The patient, a forty-two-year-old white woman, was first admitted to the hospital March 6, 1952, for abdominal pain of forty-eight hours duration. The pain had started in the right flank and had been getting worse. It was increased by bowel movements. There were no urinary symptoms. The last menstrual period was September, 1951. History of previous illness was not obtained. The patient was acutely ill. The chest was clear. The heart was regular with no murmurs. The right posterior flank was exquisitely tender. Tenderness was also present in the right lower and upper quadrant with spasm. There was rebound tenderness in the right lower quadrant. The hemoglobin was 9.3 Gm.; red blood cells were 4,000,000 per cu. mm., white blood cells 12,300 per cu. mm. Urinalysis revealed no remarkable findings.

On the day of her hospital entry the patient had a laparotomy. The appendix which was slightly thickened was removed. (Surgical pathologic report noted fibrous obliteration of appendix; edema of serosa; no acute inflammation.) The liver was enlarged, tense, and had a finely granular surface. Postoperative impression was passive congestion of liver.

At postoperative medical consultation it was difficult to get an accurate history. The patient first stated that she had "heart disease" three weeks ago. Then she denied "heart disease" and stated that she was told her dyspnea was due to a cold. She had ankle edema three weeks ago but only in one leg. She was placed on treatment of "3 tablets" per day. The patient gave no history of cough, palpitation, chest pain, rheumatic fever, chorea, epistaxis, or hyperthyroidism.

On examination the patient was thin and mentally dull. The eyes were prominent. There was bilateral lid lag. The neck veins were distended but not pulsating. The thyroid was palpable but not enlarged. The heart was not enlarged. The pulmonic second sound was prominent. The mitral first sound was impure with a questionable presystolic murmur. There was a soft, grade II, blowing systolic murmur at the apex. The abdomen was soft. The entire right side was tender. The liver was felt. The legs showed no edema. Blood pressure was 105/80.

Laboratory data after hospital admission included Wassermann test negative; gastric analysis negative for free hydrochloric acid and blood; stools negative for occult blood on two occasions; corrected sedimentation rate 31; bromsulfalein test 4 per cent retention; cephalin flocculation test 3 plus; plasma protein 6.9 Gm. per cent with albumin 3 Gm. and globulin 3.9 Gm.

X-ray films of chest showed cardiac shadow slightly enlarged. The left cardiac border was prominent with diminished aortic knob. The lung fields were clear. The right costophrenic angle was obliterated, probably from fluid.

No lesions were seen on upper gastrointestinal series and barium enema examination. Under treatment the patient improved. She no longer had dyspnea or pain. The appetite was good. The pulse had never gone above 90 beats per minute. The blood pressure reading was unchanged. Rectal and sigmoidoscopic examinations were negative. The patient was discharged April 16, 1952.

Second Hospital Admission (September 22, 1952).—Since hospital discharge in April, the patient had had progressive dyspnea and orthopnea. For the past three days she suffered pain in left anterior portion of chest, made worse by breathing. The legs were edematous. There has been much loss of weight recently.

Physical examination revealed temperature 99.6 F.; apical rate 160 per minute, at radial artery 120; blood pressure 120/80. The skin was cool and dusky. Lid lag was questionable. The thyroid gland was not enlarged. The heart was enlarged. No murmurs were heard. Rhythm was irregular. Fluid was present in both pleural cavities. The liver was felt five fingerbreadths below the costal margin. The legs showed 4 plus edema.

Electrocardiograms on three different dates gave the following results: September 22, 1952—Sinus rhythm; P-R 0.16 second; small Q_I with elevated S-T and negative T; reciprocal depression in S-T_3; elevated S-T with negative T in aVl and low RV_3; no R in V_4, V_5, and V_6. September 23, 1952—Same as on previous day, bigemini. September 29, 1952—Sinus rhythm; P-R 0.16 second; low voltage in all limb leads; negative T in aVl; no R in V_3, V_4, V_5, and V_6.

X-ray films of the chest showed the heart to be markedly enlarged. On fluoroscopic examination the left ventricle was thought to be the primary cause of enlargement. X-ray film of bone, including ribs, spine, pelvis, skull, shoulders, and femurs, revealed no evidence of multiple myeloma.

Laboratory data were as follows: Urine showed no remarkable findings. Hemoglobin was 8.7 Gm.; red blood cells 3,700,000 per cu. mm.; blood sugar 105 mg. per cent; urea nitrogen 9 mg. per cent; Wassermann negative; prothrombin time eighteen seconds, control fifteen seconds; stools negative for occult blood; blood proteins (three readings)—serum albumin 3.2, 3.4, and 3 Gm. per cent and globulin 5.4, 5.1, and 4.4 Gm. per cent; blood cholesterol 72 and 65 mg. per cent; sodium 137 and 133; potassium 5.1; chlorides 100.7 mEq. per L.; urine negative for Bence Jones protein; bone marrow hypocellular with erythropoietic left shift; protein-bound iodine 7.8 micrograms per cent; tuberculin test with PPD positive in second strength.

On September 25, 1952, the patient was placed in an oxygen tent. She had rales in bases of both lungs. Red cells were reported to show rouleaux formation.

Third Hospital Admission (December 16, 1952 to January 10, 1953).—The patient was referred by her family physician. She was weak and cachectic. She wanted to be left alone. There were dyspnea and cyanosis. Pulse was feeble. The blood pressure was 90/?. The right eye showed lid lag. The neck veins were distended. Rales were heard in both lungs. The heart was enlarged. The apical rate was 100 per minute. Heart tones were poor. No murmurs were heard. There was an apical gallop. The liver was felt four fingerbreadths below the costal margin. The legs showed 3 plus edema.

Laboratory data were as follows: urine showed no remarkable findings; blood urea nitrogen 8 mg. per cent; sugar 76 mg. per cent; hemoglobin 8.5 Gm.; red blood cells 2,510,000 per cu. mm.; white blood cells 11,450 per cu. mm.; free hydrochloric acid present after histamine on gastric analysis; stools negative for occult blood; cephalin flocculation test 3 plus; corrected sedimentation rate 31; plasma protein 7.3 Gm. per cent, serum albumin 3.6 and globulin 3.7 Gm. per cent; bromsulfalein test 4 per cent retention; alkaline phosphatase 8 Bodansky units; basal metabolic rate plus 25 and 14 per cent; circulation time arm to lung fifteen seconds, arm to tongue twenty seconds.

Electrocardiogram on December 19, 1952, showed sinus rhythm, left axis shift, auricular damage, low voltage, nondiagnostic ST-T changes, first degree auriculoventricular block, low voltage, horizontal heart, evidence of clockwise rotation; S-T_1 and S-T_2 sag with relatively low T, also aVl; inverted T in aVl; sag S-T in V_6.

The heart was larger than on previous examinations on x-ray of the chest. On fluoroscopic examination the cardiac pulsation was good. Under treatment the patient improved so that the chest became clear and resonant. Edema disappeared. The heart rate was 84 per minute; the rhythm was regular. No murmurs were heard.

Final Hospital Admission (*February 21, 1953, with death on February 22, 1953*).—The patient did not want to talk. She had fallen out of bed two days ago. She had been taking "heart pills." Temperature was 98.7 F., respiratory rate 27 per minute, heart rate 90 per minute. There were dyspnea, cyanosis, and ankle edema. The right lid was ecchymotic. Fluid was present in both pleural cavities. Heart sounds were distant. Rhythm was regular. Blood pressure reading could not be obtained. The liver was enlarged four fingerbreaths below costal margin. Lumbar puncture showed spinal fluid under normal pressure with no increase in cells.

The heart was markedly enlarged on x-ray film of the chest. Fluid was seen in both pleural cavities, more on right. Bronchovesicular markings of both lung fields were exaggerated.

Dr. Harold Feil: Before attempting to discuss this case, I am reminded of a story I heard about the late Dr. Thayer of Baltimore who in his last clinical-pathologic conference is said to have made a diagnosis of acute vegetative endocarditis, and because the patient had bundle branch block, Thayer suspected that the posterior leaflet of the aortic valve was involved, and that is where the vegetation was found. I told this story when I was in Atlantic City a year ago. I was given a case, obviously one of aortic stenosis. The patient also had bundle branch block, but this time it was a right bundle branch block. I mentioned this story about Dr. Thayer and missed my opportunity to make a brilliant diagnosis because the patient turned out to have calcific invasion of the septum from the primary aortic stenosis.

But here I am more like one of my friends in Cleveland who has a phenomenal memory, and in discussing and finally writing up the case, he puts down every possible diagnosis, but he never arrives at a conclusion. I am afraid that I am going to be like my Cleveland friend on this occasion.

The patient whose case I am discussing certainly winds up with evidence of circulatory failure. But from the protocol of the early part of the disease, which was just short of a year before death, the heart was either only slightly enlarged, or the enlargement was not outstanding. At the first observation on March 6, 1952, apparently the diagnosis of an appendicitis was made, because the appendix was removed. Or perhaps the patient had an exploratory operation, and finding nothing but a congested liver, the surgeon decided to remove the appendix. From the pathologic report there was no evidence of acute appendicitis or peritonitis. So I am sure that the surgeon felt, after the completion of the operation, he had not contributed either to diagnosis or to treatment. Passive congestion of the liver, however, was noted.

The patient had some ankle edema but only in one leg. This is a litle bit against cardiac failure because with cardiac failure ordinarily one would anticipate bilateral edema. There was no mention made of pain in the edematous leg, and so one questions the possibility of phlebitis.

Again at the examination in March, 1952, the heart was not enlarged. The pulmonary second sound was prominent. Perhaps this indicates some evidence of increased pressure on the pulmonary circuit. I was a bit disturbed by the information that the mitral first sound was impure with questionable presystolic murmur. In hyperthyroidism the first heart sound at the apex may be tympanitic, and the left auricle may be enlarged in fluoroscopy with the patient in the right oblique position. In addition, there was a grade II blowing systolic murmur, so it must have been obvious. The liver was felt. There was no edema and no hypertension.

The anemia throughout the protocol was hypochromic in type. The first gastric analysis showed no free hydrochloric acid, whereas a later examination, after histamine, did show free hydrochloric acid. Some disturbance in liver function was noted, although the bromsulfalein test was within normal limits. I believe that 4 or 5 per cent retention is normal. The plasma proteins were within normal limits, perhaps down a little bit, and according to these figures, the globulin was a little higher than the serum albumin, so that there was a slight reversal of the albumin-globulin ratio.

On the x-ray films the heart appeared to be slightly enlarged to the left. The aortic knob certainly wasn't prominent. I think one can say that would be against previous hypertensive disease.

After the patient left the hospital, the signs of cardiac failure increased because, as of September 22, the patient had shortness of breath and orthopnea. Again she had pain, but instead of having pain in the lower part of the abdomen, the pain was in the left anterior chest. Was this pleurisy? Was it pleurodynia? Was it emphysema with rupture into the mediastinum? We can't draw a conclusion from these notes. Edema did develop.

Now the patient had lost much weight. There is the suspicion from the history that the patient had hyperthyroidism.

Another question came up in my mind at this point, as to the sudden onset of pain, whether pulmonary infarction might have been present. This would not be unusual in the presence of heart failure. The temperature was slightly elevated on this one occasion, on September 22, and I think that was the only evidence of fever. However, at this time, the second admission, the patient obviously had auricular fibrillation. No electrocardiogram was taken, but the apex rate was 160 and the radial rate 120. We have no note as to the cardiac rhythm, but one might suspect paroxysmal auricular flutter.

The blood pressure was about the same as on first admission in March. The respiratory rate was somewhat increased. The thyroid was not enlarged. That would be against the presence of a large vascular goiter, of course. I don't believe I would disregard the probability of the thyroid heart disease, even though the thyroid could not be felt. We now come to the protein-bound iodine which is within normal limits.

The gallop rhythm denotes some disturbance in myocardial function. At this time no murmurs were heard, probably because of the exceedingly fast rate. But the liver was down, and the edema in the legs had increased, so one might accept then the diagnosis of a progressive heart failure. In going over the electrocardiographic reports I thought from the description there might be some evidence of a recent infarction, and I even suspected periarteritis nodosa with possible involvement of a coronary artery and myocardial infarction.

The patient must have been very short of breath on September 25 because she was placed in a tent.

The positive reaction with PPD of second strength—I am always confused by that. If the patient is awfully sick and the test is negative, then we say it is because the patient has overwhelming infection; if it is positive, we usually assume at the age of forty-two most patients give a positive reaction in second strength. I wind up by paying very little attention to that information.

As for the laboratory data, two facts stand out. First, at this time the albumin-globulin ratio was definitely reversed with the albumin 3.2 Gm. and the globulin 5 Gm. per cent. The second interesting point is the terrifically low cholesterol, and I take it that is total cholesterol, 72 and 65 mg. I know in various laboratories normal figures vary, but we may say somewhere between 200 and 250 mg. is our normal figure. Totals of 72 and 65 make one think of the cholesterol level of the newborn infant. Such a figure in an adult would bring up the probability of extreme inanition, starvation, or acute yellow atrophy. I am also thinking of the cause of an extremely low cholesterol on the basis of hyperthyroidism.

The other laboratory examinations, with the exception of anemia, were relatively normal. The erythropoietic left shift refers to the immature forms, undoubtedly related to this type of anemia. Multiple myeloma is suggested, but the absence of a positive Bence Jones reaction and the negative findings in x-rays more or less rule that out.

In the December, 1952, admission the shortness of breath and cyanosis continued, and the blood pressure fell. The pulse was very feeble.

At this time the patient was treated. No note as to the treatment is given, but I suspect, because the chest became clear and resonant, the patient was digitalized and given diuretics so that the fluid in the chest and the bronchial fluid were cleared up. The patient probably responded well since diuresis was excellent. No murmur was heard at this time, so one wonders about the accuracy of the hearing of murmurs on previous admission in March, 1952.

I have been disturbed about the murmurs. Might they be related to the anemia or to something happening in the valves? Did this patient have an endocarditis? It would have to be a subacute or chronic type. Was there some metabolic disturbance in the valve as occurs in primary amyloid disease with amyloid deposit deforming the valve-producing stenosis?

The sedimentation rate was 31 corrected. This is a nonspecific test. There might be infection or some other unknown factor. Here we come to another change, that is the total plasma protein of 7.3 Gm. per cent which is normal. Here we have albumin and globulin 3.6 and 3.7 Gm. per cent, not too far from the normal figure.

Bromsulfalein retention increased; alkaline phosphatase was up. I thought of the possibility of tumor with metastases. On the other hand, there was disturbance in the liver, and this is evidenced by the positive cephalin flocculation test and the thymol turbidity test, both of which were 3 plus.

The circulation times I think were interesting because they may throw a little light on the diagnosis. The arm to lung was fifteen seconds, the normal being four to eight seconds. I would say the time was moderately prolonged. The arm to tongue, normally ten to sixteen, was twenty seconds. Again this time was just a little above the upper limit of normal, and that would favor "hyperthyroidism" somewhat because we know in hyperthyroidism with heart failure you do tend to get more prolonged circulation times. Again you have another fly in the ointment, the anemia, which obviously would have an effect on circulation rates and might cancel out some of the changes caused by heart failure.

In the final hospital admission, February, 1953, death occurs a year after the beginning of the illness. At this time she had been taking some pills. I take it that they were digitalis. The patient had shortness of breath and ankle edema. She had fallen out of bed, and perhaps this explained the ecchymosis of her right lid. The heart rate was slow at this time, but the blood pressure had fallen and could not be obtained. The liver was still large, and there was some edema. The last x-ray film showed a markedly enlarged heart with fluid in the pleural cavities.

I read this protocol over a few times, and I came to one conclusion: Whatever disease this patient had at the time of death, its inception was some time before the first admission, roughly a year before death. In other words, it wasn't a longstanding disease. And the evidence for that was the fact that the patient had a normal-sized heart and gave a negative past history on the first admission. I think that if she had organic valvular disease, she should have had more evidence of it. The heart was not very large, even though the patient was having symptoms, so that one would suspect that was a brand new disease starting roughly a year before her death.

What are some of the primary diseases of the heart one would think about? I made a few notes on that question because I thought it might be interesting to discuss some of the possibilities. I mentioned the fact that the murmurs were heard once. There was no consistency in their presence, and I wondered about the possibility of some general disease such as one of the collagen diseases. Against collagen disease was the fact that we have no information about "L.E." cells. We have no suggestion of any skin lesions, no adenopathy, no splenomegaly, no leukopenia. The patient might have had a valvular type of heart failure. The murmurs were inconstant, and one might think of the possibility of mitral involvement even without the skin lesions. She was a little old for collagen disease. Most of the patients we see in Cleveland are in the twenties and thirties rather than in the forties. The original pain may have been due to the presence of the hepatic enlargement.

As to amyloid disease, that intrigued me, and I think whenever one sees a patient with obscure failure lasting a long time, one has to think about a primary or secondary amyloid disease. Now the secondary amyloid disease is usually disseminated in various organs, including the heart, and there is usually a complication of tuberculosis, bronchiectasis, syphilis, chronic bone suppuration, etc. If this patient had secondary amyloid disease, we should find greater albuminuria. In the absence of any great changes in the serum or plasma proteins, in the absence of albuminuria, this is not secondary amyloid disease. It might be primary type of amyloid disease where most of the deposition of amyloid material is in the myocardium. Here the Congo red test is often not positive. We know that sometimes there is involvement of other organs in a mild way, including the tongue. The tongue is somewhat enlarged and red. The tongue was somewhat red in this case. I think of the possibility of a primary amyloid disease involving the myocardium. These patients usually die and die in the course of a few months to a year.

Fiedler's myocarditis was considered. This usually has a subacute rather than chronic course. The diagnosis of Fiedler's myocarditis is usually made by the pathologist, and if the clinician thinks about it, he may have to have more evidence of infection and fever with the progressive failure. But this diagnosis is pretty much reserved for the pathologist.

Hyperthyroidism calls for serious consideration, but we really haven't very much in its favor, once lid lag was present and another time absent. About the only thing we have favoring hyperthyroidism is the paroxysmal auricular fibrillation and the very low cholesterol.

I like the diagnosis of polyarteritis because when you find the various systems involved, polyarteritis or periarteritis nodosa should always come to one's mind. On the other hand, there were no skin manifestations, and so about the only thing we have is the presence of abdominal pain, cardiac failure, and murmurs. We really haven't anything very definite in favor of polyarteritis. The fact that death usually occurs from uremia is against polyarteritis because the urea nitrogen readings were within normal limits, and the urine continued to be normal. There was no eosinophilia.

What are some of the other possibilities that come to mind? I thought of the probability of subacute endocarditis. There wasn't much fever, and apparently the observers didn't see enough evidence to order a blood culture. Tuberculous pulmonary involvement apparently was lacking. Some systemic fungous disease was thought of, but no evidence of it was seen in the sputum or skin. The x-ray ruled out sarcoidosis, although one might still think of involvement of the myocardium without skin and pulmonary lesions. We have no direct evidence on which to base the diagnosis of sarcoid.

With the abdominal pain I couldn't help but think of porphyrinuria, but there was no evidence to back up that diagnosis. The urine must have stood around, no doubt, and was exposed to light, but no evidence of change in color was recorded.

When I read over the protocol in Cleveland, I wrote down the possibility of myocardial infarction, anterior wall, but when I saw the lantern slide projection of the actual electrocardiograms here in Buffalo, I found the R wave changes disturbing but not so diagnostic.

We didn't say anything about Pick's disease. We like to think of Pick's disease as characterized by a small heart, but that is not always true. The heart may be somewhat enlarged because of a localized collection of fluid, and there may be an associated valvular lesion. I have seen that once or twice, but for the most part the heart is small, and in 30 or 40 per cent a calcified pericardium can be found. The size of the heart was in the wrong direction here for me to consider Pick's disease seriously. If the heart size started out large and ended up small, I would think of a thick, compressing scar. Once in a while one sees a hyperplastic tuberculosis with a very thick pericardium and evidences of compression. We have some statement that the neck veins were distended, but unfortunately we have no note about venous pressure.

Well, I see my time is running out, my ideas are still somewhat nebulous, and I am a little in the position of another friend who got up to give a talk on rheumatic fever and during the course of his speech he changed his mind and his conclusions.

I am intrigued by the diagnosis of primary amyloid disease which has resulted in progressive heart failure. I would hate to have any of my friends put any money on my opinion, but I can't help but think that primary amyloid disease is a pretty good bet.

I am still flirting with some of the other types of heart diseases, but I don't think we have evidence to back them up. Without any definite, positive evidence of any disease, coronary disease might be brought into the picture again. But the patient was a forty-two-year-old woman with no history of hypertension and no history of diabetes. I will rest my case on some primary, some curious, rare, unusual form of heart disease, and a good example of that is primary amyloid disease.

Dr. Dexter S. Levy, Dr. Eugene Lippschutz, and Dr. Walter T. Zimdahl opened the general discussion in which the audience participated.

Pathologic Report

DR. SAMUEL SANES: The final diagnosis was old thrombosis of left anterior descending coronary artery associated with atherosclerosis; myocardial fibrosis on basis of previous infarction of anterior wall and apex of left ventricle with aneurysmal thinning; mural thrombosis of left ventricle; diffuse chronic adhesive fibrous pericarditis; marked dilatation of left and right ventricle; bilateral hydrothorax (500 cc.); chronic, passive congestion of lungs, liver, and spleen; ascites (2,000 cc.); slight chronic pyelonephritis; slight focal myositis; slight focal acute fat necrosis in pancreas; esophagitis; absence of appendix (postoperative); slight atrophy of thyroid.

The heart was distinctly enlarged. It weighed 400 Gm. The pericardial sac was obliterated by chronic fibrous adhesions which could be separated by the fingers. The superior vena cava and right atrium were not remarkable. The tricuspid valve was thin and delicate. The right ventricle was not hypertrophied (0.5 cm. thick), but it was dilated. The pulmonary cusps were thin and delicate. Pulmonary veins and left atrium were not remarkable. The foramen ovale was closed. The mitral valve was only slightly thickened. The wall of the left ventricle measured 1.5 cm. The cavity was distinctly dilated. There was slight aneurysmal formation of the anterior wall and apex of the left ventricle. Here the wall showed fibrosis and thinning over an area 9.5 by 6.5 cm. Two mural thrombi were present on the endocardial surface, measuring respectively 5 by 3.5 cm. and 1 by 1.2 cm. The wall measured 0.7 cm. thick. The aortic cusps were thin and delicate. The ascending aorta showed slight atheromatosis. The coronary orifices were patent. At a point 2.5 cm. from its origin the left coronary artery revealed an old occlusion which extended for 2.5 cm.

Microscopically, the occlusion was an organized thrombosis associated with marked arteriosclerosis and calcification. The left circumflex and right coronary arteries were patent. Microscopically, the myocardium showed, in addition to fibrosis, recent regressive changes and inflammation.

Grossly, the thyroid gland was firm and slightly decreased in size. On section the follicles were small and contained colloid. The internal elastic membrane of arteries was calcified with intimal thickening. There was no evidence of hyperplasia. The thyroid appeared instead somewhat atrophic.

Pamphlets for Patients Promote Understanding

Complaints about fee splitting, ghost surgery, and overcharging can not stand before sincere efforts by physicians to promote better understanding between themselves and their patients.

Dr. Walter L. Portteus, Franklin, Indiana, has prepared pamphlets explaining not only his own charges but hospital, surgical, and related costs. The first page of the leaflet carries the message from the A.M.A.'s plaque for doctors' offices which invites fee talks. Dr. Portteus explains in detail his role as a family physician when a patient has surgery. Here are headings of the various sections which follow: "As Your Physician," "If There is Doubt," "My Fees Are Based," "So You May Understand," "Your Bill," "The Hospital," "Your Surgeon," "The Anesthetist," "The Assisting Physician," "Your Insurance Plan," "Your Family Physician," "Your Care Will Require the Services of a Team," and "Costs vs. Security."

In a more extensive 16-page book, Dr. H. Calvin Fisher of Denver briefs his patients about hospital experiences related to surgery. His pamphlet, illustrated with a number of cartoon-style drawings, is entitled "Your Are About to Have an Operation."

Dr. Fisher discusses selection of a hospital, type of room, what to take to the hospital, religious aspects, consultations, preoperation procedures, operative permits, the operation, nurses, postoperative care, and convalescence.

In a section on doctors' fees and hospital costs he states that "the doctor is anxious to have you discuss the fee with him before his services are rendered. He may not be able to give you an exact figure; this is not because he does not wish to, but usually results from the fact that he is unable to anticipate how much work is necessary..... A conscientious effort on your part to repay the doctor for his services is all that he asks."

Dr. Portteus suggests that both general practitioners and specialists work up similar pamphlets for their patients. Says Dr. Portteus: "Too often misunderstandings occur because of the doctor's failure to discuss fees before surgery. Word of mouth discussion is inadequate because in the shadow of impending surgery the patient fails to remember what the physician tells him. . . . I feel the patients' response to this type of public relations has been excellent."

CASE REPORTS

Dicumarol Toxicity

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DICUMAROL first came into use in 1941 as an anticoagulant in the treatment of peripheral thromboembolic disease. As a result of extensive investigation its efficiency in the prevention of complications of myocardial infarction soon became established.[1] The drug has now been in clinical use for a little over ten years, a period sufficiently long to appraise its value in the treatment of diseases for which it was intended.

A review of the literature reveals approximately 25 reported fatalities[2-11] from Dicumarol toxicity since the drug became available to the profession in 1942. It is safe to assume that there were many more fatalities, directly attributable to the use of the drug, which were not reported. In addition, many nonfatal complications of hemorrhagic diathesis either due to self-medication or to inadequately controlled dosage have been reported.[2-11] Fortunately the vast majority of these have responded to adequate therapy with fresh citrated blood or plasma or vitamin K in large doses.

An analysis of the reported fatalities with necropsy in approximately 50 per cent of the cases reveals death to have been caused in a significant number of cases by massive hemorrhage into the gastrointestinal tract in individuals with benign or malignant ulcerative gastric lesions. Cerebral hemorrhage, massive hematemesis, and generalized bleeding occurred in the remainder of the fatal cases. It should be noted that among the fatal cases which received Dicumarol the literature does not reveal any reported cases of coronary thrombosis to which death could be attributed as a complication of the drug. The reports indicate that a significant number of fatalities occurred in individuals with subacute bacterial endocarditis who were treated with penicillin and Dicumarol. Subacute bacterial endocarditis has been recognized as a contraindication to the use of the drug. In addition, Barker *et al.*[13] have warned against the use of the drug in the presence of hepatorenal disease, ulcerative lesions of the gastrointestinal tract, blood dyscrasias, thrombocytopenia, severe hypertension, threatened abortions, or obstetric cases nearing term. In the absence of adequate laboratory facilities for the daily evaluation of prothrombin activity the use of the drug is fraught with dangers.

Solandt[14] was the first to suggest the use of anticoagulants as a means of preventing intracardiac mural thrombi. Initially the drug was restricted to the treatment of peripheral thromboembolic disease. In 1946 the American Heart Association[15] as a result of intensive study formulated definite criteria governing the use of Dicumarol and heparin. Indications, contraindications, and approximate safe dosage were established. The importance of determining the prothrombin time and the maintenance of an adequate therapeutic blood prothrombin level were stressed. It was the opinion of the committee that all established cases of coronary thrombosis with myocardial infarction should receive anticoagulants. Other writers have since taken issue with this recommendation. Russek *et al.*[16] state that it is unnecessary to use anticoagulants in all cases of coronary thrombosis and advocate their use exclusively for the severe cases. They claim that the mild cases have a low mortality and a low complicating rate, and the use of a drug such as Dicumarol with its possible dangers is not justified. Furman *et al.*[17] report that the beneficial effects of the anticoagulants were most apparent in the poor risk group of patients. According to them the beneficial effects in this group of patients cannot entirely be ascribed to a reduction in the thromboembolic complications since thromboembolic phenomena played a minor role in their cases of acute myocardial infarction. Wright,[15] who was among the early pioneers in the clinical use of anticoagulants, is the foremost exponent for their use in all established cases of coronary thrombosis. It is his opinion that the mortality rate and thromboembolic complications are materially reduced in those receiving Dicumarol. It is, therefore, apparent that while most investigators attribute benefits to the use of anticoagulants, there is a diversity of opinion as to their universal applications.

Dicumarol is a relatively safe drug when the dosage is regulated by expert prothrombin determinations. At this hospital where Dicumarol and heparin have been used rather extensively in peripheral thromboembolic disease and in coronary thrombosis the records do not indicate any fatalities or serious complications of toxicity which could not be controlled by the measures advocated. On the whole the recommendations of Wright *et al.* have been followed to keep the prothrombin concentration between thirty and thirty-five seconds, and withholding the drug when the prothrombin time is thirty-five seconds or more.

Case Report

A forty-one-year-old man was admitted by stretcher to the Medical Service of Harlem Hospital on July 5, 1953. Due to the precarious condition of the patient no history was immediately available. The patient was confused and irrational. The sclerae of both eyes showed an icteric tint. The mucous membrane of the oral cavity appeared blanched, and blood was oozing from the gums. The skin had a marked pallor. The feet and ankles were edematous, and large, irregular ecchymotic patches appeared over the lower extremities and to some extent over the arms. The heart sounds were somewhat distant and rapid. The lungs revealed no significant findings. The liver and spleen could not be felt. The blood pressure was 78/54. The patient was obviously in peripheral circulatory collapse and gravely ill. The inital blood studies revealed hemoglobin 2 Gm. (12 per cent), red blood cells 78,000, white blood cells 13,700 with 81 per cent segmented, 9 per cent lymphocytes, 6 per cent monocytes, and 4 per cent staff forms. The smear showed marked achromia, anisocytosis, and poikilocytosis. The platelets numbered 90,000, and no sickling was noted.

Treatment was immediately instituted, and a transfusion of 1,000 cc. of whole fresh blood was given. On the following day a second transfusion of 500 cc. of blood was given. The condition continued to be critical despite the administration of 1,500 cc. of blood. At this time the red blood cell count had gone up to 2,660,000 with 8 Gm. of hemoglobin and white blood cells 8,500 of which number 71 per cent were neutrophils and 29 per cent lymphocytes. The prothrombin time following the two transfusions and two days after admission was sixty-four seconds. The diagnosis of hypoprothrombinemia at once became apparent, and a third transfusion of 500 cc. of fresh citrated blood in addition to large doses of Synkavite was given.

Thereafter a decided improvement in the patient's condition was noted, and he volunteered the following information. He stated that he had been treated by his local physician for arthritis and presumably a thrombophlebitis of the right leg. Two days prior to his admission to the hospital he took ill while at work with expistaxis, bleeding gums, and swelling of the ankles. He stated that the stools were bloody and the urine was reddish in color. He further related that his physician had prescribed tablets of medicine which he continued to use even though he was no longer under his physician's care. A telephone call to his physician revealed the tablets to be Dicumarol in 50-mg. dosage.

Further laboratory investigation revealed the Rumple-Leed test to be positive. Erythrocyte sedimentation rate was 57 mm. in one hour and the hematocrit 10 per cent. The icterus index was 3, and the cephalin cholesterol flocculation was negative. The thymol turbidity and the formol gel tests were negative. The urine showed many red blood cells. The VDRL was positive, and the Kolmer was 3 plus. The blood serum showed 4 Gm. of albumin and 1.5 Gm. of globulin with an albumin-globulin ratio of 2.55. On July 17, 1953, the red blood cells were up to 3,250,000 with a hemoglobin of 10.5 Gm. The patient at this time appeared oriented and rational, and the general condition was much improved. On July 24 the red blood cell count was 3,730,000, and the hemoglobin was 78 per cent. At this time the prothrombin time was fifteen seconds and the control fourteen. Patient was discharged on July 29 completely asymptomatic.

Summary and Conclusions

1. A case of severe hypoprothrombinemia with manifestations of shock as a result of self-medication with Dicumarol is reported.
2. The dangers from excessive and uncontrolled dosage are reviewed. The importance of estimating the prothrombin activity before each daily administration of Dicumarol is stressed.
3. The indiscriminate use of a potentially dangerous drug such as Dicumarol can have no justification in modern practice.

940 Grand Concourse

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Visceral Larva Migrans Simulating Leukemia

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DURING the past seven years a number of cases of chronic eosinophilia due to visceral larva migrans has been described.[1-6] This disease occurs mainly in young children up to six years of age. The symptoms consist of malaise, pallor, anorexia, irritability, failure to gain weight, hyperglobulinemia, and episodes of cough, dyspnea, and fever resembling bronchopneumonia. The children are usually "dirt eaters," and there is often a history of close association with pet animals. The blood count is described as showing a leukocytosis of 15,000 to 80,000 cells with an eosinophilia of 20 to 87 per cent.

This clinical picture is due to an invasion of the liver and other viscera by nematode larvae, especially Ascaris lumbricoides. In some of the cases the larva of Toxocara canis, the dog ascarid, was seen in liver biopsies. In others the etiologic agent was not found. Ova and adult worms of Ascaris lumbricoides are occasionally found in the stools. In Toxocara canis infestations, however, as Dent and Carrera[7] point out, the worms never exist in the human intestine as egg-laying adults, and therefore, the parasitologic examination of the feces is invariably negative.

The pathology consists of lesions in various organs to which the larvae migrate, especially the liver, lungs, brain, and kidney. The liver is enlarged with smooth surface over which are scattered small, nodular, grayish-white lesions. Sections of the lesions show focal necrosis with numerous polymorphonuclear neutrophils and eosinophilic leukocytes together with multinucleated giant cells. Occasionally a larva is found in the central portion of the lesion.

The diagnosis is often difficult. The eosinophilia is frequently, as in the present case, discovered accidentally by a routine blood smear. If the history of dirt eating is not known and no ova or parasites are found in the stool, attention is diverted to the possibility of allergies, trichinosis, or blood dyscrasias. In the past many of these cases have been diagnosed as Loeffler's syndrome, tropical eosinophilia, familial eosinophilia (when members of the same family showed eosinophilia), or pseudoleukemic eosinophilia. No skin test is available, and serologic tests are still in the experimental stage. Liver biopsy is the only means of establishing a definite diagnosis. But one should be reluctant to use this method in view of the fact that the prognosis, as a rule, is favorable, and most children recover spontaneously. No specific treatment is known.

The present case is described, not in order to add one more to the list of 15 cases already published, but because of the unusually high white blood count which suggested the possibility of a leukemia.

Case Report

The patient was a sixteen-month-old boy who had been well except for repeated chest colds with cough and fever. Five months previously he had had a cold with low fever, lack of appetite, diarrhea, slight dyspnea, and a nonproductive cough, worse at night. Symptoms disappeared gradually except for the cough which persisted and grew worse. He was irritable, filled up with mucus at night, and was short of breath.

He was first seen on June 26, 1953. His temperature was 101.9 F. rectally. The examination of the lungs showed diminished breath sounds and occasional crepitant rales, especially over the bases. There was no cyanosis. The throat was moderately red. Otherwise the physical examination was negative. He was given a penicillin injection. On the following day his temperature was 100.8 F., he threw up, and there was a slight dullness and bronchophony over the right upper lobe with occasional wheezing anteriorly. He was admitted to the Corning Hospital on June 27, 1953, with a tentative diagnosis of beginning bronchopneumonia.

A chest x-ray revealed scattered areas of congestion, apparently all confined to the bronchial tree. The film had the suggestive appearance of a residual bronchopneumonia. He was given steam inhalations and put on aureomycin. A routine blood count on June 29, 1953, showed 10 Gm. of hemoglobin, 5,000,000 red blood cells, and 120,000 white blood cells with 28 per cent polymorphonuclear neutrophils, 18 per cent lymphocytes, 0.5 per cent monocytes, 50 per cent eosinophils, 0.5 per cent basophils, 2 per cent neutrophilic myelocytes, 0.5 per cent basophilic myelocytes, 0.5 per cent myeloblasts, moderate achromia and anisocytosis.

On questioning, the mother related that the baby was allergic to wool (blankets). She also said that he had been eating gravel, garden dirt, wood from lead pencils, and sticks. Just four days before he became sick he had ingested "a handful of gravel and mud." Much of it came out in an otherwise normal stool, the rest of it after an enema. He had a high fever at that time. The father stated that the child had eaten part of an uncooked pork sausage two weeks previously with a slight diarrhea following.

Two days after admission, at 4:30 A.M., the nurse noted that the baby had very rapid, wheezing respirations, 54 to 70 per minute. He obtained relief after an injection of one minim of epinephrine 1:1,000. The same night the baby became again very dyspneic with 64 to 74 respirations per minute and was put in a Croupette. He was extremely restless and appeared very ill. He choked when trying to drink water. The next day, on June 30, 1953, bone marrow was aspirated which showed a tremendous increase in eosinophilic myelocytes and adult eosinophils, together with numerous myeloblasts. The white blood count had risen to 140,000 with 62 per cent eosinophils. A total eosinophil count was 32,500. A diagnosis of acute eosinophilic myeloid leukemia was made, and the patient was taken by ambulance to Strong Memorial Hospital in Rochester for study and treatment.

There the dyspnea gradually diminished; the child began to take fluid and food and passed two diarrheal stools.

It was learned that the family cat had been sick for about a year, with cough and frequent vomiting and diarrhea. About six weeks before, the cat had lost weight and vomited round, yellow worms and had worms in bloody, diarrheal stools. All cats on the grandmother's farm, where the family cat came from, were said to be sickly. An eight-year-old female cousin of the patient who lived on the farm had been under a physician's care for over a year for a condition "on the verge of leukemia."

Physical examination showed a pale, lethargic, apparently chronically ill, quiet white male. Positive findings were bilateral, slightly enlarged, nontender submandibular nodes, fine transient rales at both lung apices, and loud expiratory rhonchi throughout both lung fields. The liver was enlarged to 4 cm. below the right costal margin. The spleen was enlarged to 1 cm. below the left costal margin.

From July 1 to 14, the leukocytes went down gradually from 86,400 to 16,200 and the eosinophils from 57 to 35 per cent. Red blood cells on admission were markedly hypochromic and anisocytotic with poikilocytosis. Platelets were normal in number and morphology. Stool was guaiac negative; no ova or parasites were seen. Nine further stool examinations were also negative for guaiac, ova, or parasites. Total protein was 7.6 Gm. per cent; albumin-globulin ratio 4.9:2.7; cephalin flocculation test 1 plus; total bilirubin 0.1 mg. per cent; blood Wassermann negative. Skin tests with trichinella and old tuberculin 1:1,000 were negative.

Patient's symptoms cleared in two days, and the spleen was no longer felt after three days. On the fourth hospital day he passed a young male ascaris by rectum. Thereafter he steadily improved, took feedings and fluid better, although still poorly, and appeared much less ill. On July 10, 1953, the liver edge was only 1 cm. below the costal margin. The same day he was given 100 mg. of Crystoids Anthelmintic after a purge, but no worms were obtained.

The family cat was found to harbor a feline tapeworm, a feline ascaris (not Toxocara cati), and a protozoan.

Studies on the patient's family revealed the father having 7,500 white blood cells with 7 per cent eosinophils, the mother 12,000 white blood cells with 3 per cent eosinophils, and a six-year-old brother 13,200 white blood cells with 23 per cent eosinophils. The brother's stool also showed an ascaris ovum, while stools of the father and mother were negative.

After discharge from the hospital the mother stated that the child passed masses of ascarids, each stool containing "about one big worm and 30 to 40 small ones." The patient looked better and ate better. On August 10, 1953, he passed a long, live roundworm.

On September 14 the patient had croup, cough, dyspnea, restlessness, and scattered, moist bronchitic rales throughout both lungs. He also had diarrhea but passed no worms. Liver and spleen were not palpable. He was admitted to Corning Hospital where his condition cleared gradually within three days. A blood count at this time showed 13,000 white blood cells with not a single eosinophil cell. Although the stool was negative for ova and parasites, he was given another dose of Crystoids Anthelmintic.

A similar episode about four weeks later again required short hospitalization. A blood count on October 12, 1953, showed 14,100 white blood cells with 4 per cent eosinophils. A chest x-ray showed scattered areas of pneumonitis, especially in the left upper chest and the right base. A blood sample was sent to the State Laboratory in Albany. A complement fixation test for trichinosis was negative; also an experimental test with ascaris and with male Toxocara canis antigen was negative. Additional tests were planned but could not be done since the patient has not returned since October 15, 1953.

Summary

A case of a sixteen-month-old infant is presented, characterized by an extreme hyperleukocytosis and eosinophilia of the blood and bone marrow, hyperglobulinemia, fever, pulmonary infiltrations resembling bronchopneumonia, hepato- and splenomegaly. The initial diagnosis of acute eosinophilic myeloid leukemia was proved to be false by the subsequent course of the disease and further observation. The true etiology of the syndrome was found to be visceral larva migrans. A short discussion of this clinical entity is presented.

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Primary Carcinoma of the Infrapapillary Portion of the Duodenum

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CARCINOMA anywhere in the duodenum is an infrequent finding and is even more so when found in the third portion of the duodenum. The majority of cases which have been reported were diagnosed either at operation or at autopsy. Up until 1950, 15 cases of carcinoma of the third portion of the duodenum, which were resected, were reviewed by Shallow.[1] Since that time a few more cases[2-7] have been reported in the English language literature, thus bringing the total up to at least 22 cases. Most of the other cases reported in the literature were carcinoma in the supra-ampullary portion and the periampullary region of the duodenum. Our case merits reporting for the lesion not only was in the third portion of the duodenum but was also diagnosed correctly before operation by means of radiography.

Case Report

A sixty-four-year-old, white, widowed dressmaker was admitted to the hospital on July 2, 1953, complaining of weakness, anemia, cough, palpitation, and weight loss of three months duration. Prior to the onset of her present illness she had been treated for mild hypochromic anemia with iron and vitamins, and her hemoglobin was stabilized at about 12 Gm. (Sahli) until April, 1953. Early in April, 1953, she evidently had an upper respiratory infection which was not treated at the time. Since that time she had had a persistent, nonproductive cough. She also felt weak most of the time. She complained of an intermittent fluttering in her chest during this same period of time. During the period from early April until admission she continued to lose weight amounting to 17 pounds, felt increasingly weaker, and continued to cough. She had only slight anorexia and ate fairly well. Her hemoglobin dropped from 12 to 6 Gm. (Sahli), and a complete blood count showed normocytosis and hypochromia. Her past history revealed that she had high blood pressure ten years ago with sudden loss of sight in her right eye followed by eventual complete recovery of sight. For a number of years the patient had osteoarthritis of her spine and fingers which was treated with salicylates and phenylbutazone. There was no significant family history. She used neither tobacco nor alcohol and partook of only the aforementioned drugs.

Physical examination revealed a pale, well-developed, fairly well-nourished, aged white female in no acute distress. The blood pressure was 145/90, pulse 84 and regular, and temperature rectally 100 F. Her skin was relaxed, thus appearing to show signs of weight loss. Examination of the head and neck was negative except for pale mucosa in the mouth and nasal passages. There were no palpable lymph nodes. The chest was normal on auscultation and percussion, and the breasts were not remarkable. Examination of the heart was negative, and the ventricular rate equalled the pulse rate. In the abdomen no organs were palpable, and no masses or tenderness were found. The pelvic and rectal examinations were not remarkable. The extremities revealed some mild degenerative joint changes in most interphalangeal joints and in both knees. The neurologic examination was negative.

The urinalysis was negative. The blood hemoglobin was 53 per cent, red blood count 2,800,000, hematocrit 29, white blood count 6,150 with polymorphonuclears 58 per cent, bands 2 per cent, lymphocytes 37 per cent, monocytes 2 per cent, eosinophils 1 per cent. The blood smear revealed some anisocytosis, poikilocytosis, and hypochromia of the red blood cells. The erythrocyte sedimentation rate was 40 mm. in one hour (Wintrobe). Fasting blood sugars were 67 and 122 mg. per cent; blood urea 10 and 13 mg. per cent; alkaline phosphatase 1.4 Bodansky units; prothrombin time 12.2 seconds (control 11.6 seconds); icterus index 9.7; total protein 6.5, albumin 4.3, globulin 2.2, and albumin-globulin ratio 2.0. The stool was positive for occult blood. The gastric wash was negative for acid-fast bacilli. A urine culture was negative. The electrocardiogram was normal. The chest plate revealed a normal cardiac silhouette, and lung fields were not remarkable.

The gastrointestinal series revealed a normal stomach, but there was a consistent narrowing of the third portion of the duodenum about 4 cm. in length and having the appearance of an intrinsic lesion (Fig. 1). In the six-hour film a minimal retention was noted in this region of the third portion of the duodenum at the site of the described intrinsic lesion. The roentgen diagnosis was neoplasm of the third portion of the duodenum. The barium enema studies were negative.

Because of the x-ray diagnosis of malignancy the patient was prepared for operation with blood transfusions, intravenous electrolytes, and glucose solutions and gastric lavages. On July 10 the hemoglobin was 67 per cent. The operation was performed on July 11, 1953, by one of us using cyclopropane and ether endotracheal anesthesia. The stomach and the first and second portions of the duo-

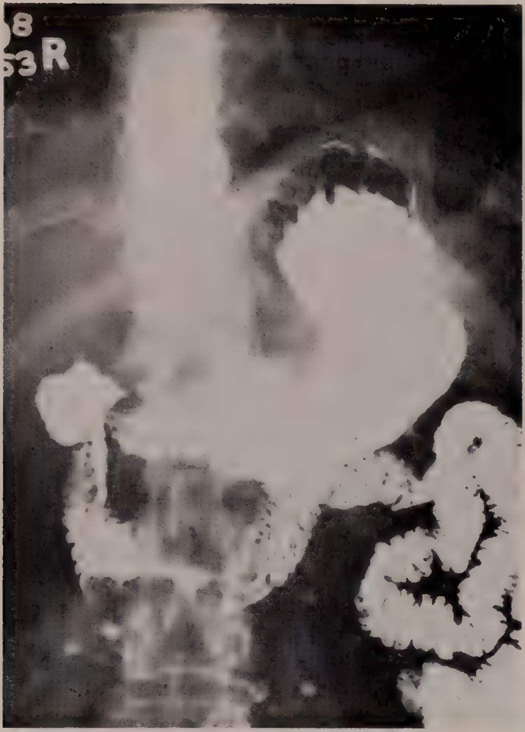

FIG. 1. Roentgenogram demonstrating the intrinsic lesion in the third portion of the duodenum.

denum were found to be normal. A constricting lesion about 6 cm. in length was found, beginning at the junction of the second and third portions of the duodenum and extending through its third portion. This lesion felt firm and irregular. No palpable glands were noted, and no metastatic nodules were palpated in the liver. The duodenum was then transected at the ligament of Treitz, mobilized, and freed to the right, bringing it out from beneath the superior mesenteric vessels. In order to remove sufficient duodenum cephalad to the lesion, the duodenum had to be cut at a level just distal to the ampulla of Vater. A free flow of bile was then noted. Any closure or anastomosis to establish continuity of the open duodenum would obstruct the biliary passages. Accordingly a modified Whipple operation seemed indicated. Unfortunately, the general condition of the patient was not good, and, therefore, a duodenostomy was performed by placing a catheter into the open duodenum and securing it with sutures and closing the duodenal stump about the catheter. Alimentary continuity was established by doing an antecolic gastrojejunostomy. The end of the jejunum was anastomosed to the side of the stomach at the greater curvature. A Witzel type of jejunostomy was performed on the proximal jejunal loop for jejunal feedings. The duodenal catheter was brought out through a stab wound on the right side, and the jejunal catheter was brought out through a stab wound on the left side.

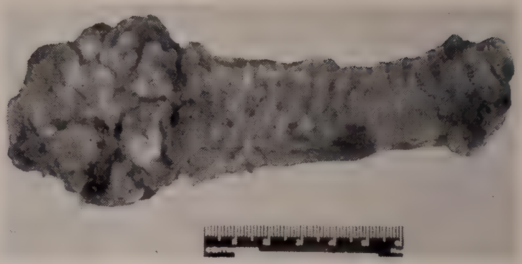

FIG. 2. The resected segment of the duodenum showing the gross pathology.

The patient received 1,000 cc. of whole blood during the operation and 500 cc. immediately after the procedure.

PATHOLOGIC REPORT.—Gross Examination: The specimen consisted of a portion of duodenum measuring 16 cm. in length and 1.8 cm. in diameter (Fig. 2). Near one end of the specimen in the region which was formerly adjacent to the ampulla of Vater the duodenum was dilated and measured up to 2.8 cm. in diameter. The serosal surface for the most part was purplish gray, smooth, and glistening. To one portion were attached lobules of bright yellow adipose tissue. On opening the specimen and in the region adjacent to the ampulla, there was noted an irregular, polypoid, cauliflower-like tumor mass measuring up to 5 cm. in diameter, with edges thrown up into irregular folds raised to about 1 cm. above the mucosa. The cut section through the tumor mass showed a yellowish-gray, cut surface and appeared to involve the entire thickness of the duodenal wall.

Microscopic Examination: The tumor was a well-differentiated glandular carcinoma composed of tall columnar cells of varying size and nuclear staining (Fig. 3). In many of the cells the nuclei were irregular and hyperchromatic, and some were in mitotic division (Fig. 4). There was a heaping-up of cells in some places. There was noted a loss of cell polarity and an indistinctness of the basement membrane. There were also small foci of necrosis in some areas. The surrounding stroma was infiltrated with inflammatory cells and freshly extravasated blood. The tumor in some areas extended into the muscular coat. Elsewhere the mucosa was preserved and showed little of note. Other sections from the tumor showed essentially similar histologic pictures. The diagnosis was adenocarcinoma of the duodenum.

POSTOPERATIVE COURSE.—The postoperative course was stormy and downhill for the most part. The patient did fairly well for the first three days postoperatively except for a persistently elevated temperature up to 104 F. and tachycardia. She was placed on large daily doses of parenteral penicillin, streptomycin, and oxytetracycline. On the third day she was sitting up dangling her feet over the side of the bed and felt fairly well. It was noted, however, at this time that she was jaundiced. Icterus index was 30.3 and persisted at about this level until death. Jejunal feedings were started on

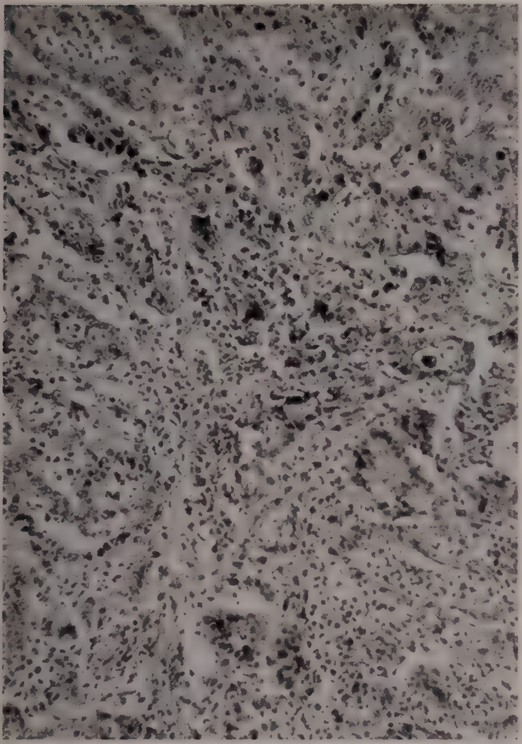

Fig. 3. Photomicrograph showing the tumor under medium magnification, hematoxylin-eosin stain. Note the glandular structure of the neoplasm.

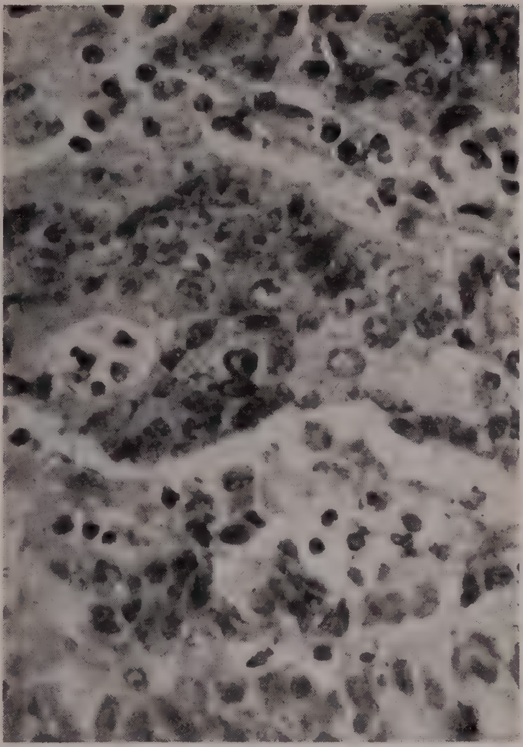

Fig. 4. Photomicrograph of the tumor under higher magnification, hematoxylin-eosin stain. Note hyperchromatism of the nuclei, variation in size of cells, and the loss of polarity.

the second postoperative day. The bile which was collected from the duodenal tube was injected through the jejunal tube. Gastric suction was continued for a greater part of the time.

On the fourth postoperative day the patient began to complain of diffuse abdominal pain associated with right shoulder pain and mild dyspnea. Physical examinations and radiographic studies were consistent with basilar pneumonitis. In addition to the antibiotics and parenteral fluids she was placed in an oxygen tent. On July 16, 1953, the fifth postoperative day, a diminution of the urinary output was noted. Acute tubular necrosis (lower nephron nephrosis) was considered to have developed at this time, and, therefore, the intake of fluids was limited to equal output and other estimated unmeasured fluid losses. During the entire postoperative period electrolytes and electrocardiograms were followed closely, and at no time were any marked deviations from normal found. On July 17, 1953, the sixth postoperative day, the jejunal tube was found lying free in the bed. This sorely complicated the feeding and fluid administration problems. The main wound showed a constant discharge of bile-stained material through a sinus opening.

The hyperthermia continued with the temperature ranging between 101 and 104 F. until the eighth postoperative day, when it dropped to 100 F. and varied between 99 and 100 F. until death. With careful fluid administration, electrolytes calculated according to blood levels, and blood transfusions, the urinary output improved on July 20, 1953, after five days of oliguria. In spite of this diuresis, the blood urea mounted from 21 mg. per cent on July 13 to 246 mg. per cent on July 29. At all times urine and blood cultures were negative. On July 22 the duodenostomy tube became loose and was removed, precluding measurement or return of biliary fluids, which continued to drain. The patient's condition deteriorated rapidly in spite of supportive measures, and she expired in coma on August 1, 1953. No autopsy was obtained.

Comment

The infrequency of carcinoma of the duodenum is admitted in various reviews,[8-12] while 0.033 per cent in autopsy material is usually stated as the average incidence. Infra-ampullary carcinoma constitutes from 12 to 21 per cent of this total.[13] Statistics reveal that most lesions occur in the periampullary area. However, there may be a possibility that since some cancers of the ampulla of Vater are included in this group, the distribution is approximately equal throughout the three areas of the duodenum.[8] The usual tumor is of the glandular carcinomatous variety[12] described by most authors as a cylindric cell adenocarcinoma of mucosal origin. It has been noted also that the tumors may arise from Brunner's glands, heterotopic tissue such as aberrant pancreas, diverticula with pancreatic or gastric tissue in situ, and possibly in some rare cases from polyps, adenomas, and papillomas. It is felt that the bulk of these tumors arise from neoplastic changes in the duodenal mucosa itself. Our case was a well-differentiated adenocarcinoma, probably of the latter origin. There was no definite evidence of metastases, which, however, usually occur later in the course of the disease.

The symptoms and signs attending malignancy of the duodenum are not specific.[9] Although definite criteria for diagnosis have been listed[14] they can be applied equally as well to lesions of the stomach and pancreas. Thus, the difficulty in making a clinical diagnosis in most cases is never resolved until laparotomy is performed. The clinical features depend on the type, site, and state of advancement of the growth. The large polypoid and infiltrating annular growths produce obstructive symptoms, whereas those involving the papilla produce obstructive jaundice and the ulcerated lesion bleeding followed by anemia with its usual symptoms and signs. Any of these growths may produce pain which is frequently the presenting symptom. Later in the course of the disease after extension of the lesion, one may be confronted with the clinical picture which accompanies perforation, metastases, and complicating biliary tract disease.[15] The presenting symptoms of this case were those associated with anemia, which is not uncommon. For instance, Lichtman[16] in his series found anemia to be the fourth commonest finding. However, blood loss is usually not found as an isolated sign but is associated with other symptoms and signs. Our patient chiefly had the symptoms associated with a poor hemic component, and she had a paucity of gastrointestinal complaints. In six cases cited by the latter author the only symptom was weakness or fatigue so that stool studies were made and occult blood subsequently found.

Weber in his discussion of Lichtman's report stated that the roentgenologist should never fail to examine the entire duodenum when it has been known that the patient was referred to him because of anemia resulting from chronic blood loss. It has been reported[17] that the diagnosis of malignancy of the duodenum was made on one occasion from Papanicolaou studies of duodenal drainage material. This was done in a case of duodenal obstruction which could not be differentiated by means of radiographic studies, yet it is believed by most authors that the roentgen examination is the best single method of diagnosis.

This case is interesting inasmuch as the diagnosis of neoplasm was made so easily by means of a routine gastrointestinal series which was done in a case of anemia. It is not always this simple. It is very possible for the radiologist to miss the lesion[1] because he may not specifically examine the entire duodenum with this possibility in mind because of its rarity. Other difficulties can occur. For instance, if obstruction is present, it may obscure the details, and a diagnosis of ulcer or gastric neoplasm may be made instead. Also, when obstruction is present, localization may be difficult because of the extreme irritability at the site of the lesion excluding filling with the barium that is necessary to outline the tumor mass. If a concomitant lesion is present in the stomach or duodenal bulb, the examination may be terminated at the latter level, and there may be a tendency to examine the rest of the bowel in a cursory manner. Thus, the duodenum should be examined in its entirety in the face of chronic blood loss whenever gastric dilatation and retention are not obviously the result of gastric or duodenal ulcer or pyloric neoplasm and whenever an extragastric mass is discovered which might be originating in the duodenum.

The roentgen signs[18–20] are variable according to the stage of the disease. They include the following: annular, infiltrating, or ulcerative defects; mucosal changes such as effacement or thickening of the mucosa, irregular polypoid filling defects; dilatation of the duodenum above the site of obstruction, dilatation of the stomach, and sometimes both giving an hourglass effect. One also may find rigidity of the duodenal wall or a palpable mass at the site of obstruction or defect during fluoroscopy. The duodenal sweep does not change unless there is extension and resulting extraduodenal pressure.

Although previous reports, such as that of Berger and Koppelman[21] in 1942 gave a gloomy picture of the operative results in duodenal malignancies, recent advances in surgical technics and management have lowered the morbidity and mortality rates. This is especially true in lesions of the third portion which are situated caudad enough to be resected without involving the biliary system. Since it is a disease which may be detected before metastases have taken place or may be suspected early in its course, it behooves us to explore any suspected case. This is borne out by the increasing number of successfully resected cases being reported. The obvious treatment of choice is complete resection of the lesion. However, if the lesion is found to be advanced beyond removal, then a palliative operation to relieve obstruction can be done.

Summary

A case of infrapapillary carcinoma of the duodenum which was resected has been presented. Some of the clinical aspects of this condition have been briefly discussed, and in particular the part that the roentgenograms play has been emphasized. In

spite of the unfavorable outcome in this case we believe that evidence is accumulating in the literature to indicate that early surgical intervention offers the only hope for cure at the present time.

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October 11, 12, and 13, 1954

SYRACUSE, NEW YORK

Retinal Hemorrhages Treated with ACTH and Cortisone

JOSEPH D. SACCA, M.D., F.A.C.A., FLUSHING, NEW YORK

A FIFTY-EIGHT-YEAR-OLD white male gave a history of his noting diminished vision in the summer of 1950. He consulted his family physician who made the diagnosis of bilateral retinal hemorrhages and referred him to an ophthalmologist for further treatment. Examination by this specialist revealed vision in the right eye to be 20/200 corrected to 20/25 with lenses. In the right fundus a moderate degree of arteriosclerosis was found. There was only light perception in the left eye, and no details at all could be found in the left fundus.

On November 29, 1952, the patient returned to this same ophthalmologist with the story that ten days prior he awoke one morning and found that there was complete loss of vision in his right eye. Under ephedrine dilatation examination of the right fundus, there were several scattered retinal hemorrhages, edema, marked fullness of the veins, and narrowing of all the arteries. The final opinion was that of a vascular occlusion causing the whole process, and the patient was referred back to his family physician for a complete medical workup. In the ensuing months the patient was put through a complete medical examination which included almost every conceivable type of test, all with negative findings. With no explanation as to cause of his disease, the patient decided to consult a second ophthalmologist for re-examination and re-evaluation of his problem in February, 1953. This physician gave him a complete eye examination, and his findings corresponded with those of the first eye specialist. No hope for visual improvement was forthcoming, and the patient was beginning to become accustomed to a very dark future.

On March 17, 1953, the patient was referred, as a last resort, for a complete allergy workup. Questioning the patient thoroughly, no allergic family or personal history could be found, thereby convincing us that the answer to this problem was not to be found in the realm of allergy. Many large hemorrhagic areas were found on both retinas, and visual acuity was nil. Since almost every conceivable type of medication except ACTH or cortisone had been unsuccessfully used on this patient in the past two years, it was decided empirically to put him on a course of ACTH.

On March 17, 1953, he was started on 80 units of Acthar gel intramuscularly which was repeated every other day. Following the fourth injection the patient reported that he had seen the sun for just about ninety seconds, and then it faded away. After the eighth dose of ACTH the patient was able to see hand motions and could count fingers three feet away. Examination of the right retina showed some clearing of the hemorrhages, but there was no change in the left retina. Following this eighth dose of Acthar gel, the patient was placed on 50 mg. of cortisone daily by mouth until he returned on June 20, 1953. Beginning June 20 he was again started on 60 units of Acthar gel three times per week for a total of nine injections, and by July 11, 1953, he had improved so well that he was now able to read the headlines of his newspaper. Within the next few weeks he had progressed so well that he could read street signs, cross main boulevards alone, and do some shopping locally. Examination of the retinas at this time showed fairly good clearing of the scattered hemorrhages, and the patient could count fingers at a distance of five feet.

On September 15, 1953, the patient returned and was given another course of 80 units of Acthar gel twice weekly until October 13, 1953, at which time the patient commented that he had steadily improved and that he was seeing and doing more than he had the previous months. It was also noted at this time that even during his rest periods between courses of ACTH, his vision kept progressively improving. The fact that his vision did not regress between courses of ACTH was very encouraging and was suggestive of the great possibility of a permanent regression of the hemorrhages.

This patient was last seen early in January, 1954, at which time there was even greater clearing of the retinas and even more progress in his visual accomplishments. His visual acuity was 1/200 bilaterally, although subjectively he claimed to have improved 50 per cent. The blood vessels of the right retina were more distinct, and the previously blotchy areas were lighter in color. The left retina was still covered with widespread, dark hemorrhages.

4668 HOLLIS COURT BOULEVARD

The trouble with most people is that they think with their hopes or fears or wishes rather than with their minds.—WALTER DURANTY

HISTORY OF MEDICINE in New York State

Editor
FREDERIC D. ZEMAN, M.D.

EDITOR'S NOTE: As we have indicated in previous numbers of this JOURNAL, this department has adopted the policy of reprinting important contributions to the history of medicine in this State. The accompanying paper by Dr. Paul E. Bechet, the distinguished dermatologist who has written extensively on the historical aspects of his specialty, exemplifies the kind of contribution that we are eager to stimulate among our readers. When the Sesquicentennial History of the State Society is finally complete, we hope to include in it the stories of all the medical and surgical specialties. We are indebted to Dr. Paul A. O'Leary, editor of the *A.M.A. Archives of Dermatology and Syphilology*, for permission to reprint this paper which appeared in that journal, volume 64, page 273, September, 1951.

Rise and Growth of Dermatology in New York

PAUL E. BECHET, M.D., ELIZABETH, NEW JERSEY

The historian's aim should be to collect with judgment and at the same time write with spirit.—William M. Sloane, Professor of History, Princeton University, 1883–1896; Seth Low Professor of History, Columbia University, 1896–1916.

I BELIEVE that this is the first time that a symposium on the history of dermatology has ever been presented before a medical body. That the Committee on Education of such an important organization as our American Academy of Dermatology and Syphilology decided to present this symposium evidences the growing interest in the history of our specialty and their appreciation of the immense amount of groundwork done by our dermatological forebears, as also the importance of their superlative contributions to the specialty we so greatly love.

In order to allay any qualms of jealousy amid many personal friends living in cities equally important to those mentioned, may I state that it is my impression that the cities of New York, Philadelphia, Boston, and Chicago were designated for this symposium simply because they are the centers of an immense population, and the rapid development of the specialty of dermatology in them was not due to any special group of supermen, but rather to the very primitive law of supply and demand; the larger the population, the greater are its dermatologic ills, and the demand for experts to relieve these ills is consequently so great as to stimulate and activate the study of dermatology to an unusual degree, and this is especially true in America's largest city, New York. The above statement is made lest the relation of the great number of dermatologic "firsts" in New York overstimulate the ego of the younger generation of dermatologists residing in that city.

To go into the complete details of the rise and growth of dermatology in New York and its share in the progress of the specialty in America and include all of the men responsible for it would take hours to relate, so that this recital must restrict itself to the more important contributions of the "stars" of the dermatologic stage in New York.

American dermatology began in New York on June 22, 1836, when the Broome Street Infirmary for Diseases of the Skin was opened under the direction of Henry Daggett Bulkley.[1] One year later he instituted a series of lectures on cutaneous diseases at the Broome Street Infirmary, and he continued these lectures during the next three years at the Broome Street School of Medicine, at the New York Dispensary, and later at the College of Physicians and Surgeons, then located

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Presented in a symposium on History of Dermatology at the Ninth Annual Meeting of the American Academy of Dermatology and Syphilology, Chicago, December 7, 1950.

on Crosby Street, delivering nine courses of lectures here during the following ten years. Bulkley was therefore not only the first to lecture on dermatology in America but the first to practice the specialty exclusively in America. He was born in New Haven, Connecticut, on April 4, 1804. He received an academic degree from Yale College in 1821. He studied medicine at Yale and graduated in 1830. After graduation he went to Paris in 1831, where he became the first American dermatologic student under Biett and Cazenave at the old Hôpital Saint-Louis. He translated into English the *Manual of Diseases of the Skin*, by Cazenave and Schedel, in 1845 and in 1851 edited an American edition of Gregory's *Eruptive Fevers*. At different times he was president of the New York Academy of Medicine and the New York County and New York State Medical Societies. It was at his home at 42 East 22nd Street that the New York Dermatological Society was founded, and he was its first president. He died of pneumonia on January 4, 1872, in his sixty-eighth year.

The New York Dermatological Society is the oldest dermatologic society in the world and was founded on May 18, 1869. This historic occasion was due to the efforts of Dr. Faneuil D. Weisse, who conceived the idea of a dermatologic society in America while studying his specialty abroad. A letter was sent to certain physicians interested in dermatology, signed by Drs. Faneuil D. Weisse, H. D. Bulkley, Henry G. Piffard, and Foster Swift, reading:

> Knowing as we do that you are interested in dermatology, we would wish you to participate with us in the organization of a society to be devoted to the investigation and consideration of the same. The object of the New York Dermatological Society shall be to afford all those interested in this most important department of medicine an opportunity for a full exchange of their opinions and methods of practice, and to contribute American experience and investigations to the fast accumulating stock of our knowledge of diseases of the skin.

Ten men responded in the affirmative to this letter and in so doing helped to launch a society which in eighty-one years has never missed its eight monthly meetings a year. Its popularity is attested by the fact that the complete roster of members from 1869 to date numbers 88, and 72 remained members until their death. George H. Fox once told me that a devoted member of the society passed the remark that in twenty years no member had resigned, or even died, thus evidencing that the joys of membership were sufficiently great even to defeat the old gentleman with the hourglass and scythe.

In 1870, a year after the founding of the New York Dermatological Society, the first journal on dermatology in America made its appearance in New York under the editorship of M. H. Henry, a New Yorker. It was entitled *The American Journal of Syphilology and Dermatology*, and under different titles but without interruption it has appeared ever since. In its span of eighty years it has proved invaluable to American dermatologists, and its appearance caused a tremendous increase in dermatologic activity throughout the country.

The years 1841 through 1846 proved exceedingly generous to our specialty in New York, for they gave birth, in chronologic order, to a constellation of brilliant men, in the persons of Samuel Sherwell, Henry G, Piffard, Robert W. Taylor, Edward L. Keyes, Andrew R. Robinson, L. Duncan Bulkley, George H. Fox, and Prince A. Morrow.

Samuel Sherwell was the first teacher of dermatology at the Long Island Medical College (1877) and first to practice this specialty in Brooklyn, where he remained active for some fifty-five years. He received his medical degree from University and Bellevue Medical College in 1868 and did postgraduate work in Europe until the outbreak of the Franco-Prussian war in 1870, when he served in the Anglo-American Ambulance Corps with Sir William McCormack and Marion Sims. For these services he received from the Bavarian government the military order *Pour le merite*. He was elected president of the New York Dermatological Society in 1881 and again in 1909. He was also president of the American Dermatological Association in 1894. He wrote a number of dermatologic articles, the most outstanding of which was on his use of acid nitrate of mercury after thorough curettage in the treatment of epitheliomas of the skin, a method which proved highly efficacious, giving at the same time excellent cosmetic results. Sherwell died in 1928, at the age of eighty-seven, after an eventful and interesting life. His *Recollections of an Old Boy*[2] makes fascinating reading.

Henry G. Piffard,[3] the author of the second American textbook on dermatology, graduated in medicine from the College of Physicians and

Surgeons in 1864, and he studied dermatology abroad, spending most of his time at the University College Hospital in the dermatologic clinic of Tilbury Fox. On his return to New York he rose so rapidly that within a few years he attained such dermatologic eminence that he helped to found the New York Dermatological Society and the American Dermatological Association and received in 1871 an appointment as visiting dermatologist to the New York City Hospital (Welfare Island), which was the first institution in the United States to establish dermatologic wards as early as 1866, when Dr. Freeman J. Bumstead received the first appointment as visiting dermatologist.[4] Piffard was a great teacher and as early as 1874 became professor of diseases of the skin at New York University, and in 1875 he started postgraduate instruction which he kept up after 1882 at the New York Post-Graduate Medical School and Hospital.[5] Piffard also wrote the first American textbook on dermatotherapy in 1881,[6] but as early as 1868 he had published a translation of Hardy's *The Dartrous Diathesis of Eczema and Allied Affections.* In collaboration with G. H. Fox he published in 1877 a small book for the use of students, which is now very scarce.[7] Piffard was a dynamo of energy, a genial fighter, avid hobbyist, profound thinker, and forceful teacher. He died of pneumonia on June 8, 1910, at the age of sixty-eight. As his lifelong friend, George Henry Fox, aptly put it, he was "a blazing meteor in our dermatologic firmament."

Robert M. Taylor received his medical degree from the College of Physicians and Surgeons in 1868. He first described idiopathic progressive atrophy of the skin in 1876.[8] In 1875 he wrote *Syphilitic Lesions of the Osseous System in Infants and Young Children,*[9] a pioneer and most important contribution to the study of bone syphilis. He published a large folio on venereal and skin diseases in 1889. He was the first to teach dermatology at the University of Vermont and succeeded George Henry Fox as professor of dermatology at the New York Post-Graduate Medical School and Hospital. Taylor was a founder of the American Dermatological Association and its president in 1882. He was president four times of the New York Dermatological Society. He died in 1908 at the age of sixty-six.

Edward L. Keyes graduated from New York University Medical College in 1866. On the advice of his preceptor, William H. Van Buren, he went abroad to specialize in dermatology. In 1871 he was appointed lecturer in dermatology at Bellevue Hospital Medical College and, in 1881, professor of cutaneous and genitourinary diseases at the same school. Keyes was deeply interested in genitourinary surgery, but he made a number of valuable contributions to dermatology, among which may be mentioned the invention of the cutaneous punch for biopsies. One of his greatest contributions was a paper on the tonic effect of small doses of mercury on syphilitic blood, which first appeared in January, 1876.[10] This paper was incorporated in an essay on the same subject which was read by Keyes before the Section on Dermatology and Syphilis at the International Medical Congress at Philadelphia in September, 1876. Keyes was a charter member of both the New York Dermatological Society and the American Dermatological Association. Van Buren and Keyes collaborated on a textbook on genitourinary diseases which remained a classic for many years.

Andrew Rose Robinson graduated in medicine at Bellevue Hospital Medical College in 1868 and the University of Toronto in 1869. He did postgraduate work in dermatology in London, Paris, and Vienna, where he became especially interested in histopathology; this interest led to his appointment as professor of histology and pathologic anatomy at the New York University Medical College and Women's Medical College of the New York Infirmary for Women and Children. He can therefore be considered the pioneer histopathologist in America. But the institution nearest his heart was the New York Polyclinic Medical School and Hospital, of which he was one of the founders and professor of dermatology for many years. He wrote a *Manual of Dermatology* and was the first to describe hydrocystoma.[11] Robinson served as president of the Section of Dermatology and Syphilology at the Ninth International Medical Congress in 1887 and of the American Dermatological Association in 1896. He was the first chairman of the Section of Dermatology and Syphilology of the New York Academy of Medicine.

On January 1, 1883, the doors of a small house at 243 East 34th Street were opened to patients with skin diseases, and that act marked the beginning of not only the first hospital in New York devoted to dermatology but also the largest of such kind in America, a position it has maintained ever since.[12] On the staff of the New York Skin and Cancer Hospital many of the representative dermatologists of New York have served at different times. Even in 1883, its first year, one may find on its consulting staff such famous New York names as William H. Draper, Fordyce Barker, T. Gaillard Thomas, Edward G. Janeway, Alfred L. Loomis, and Abraham Jacobi. An outstanding member of the group which founded the hospital and the one most responsible for its existence was Dr. L. Duncan Bulkley; it was he who conceived the original idea. He was the son of Henry Daggett Bulkley. L. Duncan Bulkley graduated in medicine from the College of Physicians and Surgeons in 1869, studied dermatology at the Hôpital Saint-Louis, and on his return to New York became most active in dermatology. His monograph *Syphilis in the Innocent*[13] won the Alvarenga prize in 1891 from the College of Physicians of Philadelphia. He wrote several hundred articles and six or eight textbooks, mostly devoted to dermatotherapy, in which he had a deep interest. He was one of the founders of the American Dermatological Association and secretary of its first annual meeting, which was held in Niagara Falls, New York, on September 4, 1877. L. Duncan Bulkley was also one of the founders of the Section on Dermatology and Syphilology of the American Medical Association and chairman at its first meeting on May 8, 1888. Bulkley died in 1928 at the age of eighty-three.

In 1879 George Henry Fox marked an epoch in the illustration of skin diseases when he published his *Photographic Illustrations of Skin Diseases*, the first successful attempt to illustrate dermatoses by means of photography.[14] He also published *Skin Diseases in Children* (1897)[15] and his *Reminiscences* (1926).[16] He was the first to describe a chronic, itching, papular eruption of the axillae and pubes (Fox-Fordyce disease).[17] The clinical observations were done entirely by him. Fordyce did only the histology. Fox was probably the first to report a contact dermatitis when he described matchbox dermatitis as early as 1888. After receiving his medical degree from the University of Pennsylvania in 1869, he served an internship at "old Blockley," where, by a strange coincidence, he succeeded Louis A. Duhring, of Philadelphia, another great American dermatologist.[18] On the completion of his internship at the Philadelphia (Blockley) Hospital, Fox left for Europe where, for three years, he studied dermatology, in Berlin under Virchow, in Vienna under Hebra, Neumann, Schroetter, and Stoerck, in Paris with Bazin, Hardy, and Vidal, and in London under Tilbury Fox and Jonathan Hutchinson.

Fox became a great teacher and served at different times as professor of dermatology, from 1875 to 1907, at the Women's Medical College of the New York Infirmary, Starling Medical College, Columbus, Ohio, the New York Post-Graduate Medical School and Hospital, and the College of Physicians and Surgeons in New York. He resigned from the last institution before the age limit in order to enable his chief assistant, Dr. George T. Jackson, to become full professor before also attaining the age limit. Fox served as president of the Medical Society of the County of New York in 1891 and of the Medical Society of the State of New York in 1894. He was president four times of the New York Dermatological Society and a founder (1876), president (1892), and honorary president at its golden anniversary meeting in 1926 of the American Dermatological Association. Most of Fox's clinical work was done at the New York Skin and Cancer Hospital,[12] where he was attending dermatologist from 1883 to 1913. One of the great satisfactions of my life was my close association with Dr. Fox over many years. On the many occasions that we were together, I never heard him speak of his own honors, but he was always ready to speak of those around him who had attained a high degree of proficiency in the specialty he had so greatly loved. Another of Dr. Fox's most lovable traits was the extraordinary friendships and interest which he manifested for the young tyros of his specialty. His willingness to help them in every way possible was expressed without the slightest trace of condescension. As Pusey rightly stated, "He was perhaps the friend of more American dermatologists than any other one of his generation." Fox died on May 3, 1937, at the age of ninety-one.

Prince A. Morrow was born on December 19, 1846, at Mount Vernon, Christian County, Kentucky. He received his degree in medicine from New York University in 1873, and after two years of dermatologic work in Europe, he located in New York, where he rapidly rose to eminence. He became professor of dermatology and genitourinary diseases at New York University and Bellevue Hospital Medical College in 1883. He was also an attending physician to the department of cutaneous and veneral diseases of the New York Hospital. He was a corresponding or honorary member of most of the foreign dermatologic societies, and he served as secretary of the International Congress of Dermatology and Syphilology in Paris in 1890 and in Vienna in 1893. He edited the *Journal of Cutaneous and Genitourinary Diseases* with Piffard from 1883 to 1888 and with Fordyce from 1888 to 1891. He was the author of *Drug Eruptions* (1887), *An Atlas of Skin and Venereal Diseases* (1888–89), *A System of Genitourinary Diseases, Syphilography and Dermatology*, three volumes (1892–1894), *Leprosy* (1880), *Social Diseases and Marriage* (1904). Morrow, through Fournier's *Syphilis and Marriage* which he translated into English in 1880, received the inspiration to take up the prophylaxis of syphilis, so that later on in life he practically made it his life's work. He founded the Society of Sanitary and Moral Prophylaxis in 1905 and remained its president until his death in 1913. He was the founder and editor of *Social Diseases*, a journal devoted to venereal prophylaxis.

John A. Fordyce graduated in medicine from Northwestern University Medical School in Chicago in 1881, served as intern in the Cook County Hospital until 1883, practiced general medicine at Hot Springs, Arkansas, for three years, studied dermatology abroad for two years, and on his return to the United States in 1888 settled in New York. Fordyce served as professor of dermatology and syphilology at New York University School of Medicine from 1893 to 1912, when he resigned in order to accept a similar position at the College of Physicians and Surgeons. He retained this position until his death. He also served the New York City Hospital most faithfully as visiting dermatologist from 1893 until his death in 1925. In 1889 he became coeditor with Prince A. Morrow of the *Journal of Cutaneous and Genitourinary Diseases*. From 1892 on he was its sole editor until his resignation in 1897. Fordyce was a prolific writer, and—what is more important—of his more than a hundred monographs, many marked an advance in the specialty to which he devoted a superabundant energy. He became at different times the presiding officer of the more important dermatologic societies in America. Despite a large practice, extensive teaching, and much hospital and executive work, he always found time to encourage and help the younger physicians, no matter how obscure. Fordyce was a great histopathologist, a bent in this direction having developed under the inspiration of Kaposi. He was also a pioneer in the modern treatment of neurosyphilis. In 1896 he first described pseudocolloid of the lips (Fordyce's disease) under the following title, "A Peculiar Affection of the Mucous Membrane of the Lips and Oral Cavity."[19] "Infectious Eczematoid Dermatitis: Possible Influence of Anaphylaxis in Skin Reactions"[20] appeared in, 1911 and probably was one of the earliest expositions of skin eruptions caused by allergy. Like most great men, Fordyce was modest and extremely diffident. American dermatology suffered an irreparable loss in his death, on June 4, 1925, two weeks after an appendectomy.

Sigmund Pollitzer graduated from the College of Physicians and Surgeons in 1884. After graduation he undertook research work in physiology in Heidelberg, Germany, and in bacteriology in Fresenius' laboratory in Weisbaden, Germany; later he took up special work in Virchow's laboratory and at this time did much original work in physiologic chemistry. It was not until 1889 that he entered on his life's work first at Unna's clinic and then as an assistant to Sir Malcolm Morris in which position he edited for some time the *British Journal of Dermatology* under Morris' direction. From London he went to Paris and there began a lifelong friendship with Darier, whose textbook he translated into English in 1920. Pollitzer was the first to describe the following dermatoses: acanthosis nigricans,[21] hydradenitis destruens suppurativa [22] and parakeratosis variegata with Unna and Santi.[23] Pollitzer, in 1910, reported the first case in which rhinoscleroma was cured with x-ray.[24] He did much pioneer work dealing with the modern concept of syphilis. Pollitzer served as vice-president (1913) and president (1914) of the American Dermatological Association and was one of its most active members for forty-one years. He was professor of dermatology at the New York Post-Graduate Medical School and Hospital from 1885 to 1915. Pollitzer was a strict parliamentarian and was especially critical of long-winded discussions lacking concrete facts. In such instances he could, in a few words of polished English and in well-chosen scientific terms, completely smother the unhappy speaker with unassailable facts from which there was nothing else to do than to retire in confusion. Pollitzer, in acting thus, did much good service, for he deflated the ego of the usual group of know-it-alls who frequent every dermatologic meeting. In his home and with his friends he exuded kindness, generosity, and simplicity. Pollitzer always evinced much friendship for me; why, I do not know, but it did bring me great happiness. He belongs to that small group of physicians who have placed dermatology on a sound, dignified, and scientific basis. His death in 1937 was a severe blow to those of us who knew him well enough to appreciate his many qualities of mind and heart.

From 1900 the progress of dermatology in New York increased by leaps and bounds. The Manhattan Dermatological Society, the second oldest in New York, was organized on November 21, 1900. The section of Dermatology and Syphilis of the New York Academy of Medicine was authorized by its trustees in 1906, and a number of new dermatologic societies have been formed within the past twenty years.

Postgraduate teaching of dermatology began in New York as early as 1875, when a postgraduate faculty was formed at the School of Medicine of New York University with Dr. Henry G. Piffard in charge of dermatology. This faculty was permitted to grant certificates to physicians completing the course. Their success was so great that by 1881 they realized the inadequacies of the conditions under which they were working and the necessity of a separate building and complete segregation from the undergraduates.

The university was not prepared to accede to these just demands so on April 4, 1882, this group resigned and founded the New York Post-Graduate Medical School, which opened its doors on November 6, 1882, and, in sequence first under Piffard, then George H. Fox, Robert W. Taylor, George T. Elliot, Sigmund Pollitzer, A. Schuyler Clark, and George M. MacKee, the dermatologic teaching became so popular that its facilities were greatly overtaxed. In 1934 the New York Post-Graduate Medical School absorbed the New York Skin and Cancer Hospital, which from its inception in 1882 had always had the largest skin clinic in America. Under Dr. George M. MacKee the entire building of the New York Skin and Cancer Hospital was renovated and altered in order to create a complete, self-contained dermatologic unit, where all divergent branches of dermatology, investigative and otherwise, could be studied and cared for under a single roof. Within the past three years New York University and the Post-Graduate Medical School and Hospital and its Skin and Cancer Unit have amalgamated into a single unit, thus greatly increasing the facilities for expert teaching.

The New York Polyclinic Medical School and Hospital has for years maintained a most efficient teaching staff.

Most of the medical schools in New York have within the past twenty years established postgraduate departments in dermatology in which a budding dermatologist can attain the full bloom of an expert, provided he is willing to work diligently.

Summary

It might be well at this time to summarize in chronologic order the substantial contributions to American dermatology made by New York men.

1. Henry D. Bulkley (1804–1872), of New York, was the first to practice and teach dermatology in America and the first American student to study his specialty abroad, at the Hôpital Saint-Louis (1831).
2. The New York Dermatological Society was founded in 1869, becoming the first dermatologic society in the world.
3. In New York in 1870 was first published *The American Journal of Dermatology and Syphilology*, under the editorship of Dr. M. H. Henry of New York.
4. Samuel Sherwell (1841–1927) was the first dermatologist to practice in Brooklyn and the first teacher of dermatology at the Long Island Medical College (lecturer in 1877 and professor a few years later).
5. New York City Hospital was the first hospital in America to establish dermatologic wards (1866).
6. New York University Medical College was the first to give postgraduate instruction in dermatology (1875), under Henry G. Piffard.
7. The New York Skin and Cancer Hospital was the first hospital in New York for the treatment of skin diseases and cancer (1882), under the direction of L. Duncan Bulkley and George H. Fox.
8. Twelve new cutaneous diseases were first identified by New York dermatologists.
9. Of the 16 founders of the American Dermatological Association in 1876, seven were from New York, and of these seven men, three had founded the New York Dermatological Society in 1869.

Epilogue

In the difficult early years of dermatology in America, there is no doubt that the pioneer dermatologists of New York played star roles in the development of their specialty in this country. The present enviable position of dermatology in the United States is substantially due to their tremendous ability, capacity for work, and complete unselfishness. But all these prerequisites were of course equally shared by many other American dermatologists; the names of Worcester, White, Hyde, Duhring, Hardaway, Ravogli, Stelwagon, Gilchrist, and Pusey, to name only a few of them, will live forever, and this will be clearly proved by the other essayists in this symposium.

May I, in closing, express the hope that this symposium will bring to resplendent life the small band of devoted, tireless American pioneers in our chosen field of medicine? If it does, I will feel that my effort to achieve this purpose has been amply rewarded.

1364 North Avenue

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Greatest Since Hadacol

A confidential memo from one of the major drug companies came through our office the other day giving the reason for the recall of one of the vitamin and mineral preparations recently put on the market by said company. It seems that the pill has an acid core which reacts with the surrounding material to form carbon dioxide. When the pill is placed in the patient's mouth, the moisture causes the carbon dioxide to be released with a pop. Sometimes this event took place in the stomach, and the company feels that though the effect is harmless, it is not good for the morale of the patient. It seems to us that they are taking a rather short-sighted view of the whole affair. This is probably the greatest medical invention since Hadacol. Instead of recalling the medication, they should turn one of their bright young scientists loose on the project to incorporate a little smoke in the pill. Then when the pill explodes, the patient will burp a miniature mushroom-shaped cloud. It could be called something like "The Atomic Age Appetizer," and its effect on patients would be so startling that it could be used as a cure for everything from dandruff to athlete's foot. As a placebo, it would be without peer. The only disadvantage that we can see is that it would put 90 per cent of the psychiatrists out of business.—*Bulletin of Allegheny County Medical Society, quoted in Pennsylvania Medical Journal, June, 1954*

Woman's Auxiliary
to the MEDICAL SOCIETY OF THE STATE OF NEW YORK

New York State Fair Exhibit

More than 14,000 persons visited the exhibit sponsored by the Woman's Auxiliary to the Medical Society of the State of New York in the Harriet E. Mills Memorial Building at the New York State Fair Grounds, Syracuse, in September last year. This number compares very favorably with the 12,000 persons who visited the entire first Fair held over a century ago in 1841.

Featured were panels on nutrition and weight control, the winning posters in the State-wide Health Poster Contest, nurse recruitment, voluntary medical care plans, *Today's Health,* and medical public relations. A special attraction were teams of student nurses, in attractive white uniforms, who answered questions of all kinds about nursing and nutrition.

The panel on weight control, featuring the slogan, "Be a Calorie Watcher for Good Health and Good Looks," induced 4,000 persons to take home a copy of the flyer entitled, "Overweight—Me?" Persons expressing concern about their weight were also given a special leaflet prepared by the Metropolitan Life Insurance Company. The student nurses also supervised the weighing of hundreds of persons and obtained the names of 164 young women interested in nursing as a career.

The panel of covers of *Today's Health* resulted in requests for 1,000 sample copies of the magazine plus several hundred copies of the A.M.A. booklet, "324 Health Questions Answered," mostly for mothers and teachers.

The caption, "23,000 Doctors United to Improve Your Health," announced the public relations panel, planned by the staff of the Public and Professional Relations Bureau and directed the public's attention to the many services the county medical societies provide.

Attention was focused on voluntary medical care plans by means of a brightly lettered poster reading, "You Insure Your Home—Your Car—Your Life—Do You Have Health Insurance, Too?" Literature describing every Blue Shield plan in New York State was also distributed.

The enthusiastic interest each visitor displayed and the type of questions asked indicate that the exhibit fulfills a need, and the Auxiliary is grateful to the State Society for financial support which makes it possible to meet this need for more information about medicine and the physician.

Plans call for the 1954 exhibit to be more limited in scope and to contain only one or two panels so that each subject can be developed in greater detail.

Since the exhibit is to be in the Mills Memorial Building again, every doctor and his wife planning to attend the 1954 Fair are invited to register and to leave word as to where they may be located so that the office and family and friends will know where to reach them.

Information about events of special interest to physicians and their families will also be available at the Auxiliary exhibit.

Mrs. Alton B. Thompson, *Chairman*
New York State Fair Exhibit

Dupuytren's Disease of the Foot

Convinced that fibromatosis of the plantar fascia (Dupuytren's disease of the foot) is commoner than generally supposed, Dr. Herbert E. Pedersen and Dr. A. Jackson Day, of Wayne University, Detroit, present three summaries from a total of six cases recently treated which illustrate the established opinion that only complete excision of the plantar fascia prevents recurrence of these nodules. In this clinical entity, benign in nature, recognition is highly important because its histologic features as well as its tendency to recur with inadequate treatment may lead to an erroneous diagnosis of malignancy. Amputations have been done under the impression that the nodules were fibrosarcomas. In the author's experience, resection of the entire plantar fascia has effectively prevented recurrence. The term Dupuytren's disease rather than Dupuytren's contracture has been used because, in the foot, contractures are rare; extension of the fascia to the phalanges is either absent or insignificant. —*Journal of the American Medical Association, January 2, 1954*

NECROLOGY

Clarence Abramson, M.D., of Brooklyn, died on May 4 at the age of forty-four. Dr. Abramson received his medical degree in 1936 from the Royal College of Physicians and Surgeons at Glasgow and Edinburgh, Scotland. He was a member of the American Society of Anesthesiologists, Inc. Dr. Abramson also belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

George Kirby Collier, M.D., of Rochester, died on June 19 at the age of seventy-five. Dr. Collier received his medical degree in 1900 from the University of Maryland College of Physicians and Surgeons. He was a Diplomate of the American Board of Psychiatry and Neurology, a Fellow of the American College of Surgeons, and a member of the Rochester Academy of Medicine. Primarily interested in problems of epilepsy and alcoholism, Dr. Collier belonged to the American Psychiatric Association, the American Association for Research in Psychosomatic Problems, the American Psychopathological Association, the Association for Research in Nervous and Mental Diseases, and the Rochester Pathological Society.

He was a consultant in psychiatry at the Strong Memorial, St. Mary's, Park Avenue, and Rochester State Hospitals, and the Craig Colony and Monroe County Infirmary. In addition, Dr. Collier was on the honorary staff at the Highland Hospital.

A past president of the Monroe County Medical Society, Dr. Collier also held membership in the Medical Society of the State of New York and the American Medical Association.

Joseph Fuchs, M.D., of New York City, died on January 9, 1954, at the age of fifty-six. Dr. Fuchs graduated from the Long Island College Hospital School of Medicine in 1920. He was an adjunct attending surgeon at the Beth David Hospital and the Beth David Hospital Outpatient Department, as well as assistant attending orthopedic and fracture surgeon at the Gouverneur Hospital. Dr. Fuchs belonged to the New York County Medical Society and the Medical Society of the State of New York.

Benjamin Mangel, M.D., of Brooklyn, died on June 22 in Mount Sinai Hospital at the age of forty-five. Dr. Mangel received his medical degree in 1935 from St. Andrews University Medical School in Scotland. He was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

M. Edward Marten, M.D., of Brooklyn, died of a heart attack on June 20 in the Long Island College Hospital. He was sixty-five years old. Dr. Marten graduated from the New York University and Bellevue Hospital Medical School in 1916. He was a Diplomate of the American Board of Pathology and a Fellow of the College of American Pathologists. A member of the American Society of Clinical Pathologists, the New York State Society of Pathologists, and the American Association for the Study of Neoplastic Diseases, Dr. Marten was a consulting pathologist at the St. Catherine's and Wyckoff Heights Hospitals. He was director of pathology at the Evangelical Deaconess and Bethany Deaconess Hospitals.

Dr. Marten was deputy chief medical examiner in charge of Brooklyn and Queens and was reputed to have performed 20,000 autopsies. In 1937 he collaborated on a book called *The Doctor Looks at Murder*.

Dr. Marten belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Eric H. Nathorff, M.D., of New York City, died June 25 while on vacation in Atlantic City. He was sixty-four years old. Dr. Nathorff received his medical degree from the University of Berlin in 1914. He was a member of the New York Cardiological Society.

Before coming to this country in 1940, Dr. Nathorff taught internal medicine at the Moabit Hospital of the Berlin University Clinic and was the author of several standard textbooks in German.

Dr. Nathorff belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Samuel Udkow, M.D., of the Bronx, died on February 28 at the age of forty-seven. Dr. Udkow received his medical degree from the University of Maryland School of Medicine in 1934. He was a member of the American Academy of Allergy and served as assistant adjunct physician in allergy at the Lebanon Hospital and Lebanon Hospital Outpatient Department. Dr. Udkow belonged to the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John Robert West, M.D., of New York City, died on June 29 in the Harkness Pavilion at the age of thirty-six. A graduate of Columbia University

College of Physicians and Surgeons in 1943, Dr. West was an assistant professor of medicine there. He was a Diplomate of the American Board of Internal Medicine, and an Established Investigator of the American Heart Association. Dr. West was an assistant attending physician at the Presbyterian and Bellevue Hospitals. He belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

MEDICAL NEWS

American Board of Obstetrics and Gynecology—The following doctors in New York State were certified by the American Board of Obstetrics and Gynecology on May 17, 1954, as Diplomates: Dr. Morton A. Beer, Bronx; Dr. Craig L. Benjamin, Buffalo; Dr. Paul F. Berlin, Bay Shore; Dr. Joseph F. Bivona, New York City; Dr. Jerome D. Blumberg, Forest Hills; Dr. Elliott D. Blumenthal, Jr., New York City; Dr. Fred Bock, Jamaica; Dr. John J. Brasino, New York City; Dr. Mitchell Brucker, New York City; Dr. Anthony J. Cantore, Brooklyn; Dr. Irving I. Cohen, Bronx; Dr. Robert J. Collins, Buffalo; Dr. Robert B. Connolly, White Plains; Dr. Paul B. Cotter, Buffalo; Dr. Joseph R. De Vita, Brooklyn; Dr. John C. Donovan, Rochester; Dr. William F. Dorsey, Flushing; Dr. Gordon W. Douglas, New York City; Dr. Arnold N. Fenton, New York City; Dr. Alexander Franco, Long Island City; Drs. Davis A. Frenkel and Wilton G. Fritz, Brooklyn; Dr. Edmund Furcinito, Utica; Dr. William P. Given, New York City; Dr. Paul M. Gold, Jackson Heights; Dr. William S. Goldfarb, New York City; Dr. Louis W. Graffeo, Brooklyn; Dr. John R. Gregory, Bronxville; Dr. Herbert H. Hall, New York City.

Also: Dr. Joseph F. Hindman, Manhasset; Drs. Albert W. Horowitz and Leo Igel, Brooklyn; Dr. Charles H. Immordino, New York City; Dr. Norman B. Juskowitz, Bronx; Dr. Noah J. Kassman, Ithaca; Dr. Siegfried Klinger, Albany; Dr. William F. Kneer, Kenmore; Dr. Thomas J. Lyons, Jr., Babylon; Dr. Warren Madell, Bay Shore; Dr. David Marcus, Long Island City; Dr. Nina M. Massola, New York City; Dr. M. Eugene Mickiewicz, Wantagh; Dr. Donald J. Nenno, Buffalo; Dr. Daniel F. O'Keeffe, Glens Falls; Dr. Robert R. Onorato, Yonkers; Dr. William A. Potts, Eggertsville; Dr. Albert J. Raphael, Brooklyn; Dr. Leonard M. Roberts, New York City; Dr. Kurt Rosenberg, Woodside; Dr. Richard A. Ruskin, New York City; Dr. Clyde E. St. Hill, Brooklyn; Dr. Alfred S. Schloss, Jackson Heights; Dr. Jerome Schwartz, Lynbrook; Dr. Joseph F. Shanaphy, New Dorp; Dr. Landrum B. Shettles, New York City; Dr. Simon L. Shick, Richmond Hill; Dr. Eugene Streim, New York City; Dr. Morton R. Talisman, Woodmere; Dr. David R. Tomlinson, Troy; Dr. Gray H. Twombly, New York City, single certification in gynecology only; Dr. George T. C. Way, Poughkeepsie; Dr. Ralph N. Weller, Syracuse, and Dr. Clarence E. Woodward, Mt. Kisco.

Caleb Fiske Prize—The subject of the Caleb Fiske Prize of the Rhode Island Medical Society for 1954, will be "Modern Developments in Anesthesia." Considered to be the oldest medical essay competition, the event requires the dissertation typewritten, double spaced, and not exceeding 10,000 words. A cash prize of $250 will be awarded.

Further information may be obtained by writing: Secretary, Caleb Fiske Fund, Rhode Island Medical Society, 106 Francis Street, Providence 3, Rhode Island.

Mount Sinai Hospital of New York—Postgraduate courses in clinical medicine will be given by the Mount Sinai Hospital in affiliation with Columbia University September through December, 1954. Offered will be part-time courses of varying length, intensive courses, courses for specialists, and other courses which have not yet been definitely scheduled.

For application forms and information address the Registrar for Postgraduate Medical Instruction, Mount Sinai Hospital, 11 East 100th Street, New York City 29.

Veterans Administration Hospital—Vacancies for resident training in otolaryngology, endoscopy, rhinoplasty, allergy, and surgery of cancer of the head and neck are available at the Veterans Hospital, Kingsbridge Road, Bronx, New York. The residency is approved for three years and is supervised by consultants and attendings who are representatives of the Dean's Committee of the local medical schools. A basic science course is included at Columbia University. Salary ranges from $2,640 to $3,300 a year.

Information may be obtained by writing to the Liaison Officer Dean's Committee, Veterans Hospital, 130 West Kingsbridge Road, Bronx 68, New York.

American Urological Association—The American Urological Association offers an annual award of $1,000—a first prize of $500, second prize of $300, and third prize of $200—for essays on the result of some clinical or laboratory research in urology. Competition shall be limited to urologists who have been graduated not more than ten years, and to men in training to become urologists.

The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Biltmore Hotel, Los Angeles, California, May 16 to 19, 1955.

Full particulars may be obtained by writing to the Executive Secretary, William P. Didusch, 1120 North Charles Street, Baltimore 1, Maryland. Essays must be received by him before January 1, 1955.

Veterans Administration—A medical advisory committee has been appointed by the central office of the Veterans Administration to the Veterans Administration Hospital, East Orange, New Jersey. In addition to advising and supervising the education and training program, the committee will advise on matters pertaining to research, therapeutic agents, and the appointment of consultants and attendings. Under their direction, a residency training program and other professional educational training was instituted at the Hospital about July 1.

Residency training is offered in the following specialities: general surgery, anesthesiology, otolaryngology, urology, orthopedics, pathology, neurology, internal medicine, physical medicine and rehabilitation, and radiology. Part of the training of this residency program will be taken in collaboration or affiliation with a number of local hospitals and medical teaching institutions in order to meet the requirements set forth by the individual American Boards.

The full-time staff is well experienced in the field of teaching residents as they were part of previous residency training programs in Veterans Administration hospitals located in Brooklyn, Bronx, and Halloran, Staten Island, New York; New Orleans, Louisiana, and Martinsburg, West Virginia.

Administrative officer in charge of the program is Dr. J. A. Rosenkrantz, chief, professional services, Veterans Administration Hospital, East Orange, New Jersey.

Chairman of the advisory committee is Dr. Bernard J. Pisani, and members include Dr. Allen O. Whipple, Dr. Stuart Z. Hawkes, Dr. Stewart F. Alexander, Dr. John H. Keating, Dr. Henry H. Kessler, and Dr. Lewis H. Loeser.

American Board of Obstetrics and Gynecology, Inc.—Applications for certification (American Board of Obstetrics and Gynecology) for the 1955 Part I examinations are now being accepted. Candidates are urged to make such application sometime in July or August.

All candidates for admission to the examinations are required to submit, with their application, a plain typewritten list of all patients admitted to the hospitals where they practice, for the year preceding their application or the year prior to their request for reopening of their application, with the diagnosis, pathologic diagnosis, nature of treatment, and end result.

Under a change of requirements for the Part I examination, candidates must submit 20 case abstracts rather than 25 as formerly. Five of these may be from one's residency service.

Application for examination or re-examination, as well as requests for resubmission of case abstracts, must be made to the secretary prior to October 1, 1954. The secretary is Dr. Robert L. Faulkner, 2105 Adelbert Road, Cleveland 6, Ohio.

Nassau Pediatric Society—Election of officers was held at the June meeting of the Nassau Pediatric Society. At this time, Dr. Mildred Wicker Jackson, Oyster Bay, was elected president, and Dr. David J. Posner, Levittown, was re-elected secretary-treasurer.

New York Roentgen Society—The newly elected officers of the New York Roentgen Society for the year 1954 to 1955 are: Dr. Harold W. Jacox, president; Dr. Jacob R. Freid, vice-president; Dr. Sidney Rubenfeld, secretary, and Dr. Maxwell H. Poppel, treasurer.

Meetings—Past

Nassau Pediatric Society

Dr. Irving Schulman, assistant professor of pediatrics, Cornell University, was the guest speaker at the scientific meeting of the Nassau Pediatric Society on June 14. Dr. Schulman discussed the latest knowledge on fetal and adult hemoglobin in premature and full-term babies.

American Neurological Association

The seventy-ninth annual meeting of the American Neurological Association was held in Atlantic City, New Jersey, June 14 to 16. Among the officers elected for the 1954 to 1955 year was Dr. H. Houston Merritt, New York City, as secretary-treasurer.

Albany County Medical Society

The June meeting of the Albany County Medical Society was held on June 24 following the physicians and pharmacists steak roast which was given by the Albany Pharmaceutical Association at Nite Owl Sunset Park.

Meetings—Future

International College of Surgeons

The nineteenth annual Congress of the United States and Canadian Sections of the International College of Surgeons will be held in Chicago, September 7 through 10. Headquarters will be at the Palmer House, and advance registration will be on September 6.

General assemblies will be held on the four mornings and afternoons. A luncheon meeting is planned for each day with the speakers of the morning forming a panel discussion. Evening meetings will include the "Film Forum" on September 7, a "Forum on Lung Cancer" on September 8, the annual banquet, which will be in celebration of the dedication of the Surgeon's Hall of Fame, on September 9, and the annual convocation in the Chicago Civic Opera House on September 10.

Throughout the Congress there will be showings of medical motion picture films and an exhibit of the latest surgical equipment and supplies. A program of entertainment will be provided for the wives and other guests of the surgeons and is under the direction of the president of the Woman's Auxiliary of the International College of Surgeons.

Jewish Sanitarium and Hospital for Chronic Diseases

Dr. Richard W. TeLinde, professor of gynecology, Johns Hopkins Medical School, will discuss "Ureteral Injuries, Genital Fistulae and Stress Incontinence," in the auditorium of Freeman Pavilion, Jewish Sanitarium and Hospital for Chronic Diseases, Brooklyn, on September 16 at 8:30 P.M. Dr. Victor F. Marshall, associate professor of clinical urology, Cornell University Medical School, will be the discussant. This lecture is presented by the gynecologic service.

Personalities

Awarded

Dr. Helen Ollendorff Curth, College of Physicians and Surgeons, Columbia University, certificate of merit at the annual meeting of the American Medical Association in San Francisco, in June, for the exhibit on "Dermatoses and Malignant Internal Tumors" . . . Dr. Normal Treves, in collaboration with Olof H. Pearson, Chares D. West, Min Chiu Li, and John P. MacLean, Memorial Center for Cancer and Allied Diseases, for the exhibit on "Endocrine Therapy of Metastatic Breast Cancer," honorable mention at the annual meeting of the American Medical Association. . . Dr. D. A. Berberian, in collaboration with E. W. Dennis and Frederick Coulston, Rensselaer, certificate of merit for the exhibit on "Chemotherapy and Host-Parasite Relationship" at the annual meeting of the American Medical Association.

Appointed

Dr. Emerson Day, director, Memorial Hospital Strang Cancer Prevention Clinic, as chief of the new preventive medicine unit at Sloan-Kettering Institute. . . Dr. George F. Etling, formerly director of St. Lawrence State Hospital, as senior director, Wassaic State School. . . Dr. I. Murray Rossman, formerly assistant director at Kings Park State Hospital, as director at Gowanda State Homeopathic Hospital, Helmuth. . . Dr. Herman B. Snow, former consultant in psychiatry to the Faxton Hospital, Utica, as director of St. Lawrence State Hospital, Ogdensburg. . . Dr. Donald M. Carmichael, former associate director at Rockland State Hospital, as director of aftercare clinics. . . Dr. Ole T. Jonassen, Brooklyn, to the associate staff of the Wyoming County Community Hospital, Warsaw. . . Dr. Robert B. Hiatt, assistant attending surgeon, Presbyterian Hospital, and instructor in surgery, College of Physicians and Surgeons, Columbia University, and Dr. Richard B. Patterson, recently appointed an instructor in anesthesiology, Columbia University College of Physicians and Surgeons, to the staff of the new medical center in Shiraz, Iran.

Dr. Julius Katz, Albany, director, Mental Hygiene Tuberculosis Services. . . Dr. Herbert Pollock, New York City, associate professor of clinical medicine, New York University-Bellevue Medical Center's Post-Graduate Medical School. . . Dr. Basil C. MacLean, Commissioner of Hospitals; Dr. Carl Muschenheim, New York Hospital–Cornell Medical College; Dr. Rene J. Dubos, Rockefeller Institute for Medical Research; Dr. Robert G. Bloch, Montefiore Hospital; Dr. Harry H. Epstein, Triboro Hospital; Dr. F. Joseph McCarthy, St. Joseph's Hospital; Dr. James E. Perkins, managing director of the National Tuberculosis Association; Dr. J. Burns Amberson, Bellevue Hospital; Dr. Perrin H. Long, State University of New York College of Medicine at New York City; Dr. Eli H. Rubin, Seton Hospital; Dr. Charles E. Hamilton, Kings

County Hospital; Dr. James S. Edlin, Municipal Sanatorium, Otisville; Dr. Walsh McDermott, editor, *The American Review of Tuberculosis;* Dr. Edward H. Robitzek, Seaview Hospital; Dr. Herbert R. Edwards, executive director, New York Tuberculosis and Health Association; Dr. Ezra A. Wolff, chairman, coordinating council of five medical societies; Dr. Robert Anderson, United States Public Health Service; Dr. Wilson G. Smillie, Cornell Medical College, and Dr. Richard H. Bennett, Triboro Hospital, to form an advisory committee to help carry forward a city-wide attack on tuberculosis...Dr. Robert Loeb, director of medical services, Presbyterian Hospital and Bard Professor of Medicine, Columbia University, as trustee of the Rockefeller Institute for Medical Research...Dr. John L. Wilson, from the U.S. Public Health Service Hospital, Manhattan Beach, to the U.S. Public Health Service Hospital in Staten Island...Dr. Kenneth R. Nelson, from U.S. Public Health Service Hospital, Staten Island, to U.S. Public Health Service Hospital, San Francisco, California...Dr. Harold A. Zintel, Philadelphia, Pennsylvania, as attending surgeon and director of surgery, St. Luke's Hospital, New York City.

Elected

Dr. B. Edmond Thomas, Great Neck, president; Dr. William B. Ayers, Manhasset, vice-president; Dr. William Kaplan, Great Neck, secretary-treasurer, and Drs. Martin L. Stein and William C. Atwell, Great Neck, and Dr. Helen-Ann Garcia, Port Washington, as members of the medical staff of the North Shore Hospital in Manhasset.

Resigned

Dr. Anthony J. J. Rourke, as executive director of the Hospital Council of Greater New York.

Speakers

Dr. Currier McEwen, New York City, and Dr. Gene H. Stollerman, Irvington-on-Hudson, at the convention of the American Rheumatism Association in San Francisco, in June...Dr. Abraham White, associate dean of the Albert Einstein School of Medicine, at the convention of Brith Abraham, at Kiamesha Lake, in June...Dr. Basil C. MacLean, Commissioner of Hospitals, Dr. Howard A. Rusk, director, Institute of Physical Medicine and Rehabilitation of New York University-Bellevue Medical Center, Dr. C. G. Scherf, medical superintendent, Goldwater Memorial Hospital, and Dr. Michael M. Dacso, director, Geriatric Rehabilitation Service, Goldwater Memorial Hospital, at the opening of the new geriatric rehabilitation service of the Goldwater Memorial Hospital.

New Offices

Dr. Arthur W. Adams, general surgery in Schenectady...Dr. Samuel John Gross, Berlin, Germany, general practice at the new medical clinic in Sanborn.

The Treatment of Diabetic Acidosis and Diabetic Coma

Diabetic acidosis or diabetic coma can be treated with small and frequent doses of insulin (25 units every thirty minutes is suggested) and replacement of water, salt, and glucose orally or intravenously. Dr. Edward Tolstoi, Cornell University Medical College, writing in the January, 1954, *Journal of the Kansas Medical Society*, is of the opinion that condemnation of glucose is based on questionable evidence; his own studies of postmortem material have not revealed pancreatic tissue damage due to glucose intake. Detailing management of (1) the mild case and (2) the moderately severe to severe case, the author says that while potassium salts may be indicated in certain of the more severe cases, they are not used on a routine basis in treating diabetic ketosis and coma. Blood sugar and carbon dioxide combining power need not be followed as guides to therapy; clinical response and disappearance of ketone bodies are excellent indicators. Prognosis is favorably influenced by early treatment.

As a rule, without medical complications, the longer a patient remains in coma the poorer the outlook for recovery.

Department of

WORKMEN'S COMPENSATION

DAVID J. KALISKI, M.D., *Director, Bureau of Workmen's Compensation*

GERALD D. DORMAN, M.D., *Chairman, Council Committee on Workmen's Compensation*

MEDICAL SOCIETY OF THE STATE OF NEW YORK

New Workmen's Compensation Hearing Rules

Miss Mary Donlon, chairman of the Workmen's Compensation Board, in preparation for the inauguration of the new hearing rules which became effective June 1, 1954, started an educational campaign which extended throughout the State and culminated in a large meeting in New York City on May 20, sponsored by the Commerce and Industry Association of New York, the New York Compensation Insurance Rating Board, and the Self-Insurers Association. The meeting was attended by nearly 1,000 persons including many physicians interested in workmen's compensation practice. Morning and afternoon sessions were held at the Engineering Auditorium in New York City.

The program was a comprehensive one and consisted of explanations of the new rules and procedures by members of the administrative staff of the Workmen's Compensation Board, including medical examiners, referees, and claim administrators, and others who normally participate in the administrative functions in the Department.

In addition, a sort of workshop on workmen's compensation procedures was carried out both in the morning and afternoon, and "mock" hearings were held illustrative of the new procedures. A package kit was made available at all the meetings and included the new carrier forms and new and revised Rules 13, 21, 22, 24, 25, and 26.

New Carrier Forms

C-6.1 Notice that payment of compensation is continuing without interruption or change of benefit rate.

C-8.1 Notice that need of medical care has terminated or authorization for medical care has been refused. A copy of this form must be mailed to claimant and also to his attending physician within five days, and there is a penalty of $25 for failure to file timely, in addition to all other penalties.

C-7 Notice claim will be controverted.

C-3 Employes claim for compensation.

C-24 (*New*) Attending surgeon's postoperative report in hernia cases. The form must be made out by operating surgeon within eight weeks of operation in a single hernia or twelve weeks in a double hernia. A new fee of $10 is provided for medical report.

Form 311 Notice requiring a claimant to furnish supplemental information concerning C-8 or C-8.1 forms, compensation payments, etc.

C-210 Notice of preliminary hearing to claimant, employer, carrier. At the preliminary hearing the referee will make findings on all issues *not* in dispute, or as to which dispute is withdrawn, and will fix a day and hour for trial hearing and estimate the time to be *allowed* for taking all testimony.

New and Revised Rules

Copies of the following new Workmen's Compensation Board procedures may be had on request of the Bureau of Workmen's Compensation, Medical Society of the State of New York, 386 Fourth Avenue, New York 16.

Rule 13.—A revised application for review of the decision of a referee.

Rule 21.—Concerning the controversion of claims by employer or carrier, form C-7, and limits of filing under Section 25.

Rule 22.—Requirements relative to suspension or modification of compensation benefits.

(*d*) Whenever an employer or carrier shall terminate medical care or refuse authorization for special medical services, prescribed form C-8.1, notice of termination of care or refusal of authorization shall be completed and filed with the Chairman *within five days* after such termination or refusal, together with (1) medical report by authorized physician that need for medical care has ended, (2) copy of notice to claimant's physician to discontinue medical care, or to refrain from commencing medical care, together with report of authorized physician establishing basis of discontinuance or refusal, and (3) proof of mailing notices under (d-2) above to the claimant and his physician.

Rule 24.—C-7 must be filed within eighteen days or within ten days of notice of accident unless C-9 is timely sent in. Penalty for failure to file is $25.

C-8, notice of stopping compensation payments, must be filed within sixteen days of stoppage; penalty $25.

C-6, report compensation has begun, must be filed within eighteen days or ten days after report of accident; penalty $25.

C-6.1 report is to be filed at intervals of six months where award has not been made and at intervals of one year where payment is pursuant to award; $25 penalty.

C-8.1, report is to be filed within five days after termination or refusal; $25 penalty.

C-9, claim not controverted but no compensation due for good reason stated in report, must be filed in eighteen or ten days; penalty $25.

Penalty may not be excused in any case except where, on verified proofs in writing, it shall appear to the satisfaction of the Chairman that such report or reports could not have been timely reported. Additional awards of from 10 to 20 per cent are prescribed for failure to perform, etc.

Rule 25.—Notice of continuation of payment of compensation by filing C-6.1.

Rule 26.—Information to be furnished with each payment of compensation.

Subject —116-1—Claims Bureau.—Rules governing the selection and referral of cases to Motion Calendar issued by Mr. Jacob Schutzbank is of interest to physicians. Mr. Schutzbank is Administrator of Claims and may be consulted by physicians with respect to matters involving the C-8.1 form and other matters concerning hearings.

Trials

Additional items for trial are schedule loss and facial disfigurement cases; C-8 cases; all questions of medical care, including C-8.1 cases, second injury and silicosis cases, reopened cases, death cases, no insurance cases, permanent nonschedule injuries, minors, medical bill reimbursements claimed by patient, transportation fare, medicines, prostheses, nursery care, dental bills, etc.

Medical bill cases (where a carrier has not filed a C-7 form because no claim was indexed for indemnity payments, but does file an A-1 controverting liability where a bill for medical care is rendered) should be placed on a trial calendar like any other controverted issue.

New Procedure re State Medical Examinations

We deem it advisable to publish in full the bulletin issued on March 17, 1954, to all medical examiners and referees.

The following directive for Medical Examining is *effective at once*, and may be implemented by instructions of the Medical Director, as necessary:

I. On examination of a claimant who alleges he has subjective symptoms or who complains of pain, if no objective signs are found the report of the medical examiner should so state and, in addition, should state also the following as a minimum:

1. The nature of the injury and the objective signs, if any, theretofore found by medical opinion in the case;
2. The claimant's complaints or subjective symptoms;
3. The opinion of the Medical Examiner, either
   (*a*) that although objective signs are not found, the nature of the injury and previous objective signs and the course of treatment are such that, in the opinion of the Medical Examiner, there may be a condition which he is unable to diagnose, and the nature of the complaints of pain is such that the condition may be disabling; or,
   (*b*) that no objective signs are found and the nature of the injury, the course of treatment and previous objective signs, are such that the pain of which claimant complains is not, in the opinion of the Medical Examiner, disabling.

If the Medical Examiner's report on examination is in category (*a*) above, the case should be referred forthwith to one or more impartial specialists as the nature of the injury and symptoms may require.

If the Medical Examiner's report on examination is in category (*b*) above, the Referee will be aided by the Medical Examiner's report in making a finding that there is no continuing disability and thus can close the case.

In either event, the case will under no circumstances be continued for further examination by a Board Medical Examiner. Reports of Medical Examiners in all cases where there are subjective symptoms only will hereafter be maintained by the Medical Director, and findings of impartial specialists compared. Medical Examiners who are frequently wrong in their opinion that there is an undiagnosed underlying condition will be asked to improve their examining abilities.

Cases that are reopened on medical evidence, after prior closing on Medical Examiner report of no underlying condition, will be referred at once, after reopening, to an impartial specialist or specialists, and if there appears consistent inability of any Medical Examiner to make correct diagnosis as to whether or not there is an underlying condition, this inability will be brought to attention.

No case under item I is expected ever to return to calendar for Board medical examining. Either the case will be closed on the Medical Examiner's report, or it will be sent to an impartial specialist. If closed and later reopened on medical opinion contrary to that reported by the Medical Examiner, on the basis of which it was closed, the case will be sent to impartial specialist, as above stated. In either event, cases of subjective symptoms only will not appear a second time on Referee calendar without the report of an impartial specialist.

II. When a case awaiting scheduling of a permanent injury is calendared, in accordance with the check sheet of periods for calendaring prepared by the Medical Director for schedule award cases, but in the opinion of the Medical Examiner the particular case is one in which the fact and/or degree of permanency cannot even then be ascertained, the Medical Examiner will include in his report the following:

1. The particular condition which, in his opinion, prevents scheduling at that hearing; and
2. As accurately as possible, prognosis of the date when, in the particular case and in view of the specified condition found, permanency and/or its degree will be determinable.

If the condition found is complaints of pain, notwithstanding that the period for scheduling that type of injury as advised by the Medical Director has elapsed, the case will be referred to an impartial specialist for opinion as to whether or not the pain complained of is disabling and is causally related to the injury; if so, whether and what medical care is indicated as necessary for a causally related condition; and, if no further medical care is indicated or the pain is not causally related to the injury whether or not the fact and degree of permanent injury are now determinable.

No case under item II, in which scheduling of award is prevented at the otherwise appropriate time because of complaints of pain, will again appear on Referee calendar for scheduling until the report of the impartial specialist has been received.

III. When a case with indications in the record of nonschedule permanency first is before a Medical Examiner for examination, his report, in addition to all other matters on which his report is to be made, should also state the reasons, in his opinion, for or against possible classification of the injury as permanent at some future date, and will state also the best prognosis he can then make as to the date when such classification will be possible.

When a case under item III is before the Medical Examiner before nonschedule classification of permanency is possible—for example, on carrier controversy of the claim itself—the case will not be continued (after the controversy or other hearing issues have been decided) for calendaring at periodic intervals for classification of permanency, but the Medical Examiner will have responsibility, when the evidence of record indicates a possibility of permanency, of fixing the time when classification may be made. Unless some other issue arises in the case, it will not again be calendared until the time so fixed for classification has been reached.

Mary Donlon
Chairman

Summary

Miss Mary Donlon made a statement to the effect that the problems incident to claims under the Workmen's Compensation Law can best be solved through cooperation. The new procedures require the closest cooperation between all the parties, including members of the medical profession, and it is believed this will simplify the disposition of claims and reduce the cost of administration of the Workmen's Compensation Law. "The degree of cooperation afforded," said Miss Donlon, "will determine whether private insurance can or cannot effectively do the relatively simple job of paying compensation benefits to disabled workers and to the widows and children who are entitled to such benefits, promptly and directly, without unnecessary controversy or litigation as the Workmen's Compensation Law intends."

We call for the enthusiastic cooperation of the medical profession at this time with the Chairman of the Workmen's Compensation Board in her effort to speed up hearings and reduce the cost of administration of workmen's compensation. This is not only a legal but a social obligation on the part of every physician who treats compensation patients.

Tetracycline, a New Antibiotic

Efforts to find a product more stable but as effective as aureomycin have resulted in development of a derivative by removal of the chlorine atom from the molecule. The new compound, tetracycline (Achromycin) is reported to be more stable and soluble than aureomycin or Terramycin. These drugs are all similar in their range of antibacterial activity.

There have been some limitation of the use of aureomycin and Terramycin because of nausea, vomiting, and diarrhea. Intravenous preparations for patients who could not tolerate aureomycin orally were not stable and they consequently had to be used shortly after addition of the diluent. The new compound, Achromycin, appears to have a considerable advantage over aureomycin in the problem of gastrointestinal side-effects. Of 217 healthy male subjects, only ten experienced nausea on 2 Gm. daily for three days. Fifty-eight suffered from loose stools but only one reported diarrhea. It was not necessary to withdraw the drug in any case.

Therapeutically the effectiveness of the new compound is apparently equal to the other broad spectrum antibiotics.—*L. E. Putnam, F. D. Hendricks, and H. Welch, Antibiotics and Chemotherapy, December, 1953*

NEWS FROM THE MEDICAL SCHOOLS

The Albany Medical College

Alumni Exchange Scholarship—Dr. William C. Van Ost, graduate of the Albany Medical College, class of 1954, has been awarded an Alumni Exchange Scholarship to intern at the University of Sheffield and the Royal Hospital, Sheffield, England. Dr. Van Ost will work under the direction of Professor C. H. Stuart-Harris of the University of Sheffield and the Royal Hospital who is well known for his work on influenza. Following Dr. Van Ost's return, he will seek a residency in pediatrics at the Albany Medical Center working under Dr. Paul Patterson, chairman, Department of Pediatrics.

This is the first year of the internship exchange between the University of Sheffield and the Albany Medical College. The British candidate to be sent to Albany Medical Center will be selected on the basis of an examination which was held on June 24 in Sheffield.

Class of 1929 presents Gift of $10,000—The Class of 1929 presented $10,000 to the Albany Medical College. Members of the class present on the occasion of making the gift were Dr. Joseph J. Russo, secretary of the class of 1929, and Dr. Benjamin Volk, president of the class.

Speakers—Dr. C. Stuart Welch, associate professor of surgery, and Dr. Albert M. Yunich and Dr. Nathan F. Fradkin, assistant professors of medicine, participated in June in a symposium on "Peptic Ulcers" which was held at the Oneonta Country Club by the Otsego County Medical Society. Dr. Fradkin spoke on "The Evaluation of Anticholinergic Drugs," Dr. Yunich discussed "The Management of Hemorrhage," and Dr. Welch discussed "Surgical Considerations."

Commencement—Dr. Robert A. Moore, vice-chancellor of the Schools of the Health Professions of the University of Pittsburgh and professor of pathology, was the commencement speaker on June 4. At this time, he was awarded an honorary doctor of science degree. Fifty-two candidates were awarded their doctor of medicine degrees.

Awards presented to the members of the graduating class were: the Association of the Alumni Medal to Dr. Mark Florain for outstanding qualities and meritorious work; the John Milton Bigelow Prize to Dr. William Carlisle Van Ost, for the senior student passing the best examination in diseases of the nose and throat; the Daggett Trust to Dr. Melvin Mattoon Galster and Dr. Leonard Herbert Levitan, the two seniors who maintained the best deportment irrespective of scholarship; the Townsend Physiological Prizes to Dr. Orazio Robert Zumbo; the Lamb Foundation, Inc., prizes to Drs. William Henry Conklin, Gerard Rudolph Gnade, Jr., and Silas Robert Beatty, the three senior students for outstanding work in doctor-patient relationship.

Drs. Gerald Altschuler, Jay Vickers Dewell, Melvin Saul Ehrenhalt, May Jane Fina, Jerome George Green, Dewey Robbiano, Jr., and Gerald Ross were elected to the honorary medical society, Alpha Omega Alpha.

State University of New York College of Medicine at New York City

Appointments.—Dr. Jean A. Curran, who has been dean of the State University's College of Medicine in Brooklyn and its predecessor, the Long Island College of Medicine, for seventeen years, has been appointed associate executive dean for medical education in the State University of New York. He will work with President William S. Carlson and Dr. Carlyle Jacobsen, executive dean for medical education, in matters relating to program planning for the health professions. This responsibility has been carried on by Dr. Jacobsen alone since the State University acquired its two colleges of medicine in 1950. Dr. Curran will assume his new duties when his successor can be appointed to the deanship. While serving in his new capacity he will also continue as professor of the history of medicine at the College of Medicine in Brooklyn. In addition, he will give professional counsel to the directors of student health services in other State University units.

The appointments of two new visiting professors have also recently been approved. Dr. Isamu Suda, Kobe Medical School, Kobe, Japan, will begin his duties as visiting professor of physiology on September 1, 1955, succeeding Dr. Silvio Weidman, associate professor in physiology of the University of Berne, Switzerland, who assumes the post of visiting professor of physiology on September 1, 1954. Dr. John Blaikley, director of obstetrics and gynecology, Guy's Hospital, London, will serve as visiting professor of obstetrics and gynecology beginning November 1, 1954.

In addition, five new assistant professors have been appointed. They are Dr. Frank S. Parker in biochemistry, Dr. John Philip Craig in microbiology, Drs. Stanley Aronson and Irene Koprowska in pathology, and Dr. Melvin M. Newman in surgery.

Research—Dr. Brian MacMahon, visiting lecturer in environmental medicine, in cooperation with Dr. Thomas Pugh, assistant professor of epidemiology, Harvard School of Public Health, recently completed a study on "Sex Ratio of White Livebirths in the U.S. During the Second World War." Their findings, published in the June issue of the *American Journal of Human Genetics*, support the belief that more males than females are born during and immediately following periods of war. Based on experience in the United States towards the end of World War II, their study notes that the increase in male births was particularly noticeable in Connecticut, New Jersey, New York, and Rhode Island, which were selected for completeness of birth registration.

They offer no explanation for the changes indicated but note that the effect was most marked in first births and occurred before the peak of the postwar marriage rush.

Drs. Harry A. Kaplan and Jefferson Browder, of the Department of Neurosurgery, have recently completed a study, in cooperation with the New York State Boxing Commission, on the effects of blows to the head sustained by professional pugilists.

The method of study consisted of observations at the ringside, analysis of head blows with slow motion photography, and electroencephalography. In a paper read before the one hundred and third annual meeting of the American Medical Association, San Francisco, they indicated that observations at the ringside and detailed examination in the dressing room after each fight failed to reveal any abnormal neurologic features, even in those who lost their bouts by a knockout. They also noted that a review of slow motion photography of parts of fights confirmed the impression gained at the ringside, that most blows to the head were short of their mark or were deflected by the opponent. In addition, correlation of physical features and performance data of each fighter with the electroencephalogram failed to reveal any significant statistical results, except in the rating class where the statistical results indicated that those lower in the ring rating have the greater percentage of disorganized electroencephalograms.

New York University College of Medicine

General Practice Award—The annual $1,000 American Academy of General Practice award was received by Dr. Walter C. Felsenstein who received his degree of doctor of medicine from the New York University College of Medicine, June 9.

Appointed Professor Emeritus—Dr. Anthony J. Lanza, who has served as professor and chairman of the Department of Industrial Medicine and director, the New York University-Bellevue Medical Center, has been appointed professor emeritus of New York University-Bellevue Medical Center's Post-Graduate Medical School. Dr. Lanza retired at the end of the academic year from his former duties.

Professor of Clinical Medicine—Dr. Herbert Pollack, New York City, has been appointed associate professor of clinical medicine at New York University-Bellevue Medical Center's Post-Graduate Medical School. His appointment became effective July 1.

Fellowship—A fellowship paying a stipend of $1,500 is open to graduates of approved schools of nursing who have had a minimum of two years experience either in a hospital or public health nursing, by the Children's Division of the Institute of Medicine and Rehabilitation, New York University-Bellevue Medical Center as a joint undertaking with the Association for the Aid of Crippled Children.

Applications may be made to Miss Mary Stewart, educational director, Children's Division, Institute of Physical Medicine and Rehabilitation, 400 East 34th Street, New York City, 16.

You may aid the man, you may guide him, and above all, you may inspire him; but the only thing that is worth having is what he gets by his own exertions, and what he gets is proportionate to the effort he puts into it.—A. Lawrence Lowell

BOOKS REVIEWED

Psychosomatic Research. By Roy R. Grinker, M.D. Octavo of 208 pages. New York, W. W. Norton & Co., 1953. Cloth, $3.50.

This illuminating and provocative book is a critical review of the vast amount of literature dealing with bodily changes resulting from environmental stress. The author discusses the complex factors involved, from the cultural and interpersonal problems down to reverberating circuits in the nervous system and enzymatic function at the cellular level. There are interesting chapters on the importance of the mouth in psychosomatic disease, as well as the meaning and effects of anxiety.

This book can be recommended to the general reader for a lucid account of this difficult subject. For the specialist it is a stimulating source book as well.—ARTHUR J. LAPOVSKY

The Psychiatrist, His Training and Development. Report of the 1952 Conference on Psychiatric Education held at Cornell University, Ithaca, New York, June 19–25, 1952. Organized and conducted by the American Psychiatric Association and the Association of American Medical Colleges. John C. Whitehorn, M.D., Chairman Editorial Board. Octavo of 214 pages, illustrated. Washington, D.C., American Psychiatric Association, 1953. Cloth, $2.50.

This is the report of the 1952 conference on psychiatric education held at Cornell University under the auspices of the American Psychiatric Association and the Association of American Medical Colleges. Leaders in many fields of medicine took part in the discussions. Although the book was primarily intended to stress the areas of training of the psychiatrist, it actually goes much further and becomes a valuable source of information on the relation of psychiatry to medicine in general. It stresses the need for more psychiatrists, evaluates the reason why more medical students do not go into psychiatry, and proposes methods of stimulating interest in the medical student to enter this field.

There are areas of dissension among the psychiatrists who took part in the discussions in regard to the orientation of the resident, but all are in agreement that the psychodynamic approach to the problems of the emotionally disturbed individual is the goal of all psychiatric resident training.

The book is a companion study to that made the year before on undergraduate psychiatric education. It contains a great deal of valuable information for those who teach psychiatry and for those who contemplate going into this field of medicine.—JOSEPH L. ABRAMSON

An Atlas of Pelvic Operations. By Langdon Parsons, M.D., and Howard Ulfelder, M.D. Illustrated by Mildred B. Codding. M.A. Long quarto of 231 pages, illustrated. Philadelphia, W. B. Saunders Co., 1953. Cloth, $18.

The technics of pelvic operative procedures are well shown by illustrations—many to a page in this large book. Text briefly describes every step. The resident or other young operator whose opportunity in pelvic surgery has been limited will profit by reading this book. Few gynecologists will take the authors' advice to "make it an invariable rule to perform an examination under an anesthetic, together with a diagnostic curettage in every instance in which pelvic laparotomy is contemplated."—CHARLES A. GORDON

The Allergic Patient and His World. Including Sources of Allergens. By Florence Eastty Sammis, M.D. With pollen charts, maps and photographs by Oren C. Durham. Octavo of 156 pages, illustrated. Springfield, Ill., Charles C Thomas, 1953. Cloth, $4.75. (No. 157 American Lecture Series.)

This monograph makes available a well-written book for the lay reader interested in allergy. Approximately two thirds of this volume is devoted to bronchial asthma, hay fever, food allergy, and dermatologic allergy. The chapter on hay fever includes pollen charts, maps, and excellent plant photographs by O. C. Durham.

In addition, there are special instructions for the avoidance of inhalant allergens and a chapter of practical recipes for the food-allergic patient. A useful index is included.

Both the allergist and the general practitioner may find it helpful to recommend this book to their allergic patients.—MAX HARTEN

Surgery of Repair as Applied to Hand Injuries. By B. K. Rank, M.S. (Melbourne) and A. R. Wakefield, M.S. (Melbourne). Octavo of 256 pages, illustrated. Edinburgh, E. & S. Livingstone (Baltimore, Williams & Wilkins Co.), 1953. Cloth, $8.00.

This a most interesting and informative treatise on treatment of hand injuries. The entire field of acute and secondary repair of various types of injuries is discussed.

The book is well divided into the different phases of treatment. The discussions of tendon repair and tendon grafting are especially well presented. The criteria for secondary repairs of hand disabilities are stressed with excellent clearness.—OTHO C. HUDSON

[Continued on page 2246]

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[Continued from page 2245]

What You Should Know About Mental Illness. By Orin Ross Yost, M.D. Octavo of 165 pages. New York, Exposition Pr., 1953. Cloth, $3.50.

This small volume is designed for the lay reader. It contains simple, nontechnical facts about mental illness, including the timely subjects of alcoholism, drug addiction, and epilepsy. Advice and encouragement are given to those who, through the force of circumstances, have to deal with friends or members of the family suffering from mental illness. Through its direct, unemotional appeal the reader may gain confidence in an otherwise discouraging field. This book fulfills its purpose adequately.—Theodore Meltzer

Films in Psychiatry, Psychology, and Mental Health. By Adolf Nichtenhauser, M.D., Marie L. Coleman and David S. Ruhe, M.D. [Data gathered under the direction of] Medical Audio-Visual Institute of the Association of American Medical Colleges. Octavo of 269 pages, illustrated. New York, Health Education Council, 1953. Cloth, $6.00.

This timely publication is essentially a catalog and critique of representative films intended to encourage their appropriate use, which is to further the principles and practice of mental hygiene as espoused by those in the fields of psychiatry, psychology, public health, sociology, and other areas where mental health needs are recognized.

This first edition, long overdue, fills a real need in mental health education. It not only aims to make instructional films more useful to more people but also sets a higher standard of quality for making better new films. This book contains a series of 51 critical reviews of films in psychiatry, psychology, and mental health, supplemented by brief descriptions of 50 additional available films released for showing, up to January, 1953. The reviews are analyzed by means of evaluated discussions which point out their value for individual selection, teaching, and programming. Information is made available on the source of the film and where it may be obtained. The usefulness of the volume is enhanced by its film subject-matter index which provides clues to the contents of films not discernible from the titles or thumbnail descriptions.

The Medical Audio-Visual Institute of the Association of American Medical Colleges, through its Health Education Council, 10 Downing Street, New York 14, New York, deserves unstinted praise for making available this unique book and catalog revealing the importance of audiovisual tools.

There is no doubt that this basic catalog and book will galvanize the interests and effectiveness of all those working in the field of mental health and its manifold ramifications for virtually all people.—Frederick L. Patry

Medical Jurisprudence. By I. Gordon, M.B., R. Turner, M.B., and T. W. Price, LL.B. Third edition. Quarto of 944 pages, illustrated. Edinburgh, E. & S. Livingstone (Baltimore, Williams and Wilkins Co.), 1953. Cloth, $13.50.

This third fully-revised edition presents an excellent treatise on medical jurisprudence. It contains a wealth of clinical information instructive to both the medical and legal professions.

Besides retaining the best features of the previous volume, the authors have added much to the chapters on crime detection, medicolegal investigation of sudden death, the narcotic act, the physician as an expert witness, and the significance of results obtained in blood grouping tests. The timely chapter on "Unprofessional Conduct" is most instructive and enlightening, serving to ward off and reduce malpractice suits against members of the medical profession.

The present trend to include courses in legal medicine in both our medical and law schools gives added reason for recommending this monograph as a valuable contribution.—S. INGRAM HYRKIN

The Medical Clinics of North America. Boston Number. September, 1953. Octavo. Illustrated. Philadelphia, W. B. Saunders Co., 1953. Published bimonthly (six numbers a year). Cloth, $18 net; paper, $15 net.

The Boston issue of the *Medical Clinics of North America* is an exceptionally well-balanced one. There is a symposium on specific methods of treatment, comprising 16 articles, all well selected and thoroughly up to date. In addition, there are three miscellaneous papers, all useful, on the composition of the doctor's office laboratory, physical examination of the heart, and civil malpractice.—MILTON PLOTZ

Physiology of the Eye. Clinical Application. By Francis Heed Adler, M.D. Second edition. Quarto of 734 pages, illustrated. St. Louis, C. V. Mosby Co., 1953. Cloth, $13.

In 1933 Adler wrote his first textbook on *Clinical Physiology of the Eye.* He then reviewed and compiled the literature available on this subject at that time. This book did not win the popularity it deserved because ocular physiology interested the research worker rather than the clinician. In reviewing the book at the time, this reviewer stated that "this book by Adler should ring a new note in medical concepts. It has so coordinated research physiology with ophthalmic practice as to make us seek the basis for everything supposedly factual."

In 1950 this book again appeared under a new title and an improved format, although the topics discussed still included color vision, dark adaptation, visual acuity, ocular motility, and retinal metabolism. "The main plan and purpose of this book continues to be the same," in the words of the author, except that it includes added consideration of physiologic developments between 1950 and 1953. This work should help the ophthalmologist and the research worker to make additional contributions to this important growing field.—EMANUEL KRIMSKY

Official History of the Canadian Medical Services, 1939–1945. Vol. Two. Clinical Subjects. Edited by Lt. Col. W. R. Feasby, R.C.A.M.C. Illustrated

[Continued on page 2248]

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[Continued from page 2247]

with Paintings and Photographs by Canadian War Artists and Photographers. Published by Authority of the Minister of National Defence. Quarto of 537 pages, illustrated. Ottawa, Edmond Cloutier, Queen's Printer and Controller of Stationery, 1953. Cloth, $5.00.

This is the second of two volumes on the part played by Canadian medicine during World War II. The first deals with the organization and development of the medical services of the Armed Forces and has not yet been published. This volume takes up clinical experiences in a variety of fields. It comprises 35 chapters covering such topics as acute communicable diseases, tuberculosis, gastrointestinal diseases, the various branches of surgery, nutrition, preventive medicine, neuropsychiatry, personnel selection, and medical statistics. Topics of considerable interest are the use of antibiotics and the application of scientific research to the problems arising out of newer types of warfare. This book combines a wealth of instructive information and will be of interest to physicians.—George Rosen

Mother and Baby Care in Pictures. By Louise Zabriskie. Fourth edition. Octavo of 244 pages, illustrated. Philadelphia, J. B. Lippincott Co., 1953. Board, $3.00.

The fourth edition of this book includes considerable revision and rewriting of the text. The importance of training for childbirth (so-called natural childbirth) is stressed and the actual technic of classroom instruction is given in great detail. Other new subjects, such as rooming-in, early ambulation, and demand feeding, are also discussed.

The author has had considerable experience as a result of her association with the Maternity Consultation Service and the Maternity Center Association of New York City. The simple, clear, and practical manner in which the text is written reflects this experience. As before, it should be of great value to expectant parents and workers in the field.—Alexander H. Rosenthal

The Year Book of Medicine (1953-1954 Year Book Series). Edited by Paul B. Beeson, M.D., Carl Muschenheim, M.D., William B. Castle, M.D., Tinsley R. Harrison, M.D., George B. Eusterman, M.D., and Robert H. Williams, M.D. Duodecimo of 736 pages, illustrated. Chicago, Year Book Publishers, 1953. Cloth, $6.00.

The Year Book Of Medicine for 1953–1954 follows the now standardized procedure of titles which considers the various phases of medicine under broad classifications such as infections, chest, blood and blood forming organs, etc.

This classification, where each system is given almost equal weight, places an artificial restraint upon the choice of subjects for inclusion in the book. The number of new developments in each year's research in medicine is necessarily limited, and one has the feeling that the systemization of the chapters, while utilizing fresh sources of information, does not give new information.

As a report which is general and inclusive but not necessarily detailed the *Year Book* serves a purpose for those interested in what is being done in medicine during each year. However, critical, organized, or directed comment is not to be looked for in this book.

It should be further pointed out that many of the reviews depend heavily on statistical analysis of a great number of cases for the evaluation of therapy. Whether this is a proper criteria for the average practitioner must be left for the individual to decide when dealing with a particular case.—Theodore M. Feinblatt

The Heart Beat. Graphic Methods in the Study of the Cardiac Patient. By Aldo A. Luisada, M.D. Quarto of 527 pages, illustrated. New York, Paul B. Hoeber, 1953. Cloth, $12.

Luisada's new work, somewhat cryptically titled, *The Heart Beat*, is a presentation of graphic methods in the study of the cardiac patient. Methods are described for recording the vibrations which may be picked up in various parts of the body, such as the pulsations in the epigastrium, the liver, the jugular veins, the esophagus, etc. All of this information will be useful to the specialized investigator of cardiovascular diseases. The section on tracings of electrical phenomena of the heart and vessels is much more sketchily done. Nevertheless, this volume has considerable value for the specialist.—Milton Plotz

A History of Psychoanalysis in America. By C. P. Oberndorf, M.D. Octavo of 280 pages, illustrated. New York, Grune & Stratton, 1953. Cloth, $5.00.

Dr. Oberndorf is eminently qualified to write this highly welcome description of the origin and development of psychoanalytic theory and practice in the United States. It is doubtful if any person now living could have presented, by reason of first-hand contact and working relations with Freud and those intimately associated with him, a volume comparable to this authoritative, objective, and deservedly critical presentation.

The author, clinical professor of psychiatry at Columbia University, was fortunate enough to have his early psychiatric education at Manhattan State Hospital, where in 1909 he was one of the first to participate in the application of psychoanalysis in this country.

The personal background of this book, with its wealth of recollections of experiences, abroad as well as in America, makes it of unique interest and value. Dr. Oberndorf gives full credit to his many teachers and associates to whose skill and wisdom he is indebted and who have significantly affected his philosophy, attitude, and method of approach.

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[Continued on page 2250]

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[Continued from page 2248]

narration of historical events pertaining to psychoanalysis a veritable repository of fact, opinion, trends, and their growing applications. The impact of psychoanalysis has been somewhat revolutionary, but on the whole essentially helpful, and gives promise of still further selective usefulness.—Frederick L. Patry

Introduction to Physiological and Pathological Chemistry. By L. Earle Arnow, M.D. Revised with the Assistance of Marie C. D'Andrea, R.N. Fourth edition. Octavo of 508 pages, illustrated. St. Louis, C. V. Mosby Co., 1953. Cloth, $3.75.

Introduction to Laboratory Chemistry. By L. Earle Arnow, M.D. Revised with the assistance of Marie C. D'Andrea, R.N. Octavo of 108 pages, illustrated. St. Louis, C. V. Mosby Co., 1953. Cloth, $1.50.

This book is the fourth edition of a textbook designed to teach physiologic chemistry and its application to clinical medicine to student nurses. The author of the book, Dr. Arnow, who possesses degrees in pharmacology and biochemistry in addition to the M.D., is eminently qualified to write such a textbook. This edition differs from its predecessors in containing new chapters on nuclear reactions and atomic energy, including the usefulness of radio isotopes in human medicine. Special instruction is also given for disaster nursing in the event of both bacteriologic warfare and radiation injuries.

It appears to this reviewer that Dr. Arnow was faced with the insurmountable task of attempting to write a textbook teaching the principles and application of biologic chemistry to a diverse group of students of such varied background that he had to assume no prior knowledge of chemistry on their part. His stated principle is to get the students to understand, not memorize. This is admirably achieved in the first part of the book. However, it is rather questionable that students with no previous background in chemistry can obtain sufficient information from a one chapter review of organic chemistry to be able to follow the more complex material in the chapters dealing with such subjects as proteins, amino acids, vitamins, hormones, etc.

The laboratory book which accompanies this fourth edition contains experiments which are well written and clearly presented. These experiments include some on vitamins and nutrition, as well as those dealing with tests of the various substances found in blood and urine, and are somewhat beyond the scope usually found in courses of this kind.—Abraham Saifer

Disability Evaluation. Principles of Treatment of Compensable Injuries. By Earl D. McBride, M.D. Fifth edition. Octavo of 715 pages, illustrated. Philadelphia, J. B. Lippincott Co., 1953. Cloth, $15.

This edition is very well written and interesting, as were all previous editions. Dr. McBride has attempted to put disability evaluation on a scientific basis. His conclusions are well founded.

"Not only must the anatomical alterations be determined, but the progress of improvement must be prognosticated, the final healing state recognized, and the extent of personal incapacity estimated, with arithmetical preciseness."

The above paragraph by the author gives a true picture of his intent. The calculation of disability may appear very complicated at first, but does give an accurate estimate of percentage loss. It would be well for all physicians having to estimate disability to read this book.—Otho C. Hudson

Living with a Disability. By Howard A. Rusk, M.D., and Eugene J. Taylor. In collaboration with Muriel Zimmerman, O.T.R., and Julia Judson, M.S. Octavo of 207 pages, illustrated. New York, Blakiston Co., 1953. Cloth $3.50.

Rehabilitation of the handicapped is rapidly developing into an exact science. The authors of this excellent book have done much to bring about the widespread interest in this timely subject. Ingenuity in design of aids for the handicapped has greatly lessened the burden of their disability, and, in many instances, spells the difference between dependency and relative or even complete independence. In this one small book is presented a fund of information for assistance to the handicapped. It will prove to be of the greatest value to all who are interested in the extensive field of rehabilitation.—Jerome Weiss

Diagnosis of Acute Abdominal Pain. By William Requarth, M.D. Octavo of 243 pages, illustrated. Chicago, Year Book Publishers, 1953. Cloth, $5.00.

Although this short book was supposedly written for surgeons, it will find its greatest use and benefit if read by the general practitioners and internists who usually first see the patient with acute abdominal pain.

The sections on examination and the differential diagnosis from the standpoint of location and type of pain contain many important points, which, although they should be common knowledge, are not too well remembered and understood by those who are confronted with this problem irregularly. Acute intestinal obstruction is still poorly handled many times. This work contains a clear differential diagnosis of the various types of obstruction. The separation of the various diseases into those which require immediate operation, those for which operation can be delayed, and those in which operation would be harmful will simplify some of the problems for the medical man who frequently gets confused or frightened in the presence of acute abdominal pain and will help him understand the surgeon's approach to some of these problems.

The book is well written in simple language that can be smoothly read. There is a bibliography for those who would go deeper into any of the subjects discussed.—L. Katz

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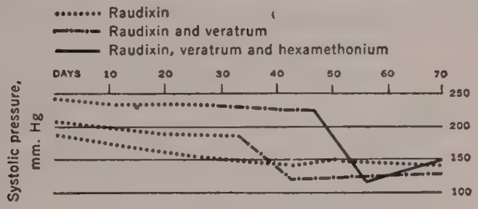

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SQUIBB

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1. WILKINS, R. W., AND JUDSON, W. E.: NEW ENGLAND J. MED. 248:48, 1953.
2. FREIS, E. D.: M. CLIN. NORTH AMERICA 38:363, 1954.

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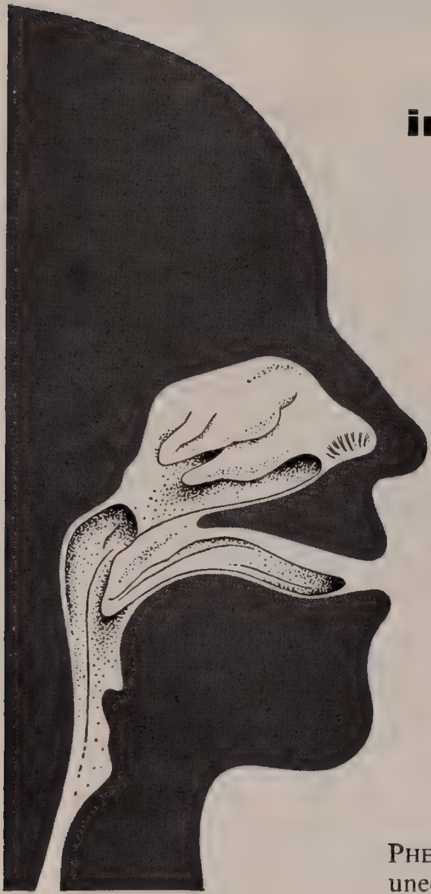

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1. Silbert, N. E.: Ann. Allergy *10*:328 (May-June) 1952
2. Peshkin, M. M., and others: Ann. Allergy 9:727 (Nov.-Dec.) 1951

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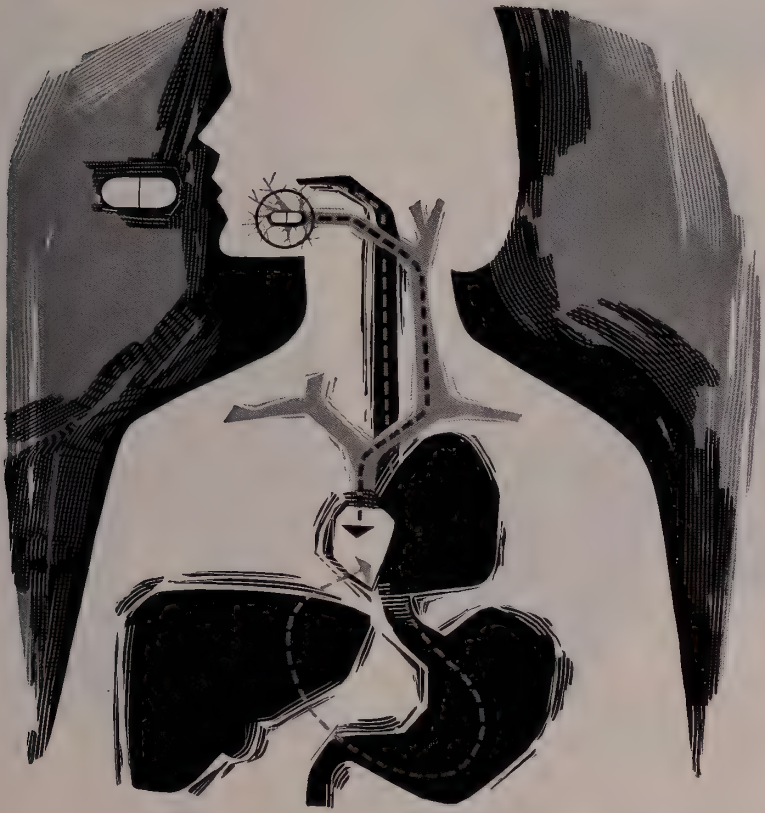

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[1] ESCAMILLA, R. F., AND GORDON, G. S.: J. CLIN. ENDOCRINOL. 10:248 (FEB.) 1950.

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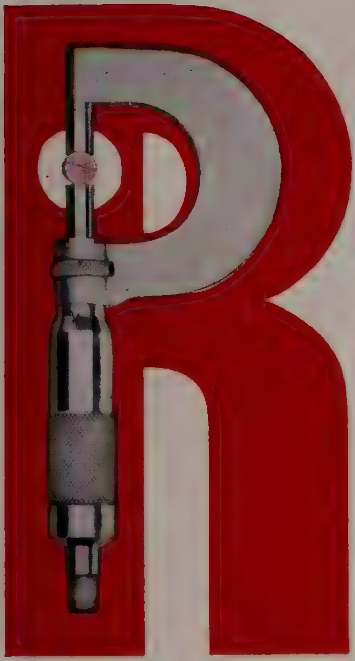

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Hunter, C.: Canad. M. A. J. *30*:41 (Jan.) 1934.

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Best, R. R.; Hicken, N. F., and Finlayson, A. I.: Ann. Surg. *110*:67, 1939.

1946

In chronic cholecystitis, "the bile acid of choice is dehydrocholic acid...."
Cheney, G., in Reimann, H. A.: Treatment in General Medicine, ed. 2, Philadelphia, F. A. Davis Company, 1941, vol. 1, p. 851.

1950

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Sanders, R. L.: Am. J. Surg. *72*:811, 1946.

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"If the therapeutic aim is to flush the bile duct with a free-flowing, thin bile...dehydrocholic acid is administered...."
Cranshaw, J. F.: Am. J. Digest. Dis. *17*:387, 1950.

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Beckman, H.: Pharmacology in Clinical Practice, Philadelphia, W. B. Saunders Company, 1952, p. 361.

"Dehydrocholic acid, because of its hydrocholeretic effect, increases the flow of dilute bile...."
O'Brien, G. F., and Schweitzer, I. L.: M. Clin. North America *37*:155 (Jan.) 1953.

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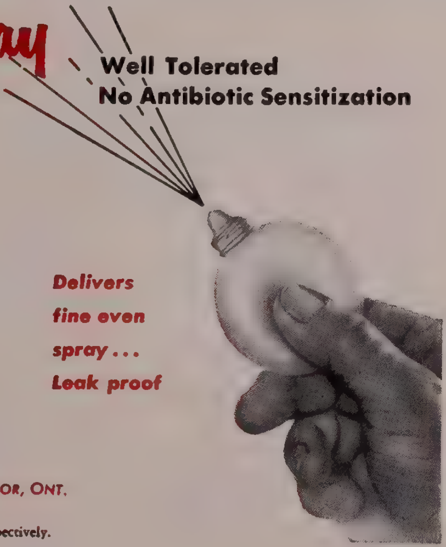

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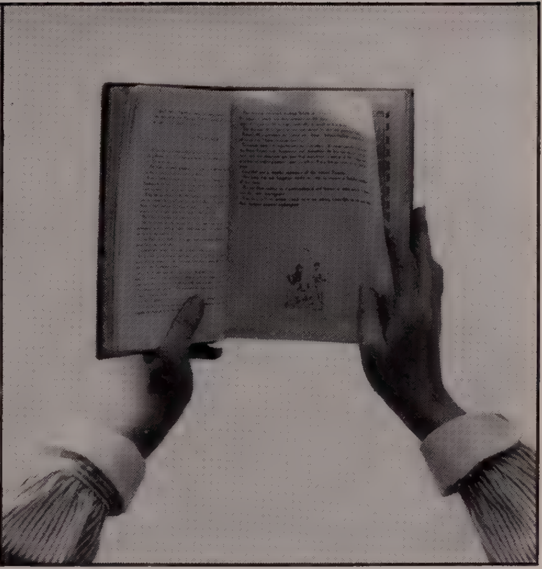

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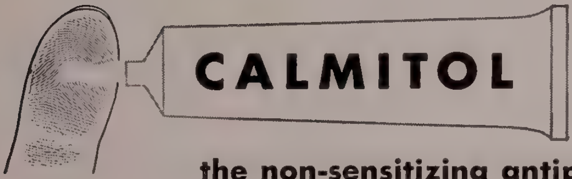

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1. Lubowe, I. I.: New York State J. Med. 50:1743, 1950.

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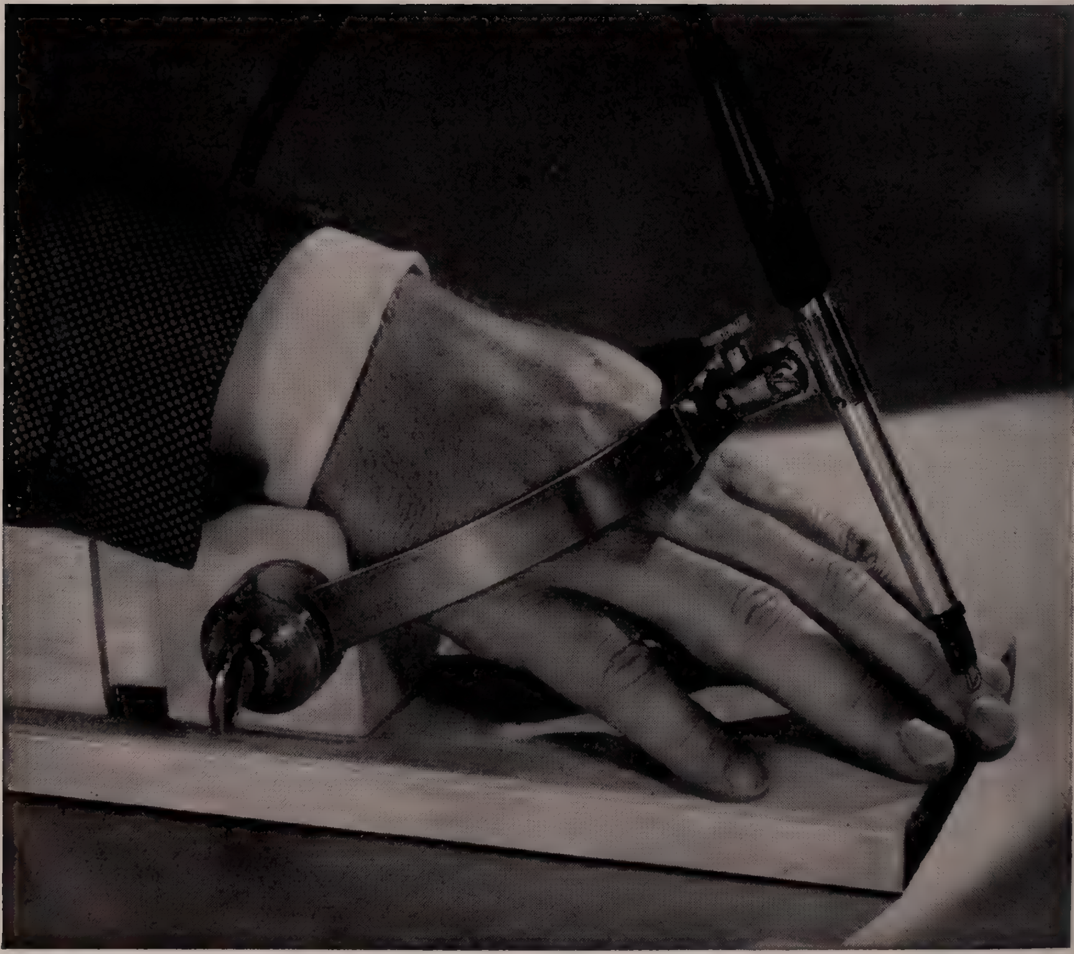

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WITH THE MICRONITE FILTER
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No·Cal
Absolutely no sugar!
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YOU ARE INVITED *to send for the Knox Gelatine brochure on "The Role of Knox Gelatine in Peptic Ulcer and Gastric Disorders." Write Knox Gelatine, Johnstown, N. Y., Dept. NYS-8*

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In a stabilized aqueous solution.

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sturdier framework
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because of more rapid, more complete absorption and utilization of its aqueous natural vitamins A and D** when compared to oily solutions.

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the original (since 1943)
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u. s. vitamin corporation
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each 0.6 cc. provides:

VITAMIN A (natural)	5000 Units
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ASCORBIC ACID (C)	50 mg.
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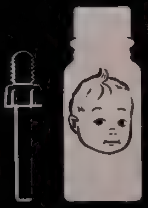
PYRIDOXINE HCl (B_6)	0.3 mg.
NIACINAMIDE	5 mg.
PANTOTHENIC ACID	2 mg.

*100% natural vitamin D, the superior anti-rachitic



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is temporary relief enough?

Now—

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CONTROL—156 Patients
The Course of the Disease
Was 21 Days to 56 Days

PROTAMIDE—84 Patients
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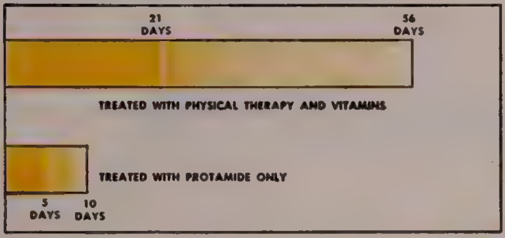

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MASS NUTRITION...
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Column I of the appended table shows the amounts of nutrients and nutrient energy provided by 5½ ounces of enriched bread. Column II gives the percentages of the recommended daily dietary allowance[4] available from this amount of enriched bread.

CONTRIBUTION OF 5½ OUNCES OF ENRICHED BREAD...

	Nutrients and Calories	Percentages of Allowances (1953)[4]
Protein	13.2 Gm.	20%
Thiamine	0.37 mg.	26%
Niacin	3.4 mg.	24%
Riboflavin	0.23 mg.	14%
Iron	4.1 mg.	34%
Calcium (average)	137 mg.	17%
Calories	418	14%

It is evident that enriched bread furnishes substantially more than its share of most nutrients. Thus it compensates for deficiencies of these nutrients in other foods of the everyday diet. Since virtually all enriched bread is made with nonfat milk solids, its protein—containing an average of 10.5 per cent milk protein and 89.5 per cent wheat and yeast proteins[5]—functions for growth as well as tissue maintenance.

Enriched bread might well be considered a basic food in maintaining the high nutritional status of the American people, yet it can be purchased for so small a percentage of the American food dollar.

---

1. Bureau of Labor Statistics, United States Department of Labor, Jan., 1954.
2. Sebrell, W.H.: Trends and Needs in Nutrition, J.A.M.A. *152:*42 (May 2) 1953.
3. Council on Foods and Nutrition, American Medical Association: A Statement of General Policy Concerning the Addition of Specific Nutrients to Foods, J.A.M.A. *154:*145 (Jan. 9) 1954.
4. Shank, R.E.: Revisions of the Recommended Dietary Allowances, J. Am. Dietet. A. *30:*105 (Feb.) 1954.
5. Sherman, H.C.: Chemistry of Food and Nutrition, ed. 8, New York, The Macmillan Co., 1952, pp. 212, 599.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

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A capsule and an enteric-coated tablet at bedtime generally results in an uninterrupted **night** of sleep—**and** if needed, capsules give relief during the **day.**

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Enteric Coated Tablets and Capsules

provide

Theophylline Sodium Acetate	(3 gr.) 0.2 Gms.
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Also available in half-strength.

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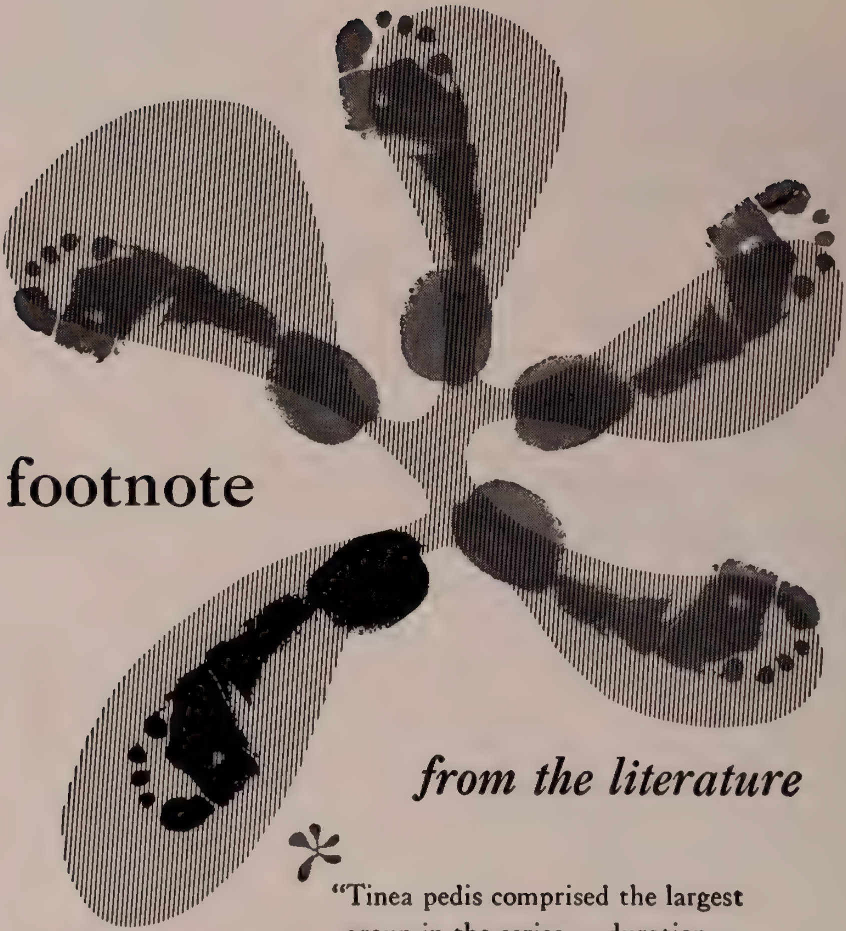

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> "Tinea pedis comprised the largest group in the series . . . duration of treatment . . . ranged from one week to two months . . . in 24 patients the condition healed completely; in 24 it improved strikingly, and in 6 it failed to respond . . . no adverse reactions from applications of Asterol dihydrochloride were observed."

H. G. Ravits, *J. A. M. A.*, *148*:1005, 1952.

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5% tincture
5% ointment
5% powder

Asterol® — brand of diamthazole

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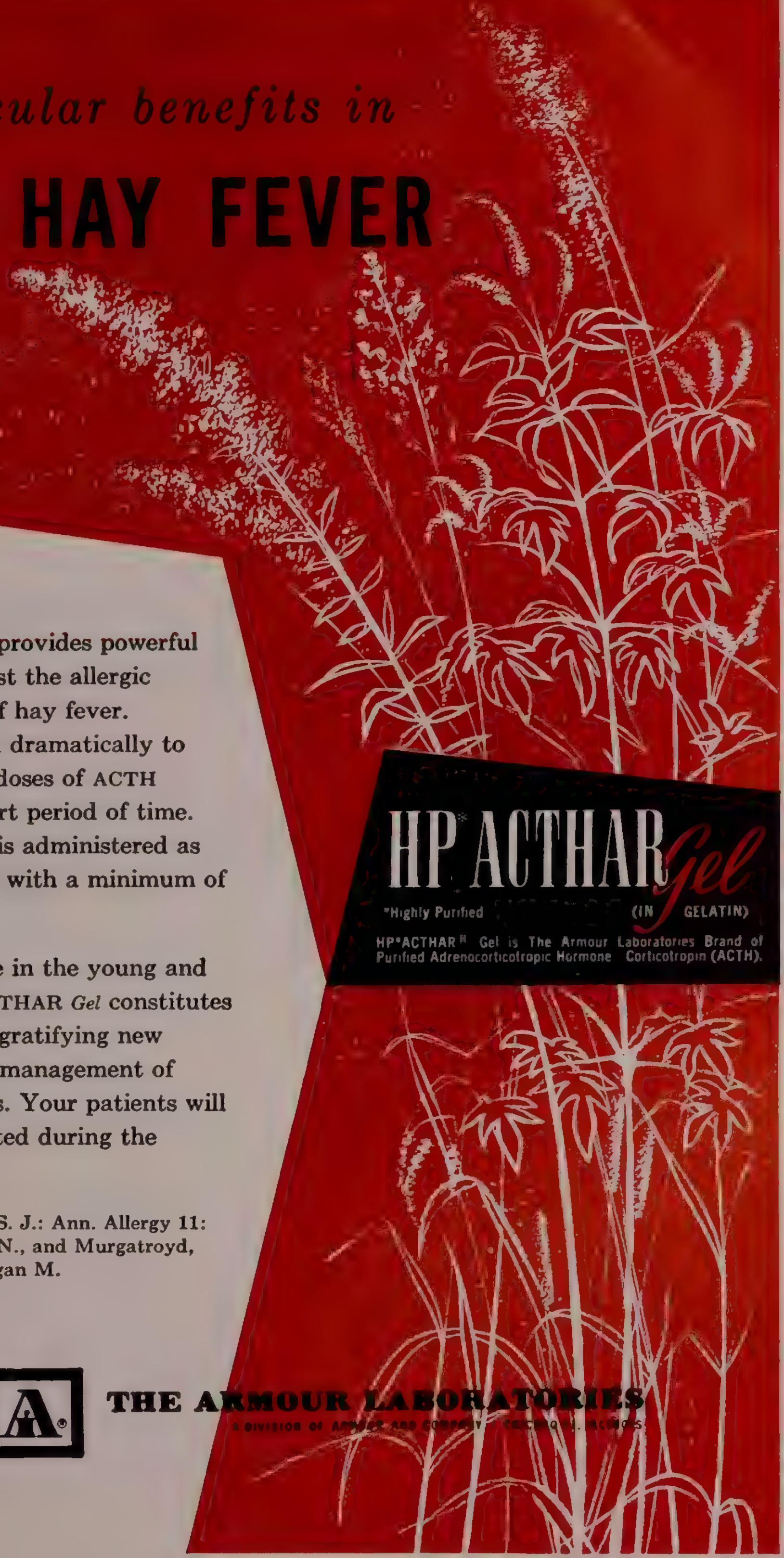
spectacular benefits in

HAY FEVER



HP*ACTHAR *Gel* provides powerful protection against the allergic manifestations of hay fever. Patients respond dramatically to relatively small doses of ACTH given over a short period of time. HP*ACTHAR *Gel* is administered as easily as insulin, with a minimum of discomfort.

Equally effective in the young and the aged, HP*ACTHAR *Gel* constitutes one of the most gratifying new additions in the management of seasonal allergies. Your patients will be better protected during the ragweed season.

References: Levin, S. J.: Ann. Allergy 11: 157, 1953., Gay, L. N., and Murgatroyd, G. W. Jr.: J. Michigan M. Soc. 53: 33, 1954.

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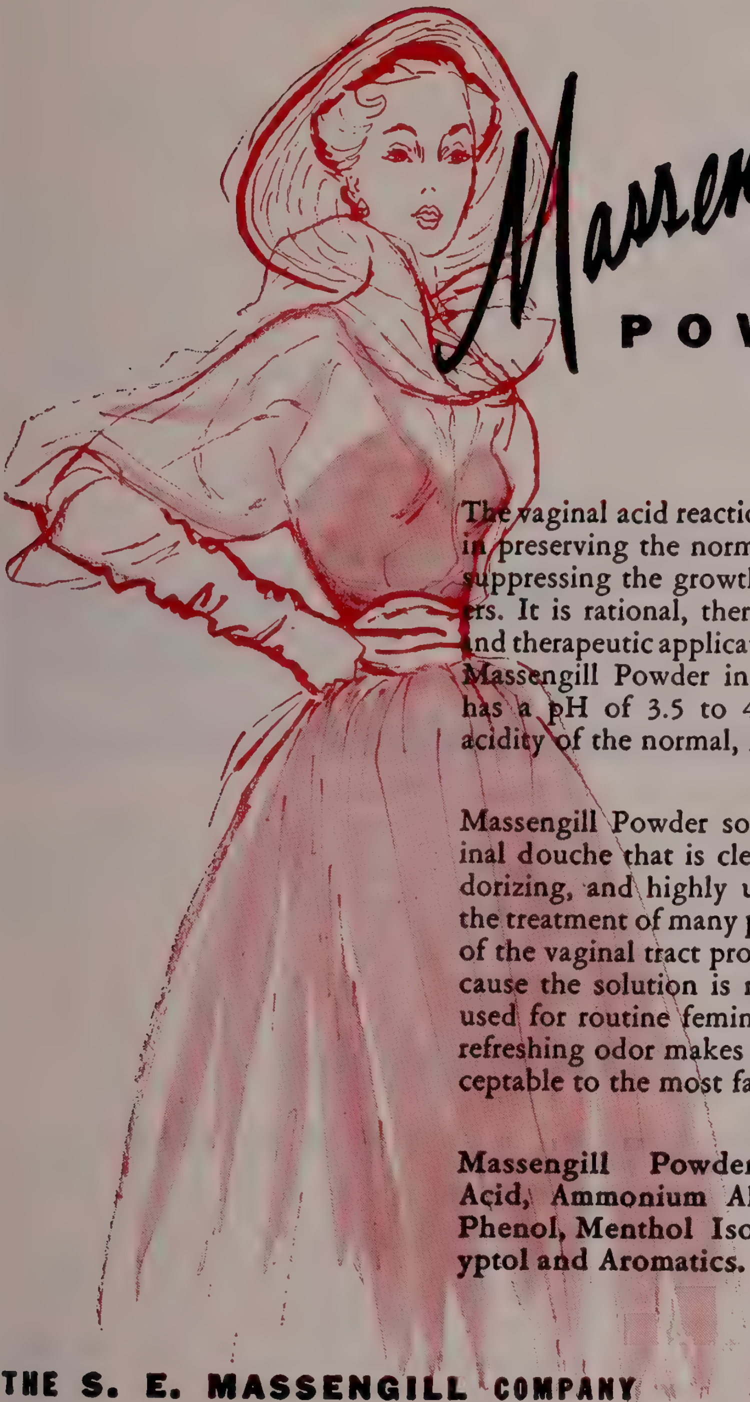

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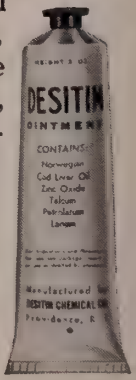

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1. Grayzel, H. G., Heimer, C. B., and Grayzel, R. W.: New York St. J. M. 53:2233, 1953.
2. Heimer, C. B., Grayzel, H. G., and Kramer, B.: Archives of Pediatrics 68:382, 1951.
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4. Turell, R.: New York St. J. M. 50:2282, 1950.

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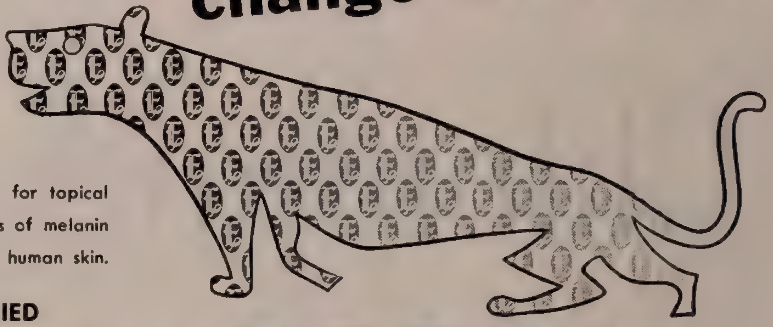

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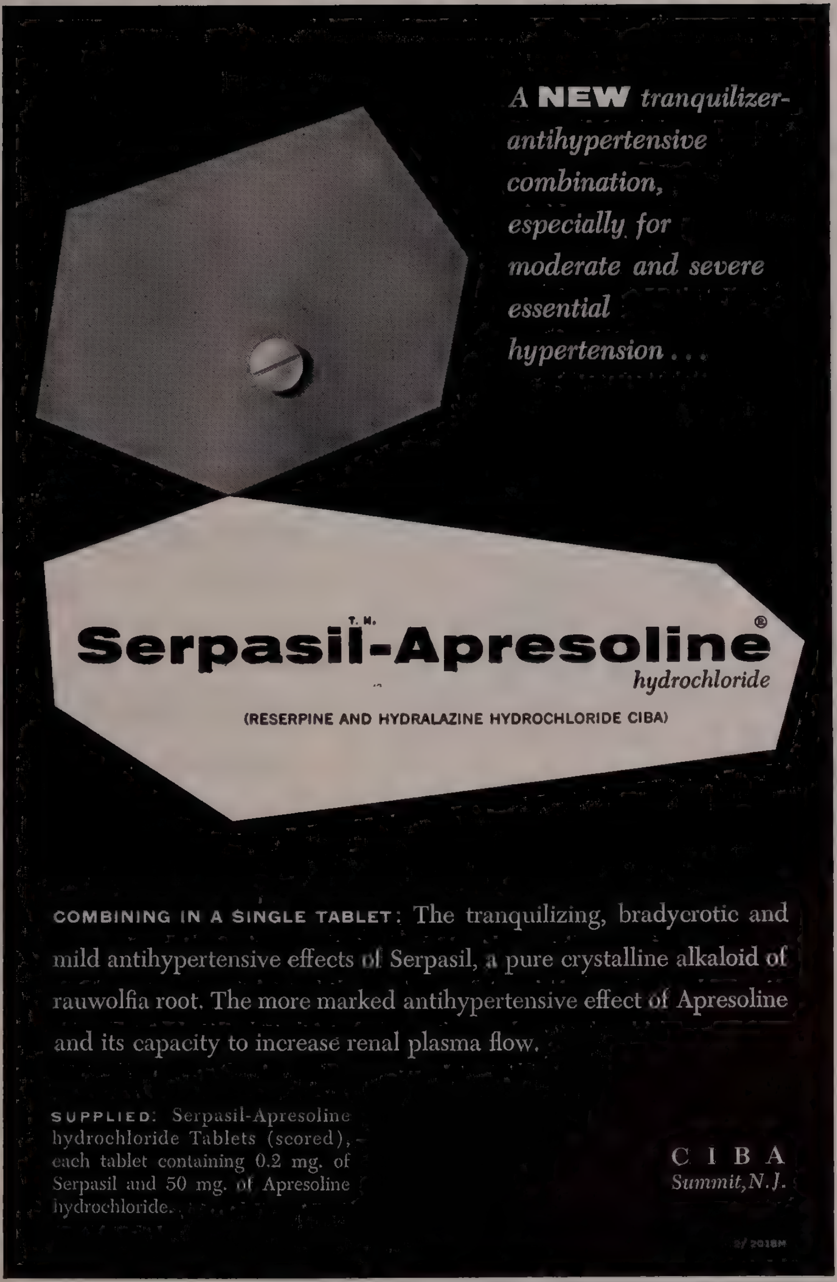

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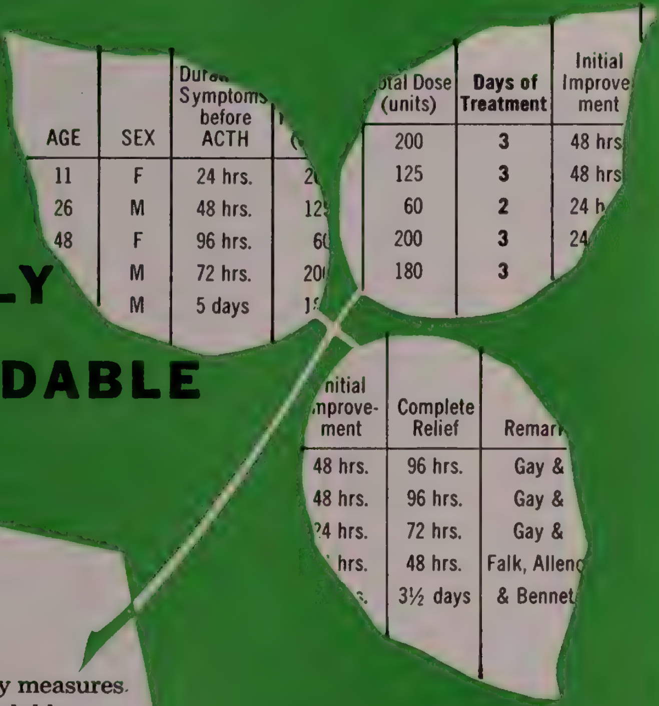

AGE	SEX	Dura… Symptoms before ACTH	(
11	F	24 hrs.	2(
26	M	48 hrs.	12
48	F	96 hrs.	6(
	M	72 hrs.	20(
	M	5 days	1

…tal Dose (units)	**Days of Treatment**	Initial Improve ment
200	**3**	48 hrs
125	**3**	48 hrs
60	**2**	24 h
200	**3**	24
180	**3**	

…nitial …nprove- ment	Complete Relief	Remar…
48 hrs.	96 hrs.	Gay &
48 hrs.	96 hrs.	Gay &
4 hrs.	72 hrs.	Gay &
hrs.	48 hrs.	Falk, Allen
s.	3½ days	& Bennet

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References: 1. Flood, J. H.: Bull. Guthrie Clinic 21: 3, 1951. 2. Gay, L. N., and Murgatroyd, G. W., Jr.: J. Allergy 23: 215, 1952. 3. Falk, M. S., et al.: J. Invest. Dermat. 18: 307, 1952.

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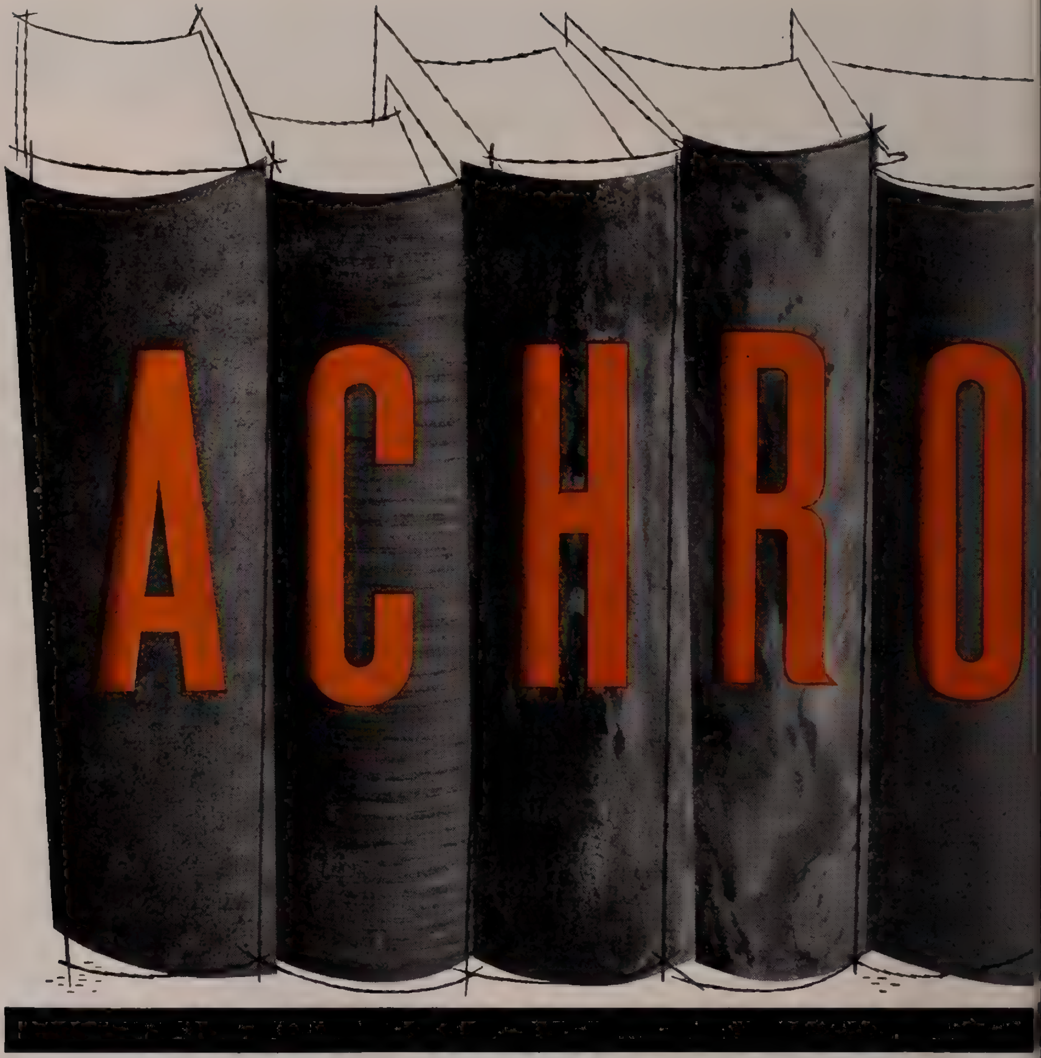

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complete relief

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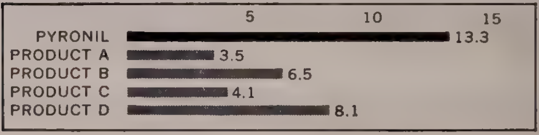

Dose: 1 or 2 pulvules every eight to twelve hours.

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EDITORIAL

George W. Kosmak, M.D.

George W. Kosmak, M.D., editor emeritus of the NEW YORK STATE JOURNAL OF MEDICINE since 1952, died at the age of eighty-one July 10 after a long illness.

Dr. Kosmak became editor of the JOURNAL in 1944, taking over from Dr. Peter Irving, and brought to this task all the force of his character and the background of his broad scholarship. In a few years of intensive effort he raised the standards of this publication by applying to its improvement the long experience he had gained as the founder and editor for over thirty years of the *American Journal of Obstetrics and Gynecology*, an outstanding journal in this field.

Dr. Kosmak was born in New York City and graduated from the Columbia University College of Physicians and Surgeons in 1899. He interned at the Sloane Hospital and founded the *American Journal of Obstetrics and Gynecology* in 1909. Dr. Kosmak was a Diplomate of the American Board of Obstetrics and Gynecology, a Fellow of the American College of Surgeons, and an honorary Fellow of the Royal College of Obstetrics and Gynecology. He belonged to the American Gynecological Society; the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons; the New York Academy of Medicine, and the New York Obstetrical Society. From 1935 until 1941 he was treasurer and trustee of the Medical Society of the State of New York and served in 1932 as president of the New York County Medical Society.

The worth of Dr. Kosmak to his profession and his community can not be found in a list of his achievements and honors. The staff of the JOURNAL remembers him affectionately for his unfailing consideration and thoughtfulness—for his wit—and for his patience. His fellow medical editors from all over the United States remember him for his keen mind and generous spirit. As a delegate from New York State to the American Medical Association he became widely known for his devotion to the highest ideals of medicine and his willingness to assume a full share of responsibility in furthering these ideals.

In fact, everyone who knew Dr. Kosmak will regret his passing both professionally and personally. Devoted to the best interests of the Medical Society of the State of New York, beloved by a host of friends, and respected by all for his geniality and outstanding integrity, he has earned his rest.

Joseph Merante

George W. Kosmak, M.D.

1954 DISTRICT BRANCH MEETINGS

District Branch	*Date*	*Place*	*Time*
First	Meeting held during session of House of Delegates		
Second	Wednesday September 15	Garden City Hotel Garden City	Dinner Evening
Third	Thursday September 16	Grossinger's Hotel Liberty	Morning Luncheon Afternoon
Fourth	Thursday October 21	Queensbury Hotel Glens Falls	Afternoon Dinner
Fifth	Wednesday October 20	Hotel Onondaga Syracuse	Afternoon Dinner Evening
Sixth	Wednesday October 27	Statler Club Ithaca	Afternoon Dinner
Seventh	Wednesday September 22	Rochester	Morning Luncheon Afternoon
Eighth	Thursday September 23	Wyoming Community Hospital Warsaw	Afternoon Dinner
Ninth	Wednesday October 6	Sleepy Hollow Country Club Scarborough	Afternoon Dinner

The Doctor in CIVIL DEFENSE

Medical Defense Committee of the Medical Society of the State of New York and the Office of Medical Defense, New York State Department of Health

J. G. FRED HISS, M.D., SYRACUSE, NEW YORK, *Chairman*

The Role of the Nurse

Every physician should be familiar with the civil defense training nurses will receive, so he will know how she can best be used in an emergency. After an atomic attack every individual in the State will be called upon to work beyond the limits of his ordinary endurance, to perform tasks that he would not perform in peacetime. Nurses are no exception. In a disaster they will be called upon to perform certain skills and technics ordinarily performed by physicians. This will be necessary in order to free the physicians—of whom there will be far too few—to care for the most critically injured. Nurses can be of invaluable assistance also by supervising and directing the large numbers of nonprofessional volunteers.

Special training aids have been prepared by the New York State Department of Health, Office of Medical Defense, to help prepare the nurse for her work in emergency medical services. Other materials will be published later.

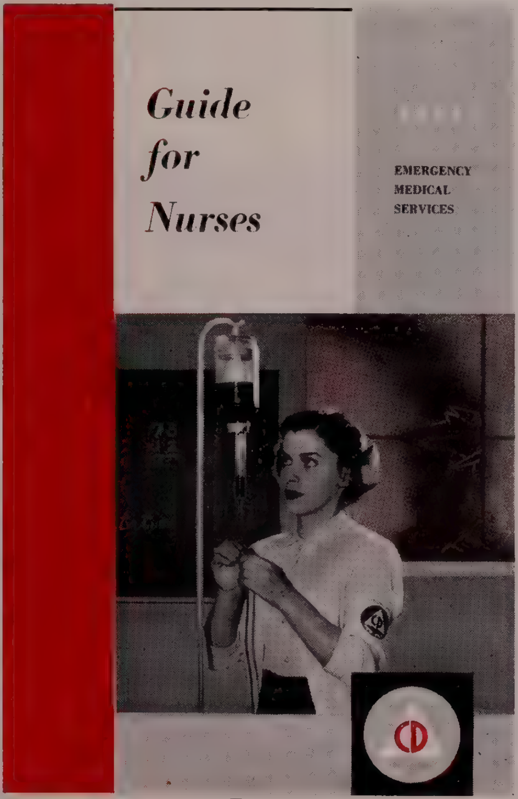


Fig. 1

The basic training course for the nurse is that which is contained in the text, *Guide for Nurses in Emergency Medical Services* (Fig. 1). It covers the orientation and training of nurses for their duties in emergency medical installations. Particular emphasis is placed on the plan for providing medical care to the large numbers of injured, on the specific assignments which nurses may be called upon to perform, and on the general nature of the tasks for which nursing personnel will be responsible.

The second course which is recommended for nurses is training in first aid. They will need first aid in order to estimate the severity of injuries so that they may give or initiate emergency treatment.

Nurses will also receive training and practice in those skills and technics for which the demand will be tremendously increased after enemy attack, such as venipuncture and intravenous therapy, care of extensive burns, care of radiation illness, and suturing minor lacerations. Nurses who have had previous training in anesthesia will be used for this function after attack.

Finally, nurses will need to develop skill in organizing and directing nonprofessional volunteers. This will be accomplished by using nurses to assist in the training of medical aides, the nonprofessional volunteers trained to help physicians and nurses after attack. Nurses will also supervise the activities of medical aides during the civil defense training exercises.

Guide for Nurses

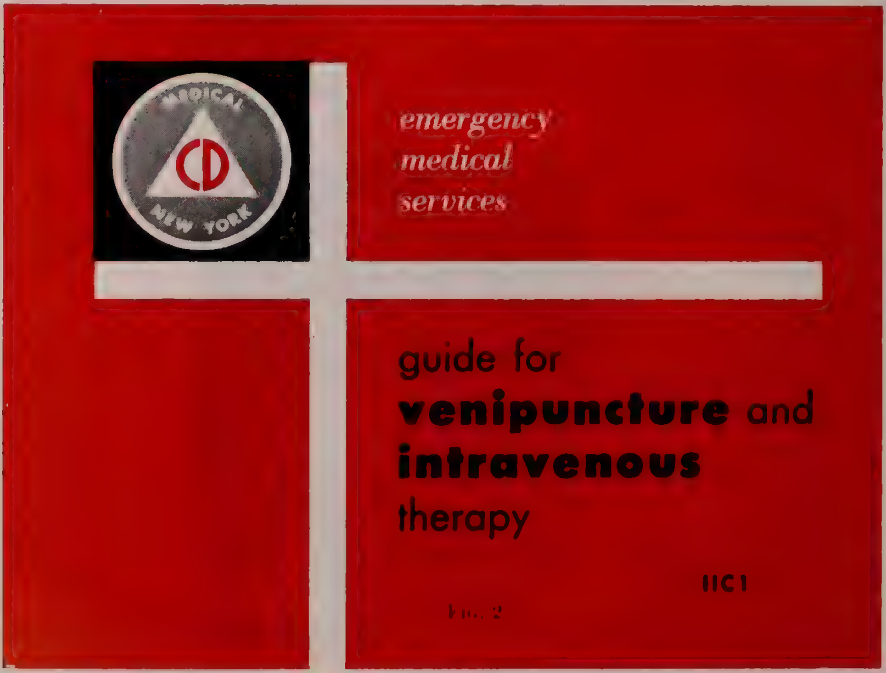
The *Guide for Nurses in Emergency Medical Services* covers the effects of an atomic bombing and civil defense measures to minimize those effects, the plans for treatment and care in emergency medical installations, the duties of nurses in various types of medical installations, and the leadership role of the nurse. The foreword to the *Guide* states, "Data on special skills not generally included in basic nursing courses, for which there will be a demand after atomic attack, will be published in the future. However, important information on treatment doctrines will be found in the descriptions of the work of each type of installation."

After attack, if a nurse is the first professional person to arrive at a medical installation, she will take charge of the setting up and the operation of the station until a physician arrives. She will be expected to do everything she can to care for the injured during this time.

After a Secondary Aid Station is set up and staffed, nurses will be assigned to the Stretcher Case Treatment Section, Walking Wounded Treatment Section, and the Patient Transfer Section. In the Stretcher Case Treatment Section the major duty of nurses will be to assume the responsibility for giving blood and plasma as ordered by the physician. They will also be expected to assist the physician with surgical repair if he so requests. This might include giving anesthesia (if trained for it) or doing the actual suturing of minor injuries.

In the Walking Wounded Treatment Section nurses will be expected to do most of the following procedures, under the direction of the physician and with the help of medical aides. They will give antibiotics orally and parenterally to all injured patients who cannot take antibiotics by mouth. They will apply pressure dressings to stop bleeding, remove foreign bodies from minor wounds or lacerations, suture wounds, dress burns, and apply or readjust splints or dressings. They will also administer morphine and give oral saline solution by mouth to prevent shock.

A nurse will be in charge of the Patient Transfer Section and will be responsible for watching for

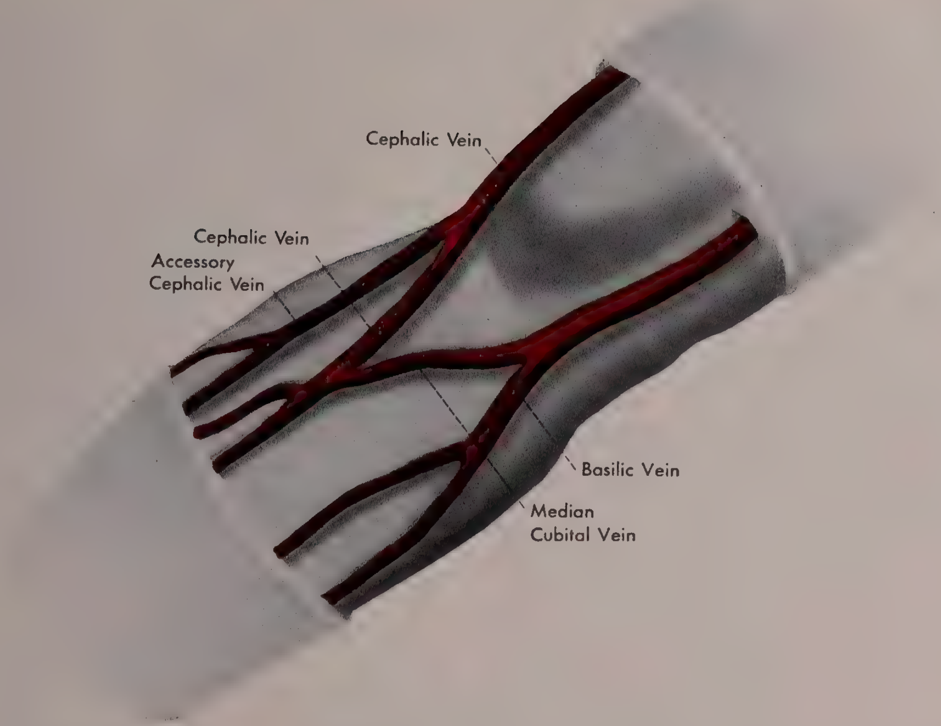


emergency
medical
services

guide for
venipuncture and
intravenous
therapy

IIC1

FIG. 2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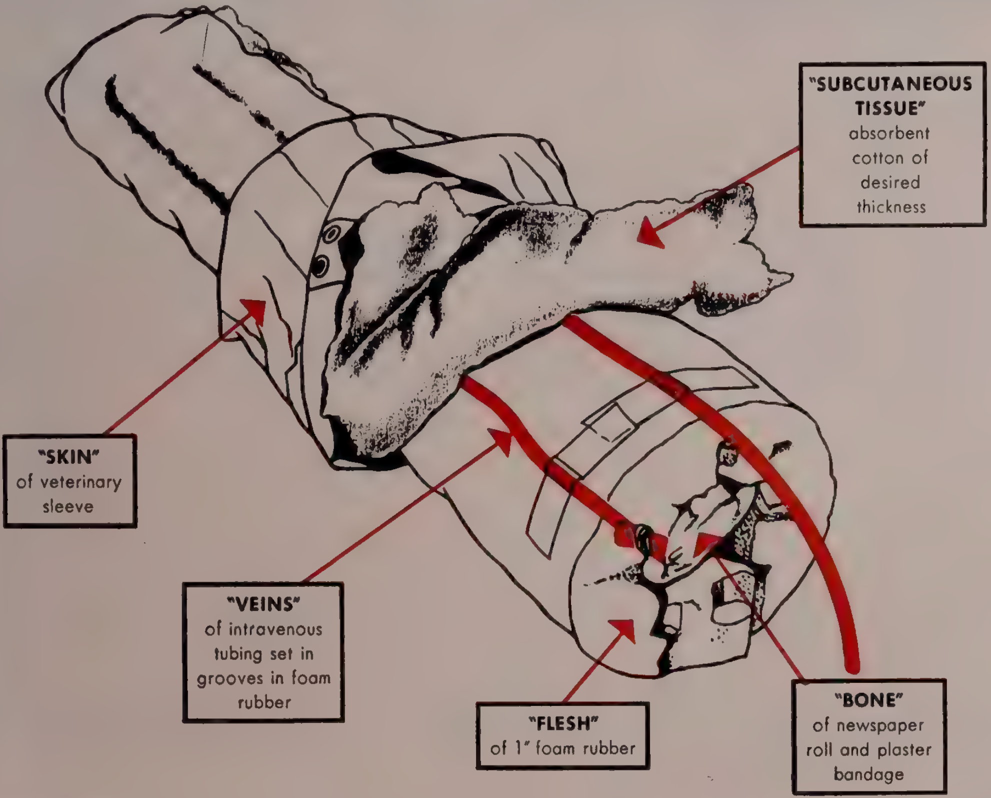
UPPER. Fig. 3 is an example of a visual aide used in the training of nurses in venipuncture.

LOWER. Fig. 4 is a drawing of the venipuncture training arm developed by the Office of Medical Defense.


"SUBCUTANEOUS TISSUE"
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"SKIN"
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"VEINS"
of intravenous tubing set in grooves in foam rubber
"FLESH"
of 1" foam rubber
"BONE"
of newspaper roll and plaster bandage

changes in the condition of patients. If their condition becomes critical, she must return them to the Stretcher Case Section for treatment.

In First Aid Stations all nurses will be responsible for procedures involving a high degree of nursing skill. They will also have to do work ordinarily considered medical or surgical procedures. They will be expected to assist in lifesaving emergency surgery which must be done before the patient is moved. They may need to assist with anesthesia (if trained to do this) and be responsible for dressing extensive burns, applying pressure dressing to wounds, as well as applying and adjusting splints for fractures. In some First Aid Stations they may give intravenous therapy as ordered by the physician.

In hospitals after enemy attack nurses will perform only those nursing skills which cannot be done by auxiliary nursing personnel. In addition, they will assist with surgical operations, dress serious wounds and burns, and suture wounds. They will supervise the administration of oxygen and be responsible for administering intravenous therapy under medical supervision. Nurses will also be expected to exercise judgment in the administration of medications such as narcotics and sedatives and to administer anesthesia (if trained) under medical supervision. Central Supply, where instruments, gloves, surgical linens, and instruments will be sterilized, will be under the supervision of nurses, as will be the large numbers of volunteers who will do routine nursing procedures.

Guide for Venipuncture and Intravenous Therapy

The New York State Defense Emergency Act states that persons other than physicians may be trained before attack to perform emergency services after attack for persons injured during an attack. It was recognized that after attack the shortage of persons capable of administering whole blood, plasma, or a plasma substitute would constitute a major problem in medical care. Materials to teach persons venipuncture and intravenous therapy were developed early by the Office of Medical Defense of the New York State Civil Defense Commission. All nurses are expected to take this training, and so far about 9,500 have been trained.

The *Guide for Venipuncture and Intravenous Therapy*, published in 1952, is the text for training nurses in these procedures (Figs. 2 and 3). It has the following chapter headings: Basic Procedure for All Venipuncture, Administration of Intravenous Fluids Using Disposable Unit, Venipuncture Using a Syringe, Possible Reactions Following Intravenous Therapy.

The Office of Medical Defense developed for use in teaching venipuncture a sponge rubber training arm that simulates the appearance and palpability of a real arm and can be made at low cost (Fig. 4). Instructions for making the training arm were issued in a Supplement to the Office of Medical Defense Memo No. 42.

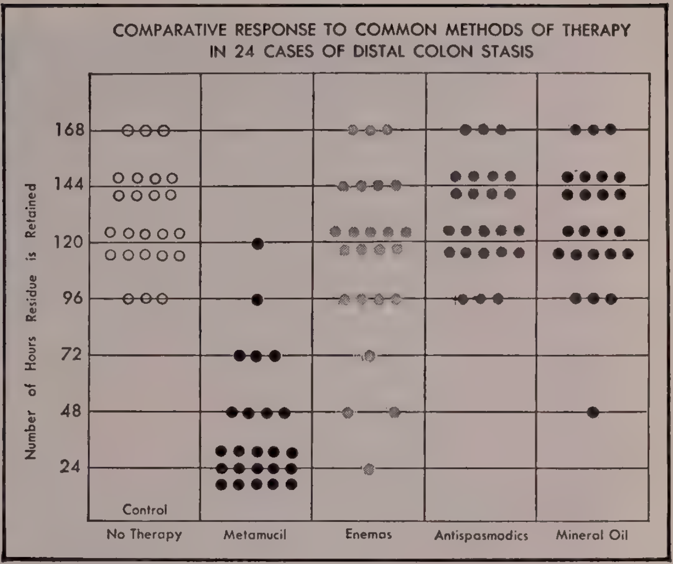
Definition of Nurses

Three groups of nursing personnel are considered nurses for civil defense purposes. The first group are all professional nurses who are or have been registered under the New York State Education Law or have been graduated from an accredited school of nursing in the United States or Canada. The next group includes all practical nurses who are or have been licensed under the New York State Education Law or who have been graduated from an accredited school of practical nursing in the United States or Canada. And finally, third- and fourth-year students in the clinical phase of their training in accredited schools of nursing will also be used as nurses in civil defense.

All three groups will be given the same training for Emergency Medical Services except that practical nurses are not expected to receive training in venipuncture and will be expected to perform only those other services of which they are capable.

You may take Martin Luther or Erasmus for your model, but you cannot play both roles at once; you may not carry a sword beneath a scholar's gown, or lead flaming causes from a cloister.—LEARNED HAND

Distal Colon Stasis



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*Barowsky, H.: A Roentgenographic Evaluation of the Common Measures Employed in the Treatment of Colonic Stasis. Rev. Gastroenterol. *19*:154 (Feb.) 1952.

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SCIENTIFIC ARTICLES

Therapy for the Systemic Fungous Infections

DAVID T. SMITH, M.D., DURHAM, NORTH CAROLINA

(From the Departments of Bacteriology and Medicine of the Duke University School of Medicine)

PULMONARY and systemic fungous infections are usually chronic, often simulate tuberculosis, and require as a basic therapy rest in bed and improved diet. Surgical drainage or excision may or may not be indicated depending upon the location and evolution of the individual case under consideration. Potassium iodide has been recognized as a specific medical treatment for sporotrichosis for generations and is of value as an adjunct treatment in actinomycosis, nocardiosis, blastomycosis, and moniliasis. Specific antibiotic and chemotherapeutic agents are now available for actinomycosis, nocardiosis, and blastomycosis. No satisfactory specific therapeutic agents have been developed for cryptococcosis (torulosis), coccidioidomycosis, histoplasmosis, and generalized moniliasis, but some of the newer antibiotics and chemical agents show promise either in laboratory experiments or in clinical trials. The dramatic effect of stilbamidine and other aromatic diamidines on blastomycosis stimulates the hope that eventually specific fungicidal agents will be available for the treatment of all the systemic fungous infections.

Actinomycosis

Actinomycosis, caused by the anaerobic Actinomyces bovis, is the most serious common fungous infection with a world-wide distribution.[1] Sanford and Voelker collected 670 cases in 1925, Cope 1,330 in 1938, and Kolouch and Peltier[2] an additional 1,236 in 1946. The reported cases represent only a small proportion of the actual cases. In Cope's series 56.8 per cent of actinomycotic infections were in the cervical region, 22.3 per cent in the abdomen, and 5.9 per cent in other parts of the body. The mortality and the expected results of therapy vary with the location of the infection.

CERVICOFACIAL ACTINOMYCOSIS.—Exact mortality figures are not available for untreated cases of cervicofacial actinomycosis or for cases treated by surgical drainage, potassium iodide, and x-ray. It is probable that the death rate did not exceed 10 per cent when the older methods of therapy were employed.

The mortality has certainly been lowered and the duration of the disease materially shortened by the use of sulfonamides and later penicillin. Recent infections may resolve without surgical drainage, but in most instances drainage will be necessary.

Excellent results have been reported following the use of chlorotetracycline (aureomycin)[3] and oxytetracycline (Terramycin),[4] but prolonged therapy over a period of weeks may cause complications by altering the normal microbiologic flora of the body.[5] Sulfonamides and penicillin do not have these undesirable side-effects even when continued for many months. Short periods of therapy with chlorotetracycline or oxytetracycline may be justified in patients who are responding slowly to sulfonamide-penicillin-iodide therapy. Stilbamidine[6] has been reported to be a curative drug for actinomycosis but should not be used unless the other drugs fail because of the danger of chronic facial neuropathy.

PULMONARY ACTINOMYCOSIS.—The mortality in untreated pulmonary actinomycosis is not known but may approach 90 per cent. This has been materially reduced but not eliminated

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by sulfonamide-penicillin-iodide therapy supplemented by surgical excision of one or more lobes.

Abdominal Actinomycosis.—In Cope's early series the mortality in cases of abdominal actinomycosis approached 100 per cent, but in the later series by Kolouch and Peltier,[2] where some sulfonamides were used, the mortality in 330 cases was 54 per cent. With improved surgical drainage and massive doses of penicillin, Sanford and Barnes[7] reduced the mortality to 15.8 per cent in 19 cases.

Vertebral Column Actinomycosis.—Brett[8] found the mortality in 60 cases of actinomycosis of the spine to be 90 per cent. He reported the cure of one chronic case following 1,000,000 units of penicillin daily for twenty weeks followed by 0.5 Gm. of streptomycin twice daily for three weeks. Cope[9] cured another case with 1,000,000 units of penicillin daily and 2 Gm. of sulfadiazine every four hours supplemented by Lugol's solution.

It should be noted that Brett[8] used penicillin and streptomycin in succession and not simultaneously. This was probably a wise procedure because the simultaneous use of penicillin and streptomycin tends to produce the same disturbances in the normal microbiologic flora of the body as the broad coverage antibiotics such as chlorotetracycline, oxytetracycline, and chloramphenicol.[5]

Suggested Therapy.—One million units of penicillin or 1 to 2 Gm. of one of the sulfonamides every four hours should be administered at the beginning of therapy. Penicillin is more effective than sulfonamides, and we usually give penicillin while the patient is in the hospital and use sulfonamides for home treatment. If dramatic improvement does not occur in seven to ten days, we advise surgical drainage with excision of as much of the infected tissue as practical. The drugs are continued after operation and supplemented by iodide therapy. A saturated solution of potassium iodide is employed, measured in drops, and administered in $^1/_2$ to 1 ounce of water. The initial dose is 3 drops three times a day after meals, and the dose is increased by 1 drop three times a day until the patient is receiving 20 drops three times a day. When this point is reached, the dose is reduced to 5 drops three times a day and again worked back to 20 drops three times a day. If evidence of iodide intolerance appears, the drug should be stopped until the symptoms have disappeared and then begun again with the initial dose. If symptoms appear a second time, the drug should be discontinued. The iodide therapy promotes absorption of the granulation tissue and probably facilitates the penetration of the fungicide drugs. The drugs and iodides should be continued for several weeks after there is an apparent cure of the cervicofacial type of lesion and for several months after apparent cure of the other clinical types. Patients who respond slowly to this therapy may have the sulfonamides supplemented by short periods, seven to fourteen days, of streptomycin or other antibiotics, or these antibiotics may be alternated with penicillin.

Nocardiosis

There are several species of the genus Nocardia capable of producing a disease which resembles actinomycosis. These species are aerobic, grow readily on all types of media, and are usually partially acid-fast. The feet[1] and lungs are most frequently infected,[10–14] although these infections can be found in any part of the body including bones.[15]

Only one patient is known to have recovered prior to the introduction of sulfadiazine therapy by Benbow, Smith, and Grimson in 1944.[10] Penicillin is not effective, even up to doses of 10,000,000 units daily. Other antibiotics show some inhibition of growth in test tube experiments and cure some experimentally infected mice, but Strauss, Kligman, and Pillsbury[16] found sulfadiazine the only drug which cured 100 per cent of infected mice.

Sulfadiazine in doses of 1 to 2 Gm. every four hours to maintain a blood level of 10 to 15 mg. per 100 ml. of blood usually initiates improvement in a few days. The treatment must be continued for weeks or months. Surgical drainage or excision may hasten recovery if done after the initial clinical improvement from sulfadiazine therapy. Other sulfonamides may be as effective as sulfadiazine, but they have not been evaluated critically.

North American Blastomycosis

There are three clinical forms of this disease: (1) primary cutaneous, (2) pulmonary, and (3) generalized. Secondary cutaneous lesions may appear as a result of hematogenous dissemination in the generalized form of the disease.

Primary Cutaneous Blastomycosis.—Primary cutaneous blastomycosis is chronic, lasting up to eight or ten years in the untreated case, but death is unusual during the first few years of the infection.[1] These patients should have skin tests performed with 0.1 ml. of blastomycin to determine the presence or absence of sensitivity. Patients with negative skin tests and those with skin reactions less than 2 mm. can be treated immediately with iodides and local x-ray. Patients with skin reactions of 2 mm. or larger should be partially desensitized before iodides and x-ray are administered.

If the skin reaction is 2 mm., a 1:10 dilution of the original skin test material should be employed for desensitization. A 1:100 dilution is used for reactions of 2.5 mm., a 1:1,000 for 3 mm., and 1:10,000 for a 4-mm. reaction. The initial dose of vaccine should be 0.1 ml. of the indicated dilution administered subcutaneously. The dose is increased by 0.1 ml. every other day or three times a week until 1.0 cc. is reached. The next dose is 0.1 ml. of the next stronger dilution, etc. If local redness or induration develops at the site of the injection, the dose should be reduced by 0.5 ml. and worked up again. The iodides and x-ray therapy can be started after the completion of the 1:100 dilution of the moderately sensitive and the 1:10 dilution for the mildly sensitive patient. Excellent results have been obtained in our clinic with this conservative type of treatment.[17] If the patient responds slowly or relapses after apparent cure, then 2-hydroxystilbamidine or stilbamidine should be administered rather than resorting to surgical excision and skin grafting, although the latter method has been successful in selected cases.[18]

Pulmonary and Systemic Blastomycosis.—These two clinical types are discussed together because the pulmonary cases frequently progress to disseminated infections. The mortality in untreated cases is about 92 per cent.[1] The mortality in 30 cases treated with vaccine and iodides by the method outlined above was 43 per cent.[19] The results were particularly poor in the far-advanced disseminated cases.

The introduction of the aromatic diamidines has revolutionized the therapy of the severe cases of blastomycosis, and the patients seem to respond equally well regardless of the presence or absence of skin hypersensitivity or the presence or absence of complement-fixing antibodies in the blood serum. These aromatic diamidines were synthesized by a group of investigators in the Liverpool School of Tropical Medicine for the treatment of trypanosomiasis but were soon found to be more effective in the treatment of the visceral form of leishmaniasis, known as kala-azar. Elson showed in 1945 that propamidine would inhibit the growth of Blastomyces dermatitidis and Sporotrichum schenckii in remarkably low concentration in media. Propamidine was applied locally to a cutaneous lesion in 1950.[20] Two systemic cases of blastomycosis were treated with intravenous injections of stilbamidine by Schoenbach and his associates[21] in 1951. In 1952 Snapper and his coworkers[22] treated two cases with 2-hydroxystilbamidine. Two cutaneous infections have been cured with small doses of diethylstilbestrol.[23] The literature was reviewed and ten new cases reported from this clinic in 1953.[24]

Since November, 1951, we have treated 17 patients having pulmonary or systemic blastomycosis with stilbamidine and five with 2-hydroxystilbamidine. One patient was practically moribund and died after the third dose of stilbamidine. One patient relapsed after an inadequate dose and one after what was believed to be adequate treatment. Nine patients have been observed for only a few months, but the remaining ten patients have remained well for fifteen to twenty-four months.

Stilbamidine Therapy.—The maximum daily dose has been 150 mg. of stilbamidine which has given a per Kg. dose which has varied from approximately 2 to 3 mg. Our initial dose is now 50 mg. diluted in 100 ml. of sterile physiologic saline and infused intravenously over a period of one hour. This dose is repeated the next day. On the third and fourth day of therapy 100 mg. diluted in 200 ml. is given over a two-hour period. From the fifth to the twenty-eighth day 150 mg. diluted in 300 ml. of fluid are administered over a three-hour period. In only one instance has additional therapy been indicated. The total dose has varied from 3.5 to 4.6 Gm. in adults and 0.9 Gm. in a four-year-old child.

The patients treated successfully by Schoenbach and his associates[21] received a total of 4.5 to 6 Gm. Schoenbach's initial and maximum daily dose was the same as ours, but he used 5 per cent glucose in distilled water as the diluent and treated the patients on an intermittent schedule of ten days of treatment and ten days of rest. Several courses of treatment were administered which accounts for the larger total dose. The drug is apparently stored in the body in considerable concentrations, and clinical improvement may continue for three to six months after the last dose is administered.

The complications of stilbamidine therapy as recorded in the literature are (1) thrombosed veins, (2) nitroid crises, such as sweating, nausea, vomiting, fall in blood pressure, and collapse, (3) destructive lesions in the kidneys and liver some three to four months after the last dose of the drug, and (4) facial neuropathy. All but the last complication can be prevented by the proper preparation and administration of the drug. Concentrated solutions are irritating and cause venous thrombosis. The diluted drug does not thrombose veins, and the nitroid crises can be prevented by slow infusions. The destructive lesions of the liver and kidneys are caused by a degeneration of the drug which occurs when it is exposed to sunlight or even direct daylight. The drug is protected by storage in amber glass vials after manufacture. It may be weighed out safely in artificial light, but the solutions should be covered with paper while being transported to the ward and the infusion bottles covered with a towel while the infusion is being administered. The neuropathy is an inherent complication for which we have no satisfactory remedy. Most of our patients have had some numbness or paresthesia in the skin of the face in the region supplied by the sensory portion of the fifth nerve. The complication begins between the third and sixth month after the completion of therapy. This discomfort has been severe in only one of our cases and that is decreasing after two years.

2-Hydroxystilbamidine.—The aromatic diamidine, 2-hydroxystilbamidine, is more stable in light than stilbamidine, is somewhat less toxic, and rarely produces facial neuropathy, but it is not so effective in inhibiting the growth of B. dermatitidis in media and requires a larger daily dose and a larger total dose. The maximum daily dose established by Snapper *et al.*[22] was 225 mg., and the total dose varied from 9 to 12 Gm. These investigators diluted the drug in 20 ml. of 5 per cent glucose in distilled water and injected it over a twenty- to thirty-minute period. They noted thrombosed veins and occasional nitroid crises. We have used an initial dose of 100 mg. in 100 ml. of physiologic saline infused over one hour followed the next day by 150 mg. in 200 ml. of fluid infused over two hours and the third day either 225 or 300 mg. in 300 ml. of fluid infused over a three-hour period. Slow infusion is necessary since we have observed nausea from 100 mg. when the infusion was rapid and an absence of all symptoms in the same patients after repeated injections of 225 mg. when the infusion was given slowly.

One of our patients with cutaneous and bone lesions is apparently well a year after treatment. He has developed no complications. The other four patients were children who received 3 mg. per Kg. for thirty days. They have taken the drug without complications, but the follow-up period is only a few months.

Coccidioidomycosis

Primary pulmonary coccidioidomycosis is usually asymptomatic and is revealed only by the conversion of a negative to a positive coccidioidin skin test. Some patients with primary infections have moderate to severe symptoms and moderate to extensive infiltrations of the lungs which usually clear completely with symptomatic treatment but may leave thin wall cavities which persist for months and years. If the patient has persistent cough and sputum, the cavity area should be removed surgically by wedge resection, segmental resection, or lobectomy.[25]

It is not known why some primary cases disseminate usually within a few weeks but sometimes after a latent period of six to eight years. The disseminated lesion may be confined to one or several bones[26] or may involve nearly all the organs of the body. The over-all mortality for the disseminated cases is about 50 per cent.

There is no satisfactory therapy for disseminated coccidioidomycosis. The iodides, sulfonamides, and antibiotics including protoanemonin[27] have been tried without success. Sodium caprylate and ethyl vanillate are of questionable value. New fungicidal agents are being investigated.[28] One of the more promising of these is prodigosin, and six of nine cases have been cured. The drug is difficult to prepare, however, and it scleroses and thromboses the veins.[29] Stilbamidine is not very effective in inhibiting the growth of the organism in media and has been of doubtful value clinically. The 2-hydroxystilbamidine inhibits the growth of Coccidiodes immitis in media as well as stilbamidine does B. dermatitidis under the same conditions. This drug is apparently harmless when administered in daily doses of 225 mg. by the method outlined under the section on blastomycosis. The clinical results have been rather disappointing and certainly are not dramatic and clear cut like those obtained with stilbamidine in blastomycosis.

Histoplasmosis

Primary asymptomatic infections are even more common with Histoplasma capsulatum than C. immitis, but many of these asymptomatic patients later develop miliary-like calcified deposits in the lungs. When symptoms are present with the primary infection, they are usually severe, and a greater percentage progress to the disseminated form of the disease where the mortality is somewhere between 50 and 98 per cent.

Residual granulomatous lesions in the lung following primary infections have been treated successfully by surgical excision.[30,31] Generalized infections do not respond to iodides, sulfonamides, known antibiotics, stilbamidine,[32] or 2-hydroxystilbamidine. Christie and his associates[33] have cured five of 12 disseminated cases with ethyl vanillate. All of 23 untreated cases died. Although the results are encouraging, the dose is large and somewhat irritating to the stomach, and the therapeutic dose is not much below the toxic dose.

Antabuse, the drug used in conditioning alcoholics, prevents the growth of H. capsulatum in 1 part of the drug in 1,000,000 parts of media.[34] In some preliminary experiments Drs. Isabel Christison and Norman F. Conant found that Antabuse was harmless for normal mice but apparently toxic, at least in the doses used, for mice infected with H. capsulatum since the latter died before the untreated controls. Experimentally infected mice treated with atabrine had an increased survival rate,[35] and two terminal cases treated with atabrine had no organisms in their lesions at necropsy.

β-diethylaminoethyl fencholate (MRD-112) manufactured by the William S. Merrell Company inhibits the growth of H. capsulatum in the presence of 10 per cent serum media of a level of 25 to 50 micrograms per ml. of medium. This drug is not toxic for dogs or monkeys after weeks or months of treatment at levels up to 10 mg. per Kg. daily.

Cases of the reinfection type of histoplasmosis, analogous to reinfection tuberculosis, with unilateral or bilateral upper lobe cavities are now being recognized, and some of these have been cured by pulmonary resection.[37]

Cryptococcosis

Cryptococcosis (torulosis) caused by Cryptococcus neoformans is usually a primary pulmonary infection but may be cutaneous, subcutaneous, or mucosal. The primary pulmonary lesion may be inconsequential or never detected, and the patient appears with a brain or meningeal lesion. Some of the recognized pulmonary lesions have been cured by surgical resection and others with vaccine, iodides, and sulfadiazine.[1]

An occasional patient with cryptococcus meningitis achieves a biologic balance with the fungus and remains alive for years but subject to periodic recurrence of symptoms and reappearance of the organism in the spinal fluid. An occasional patient has recovered after treatment with sulfadiazine[1] or actidione.[38,39]

Streptothricin is effective in the test tube and has cured some experimentally infected mice[40] but is probably too toxic to be used in man. Propamidine inhibits the growth of C. neoformans in media in the presence of serum. We have treated two moribund patients who died on the third day of therapy. The patients were so ill that it was not possible to evaluate either the harmlessness of the drug or its therapeutic effectiveness.

Sporotrichosis

Most patients with cutaneous lymphatic sporotrichosis and many with generalized sporotrichosis respond slowly but satisfactorily to treatment with potassium iodide. The dose should be administered as described under the section on actinomycoses but may be pushed up to a maximum of 30 or even 40 drops three times a day.[41]

A few patients are intolerant of iodides, and some of the generalized cases respond extremely slowly or not at all to this therapy. It is encouraging to note that there is now one case in the literature where stilbamidine proved effective.[42]

Candidiasis (Moniliasis)

Localized lesions of moniliasis respond to a variety of well-known treatments.[1] Bronchial and pulmonary infections sometimes require desensitization and iodide therapy.

There is no effective therapy for generalized moniliasis which usually persists for years and generally results in death. Candicidin[43] seemed promising in preliminary studies in mice, but as yet it is too toxic for use in man. Intravenous gentian violet in doses of 5 mg. per Kg. has been administered in some cases of acute pulmonary or generalized moniliasis, but this drug thromboses veins and is limited, therefore, to four to six doses.[1] Diodoquin[44] has been used in the treatment of acrodermatitis enteropathica, where monilia were eliminated from the stools, but its effect on uncomplicated cases of primary generalized cases of moniliasis has not been evaluated.

Geotricosis

The various species of Geotricin usually produce focal lesions of the mouth, bronchi, lungs, or intestinal tract, but a few instances of generalized infections with positive blood cultures have been reported.[45,46] One case was treated with neomycin sulfate with apparent recovery, but deafness was produced by the drug.[46]

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Discussion

Rhoda W. Benham, Ph.D., *New York City* (*By invitation*).—Treatment of these more serious of the mycotic infections has long been a heartache and the cause of a great dread or fear of the same. I need only recall the story of the so-called "California disease" or coccidioidomycosis as an example of what I mean. One consolation has been that the diseases were of rare occurrence and showed rather strict geographic distribution. We now know, however, that the diseases are not so rare as once thought and that due to modern methods of travel, geographic distribution can no longer be counted on as a safeguard.

For three diseases Dr. Smith tells us we have a specific therapy; either an antibiotic or a chemotherapeutic agent has been found for actinomycosis, nocardiosis, and North American blastomycosis. For a fourth disease, sporotrichosis, potassium iodide has been known as a specific agent for many years. Although no specific agent for the remaining systemic diseases has as yet been found, as pointed out by Dr. Smith, progress is being made, and the outlook is more hopeful that in time, among the newer drugs and antibiotics, we will find a specific agent for each. We already have an antibiotic not yet released to the public which seems very promising in that it is active against many fungi. This is Nystatin or fungicidin, as it was originally named. Fungicidin was first isolated by Dr. Elizabeth Hazen of the New York State Public Health Laboratories and is being developed by E. R. Squibb and Sons. Fungicidin was found by Hazen, Brown, and others[a–d] to be active against a long list of fungi tested, the only exceptions being Monosporium apiospermum and Allescheria boydii. The yeast and yeastlike fungi appeared particularly sensitive.

The best results with any of the therapeutic agents are obtained when treatment is started early in the disease; therefore, an early diagnosis is of utmost importance. How to obtain this is the problem. The only sure and undoubted diagnosis is made by finding the specific fungus in a direct preparation of scrapings or exudates or obtaining it in culture. It is essential then that we have personnel trained to recognize these fungi when they see them and with a knowledge of the media most effective in their isolation.

They are with perhaps one or two exceptions all distinct diseases, each with a single etiologic agent. This agent has a characteristic parasitic stage, as seen in tissue or exudates, and another and equally characteristic cultural stage. While the early antibiotics were not active against fungi, they have, in general, made the isolation of them easier by the elimination of bacterial contaminants when incorporated in the medium. This holds true for all but the Actinomycetes which behave like bacteria in their response to antibiotics. Littman's medium now put out by Difco and Company, containing gentian violet and streptomycin, is very useful in eliminating bacterial contamination. However, the fungous growth appears quite different on this medium, being more restricted and of quite a different character. One must learn to recognize the fungi all over again. Actidione or cycloheximide medium is most helpful in inhibiting saprophytic fungi and permitting the isolation not only of C. immitis but of many dermatophytes as well. Georg succeeded in isolating C. immitis from a mixture of spores of 15 different saprophytes. We at Columbia have found it most helpful in isolating dermatophytes from clinic patients.

Skin testing and formation of antibodies should be utilized as aids to diagnosis, but the ultimate decision rests on finding the specific organism. A real contribution to the latter has been the introduction of the Hotchkiss-McManus or Periodic-Schiff stain for tissue, scrapings, or exudates from mycotic lesions. This is most successful with the fungi staining bright red. When this stain is used, fungi have been found present in sections that have appeared negative with other stains. A thorough knowledge of the fungus, what it looks like, and its nutritional requirements is most important. A continued search for a more efficient diagnosis and an improved method of isolation, primarily by making sure that our hospital technicians are trained in mycology as well as bacteriology, and a renewed search for more specific fungicidal agents will no doubt eventually lead to the goal, a specific treatment for each disease.

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Injection Therapy of Varicose Veins Using Sylnasol Foam

Dr. H. A. Alexander, Minneapolis General Hospital, wrote in the December, 1953, *Minnesota Medicine*, that by passing air through a sclerosing agent a few drops are converted into several cc. of foam. In the injection therapy of varicose veins sclerosing material so treated offers two principal advantages:

(1) Allergic reaction is partly governed by quantitative considerations, and by this method much less of the agent need be injected, and (2) a single drop of Sylnasol mixed with air seldom will produce a slough. Other advantages are minimal discomfort to the patient because of smaller needles, fewer punctures, and, often, omission of the use of a tourniquet. He also believes that there is less pigmentation and slight chance of deep phlebitis because the sclerosing agent would have trouble getting into the deep vein. The author details injection technic, postinjection management, and suggestions for follow-up including education of the patient. He includes some notes on hazards and contraindications.

Acceleration and Induction of Labor

MARTIN L. STONE, M.D., F.A.C.S., AND MYRON GORDON, M.D., NEW YORK CITY

(From the Department of Obstetrics and Gynecology, New York Medical College, Flower and Fifth Avenue Hospitals)

PERHAPS the outstanding advance in the field of obstetrics has been the introduction of a new technic for the acceleration and induction of labor. The essential of this technic is the intravenous administration of a dilute solution of posterior pituitary extract. Proper evaluation of this or any new procedure must answer three questions: (1) Is the technic necessary? (2) Does it work? (3) Is it safe? This report is our answer to these three most pertinent questions.

Is It Necessary?

The need for some agent to stimulate the uterus for induction or supplementation of labor is an accepted fact. There is little doubt that prolonged labor generally due to uterine inertia, either primary or secondary, is associated with a marked increase in fetal and maternal morbidity and mortality.[1–3] The occurrence of hemorrhage, sepsis, dehydration, exhaustion, and difficult operative procedures, all frequently associated with prolonged labor, are important factors in the poor maternal and fetal outcome. This is especially true when prolonged labor is associated with premature rupture of the membranes.[3] It is also significant that many of the females with a history of previous inertia forego further childbearing.[1,4]

Termination of pregnancy is often *indicated* for a variety of complications, such as toxemia, placental bleeding, premature rupture of the membranes without labor, postmaturity, intrauterine death, and certain medical conditions including, according to a most recent report, poliomyelitis.[5] Interruption is often *desirable* for elective reasons including physician and/or patient convenience.

Obviously any method that would fill this need for a uterine stimulant would be most welcome. Attempts to use posterior pituitary extract on this basis have been reported since 1909.[6] Unfortunately, lack of knowledge of uterine and endocrine physiology led to improper dosage, incorrect uses, and many abuses. Reports of frequent and tragic accidents were followed by an attitude of condemnation, and posterior pituitary extract has had a much maligned existence.[7–9] Many of the present taboos are the legacy of the period of abuse and misuse.

The availability of better products, the increased understanding of the pharmacology of pituitary extract, and the continuing need for an agent to stimulate labor led to a re-evaluation of posterior pituitary extract by many competent obstetricians.[10–12] The most important advance in this field was the suggestion of Theobald[13] and Page[14] that posterior pituitary extract be given in dilute solutions by intravenous drip. Successful clinical application of this concept has been reported by Hellman[15] and Stone[16] and confirmed by numerous observers who have recognized the need for an agent to stimulate uterine contractions.[17–27] As a result, a mass of favorable evidence has been accumulated. Since our original report on 576 cases, we have used intravenous pitocin in over 1,000 additional cases. All of these have been subjected to careful analysis in regard to efficacy and safety of the intravenous technic.

Method and Material

The method employed has been previously described[26,27] but bears repetition. Pitocin is the product used exclusively. This is a logical choice since it affords a standardized product with minimal pressor effect and maximum oxytocic action. Pitocin has little effect on the coronary arteries and may be used with cyclopropane anesthesia.[25,28] Pitocin is not to be confused with pituitrin which has pressor factor and antidiuretic hormone or with pitressin which contains no oxytocic principle.

After preliminary soapsuds enema an infusion of 500 cc. of 5 per cent glucose in water is started and set to flow at a rate of 10 drops per minute. We have not found it necessary to complicate

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the procedure by the use of double setup with a Y tube. The use of a vein not in the antecubital fossa allows for increased patient comfort and permits freer movement during labor. One-half cubic centimeter ($7^1/_2$ minims) of pitocin is added (to make a 1:1,000 dilution) after the infusion is running. This prevents a high concentration of the drug from reaching the patient at the onset and obviates the occurrence of tetanic contractions or reversal phenomenon. The initial slow rate is maintained for a half hour. The subsequent rate is variable and is individualized according to the response of the uterus and not according to any arbitrary number of drops per minute. All patients receive preliminary sedation consisting of Demerol, 100 mg., and scopolamine, $^1/_{150}$ grain, with or without barbiturate just prior to the start of the infusion. The sedation is repeated as necessary.

In all cases the infusion is continued during delivery and throughout the third stage. This step is in direct variance with recommendations that pitocin be stopped when the patient responds with active labor.[29]

This technic was used in over 1,500 cases for acceleration and induction of labor. Ages ranged from fifteen to forty-five years and parity for 0 to 4.

Does It Work?

On the basis of our work and the reports in the literature, our answer to this question is yes. In all successful cases effective labor may be anticipated soon after the start of the infusion. As might be expected, the latent period is longer for induction than for supplementation. The frequency and intensity of the contractions are controllable by regulating the rate of flow. Tetanic contractions have not been seen since the adoption of the described method of administration.

When intravenous pitocin is used to stimulate contractions for patients in early labor or in cases of inertia, the results are excellent. This is to be expected since the presence of early labor is fairly reliable evidence that the cervix is favorable.

In inertia or hypotonic labor often leading to infection, exhaustion, and dehydration, the use of intravenous pitocin permits the administration of needed sedation without lengthening labor and affords the benefits of intravenous fluids and glucose as well as initiating and maintaining effective contractions. Without a Tokodynamometer we believe it is difficult to differentiate hypo- from hypertonic states and, therefore, advocate the early use of pitocin stimulation with adequate sedation before secondary inertia ensues and the complications of prolonged labor appear. There is some evidence that Demerol has a synergistic effect, and this may explain the success of intravenous pitocin irrespective of the type of case.[30]

BREECH.—In breech presentation, often associated with long and desultory labor, the use of pitocin stimulation increases the effectiveness of the contractions and shortens the length of labor. This has led to an increase in the number of spontaneous breech deliveries with a concomitant improvement in fetal outcome. It is not to be inferred that pitocin stimulation is advocated to overcome any bony disproportion in association with breech presentation. However, breech presentation per se cannot be considered a contraindication to the use of pitocin drip.[18,20]

In the presence of transverse or posterior positions use of intravenous pitocin will frequently result in spontaneous rotation and obviate the need for difficult midforceps rotation and delivery. The improvement in expulsive powers by intravenous pitocin will tend to overcome many of the factors associated with occiput posterior and transverse positions, such as ineffective pains, minimal disproportion, relaxed pelvic floor, deflections, and inertia. This result is best achieved by continuing the pitocin infusion for one hour after full dilatation when a diagnosis of occiput position or transverse is made. Intravenous pitocin is particularly valuable in conjunction with conduction anesthesia which otherwise is associated with a high incidence of operative obstetrics.[31,32]

USE IN INDUCTION.—A high incidence of success can be obtained in the induction group, irrespective of the indication for the induction. Earlier in our series certain strict criteria were considered essential prior to selecting a case for induction. Most important of these was the condition of the cervix. More recently we have noted that the so-called unripe cervix can be prepared by an initial infusion and will respond rapidly to a second infusion. This observation has been reported by others and explains successes in many cases previously reported as failures.[33]

Intravenous pitocin has one of its greatest uses when interruption of pregnancy is necessary for toxemia. By repeating the infusion and priming the cervix, success can be achieved even if the patient is not at term. It is also significant that intravenous pitocin has no hypertensive effect on the toxemic or the normal patient.[21,34] It is obvious that success in induction for this as well as other indications must lead to a lowered section rate.

While simple rupture of the membranes for acceleration and induction of labor has its proponents, the use of intravenous pitocin is preferable for many reasons. The latent period after amniotomy is variable and the onset of labor unpredictable. Sepsis is always a potentiality.[35] If labor does not ensue soon after rupture of the membranes, the eventual labor is longer, and the need for surgical procedures increases in frequency.[36] For those cases with premature rupture of the membranes and no labor, intravenous pitocin is specifically indicated.

Rupture of the membranes is not carried out as part of the inductive procedure with intravenous pitocin. We prefer not to burn our bridges behind us and be compromised by ruptured membranes if a case should not respond to pitocin. Many cases in which induction is indicated are not suitable for rupture of the membranes because of minimal dilatation or lack of descent. For these reasons amniotomy is not performed until labor is well established as evidenced by descent and/or dilatation. Often rupture of the membranes occurred spontaneously after intravenous pitocin or became a relatively simple procedure. Rupture of the membranes is not necessary for success with intravenous pitocin, but once labor ensues from intravenous pitocin, rupture of the membranes will enhance the effect.

Obviously other measures for induction and stimulation of labor, such as bags, catheters, etc., are archaic and should be relegated to an obstetric museum.

LENGTH OF LABOR.—By improving the expulsive powers and by overcoming abnormal positions, excess sedation, and other previously mentioned factors, intravenous pitocin minimizes the incidence of prolonged labor. Based on the use of this technic, it is our opinion that the accepted textbook standards in regard to the length of labor need revision downward. In our experience the average length of labor was four and one-half hours for primiparas and three hours for multiparas when used for supplementation and seven hours for primiparas and four hours for multiparas when used for induction. It is questionable whether old fashioned "twenty-four-hour labors" represent good obstetrics. The patient should be re-evaluated before this point is reached. We feel that the prevention of prolonged labor is better than treatment.

METHOD OF DELIVERY.—It follows then that the use of intravenous pitocin should result in a lowering of operative obstetrics. Over 90 per cent of our cases delivered spontaneously or by low forceps. The success in induction automatically reduced the number of cases subjected to cesarean section. The decrease in occiput transverse and posteriors discussed previously had a corollary in the decrease in midforceps. The use of intravenous pitocin to increase the maternal vis a tergo decreases the high incidence of operative obstetrics commonly associated with conduction anesthesia.

Those cases sectioned after the use of intravenous pitocin include patients receiving pitocin for a test of labor in cases of relative disproportion. A patient selected for test of labor cannot be properly evaluated if the contractions are poor. Intravenous pitocin results in good regular contractions and allows for an adequate and rapid test of labor. Those cases subsequently sectioned were on a basis of an excellent indication, a failed test of labor.[37] The use of intravenous pitocin is not advocated for absolute disproportion, and this latter condition remains a contraindication accepted by all.

Is It Safe?

Again a perusal of the literature and analysis of our experiences make us answer yes to this most important question. In all our cases there has been no ruptured uterus, no extensive lacerations, and no increase in postpartum hemorrhage. There has been only one maternal death in a patient who received intravenous pitocin. The death from cardiac arrest occurred on the table after delivery and after the pitocin had been discontinued. The fetal outcome, both corrected and uncorrected, has been better for cases receiving pitocin than for our other cases and compares most favorably with the national figures.

The decrease in morbidity is to be expected on the basis of the decreases in length of labor and operative obstetrics with its high incidence of fetal mortality, postpartum hemorrhage, and the decrease in ability for future childbearing.

This procedure is applicable to breech and twin pregnancies. Irregularities of the fetal heart are no more significant than those seen in labor without pitocin infusion.

The continuance of the infusion throughout the third stage hastens placental separation and leads to a decrease in the third-stage bleeding and postpartum hemorrhage.

Shortening the length of labor and controlling the time of delivery affords the obstetrician every opportunity to be present throughout labor and delivery. Without this method the busy obstetrician is often absent because of office, teaching, and other commitments. The constant supervision which is an integral part of this technic automatically results in improved obstetric care and better evaluation of the patient, her progress in labor, and earlier recognition and treatment of complications.

Summary and Conclusions

Intravenous pitocin has now been used in a sufficient number of cases and by enough independent workers to allow for proper evaluation based on objective evidence and not on fear, past reputation, or condemnation without use. Our extensive experience and the many reports in the literature lead us to conclude that the use of intravenous pitocin is a safe, physiologic procedure for acceleration and induction of labor. This technic removes pitocin from the classification of an unpredictable agent into that of a most useful agent. It is excellent for the treatment of inertia, and its proper use is attended by shorter labors with a decrease in operative obstetrics and, therefore, improvement in the maternal and fetal results. Its success in inducing labor results in a decrease in cesarean section. It also insures the patient having contractions for a test of labor. Intravenous pitocin is effective for breeches, twins, toxemias, and posterior and transverse positions. This effectiveness makes it a most valuable agent for the general obstetrician. The only contraindication is absolute cephalopelvic disproportion.

We believe the answer to each of our original questions is yes. Intravenous pitocin is necessary, intravenous pitocin works, and intravenous pitocin is safe.

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Discussion

Graham G. Hawks, M.D., *New York City.*—Dr. Stone's and Dr. Gordon's paper on the general evaluation of intravenous pitocin for induction and stimulation of labor is indeed an interesting one and is based on the experience gained from its use in over 1,500 cases. Their excellent results in this series combined with the many other successful reports that have appeared in the literature in the last few years certainly tend to support their answer to the question, "Is intravenous pitocin safe?" One should emphasize that its safety depends not so much on the drug itself or the method used but on the proper evaluation of each individual case in which its use is contemplated and the strict supervision during its administration. Any failure in proper evaluation and supervision of the administration may result in abuse, misuse, and an increasing number of tragic accidents.

I am in agreement with the authors in that breech presentation per se is no contraindication to the use of intravenous pitocin in those cases that have developed uterine inertia. However, I am of the opinion that prior to its use in elective induction of labor the evaluation of a breech presentation should include, in addition to the favorability of the cervix and adequacy of the pelvis, x-ray study of the upper pole of the uterus using the head as the target. Dr. E. H. Dennen[a] has pointed out that an average-sized baby with an extended attitude of the head associated with extended arms is an unfavorable breech and that it is, therefore, better to consider this case as unfavorable for elective induction.

The advantageous use of pitocin in arrested posterior and deep transverse arrest due to inertia is an accepted fact, but I would be most cautious in its use in those cases where the contractions are adequate and the failure in progress is due to deflection or a borderline contraction of the pelvis. In such an instance I would prefer to use Kielland or Barton forceps to correct the deflection, rotate, and complete the delivery.

I have had very little experience with the use of pitocin in toxemia, diabetes mellitus, or erythroblastosis in which the unripe cervix is involved and would like to ask Dr. Stone if he could go into more detail as to his technic and results in these cases. I would also like to ask Dr. Stone about how many were sectioned and how many were delivered by mid-forceps? In my own experience with the use of pitocin in the borderline pelves I have had several cases in which I have been "mouse-trapped," ending up with a hard mid- or hard low mid-forceps delivery. Although mother and baby went home well, I felt that I would have obtained better results if I had sectioned them initially.

In closing I would like to comment on the author's statement that intravenous pitocin is specifically indicated in postmaturity and premature rupture of the membranes. It would be better if the statement were qualified to apply to certain individual cases because of the many variable factors that may be present in each.

Martin L. Stone, M.D., *Closing Remarks.*—I wish to thank Dr. Hawks for his interesting and pertinent discussion.

I agree wholeheartedly with the importance of proper evaluation and strict supervision. As mentioned in our paper, this strict supervision is actually an advantage inherent in the technic.

As regards the unripe cervix, several investigators have found that in many, if not in all cases, the cervix can be "primed and ripened" by repeating the infusion on successive days.

The figures Dr. Hawks requests are all included in the statistical paper analyzing some 1,200 cases upon which this general talk was based. This statistical paper is now in press, but, as I recall the figures, the incidence of mid-forceps was 3.5 per cent and the incidence of Cesarean section was slightly over 3 per cent.

I did not mean to infer that intravenous pitocin is specific for premature rupture of the membranes before the patient is at term. I do feel that it is specific for the patient at term with rupture of the membranes and without the onset of labor.

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Trends in Early Feeding of Supplementary Foods to Infants

Quarterly Review of Pediatrics conducted a survey among pediatricians in the May, 1954, issue to determine the age at which solid food is first being given to infants. Leading pediatricians all over the country were then asked to comment on the result (which showed, among other things, that over 90 per cent of the doctors questioned advise solid foods during the first three months of life.)

Dr. Lewis Webb Hill, Massachusetts, notes that "there seem to be three factors which promote the early feeding of solid foods: (1) It has been found that young infants can digest solid foods much more readily than was formerly thought to be the case; (2) There is a desire in every young mother for her infant to progress rapidly . . . . . If the pediatrician does not cater to this desire, the mother begins to wonder if he is up to date and there is nothing more damaging to the career of a young pediatrician . . . .; (3) Another factor is the ease with which prepared baby foods may be obtained, and the amount of money that their vendors have spent on advertising."

Dr. Harry H. Gordon, Maryland, stated: "I believe that some permissive physicians prescribing for compulsive mothers, or compulsive physicians prescribing for permissive mothers, end up with overstuffed obese babies during the first six months of life."

Dr. Benjamin M. Kagan, Chicago, "It may be that the misinterpretation of research reports is leading to the early feeding of solid foods."

Dr. Grover F. Powers, Connecticut, "There are many points I would like to consider . . . . . Among the most pertinent is the question of the source of information or teaching responsible for early feeding . . . . . None of the pediatric textbooks advocate such a practice. I have seen no such recommendation in current medical journals."

Some Considerations in the Surgical Treatment of Peptic Ulcer

ELMER MILCH, M.D., WILLIAM F. LIPP, M.D., AND A. H. AARON, M.D., BUFFALO, NEW YORK

(From the Buffalo General Hospital and the University of Buffalo School of Medicine)

GASTRIC resection over the years has been accepted as an important adjunct in the treatment of peptic ulcer, and the indications for its use have been fairly well established. There is no longer necessity to debate the relative merits of medical versus surgical treatment, nor is it necessary to discuss the merits of one type of resection over another. Any operation which has as its ultimate goal the removal of the ulcer environment is satisfactory. The end result will depend upon the experience of the individual surgeon in using that particular type of operation. However, we feel that there are certain factors, not sufficiently stressed in the literature, which do influence the principal objectives of surgery in the treatment of peptic ulcer, namely, prolonging life and preventing disability. It is our intent to discuss certain of those factors which can play an important role in improving the results of what has already proved to be a most satisfactory surgical procedure.

Preparation of Local Ulcer Site

It is generally recognized that the physiologic purpose of any type of therapy, either medical or surgical, is the production of an achlorhydric state. The old dictum of "no acid, no ulcer" apparently still holds true. To accomplish this by surgical means requires wide gastric resection including the entire pylorus and prepyloric area in addition to about 80 per cent of the stomach including the second vasa brevia on the greater curvature and the left gastric artery on the lesser curvature.

The average patient subjected to surgery for an intractable (or frequently penetrating) ulcer has had symptoms for years with periods of remissions and exacerbations. It is our feeling that whenever possible, no patient should be operated during an acute exacerbation, for then the inflammatory reaction about the ulcer is at its height, penetration probably exists, and an adequate gastric resection including the pylorus can be done only with added danger to the suture line, common duct, and pancreas, which means increased risk to the patient. To do a gastric resection and leave a portion of the pylorus or prepyloric area of the stomach behind because of technical reasons may well lead to surgical failure.

In order to assure the accomplishment of what possibly is felt to be an ideal physiologic gastric resection, we try never to operate during an acute exacerbation but attempt to prepare the local ulcer site and surrounding area for surgery by three to four weeks of strict medical ulcer therapy in the hospital. In this way it is hoped that the inflammatory changes will be either absent or minimal at the time of operation. We feel that the optimum time for surgery in the intractable ulcer is when the patient is free of symptoms and when radiographic examination shows either complete or almost complete healing of the duodenal ulcer. Then and then only do we feel that the patient, both locally and systemically, has been prepared for surgery to the best of our ability.

It is obviously impossible to accomplish the adequate preparation of the ulcer site in some 5 per cent of intractable ulcer patients. It is for this small group of patients, in whom we feel that an ideal physiologic gastric resection cannot be performed for technical reasons, that we reserve the operation of vagotomy and gastroenterostomy, recognizing that in our hands this procedure does not give as good end results as gastric resection.

Prevention of Dumping Syndrome

One of the most distressing complications of gastric resection is the development of the so-called "dumping syndrome." The syndrome may be defined as the occurrence in varying degrees of sweating, nausea, emesis, flushing, abdominal distention, palpitation, rapid and sudden

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violent peristalsis, and even fainting, appearing near the end of a meal or shortly after eating solid food and relieved by lying down. In the literature are to be found numerous and various explanations for this syndrome, and the fact that so many theories exist is evidence that not one is entirely acceptable and that we do not know the exact cause. It is our feeling that this complication is preventable by the simple expedient of instructing the patient in his or her eating habits with emphasis on the amount rather than type of food. This educational program starts in the preoperative period with a detailed explanation of the nature of the operation and the necessity for small frequent feedings, and the instruction is carefully continued into the postoperative period. We feel that this program is of the utmost importance because it is usually possible to produce the classic clinical picture of "dumping syndrome" at will in the immediate postoperative period by permitting the patient to overdistend the gastrojejunal or gastric duodenal pouch with food. If the overdistention is prevented, this distressing complication is rarely seen. The patient is told that at the end of two to three months time he will be able to eat and drink anything he desires with no restriction on amount. In the postoperative period he is started on six small daily feedings and is discouraged from taking a large amount of food, particularly in the morning, and he is also instructed to take liquids, whenever possible, at a different time from solid foods. By the time the patient is discharged from the hospital, he will be on an adequate diet with no restrictions as to type of food.

We are convinced from our own clinical experience that whatever the etiology of the "dumping syndrome" might be, if this dietary routine is carefully followed, the occurrence of dumping syndromes will be infrequent, and one of the chief objections to gastric resections in the treatment of peptic ulcer will be eliminated.

Massive Exsanguinating Hemorrhage

Massive hemorrhage is defined as a sudden, massive, continuing hemorrhage into the upper gastrointestinal tract with an exhibition of the classic picture of collapse: pallor, sweating, air hunger, hypotension, tachycardia, acute anemia, diminished blood volume, and reduced hematocrit. In an attempt to avoid the confusion existing in the literature, it is only the treatment of this phase of hemorrhage from peptic ulceration that we shall discuss. We shall not concern ourselves with the chronic, slow, insidious, bleeding peptic ulcer.

During the past several decades there have been innumerable reports concerning the management of this serious complication of peptic ulcer. Many have favored only supportive medical therapy and many surgical therapy. The abundance of these reports indicates the confusion surrounding the problem, and for years the attitude has fluctuated between the extremes of medical and surgical management. This cyclic fluctuation implies dissatisfaction with concurrent mortality figures.

It is our contention that the persistent controversy between medical and surgical forms of treatment not only is unnecessary but misleading. The usefulness of both forms of treatment is apparent to anyone called upon to treat large groups of bleeding patients.

Without intending to over-simplify the problem, we feel that only two questions need be answered in treating this group of patients: (1) Which patient will stop bleeding with conservative medical therapy, and (2) which patient requires immediate surgical intervention to control the massive gastrointestinal hemorrhage? It appears to us that if these two questions can be answered, the treatment can be individualized and the need for controversy and confusion avoided.

In 1949 the use of the selective "test of transfusion" was described by one of us as a means of determining not only on whom but when to operate for massive gastrointestinal hemorrhage due to bleeding peptic ulcer. By means of this test we feel that we can clinically separate the patient to be treated medically from the one to be treated surgically and, in addition, can choose the proper time for surgical intervention.

Selective "Test of Transfusion"

The patient who has massive continuing hemorrhage with the classic picture of collapse should immediately have multiple transfusions in addition to the usual supportive therapy (oxygen, nasogastric drainage, and opiates) with as much as 2,000 cc. of blood being administered in an hour if necessary. At the end of three hours of this treatment, if there is no appreciable clinical improvement in the patient, as indicated by a rise in blood pressure, reduction in pulse rate, and disappearance of air hunger, the patient is a candidate for immediate operative intervention, inasmuch as it is apparent that he is losing blood as rapidly as it is being replaced. Of course, if this persists for a few more hours, the shock state will become irreversible so that resection will not save the patient.

However, if at the end of three hours clinical improvement is manifested, the treatment is continued, and at the end of six hours blood replacement is interrupted and the patient carefully watched for further evidence of bleeding. If the patient once again starts to bleed massively, transfusions are again inaugurated, and surgical operation is performed at once. However, if the patient does not show evidence of massive bleeding after discontinuance of transfusion, the medical plan of treatment is continued, and surgery may be performed as an elective procedure. We have employed the test of transfusion for the past three years, and thus far we have treated 32 patients.

There were 17 patients in whom vigorous medical treatment was continued, and 16 responded successfully to the test of transfusion, a mortality rate of 5.8 per cent. The single medical death was a seventy-eight-year-old woman with hypertension, kyphoscoliosis, and bilateral hydronephrosis. In view of her multiple and serious diseases surgical intervention was advised against and medical treatment continued.

Fifteen of the 32 patients failed to pass the test of transfusion and were submitted to subtotal gastric resection with one death, a mortality rate of 6.6 per cent. The single surgical death occurred in a fifty-three-year-old man with a large bleeding ulcer in the second portion of the duodenum.

Local arterial ligation failed to stop the bleeding, and an extensive surgical procedure was performed including subtotal gastric resection, duodenectomy, partial resection of the head of the pancreas, and choledochojejunostomy. Following operation he was up and around but died on the tenth postoperative day. Postmortem examination revealed a leak of the anastomosis between the common duct and jejunum.

Thus, of 32 patients treated with the so-called test of transfusion, 30 recovered, and two died, a combined mortality of 6.2 per cent. This group of 32 patients is, of course, small, yet it takes some years, according to our definition, to develop a large experience with massive exsanguinating hemorrhage.

Avoidance of Elective Ulcer Surgery in Unstable Individuals

The past decades have demonstrated that gastric resection is a very definitive means of curing the vast majority of patients with intractable peptic ulcer, many so-called "gastric cripples." It has been not only our experience but the experience of many others that 90 per cent of these "gastric cripples" can be cured after they have failed for years the test of intensive and adequate medical therapy. Thus they are enabled to resume a normal, useful, economic, and social existence.

In medicine, however, no form of therapy is without its failures, and the surgical therapy of peptic ulcer is no exception. These failures manifest themselves not only in recurrence of peptic ulceration but, just as importantly, in dissatisfaction with the side-effects of such an extensive operation. It is unreasonable to expect that the removal of the greater portion of an organ (the stomach) with its important physiologic functions can be accomplished without varying degrees of hardships and disability being imposed upon some patients.

It has been the experience of the authors that the few failures encountered subsequent to gastrectomy, either recurrent ulceration or extreme dissatisfaction with the operation, have in most cases been in individuals who cannot adjust to the everyday problems of life, let alone to a major surgical procedure.

We have three instances of marginal ulcers occurring in individuals who suffered "nervous breakdowns" and had to be institutionalized for shock therapy. One emotionally disturbed patient, who had elective ulcer surgery in the hope that the ulcer might be aggravating the emotional disturbances, developed ulcerative colitis and feels that the gastric resection is responsible for this disease. One of these three patients developed a recurrent marginal ulcer on two different occasions following an acute depression, each depression requiring shock therapy.

We have quoted specifically several major instances of failure of gastric resection to cure peptic ulcer in emotionally disturbed individuals. We feel that the failure is not in the surgical procedure but in the individual in whom the operation was attempted. Because of these failures, and in a few instances not so marked, it is our clinical impression that elective surgery for so-called intractable ulcer in the patient with tendencies bordering on the psychopathic should be approached with considerable caution. Everything being equal, surgery should be employed only for the acute complications of peptic ulcer in this group of patients.

Furthermore, not infrequently it is difficult to evaluate the importance of the ulcer as the source of pain and disability. It has been said before that it may be the patient who is intractable and not the ulcer. Failures here are apt to cast discredit on a generally satisfactory surgical procedure.

Conclusions

Based primarily on their own clinical experience, the authors feel that there has not been sufficient emphasis placed on certain factors which influence the end results of surgical treatment of peptic ulcer:

1. Adequate medical preparation of the ulcer site prior to the time of surgery so that inflammatory reaction will be absent or minimal.
2. Carefully regulated feedings in the immediate postoperative period to avoid the "dumping syndrome."
3. Utilization of the selective "test of transfusion" in massive exsanguinating hemorrhage.
4. Avoidance of elective ulcer surgery in individuals with unstable personalities.

Discussion

Ralph Colp, M.D., *New York City.*—Drs. Milch, Lipp, and Aaron emphasize certain medical measures which would tend to simplify the technical efforts of the surgeon performing subtotal gastrectomy, which in effect would diminish the plaques on his coronary arteries and prolong his life as well as that of the patient. One of the indications in the treatment of ulcer is intractability, the inability of the patient to respond to modern medical treatment which finally occurs on the average of twelve years after the inception of the disease. In our experience, with the exception of edema and spasm about the pyloroduodenal region which usually yield to daily hot gastric lavage after five days, very little can be accomplished for posterior wall penetrations or perforations sealed off by the gallbladder, colon, or gastrohepatic omentum. Delaying these cases is a waste of time and is hazardous because of the danger of perforation, hemorrhage, and the further extension of the necrotizing process. In those cases which present grave technical difficulties, especially in those patients over sixty who are arteriosclerotic, hypertensive, diabetic, or obese, I have no hesitancy in performing a gastroenterostomy with vagotomy. We know from past experience that the duodenal ulcer will heal, but the hazard of gastrojejunal ulceration is still present, although its incidence will probably be diminished by the combined procedure.

I wish the problem of the dumping syndrome was as simple as Drs. Milch, Lipp, and Aaron have made it. In all clinics in which subtotal gastrectomy is a common operation patients are advised as far as frequency of meals are concerned and foods which they should take. In spite of this, symptoms of the dumping syndrome are fairly frequent, but fortunately they usually disappear within a year when the usual adaptations to the altered physiology of the gastrointestinal tract have been established. In our experience in over 357 cases of subtotal gastrectomy for ulcer which we followed, 14 cases had dumping syndrome. In ten it disappeared within the first year, and only one patient was really miserable. Unfortunately, there is nothing at present which will relieve these distressing symptoms. There may be some solace, however, in the fact that there are patients who suffer from this syndrome who have never undergone any surgery.

The management of massive hemorrhage is tersely stated, and its solution adequately answered by the test of transfusion. When a group from Buffalo, the home of radical surgery for bleeding duodenal ulcer, admit that 17 of 32 patients passed the test medically, that is news. We don't flunk as many of our patients. We give them much more time than three hours to pass their test, and the majority stop bleeding spontaneously and are a credit to their medical preceptors.

A psychiatrist has been assigned to our Service at the Mount Sinai Hospital for over twenty years. His insight has been of great value in eliminating surgery in a very selected group of patients. At times, however, these decisions are very difficult. If these patients were emotionally stable and well adjusted, they wouldn't have ulcers to begin with. It's not what they eat; it's what eats them.

I realize the essayists have had only a limited time. I wish they would tell us what steps they are taking to avoid gastrojejunal ulcer and painless bleeding after subtotal gastrectomy. And I should be most anxious to learn what they are doing for patients who are unable to gain weight after their gastric operations.

The Professors Look at Laboratory Tests

PERRIN H. LONG, M.D., F.R.C.P., BROOKLYN, NEW YORK

(*From the Department of Medicine, State University of New York College of Medicine at New York City, and the University Division Medical Service, Kings County Hospital*)

I AM frequently appalled at the number of laboratory tests which are done as part of the case study of patients suffering from diseases, which are easily diagnosed and in which if the physician had only taken a detailed, careful history and performed a thorough physical examination, many of the tests would have been unnecessary. Laboratory work is expensive to the patient if he has to pay for it and costly to the hospital if the patient does not pay for it. Furthermore, the extensive reliance on laboratory tests by physicians, instead of using their God-given senses, overloads many laboratories with the result that the accuracy and efficiency of the laboratory workers decrease. It must be kept in mind that *the reliability of a laboratory test is dependent on the skill, accuracy, and integrity of the individual who does it.*

My colleagues, Drs. William Dock, R. Janet Watson, David M. Kydd, Robert Austrian, and Harold A. Lyons, and I have become seriously concerned with this problem because we feel that younger physicians are placing too much reliance on laboratory tests and not enough on their own clinical skills. We believe that neither the physician nor the patient is benefited by this state of affairs. In this presentation we have attempted to draw up a guide to the importance of laboratory procedures for use by the interns, the residents, and the attending staff of the University Division Medical Service, the Kings County Hospital, Brooklyn, New York. We realize thoroughly that there will be disagreement with our recommendations, but it is to be expected that an undertaking such as this will be controversial.

We do feel, however, that the recommendations which we are making may be of interest to practicing physicians in general. Before taking up specific recommendations, we would like to state most emphatically that as far as laboratory procedures are concerned, *none of them should ever be considered as routine measures.* If the reader doubts this statement, let him look up the meaning of the word "routine" in the Oxford Dictionary.

Chemical Determination

We will start with a discussion of the broad implications of clinical chemical tests because the load on the clinical chemical laboratory is generally very heavy.

The levels of nonprotein nitrogen or blood urea nitrogen reflect the state of renal function. Which test should one use? It really doesn't make much difference. We think this determination should always be made on the blood of any patient who has albumin in his urine, progressive hypertension, evidence of obvious arterial damage in his eyegrounds, or in any male who has a definitely enlarged prostate regardless of whether his urine shows albumin or evidence of a cystitis. Otherwise, this test should be done only when there is a definite indication that it might be of diagnostic or prognostic value in the patient's illness. In health examinations repeated on the same individual at yearly intervals, it may be done on the first examination but need not be repeated unless there are definite clinical indications for doing so.

The fasting blood sugar should be determined in all patients who have sugar in their urine, where there is a suspicion of hypoglycemia, and at intervals in the management of diabetes. The finding of acetone in the urine is not necessarily an indication that the blood sugar should be measured. In health examinations repeated in the same individual at yearly intervals, this test may be done on the first examination but need not be repeated unless there are definite clinical indications for doing so. The glucose tolerance test should be used as a diagnostic aid when one is in doubt about the diagnosis of diabetes.

Knowledge of the carbon dioxide combining

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power of the blood or the level of chlorides in the blood is of value in the management of diabetic ketosis, extreme dehydration, severe vomiting or diarrhea, certain patients with severe renal failure, and in certain patients who show clinical signs of pulmonary insufficiency.

The determination of the levels of sodium in the blood is of diagnostic or therapeutic importance in dehydration, excessive vomiting, in Addison's disease, and in patients who are on a low-salt intake and who are receiving mercurial diuretics.

Knowledge of the levels of potassium in the blood is helpful in the diagnosis and in the management of patients who have vomited excessively, have certain types of renal insufficiency, who have been undergoing prolonged parenteral therapy with fluids other than blood or plasma, or in whom gastric suction is being used. It is also of use in the diagnosis of familial periodic paralysis.

The determination of the amount of calcium in the blood is of value in the diagnosis of hyper- and hypoparathyroidism, as well as in the management of these conditions and others, such as certain of the fatty diarrheas or severe renal insufficiency.

Knowledge of the amount of phosphorus in the blood is helpful in the diagnosis and management of parathyroid disturbances and in the management of certain instances of renal insufficiency.

Determination of the content of uric acid in the blood may be helpful in the diagnosis of gout.

Knowledge of the level of alkaline phosphatase may be helpful in the differential diagnosis of certain types of jaundice or bone disorders, while that of the acid phosphatase may be helpful in the diagnosis of cancer of the prostate.

The determination of creatinine or creatine is never a routine test, and the same is true of cholesterol. The levels in the blood of the latter may be additional useful information in thyroid or hepatic disease, xanthoma, or in certain young patients suffering from hypertension.

The icterus index is of value as a prognostic guide in jaundice, but since carotenemia gives a false reading, it is probably better to determine the bilirubin content of the blood when carotenemia is suspended. Also, the latter test is much more sensitive for differentiating borderline instances of jaundice. It is probable that the thymol turbidity test is more useful than the cephalin flocculation test, both of which are of value in determining cellular damage in the liver. Neither should be used routinely. The bromsulfalein test is of value in determining the function of the liver when jaundice is clinically absent and damage to the liver cells is suspected.

A determination of the total protein of the blood may be of value diagnostically and in the management of certain instances of anemia, malnutrition, other debilitating states, and in ascites or edema. It is generally the better plan, except in certain emergencies or when multiple myeloma is suspected, not to determine the ratio of the albumin to the globulin in the blood until after the results of the determination of the total protein are known.

Amylase determination should only be made when cellular pancreatic damage is suspected and renal disease is absent.

Immunologic and Bacteriologic Tests

Serologic tests for syphilis should always be carried out with new patients. If positive, repeat the test before treatment is initiated except in pregnant women. These patients should be treated immediately upon the receipt of a positive serologic test for syphilis. A serologic test for syphilis should be done on the spinal fluid of every patient having syphilis. Then such tests need not be repeated unless there are historical or clinical indications for such. Agglutination tests for aiding in the diagnosis of infections produced by the Salmonella (typhoid-paratyphoid) group of organisms are indicated when the physician is faced with a fever of unknown origin lasting five to seven days. They are of little value in "food poisoning." A rise in the "O" agglutinins is of importance. "Tube tests" rather than "slide tests" should be done, and it is to be remembered that variations in titer of one dilution up or down from the original titer are of no significance. Agglutination tests used as diagnostic aids for the diagnosis of undulant fever are valueless unless the results show high titers. Such tests should not be performed if the patient has received Brucella antigen or vaccine. The Weil-Felix test may be used to support a diagnosis of rickettsial infection. It has no value in rickettsial pox. Complement fixation tests for use as diagnostic aids in rickettsial infections are available through certain large municipal or state laboratories.

Cold agglutinins are not important. The Paul-Bunnell (heterophil antibody) test is of diagnostic significance in the differentiation of infectious mononucleosis from acute benign lymphocytosis or of mild instances of infectious hepatitis from infectious mononucleosis. Agglutination tests are rarely of any real value as diagnostic aids in tularemia except in those patients ill with the typhoidal or pneumonic forms of this disease.

The prime indication for blood cultures is fever. If three cultures of the venous blood show no growth in proper media, culture of the arterial blood may be indicated rather than repetition of cultures of the venous blood. Throat cultures are indicated when the patient's throat is sore and membrane or exudate is present or when there is marked redness and swelling of the throat. Don't mistake the vesicles of herpetic angina for exudate. Nose cultures may be of value in infants suffering from pneumonia or throat infections. Cultures of the urine are indicated when there is pus in the urine or a fever of unknown origin. Stool cultures are indicated in Salmonella infection and in any type of enterocolitis. Swab cultures from the rectum are frequently to be preferred. Rectal swab cultures should always be inoculated immediately on suitable media in plates. Body fluids should be cultured each time they are withdrawn. Swabs from the throats of patients suspected of having diphtheria should be inoculated directly on slants of appropriate media. *Note well! Cultures from patients receiving sulfonamides or antibiotics are notoriously unreliable unless special bacteriologic technics are used in the laboratory.*

A gram stain should be made on all samples of pus and cultures as well. Stained specimens of sputum are only of value when tuberculosis is suspected clinically and in rare instances when a pneumonia is thought to be due to Friedländer's bacillus. Stained specimens and cultures of the sputum should be made in all patients suspected of having pulmonary tuberculosis. If sputum can be obtained from the patient, there is little point in culturing the gastric washings. In our opinion tests for determining the sensitivity of microorganisms to sulfonamides or antibiotics which are made by the "disk method" may be fraught with error. Careful testing with the multiple tube dilution method may be done on organisms isolated from subacute bacterial endocarditis.

Hematologic Tests

The minimal requirements of good medical practice dictate that a hemoglobin, total white blood cell count, and a differential count made from a stained smear of the blood on a cover slip be performed on each new patient. The sedimentation rate should be determined by the Wintrobe method in all new patients. In certain instances this test is of value in differentiating between functional and organic disorders. Bone marrow studies should be made in all instances of macrocytic anemia and when leukemia or multiple myeloma is suspected. Every new Negro patient deserves to have a sickle cell preparation done. The test for the diagnosis of lupus erythematosus should be made in all patients suspected of having this disease and in patients with a continuing fever of unknown origin. The stool should be tested routinely with guaiac for occult blood in all newly admitted patients and daily in febrile patients ill with typhoid fever or suspected of having a peptic ulcer, neoplasm, or varices of the gastrointestinal tract. Complete Wintrobe indices should be determined in all patients having an unexplained anemia.

Laboratory Procedures for Heart Disease

Electrocardiograms of proper duration and leads should be taken in patients having an irregular pulse, varying of the first heart sound, suspected myocarditis, pulmonary embolism, or myocardial infarction. They may be considered to be of some use in the confirmation of the clinical diagnosis in patients suffering heart failure or valvular disease. Electrocardiograms may be of some diagnostic importance in patients over forty years of age who suffer from diabetes or hypertension.

The ballistocardiogram should never be considered a routine procedure. Its chief clinical value is in determining the effects of tobacco smoke on patients in whom there is a question of coronary disease.

Miscellaneous Tests

The determination of the vital capacity is a useful test of pulmonary function in patients suffering from cardiac or pulmonary insufficiency.

The basal metabolism may be determined in all patients suspected of hypo- or hyperthyroidism. It is undependable in patients having fever, heart failure, or severe tremor.

Gastric analysis should be made on specimens of gastric juice obtained after the injection of histamine from all patients who have a macrocytic anemia or who are suspected of having a neoplasm of the stomach. In patients suspected of having a peptic ulcer, the analysis of the gastric juice obtained before histamine is injected may be of some value.

The urine of each new patient should be tested for albumin, acetone, and sugar; its specific gravity should be determined and the urinary sediment examined on a slide under the microscope. If abnormalities are found, frequent repetition of the urine examination is desirable.

The radioactive iodine uptake of the thyroid (or its metastases) should be determined in patients suspected of having myxedema, hyperthyroidism, or cancer of the thyroid. This test should be performed in all patients who have auricular fibrillation at the period when the patient's heart disease is as fully compensated as possible.

Plan Now To Attend!

CONVENTION

New York State Academy

of

General Practice

October 11, 12, and 13, 1954

SYRACUSE, NEW YORK

Primary Occlusion of the Internal Carotid Artery in the Neck

SIDNEY W. GROSS, M.D., NEW YORK CITY

(From the Departments of Neurosurgery of Montefiore and Mount Sinai Hospitals)

That spontaneous occlusion of the internal carotid artery in the neck may simulate almost any type of cerebrovascular disorder is now fairly well known. It is less commonly known that in some cases the clinical picture may closely resemble that of a brain tumor. In recent years cerebral angiography has been employed in many patients having intracranial affections, and thus the carotid arteries in the neck have come under close scrutiny. Careful palpation in the neck may disclose an absent or reduced pulsation of the carotid vessels on one side. Occasionally, in the process of surgical exposure of the internal carotid artery for direct or "cut-down" angiography, the vessel is found thrombosed. Patients with primary occlusion of the internal carotid in the neck may be classified into four groups:

1. Those with sudden onset of hemiplegia and alteration in the state of consciousness simulating the usual type of cerebrovascular accident.
2. Those with sudden onset of unilateral blindness along with contralateral hemiplegia.
3. Those with recurrent prodromata such as numbness or weakness of an extremity, transient aphasia, syncopal attacks, and similar fleeting neurologic disturbances over a period of several weeks or months, simulating vascular spasm.
4. Those with progressively developing neurologic manifestations over a period of several days or weeks, resembling the clinical picture often seen in brain tumors.

During the past few years my associates and I have seen several patients with primary occlusion of the internal carotid artery in the neck. In some the diagnosis was suspected on clinical grounds alone and was later proved either by angiography or by direct inspection of the occluded artery. In other cases the diagnosis was made only after angiography had been done for a presumed cerebral neoplasm.

Case Reports

The following cases illustrate the important clinical and angiographic findings.

Case 1.—A man of fifty-three who had always been in good health suddenly complained of weakness and collapsed. He was unconscious for fifteen or twenty minutes. When he regained consciousness, he had a complete left hemiplegia. He was admitted to a local hospital where his blood pressure was found to be 134/90. The cerebrospinal fluid was clear, colorless, and under a pressure of 78 mm.; it contained two lymphocytes and a total protein of 35 mg. per cent. X-ray examination of the skull showed no abnormalities. He was restless, noisy, confused, and incontinent. There was gradual improvement, and he was discharged with a diagnosis of "thrombosis of the right middle cerebral artery." The left hemiplegia improved to the point of walking in a characteristic hemiplegic fashion. The left upper extremity remained weak and spastic. During the next fifteen months his condition was more or less stationary. The patient then came under our observation.

Examination disclosed absence of the right carotid pulse above the carotid bifurcation (upper border of the thyroid cartilage). An electroencephalogram showed a large amount of delta activity with frequencies as low as 1.5 per second, especially in the right frontal, right earlobe, and right inferior parietal electrodes. The right carotid arteries were explored with the use of local anesthesia. The common and external carotid arteries seemed relatively uninvolved. The internal carotid artery, beginning just above the bifurcation and extending for a distance of about 3 cm., was converted into a solid nonpulsatile cord. The thrombosed segment of the artery was resected.

Examination of the specimen showed a marked arteriosclerotic narrowing with an organizing thrombotic occlusion.

The onset and course in this patient was similar to that found in acute intracranial vascular lesions of the usual type involving the cerebral arteries within the cranial cavity. Only after palpation of the carotid arteries in the neck was the diag-

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Neurology and Psychiatry, May 14, 1954.

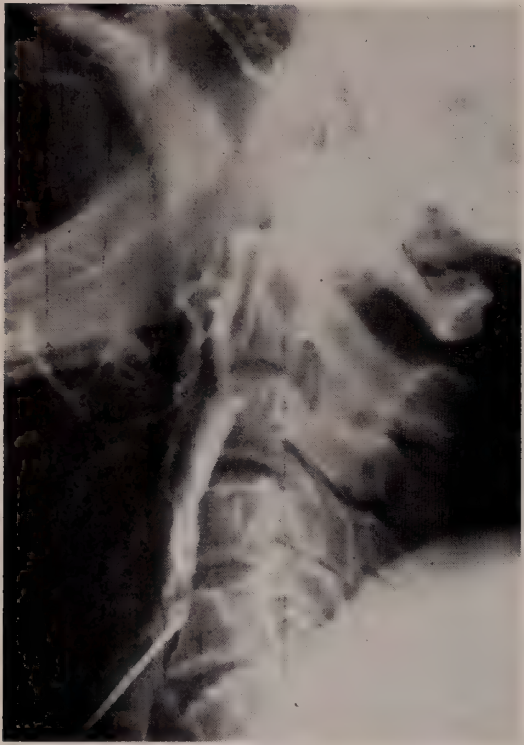

FIG. 1. *Case 3*—Angiogram showing occlusion of internal carotid artery in the neck. The external circulation is well filled. (Dr. Joseph Ransohoff kindly supplied the angiogram.)

nosis of spontaneous occlusion suspected and then confirmed by excision of the thrombosed segment.

CASE 2.—A young man of twenty-six who had previously been in good health suddenly lost the ability to speak. Within a few hours he developed a right hemiplegia. He did not lose consciousness. During the ensuing few months he slowly improved. However, speech impairment and weakness of the right extremities persisted. About six months after the onset of the illness his condition began to deteriorate, and he was hospitalized at another institution. At this time, in addition to the speech defect and the hemiplegia, he complained of headache. A pneumoencephalogram was reported to have been within normal limits. He was discharged unimproved. He was able to use simple words and had a right-sided spastic limp. He was unable to use the right upper limb for eating, writing, or any skilled acts.

When he came under our observation a few months later, he had a shuffling right hemiparetic gait. The right upper extremity was weak and spastic with markedly increased reflexes on the right side and positive Babinski and Hoffmann signs. Sensation was diminished on the right side, and there was a right homonymous hemianopsia. The fundi were normal. Lumbar puncture disclosed a clear, colorless cerebrospinal fluid; the pressure was 50 mm. Several observers believed the patient had suffered a thrombosis of the left middle cerebral artery. Palpation of the carotid arteries in the neck, however, revealed a diminution in force on the left side. An electroencephalogram showed a depression in amount and voltage of alpha activity on the left side. In addition, there was a moderate amount of delta activity with frequencies as low as 2.5 per second on the left side.

Because primary thrombosis of the left internal carotid artery was suspected, the carotid vessels were exposed with the use of local anesthesia. The common and external carotid arteries were normal. The internal carotid artery was firm, cordlike, and nonpulsatile, obviously completely occluded. Diodrast (35 per cent) was injected into the common carotid artery. The opaque material filled the external circulation, but no visualization was obtained in the internal carotid distribution. The patient's condition remained unchanged. He was referred to a veterans hospital for re-education. When examined six months later, he had improved slightly.

The sudden onset of aphasia, followed in a few hours by a right hemiplegia, led to a diagnosis of a left middle cerebral artery occlusion. Palpation of the carotid arteries in the neck resulted in the correct diagnosis, later confirmed by surgical exploration.

CASE 3.—A woman of sixty-five who had had a resection for carcinoma of the rectum seven years previously and a coronary occlusion one year prior to the onset of her present illness was seen because of an episode during which she was unable to speak for about ten minutes. At the same time her right hand and the right side of her tongue felt numb. During the ensuing few weeks there were several similar attacks. About three months later there was sudden inability to speak at all, although she could walk. Within a few days she became hemiplegic on the right side. The carotid pulse on the left was less forceful than on the right. Bilateral cerebral angiography was done. On the left the internal carotid was found occluded in the neck just above the bifurcation (Fig. 1). The right cerebral angiogram was normal.

This patient had prodromata for three months preceding the development of aphasia and hemiplegia. She was thought to have had attacks of cerebrovascular spasm. Angiography led to the correct diagnosis.

CASE 4.—A man of forty-seven first noted some visual disturbances about two years prior to hospital admission. Because of a speech defect the exact

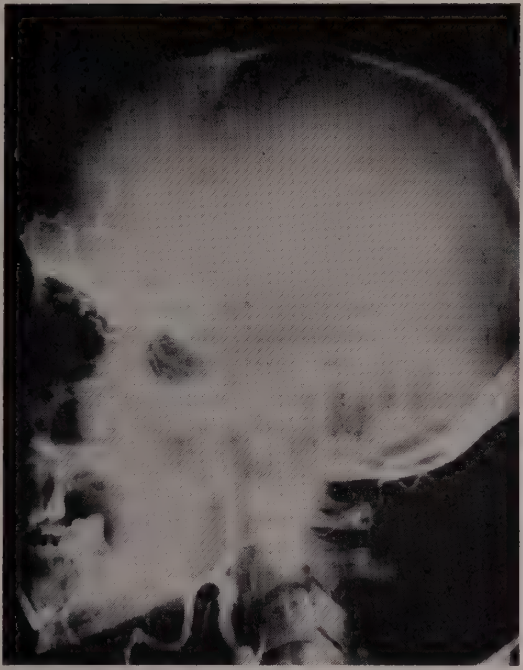

FIG. 2. *Case 4*—Left cerebral angiogram. Internal carotid obstructed just above the bifurcation. (From Dr. M. B. Bender's service.)

nature of his visual complaints could not be determined. Two months before admission, he developed a throbbing headache lasting five days. Shortly thereafter, progressively increasing weakness of the right extremities was noted. Two weeks before admission, he awoke one morning and found himself unable to speak. When examined, he had a mixed aphasia, a right spastic hemiparesis, a right hemisensory defect, and a right homonymous hemianopsia. Lumbar puncture revealed clear, colorless cerebrospinal fluid under pressure of 140 mm. The electroencephalogram showed a "high abnormality delta focus in the left temporal region" (Dr. Hans Strauss). The patient was thought to have a brain tumor. A left cerebral angiogram showed filling of the external carotid artery and its branches. The internal carotid artery was occluded in the neck just above the bifurcation (Fig. 2). A pneumoencephalogram done a few days later disclosed marked dilatation of both lateral and the third ventricles. The cerebral sulci appeared somewhat increased in size.

The progressive development of symptoms and signs in this patient was thought to have been due to a cerebral neoplasm. Angiography revealed occlusion of the internal carotid artery in the neck.

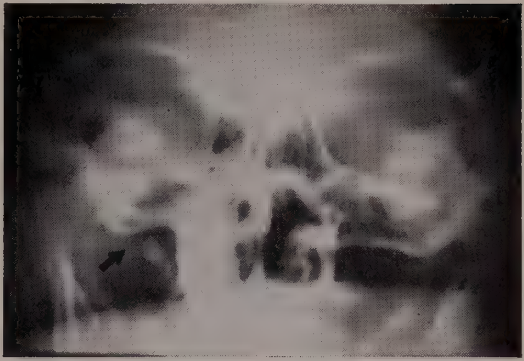

FIG. 3. *Case 5*—Right cerebral angiogram, anteroposterior view. Arrow marks site of occluded internal carotid artery.

CASE 5.—A sixty-four-year-old woman complained of impairment of vision in the right eye of five years duration. An ophthalmologist found the right disk pale and visual acuity on the right reduced to 10/200. Visual acuity on the left was 20/20. Her condition remained unchanged until two weeks before her present hospital admission when the left lower extremity suddenly became paretic. On examination the patient was found to have a left hemiparesis. The carotid pulses in the neck were equal. A lumbar puncture yielded clear, colorless fluid under 170 mm. pressure. The total protein was 72 mg. per 100 cc. X-ray of the skull showed no abnormalities. An angiogram was done on the right side with Thorotrast and showed filling of the internal carotid to a point just below the base of the skull (Fig. 3). The external circulation filled adequately, and the vertebral circulation was visualized. Physiotherapy and rehabilitation were started, and the patient improved.

The diagnosis in this case was obscure. The possibility of a chiasmal tumor which had extended into the middle fossa was considered in spite of the negative skull x-rays. The correct diagnosis was established by angiography.

Comment

Recently there have been several reviews$^{1-3}$ of spontaneous occlusion of the internal carotid artery in the neck. It would appear that although this disorder is not common, it is by no means rare. The diagnosis should be suspected whenever there is evidence of massive involvement of one cerebral hemisphere (hemiplegia, hemianopsia, and hemisensory disturbances). If, in addition, there is a sudden onset of unilateral blindness on the side of the affected artery, the possibility of an internal carotid artery occlusion should be given serious consideration.

In some cases the carotid pulse may be found diminished, although this is often difficult to evaluate. Nevertheless, palpation of the carotid arteries in the neck should be done in every patient who develops signs of massive involvement of one cerebral hemisphere. In fact, it should be part of every complete physical examination. Dunning[4] recently described a method for detecting occlusion of the internal carotid artery by pharyngeal palpation. This technic was not used in this series but very likely is an important diagnostic adjunct. Angiography plays an important role in the diagnosis of primary occlusion of the internal carotid artery in the neck. If the condition is suspected, the cervical region should be exposed radiographically along with the skull during angiography. If in routine angiography only the external carotid circulation fills, a second injection is advisable in order to include the neck in the film. Usually, in addition to the common and external carotid arteries, a short section or nubbin of the internal carotid will be visualized. Failure to fill the internal carotid is most often due to primary thrombosis. However, arterial spasm or the formation of a valvula resulting from trauma to the intima during puncture[5] must also be considered. The issue can be solved by exposure of the involved vessel with the use of local anesthesia. This is of value not only in establishing the diagnosis, but the resection of the diseased portion of the artery may also release vasoconstrictor influences to the cerebral arteries on the affected side.

In some patients who come under observation shortly after the onset of neurologic dysfunction, the constellation of symptoms and signs may simulate an expanding lesion to such an extent that the correct diagnosis may be missed. In Strully, Hurwitt, and Blankenberg's case[6] the pineal body was displaced 6 mm., and the symptoms and signs favored a diagnosis of a brain tumor. Primary occlusion of the internal carotid artery in the neck was demonstrated by angiography and surgical exposure.

Thus far, treatment of primary thrombosis of the internal carotid artery in the neck has not been satisfactory. Resection of the diseased arterial segment has been advocated, but there is no convincing evidence that this procedure is beneficial. Nevertheless, it affords a means of confirming the diagnosis, and on theoretic grounds the interruption of vasoconstrictor impulses from the thrombosed arterial segment should result in improvement in the cerebral circulation on the affected side. Strully, Hurwitt, and Blankenberg[6] advocated thromboendarterectomy or a bypassing arterial anastomosis for restoring the blood flow through the affected internal carotid artery. In the case which they reported they were unable to remove the intracranial portion of the clot, and they resected the diseased vascular segment. In subsequent cases retrograde flow from the distal segment of the internal carotid artery was obtained, and thromboendarterectomy was accomplished.[7] There have been too few cases so far to permit an evaluation of this method as yet.

Stellate ganglion block, sympathectomy, anticoagulants, and vasodilators have all been tried with indifferent success. In most instances the diagnosis can rarely be made before permanent changes have taken place in nervous tissue. At this stage physiotherapy and rehabilitation, combined with an attitude of hopefulness, will lead to ambulation in most patients.

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Nature has given man one tongue, but two ears, that we may hear twice as much as we speak.—Diogenes Laertius

Chemotherapy in Certain Forms of Juvenile Tuberculosis

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It is now approximately two and one-half years following our first experience with the use of a new antituberculous chemical, iproniazid (Marsilid). Isoniazid (Rimifon, Nidrazide, etc.) had been used by the medical personnel of Sea View Hospital for approximately six months previous to that.

All of the patients recorded hereafter were treated with the iproniazid (Marsilid). It is still a restricted drug for experimental use only and may be obtained only by qualified investigators. Iproniazid is considerably more toxic than isoniazid in the treatment of patients. In our experience, however, it has also proved much more effective. Where tuberculous infection of bones and joints is present, bare bony structures act as foreign bodies in badly infected wounds. For this reason, in such lesions more drastic surgical and medical treatment is necessary to secure a favorable result than where soft tissues alone are involved. We have recently completed a study of the results obtained in a series of cases treated with isoniazid in direct comparison with results obtained with iproniazid. It is not merely a matter of judgment but is a definitely established fact that iproniazid is many times more effective than isoniazid. We suspected this early in the use of the two drugs and, except for the experimental study mentioned above, have held to the use of iproniazid, even though it was toxic.

The dosage of iproniazid can in most children be held at the high limit of 4 mg. per Kg. of body weight. Only occasional difficulty will be encountered. In children this is generally reflected as a hypertonic state with increased reflexes and possibly sustained clonus. On continued medication mild changes in personality may develop, but these disappear following removal from or reduction in dosage of the drug. Toxic symptoms complained of in adults and the severe psychoses that occasionally occur have not been seen in children. Even the occasional patient with severe psychosis seen in adults recovers on removal from medication.

Accuracy in dosage is essential. If the medication drops to a level of 2 mg. per Kg., its action is markedly reduced. As growth and weight increase, the amount of medication must be raised to maintain the level of dosage at 4 mg. per Kg. The added weight has to be medicated with the drug as well as the initial weight.

Beneficial Effects

Many beneficial effects have been seen in the use of this antituberculous chemical. Reduction of temperature, increase of appetite, weight gain, relief of pain, reduction of sinus drainage, healing of wounds when present, and bacteriostatic control of the tubercular bacillus itself have proved amazing. Compared with previous medication with streptomycin, the action of this drug is very much faster, more certain, and without the toxicities resulting in deafness, gastrointestinal disturbance, and skin lesions experienced with the former.

Use of Iproniazid in Children

We have used this material for the treatment of 27 children with tuberculous infections. One patient signed out, markedly improved, to medical care at home. There has been no further follow-up on this case. All of the other patients are now under either hospital observation or definite follow-up control in the clinic.

Among these children there were 33 proved lesions. Six of the lesions were of soft tissue and 27 of them of bone or joint structure. Thirteen spines, four tarsal bones, four knees, three hips, two meninges, and one each pilonidal cyst, skin, lymph glands, wrist, femur, ankle, and jaw were involved. The ages of the patients ranged from six months to sixteen years.

There have been 26 consecutive patients ade-

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quately followed with severe nonpulmonary tuberculous lesions. There has been no death to date in a period extending over two and one-half years.

Closed Cases

Fifteen of the patients had closed lesions without sinus or wound drainage. Of these, arthrodesis of joints was performed in 12 in conjunction with the antituberculous chemical medication. Three of these 12 were discharged more than a year ago and have remained well.

There are three patients of this group with closed lesions who have not had joints arthrodesed. It appears probable that one of these with a badly involved knee may have the joint saved with motion and without arthrodesis. Two others will have to have joint arthrodesis in the future because of marked bony destruction present. All three of these have their tuberculous infection well under control.

Open Cases

There were 11 children who had open tuberculous lesions. These had among them 14 draining wounds or sinuses. Three of the patients had sinuses from soft tissue, fascia, skin, and pilonidal sinus. Eight had lesions draining from bone or joint foci. Three of these had tuberculosis of the spine, one had tuberculosis of both os calci and of the jaw, and the others had involvement of the hip, knee, ankle, and tarsal cuneiform bones. As of the present they are all healed.

This does not mean that they all healed with normal bone or joint structures, however. Two of the three spine cases had arthrodeses done. The third patient with spinal involvement has minimal narrowing in the upper dorsal area which has seemed arrested. She is being held without arthrodeses but still on medication. Ankylosis of the patient with the hip lesion has occurred spontaneously. The patients with the draining sinuses from the knee, ankle, tarsal cuneiform, jaw, femur, and os calci have had no arthrodeses.

Pediatric Versus Adult Use of Iproniazid

Toxicities of troublesome nature seen in the adult do not seem to affect the child greatly. It is true that children can be maintained on a higher dosage than adults. They cannot, however, be maintained on a higher dosage than the accepted toxic dosage level. Dosage with iproniazid cannot at any time safely exceed 4 mg. per Kg. of body weight accurately measured since this chemical is found in the spinal fluid at a level 50 per cent greater than in the blood and body plasmas. Toxicity of the central nervous system is already appreciable at an adequate level for arrest of tubercular infection. Any attempt to use dosages above 4 mg. per Kg. of body weight are sure to end disastrously because of the toxic effect on the central nervous system.

It would appear that joint structures may be sometimes saved and bony lesions healed in children by the use of this drug without surgical intervention. This is in direct contrast to the results achieved in the adult. All indications in the adult are that, as of our present knowledge, arthrodesis of a weight-bearing joint must accompany the use of this antituberculous chemical to secure satisfactory results within any reasonable period of therapy.

Conclusions

1. Iproniazid (Marsilid) is the most efficient drug we have for treatment of children with tuberculous bone and joint lesions. It may be equally efficient in the treatment of other tubercular lesions.

2. Surgery must frequently accompany use of this chemical. In children some joints may now be saved with mobility which previously had to be ankylosed.

3. Toxicities of this drug must be respected and dosage accurate.

4. A much longer period is essential for final end result studies. This report can only be a signboard pointing the way.

Discussion

Rosa Lee Nemir, M.D., *Brooklyn.*—Dr. Bosworth's pioneer investigation of the value of iproniazid in the treatment of bone tuberculosis in children is most encouraging. By virtue of his long interest in and study of this aspect of tuberculosis, Dr. Bosworth is ideally qualified to explore the value of various therapeutic agents.

This report suggests that iproniazid is not only effective as a curative agent but also that it may decrease the need for surgical intervention. To the pediatrician responsible for the growing child, cure without surgery is particularly desirable.

On the Children's Medical Service of Bellevue Hospital we have had no experience with iproniazid.

We have used the less toxic drug, isoniazid. Our short period of observation of two years does not permit us to make a definitive statement. It has appeared that isoniazid, in combination with promizole, para-aminosalicylic acid, and/or streptomycin, is effective, as Dr. Bosworth indicated.

Several pertinent points arise. Are there some infants and young children from whom iproniazid may be withheld in favor of the less toxic, even though apparently somewhat less effective, drug isoniazid? These may be debilitated infants and patients with convulsive disorders whose susceptible central nervous systems may react unfavorably with iproniazid. Perhaps Dr. Bosworth will tell us if he has treated such patients.

Will there be less bone tuberculosis in the future now that isonicotinic acid hydrazid is being used so widely? In our experience streptomycin, para-aminosalicylic acid, and promizole used in combinations in the treatment of progressive primary tuberculosis, miliary tuberculosis, and meningitis have not prevented the development of bone tuberculosis. On the other hand, we have had no instance of the development of bone tuberculosis in patients under treatment with isoniazid.

If patients with tuberculosis of bone have other evidences of active disease such as miliary tuberculosis or meningitis, as often happens in children, should not other therapeutic agents be combined with iproniazid? It has been the plan on the Children's Medical Service to use combined therapy always because of its possible and probable greater effectiveness and also because of the lesser incidence of the emergence of resistant strains of tubercle bacilli. Dr. Bosworth's paper implies that no resistant strains have been encountered. Have studies of resistance of the tubercle bacilli been made?

The extent of the problem of bone tuberculosis is indicated by the figures for a ten-year period, 1930–1940, on the Children's Medical Service, Bellevue Hospital. One thousand cases of primary tuberculosis studied carefully by Dr. Edith Lincoln and her coworkers revealed 42 with bone tuberculosis; of these 14 died.

Early diagnosis of tuberculous infection of the bone is mandatory. This aim can be accomplished, in part, by careful x-ray survey of spine and long bones in all patients with evidence of hematogenous dissemination.

On our service a significant number of patients with tuberculosis of the spine particularly are diagnosed in this way before any clinical evidence of the disease can be found.

The toxicity of iproniazid has required that it be used by those physicians who will follow the patient closely, using laboratory determinations of blood levels from time to time and tests for possible toxicity. It is not surprising that children show less toxicity than adults to iproniazid. We had a similar experience with promizole. As the number of patients treated increases, the degree and seriousness of the toxicity will be revealed.

As Dr. Bosworth indicated, a much longer time is required to determine whether iproniazid will be the drug of choice in the treatment of bone tuberculosis. It is possible that combinations with other drugs and antibiotics may be explored in a parallel series. We await with interest Dr. Bosworth's continued study.

David M. Bosworth, M.D., *Closing Remarks.*—Several points have been raised by Dr. Nemir and we will attempt to answer them.

First, where proved tuberculosis of bone or joint exists, we have used the iproniazid or most potent drug available without regard to debilitated condition of the patient, with excellent and prompt response as to temperature, weight gain, and control of the infection. We have, to date, had no disasters from its use in such debilitated children.

Second, it is certainly true that bone and joint tuberculosis has rapidly decreased, first with the advent of streptomycin and even more so following the use of the isoniazids and iproniazids. Actually our wards at Sea View are becoming depleted of bone and joint cases, and we believe this is directly due to the use of these new antituberculous chemicals.

Third, since the iproniazid gives us prompt control of tuberculous lesions, we have seen no reason to combine the toxicities of several other drugs in therapy. At first our use of the iproniazid alone was experimental, but the response to it has been so uniform and excellent that we now see no reason for "combined treatment." We have shown in previous publications that streptomycin in severely infected individuals, where used in sufficient extent to control the infection, carried with it 6 per cent total deafness, many gastrointestinal upsets, and that numerous patients developed dermatitis. I see none of these complications now with the iproniazid. As we have stated above, the isoniazid is much less potent than the iproniazid. The toxicities of the iproniazid can be controlled and are reversible. We would advise using it alone.

Fourth, disappearance of organisms from a discharging sinus has been so rapid and almost universal that the carrying out of resistant studies has been impossible. On a clinical basis resistance of organisms to iproniazid does not seem to be a factor to be contended with.

Success is a journey—not a destination.—H. Tom Collard

Sympathetic Reflex Dystrophies in Coronary Heart Disease

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Numerous reports in the literature on pain and trophic changes of the upper extremity following coronary heart disease attest to the frequency and interest of this subject. Like any other important internal viscus the heart is so connected with the central nervous system that it is able to produce reflexes through afferent sympathetic and efferent somatic fibers. This can be possible only through the nervous communications between the heart and the musculoskeletal structures of the upper extremity. The region of the spinal cord which gives origin to the brachial plexus gives origin also to the greater part of fibers which eventually find their way to the heart.[1]

Afferent stimuli due to myocardial lesions run in the cardiac nerves to reach the cord via the sympathetic chain. These afferents travel in the white communicating branches to join the posterior roots of the upper four thoracic nerves.[2] Reaching the sympathetic cells in the posterolateral horn of grey matter, the impulses are transmitted via connector fibers to the excitatory cells of the sympathetic chain ganglia. Here postganglionic fibers arise which enter the spinal nerve through the gray communicating branches.[3] Sympathetic fibers supplying the dermal and subdermal structures of the upper extremity innervate the blood vessels, the sweat glands, and the erector pili muscles. If we assume that painful afferent impulses due to myocardial ischemia stimulate the sympathetic cells, an overaction of the sympathetic tone will find its clinical expression in disturbed circulation and sweat secretion.

Sympathetic reflex dystrophies are, therefore, characterized by the following signs and symptoms. Pain may be trivial, mild, or sometimes excruciating, burning, or throbbing in character. Cutaneous hyperalgesia is often present in the acute stages. Patient is unable to tolerate touch or covering. Stiffness due to reflex muscular spasm often accompanies this syndrome. Emotional disturbance and irritability are frequently noted. Vasomotor disturbances include vasoconstriction, increased capillary permeability, edema, cyanosis, blanching, and redness. Sudomotor disturbances include increased sweat secretion and glossy skin. Pilomotor disturbances comprise phenomena of gooseflesh due to increased contraction of the erector pili muscles. This is regarded as a contributing factor of the cutaneous hyperalgesia, particularly to light touch and air currents playing on skin. Among the trophic changes are spotty osteoporosis, fibrosis of the skin and palmar fascia, chronic adhesive tendinitis, atrophy of skin of subcutaneous tissue, postinfarctional sclerodactylia, and finger contractures. Trophic changes of the nails may also be seen.

Pain due to myocardial ischemia felt in the upper extremity is maintained after cessation of visceral stimuli, probably by impulses generated in peripheral pain receptors. Pain impulses originating from localized tissue disturbances enter the cord via sensory pathways and cause a constant re-excitation of internuncial neurons.[4] Extension of stimuli to the anterior horn cells results in muscular spasm, further augmenting the pain impulses. Stimulation of the lateral horn cells causes a chronic reflex sympathetic hyperactivity in the upper extremity. Once the syndrome is established, it is self-aggravated and self-maintained.[4-10]

Experimental studies by Wernoe, Pollock, Travell, Davis, and Weiss[11,12] seem to support this assumption of peripheral origin of pain. They reported abolition of anginal pain induced experimentally by the application of ethyl chloride spray to the anterior chest wall and by cutaneous novocaine infiltration.

Case Reports

Case 1.—A nurse, forty-seven years of age, was admitted to the hospital in October, 1951, with a severe attack of chest pain radiating to the left arm.

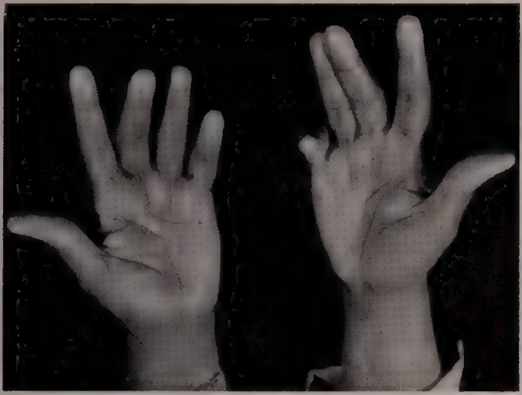

FIG. 1. *Case 1*—Flexion deformities of both little fingers resembling the late stage of Dupuytren's contracture.

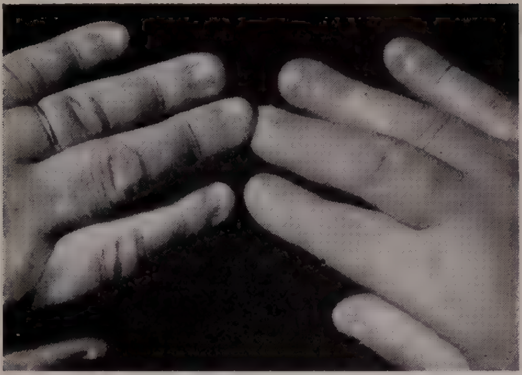

FIG. 2. *Case 2*—Trophic changes of the fingernails.

Since this time the patient had two further hospital admissions because of acute severe chest pain. Her last electrocardiogram, taken in June, 1953, showed normal sinus rhythm, tendency to left axis deviation, ST depressions with T inversions in leads I, II, CF_2, and CF_4, indicating enlargement of the left ventricle with myocardial damage. Several weeks after the first attack in October, 1951, she started to feel a burning sensation in the fingers of both hands with stiffness and pain, especially in the mornings. Gradually a small nodule developed on the palm of both hands below the metacarpophalangeal crease of the little fingers. These hardenings were painful and started to spread distally, in time causing flexion deformities of both little fingers. Today the patient is not able to extend these fingers, and the deformity resembles the late stage of Dupuytren's contracture (Fig. 1). The diagnosis of a progressing bilateral contracting tendinitis was made. Hydrocortone acetate was injected three times in weekly intervals into the thickenings without any improvement. She was subjected to radiotherapy without any relief.

Finger contractures and palmar fascial nodules were frequently described in coronary heart disease. Askey[13] in 22 cases of shoulder-hand syndrome found seven palmar contractures. The shoulder or hands or both were affected in 39 of 178 consecutive cases of myocardial infarction studied by Johnson.[14] He introduced the term "postinfarctional sclerodactylia." Kehl[15] published six cases of Dupuytren's contracture as a sequel to coronary heart disease. Powers[16] reported several cases, and he blamed the intimate anatomic relationship of the ulnar nerve with the sympathetic chain for the frequent occurrence of trophic changes on the ulnar side of the palm. Gordon and Fauteaux and Ripstein[17,18] recently published three cases of palmar contractures in coronary heart disease.

CASE 2.—A woman, fifty-seven years of age, had been suffering from hypertension and arteriosclerosis for about eleven years. She had had, so far, three hospital admissions because of acute coronary pain. Her exertional precordial pain was relieved by nitroglycerine, and the orthopnea and ankle edema were fairly well controlled with mercurial diuretics. Her electrocardiogram, taken on February 27, 1953, showed regular sinus rhythm, RST depressed, and T inverted in leads I, II, and III. Unipolar limb leads showed tall R and inverted T in aVl and V_4 to V_6. These abnormalities indicate hypertrophy of left ventricle with involvement of the ventricular muscle. About fourteen months ago she developed bilateral shoulder pain with burning and stiffness in the fingers of both hands. She was referred to the Arthritis Clinic to rule out the possibility of rheumatoid arthritis. Her sedimentation rates were slightly elevated on frequent occasions. Sheep cell sensitivity test was normal, and x-ray studies did not reveal any skeletal lesion suggestive of rheumatoid arthritis. The skin of the fingers was moist and reddish purple. The fingernails were brittle, thin, and atrophic. The burning was felt mostly in the terminal phalangeal regions, and the stiffness involved all the digits throughout their length. The trophic changes of the nails were conspicuous (Fig. 2). There was no thickening of nailbeds or elevation of nailplates so frequently seen in psoriasis. Similar trophic changes of the nails were described in radiodermatitis and in various types of circulatory disturbances like peripheral vascular disease, Raynaud's disease, and scleroderma. It was felt that these progressing and atrophic changes of the fingers and nails were due to a vasospasm as a consequence of irritated sympathetic nerve supply initiated and maintained by the cardiac insufficiency. About one year ago a left stellate ganglion block with procaine was performed

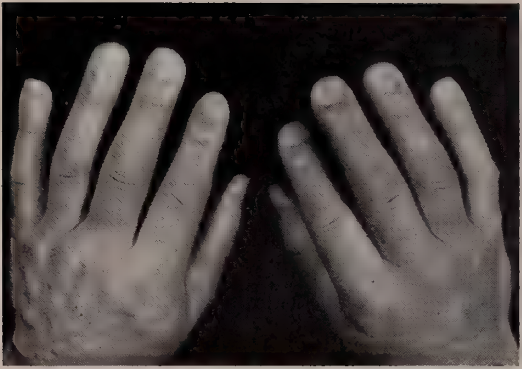

FIG. 3. *Case 3*—Postinfarctional sclerodactylia.

successfully, as proved by the following myosis and narrowing of left palpebral fissure, but no alleviation of her clinical symptoms was achieved.

CASE 3.—The third and last case illustrates a typical picture of a bilateral shoulder-hand syndrome in a man sixty years of age suffering from arteriosclerotic heart disease and diabetes for many years. He presents the classic syndrome described by Johnson and termed "postinfarctional sclerodactylia." His last electrocardiogram showed left axis deviation, normal sinus rhythm, and changes due to a previous anteroseptal infarction. The skin overlying the fingers was thin, boardlike, and seemed immovably adherent to the underlying tissue (Fig. 3). The rigidity and tightness of the skin interfered with the normal function of the fingers, and the patient held them in semiflexion. A skin biopsy was performed recently, and the pathologist's report was as follows: "Although some features of scleroderma are present, the findings are not adequate for a diagnosis." Blood flow studies of the digital arteries, however, showed readings typical of scleroderma.

For his shoulder pain with limited motion he received several suprascapular blocks with very good result. The mobility increased in both arms greatly, but the trophic changes of the fingers persisted, and the patient continued to complain of burning pain. Butazolidin was tried, but, unfortunately, it had to be discontinued because of a drop in his white count after three weeks. While taking Butazolidin, the patient felt better.

Steinbrocker and others[19,20] recently published good results in several cases of shoulder-hand syndromes with cortisone and ACTH. We felt that the underlying primary lesions of the heart constituted contraindication to prolonged hormonal therapy.

Conclusion

Sympathetic reflex dystrophy of the upper extremities as a sequel to coronary heart disease is more common than is generally recognized. This report is based on the study of three cases with bilateral trophic changes in the hands, and in two of the three the abnormalities started with bilateral shoulder disabilities. All three cases manifested clinically the terminal phase of postcoronary syndromes in the dermal and subdermal structures of the hands. Although it is generally believed that painful impulses from visceral organs transmitted to the cord may induce and maintain a reflex vasoconstriction and a reflex muscular spasm in somatic areas, further observations are required to clarify the neurophysiologic mechanism involved. The nutritional and functional state of the skin depends on adequate blood supply, which is regulated by sympathetic vasomotor fibers. The caliber of cutaneous vessels and of the tissue spaces and capillary permeability constitute major factors of sympathetic innervation, influencing tissue nutrition. Increased vasomotor tone due to sympathetic irritation must undoubtedly cause malnutrition of tissues in the affected parts, consequently leading to trophic changes.

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Acanthosis Nigricans Occurring in Association with Squamous Carcinoma of the Hypopharynx

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ACANTHOSIS nigricans is a benign cutaneous manifestation that occurs concomitantly with certain forms of systemic or internal cancer. Curth[1] has collected 500 cases of acanthosis nigricans in association with adenocarcinoma, sarcoma, and lymphosarcoma of various organs. The patient to be presented had a known squamous carcinoma originating in the hypopharynx for approximately five and one-half years prior to the appearance of the acanthosis nigricans. We have been unable to uncover a previous instance in the literature of acanthosis nigricans in association with a malignant neoplasm primary in this organ. It is also of particular interest that it was a squamous type of carcinoma.

Acanthosis nigricans is a well-known dermatologic entity. However, there has been little reference to it in surgical or internal medical papers concerned with cancer. Since such an obvious cutaneous change represents a clinical sign that suggests the possible presence of an associated cancer of internal origin, the condition deserves recapitulation of its salient features.

Description of Acanthosis

Acanthosis nigricans in association with cancer was first observed by Pollitzer and coincidentally by Janovsky[2] in 1890. Clinically, it develops on the skin in localized areas of dark brown or black pigmentation which becomes thickened and accentuated. Invariably, this condition is complicated by the appearance of numerous, small, papillary and verrucous growths which may be accompanied by palmar and plantar hyperkeratosis, alopecia of the scalp and eyebrows, and striated and brittle nails. The sites of predilection are the flexural surfaces such as the axillae and groin, genitalia, neck, and nipples. Frequently, it involves the mucous membrane of the mouth and tongue. General lymphadenitis has been observed in a few instances. It resembles the cutaneous picture of Addison's disease with the addition of the papillomatous and verrucous proliferation.

Microscopic examination reveals changes confined, for the most part, to the basal cells with evidence of hyperkeratosis, papillary hypertrophy, and acanthosis.

BENIGN AND MALIGNANT FORMS.—In 50 per cent of the cases of acanthosis the condition is found in association with a cancer of one of the internal organs. This is the so-called malignant type. In the other half of the cases, the juvenile or benign type, the condition appears at birth or in early childhood and is not associated with a malignant growth. In both the malignant and benign types the acanthosis has the same benign histologic and clinical characteristics, and the cutaneous lesions per se never evidence malignant changes.

AGE AND SEX.—The form of acanthosis nigricans associated with malignant neoplasms may occur in extremely young or in very old individuals. The average age is forty years, and the disease appears with equal frequency in both sexes.

Relationship to Cancer

SITE OF CANCER.—The majority of all malignant tumors associated with acanthosis nigricans occur in the abdomen. In an analysis of 384 collected cases of acanthosis nigricans from the literature Curth[3] found 92.6 per cent associated with cancer of abdominal origin and believed Darier's figure of 80 per cent to be too low. Gastric carcinoma accounts for 60 to 70 per cent of the abdominal cancers with the remaining tumors being divided among all of the other organs of the abdominal or pelvic cavities. The condition has also been observed in association with malignant neoplasms of the mediastinum, lungs, breast, and esophagus and in certain types of lymphomas. However, we have not found a previous instance of a primary carcinoma of the hypopharynx in association with acanthosis nigricans described in the literature.

Histologic Classification of Cancer.—Curth[3] has noted that the histologic pattern of the carcinoma and metastases found in association with acanthosis nigricans has been generally that of an adenomatous character. This glandular type of structure prevails in the primary carcinoma of the stomach, liver, ovary, uterus, and lung as well as in the metastatic infiltrations of the pancreas, mesenteric glands, and other sites.

Primary sarcoma of the colon and of the stomach with diffuse metastases has been reported by Klotz and Rohdenburg[4] and Swartz and Miller[4] as occurring in combination with acanthosis nigricans. The disease has also been observed coexisting with generalized lymphosarcoma by Wile,[4] Masson and Montgomery,[5,6] Nicholas,[7] and Sanchez Covisa.[8]

In view of the fact that most observers have reported a preponderance of patients showing an adenomatous type of neoplasia where it was found in association with acanthosis nigricans, our case was quite distinctive since the primary in this instance was a carcinoma of the squamous cell variety.

Degree of Malignancy of the Cancer.—Cancer occurring in association with acanthosis nigricans is generally of the highest grade of malignancy and frequently accompanied by metastases. In the majority of cases it is inoperable or has a tendency to recur even after early surgical intervention.

Time Relation between Cancer and Acanthosis Nigricans.—Ordinarily, cutaneous lesions are noted simultaneously or several months prior to the initial diagnosis of the involved neoplasm, and in others they are present within a relatively short period afterwards. In some instances the skin lesions have not appeared until after operative removal of the tumor or have followed other cancericidal therapy.

Since in most cases the tumor is of such a high grade of malignancy, there is never a prolonged interval between the onset of the cancer and the subsequent appearance of acanthosis nigricans. However, in our own case there was a lapse of five and one-half years after the initial diagnosis of the carcinoma of the hypopharynx before the acanthosis nigricans was manifested on the skin. The low grade of the malignancy or its inhibition under therapy might account for this unusual circumstance.

Effect of Treatment of the Primary Cancer on Acanthosis Nigricans.—While complete resolution of acanthosis nigricans never occurs following surgical removal or therapy administered to the primary neoplasm, at times the lesions partially resolve, only to be followed by marked recrudescence upon recurrence or metastases of the tumor.

It is felt that some products of the tumor per se might be capable of stimulating the production of the acanthotic changes in the skin. This theory is given weight by the fact that nonspecific remedies not directed to the cancer may ameliorate the acanthosis nigricans, i.e., arsphenamine, thyroid extract, and cervical ganglion resection. Again the degree to which the cancer can be eliminated in some cases makes a notable difference in the course of the cutaneous lesions.

Pathogenesis

A variety of causal agents have been incriminated as the etiologic factors involved in the production of the malignant form of acanthosis nigricans, including disturbances of the sympathetic nervous pathways presumably brought about either by the toxic effect of the neoplasm or by virtue of its intra-abdominal pressure; adrenal, thyroid, ovarian, or pancreatic dyscrasias, and various coincidental diseases. However, there is little evidence to substantiate the etiologic significance of any of these.

Some evidence has accumulated to indicate a possible genetic relationship between the cancer and the acanthosis nigricans. Moncorps,[4] Stihl,[9] and Curth[3] have demonstrated the frequent occurrence of carcinoma among the antecedents of patients having acanthosis nigricans.

Case Report

The patient was a sixty-five-year-old white male South American who was first seen in December, 1947. He gave a history of intermittent hoarseness over a period of two years associated with a cough and blood-tinged mucus. There had been no dysphonia or dysphagia. The patient's past history was otherwise unremarkable except for having had syphilis twenty years previously which had been adequately treated.

On examination of the hypopharynx and larynx the patient was found to have an advanced carcinoma involving the lower half of the posterior

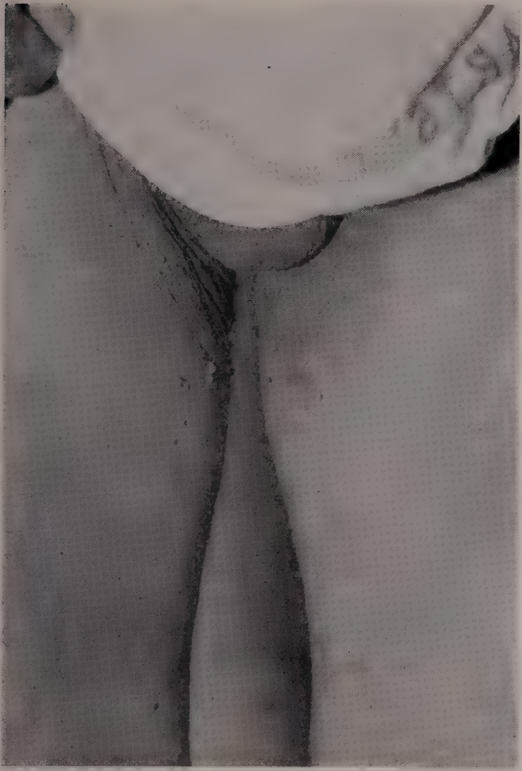

FIG. 1. Typical brown-black pigmentation of acanthosis nigricans with papillary proliferation involving the skin in the genitocrural folds.

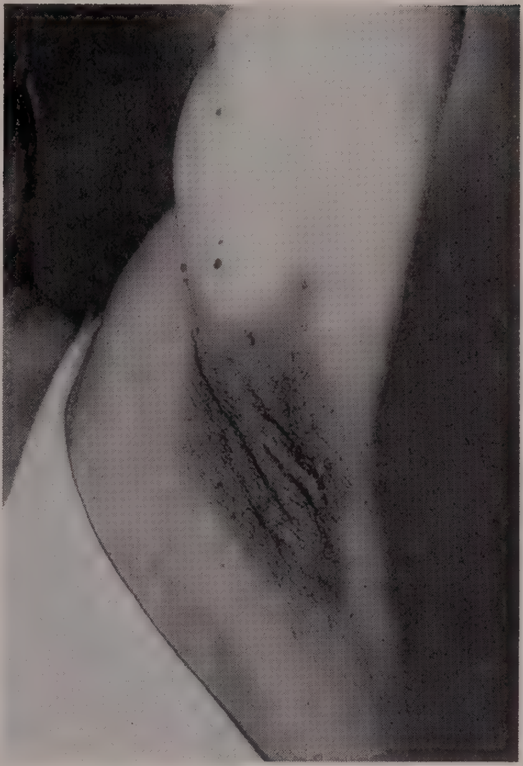

FIG. 2. Acanthosis nigricans in the axillary skin folds.

surface of the epiglottis with lymph nodes palpable in the right carotid bulb region and the left submaxillary region. A biopsy from the tumor of the epiglottis and the lymph nodes confirmed the clinical impression of primary squamous carcinoma of the epiglottis with lymph node metastases.

X-ray of the chest was negative for any evidence of pulmonary metastases. Because of the extent of his disease and its location, it was decided to treat the patient with x-ray therapy. Two external ports were outlined to encompass the metastatic disease and the primary in the epiglottis. He was given 300 r daily at 50 cm. skin target distance using 250 kilovolts with $1^1/_2$ cm. copper filter. A total dose of 3,600 r in air was delivered to each portal over a period of twenty-four days.

In January, 1948, the pharyngeal disease was noted to have regressed well and the nodes to have become smaller. The patient was admitted to Memorial Hospital on February 12, 1948, and gold-filtered radon seeds (25 mc. destroyed) were inserted into the residual disease in the left submaxillary region. Subsequent submaxillary dissection showed no residual carcinoma in the specimen. The patient was then discharged to his home and was not seen again until July, 1951, at which time he presented definite recurrence in the right neck. He had been given an unstated amount of x-ray therapy by his physician in South America.

On August 2, 1951, he was admitted to Memorial Hospital, and a right radical neck dissection was carried out. The specimen showed metastatic squamous cancer at all levels. The wound healed slowly, and the patient returned to his home in Ecuador.

He returned to our clinic in May, 1952, and on examination presented a pathologic fracture of his right clavicle and axillary metastases. He was again admitted to Memorial Hospital, and on May 18, 1952, the right clavicle was removed and an axillary dissection carried out, removing both pectoralis major and minor muscles. A further dose of gold-filtered radon seeds was inserted in the tissues at the root of the neck because of questionable infiltration of the deep neck muscles. His convalescence was somewhat delayed because of difficulty in healing, but he had little trouble with the function of the arm and returned to his home in Ecuador.

In June, 1953, he reappeared in the clinic much disturbed by an eruption on his skin. Upon examination the skin revealed characteristic changes of acanthosis nigricans. Pigmented verrucous and papillary growths were present in both axillae, the inguinal regions, over the dorsum of the hands and feet, and at the commissures of the mouth (Figs.

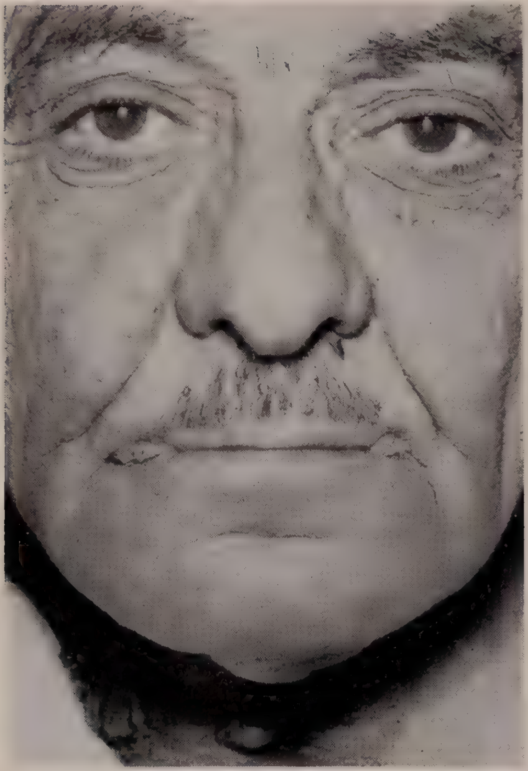

Fig. 3. Verrucous hyperplasia about the eyelids, perinasal area, and the commissures of the mouth.

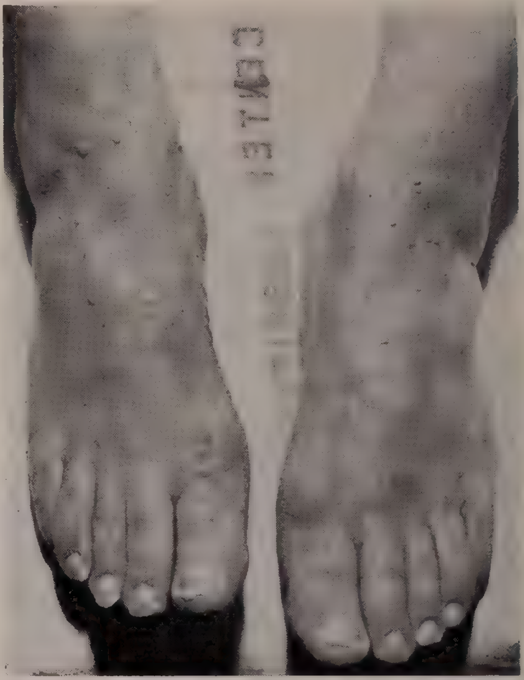

Fig. 4. Papillary growths over the dorsum of the feet.

1 to 4). The palmar and plantar surfaces of the hands and feet showed extensive hyperkeratosis. A biopsy of the skin revealed hypertrophy and acanthosis diagnostic of acanthosis nigricans.

At this time he had evidences of widespread metastatic disease in the skin flaps of the right axillary dissection, the left neck, and the left axilla. He was again admitted to the hospital and given x-ray therapy to the metastatic disease as a palliative measure. The patient's progress was steadily downhill from this point, and in July, 1953, he expired at his home in Ecuador, five years and seven months after his initial treatment in this clinic.

It is interesting to note that this patient's death was due to inability to control the metastatic disease since he never had any further trouble with his primary lesion and up until the final episode remained in robust health. There was no indication of gastrointestinal involvement at any time, although the appearance of acanthosis nigricans suggests that a second primary may have been present.

Unfortunately, a postmortem examination was not obtained so that the presence of adenocarcinoma of the gastrointestinal tract could not be definitely ruled out. However, the patient had no symptoms or physical signs to suggest the possibility.

Summary

1. The salient clinical features of the malignant form of acanthosis nigricans are described.

2. A patient is presented with a primary squamous carcinoma of the hypopharynx and metastases, accompanied by acanthosis nigricans of the skin. Insofar as we could ascertain, this is the first case to be observed in which acanthosis nigricans has occurred in association with a primary cancer of this organ.

3. The rarity of acanthosis nigricans occurring in association with squamous carcinoma, as in the case presented, in contrast to the usual finding of an adenocarcinoma as the primary form of the cancer was discussed.

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Doctor-Parent Approach to Retrolental Fibroplasia

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RETROLENTAL fibroplasia, one of the major problems of the surviving premature of the lower birth weight group, accounts for most of the blindness in the preschool child. It has been thought by some that the reduction in mortality rates of the smaller birth weight prematures has in a large part contributed to the increased incidence of this disease. There are indications, however, that retrolental fibroplasia has now begun to invade the larger birth weight group of premature infants.

With the increasing emphasis on improving premature care comes the added responsibility of intelligent and judicious handling of the byproducts of the improved care. Until the cause and prevention of retrolental fibroplasia are found, the profession must assume this responsibility. Recognition of the early stages of retrolental fibroplasia, knowledge of the outcome of these beginnings, and sharing some of this knowledge with the parents of the infant should go a long way toward decreasing or cushioning the emotional impact this produces in parents.

Early reporting of visual disturbance by the physician to the proper agency will serve to bring prompt help to a bewildered family. This certainly can be done before the infant is six months of age and in many instances can be done by the third month. Complete honesty, frankness, and understanding are essential.

The only way to face the problem squarely is to diagnose the disease in its earliest phase. This requires ophthalmoscopic examination at frequent intervals starting shortly after birth, for the disease begins sometime between the third and sixth week of life, earlier in the larger birth weight group and later in the smaller birth weight group. Such an examination is a technic that all physicians can and should do in the neonatal period. Once the physician is familiar with the normal fundus of the newborn, any deviations from the normal can be recognized easily and ophthalmologic consultation sought for confirmation. In this way all individuals directly concerned, physicians, parents, nurses, and hospital social service departments, can act as a team sharing the problem.

At the Premature Center in the Children's Hospital examination of the ocular fundus of a premature infant has become just as much a part of the whole examination as auscultation of the heart and lungs. By the time the intern has completed his few short weeks of service in the premature unit, he has become familiar with the normal and abnormal fundus of the premature infant. He has gained a real awareness of the immensity of the problem. Since the nursery was established five years ago, it has been the policy for both the pediatrician in charge of the unit and an ophthalmologist to examine the ocular fundi of all prematures in the unit at weekly intervals, beginning within two weeks after birth. These physicians make the examination together.

The technic is quite simple. Two drops of 10 per cent Neo-Synephrine Hydrochloride and two drops of 1 per cent homatropine hydrobromide are instilled into each eye at intervals of fifteen minutes for one-half hour. In this way adequate dilatation of the pupil occurs within twenty minutes and is maintained for at least one hour. At the time of examination the infant is removed from his incubator, wrapped in a blanket, laid on a flat cribside table, and a rubber nipple with cotton soaked in 5 per cent glucose water placed in the infant's mouth to maintain him in a quiet state. Each examiner then takes his turn first as the "holder" of the infant and then as the examiner. The procedure requires a few minutes depending on the degree of pathology seen. Both of the examiners must agree on a particular finding before it is recorded.

Once the infant is discharged to his parents, follow-up examination is continued at monthly or more frequent intervals throughout the first year of life. In many of the infants where it becomes necessary to follow the course of cicatricial changes in the fundus beyond the sixth month of life, examination under anesthesia is a necessity for thoroughness.

The actual changes observed in the fundi of premature infants during the acute and cicatricial phases of retrolental fibroplasia have been adequately described by Owens and Owens,[1] Reese and Blodi,[2] and Laupus and Bousquet.[3] Dilatation and tortuosity of retinal vessels, retinal and vitreous hemorrhage, neovascularization, and retinal edema characterize the early active acute phases of the disease. Peripheral retinal separation, most often beginning in the temporal retina, progressing to complete retinal separation with the formation of an opaque retrolental mass constitute the cicatricial phases of the disease. Reversibility at any stage short of the late, complete retrolental membrane or mass has been regularly described by several observers. Reversal of the process, however, is more apt to occur in the early acute phase than in the cicatricial phase. The whole process involves both eyes in the majority of instances, while phase reversal in the early cicatricial stages, if it does occur, may affect either eye but not necessarily both.

It has become the policy in the Children's Hospital Premature Center to require that both parents together be informed as soon as any phase of the disease is observed. This is done in a personal interview between the parents and physician familiar with the prognosis of the situation under discussion. Should phase reversal occur, as it most often does on subsequent examination, the parents do not usually adopt an overprotective attitude toward their infant. Should the process continue and progress to the late cicatricial phase, the parents, when informed of events as they occur, appear to be in a better position ultimately to accept blindness in their infant than if they had not been informed from the beginning.

Despite continuing efforts in many premature centers throughout the United States, the etiologic agent, or agents, of retrolental fibroplasia is unknown, and no effective therapeutic agent has yet been discovered for this clinical entity. As a result of a recent M & R conference on the subject, it was recommended that a coordinated research program be instituted to solve these problems and also that of the unknown nationwide incidence of retrolental fibroplasia. However, there are certain indications that the solution may not be far off. As a matter of fact, there now appears to be some confirmed evidence of the relationship of the prolonged use of high concentrations of oxygen to the development of the cicatricial phases of retrolental fibroplasia.[4–9]

Until these unsolved problems have been settled, the continuation of early conferences is recommended for parents and those closely working for the health and welfare of infants, especially those engaged in the preschool blind field. The parents are eager to learn the sources of help available to them. The physician and hospital social service staff have been often the sole contact with the parents. It is up to them to make the proper referrals when the development of the child will be aided by education and training rather than medical care only. Agencies offering this type of service are local associations for the blind, family service units to be found in some cities, health departments, the American Foundation for the Blind, and the New York State Commission for the Blind.

The American Foundation for the Blind, 15 West 16th Street, New York 11, New York, maintains lists of reading material and consultant service primarily for those outside New York State.

The New York State Commission for the Blind, located at 270 Broadway, New York 7, New York, provides a parent and child educational program in the home. A specialist in guidance and training assists parents in the home during the preschool years by demonstration of methods, training, and guidance to prevent behavior difficulties, encouragement of outdoor exercise, and provision of social experience through community contacts such as nursery schools, kindergartens, and Sunday school attendance until the child is ready for formal education in an elementary school. It encourages the parents to treat the child as a "normal" individual and to bring him up as such. It fosters the belief that the child belongs in the home with his parents, particularly during these early, formative years. Frequent home visiting by the consultant helps the parents through their difficult period of adjustment, often spares them many needless worries, and helps them to solve their own problems.

Thus, it would seem that a perfect doctor-parent approach to retrolental fibroplasia must recognize the social implications that follow the diagnosis. Such an approach not only covers the diagnosis and medical care but also gives the doctor the added responsibility of passing on information to the parents as to where they can obtain help and of making the contacts for them.

Grateful appreciation is expressed to Miss Laverne Tupper, Supervisor of Training for Preschool Blind Children, New York State Commission for the Blind, for her help with most of the problems discussed above.

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A Review of 1,000 Consecutive Closed Fossa Tonsillectomies Without Spontaneous Hemorrhage

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PROBABLY in no field of surgery has there been any greater persistence on the part of the operating surgeons in the use of the technics of the ancients than in that of tonsillectomy. In fact, the oldest writings, Oribasius[1] and Paul of Aegina,[2] from a strictly surgical point of view described methods nearer that of modern surgery (they believed in dissection) than many of the operative procedures described in more modern times. However, in the seventeenth century Rochard Wiseman[3] and in the eighteenth century Joseph Desault[4] introduced instrumental tonsillectomies which were the forerunners of the present-day guillotine technics, i.e., methods which, to the shame of the present-day otolaryngologists, still persist in the form of Sluder and Beck technics and the like. In 1909 Waugh[5] introduced (and from the point of view of history reintroduced) tonsillectomy by dissection and by so doing began the long process of bringing the operation back into the field of good surgery. However, the adoption of such surgery has met and still meets with an undeniable yet inexcusable resistance on the part of a large portion of practicing otolaryngologists who would not, under any circumstances, tolerate such antiquated technology in even the more common problems of modern living.

In a like manner there has been a general refusal on the part of tonsil surgeons to recognize the source and etiology of their postoperative hemorrhage, i.e., a hole in a blood vessel not enclosed in a suture. The number of papers that have appeared in the past purporting to establish a relationship between tonsillar hemorrhages and such nonrelated phenomena as atmospheric pressure, temperature, the spring of the year, the menstrual cycle in women, or the color of the patient's hair are too numerous to be of any practical value. Suffice it to say that one would hardly expect a barometer or a rain gauge to recognize the hole in the blood vessel in the first place. The recognition of the potential source of the bleeding must be the duty of the operating surgeon. The matter of vitamin deficiences has been investigated by Coombs,[6] Wright and Pray,[7] and others. In the absence of well-placed sutures, the use of vitamin K has helped. However, the use of caustics and sulfonamides in the postoperative tonsil fossa and the resulting concrete-like resurfacing of the fossa has not prevented postoperative hemorrhage and has no place in modern throat surgery.

With the bizarre history of tonsillectomy in mind and with the very real threat of fatal postoperative hemorrhage still present, work was started in 1946 to improve, on a good anatomic and surgical basis, a situation which has persisted since the time of the ancients without any very positive approach to the problem. The technic of closed fossa tonsillectomy[8] was first reported in May, 1952, on the basis of the first 634 cases. It is the purpose of this paper to report on a series of 1,000 consecutive tonsillectomies, completed without occurrence of spontaneous postoperative hemorrhage—"immediate," "early," or "late."

Procedure and Results

In brief, studies done on injected anatomic specimens in a reasonably fresh state showed that both arteries and veins entering the tonsil fossa tend to run up and down the length of the fossa and that vessels entering the tonsil proper are small branches of this fairly free anastomotic network. The blood supply in the pillars was found to be of capillary character only. Thus, it became apparent that control of bleeding could be accomplished by closing the fossa proper without involving the pillars, so that the usual contours of the throat are not disturbed.

Safe closure of the fossa depends upon the ability of the surgeon to remove the tonsil cleanly by careful, methodical, blunt dissection, and it precludes the use of the guillotine technics of the past since they are too apt to leave tags of lymphoid tissue and portions of the lower pole behind. Closure of the fossa and control of bleeding are then accomplished by placing the sutures just shy of the posterior pillar, passing them just under the floor of the fossa proper, and bringing them out just short of the anterior pillar. The sutures may be interrupted, figure-of-eights, or even running sutures depending upon the surgeon's experience. When the sutures are tied, not only is bleeding controlled, but the closure reduces the great gaping wound to a narrow strip of tissue uncovered by mucous membranes between the pillars, which are undisturbed (Fig. 1).

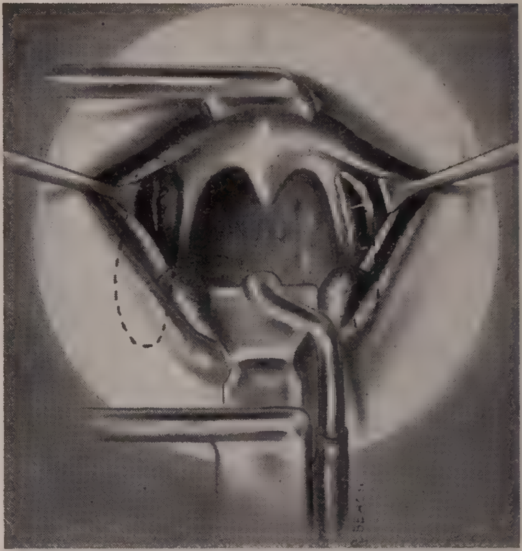

FIG. 1. Comparison of the open fossa and the closed fossa tonsillectomy. The dotted lines give a rough comparison of the difference in surface to be healed. The side that has been closed shows the pillars free of the closure. Note the large blood vessel coursing up and down the floor of the open fossa. (This illustration also appeared in the May 24, 1952, issue of the *J.A.M.A.*, page 348.)

The present series of cases was operated on between 1946 and May, 1953. They are consecutive cases done by the closed fossa method, 1,000 in all, accomplished without occurrence of spontaneous postoperative hemorrhage from the tonsil fossa. As noted in the original publication, although two cases of traumatic postoperative hemorrhage occurred in the first 634 patients, there have been no additional accidents. Bleeding from the adenoid bed occurred four times in the original 634 cases and has occurred in one additional case.

Comment

It seems appropriate to review some of the advantages and some of the problems encountered in the closed fossa technic versus the traditional returning of the patient from the operating room with the fossae wide open. First, the time consumed by the operation and, concomitant with it, the duration of anesthesia will be found to be approximately twenty minutes for children and thirty minutes for adults. While compared to the guillotine technic this is rather slow surgery, yet certainly with modern anesthesia it is not an overly long procedure. Speed in operative surgery has long been considered a poor criterion of excellence.

The closure of the wound (fossa) follows the precepts of good surgery with the elimination of dead space and control of hemorrhage. In this respect the general surgeon, for instance, has learned to close his pilonidal cysts, and the plastic and traumatic surgeons have for years closed their oral wounds. It seems only logical and reasonable that the tonsil fossa should also be closed.

The control of hemorrhage which, as has been pointed out, has not in the past been handled with any very definitive approach is brought well under control by the closed fossa technic. The control of the hemorrhage problem is based on two things: (1) closure of the fossa and control of bleeding on an anatomic basis and (2) the elimination of the wide bed of granulations that follows the open fossa surgery and its consequent secondary ("or late") tonsil hemorrhages. It is the author's most sincere hope that it may eliminate entirely the occasional and sometimes whispered report of fatal tonsil hemorrhage.

The postoperative period is reduced in its intensity, as might be expected, by the degree of lessening of open raw wound with which the patient is returned from the operating room. Sedation, while still desirable, is reduced both in size of dose and frequency of request from the patient. Eating remains difficult but not the prolonged, miserable problem it is with a wide open fossa. Liquids are taken even by the adult with comparative ease with reduction of dehydration and fever. (The author admits occasional hunger strike in the younger set and thus far has found no good solution for the problem.)

The question has been raised as to what effect the closed fossa technic has on the voice. Experience has shown that if care is taken during closure not to shorten the posterior pillar, i.e., tighten it too much with consequent tension on the soft palate, no damage to the voice results.

TABLE I.—AGE RANGE OF 1,000 TONSILLECTOMY CASES

Age in Years	Number of Cases
0 to 3	121
4 to 5	312
6 to 10	278
11 to 15	60
16 to 20	66
21 to 30	100
31 to 40	29
41 to 50	24
51 to 60	11

Included in the series are six music (voice) students and four professional singers, and in this admittedly small number there has been no criticism of the end results. The usual early difficulty with voice will be observed with the closed fossa, as it is with the more traditional technics.

Time of healing is markedly reduced. The child is healed more or less completely in five to seven days. The average adult is back on the job in seven to ten days, a decided improvement over the open fossa technic. Nor is the adult as sick a patient as he is when the fossa is left open.

An added advantage of the technic is that it makes it possible to do tonsillectomies safely in the three-year or younger group of patients. In this series there are 121 such patients who might have been denied the combined tonsil and adenoidectomy for reasons having to do with safety (Table I). Yet these cases with the closed fossa can be safely done and a second operation at a later date avoided.

Experience with the closed fossa tonsillectomy has shown it to be a desirable technic when handling congenital cardiacs in that the threat of hemorrhage and secondary anesthesia is eliminated. In addition, the shorter healing time, plus the use of antibiotics, minimizes the chance of the dreaded complication endocarditis. Seven such cases are included in the series.

Again, the danger of hemorrhage after tonsillectomy in the severe cases of cerebral palsy has long been a problem. The closed fossa surgery markedly increases the margin of safety as regards surgery and minimizes the duration of the postoperative feeding problem in these children. Six such cases have been successfully operated by this method.

A still further advantage of the closed fossa technic has to do with the patient referred by the family physician in the rural area. In the past the threat of postoperative hemorrhage after return home has justifiably made the physician in country practice leery of tonsillectomy except in the most extreme cases. The closed fossa brings to the family physician a form of tonsil surgery which he can handle with reasonable ease in its postoperative state without undue fear of either serious or fatal hemorrhage after the patient is returned to him.

In the same manner, the closed fossa technic has similar advantages to offer the pediatrician and the family physician within the more urban area. The pediatrician can feel free to advise tonsillectomy with considerable assurance that the threat of serious or fatal hemorrhage will be minimized. To these men, even more than to the otolaryngologist, the safety of the procedure is important since their attachment to the patient and the family is, by nature of their work, far closer than that of the specialist.

The possibility of lymphoid tissue being buried beneath the closure has been a factor that has been a source of worry to pediatricians and medical men referring patients for tonsillectomy. The author admits the possibility and points out that if careful and deliberate dissection is done, this difficulty will be minimized. However, this work has been in progress since 1946, a period of seven years, and buried tonsil tissue has not thus far been a problem.

Again it is pointed out that the operative procedure is not difficult. It requires no more surgical technic than that which should be included in the armentarium of any good general practitioner who does his own tonsillectomies, appendectomies, and deliveries. The closure should be considered in much the same light as the closure of the deeper layers of any other wound with good hemostasis, the only difference being that the remaining surface is not closed with the customary skin sutures or in this case surface sutures in the mucous membrane.

Conclusions

1. One thousand consecutive cases of tonsillectomy without spontaneous postoperative hemorrhage have been presented.
2. A discussion of the various problems and advantages of the closed fossa technic has been presented.
3. It is again pointed out that the tonsil patient and his referring physician today have the right to expect and the right to demand surgical technic and a safety margin comparable to those accorded the patient referred for appendectomy or herniorrhaphy. In the past such has not been avatlable.

26 Strathallan Park

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Rules for Safety During Thunderstorm

1. Do not go out of doors or remain out during thunderstorms unless it is necessary. Stay inside of a building where it is dry, preferably away from chimneys, fireplaces, stoves, and other metal objects.
2. If there is any place of shelter, choose in the following order:
   (*a*). Large metal or metal-frame building.
   (*b*). Dwelling or other buildings which are protected against lightning.
   (*c*). Large unprotected building.
   (*d*). Small unprotected building.
3. If remaining out of doors is unavoidable, keep away from:
   (*a*). Small sheds and shelters if in an exposed location.
   (*b*). Isolated trees.
   (*c*). Wire fences.
   (*d*). Hill tops and wide open spaces.
4. Seek shelter in a cave, a depression in the ground, a deep valley or canyon, the foot of a steep or overhanging cliff, in a dense woods, or in a grove of trees.—*J.A.M.A., April 17, 1954*

Cornell Conferences on Therapy

DEPARTMENTS OF PHARMACOLOGY AND MEDICINE OF THE
CORNELL UNIVERSITY MEDICAL COLLEGE AND NEW YORK HOSPITAL

THESE are stenographic reports, which have been edited, of conferences by the members of the Department of Pharmacology and of Medicine of Cornell University Medical College and New York Hospital, with collaboration of other departments and institutions. The questions and discussions involve participation by members of the staff of the college and hospital, students, and visitors. A selected group of these conferences is published in an annual volume, *Cornell Conferences on Therapy*, by the Macmillan Company.

Use and Abuse of Physical Therapy

DR. KRISTIAN G. HANSSON: The subject of the conference today is the use and abuse of physical therapy or physical medicine. I felt fairly certain that the range of our activities was well known and that the field did not require a definition until I received a telephone call a week ago which made me change my mind. The call was from an undertaker who was troubled by the possibility of danger to himself from exposure to bodies of patients who had been treated with isotopes. He thought this exposure might hurt him, and he thought that as I was engaged in the field of physical medicine, I might be an expert on that subject.

As you know, physical medicine had its start during World War I and was developed further in World War II. This field consists of three broad divisions, physical therapy, occupational therapy, and rehabilitation. Physical therapy deals mainly with the use of physical means such as heat and cold, ultraviolet radiation, water, electric currents, and exercise of all kinds. Occupational therapy is exercise with a purpose. Rehabilitation deals with the matter of teaching the patient to get along the best he can with what he has. The discussion will be opened by Dr. Austlid, who is assistant director of physical medicine at the Hospital for Special Surgery.

DR. OLAF AUSTLID: There are two primary effects of electricity on human tissue, namely, the ionic or chemical effects and the heating or thermal effects. Generally, the ionic effects are exerted by galvanic low-frequency current, while the primary heating effect is exerted by the high-frequency current. When a direct current passes between two electrodes in an electrolytic solution, we know that positive ions will be attracted towards the negative pole and the negative ions toward the positive. This same transfer or iontophoresis will occur when an electric current like the galvanic or faradic current is applied to the body. If an interrupted galvanic or faradic current is applied and the negative electrode is placed over the motor part of the nerve or muscle, there will arise a stimulation of the corresponding nerve or muscle which will result in a muscle contraction. This stimulation is due to hydrogen-ion concentration under the negative electrode. This stimulating effect of the galvanic and low-frequency currents is used for testing muscles and nerves for so-called "reaction of degeneration" and is also used for stimulating atrophic or paralyzed muscles.

On the other hand, in high-frequency currents of 1,000,000 cycles or more, the duration of each single impulse is much below the effective time for ionic concentration. Consequently, we cannot get any stimulating effect on muscle or nerve, but if the current is applied with sufficient intensity, we will get a heating effect. It is this heating effect of the high frequency current that is used for therapeutic purposes. We call it medical diathermy. It is used in two forms, shortwave and microwave. Shortwave has a wavelength varying from 7 to 30 M., and we can apply it in two ways. We can apply it by means of a so-called induction cable, an insulated cable which provides an electromagnetic field heating, or it can be applied with condenser pads or air-spaced electrodes which provide an electrostatic field heating. Microwaves, as the term implies, are short wavelengths, usually about 12.2 cm. The radiation of microwaves has somewhat the properties of light in that they can be reflected and diffracted. The energy is beamed from an antenna, and the heat can then be directed and focused. It is very convenient to apply, but it can heat only a small area at one time.

The physiologic and clinical effects of diathermy are due to the raising of the temperature in the tissues that are heated. Whenever heat is applied to a part of the body from an external source, the vasomotor mechanism will respond in an effort to dissipate the excessive heat. There will occur an active vasodilatation of the capillaries, with a resulting increase in the arterial and venous flow, which then in turn will speed up the transport of waste products. Diathermy also exerts marked sedative effects on irritative conditions of the sensory nerves that produce pain, and motor nerves that produce spasm and cramps. There is no generally accepted explanation for this pain-relieving effect. We know that diathermy will slow down the conductivity in the nerve-muscle preparations of frogs.

The most common conditions treated with diathermy are bursitis, osteoarthritis, tendinitis, and in postfractural cases. It is usually used in connection with exercises. It may also be used on occasion in pelvic inflammatory disease and in otitis media. There are several contraindications to diathermy. It is contraindicated in peripheral vascular disease where it may produce burns. It is also contraindicated where metal implants are found in the part to be treated after open reductions of fractures and where you have metal plates or in cup arthroplasties of the hip. The reason is that the metal has a higher density and conductivity, attains a higher temperature, and can thus burn the surrounding tissue. It is contraindicated in pregnancy for use over the abdomen. It is contraindicated in osteomyelitis and in sinusitis if the drainage is insufficient, because it tends to increase the secretion of the mucous membranes. It is contraindicated in tuberculosis and in thrombophlebitis.

As I mentioned, the galvanic current and the low-frequency currents can be used in testing for the so-called reaction of degeneration. The stimulation by the faradic current is very brief and can only stimulate a muscle indirectly through the nerve. The denervated muscle requires a longer stimulus. Only the galvanic current provides a stimulus of sufficient length to stimulate the muscle directly. In contrast to the immediate brisk contraction which occurs when the muscle is stimulated through the nerve, the contraction resulting from direct muscle stimulation is slow. If, due to disease or trauma of the nerve trunk or the anterior horn cells, the conduction of impulses through the peripheral nerve has ceased, there take place certain changes within ten days which are known as the reaction of degeneration. In the full reaction of degeneration there is no conductivity through the nerve. Consequently there is no response to any current, faradic or galvanic, when applied to the nerve. The muscle still responds to the galvanic current applied directly, but the contraction is slow and is like that occurring in a denervated muscle. In a partial reaction of degeneration there is a decreased response to the faradic current. The response is slow, but the effect is not so pronounced as in the full reaction of degeneration. If reaction of degeneration is found ten to twelve days after trauma or disease, it signifies that changes have occurred in the nerve from which it will take a long time to recover, and on occasion such changes are irreversible. The absence of the reaction of degeneration, on the other hand, indicates that recovery will occur.

It is possible to examine the process of regeneration and to find out whether there is further degeneration by the quantitative measurements of chronaxie. I shall briefly review the meaning of chronaxie, although I imagine many of you are familiar with it. It can be shown in a so-called strength-duration curve that when the muscle is stimulated, there is always a certain intensity of stimulus needed to produce a contraction regardless of how long a time the impulse lasts. This minimum intensity is called the rheobase. As the intensity of the stimulus is increased, the necessary duration of the stimulus to elicit a response becomes shorter and shorter, but regardless of the intensity of the stimulus there is always a minimum duration of stimulus required. Chronaxie of the muscle is defined as the minimum time necessary to cause a minimal contraction with the intensity of the current twice the rheobase. The normal muscle has a very short chronaxie, about $^1/_{2,000}$ second. In the denervated muscle or during a partial reaction of degeneration, the chronaxie may be from 20 to 100 times as long as that of the normal muscle. Measuring the chronaxie, therefore, makes it comparatively easy to determine whether the nerve recovers or not.

The galvanic and low frequency currents also are used to stimulate atrophic and paralyzed muscles, especially in peripheral nerve injuries where regeneration of nerve is anticipated. If a current is used with sufficient strength to cause strong contractions, it will delay the atrophy and enhance the recovery of muscle. It will, of course, have no effect on the regeneration of the nerve itself. In stimulation of denervated muscles the most common currents used are the interrupted galvanic and the slow sinusoidal.

Dr. Hansson: Dr. Lorenze will take up the discussion from this point.

Dr. Edward Lorenze: I would like to make a few remarks of a general nature on the problems of rehabilitation and also say something about the methods that are employed. The goal of rehabilitation has been very broadly defined by the Barach committee, and it is briefly this: to achieve the maximum function and adjustment of a disabled person and to prepare him physically, mentally, socially, and vocationally for the fullest life compatible with his abilities and disabilities. This formulation expresses a principle of medical practice which applies across the board to every medical condition and is not really limited to any particular group of conditions treated with any specific or particular type of technic. This concept has been referred to as the fourth phase of medicine; the first phase is prevention, the second diagnosis, the third specific treatment, and the fourth rehabilitation and return of the individual to society in the best possible condition. In this purpose our attention is not directed primarily to a pathologic condition of a particular organ but to the state of the whole person, and the specific disease is viewed not only as a matter of concern while the patient is in the hospital, but as a condition likely to have an important bearing on the economic and social adjustment of the individual. By this concept of rehabilitation the medical profession reaffirms what physicians have long recognized, namely, that their job in connection with a chronic illness is a total medical job which begins from the time of onset of the disease or injury, or even before if one thinks in terms of prevention, and does not end until the person is back in the community functioning in the best possible state.

The technical aspects of rehabilitation relate chiefly to the restoration of function in the neuromuscular and skeletal systems. The practical methods include physical therapy, occupational therapy, and retraining technics. These are all very important, but of at least equal importance is the emphasis that is now being placed on the psychologic and vocational aspects of the entire program. The first item in care is the relief of pain. It is accomplished chiefly through the use of heat in various forms. The relief is sometimes only temporary; other times it is of a more permanent nature when it results in the breaking up of a cycle. Even if the heat alleviates pain only temporarily, it is of considerable importance in relation to the whole problem because it permits the use of other forms of treatment that are necessary for the restoration of function. For example, therapeutic exercises in one form or another, so important in the ultimate outcome, are not possible in the presence of pain. Heat, which is so effective in relieving pain, plays another role in that it relieves muscle spasm which tends to persist after it is initiated by a temporary painful condition.

A major cause of pain in mucsular and skeletal disorders is abnormal body mechanics. This may arise from paralysis, weakness, or contractural deformities in relation to weight-bearing positions. The resulting malalignment of the body tends to give rise to painful syndromes of various types. For example, flexion contractures of the knee are likely to cause pain not only in the knee and muscles surrounding the knee but may throw out of line the mechanics of the spine and hips, giving rise to pain syndromes in those areas as well. In addition to exercise for the purpose of correcting or preventing deformities and muscle imbalances, various forms of bracing are used, particularly for the lower extremities.

There are several forms of therapeutic exercise. The simplest one is the so-called passive exercise. The muscle does not do any active work. The person administering the exercise stretches the tight muscles and helps in this way to correct deformities. Another type involves re-education. It is used in situations in which some muscles are completely paralyzed or extremely weak as in poliomyelitis or in peripheral nerve injuries. The exercise is frequently carried out in association with hydrotherapy, making use of the heat of the water and the buoyancy of the water, as well as the psychologic effect which comes from the sense of lightness in water. In the more advanced stage of treatment, resistance exercises are employed in which progressively heavier weights are applied to the muscle for it to contract against. In this stage the muscle acquires strength because the development of muscular strength is directly related to the resistant load against which the muscle fibers must contract.

There are situations in which rehabilitation is unsatisfactory without the replacement of an extremity or a part with a gadget. The subject of gadgets comes up in relation to extensive paralyses or deformities which have not responded to exercise and, of course, where there has been a loss of a particular extremity. An amputee cannot be expected to grow another limb, and so the only thing to do is to replace it with a gadget or prosthesis. Similarly, a patient whom you cannot ambulate is able to get from one place to another if you substitute a wheelchair for the legs. Another example of the use of gadgets is the case of a person who has a good elbow and shoulders but no grasp. The elbow and shoulders are ineffective because he cannot hold anything in his hand. In such a case gadgets may be attached to the hands to hold objects like combs, spoons, etc., and thus substitute for grasp.

One aspect of rehabilitation which commands attention long before it is possible to think in terms of social life or of getting a job and working is that of training in the simple technics of personal hygiene, the toilet, the bath, the bowels. The patient must be able to do these things for himself before he can think of anything else. It relieves the family of great burdens and spares the expense of an extra person to help with these functions. The business of having the person learn how to manage in the wheelchair to get to the toilet by himself is an extremely important one. Toilet activities for many patients disturb a large part of the day and are sometimes the cause of great commotion in the home or wherever else the patient may be. To train the patient to deal with these matters himself is worth all the time that is spent on it. This training in the activities of daily living is the central feature of physical rehabilitation.

A course of rehabilitation involves a fairly elaborate system of cure. The needs must be evaluated for every patient individually, and we try in each case to arrive at some notion of what may be expected in the way of results. Such prognostication is not always correct; some patients in whom the outlook appears to be poor come through satisfactorily, and vice versa. In addition to the conventional physical and laboratory examinations, we pay a great deal of attention to a test of the range of motion at the joints in order to know the state of function. For example, one often sees patients being treated for contractures of the toes which are not very significant. They go through a long period of stretching of the toes where contracture was observed, while the knees and hips are neglected although they are much more important. We make special evaluations of muscular capacity, not only of the muscles that appear to be involved but those that appear not to be involved. For example, you may plan crutch-walking for a patient whose legs are paralyzed, but it is necessary to evaluate the strength of the muscles of the upper extremities, especially the triceps and shoulder depressors, for such ambulation may prove to be impossible in one in whom the muscles of the upper extremities are not strong enough.

We also conduct fairly extensive psychologic tests in these patients, intelligence tests, and tests which help to describe their emotional makeup. The program is a complicated one and requires considerable intelligence to learn all the things that one needs to learn. It is also necessary for the patient to want to learn. Because of premorbid instability or because of reaction to the particular accident or disease, the patient may lack the emotional maturity or drive to carry out the necessary measures in rehabilitation, although he may possess the physical ability to do so. It is quite different from treating a case of pneumococcal pneumonia, where generally all one has to do is apply the medicine and good results may be expected to follow. In the program of rehabilitation one cannot force anything upon a patient. He cannot be forced to contract the muscle. He must be in a frame of mind in which he wishes to do it.

As I have already mentioned, the matter of rehabilitation does not end here. There still remain the matters of social adaptations and vocational guidance, for one of the most important aspects is that of getting the individual back to work.

Dr. Hansson: Are there any questions?

Dr. Harry Gold: In relation to the very interesting remarks of Dr. Lorenze, I should like to recall a demonstration in rehabilitation which I witnessed a few years ago. The patient was an old man, just skin and bones, who had for many months been completely incapacitated and confined to bed, being fed by others, and having to have his personal hygiene managed very much like a baby's. He was taken in hand by an expert in rehabilitation whose main concern was with the problem of convincing the patient that he could do a great deal more than he did and that most of the things that were now being done for him he could learn to do for himself. The result was truly remarkable. After some weeks of this kind of training the patient was able to get in and out of bed, sit in a chair, walk, feed himself, and look after his bowel, bladder, and bath without any help. This restoration relieved a great many hands that were previously needed to keep him alive. It is of course easy enough for us to say that many of these patients can do more for themselves than they think they can, but the real job is that of getting this idea across to the patient and developing in him an interest in trying.

DR. LORENZE: This point of view cannot be stressed too much. It is my belief that the goal of treatment that can be attained in these cases is not that of creating a new function but of reactivating residual ability not at first apparent to the patient. In this connection I sometimes wonder about the validity of the theories of neuromuscular re-education technics which involve the idea of rechanneling motor impulses through new pathways.

DR. GOLD: Perhaps we can carry the point a bit further by asking this question: What does it mean if such an elderly patient as I have just described states, "I cannot lift my leg at the hip. I just can't do it and that's all there is to it." Yet when the expert in rehabilitation is finished with him, he can do it.

DR. LORENZE: The ability to do it was there all the time. I imagine that the individual who goes to bed one night and wakes up the next morning with a paralyzed right side suffers not only the organic injury but a psychologic injury. When you examine such a person in bed, you discover that he is unable to move the leg at all. Then, if you stand him up with a person on each side for support, you may become aware of the fact that there is some flexion at the hip, perhaps also some contraction in the hamstrings. The paralysis in this person was not really complete, but he thought he was completely paralyzed and for psychologic reasons failed to initiate a movement. The capacity for movement was there all the time. This is the thing that can be further and further developed, and it is a thing that happens in the program of rehabilitation training. We frequently see patients in bed who seem to be completely paralyzed who, shortly after we begin to work with them, begin to show muscular action of varying degrees proving that the paralysis is not complete. In terms of an active life the disability of the hemiplegic seems like a catastrophe with nothing hopeful in it. However, those people who have suffered a hemiplegia and have already passed through a period of complete helplessness are often able to derive a great deal of comfort out of the small improvements in their capacity to take care of themselves.

DR. GEORGE READER: Dr. Hansson, we have heard a good deal about the uses of the treatments in physical medicine. I wonder if we could hear more about how these measures are misused and what we ought to guard against in their use.

DR. HANSSON: Would you answer that, Dr. Austlid?

DR. GOLD: Maybe Dr. Austlid would comment on the contraindications he mentioned in regard to the use of diathermy. I think he said it was contraindicated in thrombophlebitis and in peripheral vascular disease. What does it do, and how does it hurt?

DR. AUSTLID: Diathermy seems to increase the pain in thrombophlebitis. The trouble in peripheral vascular disease is that the increased heat by diathermy leads to relative anoxia because of the failure to obtain a corresponding increase in the circulation. The metabolism is increased without sufficient oxygen, and pain is sometimes increased.

VISITOR: It may actually lead to gangrene.

DR. AUSTLID: Possibly.

DR. GOLD: It is interesting that the unfavorable balance may be so pronounced as to cause gangrene.

DR. AUSTLID: There is also the fact that diathermy in peripheral vascular disease is apt to get the tissues too hot because of the diminished blood supply and because of the fact that it is through the medium of the blood that the heat is normally dissipated.

DR. HANSSON: I would like to answer Dr. Reader's question about the abuses in physical medicine as I see them. The most common one is overtreatment, the patient being treated for too long a time and often with the improper modality. Take the case of painful shoulders. They are sometimes acutely painful, but they get better in a week or so with any one of a host of treatments, x-ray, ethyl chloride spray, heat, cold, and many other things. This is essentially a self-limited condition. It gets well anyway. The thing that is important, however, is to provide against stiffness and freezing of the shoulder joint. The common error in the treatment is the neglect of exercises to prevent the stiffness. The case of low back pain is another example of abuses in physical medicine. A great deal of time and effort is wasted in applying massage, diathermy, shortwave microtherapy when the real problem is that of the correction of body mechanics. A properly devised exercise which the patient may carry on himself at home twice a day does much more good than the day-after-day and week-after-week treatments in the doctor's office.

Dr. Solomon Garb: Suppose the diminished blood supply to the extremities was due to a spasm of the vessels rather than to permanent changes in the arteries, would diathermy still be contraindicated?

Dr. Austlid: Diathermy would be useful in such a case, but the heat would be applied to a part higher up. This would cause a general increase in the circulation and indirectly an increased flow through, let us say, the leg. It would not be wise to apply the heat directly to the leg.

Dr. Garb: How long does such dilatation last?

Dr. Hansson: From about one-half to two and one-half hours.

Dr. Janet Travell: We had a therapy conference some years back in which Dr. Hansson pointed out that pain is very much aggravated in a certain number of cases of acute muscle spasm, presumably if there is congestion or vasodilatation or local irritation or true myositis of some type.

I have myself many times seen persons with acute muscle spasm in whom diathermy has made matters temporarily worse. It may well be that heat, as commonly applied, is too intense. It may actually serve as an additional irritant.

Dr. Austlid: In acute neuritis it may aggravate the pain if the heat is too intense.

Dr. Travell: I wonder if overheating is not the reason that patients with thrombophlebitis are made worse by diathermy. These patients also have acute muscle spasm and may have edema, vasodilatation, and congestion in the muscles.

Dr. Austlid: It is very easy indeed to get overheating with diathermy. Hot packs supply more superficial heating and cause dilatation of the arteries indirectly.

Dr. Reader: Is there any advantage in one source of heat over another, let us say, diathermy as contrasted with infrared lamps?

Dr. Austlid: Theoretically there is quite a difference, but in practice there is not so much. A shortwave with an induction cable, as I mentioned, provides electromagnetic heating. By this method the muscles and the vascular bed get most of the heating. On the other hand, with condenser pads you get most of the heating in nonconducting tissue like skin, fat, and bone. However, because heat is dissipated through the circulating blood and temperature is also lowered through conduction, much of the difference between these forms of therapy disappears. Infrared gives a much more superficial heat. It is preferable, for instance, for application to the hip in arthroplasty with a vitallium cup. Here it is undesirable to heat the deeper structures for reasons I stated earlier in the conference. Still, by heating the skin and superficial tissues you can increase the circulation in the part to which it is applied.

I would like to mention one point in regard to the misuse of the technics of physical medicine. Patients are often referred to us from other clinics without a diagnosis and presumably because they do not know what to do with them.

Physical therapy becomes a wastebasket for undiagnosed cases. Many of these are in pain, and they are referred with the suggestion for the use of some form of heat. If there is no tenderness and no spasm, heat is not likely to accomplish very much. We should avoid treating these patients unless we know as much as we can about what they have.

Dr. Seymour H. Rinzler: Could we have a word about the kind of machine one should have in the office, high or low-frequency?

Dr. Hansson: The Federal Communications Commission has something to say about that.

Dr. Austlid: For shortwave machines there are three different frequencies. The wavelengths are approximately 7.5, 10, and 20 M. In the microwave several frequencies are allowed, but the one most commonly used is 12.2 cm.

Dr. Hansson: I would suggest that when you secure an apparatus you look for the tag "Accepted by the F.C.C."

Dr. Rinzler: Which ones do they not accept?

Dr. Hansson: The longwave machines are no longer acceptable. According to law they had to be discontinued by July, 1953.

Dr. Gold: In the way in which doctors by and large use these machines and considering the conditions for which they are usually employed, would you not agree that their effect is simply that of a placebo in about 90 per cent of the cases?

Dr. Hansson: I would say yes.

Dr. Austlid: In orthopedic hospitals and in hospitals having a good physical medicine department, one is apt to encounter a good deal of rationality in the application of physical therapy. Much is now known about the conditions in which particular technics are most useful, and this knowledge is frequently applied. One must still guard against a practice which continues on because of the fact that most physicians are not sufficiently familiar with specific indications for particular physiotherapies. It is not uncommon to have the doctor order some diathermy for a frozen shoulder. It has little effect on the frozen shoulder, but what actually would have an effect is often omitted, namely, regular exercises after the heat, the heat serving to loosen up the joint and the active exercises tending to prevent stiffness. The heat itself will do very little.

Dr. Frank C. Ferguson, Jr.: I have often been puzzled by the apparent limitations in the benefits of physiotherapy. A patient with bursitis might receive diathermy in a course of eight or ten treatments over a period of about three weeks with some improvement, and then for some reason the benefits cease as if the patient had developed a tolerance to the treatment.

Dr. Lorenze: This may be due to the use of a single modality in treatment with physical measures. It is a mistake to use one method to the exclusion of others. I know of no condition which is properly treated by diathermy alone, by infrared alone, or by hot water alone. It is imperative that the individual who is treating should understand precisely what he is trying to do in relation to the nature of the pathology. The single modality, for example, rarely corrects the trouble in acute bursitis of the shoulder. The thing that is important is not so much the early days of pain, which can be easily relieved with drugs or by physical measures, but the fact that the condition goes on to develop adhesions of the rotators and adductors of the shoulder. The most important aspect of the treatment is prevention of limitation in range of motion by the use of therapeutic exercise.

Dr. Hansson: In regard to the question about addiction, I should like to say that we have addicts to physical medicine.

Dr. Ferguson: The doctor in his office usually employs only one modality. The general practitioner does not, as a rule, undertake a program of passive exercises or re-education. Would it be feasible, for example, to place a limit on the use of diathermy for any particular condition and say that if the results are negligible after so many treatments, the method should be abandoned?

Dr. Lorenze: It is difficult to set a limit. One who knows his business should have little difficulty arriving at the conclusion that in the particular case the treatment is leading nowhere.

Dr. Hansson: I would say a trial of two or three weeks would be the upper limit.

Visitor: It seems to me that the point should be stressed that even in the doctor's office the use of one modality alone should be avoided.

Dr. Hansson: You are quite right. You should try to obtain the patient's cooperation and get him to take the proper exercises at home two or three times a day. That will do much more good than coming to the doctor's office for diathermy.

Summary

Dr. Gold: This conference directed attention to prevailing attitudes in relation to physical therapy and physical medicine, which are in need of revision. Patients with neuromuscular and skeletal symptoms and disabilities are referred to departments of physiotherapy for one or another form of treatment, massage, heat, ultraviolet, infrared, diathermy, or the like, without a specific diagnosis, without pertinent objectives, and without sufficient understanding of the specific applications of the various modalities of physical medicine. The discussions developed a clear-cut picture of physiotherapy in its current form as a medical discipline based on sound scientific principles, rational procedures, and rich in experience concerning indications, contraindications, benefits, dangers, and choice of methods for the best results.

There is a detailed account of the chemical and thermal effects of electric currents on human tissue, their use in stimulating atrophic muscles and testing for nerve degeneration, the nature of the action of diathermy in contrast to superficial forms of heat, the dangers of diathermy. The point was stressed over and over again that a single modality of physiotherapy is rarely the answer to the patient's problem, that several forms of treatment are usually needed. The issue was typified by the case of the "frozen shoulder" for which diathermy alone is so often prescribed for the relief of pain and the muscular exercises so often neglected, although these are the more important from the standpoint of ultimate recovery.

The discussion was extended to the field of rehabilitation. In this physical medicine plays a prominent role, but the total program is much larger, including occupational therapy, retraining technics, prosthesis, and psychologic reorientation to enable the disabled person to make the most of his latent and potential abilities. It has been one of the most noteworthy discoveries in this field that the disabled person is not nearly so disabled as he thinks and that with suitable attention to the psychologic aspects of disability many are restored to a functional state in which they are able to look after themselves and even engage in useful occupation.

The Worcester Tornado

On June 9, 1953, a tornado struck Worcester, Massachusetts, killing 93 persons and injuring about 1,500. The following is a condensed account of Dr. George R. Dunlop's observations concerning the effectiveness of civil defense measures applied to a community disaster.

"By 7 P.M. the picture in the accident room of Memorial Hospital might be described as follows.

"One was met with a wave of humid heat, noise, and confusion. Casualties were lying on the floor, desks, and stretchers. Whole swarms of people were moving about; some working; some with looks of desperation stepping over bodies, peering under blankets, looking for loved ones. . . . . Although I had seen hundreds of war casualties, I had never seen more dirt, gravel, and grass than had been ground into the clothes, skin, and wounds of these poor individuals.

"During the next few hours order developed out of chaos as nurses, doctors, and volunteers rolled up their sleeves and went to work. The number of civilians who suddenly appeared out of nowhere with first-aid training was impressive, thanks to the demands of the last World War.

"The hospital was partly emptied and extra beds and cots set up. The cases of shock were segregated and given transfusions. The patients with large lacerations and major fractures were moved into the operating room suite. The medical men sewed up minor wounds. The head and chest cases were soon seen by the proper specialists, and, by early morning, 338 casualties had been examined and cared for.

"Several observations seemed evident. In an emergency the admitting physician assigned the duty of sorting and routing the casualties may never arrive at the hospital. He may not hear of the catastrophe, or he may be held up in traffic, or injured. If a physician is not present at the front door, the proper and immediate segregation of the casualties is impossible. It is easier to organize a smooth flow of traffic than to try to unravel a traffic jam. . . . . The first physician arriving at the hospital should assume this duty and screen the casualties as seems best . . . . .

"Our experiences in the recent tornado suggest that in the event of another disaster—

1. The police department notify the hospital as to the anticipated number of casualties to be handled and a policeman be dispatched to the admitting department;
2. The resident surgeon assume the responsibility of screening casualties until he can be relieved by the first attending physician who arrives;
3. The staff . . . .familiarize themselves with the method of sorting and assigning patients to a specific area of the hospital for treatment . . . . .
4. Our experiences re-emphasize the fact that the average hospital is set up to process a large number of casualties . . . .once the initial traffic jam has been straightened out."

SELECTED REPRINTS

Editor's Note: *Occasionally the editors of the* Journal *find articles or editorials in other medical publications which seem to us so noteworthy that reprinting them for the information of the readers of the* New York State Journal of Medicine *seems to be indicated as a function of good medical journalism. These reprints will appear from time to time in this department.*

*The Harmful Effects of Tobacco**

Presented at the Practitioners' Conference, New York Hospital-Cornell University Medical Center, December 2, 1953

Chairman

Claude E. Forkner, M.D., Professor of Clinical Medicine, Cornell University Medical College; Attending Physician, New York Hospital

Panel Members

Greydon Boyd, M.D., Associate Professor of Surgery, New York University; Surgeon, New York Eye and Ear Infirmary; Consultant Surgeon, Veterans Hospital, Brooklyn

Norman Wilson, M.D., Assistant Clinical Professor of Surgery, Tufts College Medical School; Thoracic Surgeon, New England Deaconess Hospital, Boston, Massachusetts

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Chairman Claude E. Forkner: Today we are having a conference on the harmful effects of tobacco.

I have one or two statements to make. In a paper by R. B. Scott in the *British Medical Journal,* March 29, 1952, is a historical note that I thought would be of interest.

He says that so far as Western civilization is concerned, the history of tobacco begins on October 13, 1492, when Christopher Columbus landed on the island he named San Salvador. The natives sought to propitiate their visitors with rare gifts including among them some dried leaves which the Spaniards later threw away with smiles at the artless generosity of the savages. Nevertheless, within fifty years these leaves were eagerly sought in Europe and recommended for their medicinal property by the Ambassador in Lisbon, Jean Nicot, who later gave his name to nicotine. Within the century the habit of pipe smoking had been firmly established in England. It survived the formulations of James I who published his counterblast to tobacco within a year of coming to the throne, stigmatizing smoking as a custom loathsome to the eyes, hateful to the nose, harmful to the brain, and dangerous to the lungs.

In continental countries where deterrents were more vigorous, the habit of smoking spread less. In Russia smokers were discouraged by amputation of the nose, and in the Swiss canton of Berne the offence was ranked only one degree less odious than adultery. The prohibition of smoking in the streets was rigidly enforced in the streets of Berlin up to 1849.

I have asked a patient to tell you in thirty seconds why he stopped smoking. Would you, sir, tell us why you stopped smoking?

Patient: Dr. Forkner, I have no prescribed speech. I didn't give up smoking because of fear of cancer. I gave it up because I had an irritation of the throat. I noticed the difference almost immediately. The next day my breathing was easier, and I seemed to be more alert. I found that sometimes I seemed to be in a fog. I became convinced that this mental dullness was due to cigarets. To me it seemed they were a form of sedative which was no longer active after I ceased smoking. The only thing wrong now is that I am getting too fat. I don't know whether I can afford it or not.

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* Reprinted from *New York Medicine,* **10**: 356 (May 5) 1954.

Chairman Forkner: Thank you. Dr. Sutton, would you tell us why you stopped smoking?

Dr. John E. Sutton: I smoked cigarets and I smoked many of them—a pack and a half or two packs a day. On the 9th of August, Sunday morning, I awakened with my left arm asleep. That was not unusual because for years I slept with a thin pillow or no pillow and used my arms instead. For a number of years we have had a custom of taking black coffee in a thermos up to our bedroom and having it the first thing in the morning. It was a very comfortable habit, and I smoked one, two, three, sometimes four cigarets with my black coffee. I did that on the morning of the 9th of August, not thinking anything of it at all until I found that my left arm had not come to life. In fact, it had become completely dead up to my elbow. I could not move a finger. My thumb, fingers, hand, and arm were white. The fingernails were cyanotic. I loafed around. I said nothing to my wife, and she did not think it anything too unusual that I loafed around on Sunday morning. For about two and one-half hours I did no smoking, but during that time I thought it wise to call up some friends of mine. I telephoned a neurosurgeon and a neurologist and told them my symptoms and what had happened and my habit of sleeping on my arms and something about smoking and the black coffee. They concluded that I had been sleeping on my arm. That was a natural conclusion.

During the morning I had considerable time to think about things and I came to the conclusion that the symptoms were not entirely due to sleeping on my arm. I began to get a little sensation back in my hand, but I could not use it. I could not shave. I could not dress. I could not tie my necktie. I could not button a button. So I said to my wife that I was going to try an experiment and that it may prove what was wrong with me. I had been smoking cigarets for thirty years. So I picked out one of my favorite cigarets and began inhaling it as I usually did. The tip of my thumb and all of my fingers began to tingle. They became dead and white and that tingling and dead feeling went up to my elbow, and I was right back where I started from, with a perfectly paralyzed hand and arm. I was admitted to the hospital and had a course of anticoagulants administered. Gradually improvement occurred. I went south and had some good baking in a tropical climate. I got back to New York and started operating again on the 28th of September.

Chairman Forkner: Have you smoked again?

Dr. Sutton: Not on your life.

Chairman Forkner: I have asked Dr. Wynder to open this conference, if it is not already open, by making a few remarks. Then we are going to show you two cases briefly. Dr. Wynder!

Dr. Ernest L. Wynder: Dr. Forkner, first of all, I think we must be aware that there are two sides to this problem, and I think we should not take either extreme. One extreme that I recall was written by Dr. Abbott in the 1800's when he wrote about the effects of tobacco, and he stated that he has never seen a man smoking a cigaret who is trustworthy or honorable. I have too many friends of my own who smoke so I would hate to agree with such statements. On the other hand, the statements that we read today in advertisements go to the other extreme saying that there are no harmful effects at all in smoking.

We are convened here today to decide what is fact and what is fancy in regard to the effect of smoking on various diseases.

There are a number of diseases which have been considered in the medical literature to be associated with tobacco smoking. Among these are vascular diseases, gastric ulcers, some allergic disorders, certain throat conditions, and, finally, and perhaps what has brought this entire subject into the great limelight today, is the possible association of smoking to cancer.

In the evaluation of these diseases we must think along two lines. One is the effect of tobacco on vascular diseases. This effect probably is related to the nicotine content. The other effect is related to its possible irritating nature which we believe is due to the tars in tobacco. These two facts we must keep separate.

We are discussing this subject today as scientists and as physicians and as such we want to know the part tobacco may play in the etiology of various diseases and how by controlling the effect of tobacco, if we determine that it has an etiologic effect, we can control some of these diseases. Our only concern is the welfare of our patients. We have nothing to sell. Our job as physicians is to fight disease. If in this task we find evidence of harmful effects on the health of patients by any given agents, then we must try to modify these agents or their use.

We are now opening the discussion to determine, as I said in the beginning, what is fact and what is fancy. Some of the things we read today in regard to tobacco coming from our own medical profession may be exaggerated, but much is truth, and that truth we would like to ascertain this afternoon.

Chairman Forkner: Thank you, Dr. Wynder. I agree entirely with everything that Dr. Wynder has said. I don't want to leave the impression that we are trying to attack the tobacco companies. We are aware that some of the great tobacco fortunes of this country have contributed to medicine. They have built a great university, Duke University, and I believe Wake Forest University, and have contributed to the medical schools. We fully believe that the tobacco industry wants to continue to be philanthropic and of benefit to the people, but I feel that in their eagerness to sell their products that they have misled the people and themselves.

Now we are going to show two cases. The first case will be presented by Dr. Barakat.

Dr. Russel Barakat: This is the first New

York Hospital admission of a fifty-six-year-old white, male, widower, chauffeur, who came into the hospital because of cough. Six weeks prior to admission he had a cold which lasted for two or three days. This respiratory infection left him with a chronic cough. Three weeks prior to admission he acquired another cold. At this time he consulted his family doctor, who took a chest x-ray and found a "spot" on the lung. He was advised to come to the hospital. Two weeks prior to admission he experienced some dyspnea.

He had been known to smoke for forty years, about 30 cigarets a day, plus an occasional cigar or pipe. He usually inhaled the smoke. He had no history of tuberculosis or chronic bronchitis or asthma. He had no chest pain or hemoptysis. The family history, past history, and review of systems were noncontributory.

On physical examination the vital signs were essentially normal. Rectal temperature 37.8 degrees C., pulse 80, respirations 24, blood pressure 135/75. The only positive finding was found to be clubbing of the fingers. The routine laboratory examinations were within normal limits except for a white blood cell count of 11,600 per cu. mm. Further routine screening studies were done as you see on the chart. The results all were negative—urine, Mazzini, blood urea nitrogen, fasting blood sugar, prothrombin time, sputum culture, and intravenous pyelogram. The sputum was studied by Dr. Papanicolaou and was class II which is negative. X-ray films of the chest were taken, and the results will be shown.

CHAIRMAN FORKNER: Dr. Barakat, will you tell us about the films?

DR. BARAKAT: There is a density here at the upper lobe of the right lung. That is the only positive finding. It was decided to do a right pneumonectomy. This was done, and carcinoma was discovered with metastases to the hilar lymph nodes. The operation was done on the 23rd of November. The condition of the patient is good, and he is up and around. Shall I show the patient?

CHAIRMAN FORKNER: Yes.

(*Patient comes in.*)

Dr. Barakat, have you anything to demonstrate on this patient?

DR. BARAKAT: I would like to show you the clubbing of the fingers which was the only positive finding.

CHAIRMAN FORKNER: Will that clubbing disappear, Dr. Wilson?

DR. NORMAN WILSON: I would like to know how long it has been present.

DR. BARAKAT: It has been present for thirty years.

PATIENT: I used to bite my fingernails.

CHAIRMAN FORKNER: How long have they been bent over, bigger on the end?

PATIENT: About thirty years.

CHAIRMAN FORKNER: They probably will not disappear.

DR. WILSON: I don't think they will change.

CHAIRMAN FORKNER: If it were recent in origin, the clubbing would disappear. Are you smoking now?

PATIENT: No, sir.

CHAIRMAN FORKNER: Are you going to resume smoking?

PATIENT: I am afraid not.

CHAIRMAN FORKNER: Are there any questions you would like to ask this patient?

DR. WILSON: I would like to ask him about his cough that took him to his family doctor. How did your cough change?

PATIENT: I caught a cold.

DR. WILSON: You started a head cold?

PATIENT: Running nose, watery eyes, etc., kind of depressed me. I went over to the doctor. He gave me an antihistamine or so. I got rid of the cold, but I never did get rid of the cough. That lagged for three or four weeks. Then I caught another cold on top of that.

CHAIRMAN FORKNER: Did you have a cough before you had the cold, a smoker's cough?

PATIENT: Occasionally in the mornings. If I had a heavy night the night before, I would get a throat clearing out the next day.

CHAIRMAN FORKNER: We hear about smoker's cough, smoker's larynx, smoker's angina, smoker's asthma, smoker's lung, smoker's throats; did you have any of these?

PATIENT: Well—

CHAIRMAN FORKNER: Thank you very much.

(*Patient leaves.*)

DR. LAWRENCE SONKIN: I brought another patient down who has the identical history of this patient. I thought we might just bring him in to show that the woods are full of them.

(*Patient comes in.*)

CHAIRMAN FORKNER: How long have you been smoking?

PATIENT: About forty years.

CHAIRMAN FORKNER: How many cigarets a day?

PATIENT: An average of three packs a day.

CHAIRMAN FORKNER: Do you smoke a pipe or cigars?

PATIENT: Just cigarets.

CHAIRMAN FORKNER: Three packs, forty years. You are a little hoarse now. Have you always been that way?

PATIENT. No, since the bronchoscopy.

CHAIRMAN FORKNER: What did they find on the bronchoscopy?

PATIENT: They did not tell me.

CHAIRMAN FORKNER: Have you had a cough?

PATIENT: Not much since my operation, but I have had a smoker's cough, yes.

CHAIRMAN FORKNER: What do you spit up with it?

PATIENT: Nothing at all.

CHAIRMAN FORKNER: Have you ever stopped smoking in forty years?

PATIENT: Yes, since my operation.

CHAIRMAN FORKNER: Thank you very much for coming in. Are you going to start smoking again?

PATIENT: Definitely not.

CHAIRMAN FORKNER: The next patient will be presented by Dr. Dame.

DR. RICHARD DAME: The second case this evening is that of a twenty-six-year-old, white, male Czechoslovakian draftsman who entered the New York Hospital for the second time on the 16th of September, 1952, with the chief complaint of gangrene of the right fifth finger manifested by a discoloration and extreme pain.

His present illness dates back to about November of 1948; at that time he had been in a displaced persons' camp. For about five months prior to this, he had been smoking quite heavily, up to a pack and one-half a day, but when he entered the displaced persons' camp, cigarets became less available to him, and he restricted himself to two, three, or four cigarets a day. In November of 1948 he developed pain in the left second toe which bothered him considerably. Soon after that he developed discoloration and severe pain in the fourth toe of his left foot. In December of 1948, a month later, left lumbar sympathectomy was done, apparently as a result of the diagnosis of thromboangiitis obliterans. However, following that the patient continued to smoke cigarets to the extent of five or ten a day, never having been told to stop.

However, he was asymptomatic until about March of 1940 when the left fourth toe, on which he had the gangrene previously, was amputated. Again he was well and asymptomatic although he continued to smoke until January, 1950, when he developed gangrene of his right third and fifth toes, and a right lumbar sympathectomy was done. At this time he was still in Germany. Amputation of the third and fifth toes of the right foot was also performed. He continued to smoke, never having been told to stop. In December, 1950, he developed a paronychia on the first toe of the left foot, which responded well after the nail was removed. In June of 1951, having been asymptomatic since December of 1950, he came to the United States to live and was well until September of 1951. He continued to smoke and developed gangrene of the first toe of the left foot. This was soon followed in November by a cold and tingling sensation of his hands.

He was admitted to the New York Hospital in January, 1952, for the first time with the physical findings essentially as described above, the amputated toes, the gangrene of the left first toe, and cold hands. He was placed on a rocking bed, given Priscoline, whiskey, local heat, débridement of the wound, and a course of therapy with typhoid vaccine. Smoking was discontinued for the first time. An incidental bladder stone was discovered and removed. He was discharged after three months and in May of 1953 felt so well and had been so asymptomatic that he decided to stop taking Priscoline and started smoking again. He was cautious enough to begin smoking a brand of cigarets that advertises a micronite filter.

In August, about three months later, he developed a phlebitis of the right foot which was treated by his private physician. About the same time he injured the fifth finger of his right hand striking it with a hammer, creating a lesion which never seemed to heal. On the 16th of September, 1953, he was admitted to the New York Hospital for the second time.

On physical examination his vital signs were within normal limits. The positive physical findings were restricted to the extremities. The nailbeds were found to be quite cyanotic. The brachial pulse on the side was weak. His hand was cold, and gangrene of the tip of the fifth finger was noted. Also the ulnar pulse on the left hand was weak. The amputations of the toes on the feet were noted. There was bilateral absence of the dorsalis pedis and posterior tibial pulses.

The laboratory work at that time was essentially negative, and the course of therapy was almost identical with the previous admission. He was discharged after three weeks.

CHAIRMAN FORKNER: Dr. Wright, what does this sound like to you?

DR. IRVING S. WRIGHT: It sounds like a perfectly typical history of a person with thromboangiitis obliterans who continues to smoke either without periods of intermission or with them. This man has been followed in the Vascular Clinic, and we have seen him repeatedly. We still encounter a number of these patients who have never been told to stop smoking. They frequently submit to multiple sympathectomies which are quite futile if the patient continues to smoke. I think that perhaps now this patient has learned that he cannot smoke. I hope he has. It is a very serious matter with him. If he continues, he is in danger of losing his legs and his arms.

CHAIRMAN FORKNER: You think that people can stop smoking when they want to, Dr. Wright?

DR. WRIGHT: Patients can definitely stop smoking if they make up their minds to. On the vascular clinics and services we have stopped hundreds of patients from smoking in the last twenty years. With some there has been great difficulty due to the vagaries of human nature.

CHAIRMAN FORKNER: Are you smoking now?

PATIENT: No.

CHAIRMAN FORKNER: Are you going to smoke in the future? (*Patient shrugs his shoulders.*)

DR. WRIGHT: If he does, we will have him back in the hospital all too soon.

CHAIRMAN FORKNER: Do you think from your own experiences that these troubles you have are related to smoking?

PATIENT: Yes.

CHAIRMAN FORKNER: What happens when you smoke? Do you notice any trouble with your extremities? Do they change color, or do you have pain in your toes or fingers?

PATIENT: Not at the time I am smoking but perhaps later.

DR. LAWRENCE SONKIN: Would you tell us what happened to your hands, sir, after you started smoking cigarets with micronite filters again? Did you notice some change in color?

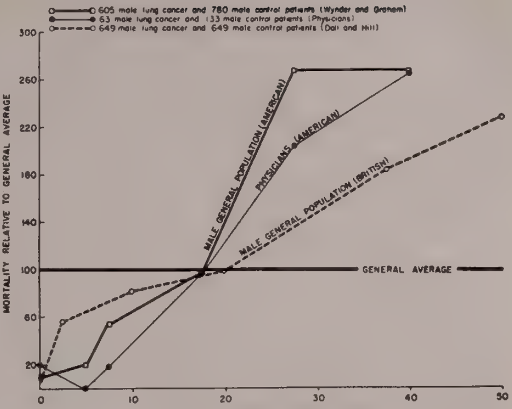
PATIENT: My hands were turning white.

CHAIRMAN FORKNER: Micronite filters did not prevent your trouble?

TABLE I.—PER CENT DISTRIBUTION OF 870 MALE PATIENTS WITH EPIDERMOID, UNDIFFERENTIATED, OR UNCLASSIFIED BRONCHIOGENIC CARCINOMAS AND 780 MALE CONTROL PATIENTS OF SIMILAR AGE AND ECONOMIC DISTRIBUTION, ACCORDING TO TOBACCO CONSUMPTION OVER A 20-YEAR PERIOD

Smoking Classification* (Total)	Lung Cancer Patients (870)	Control Patients (780)
Less than 1	1.6	14.6
1 to 9	2.6	11.5
10 to 14	9.2	19.0
15 to 20	35.1	35.6
21 to 34	30.8	11.5
35 or more	20.7	7.6

* Equivalent number of cigarets per day. One cigar has been arbitrarily treated as the equivalent of 5 cigarets and a pipeful as $2^1/_2$ cigarets.



Courtesy New York Medicine

FIG. 1

PATIENT: No.

(*Patient leaves.*)

CHAIRMAN FORKNER: Dr. Wynder, have you anything that you would like to tell us now to develop your point further?

DR. WYNDER: As you undoubtedly know, a relationship between cancer of the lung and tobacco is believed to exist. I should like to review briefly the extent of the evidence for this association. The subject came into being during the last two decades because cancer of the lung has become the most common cancer in males and in many areas of the world accounts for one third of all cancer deaths in males.

There is hardly any disagreement today on the point that the increase that has taken place in cancer of the lung has been real. The primary reason for this has been the fact that the increase has been primarily in males. Today the sex ratio of cancer of the lung is up to 20:1, and if you take just epidermoid cancer of the lung, the ratio may reach up to 40:1. If it were a question of improved diagnostic means or aging population, we should expect as much increase in women. The fact that the increases has occurred primarily in males leads to the suspicion that it might be due to a factor to which males have been exposed more and over a longer duration of time than women. It stands to reason that tobacco was considered to be one of these factors.

Such an association has been thought to exist first because the curve of increased sales of cigarets runs closely to the increased incidence of cancer of the lungs. This has never impressed us very much because of things now in our environment such as gasoline fumes, nylon stockings, refrigerators, television, etc. Because of the ever-increasing incidence of lung cancer, Dr. Graham and I began an investigation in 1948 trying to determine whether there could be any association of environmental factors in relation to cancer of the lung. In this study we investigated all possible factors. We investigated occupations. We found a few occupations which seemed to have a higher than expected frequency of lung cancer, but they could not account for the great increase in lung cancer. We investigated the urban and rural distribution of lung cancer, about which I want to say a little more later. It must be realized in this regard that cancer of the lung had also increased in farm areas. Finally we found that tobacco was positively associated with cancer of the lung as compared to our control patients.

Table I shows the summary of our first paper. The two outstanding features of the graph are that the control patients include considerably more nonsmokers than are found among lung cancer patients, whereas among the lung cancer patients there are considerably more excessive chain smokers than in the control group. These patients are of similar age and economic distribution.

Figure I summarizes these data by showing that the risk of developing cancer of the lung seems to increase in direct proportion to the amount smoked. This was also shown in a study by Cornfield and myself in which we analyzed the tobacco habits of physicians who died from cancer of the lung, and we found what was true for the general population is true also for the physicians. The more these patients smoke, the greater is the chance of developing cancer of the lung. The lower curve, taken from a study of Doll and Hill in England, which today has been extended to 1,465 cases of cancer of the lung, demonstrates the same relationship which we found in this country. During the past three years a large number of different studies has been published comprising more than 6,000 patients with cancer of the lung and a similar number of controls. All confirm this type of data, namely, that the more a patient smokes, the greater is the chance to develop cancer of the lung, and it is exceedingly rare for a nonsmoker to develop cancer of the lung.

CHAIRMAN FORKNER: How common is cancer of the lung in relationship to other cancers?

DR. WYNDER: Cancer of the lung today accounts for about one fourth of all cancer deaths in males in England. In Austria it accounts for one third of all cancer deaths in males, and it is rapidly increasing.

Table II shows the distribution of cancer of the lung among various types of smokers. I think that

TABLE II.—Present Distribution of Lung Cancer and Control Groups by Type of Smoker

Type of Smoker	Estimated Annual Mortality per 100,000: Among Physicians	Estimated Annual Mortality per 100,000: Among General Population
Nonsmoker	10	4
Smoker		
Total	60	58
Predominantly		
Pipe	40	16
Cigar	24	22
Cigaret	84	70

TABLE III.—Smoking Habits of General Male Population in Greater London (1,393) and Rural Districts of England (327) [Doll and Hill]

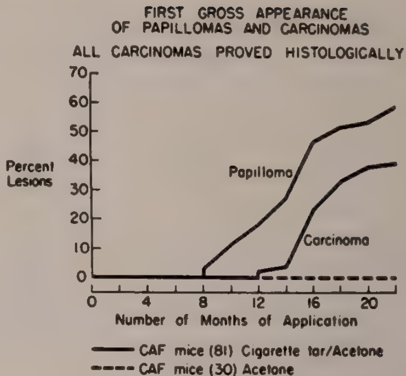
	Greater London	Rural Districts
Nonsmokers	5.1%	10.4%
Heavy cigaret smokers	14.6%	7.7%
Pure cigaret smokers	74.2%	58.4%
Cigaret/pipe smokers	16.0%	21.5%
Pure pipe smokers	4.8%	9.8%

cigarets have been a little bit unduly regarded as the only type of tobacco related to cancer of the lung. These data show that the mortality among pipe smokers and cigar smokers is also greater than among nonsmokers. The reason why we believe that pipe smoking and cigar smoking are perhaps less associated is because of the practice of inhaling which is more commonly practiced among cigaret smokers.

Table III shows a distribution of smoking habits in England among city people and among farm people. A few investigators believe that air pollution is an important factor in cancer of the lung because cancer of the lung occurs more commonly in cities. It is well established that cancer of the lung does occur more in cities, but this does not mean that air pollution is a factor. The British have tackled the problem and showed that city people smoke more cigarets than farm people and that there are more nonsmokers in the rural areas. Differences in smoking habits must be considered before one can condemn air pollution as being a factor in the development of cancer of the lung.

Recently, Doll has demonstrated that statistically a nonsmoker, regardless of whether he lives in city, suburban, or rural areas, has the same chance of developing cancer of the lung, a chance which is very low. Therefore, air pollution does not seem seriously to affect the development of cancer of the lung. Because of the evidence we had at hand, Dr. Graham, Miss Croninger, and I proceeded to determine whether cigaret tar could induce cancer in animals.

Recently you read some statements in newspapers that animal data, which I shall present, prove nothing as far as human cancer is concerned. I should like to state that these animal data were obtained because of the human evidence already at hand. Furthermore, throughout the history of animal cancer research there was a close correlation between animal data and cancer in man. This holds true particularly for epidermoid carcinogenesis in mice and men.



Courtesy New York Medicine

Fig. 2

We produced tobacco in a smoking apparatus which simulated human smoking habits. The tar obtained from condensed cigaret smoke was applied to the backs of mice, 40 mg. dissolved in acetone three times a week. At the end of the first year the first carcinoma was noted.

This was typical undifferentiated carcinoma with typical mitotic figures. Miss Croninger transplanted one of these cancers through 13 generations which shows definitely that it was a true neoplasm.

Figure 2 shows a summary of these data. At the end of two years 44 per cent of 81 mice painted with this condensed smoke developed cancer of the skin, whereas none of the control animals painted with acetone alone developed any cancer. These animal data have proved that tobacco tar does indeed contain carcinogenic elements. It does not prove that it contains elements that are also carcinogenic to man, but as I stated before, these studies were done because of the evidence already at hand in man, and the great significance of these data we believe is that they give us a working tool with which to examine these tars in order to determine which fraction in these tobacco tar samples is carcinogenic. At the present time we have no idea which fraction or fractions within tobacco smoke are carcinogenic. Experiments are now at hand both in Washington University, Memorial Hospital, New York University, and other institutions in this country to determine these elements. We believe that if these substances can be identified and should be removable from tobacco, we would make tobacco less harmful, at least as far as its carcinogenic effect is concerned. We believe that any carcinogenic material is a specific substance. We do not believe that chronic irritation per se is carcinogenic. We have, therefore, instituted these large research projects trying to identify the active carcinogen in the tobacco. It would, therefore, seem to us that there is a positive association between cancer of the lung and smoking as far as human data are concerned.

At a recent conference in Louvain, sponsored by the World Health Association and UNESCO, the relationship was regarded as established. The fact that cancer of the lung is so common, that its incidence increases from year to year, and that statisticians tell us that within the next thirty years there will be another fivefold increase of cancer of the lung makes it one of the most alarming types of cancers we are dealing with today. It is made further alarming, as Dr. Wilson will point out to us, because of the great mortality of cancer, a type of mortality which we may not be able to overcome because of the anatomic location of cancer of the lung. We, therefore, believe that the greatest hope that we have in our fight against cancer of the lung consists of preventive measures. I do think that practical preventive measures are at hand. Some day these measures may lead to a startling decrease of lung cancer.

Dr. Greydon Boyd: May I ask Dr. Wynder a question? Did not Roffo in 1938 do the same work on rabbit's ears and produce a cancer such as you have in mice?

Dr. Wynder: Throughout the 1930's Dr. Roffo published a series of papers based upon tobacco tar obtained from distilled tobacco. It has been claimed that using distilled tobacco, one uses a high degree of heat and that, therefore, the actual nature of the tars used is changed. Thus his studies were never fully accepted. It is also noticed that Sugiura at the Memorial Hospital and Flory in Chicago, trying to repeat the experiments, were unable to do so. The major criticism of his work has been the fact that he used the type of tar which was not the type of tar to which humans are exposed, and this is the one factor that we tried to avoid in our own experiment, using a type of tar which simulates human smoking habits as closely as possible.

Chairman Forkner: Dr. Wilson, Dr. Wynder has spoken something about the irritating effects of these tars. Have you observed them bronchoscopically?

Dr. Norman Wilson: I think anybody who looks hard enough at enough smokers can see irritation and observe great disability from it too. In fact, I am almost as alarmed by the pulmonary patient I see whose respiratory reserve has been reduced by his smoking habits as I am about the cancer problem. Many times a patient with a cancer has so much bronchospasm and trapped air in the lungs, you have to treat this before you can safely operate for cancer.

One can see the irritation bronchoscopically but not in all people. In many patients who have severe symptoms you do not see the visible evidence of irritation, yet they have paroxysmal cough and raise a great deal of sputum.

I would like to confirm what Dr. Wynder said about the seriousness of cancer. In our experience cancer of the lung occurs exclusively in people who smoke heavily. The disease is very serious. Only about 8 or 10 per cent of patients with carcinoma of the lung are alive five years after the beginning of symptoms.

The problem of carcinoma of the lung is rapidly increasing in the experience of all physicians, and yet we have not shifted gears in our teaching of students and in our publication to the medical profession at large about the salvable cancer patients. The statistics in textbooks and many articles still cover all cancers so that the physician, and oftentimes the senior medical student, thinks that 65 per cent of cancer are visible through the bronchoscope. That is true if you take the many advanced cancers that are sent in, but let us take the salvable cancer, the early cancer, the one you and I, as physicians, should be most interested in because it is the one we can possibly cure. This patient is apt to have a negative bronchoscopic examination. He is very apt to have a negative Papanicolaou smear, as you saw in the first case here, and almost routinely he has no physical signs. The shadow is usually the only evidence of the tumor. I have a few slides that might be helpful at this point.

(*Slide*) In private clinics the general experience in this country is that around 37 per cent of cancers in the lung can be diagnosed by means of bronchoscopy. However, in "survey cancers" we can get bronchoscopic evidence in only 11 per cent. That includes those with symptoms.

Chairman Forkner: What do you mean by "survey cancers"?

Dr. Wilson: Those who did not know they had trouble until x-rays were taken. If you take the symptomless survey patient, the value of bronchoscopy almost fades out of practical value. Likewise the Papanicolaou test is positive in a little better than 60 per cent in our experience, but in our "survey carcinomas" in only 25 per cent, and those without symptoms much lower than that. I think a very important point to drive home is that the patient who is salvable is a patient who usually has symptomless cancer and one without physical findings, who will have a demonstrable lesion on x-ray and whose diagnosis can best be proved by exploratory thoracotomy. I have never quite understood why we as a group have a different fundamental concept about the cancer we have to look at in an x-ray and the one we can palpate with our fingers. I find that almost routinely my senior students are very willing to explore a breast for a palpable nodule but are very unwilling to have an exploratory thoracotomy for a symptomless tumor that they look at in an x-ray. It takes quite an effort to teach them that this is the proper procedure.

(*Slide*) Here again you see what symptoms mean in cancer of the lung. You will notice that in this group *with symptoms* only one of ten has a chance of having negative lymph nodes, whereas in the patients who *do not have symptoms*, seven out of ten have negative nodes. This means that there is a great difference in the final statistics in the two groups. Our five-year statistics in the patients with symptomless cancer show 40 per cent to be alive.

(*Slide*) This is the real big clinical problem. Here is a small carcinoma without physical signs, without symptoms, and in this particular instance unchanged over a period of one year as judged by its appearance in the x-ray films. It was a symptomless cancer discovered at a time in the evolution of the disease when the patient could be saved. When patients develop symptoms, we have very little chance to pull them out of the fire. We feel that these people should be explored as early as possible to establish the diagnosis of the x-ray shadow.

Chairman Forkner: Will you point that out to us, Dr. Wilson?

Dr. Wilson: These films were taken fourteen months apart, and you have to take my word for it that the x-rays taken every two months showed no demonstrable change. We feel that this demonstrates the clinician's and the surgeon's problem today with these cancers. When a patient is presented to you with an unexplained lesion in his chest, even though it is very small, we feel that you have only one of two roads to send him down. You can send him down that dark road over there without any lights on it, which means you are going to wait and see if it grows or causes symptoms and if it does, then you cannot have much chance of saving him, or you can do what you would do with any other tumor. You can explore it and have a frozen section performed by your pathologist. Statistically you have justification for early exploration because the risk of having cancer in unexplained peripheral lesions, which contain no calcium, is about 40 per cent. The risk of exploration in a patient in good condition is definitely under 1 per cent. Early exploration really represents not only the intelligent but also the conservative approach to this rapidly increasing problem.

Chairman Forkner: Dr. Wright, will you tell us about the cardiovascular aspects of smoking?

Dr. Wright: I think we ought to consider first the normal reaction of the circulatory system to the use of tobacco. The question is often raised as to whether effects can be measured from absorption from the mucous membranes of the mouth and perhaps the nose without inhalation. In other words, does the person have to inhale deeply in order to obtain a response which can be measured from the viewpoint of the circulation?

As it was brought out before, our interest is primarily not with the tars but primarily with nicotine. If there are other agents in tobacco which have an effect on the circulation, we are not aware of them and have not been able to demonstrate them. It is true that nicotine is readily absorbed from the mucous membranes of the mouth. So it is not important whether the patient smokes cigarets, cigars, or pipes or whether he chews. He can absorb enough nicotine to get a profound effect. If you doubt this, place a drop or two of nicotine sulfate solution 1:1,000 dilution on the gum of a dog and watch him die within a half minute as a result of absorption from the gum. During smoking the average individual shows some increase in pulse rate. Many show an increase in blood pressure; the blood sugar characteristically rises temporarily. That may in a way account for the feeling of a "lift." Many people do develop cardiac premature contractions, which are not in themselves serious but may be annoying. There is a decrease in the peripheral blood flow as evidenced in most normal persons by a drop in the surface temperature of the fingertips and tips of the toes.

(*Slide*) There is often a profound drop of from 3 to 9 degrees in the temperature of the finger following the smoking of a single cigaret. This curve is characteristic not only for normal standard brands but also for mentholated cigarets. The results were identical when denicotinized cigarets were smoked. In the so-called denicotinized cigaret the drop is just as precipitous. A number of filters thus far tested have also been ineffective in blocking this effect, even though they quite obviously appear to reduce the tar carried into the mouth.

Measuring the circulation at the periphery by plethysmography, as determined by Lampson, confirms this general observation. There are a few individuals who show no response of this nature, but the majority show some degree. Some patients, more commonly those with coronary insufficiency, have an increase in anginal pain. We do not always understand the exact mechanism. There are individuals who, when they stop smoking, have a striking diminution or cessation of this anginal pain, and for them it is unwise to continue. This pain response may be due to spasm of the coronary arteries, but it is difficult to prove beyond doubt. However, in some patients it is possible by smoking to produce definite transient changes in the electrocardiograms, such as negative T waves, which are not due to deep breathing alone. In those individuals the evidence appears more convincing.

When we consider the peripheral vascular diseases, thromboangiitis obliterans, the disease seen in the first patient, is the most clearly related to tobacco. It is a relatively rare disease, yet there are thousands of such patients in the United States. I do not think anyone knows the statistics on thromboangiitis obliterans because most of these patients do not die from the disease, but if they die, they die after they have had it for many years. It would be interesting to know whether or how these figures compare with the number of patients who have carcinoma of the lung. There might be quite a similarity, yet in my experience I have yet to encounter a patient with carcinoma of the lung and thromboangiitis obliterans, which again makes me suspect we are dealing with different agents rather than tobacco as a whole or similar agents.

I would like to show a few slides illustrating patients who have had this disease and their problems.

(*Slide*) Here is an individual who came to see us in 1933 with amputation of the left leg at the age of nineteen for gangrene. He stopped smoking at that time but resumed smoking and developed gangrenous ulcers of the right foot and changes in the vessels of his hands.

(*Slide*) This is a closeup of the gangrenous ulcers which he developed in his right foot, which had been his good foot. This was extremely important to this man because he already had lost one leg.

(*Slide*) This is the so-called Allen test, which in brief indicates, by the pallor of the right hand when the ulnar artery is open and the radial artery is occluded, that the ulnar artery is already affected.

(*Slide*) The next slide illustrates another patient with thromboangiitis obliterans with multiple ulcers involving the fingers.

(*Slide*) These are closeup pictures. These are extremely painful small ulcers but will continue to develop into a gangrenous condition if the patient continues to smoke.

(*Slide*) These are the hands of a physician. This individual came to us with gangrene of the fingers of both hands, a very advanced situation. It looked as though he were going to lose his hands. He did lose part of the tips of the fingers of his left hand, and it looked as though he were going to lose the third finger of the right hand. That finally healed. He stopped smoking and was treated with typhoid vaccine for a while.

(*Slide*) This shows a picture of his foot which was involved.

(*Slide*) This is a picture of another individual, a woman who had had a sympathectomy and was never told to stop smoking. She proceeded to develop gangrene and lost the fourth toe.

(*Slide*) This man has lost his leg because of arteriosclerosis associated with diabetes mellitus. There is no evidence whatsoever that arteriosclerosis obliterans is produced by smoking. However, once the patient has a marked diminution in circulation, it is very important that spasm not be produced in the collateral vessels that are endeavoring to take over the load in lieu of the major vessels. This case is demonstrated as an example of that.

(*Slide*) Some years ago several of us made some studies at Macy's of individuals who had followed a similar course in reference to their occupation for many years. Among other statistics of interest was the incidence of arteriosclerosis, as we are measuring it, in tobacco users versus nonusers; for the sake of general interest alcohol was also studied. As you can see, there is no significant difference in the incidence of arteriosclerosis between the two groups.

I think that this is sufficient evidence in our view to indicate that:

1. Patients with thromboangiitis obliterans should never smoke. Even a single cigaret may produce a recurrence in their gangrene as long as several years later. We see many examples of this.

2. If they have an impaired circulation from another serious disease, they should not smoke, not because the disease is associated with tobacco in terms of etiology, but because it may aggravate the disease by producing constriction of the small collateral vessels when they are needed to save the tissues.

CHAIRMAN FORKNER: Thank you, Dr. Wright! Dr. Boyd, what about the nasopharynx and perhaps the larynx?

DR. BOYD: An average of one-half pack of cigarets is smoked daily by every person over fifteen years of age in the United States. It seems that the public may not be well informed about the harmful effects of tobacco because news sources carry tobacco advertisements that are deceptive. The public, however, senses some danger as shown by the 1949 Gallup Poll, in which more than 50 per cent of smokers thought it harmful and had tried to quit. Another evidence of this is shown in the use of slang terms such as "coffin nails," "gaspers," "weeds," "pills," "lung dusters," "dope sticks," and "poison sausages." The use of misleading endorsements by ball players and actors and such statements as "Leading doctors find no nose, throat or sinus irritation or harmful effects," are still being used, in spite of the Federal Trade Commission's efforts.

I think as far as the prevalence of symptoms is concerned, there are more in the nose and throat than from any other effect of tobacco. Of 18 leading otolaryngologists interviewed prior to this meeting, 100 per cent believed tobacco smoking to be irritating to the nose and throat. They believed that tobacco caused sore throats, cough, postnasal drip, and redness of the throat. Other adverse effects were mechanical irritation, hot smoke, foreign body effect, vasomotor symptoms, nasal obstruction, leukoplakia, edema, dryness, staining of the teeth, nicotine hypertrophy of the palate, gagging, hoarseness, vertigo, asthmatic wheezing, hearing loss, and Ménière's disease.

There is a tremendous amount of difference in individuals as to the way they respond to irritation, and I think that is also true of tumor response in the throat and mouth. In the throat the amount of smoking makes a great deal of difference. My discussion will be divided into three primary parts.

One is the irritation of tobacco on the throat primarily producing a red, thickened membrane with increased secretion, postnasal drip, cough, morning gagging, etc., that smokers have. Also there is a definite entity called smoker's larynx, in which a fibrous polypoid condition occurs in the larynx. On removal it is found to be an inflammatory rather than allergic type of hypertrophy of the vocal cords. It occurs most often in individuals who have short necks and who smoke from 20 to 120 cigarets daily.

Other results of smoking are gingivitis and leukoplakia that occur in the mouth. This is common in all types of smoking. Cigar smoking particularly causes cancer of the palate. Cigarets, however, apparently do not cause as much cancer in the mouth as does the smoking of a pipe or of cigars. I think there is not any great evidence that the cigaret smoking itself causes very much cancer of the mouth. Tobacco chewing has been reported to be associated with cancer.

The third point I wish to mention is the effect on the nose and the question of allergy. The consensus of opinion is that in a fair number of patients the main effect from smoking is the secondary irritation of tobacco on the nose in allergic people. It aggravates the symptoms and results in congestion of the nose followed by poor sinus drainage and sinusitis secondarily. In the ear an occasional case of Ménière's and toxic deafness occurs from tobacco. Those people who have the latter condition are generally smokers and drinkers at the same time. Anesthetists feel that anesthesia in smokers is more prone to be associated with bronchial complications. Toxic amblyopia is one of the results of the use of tobacco. Loss of smell or diminished sense of smell may occur.

What about filters and king-size cigarets as far as the nose and throat are concerned? I think the length of the cigarets and the use of filters do the same thing, namely, reduce the amount of smoke. How little smoke do you want to get at the other end? If you put enough filter in you won't get any smoke, and you won't get any irritating effect from the cigaret. I think the fancy brands or special kinds of cigarets sold today do not make a great deal of difference.

Dr. Wilson: May I ask a question? Maybe Dr. Wynder and Dr. Boyd might take part in answering it. I wonder if you know of any evidence to indicate a difference in the potentiality of the mucosa of the nose as compared with that of the bronchus for developing metaplasia?

Dr. Wynder: We are currently investigating this problem at Memorial Center. For the past two years we have interviewed routinely every patient on the Head and Neck Service of Memorial Hospital. In addition we have interviewed patients at the Radiumhemmet in Sweden and the Tata Memorial Hospital in Bombay to get differences in tobacco habits on national levels. I think the data indicate that tobacco chewing in certain parts of the world is associated with carcinoma of the esophagus, carcinoma of the tongue, buccal mucosa, and larynx. As yet I cannot tell whether cigaret smoking is less or more responsible for these types of lesions of the oral cavity than cigar smoking or chewing tobacco.

Bronchial epithelium seems particularly susceptible to metaplastic changes.

The apparent stabilized incidence rate of cancer of the larynx has frequently been mentioned as one of the reasons for believing that smoking is not a cause of cancer. There seems to be less effect of tobacco on the larynx than on the lung. We must consider the susceptibility of tissue in this comparison. We must also consider that not every person who smokes develops cancer of the lung. This may be the result of individual difference in predisposition. Frequently one is asked, "What about Winston Churchill?" He certainly smokes heavily and is still free of cancer. If we knew the answer to this question, we might have the answer to the cancer problem. If we knew why a given person is resistant to cancer, we might not be here today to discuss the cancer problem. But in view of the fact that we do not know what predisposition means, we must tackle those factors that we know today. I think that tobacco is one of the factors that is known, and, therefore, we have to concentrate our efforts in that direction.

Chairman Forkner: Dr. Wynder, it is commonly thought by a number of people that if you smoke for twenty years, you have already conditioned yourself, and you might just as well go ahead and smoke for another twenty years, that it has already been decided whether or not you are going to get cancer of the lung. Is that true?

Dr. Wynder: That question is asked most often by those people who do not want to stop smoking. We have found in our first series of 650 lung cancer patients five cases that had stopped ten years prior to developing cancer of the lung. We believe the latency period of cancer takes many years to develop. I would say that a patient who has stopped smoking may still develop cancer if he is destined to do so. However, I would also state that if a person continues to smoke, his chances, if susceptible, are greater than in the person who has stopped, and I think also he may develop his cancer at an earlier time.

Dr. Boyd: I have a question which I think is quite important with regard to leukoplakia. I run across many statements that leukoplakia from smoking does not become cancerous very often. I have always felt that it was a potential forerunner. I want to know what you think about it.

Dr. Wynder: I think leukoplakia in the oral cavity, particularly on the tongue, is precancerous. Leukoplakia does not always develop into cancer. We know that in many of these patients, if they stop smoking, it becomes reversible. Leukoplakia can go either way. In general, I believe we must consider it a precancerous condition.

Chairman Forkner: Dr. Wynder, we heard from Dr. Wright that the filters do not filter out the nicotine. Is that correct?

Dr. Wright: I believe that essentially is true. They may filter out some of the tar, but I don't think they filter out a considerable amount of nicotine. There is one point that may be made. If you have a cigaret that has a smaller amount of nicotine than the average, we will concede that perhaps if that tobacco is moist, more of the nicotine will be distilled and probably more of the tars will be distilled back through the cigaret into the mouth; whereas if the cigaret with a higher percentage of nicotine is dry, it will burn up and consume the tars and nicotine as it proceeds, so that the patient is not so apt to have as marked a response. So, actually you not only have the amount of nicotine in the tobacco but the moisture in that tobacco playing a major role.

Dr. Cobb: I was going to ask what about the effect of filtered cigarets on the carcinogenic tars. Quite a lot is absorbed in the filter.

Dr. Wynder: The makers of filtered cigarets, as you know, are the ones who primarily gained from the recent publicity about cancer of the lung being related to smoking. People assumed that these cigaret filters removed a certain amount of tar. There is no question that some filters remove some and others less, and if a given filter removes 50 per cent of the tar, we might state that perhaps it might remove 50 per cent of the carcinogenic material. This is by no means proved.

As long as we do not know what the carcinogenic material is, we do not know whether the filter will remove any or all of this material.

Now one study done recently in Germany by Dr. Druckrey, which has not been published, shows that if you take cigaret smoke and do not inhale it and blow into optical-free benzol and show it under the ultraviolet lamp you get a marked fluorescence.

(*Slide*) This on the left here is the very marked fluorescence that you get from cigarets which have not been inhaled. In the middle is the optical-free benzol without any smoke in it. On the right, number 3, is the fluorescence of cigaret smoke that has been inhaled, and number 3 contains twice as many cigarets as number 1, which demonstrates that inhaling absorbs up to 90 per cent of some material which is fluorescent. It was also shown that filters will take out very little of this material that fluoresces. We do not know whether this material is carcinogenic. However, it indicates that some particles which are almost completely absorbed through inhaling and are not removed by filters remain in the tobacco. So unless we have the answer as to what is the carcinogenic element, we cannot say how good filters will be.

Dr. Wright: Isn't it true, Dr. Wynder, since filters of any degree of effectiveness whatsoever are so recent that any information regarding the ability to prevent carcinoma would be deferred, would be difficult for us to judge for some years to come?

Dr. Wynder: As far as the incidence data are concerned, we could not draw any conclusions at all.

Chairman Forkner: I would like to ask the members of the panel whether or not it is their opinion that the advertising about cigarets is wrong, morally wrong. Would you not advise the advertising agencies to face this problem squarely, admit that tobacco has ill effects, and advise the tobacco companies to put funds into research. Studies designed to make tobacco safe rather than to make false advertising claims over the radio and in newspapers would appeal to the American public. Could we make that recommendation to the tobacco companies?

Dr. Wright: We have been making that recommendation since 1934, but I have not been able to gain much headway.

Chairman Forkner: The impact might be a little more, a little stronger now.

On behalf of all of us I wish to thank the members of the panel for this timely discussion.

Summary

Dr. Claude E. Forkner: 1. Current advertising of tobacco companies has been shown by the Federal Trade Commission to be deceptive, misleading, false, and has been to the prejudice and injury of the public and has constituted unfair methods of competition in commerce.

2. Cancer of the lung during the last two decades has become the most common cancer in males and in many areas of the world accounts for one third of all cancer deaths in males. Its incidence is increasing rapidly.

3. The risk of developing cancer of the lung increases in direct proportion to the amount smoked. It is rare for a nonsmoker to develop cancer of the lung.

4. The smoking of cigars and of pipes is less likely to be associated with cancer of the lung presumably due to the practice of inhaling which is more common among cigaret smokers.

5. Pollution of air in urban areas has been considered as a possible cause of cancer of the lung, but recent studies show that this probably is an unimportant factor.

6. Tar obtained from condensed cigaret smoke, when applied to the skin of mice three times weekly for from one to two years, resulted in the appearance of typical undifferentiated carcinomas at the site of application of the tar.

7. The specific fraction of the carcinogenic tar from cigaret smoke which is responsible for the cancer has not been identified.

8. Irritation of the bronchi associated with smoking often is visible by means of bronchoscopy.

9. The patient with carcinoma of the lung who is salvable usually is symptomless, without positive physical findings, and in whom the diagnosis is suspected by virtue of a density in the x-ray film. The diagnosis often can be proved only by exploratory thoracotomy since less than 25 per cent of such symptomless cases prove to be positive with the Papanicolaou test or by bronchoscopy.

10. Ninety per cent of patients who exhibit symptoms of carcinoma of the lung have metastases in the regional lymph nodes, whereas only 30 per cent of symptomless patients have such metastases.

11. Only 8 or 10 per cent of patients having carcinoma of the lung *with symptoms* are alive five years later in spite of vigorous treatment, whereas 40 per cent of *symptomless* patients treated are alive five years after the discovery of the carcinoma.

12. The presence of an otherwise unexplained density in the lung field in an individual of appropriate age should be regarded as a carcinoma until proved otherwise. Exploratory thoracotomy is not only justifiable but is imperative to establish the diagnosis. The surgical risk is under 1 per cent.

13. Nicotine is the active agent in tobacco which affects the blood vessels.

14. Nicotine is absorbed from the mucous membranes and is harmful whether the individual smokes cigarets, cigars, pipes, or chews tobacco.

15. Nicotine causes a decrease of peripheral blood flow. Smoking a single cigaret may produce a profound drop of from 3 to 9 degrees C. in the temperature of the fingers. Identical changes are encountered with so-called denicotinized cigarets or with standard brands.

16. A number of filters have been tested and found to be ineffective in blocking these vascular changes.

17. In some individuals with coronary artery

insufficiency adverse changes in the electrocardiogram may be produced by smoking.

18. Even smoking a single cigaret may produce a recurrence of gangrene of an extremity in a patient with thromboangiitis obliterans.

19. Individuals with an impaired circulation, brought about by disorders other than smoking, should not smoke because smoking may aggravate the disease by producing constriction of the small collateral vessels when they are needed to save the tissue.

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Narcotic Addiction Guide

A manual entitled *Treatment of Withdrawal Symptoms of Persons Addicted to Narcotic Drugs*, by Hubert S. Howe, M.D., chairman of the Subcommittee on Treatment of the Welfare and Health Council's narcotics committee and member of the Committee on Public Health Relations of the New York Academy of Medicine, and by Lynn Stratton Morris, executive secretary of the Committee on the Use of Narcotics Among Teen Age Youth, is now available.

Dr. H. D. Kruse, executive secretary of the Committee on Public Health Relations, wrote ". . . . the Committee on Public Health Relations of the New York Academy of Medicine thinks highly of the brochure. . . ." and "will be pleased to endorse this pamphlet if it is sponsored by the Welfare and Health Council of New York."

The manual is unique in medical literature, for it brings together for the first time the various methods of treatment for withdrawal symptoms and outlines procedures developed by specialists in the field of narcotics.

Topics covered in the 32-page reference guide include the chemical and clinical characteristics of addicting and habituating drugs, regulations governing narcotic drugs, the diagnosis of addiction, disposition and methods of treatment of addiction, technics of substitution treatment, treatment for apprehended addicts, and suggested follow-up care for former addicts. It also includes a comprehensive bibliography of books and periodical articles relating to the treatment of addiction.

Individual copies may be purchased at $1.00 each from the Welfare and Health Council of New York City, 44 East 23rd Street, New York 10.

CORRESPONDENCE

Inhalation of Smoke as a Factor in Lung Cancer

To the Editor:

After reading the article by Dr. Morton Levin on "Etiology of Lung Cancer" in the March 15, 1954, issue of the JOURNAL, page 769, one must conclude that his statistics give definite evidence of the greatly increased prevalence of lung cancer among cigaret smokers. The author brings out the fact that cigaret smoking has greatly increased in the past thirty years with much greater prevalence among males and a marked excess incidence of lung cancer in males. Another conclusion based on the statistics of the author is that there is a much *smaller* increased cancer risk among cigar and pipe smokers.

A further conclusion of the author is that in the age groups fifty to fifty-nine years and sixty to sixty-nine years male smokers have lung cancer prevalence rates from four to 15 times as great as nonsmokers and that among "heavy" smokers the relative prevalence is estimated at seven to 29 times that of nonsmokers. The author states, "At present rate of incidence 2 per cent of males may be expected to develop lung cancer."

My point is as follows: Cigaret smoking as a national habit in this country began just after World War I. Previous to that time men (for few women smoked in those days) smoked cigars and pipes almost exclusively. There were comparatively few cigaret smokers. Of the cigar and pipe smokers only a very low percentage *inhaled* the smoke. When the younger generation started smoking cigarets, the vast majority of smokers did inhale the smoke. So we have a period of over thirty years during which there has been a constant inhalation of tobacco smoke by most cigaret smokers.

As Dr. Levin states in his article on page 774, tobacco smoke is known to be an irritant and to come in contact with bronchial mucosa. As further evidence of bronchial irritation due to *inhalation* of tobacco smoke, I would call attention to the so-called "cigaret cough" so common on arising in the morning among cigaret smokers.

My conclusion would be that the constant daily *inhalation* of tobacco smoke over a period of years and its irritating effect on the bronchial mucosa and lung tissue, rather than smoking per se, would be a positive causative factor in the greatly increased prevalence of cancer of the lungs.

Remember that the bronchi and the lungs have no vent for the smoke that is forced into them.

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Comment by Dr. Levin

To the Editor:

Dr. Schaeffer's suggestion that smoke inhalation is the factor which accounts for the greater prevalence of lung cancer among cigaret smokers than among pipe and cigar smokers is one which has been made by a number of persons. Dr. Richard Doll and Professor Bradford Hill, in their studies in England, did not find a marked difference in lung cancer risk between cigaret smokers who said they habitually inhaled and those who said they did not. Presumably, the effect of smoking is exerted by that portion of the smoke which reaches the bronchial mucosa.

While our studies, as do those of other observers, show a considerably smaller increase of lung cancer risk among cigar and pipe smokers compared with cigaret smokers, it cannot be concluded that there is no added risk attached to cigar and pipe smokers. As I pointed out in the paper in the JOURNAL, March 15, 1954, the excess risks in all types of smokers found in that study are probably underestimates, due to the fact that our histories were taken routinely on admission without any special attempt to obtain a fully detailed smoking history. We have subsequently checked a routine history against a more detailed special history and have found that a number of smokers are missed by the routine history method. Accordingly, the excess risk among all classes of smokers may be higher that those indicated by our studies.

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THE MONTH IN WASHINGTON

During the next three years the Federal government expects to help finance the construction of thousands of new medical and dental facilities—diagnostic-treatment clinics, vocational rehabilitation centers, nursing homes, and chronic disease hospitals. Only three strings are attached: the facilities must be nonprofit, they must be under medical or dental supervision, and local communities must raise part of the cost.

Legislation establishing the new program was enacted just as Congress plunged into its adjournment rush and before it had come to final decisions on reinsurance and other major controversial bills in the health field.

The new operation was authorized by amending the Hill-Burton Act (passed in 1946 to assist hospitals) to permit grants to units that do not qualify as hospitals. Under the original Hill-Burton law, grants could be made to rehabilitation centers and diagnostic-treatment clinics only if they were attached to hospitals. Grants could also be made to chronic disease hospitals. The new law authorizes help to centers and clinics operating on their own, a provision Public Health Service expects to be of particular assistance to smaller communities. It also offers aid to nursing homes, which previously were not covered.

In the case of chronic disease hospitals, it is explained that the law offers two new inducements for construction: (1) Money is allocated to the state and earmarked for this particular type of hospital, and (2) the Federal government will be able to pay 50 per cent or more in all cases, whereas under the old law the U.S. share was as low as one third in some of the higher-income states.

Grants to clinics, centers, and nursing homes will have to wait on state surveys to determine priorities, according to U.S. hospital officials. However, if local sponsors take the initiative, grants can be processed immediately for chronic disease hospitals since earlier Hill-Burton surveys have established their priorities. Failure of communities to construct chronic disease hospitals was one of the disappointments of the first Hill-Burton program.

The first year's appropriation will be $37,400,000, increasing over the next three years until the total authorization of $182 million has been reached. The new projects in no way interfere with the regular Hill-Burton grants for construction of hospitals, for which $75 million is available this year.

The final flurry over the reinsurance bill was preceded by a concerted drive by the administration. The President himself interceded with insurance company officials, and Secretary Hobby agreed to amendments in an effort to satisfy the state insurance commissioners. The commissioners, who would have an important role in administering the reinsurance program, at first had flatly opposed it. President Walter B. Martin and other A.M.A. officials were called in for a discussion of reinsurance at the Department of Health, Education, and Welfare, and later Sherman Adams, assistant to the President, also invited Dr. Martin to a White House meeting on the same subject.

As expected, bills for a new program of medical care of military dependents were left stranded when adjournment time approached. Before he introduced his bill on the subject, Chairman Dewey Short of the House Armed Services Committee insisted that Defense Department estimate first year's additional cost of the program. The estimate was $67 million.

The military scholarships bill met the same fate—too much time taken up in drafting a version that would satisfy all executive departments. Under this plan the Defense Department would grant tuition-and-maintenance scholarships to medical and dental students in exchange for pledges to spend one year in military service for every subsidized year of training. Both bills are certain to reappear next session.

For the current fiscal year, the Department of Health, Education, and Welfare has available $1,663,413,761. The appropriation bill is $10,904,500 more than the administration requested but under last year's budget of $1,927,432,261 (the decline explained by decreased public assistance grants to states). Public Health Service has $228,060,000 for its regular programs.

Prepared by the Washington Office of the American Medical Association, Washington, D.C.

Scientific truth is not established by taking a vote, no matter how democratic the procedure.—Ashley Weech, M.D.

NECROLOGY

Julius Blum, M.D., of New York City, died on July 13 at the age of sixty-nine. Dr. Blum graduated from Columbia University College of Physicians and Surgeons in 1910 and interned at Mount Sinai Hospital. Formerly with the Bureau of Laboratories of the City Health Department, Dr. Blum had been retired for thirteen years.

Nathan Cohn, M.D., of the Bronx, died on July 6 in Bronx Hospital after a long illness. He was fifty-three years old. Dr. Cohn graduated from New York University and Bellevue Hospital Medical School in 1924, and was a Fellow of the American College of Chest Physicians. Dr. Cohn held posts as adjunct attending physician at the Bronx Hospital and attending physician at the Morrisania Hospital.

He belonged to the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Samuel Jay Crumbine, M.D., of Jackson Heights, died on July 12 at the age of ninety-one. Dr. Crumbine received his medical degree from the Cincinnati College of Medicine and Surgery in 1889. He opened a practice in Dodge City, Kansas, treating many of the outlaws who made Dodge City notorious. In 1900 he was named to the Kansas Board of Health and became its head in 1904. As one of the first successful public health officials in the nation, Dr. Crumbine succeeded in having common drinking cups and towels barred by the Kansas legislature. He was responsible for national health campaigns based on slogans like "Swat That Fly," "Don't Spit on the Sidewalk," and "Sleep With Your Windows Open." He also fought successfully for milk inspection and diphtheria innoculation.

Dean of the University of Kansas Medical School from 1911 to 1919, Dr. Crumbine was appointed to the American Child Health Association by Herbert Hoover in 1923. In 1925 he became the director of this organization and established a six-year program for the relief and rehabilitation of Puerto Rican children.

Dr. Crumbine published his autobiography in 1948, "Frontier Doctor."

Jay Thomas Dunigan, M.D., of Albany, died of a heart attack on July 8 while vacationing in Maine. He was forty-three years old. Dr. Dunigan graduated from Albany Medical College in 1934. He was a member of the New York State Society of Anesthesiologists. Dr. Dunigan was assistant attending anesthetist at St. Peter's Hospital and clinical assistant attending anesthetist at the Anthony M. Brady Maternity Home. He belonged to the Albany County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Max Herskowitz, M.D., of New York City, died at his home on July 2 at the age of fifty-seven. Dr. Herskowitz graduated from the Long Island College Hospital Medical School in 1918. Prior to his retirement a year ago, he had practiced on the lower East Side of New York City for thirty-five years and was a member of the East Side Medical Alliance.

Edward Joseph Hyland, M.D., of Jamaica, died on June 18 at the age of sixty-seven following a heart attack suffered in his office. Dr. Hyland graduated from New York University and Bellevue Hospital Medical School in 1911 and interned at the Mary Immaculate Hospital where he later served as assistant attending surgeon. He was a member of the Queensboro Surgical Society, the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

George William Kosmak, M.D. (*see Editorial section*).

All men are by nature equal, made all of the same earth by one Workman; and however we deceive ourselves, as dear unto God is the poor peasant as the mighty prince.—Plato

MEDICAL NEWS

Polio Vaccine Trial Needs Physicians' Aid in Evaluation Phase—More than 600,000 children have completed three inoculations, in the field test of the trial polio vaccine developed by Dr. Jonas E. Salk, University of Pittsburgh. The emphasis now shifts to the evaluation study under the direction of Dr. Thomas Francis, Jr., University of Michigan School of Public Health. The validity of the evaluation is dependent upon data gathered on poliomyelitis cases in the test groups, *including those children in the first three grades who did not get vaccine.*

In addition, data on cases among family members of participating children are an integral part of the study. Since the number of poliomyelitis cases among the test groups may not be large, it is essential that all cases are completely reported. Early diagnosis, prompt reporting and follow-up, and the securing of *necessary epidemiologic information and laboratory specimens* are important factors in the evaluation.

An outline of procedures and copies of necessary forms have been sent to local and state health authorities. It is important that physicians in areas where vaccinations were not given cooperate in the study by notifying local or state health officers of cases occurring among children who participated in the trials and then migrated to another area and children who go to summer camps. Local health officials also need information on participating children who receive injections of gamma globulin.

This phase of the study will depend, to a large degree, on the whole-hearted cooperation of practicing physicians.

American Medical Education Foundation—Contributors to the American Medical Education Foundation from New York State during the month of June were: *Albion*—Drs. S. A. Dispenza and J. G. Parke; *Astoria*—Drs. Anna M. Arroyo, Michael Pollack, Harry A. Schwartz, and John J. Vasile; *Babylon*—Drs. W. R. Brady and W. A. Coates; *Bath*—Dr. J. F. Kenzie; *Bayside*—Dr. Melvin J. Herman; *Bridgehampton*—Dr. A. E. Corwith; *Bronx*—Drs. A. Ettinger, H. Fay, Henry Robbins, M. H. Robbins, S. S. Schifrin, and J. A. von Tischler; *Brooklyn*—Drs. Albert F. R. Andresen, Ralph Blumberg, Howard R. Gerber, Max Gutmann, David Levine, and Morris Shlansky; *Buffalo*—Drs. Anthony M. Aquilina, H. L. Battaglia, H. H. Bauckus, C. L. Benjamin, R. G. Buchheit, S. M. Clement, E. F. Driscoll, B. E. Heckmann, I. Hyman, and C. E. Wertz; *Cambria Heights*—Dr. Joseph Schepis; *Canandaigua*—Dr. Henry Buxbaum; *Cattaraugus*—Drs. Ellwyn E. Heier and Harry C. Law; *Central Islip*—Drs. J. J. Cacioppo and F. J. O'Neill.

Also: *Corning*—Dr. L. J. Graham; *Corona*—Drs. George P. Josephson, Charles S. Miller, and Kate F. Miller; *Crown Point*—Dr. John S. Miller, Jr.; *Dexter*—Dr. Harold C. Livingston; *Dobbs Ferry*—Dr. G. C. Williams, Jr.; *Douglaston*—Dr. Lief Y. Jacobsen; *East Hampton*—Dr. R. W. Sucsy; *Ellicottville*—Dr. Walter Leyens; *Elmhurst*—Drs. Emanuel F. Kalina and A. Koevesdi; *Elmira*—Drs. George T. Bartlett, Werner H. Bloch, D. Caravetta, E. L. Curvish, Arthur C. Glover, Robert E. Good, R. O. Gregory, Donald N. Groff, J. H. Hunt, David Kaplan, B. H. Kaufman, William Kober, Swen Larson, Joseph J. McConnell, John C. Roemmelt, Rudolph Schwarz, Arthur D. Smith, King R. Snyder, Donald J. Tillou, R. G. Turner, Bert G. Voorhees, Harold L. Walker, and Maredith Wyttenbach; *Endicott*—Dr. Donald E. Stack; *Fayetteville*—Dr. Clara H. Gregory; *Flushing*—Drs. Clyde N. Baker, Adrian E. Donnelly, William Feiring, Knut H. Houck, N. R. Katlan, Julius S. Kaufman, Victor S. Lait, John E. Lowry, John D. Mountain, Arthur Reich, Joseph D. Sacca, Joseph V. Sullivan, and Hyman Zahtz.

Also: *Forest Hills*—Drs. Seymour S. Balkin, Matthew Freed, Leo A. Green, Anthony Mira, Chester M. Raphael, Edward L. Seretan, and Ezra A. Wolff; *Franklinville*—Dr. Robert D. Kelsey; *Garden City*—Dr. Thomas V. Miles; *Gasport*—Dr. Francis Clifford; *Geneva*—Dr. M. E. Deuel; *Gowanda*—Dr. Roy Thurn; *Holley*—Dr. Arnold O. Riley; *Hollis*—Drs. Abraham Appel, Morris Goldman, and Peter V. Gugliuzza; *Horseheads*—Dr. Norman G. Gridley; *Howard Beach*—Dr. Murray Elkins; *Huntington*—Dr. E. B. Hofman; *Huntington Station*—Dr. S. Teich; *Jackson Heights*—Dr. Louis E. Gaeta; *Jamaica*—Drs. Fred Bock, Monroe M. Broad, Louis J. Guardino, James V. Rizzi, Arthur Sawitsky, T. Schneller, and Alfred A. Trivilino; *Keene*—Dr. A. R. Goff; *Kew Gardens Hills*—Dr. Abraham Black; *Kingston*—Drs. Vincent P. Amatrano, Peter D. Corsones, P. Frangoulis, F. W. Holcomb, Walter Levy, Elvert F. MacFadden, and John R. Roberts; *Lake Success*—Dr. Jerome Weinstein; *Larchmont*—Dr. Peter A. Fauci; *Laurelton*—Dr. Felix Schwarz; *Little Neck*—Dr. A. D. Juffey.

Also: *Lockport*—Dr. George Hixson; *Long Island City*—Drs. Anthony P. Nicosia, E. Schusdek, and Harry J. Secky; *Mamaroneck*—Dr. C. N. Jeffries; *McGraw*—Dr. Zenta Krauklis; *Mannsville*—Dr. M. N. Margulies; *Medina*—Dr. A. F. Leone; *Merrick*—Dr. H. B. Holleb; *Middlebury*—Dr. Donald R. Lyon; *Middletown*—Drs. J. W. Larsen and L. O. Larsen; *Mineville*—Dr. Oscar Greene; *Montour Falls*—Drs. J. J. Norton and W. F. Tague; *Mount Vernon*—Drs. Louis S. Blancato and Charles T. Hazzard; *Newburgh*—Drs. D. C. Bouton, W. J. Hutchins, and C. B. Reed; *New Paltz*—Dr. Erhard

Boetzel; *New Rochelle*—Drs. Samuel A. Hand, Raymond F. Kiernan, and Daniel Sherber; *New York City*—Drs. Thomas P. Almy, Edward R. Cunniffe, Irving A. Glass, James P. Hennessy, Harry H. Kaufman, Joseph Laval, Luis Mendez, Gurney Taylor, and Harry F. Wechsler; *Niagara Falls*—Drs. Willy Bender, Guy S. Philbrick, and Richard W. Rooker; *Northport*—Dr. H. P. Saltz; *Odessa*—F. C. Ward; *Olean*—Drs. Joseph E. Anderson, L. J. Atkins, Gary H. Carl, George C. Cash, James F. Durkin, Fred W. Kehr, W. J. Manley, Joseph L. Mountain, and Leo Murphy; *Ozone Park*—Dr. Henry Cymerman.

Also: *Oswego*—Dr. Tracy J. Gillette; *Pearl River*—Dr. B. W. Carey; *Peekskill*—Dr. N. M. Blumenkrantz; *Port Chester*—Dr. Harmon H. Perry; *Port Henry*—Dr. James E. Glavin; *Queens Village*—Drs. Mario M. DeMarco and Jeptha R. MacFarlane; *Ray Brook*—Dr. James Monroe; *Redwood*—Dr. Joseph R. Recupero; *Rego Park*—Dr. Oscar Schneller; *Richmond Hill*—Dr. Saul Lustig and Michael P. Vinciguerra; *Ridgewood*—Dr. Joseph Brody; *Rochester*—Dr. John L. Norris; *Rome*—Drs. James H. McDonough and F. K. Reid; *Sackets Harbor*—Dr. Juda B. Bickel; *St. Albans*—Drs. Hans Bergmann and William Gartland; *Salamanca*—Dr. Thomas G. Gardner; *Scarsdale*—Dr. Harry E. Voss; *Schenectady*—Drs. Joseph L. Cirincione and Gomer Richards; *Schuylerville*—Dr. Melvin Boright; *Southampton*—Dr. Mary F. Johnson; *Staten Island*—Drs. Arpad Berczeller, Harold Dangerfield, Dominic Elia, N. M. Fedde, Cyril M. Levin, and Theodore J. Talbot; *Suffern*—Dr. George G. Stone; *Syracuse*—Drs. Daniel F. Luby and R. A. McLean; *Ticonderoga*—Dr. Rudolph J. Martin; *Utica*—James S. Heywood; *Watertown*—Drs. Walter S. Atkinson, James L. Crossley, J. A. Fitzgerald, Murray H. Gardner, H. L. George, W. D. George, Alfred Kant, Jacob A. Mishkin, and Thomas N. Sickels; *Watkins Glen*—Drs. M. J. Daus, F. Landsberg, J. Y. Roberts, and W. C. Stewart; *Wellsburg*—Dr. M. E. Pittman; *Westport*—Dr. Harold J. Harris; *White Plains*—Drs. Russell J. Heffering and Walter W. Mott; *Williamson*—Dr. Raymond W. De Smit; *Williamsville*—Dr. R. S. Pratt; *Woodhaven*—Drs. Olga K. Kiss, Stephen Kiss, and Anthony W. Russo; *Woodside*—Drs. A. S. Perry and Harry K. Stone; *Wyandanch*—Dr. L. Schultz, and *Yonkers*—Drs. Norman Spitzer and L. A. Volino.

Fellowship—The International Academy of Proctology announces the establishment of a teaching and research fellowship in proctology under the direction of Dr. Marcus D. Kogel, dean of the newly formed Albert Einstein College of Medicine, New York City. The Academy has voted a $1,000 annual grant for each of three years to assist in the development of research and educational projects in proctology at the University.

One of the suggested projects is the establishment of a pathologic tissue slide "library" for teaching purposes, under the direction of Dr. Alfred Angrist, professor of pathology.

As emphasized by the founder and secretary of the International Academy of Proctology, Dr. Alfred J. Cantor, Flushing, at the time of the sixth annual convention of the Academy in Chicago, the major function of the Academy is educational. All Academy funds are to be used for research and teaching projects in proctology so that earlier diagnosis and better treatment of patients with diseases of the colon and rectum may be made universally available.

The Academy offers a teaching seminar open to all physicians without fee each year. Research fellowships in proctology are sponsored by the Academy and three such fellowships were voted at the time of the last annual meeting. Dr. Earl J. Halligan, director of surgery, Jersey City Medical Center, and international secretary-general of the Academy, is in charge of a research fellowship at the Jersey City Medical Center. Additional fellowships were voted to be established in the Midwest and on the West coast of the United States.

Richmond County Medical Society—The officers of the Richmond County Medical Society elected to serve for the term 1954 to 1955 are: Dr. Max Werner, president; Dr. Leif Jensen, president-elect; Dr. John Beck, secretary; Dr. A. Leikensohn, treasurer, and Dr. Curtis J. Becker, Vice-President.

Meetings—Future

College of Physicians and Surgeons, Columbia University

The Faculty of Medicine, Columbia University, announces a series of lectures on occupational medicine to be given from nine to ten o'clock on Saturday mornings beginning September 18, 1954. The lectures will be given in Amphitheater I, College of Physicians and Surgeons, 630 West 168th Street, New York 32, New York. The lecturers will be members of the staff of the Division of Occupational Medicine of the School of Public Health. Interested members of the medical and allied professions are invited to attend. There will be no formal registration and no tuition fee. The schedule is as follows:

September 18—History, Scope, Objectives and Practice of Occupational Medicine; September 25—Industrial Toxicology—General Principles; October 2—Toxic Metals I; October 9—Toxic Metals II; October 16—Toxic Solvents I; October 23—Toxic Solvents II; October 30—Toxic Dusts; November 6—Toxic Gases; November 13—Ventilation, lighting, noise; November 20—Elementary nuclear physics; radiation hazards, and November 27—Written Examination (optional for visitors).

The order in which the topics are presented may be slightly modified depending on the availability of lecturers.

University of Buffalo School of Medicine

The thirty-fourth annual session of a general postgraduate course for practitioners will be held at the University of Buffalo School of Medicine on "Recent Advances in Clinical Practice" from September 13 through 18. There will be panel discussions affording ample opportunity for the practitioner to submit written questions concerning various aspects of the subjects. Major emphasis is placed on case presentations and clinical ward work in which each physician will have the opportunity to examine individual patients with an instructor.

The course is designed to provide a comprehensive review of recent advances in diagnosis and therapy, and it is suggested that physicians bring their tethoscopes.

Each day's sessions are held at a single hospital or adjacent hospitals in order to save time and transportation. All facilities may be reached by excellent bus service and it is not necessary for registrants to bring their own cars.

Information and registration forms may be obtained by writing to Dr. Milton Terris, assistant dean for postgraduate education, University of Buffalo School of Medicine, 3435 Main Street, Buffalo 14, New York.

Canadian Society for the Study of Fertility

The first annual meeting of the Canadian Society for the Study of Fertility will be held at the Windsor Hotel, Montreal, Canada, September 30 through October 2. Among the doctors taking part from New York will be Dr. Raphael Kurzrok, attending obstetrician and gynecologist, Morrisania City Hospital; Dr. Abner I. Weisman, assistant clinical professor of obstetrics and gynecology, New York Medical College, and Dr. J. R. Gepfert, instructor in obstetrics and gynecology, Cornell University and attendant in obstetrics at the New York Lying-in Hospital, all of New York City.

All meetings will be held in the Hotel, the Prince of Wales Salon. Papers and discussions will be presented from 9 A.M. through to about 5 P.M. with adequate breaks for lunch and recess periods. For registration and information, write to Canadian Society for the Study of Fertility, Dr. L. H. Harris, 167 College Street, Toronto, Canada.

Gastroenterology Postgraduate Courses

The sixth annual course in postgraduate gastroenterology will be given at the Shoreham, Washington, D.C., October 28, 29, and 30, 1954. Under the direction of Dr. Owen H. Wangensteen, professor of surgery, University of Minnesota Medical School, as surgical coordinator, and Dr. I. Snapper, director of medical education, Beth-El Hospital, Brooklyn, New York, as medical coordinator, faculty selected from the medical schools and Walter Reed Army Hospital will present all phases of gastrointestinal diseases and problems.

In order to obtain further information and to enroll, write to the National Gastroenterological Association, Department GSJ, 33 West 60th Street, New York 23, New York.

Personalities

Elected

Dr. Harold Brandaleone, president; Dr. Sidney Rubenfeld, president-elect; Dr. Wallace B. Murphy, vice-president; Dr. Edgar H. Bates, secretary; Dr. Alan A. Scheer, treasurer, and Dr. Claude E. Heaton, historian of the Medical Alumni Association of New York University-Bellevue Medical Center's College of Medicine.

Honored

Dr. Albert F. R. Andresen, clinical professor emeritus, State University of New York College of Medicine at New York City, with the Julius Friedenwald Medal for outstanding achievement in gastroenterology, at the annual meeting of the American Gastroenterological Association in June . . . Dr. Morton I. Berson, New York City, with a diploma making him a Miembro Correspondiente in the Sociedad Argentina de Cirugia Plastica and one from the Sociedad de Cirujanos de Chile . . . Dr. Arthur A. Landsman, New York City, with a plaque in recognition of his thirty-one years of service at the Jewish Memorial Hospital, at the time of his appointment as consultant in proctology.

Awarded

Dr. Dominick F. Maurillo, director of surgery, St. Mary's Hospital, Brooklyn, the Stella della Solidarieta Italiana from the Italian Government . . . Dr. Emanuel Schwartz, assistant professor of medicine and chief, Allergy Clinic, Long Island College Hospital, a grant by the A. H. Robins Co., Inc.

Appointed

Dr. Leona Baumgartner and Dr. Basil C. MacLean, New York City, to the advisory council for the Joint Hospital Survey and Planning Commission . . . Dr. Herman Hilleboe, State commissioner of health, to a Committee for Economic Progress . . . Dr. Alexander Martin, consulting psychiatrist of the Children's Aid Society, New York City, to the New York City Youth Board . . . Dr. Alfred H. Noehren, Buffalo, as medical director of the Deaconess Hospital in Buffalo . . . Dr. Douglas A. Sunderland, Pelham, as director of the Rome City Laboratory . . . Dr. Ernest Witebsky, Buffalo, as distinguished professor of bacteriology and immunology, at the University of Buffalo School of Medicine.

New Offices

Dr. James R. Guthrie, formerly of Tarrytown, practice of pediatrics in Ossining . . . Dr. Merrill P. Haas, New York City, practice of pediatrics in Peekskill . . . Dr. Nathaniel C. Wollin, New York City, practice of ophthalmology in Cortland . . . Dr. Edward Weissman, general practice in Kingston.

BOOKS RECEIVED

(The following books were received during the month of June, 1954)

Endemic Goiter. The Adaptation of Man to Iodine Deficiency. By John B. Stanbury, M.D., Gordon L. Brownell, Ph.D., Douglas S. Riggs, M.D., Hector Perinetti, M.D., *et al.* Octavo of 209 pages, illustrated. Cambridge, Mass., Harvard University Press, 1954. Cloth, $4.00.

Physiology and Biochemistry of the Skin. By Stephen Rothman, M.D. Contributors: Zachary Felsher, M.D., Peter Flesch, M.D., Aaron Bunsen Lerner, M.D., Allan L. Lorincz, M.D., *et al.* Octavo of 741 pages, illustrated. Chicago, University of Chicago Press, 1954. Cloth, $19.50.

Grenz Ray Therapy. Principles, Methods, Clinical Applications. By Gustav Bucky, M.D., and Frank C. Combes, M.D. Contributors: Ralph Howard Brodsky, D.M.D., Thomas Lee Bucky, M.D., Otto Glasser, Ph.D., Max A. Goldzieher, M.D., *et al.* Octavo of 204 pages, illustrated. New York, Springer Publishing Co., 1954. Cloth, $8.50.

Health Services in American Colleges and Universities, 1953. Findings of the American College Health Association Survey. By Norman S. Moore, M.D., and John Summerskill, Ph.D. Quarto of 108 pages. Ithaca, New York, Cornell University, 1954.

The Pharmacologic Principles of Medical Practice. A Textbook on Pharmacology and Therapeutics for Medical Students, Physicians, and the Members of the Professions Allied to Medicine. By John C. Krantz, Jr., Ph.D., and C. Jelleff Carr, Ph.D. Third Edition. Octavo of 1,183 pages, illustrated. Baltimore, Williams & Wilkins Co., 1954. Cloth, $12.

A Primer of Pulmonary Function. By Harold Guyon Trimble, M.D., and James Kieran, M.D. Octavo of 22 pages, illustrated. Oakland, California, The Authors, [1954].

The Antiseptic. Monthly Journal of Medicine & Surgery. Founded by Dr. U. Rama Rau in 1904. Golden Jubilee [Number], April, 1954. Octavo of 500 pages, illustrated. Madras, India, "The Antiseptic," 1954. Published Monthly, 15/- per year.

The Medical Clinics of North America. Mayo Clinic Number. July, 1954. Octavo, illustrated. Philadelphia, W. B. Saunders Company, 1954. Published Bimonthly (six numbers a year). Cloth, $18 net; paper, $15 net.

The Doctor Writes. An Anthology of the Unusual in Current Medical Literature. Edited by S. O. Waife, M.D. Octavo of 175 pages, illustrated. New York, Grune & Stratton, 1954. Cloth, $3.75.

Why We Became Doctors. Edited by Noah D. Fabricant, M.D. Octavo of 182 pages. New York, Grune & Stratton, 1954. Cloth, $3.75.

Arthritis and Rheumatism. The Diseases and Their Treatment. By Charles LeRoy Steinberg, M.D. With five contributors. Octavo of 326 pages, illustrated. New York, Springer Publishing Company, 1954. Cloth, $10.

The Permanent Revolution in Science. By Richard L. Schanck. Octavo of 112 pages. New York, Philosophical Library, 1954. Cloth, $3.00.

One Hundred and Fourth Registration Report of Births, Marriages, Divorces and Deaths for the Year Ended December 31, 1951. State Department of Health, [Connecticut]. Octavo of 246 pages. Hartford, The State, n.d. (State of Connecticut, Public Document No. 9)

Additional Reports No. 2 on Experimentation of the Conaemie Therapy. By Masao Yamagata, M.D. Duodecimo of 51 pages, illustrated. No place, [The Author], December, 1952. Paper, 50 yen.

Additional Reports No. 3 on Experimentation of the Conaemie Therapy. By Masao Yamagata, M.D. Octavo of 24 pages. No place, [The Author], April, 1954.

The Deaf and Their Problems. A Study in Special Education. By Kenneth W. Hodgson, M.A. Octavo of 364 pages. New York, Philosophical Library, 1954. Cloth, $6.00.

Peripheral Circulation in Man. G. E. W. Wolstenholme, M.B., and Jessie S. Freeman, M.D., Editors. Assisted by Joan Etherington. Octavo of 219 pages, 72 illustrations. Boston, Little, Brown & Co., 1954. Cloth, $6.00. (A Ciba Foundation Symposium)

Nutritional Factors and Liver Diseases. By Klaus Schwarz, (Conference Chairman), C. H. Best, M.D., M. Bevans, M.D., J. M. R. Beveridge, Ph.D. (biochem.), *et al.* Octavo of 347 pages, illustrated. New York, New York Academy of Sciences, 1954. Paper, $4.50. (*Annals of the New York Academy of Sciences*, v. 57, Art. 6, pp. 615–962, May 10, 1954)

Beyond the Germ Theory. The Roles of Deprivation and Stress in Health and Disease. Iago Galdston, M.D., Editor. Octavo of 182 pages, illustrated. New York, Health Education Council, 1954. Cloth, $4.00. (A New York Academy of Medicine Book)

Heart Disease and Industry. With Particular Reference to Workmen's Compensation Cases. By

Meyer Texon, M.D. Quarto of 324 pages. New York, Grune & Stratton, 1954. Cloth, $7.50.

Recent Advances in Cardiovascular Physiology and Surgery. A Symposium Presented by the Minnesota Heart Association and the University of Minnesota. September 14, 15 and 16, 1953. Quarto of 133 pages, illustrated. Minneapolis, University of Minnesota, 1954.

The Ciba Foundation for the Promotion of International Cooperation in Medical and Chemical Research. Report, 1953. Octavo of 40 pages, illustrated. London, England, [The Foundation], 1954.

Progress and Problems in Mental Hospitals. Proceedings of the Fifth Mental Hospital Institute. Held Under the Auspices of the American Psychiatric Association Mental Hospital Service, Hotel Marion, Little Rock, Arkansas, October 19–22, 1953. Daniel Blain, M.D., Editor, Stella B. Hanau, Consultant Editor. Octavo of 204 pages. [Washington, American Psychiatric Association], n.d. Paper, $2.50.

Hospital Service in the United States. The 1953 Census of Hospitals. Thirty-Third Presentation of Hospital Statistics by the Council on Medical Education and Hospitals of the American Medical Association. Approved Schools for Medical Technologists, X-Ray Technicians, Physical Therapists, Occupational Therapists, Medical Record Librarians and Medical Record Technicians. Quarto of 108 pages. [Chicago], American Medical Association, 1954.

The Year Book of Endocrinology (1953–1954 Year Book Series). Edited by Gilbert S. Gordan, M.D. Duodecimo of 390 pages, illustrated. Chicago, Year Book Publishers, 1954. Cloth, $6.00.

Hormones in Health and Disease. A Symposium Presented at the Twenty-Fifth Graduate Fortnight of the New York Academy of Medicine, October Sixth to Seventeenth, 1952. Edited by Robert L. Craig, M.D. Octavo of 346 pages, illustrated. New York, Macmillan Company, 1954. Cloth, $6.00.

The Emotional Problems of Children. A Guide for Parents. By Harry Joseph, M.D., and Gordon Zern. Octavo of 310 pages. New York, Crown Publishers, 1954. Cloth, $3.75.

A Methodological, Psychiatric and Statistical Study of a Large Swedish Rural Population. By Tage Larsson and Torsten Sjögren. Translated by Donald Burton. Octavo of 249 pages, illustrated. Copenhagen, Einar Munksgaard, 1954. (*Acta Psychiatrica et Neurologica Scandinavica* Supplementum 89)

Coronary Heart Disease in Young Adults. A Multidisciplinary Study. By Menard M. Gertler, M.D., and Paul D. White, M.D. With the Aid, Advice, and Editorial Assistance of E. F. Bland, M.D., J. Fertig, Ph.D., S.M. Garn, Ph.D., J. Lerman, M.D., *et al.* Octavo of 218 pages, illustrated. Cambridge, Mass., Published for the Commonwealth Fund by Harvard University Press, 1954. Cloth, $5.00.

Let's Eat Right to Keep Fit. By Adelle Davis, M.S. Octavo of 322 pages. New York, Harcourt, Brace & Co., 1954. Cloth, $3.00.

Manual of Proctology. By Comm. Emil Granet, (M.C.), USNR. Octavo of 346 pages, illustrated. Chicago, Year Book Publishers, 1954. Cloth, $7.50.

Treatment of Withdrawal Symptoms of Persons Addicted to Narcotic Drugs. By Hubert S. Howe, M.D., and Lynn Stratton Morris. Octavo of 24 pages. New York, Welfare and Health Council of New York City, 1954. Paper, $1.00.

BOOKS REVIEWED

Review of Physiological Chemistry. By Harold A. Harper, M.D. Fourth edition. Quarto of 329 pages, illustrated. Los Altos, Calif., Lange Medical Publications, 1953. Paper, $4.00.

This book represents a useful summary of the fundamentals of physiologic chemistry, especially useful to the clinician, as it discusses topics omitted in other textbooks of biochemistry, i.e., acid-base balance, electrophoresis, resorption, chemical change in disease.

Although it is a good summary of known facts, it omits many fundamental and critical aspects of information and therefore serves more as a ready reference of facts learned than as a book from which physiologic chemistry should be initially acquired.

As this represents the author's objective, the purpose for which the book was written is admirably fulfilled.—ALBERT E. SOBEL

Diseases of the Retina. By Herman Elwyn, M.D. Second edition. Octavo of 713 pages, illustrated. New York, Blakiston Co., 1953. Cloth, $12.

This is an excellent text that systematically covers all phases of retinal disease. The pathologic background for the clinical picture is emphasized. The book is very well illustrated and includes many colored paintings of fundi conditions. The second edition brings the text up to date with the very latest progress in the field of retinal disease. The most recent concepts of essential hypertension, diabetic retinopathy, tuberculosis, sarcoidosis, and retrolental fibroplasia are given. This book is highly recommended for the internist, pediatrician, and general practitioner as well as the ophthalmologist.—Jesse M. Levitt

Frontal Lobes and Schizophrenia. Second Lobotomy Project of Boston Psychopathic Hospital. Edited by Milton Greenblatt, M.D., and Harry C. Solomon, M.D. Octavo of 425 pages, illustrated. New York, Springer Publishing Co., 1953. Cloth, $12.50.

The essence of human personality still eludes us. Geometric descriptions of the facets of a gem do not adequately characterize its beauty. Likewise, detailed analysis of behavior and attitude does not adequately characterize the person.

The authors have presented a most intensive and extensive study of 116 patients subjected to lobotomy and followed presumably for a maximum of two years. The effort expended was prodigious. It is evident, however, that evaluation of results depended upon a fundamental classification of "good, fair, or poor"—an impressional method of assay which leaves us essentially where we were fifteen years ago. Too, while it is interesting to know that these patients advanced from 1.0 to 1.7 in expressive movements of the face, it would be more to the point to know whether they could take twenty cents to the store and buy a loaf of bread.

The sections on autonomic function are interesting. The chapter on neuropathologic lesions contributes almost nothing to our knowledge. The chapter on prediction of results, when reduced to monosyllables, indicates essentially that the patients who seemed in better condition before surgery will be in better condition after surgery.

The time and effort that must have gone into this work is almost inconceivable. The fundamental questions concerning lobotomy, however, remain unanswered.—Everett W. Corradini

The Surgery of Infancy and Childhood. Its Principles and Techniques. By Robert E. Gross, M.D. Drawings by Etta Piotti. Quarto of 1,000 pages, illustrated. Philadelphia, W. B. Saunders, 1953. Cloth, $16.

This beautifully illustrated and well-documented text is a classic work. Dr. Gross presents his wide and varied experience in a concise, clear manner and draws a great deal on the material from the Children's Hospital of Boston. In addition, important case collections from the literature are presented. Each chapter is followed by an excellent bibliography.

The book starts with a discussion of general problems, those of pre- and postoperative care, anesthesia, the surgery of prematures, etc., and then considers specific subjects. There are chapters on atresia of the esophagus, congenital hypertrophic pyloric stenosis, duplications of the alimentary tract, genitourinary subjects, thoracic and cardiac surgery, to mention only some, and many others. The clinical aspects of each subject are stressed. Many cases are presented. The material is practical. Pertinent embryology, anatomy, and physiology are briefly discussed. Operative procedures are presented in detail in the text and in many excellent illustrations. End results are given.

This book brings the many problems of surgery in the very young up to date. It reflects the originality and brilliance of the author and contains many of his own contributions.—William Sheinfeld

Dermatologic Formulary. From the New York Skin and Cancer Unit, Service of Dermatology, (Dr. Marion B. Sulzberger, Director.) Frances Pascher, M.D., Editor. Revised edition. Duodecimo of 150 pages. New York, Paul B. Hoeber, 1953. Cloth, $3.00.

This book, which is small in size, represents a monumental task in its organization. Between its covers are 132 pages containing the collective therapeutic thinking in the field of skin diseases of some of the greatest dermatologic minds. It includes prescriptions, drugs, and various modalities used in the treatment of skin disorders at one of the most outstanding clinics in the world. They have withstood the acid test of time and have proved their efficacy over the years. Each drug is discussed in detail, giving its uses, indications, and contraindications, and, where necessary, the deleterious side effects. The book would be a most effective guide to the general practitioner and, in this era of new drugs, will keep the specialist up to date in the latest therapeutic agents and drug terminology.—George F. Price

Diseases of the Liver, Gallbladder and Bile Ducts. By S. S. Lichtman, M.D. Third edition. In two volumes. Octavo of 1,315 pages, illustrated. Philadelphia, Lea & Febiger, 1953. Cloth, $22 set.

In 1952, when the first edition of this book was published, it was considered an excellent résumé of the anatomy, physiology, and diseases of the liver. Following this, a second enlarged edition was found necessary. At the present time our knowledge of the function and diseases of the liver has greatly increased. Especially is this true in the treatment of hepatic disorders. This has necessitated a marked revision and expansion of the book so that the present third edition is published in two volumes. Dr. Lichtman discusses, authoritatively, all phases of liver function, pathology, and diseases with their treatment. The bibliography following each chapter is complete. In addition to the references in English, there are as many in German, a lesser number in French, and a few in other languages.

These volumes represent an exhaustive study of the subject. They are highly recommended to the student, specialist, and general practitioner. The publishers should also be commended on the excellence of the format.—REUBEN FINKELSTEIN

Human Neuroanatomy. By Oliver S. Strong, Ph.D., and Adolph Elwyn, A.M. Third edition. Quarto of 481 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $7.50.

This is by far the finest book on neuroanatomy in American medicine. Maintaining the general arrangement of previous editions, the author has incorporated the results of neuroanatomic and neurophysiologic research of recent years, making it a dynamic and salient work. For the student, the text is very readable, while the photographs and line illustrations are of high technical degree and extremely lucid. For the researcher there is, in addition, an extensive bibliography. With the growing importance of cerebral structure and function in the treatment of mental illness, this book makes a very valuable contribution. It is recommended without reservation.—THEODORE MELTZER

The Medical Clinics of North America. Philadelphia Number. November, 1953. Index 1951-1953. Octavo, illustrated. Philadelphia, W. B. Saunders Co., 1953. Published bimonthly (six numbers a year.) Cloth, $18 net; paper, $15 net.

The Philadelphia number of the *Medical Clinics of North America* consists of a symposium on clinical medicine covering a wide range of topics. All of the articles are useful and some are extremely good. There is an excellent paper by Fitz-Hugh and Frost on hemocytopenic reactions to modern drugs. A feature of this issue is the report of a clinicopathologic conference from the hospital of the University of Pennsylvania.—MILTON PLOTZ

The Use of Drugs. A Textbook of Pharmacology and Therapeutics for Nurses. By Walter Modell, M.D., and Doris J. Place, R.N. Octavo of 468 pages. New York, Springer Publishing Co., 1953. Cloth, $4.50.

This book is written specifically for the nurse as a guide to the use of drugs and to the understanding of their actions. Part I deals with the principles of pharmacology; part II, the principles of therapeutics, and part III, writing of prescriptions with an excellent explanation of weights and measures, dosage, calculations, and preparation of solutions. Part IV contains a comprehensive listing with brief descriptions of the majority of drugs a nurse will usually encounter, including the main actions, contraindications, mode of administration, and dosage. The illustrations are simple and educational even when dealing with such complicated entities as the central and autonomic nervous systems. Nurses will surely find this text concise and practical.—CECELIA JETT-JACKSON

The Interpersonal Theory of Psychiatry. By Harry Stack Sullivan, M.D. Edited by Helen Swick Perry and Mary Ladd Gawel. Octavo of 393 pages. New York, W. W. Norton & Co., 1953. Cloth, $5.00.

The author, writing in the first person and in a sort of "informal referral to notes" style, emphasizes the importance of the early years, of anxiety, of the development of the personality through interaction with the environment, and of the effect of the social milieu on every individual.

The editors are to be congratulated on selection of material and for the skillful blending of the subjects to produce an organized and readable treatise. Sullivan was noted for his flexibility and foresight, which is amply reflected in his chapter "Towards the Psychiatry of Peoples," in which he emphasizes what most of us should feel, that hope for the future with regard to the differences between nations depends on a knowledge of the makeup of the people of those nations.

In construction many of the sentences are necessarily too lengthy. It is not a book which can be casually or rapidly perused. However, its value is unquestioned and it certainly deserves a place in the library of every psychiatrist and those persons who enjoy the reflections of a man with far-seeing eyes and great ability for explaining details.—ROBERT J. MEARIN

Fool's Haven. By C. C. Cawley. Octavo of 210 pages. Boston, House of Edinboro, 1953. Cloth, $2.75.

According to the author, "Is not faith-healing truly a Fool's Haven from reality?" This novel is climaxed by the death of a young prospective bride from acute appendicitis. The mother has refused medical advice and attention, and the faith treatment has been under the direction of a self-ordained healer. The bridegroom-to-be has all along opposed the conduct of the case. After an inquest, autopsy, and trial, the mother was convicted of negligence but paroled. The healer was acquitted. Sufficient tragedy even for a novel, but too much space has been devoted to what one reviewer has referred to as considerations and experiences of adolescent life.—JOSEPH RAPHAEL

An Evaluation of Rehabilitation. A Study of 476 Cases, with a Detailed Follow-Up Study of 208 Cases Discharged in 1949 from the Physical Medicine and Rehabilitation Services of the New York University-Bellevue Medical Center. By Georgia F. McCoy, M.S., and Howard A. Rusk, M.D. Quarto of 87 pages. New York, Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, 1953. Paper, $1.00. (Rehabilitation Monograph 1.)

In keeping with the scientific development of medical rehabilitation, a review of the results attained is of great value. To this end the authors have presented a thorough compilation of the data covering a large number of patients who have received prescribed rehabilitation. An appendix defining many of the terms used in rehabilitation studies serves to promote standardization of the work. This monograph offers a basis for comparative studies of intermediate and end results of applied rehabilitation, and as such it will be of particular interest to those who are engaged in the many aspects of this field.—Jerome Weiss

Medical Schools in the United States at Mid-Century. By John E. Deitrick, M.D., and Robert C. Berson, M.D. Octavo of 380 pages, illustrated. New York, McGraw-Hill Book Co., 1953. Cloth, $4.50.

This is the most important discussion of medical education in America since the appearance of Flexner many years ago. It should be read with attention by every doctor in the United States and by all those who are interested in the subject and the status of medical attention to patients in the United States.

The book is the formal report of the survey of medical education which was participated in by leading educators throughout the country. Almost every aspect of the activities of medical schools is discussed in detail. The strengths and the weaknesses are pointed out and the possibilities for improvement are indicated. Deitrick and Berson are to be congratulated on their lucid and readable style and their organization of difficult material. This valuable volume belongs in the library of each reader of this review.—Milton Plotz

Practical Methods in Biochemistry. By Frederick C. Koch and Martin E. Hanke, Ph.D. Sixth edition. Octavo of 537 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $5.00.

This new sixth edition, among other features, contains procedures for the separation and identification of amino acids by paper chromatography, the effect of hydrogen-ion concentration on the distribution of chloride between blood cells and plasma, new and improved procedures for the estimation of ascorbic acid and vitamin A. There are also various other estimations, of pepsin by the hemoglobin method, the microbiologic estimation of methionine, of blood sugar in small quantities of blood by the colorimetric method, and estimation of serum proteins by the biuret method.—Edward H. Nidish

Headaches. Their Nature and Treatment. By Stewart Wolf, M.D., and Harold G. Wolff, M.D. Duodecimo of 177 pages, illustrated. Boston, Little, Brown & Co., 1953. Cloth, $2.50.

Dr. Stewart Wolf is professor and head of the Department of Medicine in the University of Oklahoma School of Medicine. He has given considerable time to the study of emotional factors in somatic diseases. Dr. Howard G. Wolff is professor of medicine (neurology) at Cornell University Medical College, and he has done pioneer work on headache, having written a large volume on the subject for the medical profession. These authors have brought out a book addressed to the general public because they believe "that the layman deserves to learn of developments and trends of medicine from workers who are directly concerned with them." The book is a very fine elucidation of the mechanism of headaches, their etiology, the various clinical forms and manifestations, and the different methods of treatment. Although there is some doubt as to the value of such a work for lay people, the fact remains that it is a very excellent one for doctors, who would do well to have a copy in their office. It truly discusses headaches from every conceivable angle and it is written in very simple, almost elementary language. The general practitioner would profit a good deal from studying this book.—Irving J. Sands

Aspects of the Psychology of the Tuberculous. By Gordon F. Derner, Ph.D. Octavo of 119 pages. New York, Paul B. Hoeber, 1953. Cloth, $3.50. (A Psychosomatic Medicine Monograph.)

Dr. Derner has presented us with an interesting and timely study of some *Aspects of the Psychology of the Tuberculous*. By applying a number of well-known psychologic tests to a limited number of patients at the Grasslands Hospital in Westchester County, New York, he has come to conclusions which should prove valuable to all workers in the field of tuberculosis control.

The author states that the following implications can be drawn from this study:

1. The diagnosis and treatment of tuberculosis necessitates a consideration of the patient's fears and concerns related to the disease and its concomitants. The approach to the patient should be psychotherapeutic in orientation.
2. The basic anxiety, rather than a euphoria, which is typical of the tuberculous patient, may require systematic psychotherapy. Because the neurotic patterns are frequently reactive patterns, brief rather than intensive psychotherapy would seem to be adequate in most cases.
3. Group discussions on tuberculosis by a staff member should be attempted. This could be followed by group psychotherapy sessions.
4. Because tuberculous patients tend to view their handicap realistically, they will accept realistic life goals. Rehabilitation procedures, coupled with psychotherapy, may help the patient choose a life goal appropriate for him.
5. The effectiveness of psychotherapy as an adjunct to the present prescribed methods of tuberculosis treatment offers an important research problem.—Foster Murray

20 Years of Psychoanalysis. A Symposium in

Celebration of the Twentieth Anniversary of the Chicago Institute for Psychoanalysis. Edited by Franz Alexander, M.D., and Helen Ross. Octavo of 308 pages. New York, W. W. Norton & Co., 1953. Cloth, $3.75.

The first part of this volume presents the proceedings of the scientific meetings held in Chicago in celebration of the twentieth anniversary of the founding of the Chicago Institute for Psychoanalysis. It contains such articles as "The Place of Psychoanalysis in Medicine," "The Impact of Psychoanalysis on Training in Psychiatry," and "Psychoanalysis and the Biological Sciences." The second part contains four papers dealing essentially with the specific training and research activities of the Chicago Institute for Psychoanalysis during its period of existence. This book points to the pioneering work done by a few leaders in the field who were able to gain admission to the faculties of medical schools and who were able to break down the barriers of prejudice and ignorance that prevent even intelligent people from gaining an understanding of psychoanalytic theories. This book will be warmly accepted by doctors, sociologists, psychoanalysts, and particularly those who are interested in psychiatry and psychoanalysis.—Irving J. Sands

Pituitary Chromophobe Adenomas. Neurology, Metabolism, Therapy. By John I. Nurnberger, M.D., and Saul R. Korey, M.D. Octavo of 282 pages, illustrated. New York, Springer Publishing Co., 1953. Cloth, $7.00.

The authors offer a neurometabolic appraisal of 117 selected patients harboring chromophobe adenoma of the pituitary gland. Initially, data relevant to the anatomicophysiologic status of structures implicated in the clinical syndrome is reviewed, and with this as a basis the more common manifestations of the lesion are detailed. A somewhat comprehensive evaluation is made of the metabolic and endocrinologic aspects, and justifiable emphasis is placed here. However, further statistical and metabolic information as regards the use of ACTH and cortisone in patients submitted to radiation, surgery, or each together, would have been of great import. Some of the more pressing issues in therapy are mentioned but the benignity of radiation therapy is erroneously portrayed.

The book finds its true value in the emphasis placed upon the metabolic consequences of chromophobe tumors. It is beyond question that therapeutic failures in the past by one or any method have resulted from lack of comprehension of just these neurometabolic disturbances portrayed by the authors. For all those confronted with the problem of chromophobe adenomas, Drs. Nurnberger and Korey have reinitiated a necessary awareness of the widespread effects of this tumor and its therapeutic implications.—Albert W. Cook

An Approach to General Practice. By R. J. F. H. Pinsent, M.D. Octavo of 166 pages. Edinburgh, E. & S. Livingstone (Baltimore, Williams & Wilkins Co.), 1953. Cloth, $3.50.

The author, a general practitioner in a large industrial city in Great Britain, records his experiences as a practicing physician with the aim of giving a newcomer suggestions of what may confront him in his work and what society may expect from him. He begins with the doctor's career as a locum to another physician and discusses his position in the community and his relationship to his colleagues in general practice and in the specialties. The role of the medical man in social health is stressed, and the author refers to public health facilities as an orchestra of which the physician is the conductor. The education of the patient is not neglected. One chapter is devoted to doctors' documents. It is of interest to an American physician that the British practitioner is required to fill out over forty different forms under the present system of medical practice in Great Britain.—Jacob H. Landes

The Roots of Psychotherapy. By Carl A. Whitaker, M.D., and Thomas P. Malone, Ph.D. Octavo of 236 pages, illustrated. New York, Blakiston Co., 1953. Cloth, $4.50.

The object of this book is the scientific formulation of what the authors regard as the art of psychotherapy. Psychiatry has long passed from a state when it was confined solely to the treatment of psychotic patients in state hospitals. It has now infiltrated every phase of medical science and deals with many aspects of interpersonal relationships wherever human beings congregate as a group for whatever purpose. Psychotherapy is an old and ancient art and has antedated scientific medicine. Only in the past thirty-five years has it assumed a definite role in science.

The book under discussion covers the various theories, such as psychoanalysis, psychobiology, and other views regarding the bases for psychotherapy, and is a philosophic approach to the topic. It is difficult to review because it contains so many different facets which the authors try to integrate into a harmonious approach to the entire subject. Moreover, throughout the volume the authors give their own personal theories and experiences in teaching psychotherapy to students and in treating patients psychotherapeutically. It is a provocative book, one that will elicit considerable discussion and possibly some controversy among the various workers in this very important field of medicine.—Irving J. Sands

Emotional Factors in Skin Disease. By Eric Wittkower, M.D., and Brian Russell, M.D. With contributions from Peter Edgell, Desmond Irwin, and John Slorach. Octavo of 214 pages. New York, Paul B. Hoeber, 1953. Cloth, $4.00.

This volume represents a tremendous amount of research work because it is really a résumé of medical literature, not only of the present, but also of

[Continued on page 2378]

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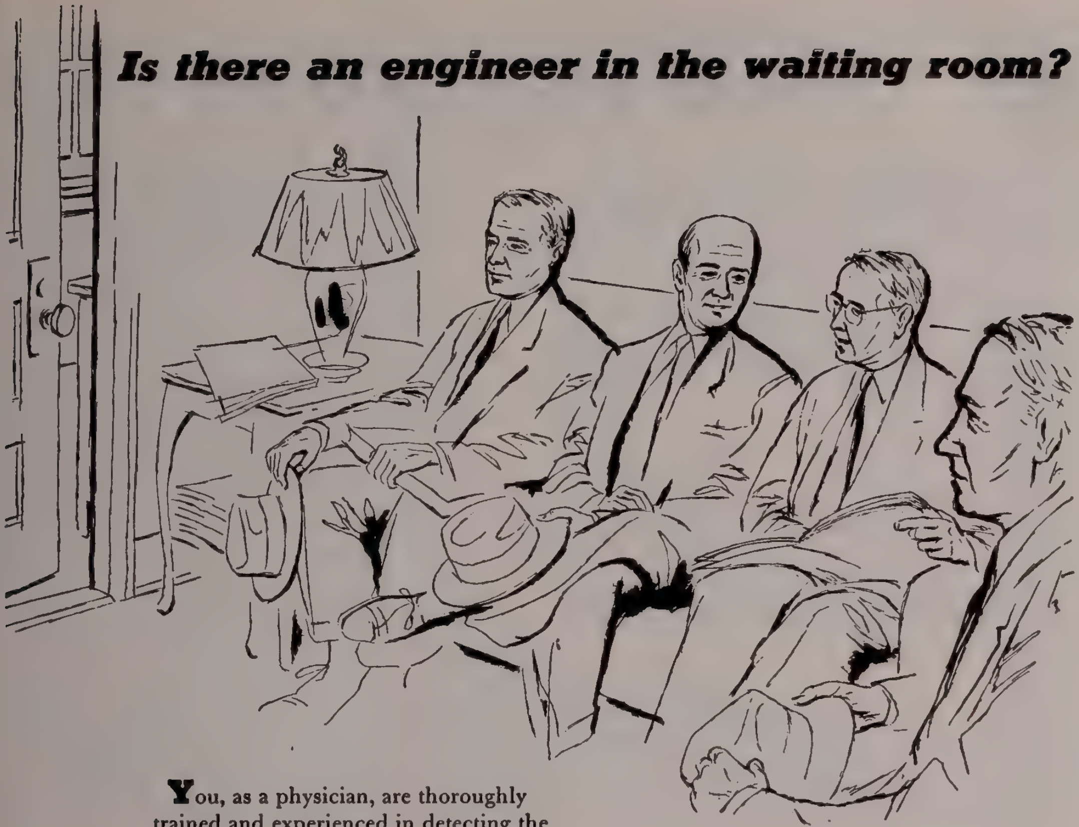

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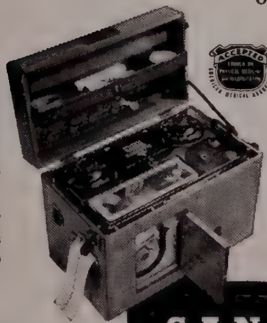

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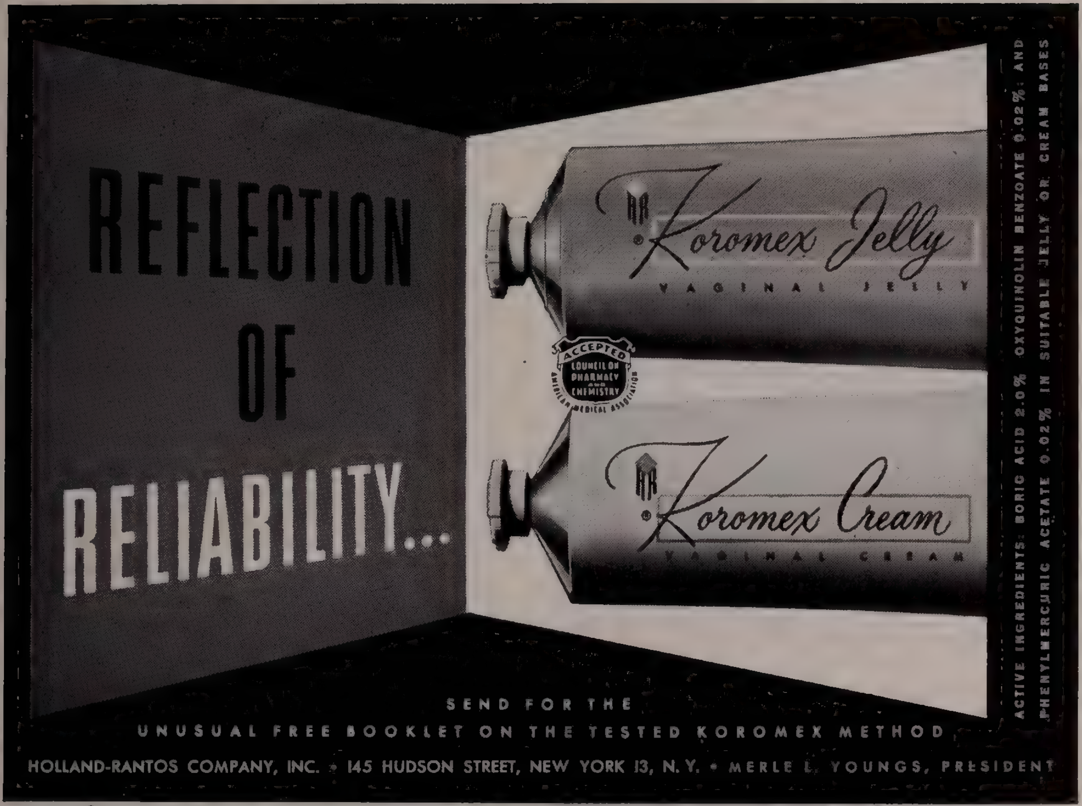
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[Continued from page 2374]

the past. Besides this, it touches on medical references by great poets and writers.

It is a welcome addition to the field, because it is the second book of its kind that has been written, the previous one in 1927. It is also very timely, since it develops the psychosomatic concept of present-day dermatology.

The work is divided into two parts. The first deals with a general psychosomatic approach to skin diseases and the embryonic development, anatomy, and physiology of the skin. The second part deals with specific skin diseases which the authors believe relate to the central nervous system.

At the end of each chapter there is an extensive bibliography supporting the claims of the writers. They are to be complimented for their frankness and honesty, because in their conclusion they make statements not supporting their own claims. Realizing the thin ice they are skating on, as all pioneers do, they allowed for future changes by using such expressions as "may," "all in the future," "probably," "it remains to be seen," and similar equivocal phrases.

The book is unique in that it does not have one photograph. It is the opinion of this reviewer that the sex angle is overplayed and stressed too much.

If this work accomplishes nothing else but the elimination of the term "nerves" from medical terminology, if will have performed a tremendous task.—GEORGE F. PRICE

The Digestive Tract in Roentgenology. By Jacob Buckstein, M.D. In Two Volumes. Second edition. Quarto of 1,202 pages, illustrated. Philadelphia, J. B. Lippincott Co., 1953. Cloth, $30 set.

The two volumes of *The Digestive Tract in Roentgenology* under the authorship of Dr. Jacob Buckstein are of great value for their 1,500 illustrations alone.

The author's tremendous experience over thirty-three years, both in private practice and in the x-ray department of Bellevue Hospital, has enabled him to describe with authority the commoner forms of pathology met with in the digestive tract, as well as the rare and the unusual.

In addition, each section is introduced by a review of the literature relative to the subject under discussion. Short case reports are made of the films shown and the diagnosis is often corroborated by surgery or by autopsy.

Although this might be considered primarily a reference work, perusal at random is very pleasant reading and highly informative. Cursory inspection creates a desire to own these volumes, and for those who are interested in the digestive tract from the standpoint of diagnosis or surgery, possession is imperative.—HENRY F. KRAMER

The Winslow Weight Watcher. By Thyra Samter Winslow. Octavo of 384 pages. New York, Abelard Press, 1953. Cloth, $3.50.

This book has 29 chapters and 384 pages and is written by a layman for laymen in a simple everyday style. The author, being an experienced novelist, knows how to appeal to the character of the obese personality. However, in her enthusiasm for simplicity she almost reaches the style of advertising copy. A few excerpts will illustrate this point, such as:

"Welcome to *The Winslow Weight Watcher.* It isn't often that you get a definite guarantee, a written promise in the first paragraph of a book. Here is that guarantee to you . . . . IF . . . . " "If you will study the information and conscientiously follow the rules—all of which are backed up by the best medical authorities," etc., etc. "There is another side to massage—and most beauty parlors will undoubtedly deny this and wish I'd fallen dead before I wrote it. One of the most famous plastic surgeons in America said to me, 'Outside of the cases from accidents and birth, nearly all of my facial work comes from the beauty parlors.' 'You mean the beauty parlors recommend cases to you?' I asked. 'Not exactly,' he smiled. 'They do recommend cases. But most of the face lifts that I do, and I do many of them, are needed because the faces of my patients have become flabby from too much unskilled massage.' "

The author recommends a complete list of brand names for cosmetics, pills, vitamins, low calorie foods, electrical appliances, appetite depressors, and all forms of exercises. There is a great deal of repetition that is commonly found in the perennially appearing books for the obese. The author employs slogans and anecdotes to emphasize her views. There is a bibliography on cookbooks for the diet watchers which seems redundant, because good cooking in itself is a problem for the obese, like a tight rope for an acrobat.

The foreword by a physician sets the theoretic set-up for the book. Namely, that permanence of success in weight reduction is not possible, knowledge of diet and calories is not enough, aside from other factors. The dieter needs a policeman, and since there is a potential reservoir of thirty-five million obese in the United States, this certainly requires an unusual army of dietary police enforcement. Therefore, in the reviewer's opinion, it is best to follow the advice in the foreword by Dr. Kotkin, "It is wise to diet under the guidance of your personal physician."—MORRIS ANT

Manual of Psychological Medicine. For Practitioners and Students. By A. F. Tredgold, M.D., and R. F. Tredgold, M.D. Third edition. Octavo of 328 pages. London, Baillière, Tindall and Cox (Baltimore, Williams & Wilkins Co.), 1953. Cloth, $7.00.

The previous edition of this book appeared in 1945. The present one was completed by the son after the death of the elder Dr. Tredgold. However, the basic concept and format is similar to that which appeared in previous editions. Nevertheless, there

[Continued on page 2380]

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BOOKS REVIEWED

[Continued from page 2379]

has been a thorough revision of most of the chapters and the book has been brought up to date with present-day psychiatric thinking.

It is an excellent presentation of introductory psychiatry for general practitioners and medical students, easy to read, and the arrangement is concise. The chapter on sociologic considerations makes interesting reading and is very instructive. The section on legal relationships is not entirely applicable in the U.S.

On the whole, however, the reviewer recommends it highly to those who want an introduction into psychiatry.—Joseph L. Abramson

Fundamentals of Disease. A Textbook of Pathology and Clinical Pathology for Nurses. By Emmerich Von Haam, M.D. Octavo of 424 pages, illustrated. New York, Springer Publishing Co., 1953. Cloth, $4.75.

Nurses in training will surely find this text helpful in understanding pathology and the explanation of the lesions which underlie disease processes. Part I is devoted to a discussion of the six principal lesions, i.e., degenerative changes, circulatory disturbances, inflammation, diseases of adaptation, tumors, and changes associated with the death of cells and the body as a whole.

The second part presents reactions caused by various injurious accidents, such as physical and chemical trauma, as well as deficiency diseases, infection, and resistance. About one-half of the book is devoted to the third part which covers special and clinical pathology of the various systems. There are many illustrations specifically prepared for this book, some of them clear and helpful in demonstrating the fundamental lesions. The chapter on disease of the circulatory system is particularly well done.—Cecelia Jett-Jackson

An Introduction to Pathology and Bacteriology for Medical Students in the Tropics. By the late E. C. Smith, M.D. Revised by R. Kirk, M.D. Second edition. Octavo of 390 pages, illustrated. New York, Staples Press, 1953. Cloth, $9.00.

This book is essentially a summary of the facts of pathology, bacteriology, parasitology, and the blood-forming organs. It is not written as a substitute for standard texts in these disciplines, since the material is presented in far too condensed a manner. The material presented may be regarded as even too sketchy to be helpful as an introductory guide.—Morris L. Rakieten

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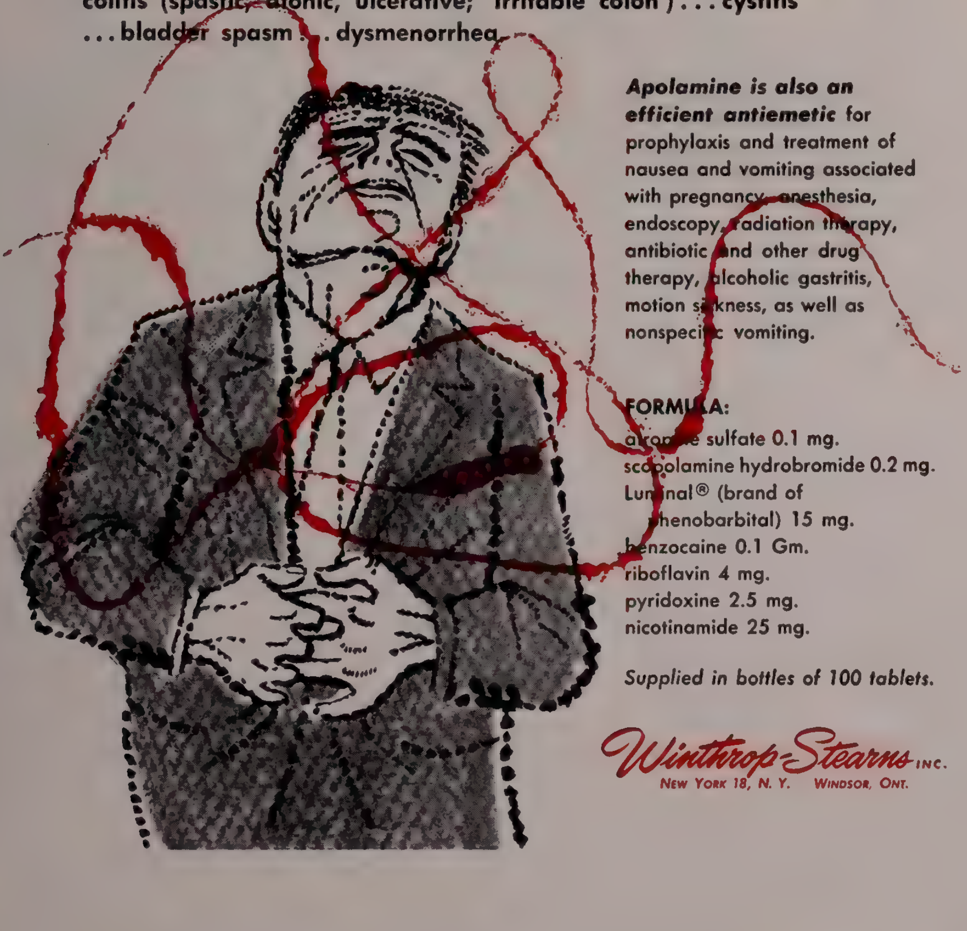

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7½ grain tablets and powder. Dose: 1 to 3 tablets, repeated.

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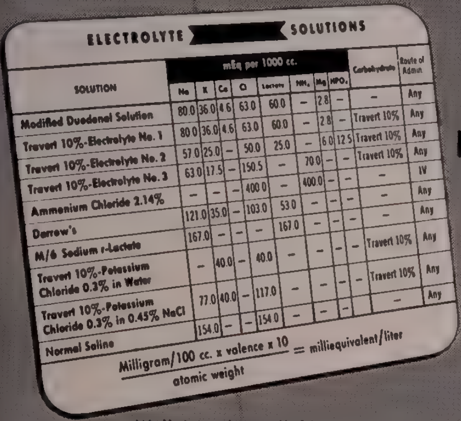

ELECTROLYTE SOLUTIONS

SOLUTION	mEq per 1000 cc.								Carbohydrate	Route of Admin.
	Na	K	Ca	Cl	Lactate	NH₄	Mg	HPO₄		
Modified Duodenal Solution	80.0	36.0	4.6	63.0	60.0	–	2.8	–	–	Any
Travert 10%-Electrolyte No. 1	80.0	36.0	4.6	63.0	60.0	–	2.8	–	Travert 10%	Any
Travert 10%-Electrolyte No. 2	57.0	25.0	–	50.0	25.0	–	6.0	12.5	Travert 10%	Any
Travert 10%-Electrolyte No. 3	63.0	17.5	–	150.5	–	70.0	–	–	Travert 10%	Any
Ammonium Chloride 2.14%	–	–	–	400.0	–	400.0	–	–	–	IV
Darrow's	121.0	35.0	–	103.0	53.0	–	–	–	–	Any
M/6 Sodium r-Lactate	167.0	–	–	–	167.0	–	–	–	–	Any
Travert 10%-Potassium Chloride 0.3% in Water	–	40.0	–	40.0	–	–	–	–	Travert 10%	Any
Travert 10%-Potassium Chloride 0.3% in 0.45% NaCl	77.0	40.0	–	117.0	–	–	–	–	Travert 10%	Any
Normal Saline	154.0	–	–	154.0	–	–	–	–	–	Any

$$\frac{\text{Milligram/100 cc.} \times \text{valence} \times 10}{\text{atomic weight}} = \text{milliequivalent/liter}$$

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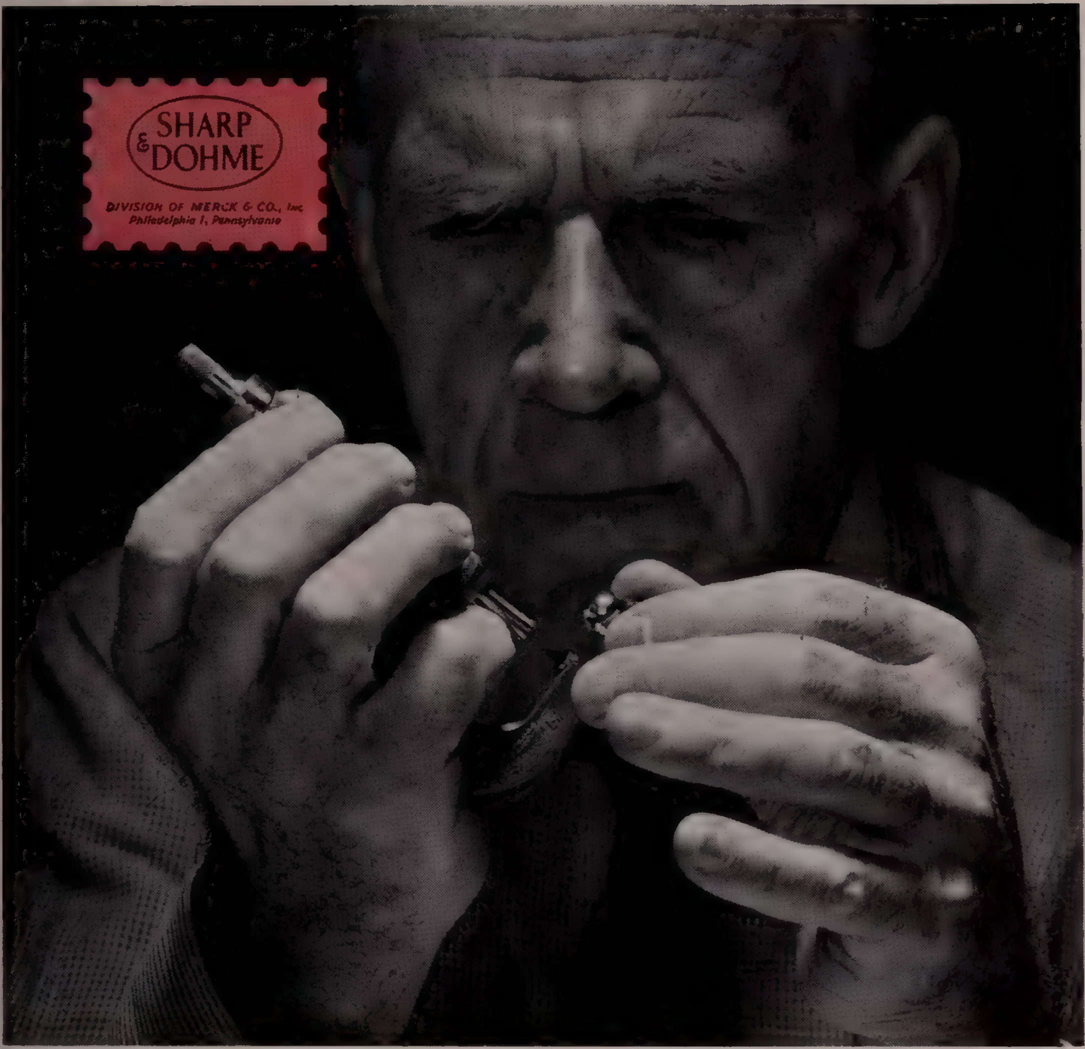

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*From a case report: J.A.M.A. 153:191, 1953.

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In obesity, the appetite-suppressing effect of amphetamine can be maintained for long periods, and the feeling of deprivation is averted.

Rauwidrine combines 1 mg. of Rauwiloid with 5 mg. of amphetamine in one slow-dissolving tablet.

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For obesity, 1 or 2 tablets 30 to 60 minutes before each meal.

Physicians are invited to send for clinical test samples.

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vigorous improvement

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Folic Acid..................... 1 mg.
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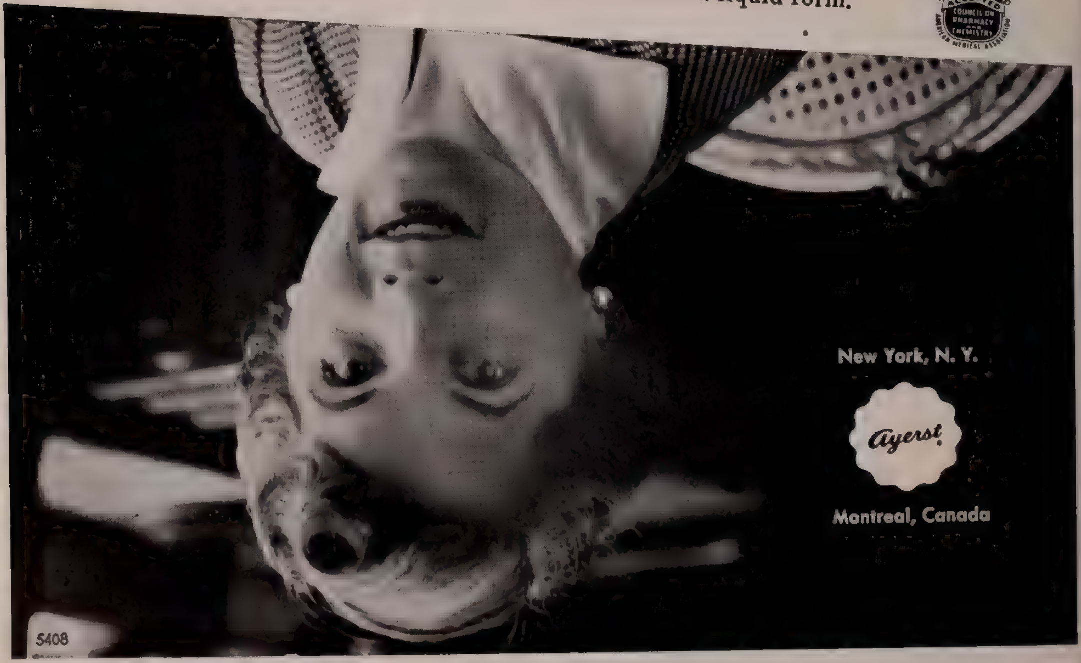

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and the Protein Requirement in Tuberculosis

Evaluation by blood analyses shows that protein needs of the tuberculous patient increase markedly with advancing extent and duration of the disease.[1,2]

Although the concentration of total serum proteins in tuberculosis may be elevated, controlled studies have shown that the elevation usually is due to an increase in the globulins.[3] In patients with advanced tuberculosis the albumin fraction of the total serum protein may be sharply lower, while the globulin fractions are distinctly higher in amounts than normal.[4]

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Other important contributions of meat are its valuable amounts of B vitamins and of essential minerals, especially iron, phosphorus, and potassium.

---

1. Getz, H. R.; Westfall, I. S., and Henderson, H. J.: Nutrition in Tuberculosis as Evaluated by Blood Analysis, Am. Rev. Tuberc. *50*:96 (Aug.) 1944.
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3. Eichelberger, L., and McCluskey, K. L.: Chemical Studies in Tuberculosis: Plasma Proteins, Cholesterol and Corpuscle Volume, Arch. Int. Med. *40*:831 (Dec.) 1927.
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from gastroduodenal pain⇄spasm..

visceral eutonic

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relieves **pain⇄spasm** usually in 10 minutes

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action at the site of visceral pain gives unusually rapid relief.

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control of spasm gives relief up to four hours.

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for gastroduodenal and biliary spasm, cardiospasm, pylorospasm, spasm of biliary sphincter, biliary dyskinesia, gastric neurosis and irritability, and as adjunctive therapy in selected inflammatory hypermotility states. A specific for upper gastrointestinal pain ⇄ spasm, DACTIL is not intended for use in peptic ulcer.

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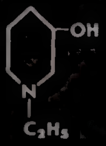

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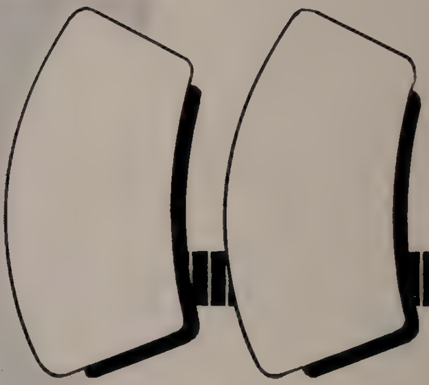

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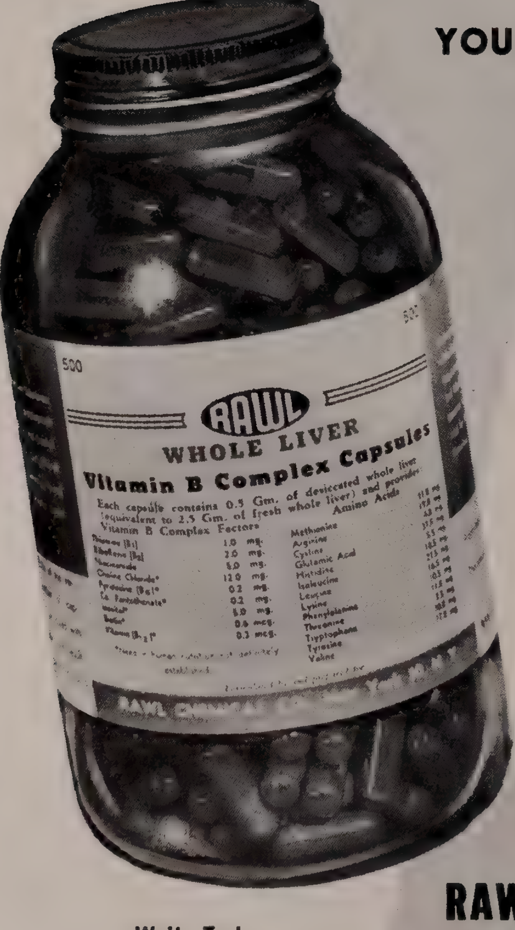
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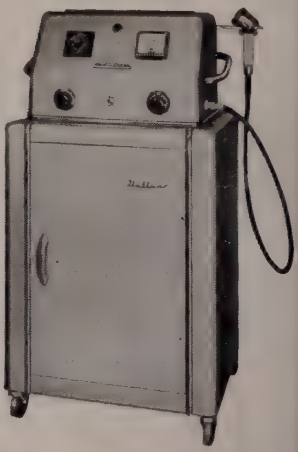

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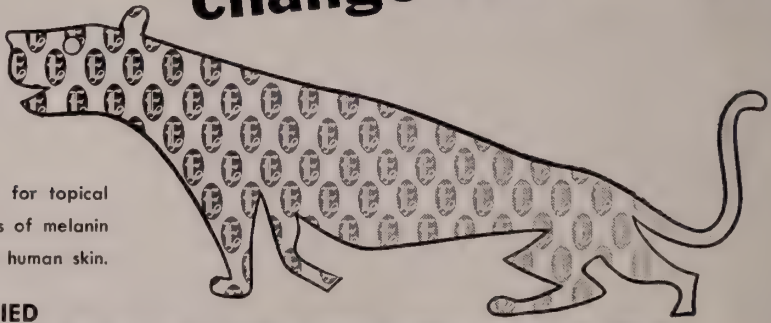

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1. Friend, D.G., and Cummins, J.F.: J.A.M.A. *153*:480 (Oct. 3) 1953.

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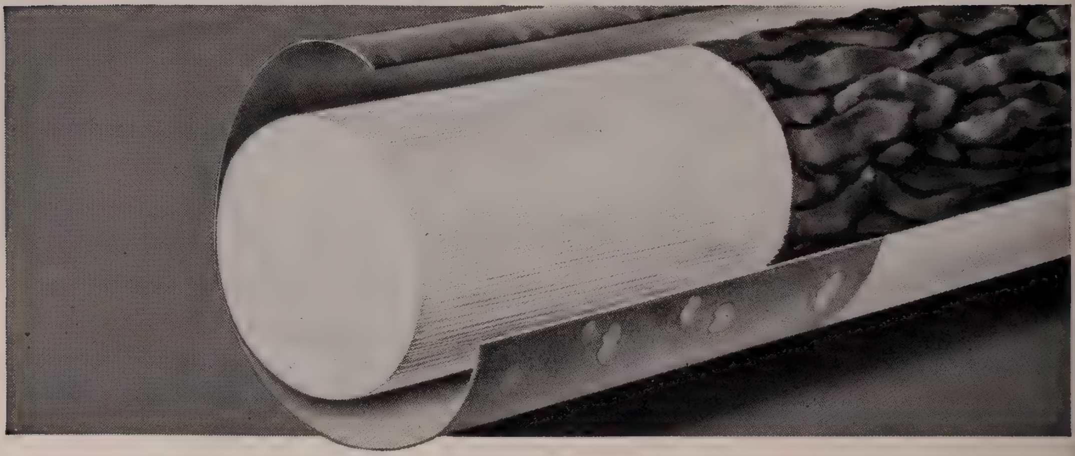

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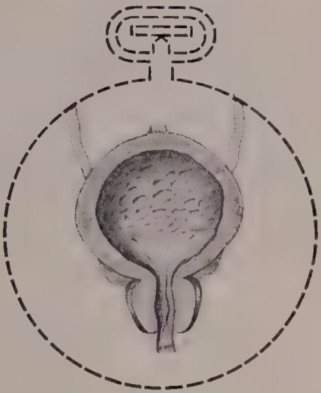

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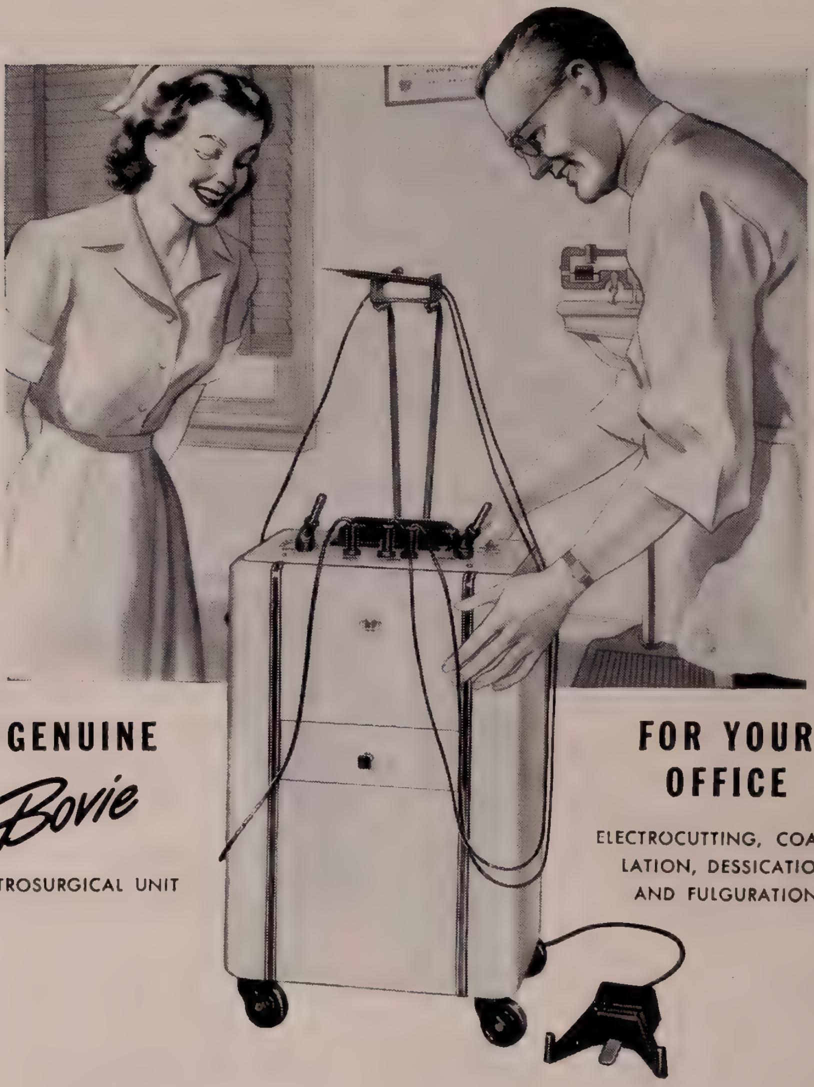

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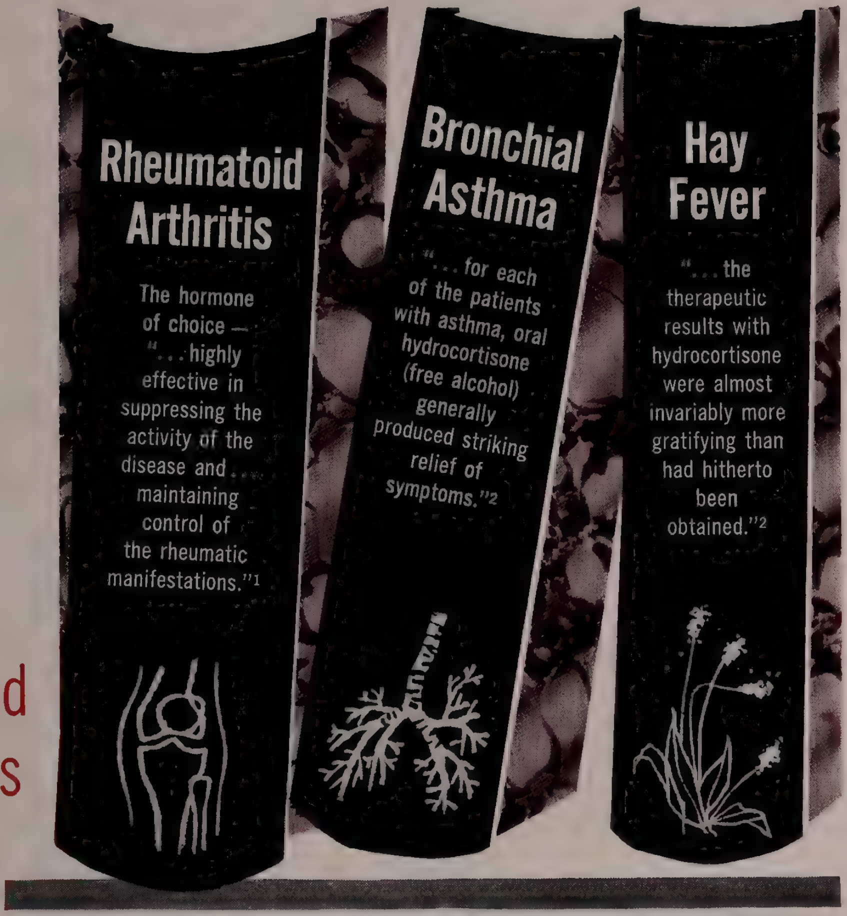

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references: 1. Boland, E. W., and Headley, N. E.: J.A.M.A. 148:981, March 22, 1952. 2. Schwartz, E.: J. Allergy 25:112-119, March, 1954.

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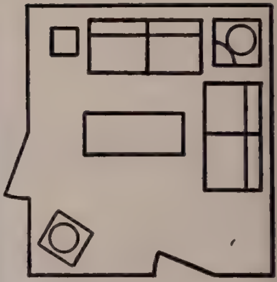

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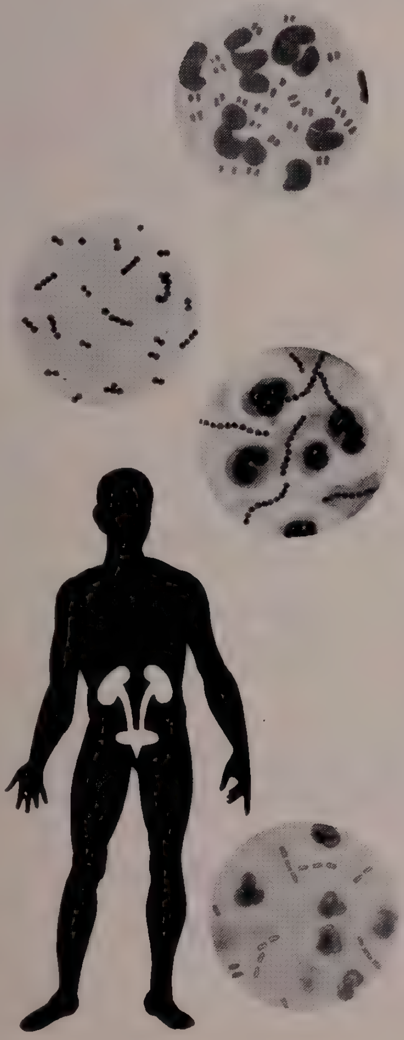

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1. Spink, W.W.: J.A.M.A. *152*:585 (June 13) 1953
2. Bush, W.L.: Southern M. J. *45*:870 (Sept.) 1952
3. Berkowitz, D.: Antibiot. &Chem. *3*:618 (June) 1953

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1. Buxton, C. L., and Vann, F. H.: New England J. Med. 236:536, 1948.
2. Douglas, H. S.: Western J. Surg. Obst. & Gynec. 59:238, 1951.
3. Cushny, A. R.: Textbook of Pharmacology and Therapeutics, ed. 10, Philadelphia, Lea & Febiger, 1943, pp. 436-437.

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1951 Of 119 patients treated with Azulfidine prior to 1944, 90 patients (75%) were symptom-free or considerably improved when re-examined in 1949.
Svartz, N.: Acta. Med. Scandinav. 141:172, 1951.

1952 In a series of 52 patients with chronic ulcerative colitis 30, or 58%, showed significant improvement after treatment with Azulfidine.
Morrison, L. M.: Gastroenterology 21:133, 1952.

1953 *Morrison says:* "Azopyrine [Azulfidine] . . . has been effective in controlling the disease in approximately two-thirds of patients who had previously failed to respond to standard colitis therapy currently in use."
Morrison, L. M.: Rev. Gastroenterology 20:744 (Oct.) 1953.

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The symptomatology noted in the male varies widely and apparently causes no serious residual lesions. According to Lancely[1] in his investigation, the infection can even exist in an asymptomatic state. Meigs[3] reports that the infection in the male is usually self-curative, and within a month the trichomonads "usually disappear."

This observed absence of symptomatology is all the more remarkable when contrasted with the harassing and tormenting manifestations almost invariably reported by infected females.[1-5]

Crossen,[2] in his instructive study and investigation of the persistent and therapy-resistant cases of trichomonal vaginitis, reports numerous avenues of re-infection, listing among others—douche nozzles, fingers, and the sexual partner. He emphasizes the importance of checking the husband as a possible focus of re-infection. Reich and Nechtow[5] similarly advocate such a procedure, stating, "The male, too, may be a source of re-infection. The prostate should be checked as a possible source of trichomonads." Wharton[4] notes "... the infection returns after coitus..." and again, "Occasionally the husband is the reinfecting focus." Lancely,[1] in his extensive study, observes that infection and re-infection by coitus "is not uncommon."[1]

Increasingly, data and studies[1-5] point up the need for prophylactic measures in coitus, as an effective adjunct to routine trichomonal therapy of the female. The importance and rationale for the use of a condom as a preventative of re-infection should be explained carefully. At the same time, both partners can be oriented as to the necessity for repeated laboratory examinations to establish the absence of trichomonal infestation.

Because of the self-limiting, transient nature of the infection in the male,[1,3] a thirty-day regimen with the husband employing a condom is a rational adjunct to direct therapy.

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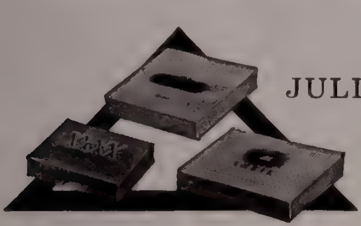
references:

1. Lancely, F.: Brit. J. Ven. Dis. 29:213-217, Dec., 1953; abstracted, J.A.M.A. 154:1467, Apr. 24, 1954. 2. Crossen, R. J.: Diseases of Women, ed. 10, St. Louis, C. V. Mosby Company, 1953, p. 294. 3. Meigs, J. V., and Sturgis, S. H.: Progress in Gynecology, vol. 2, New York, Grune and Stratton, Inc., 1950, p. 433. 4. Wharton, L. R.: Gynecology, Including Female Urology, ed. 2, Philadelphia, W. B. Saunders Company, 1947, pp. 446, 448. 5. Reich, W. J., and Nechtow, M. J.: Practical Gynecology, Philadelphia, W. B. Lippincott Company, 1950, pp. 263, 267.



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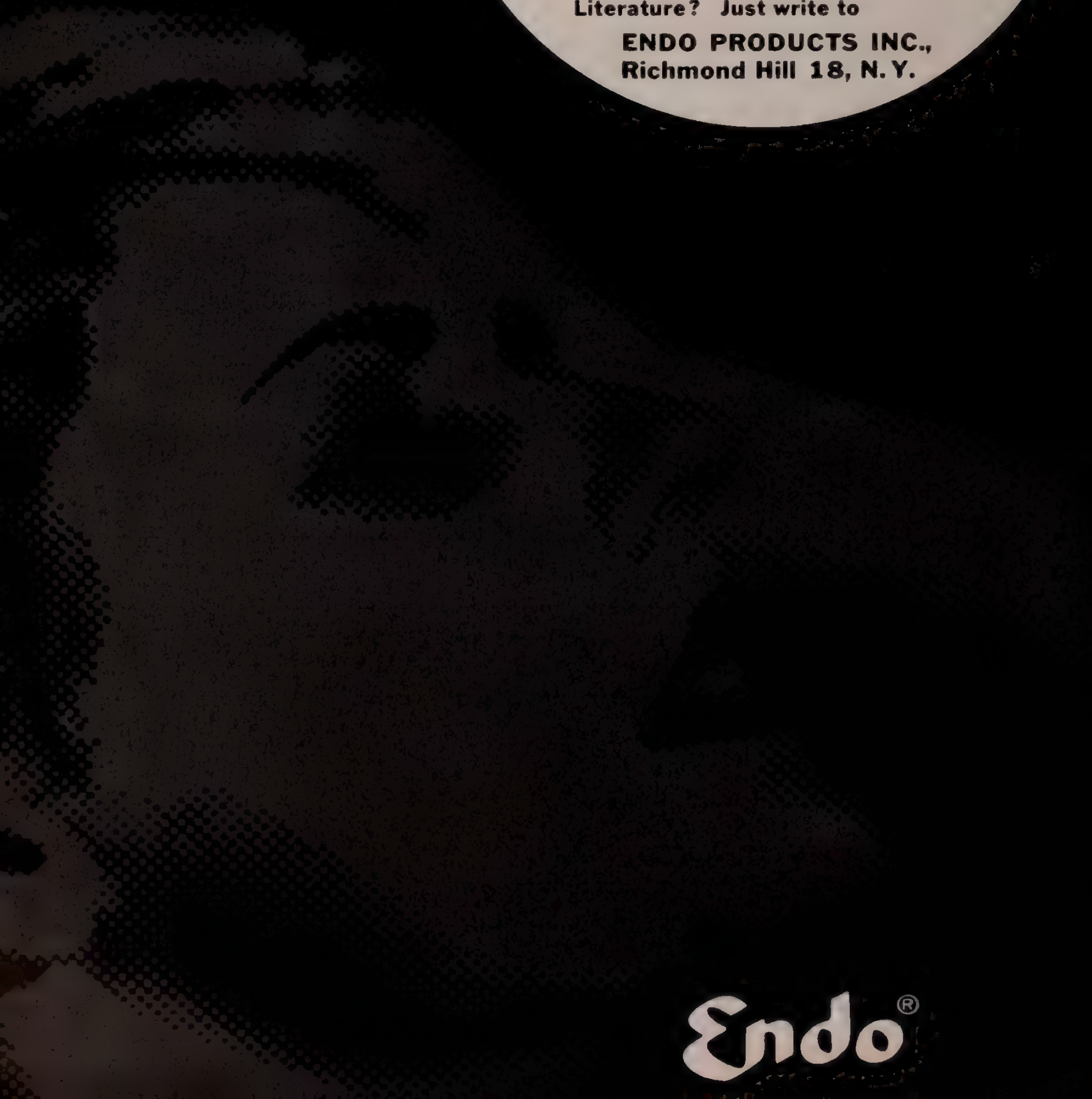

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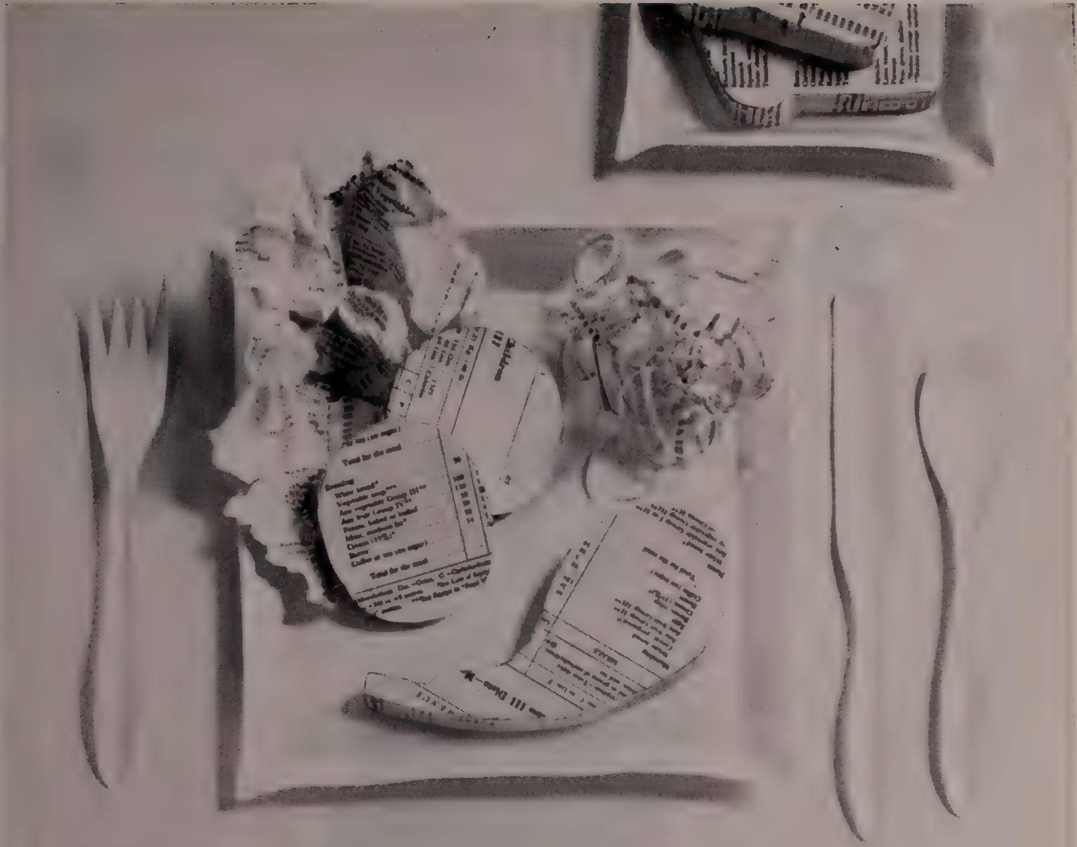

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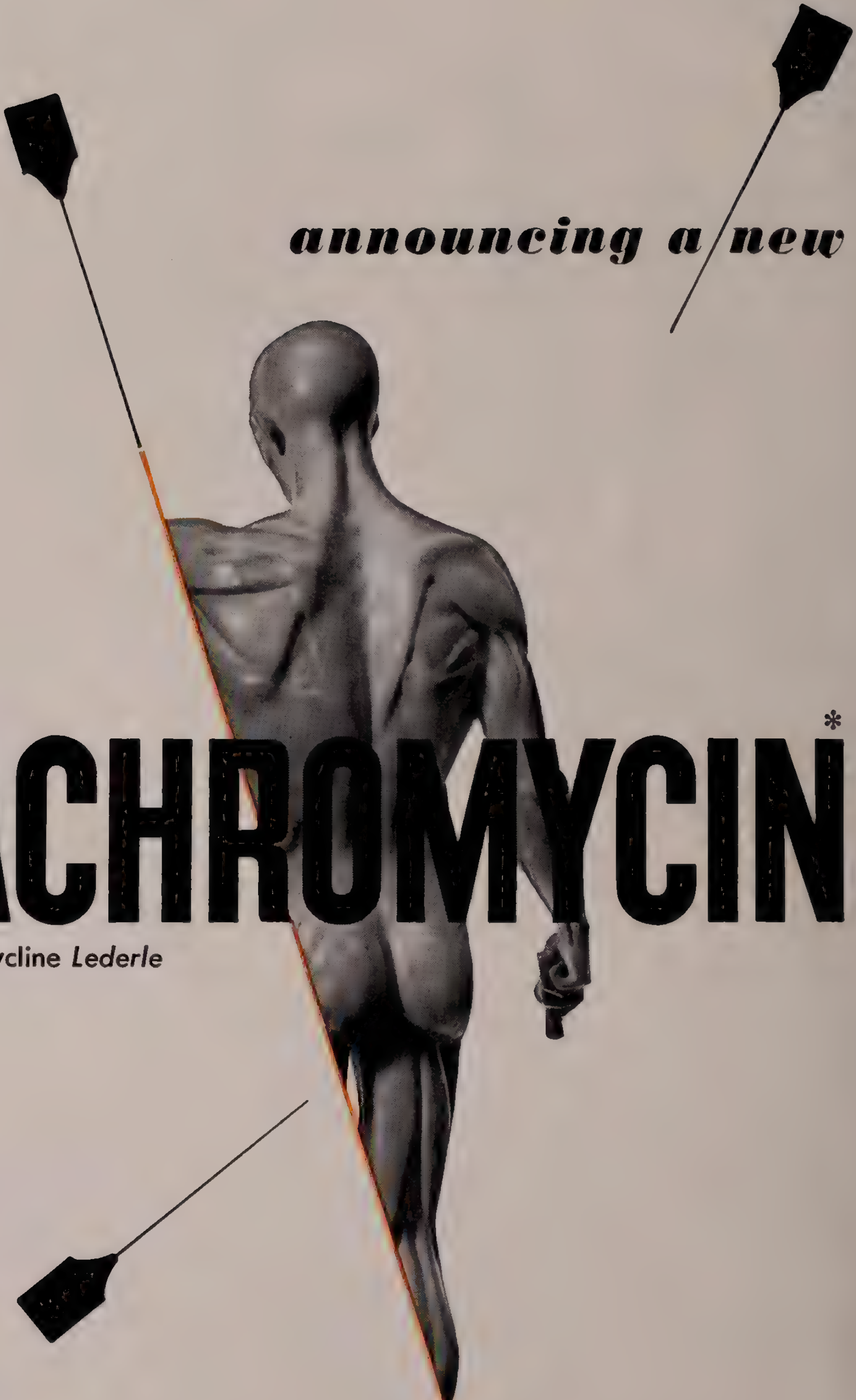

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EDITORIALS

The District Branches

The district branches of the Medical Society of the State of New York will begin their meetings for 1954 on September 15 when the Second District Branch will meet at Garden City, Long Island. Elsewhere in this issue on page 2426 will be found the complete schedule of meetings of all the branches. It is hoped that attendance at the meetings this year will exceed that of previous years.

Historically, the scientific portions of the district branch meetings are part of the postgraduate teaching program of the Medical Society of the State of New York and go back to the period in the year 1906 when the New York State Medical Association and the Medical Society of the State of New York fused to form the present Society. Ever since, the branches have met annually to elect their officers and in most instances to conduct their scientific programs, to hear also at a dinner the address of the president or, recently, the president-elect, and to meet the other members of the official family socially.

The officers of the several branches spend many hours in arranging interesting scientific programs for these meetings. Also, there is afforded to many in the area of the branch an opportunity to meet personally the officers and to hear an address by either the president or the president-elect of the Medical Society of the State of New York. It is hoped that the membership will make every effort to attend in their areas.

Nathan B. Van Etten, M.D.

Dr. Nathan Bristol Van Etten died at the age of eighty-eight years on July 23, 1954. He was the first president of the Bronx County Medical Society in 1914, president of the Medical Society of the State of New York in 1925, and president of the American Medical Association in 1940. He was editor of the NEW YORK STATE JOURNAL OF MEDICINE from 1923 to 1925.

Dr. Van Etten was born in Waverly, New York, received his M.D. degree from Bellevue Hospital Medical College in 1889, and shortly thereafter began practice in the Bronx. He was medical director of the Morrisania Hospital from 1931 to 1937 and president of the medical board from 1935 to 1940. In 1921 he became president of the New York Society for Medical Jurisprudence and in 1923 president of the Greater New York Medical Association.

Dr. Van Etten was a Diplomate of the American Board of Internal Medicine and a Fellow of the American College of Physicians. He was a member of the New York Academy of Medicine and had been consulting physician at the Morrisania and Union Hospitals and Bronx Eye and Ear Hospital.

Always an active leader in the interests of the medical profession, he was influential in the formation of plans for prepaid medical care and hospital insurance, now known as Blue Shield and Blue Cross. Dr. Van Etten had the distinction during his lifetime of having a city hospital named for him, the 511-bed hospital in the Bronx Municipal Hospital Center expected to be open for the care of patients this year. His good deeds are his monument. May he rest in peace.

Editorial Comment

Augustus B. Wadsworth, M.D. The practice of medicine in New York has been strongly influenced for more than a generation by the remarkable career of Dr. Augustus B. Wadsworth, whose death on June 1, 1954, we record with sorrow.

Dr. Wadsworth was a native New Yorker and a product of New York medicine, having graduated from the College of Physicians and Surgeons in 1896. After some years of clinical experience he turned full time to the laboratory and, in company with Hermann M. Biggs, James Ewing, William H. Park, and other giants of the period, plunged into basic studies of immunology and microbiology.

An architect of the Division of Laboratories and Research of the State Department of Health, Dr. Wadsworth achieved great things. He organized and built an outstanding laboratory, one of the world-famous public health institutions. He pioneered in the development of standards in antitoxin, serum, and vaccine production at a time when these preparations were to a surprising degree empiric. He established the highest possible standards of diagnostic laboratory procedures, of which the quantitative complement fixation test is a classic example. He affiliated the local hospital, municipal, and private laboratories in upstate New York into a strong voluntary and democratic association that has led to exceptional competence and reliability without paternalism or state control. The quality of cancer diagnosis in New York bears witness to the success and importance of that program.

He pioneered in the development of research in the public health laboratory field, giving scientific excellence and research quality to all of the work of his large organization, for he managed to make research and routine services blend in a most effective way. He played a prominent role in the leading professional societies and was much honored here and abroad. He added to the knowledge and the dignity of his profession. His mark was deep and sharp. It will be there for other generations to see and feel.—G.D.

Page the Medical P.R. Men. A recent news dispatch[1] relates to a citizen of the sovereign state of Connecticut, alleged to be one hundred and one years old. Not that this in itself is newsworthy, but the elder citizen had the misfortune, it is reported, to fall out of bed, breaking his hip. Still, that can happen and yet remain of purely local interest. Even the fact that this injured elder was removed to a hospital seems only a logical action under the circumstances not meriting a special dispatch. However, and we quote,

> Because of his age he was put on the critical list which, he said, was a mistake. Far from being critical, he said, he admired the institution immensely.
>
> He never had seen one from the inside before, he said.

Is this a feather in the cap of those charged with the promotion of good public relations for the medical profession? Should we not better educate our citizens, young or old? Well? Here is one citizen allegedly uninformed about things medical in these days of atomic bombs, radio, television, and a highly active press both medical and nonmedical—not for forty or seventy or eighty-nine years, *but for one hundred and one years!* For shame. Let this situation never again recur, gentlemen.

Are Doctor's Human? Some years ago Robert Burns wrote:

> "Oh wad some power the giftie gie us
> "To see oursel's as others see us!
> "It wad frae monie a blunder free us,
> "And foolish notion."

Reportedly addressing the American Academy of General Practice,[1] a physician who was once an ordained minister criticized doctors "who feel that God made them, and everybody else just happened":

> "Dr. Robert M. Myers, of Kansas City, made the remark in urging doctors to "become more human" in dealing with patients, especially prospective mothers. . . ."[2]

This comes with all the force of a one-two punch to the button, ministerial and medical. Admittedly our excerpt is only a portion of the address of the good doctor who reportedly was "once an ordained minister," but it has the virtue of brevity, the force of cloth and scalpel, and the saving grace of humor.

Reading the printed report of his address, we naturally reverted to the familiar lines of Burns which so many readers will recognize and so few remember as having been written to a louse. Burns's message as we interpret it was "Be yourself."

---

[1] *Herald Tribune*, Mar. 23, 1954.

[1] Cleveland, Mar. 24, 1954.
[2] *Herald Tribune*, Mar. 25, 1954, p. 17.

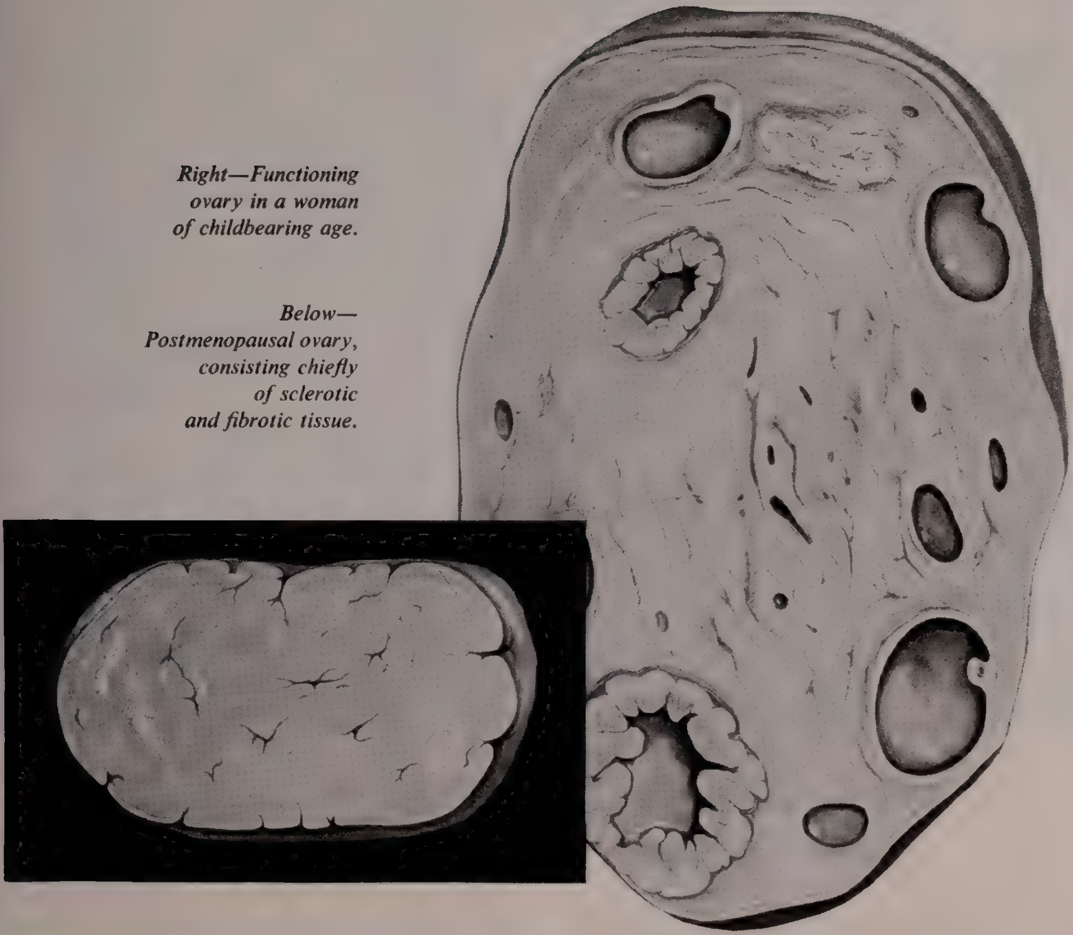
We think that doctors are human, and we believe that most people consider them so under trying circumstances, illness and despair, pain and worry. Only when they are well again do a few people cast about them for defects in the professional man and his service. We fail to comprehend how anyone can "become more human" than human. If "to err is human," does the good doctor's thesis call for more rather than less of this characteristic? His reported words could be so interpreted.

For our part, Burns to win, place, and show. Maybe we're just old-fashioned.

1954
DISTRICT BRANCH MEETINGS

MEDICAL SOCIETY OF THE STATE OF NEW YORK

District Branch	*Date*	*Place*	*Time*
First	Meeting held during session of House of Delegates		
Second	Wednesday September 15	Garden City Hotel Garden City	Dinner Evening
Third	Thursday September 16	Grossinger's Hotel Liberty	Morning Luncheon Afternoon
Fourth	Thursday October 21	Queensbury Hotel Glens Falls	Afternoon Dinner Evening
Fifth	Wednesday October 20	Hotel Onondaga Syracuse	Afternoon Dinner Evening
Sixth	Wednesday October 27	Statler Club Ithaca	Afternoon Dinner
Seventh	Wednesday September 22	Rochester	Morning Luncheon Afternoon
Eighth	Thursday September 23	Wyoming Community Hospital Warsaw	Afternoon Dinner
Ninth	Wednesday October 6	Sleepy Hollow Country Club Scarborough	Afternoon Dinner



Right—Functioning ovary in a woman of childbearing age.

Below—Postmenopausal ovary, consisting chiefly of sclerotic and fibrotic tissue.

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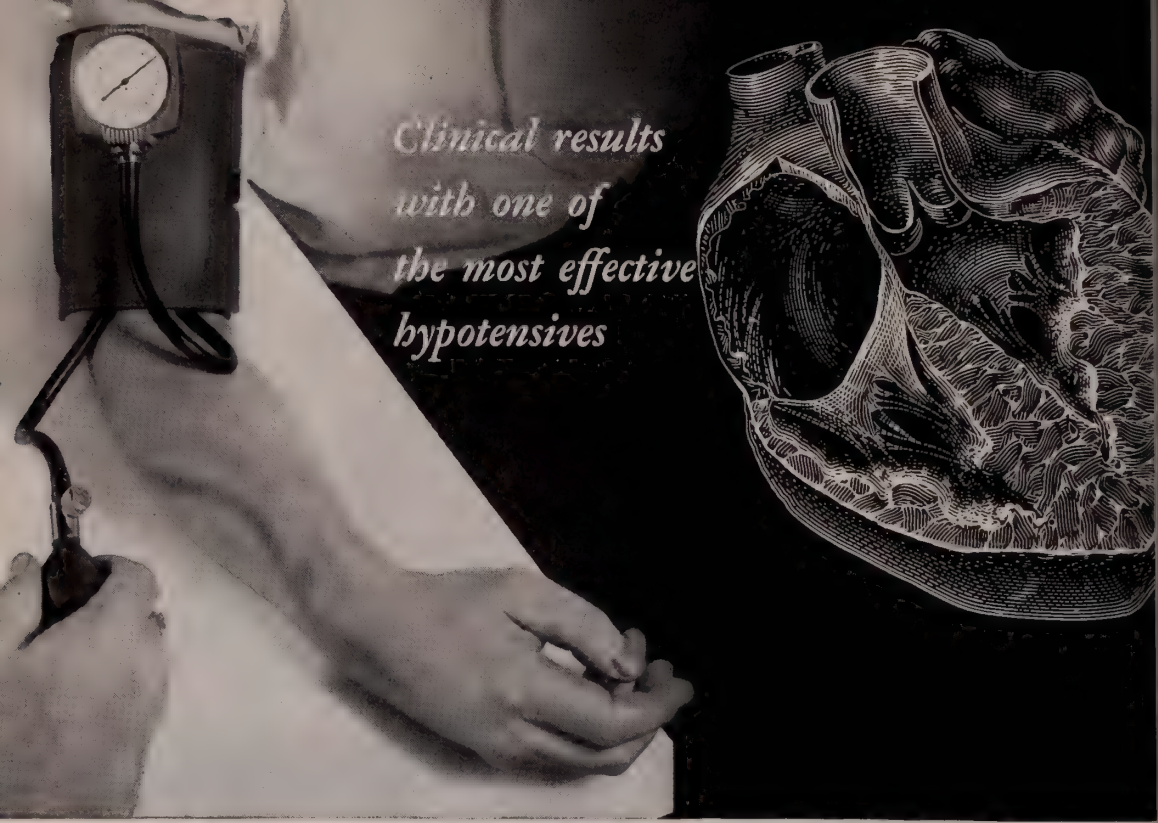
Vallestril "quickly controls[1] menopausal symptoms, ... The beneficial effect of the medication appeared within three or four days in most menopausal patients. There is also evidence that the patient can be maintained in an asymptomatic state by a small daily dose, once the menopausal symptoms are controlled."

The dosage in menopause is one tablet (3 mg.) two or three times daily for two or three weeks; then reduced to one or two tablets daily as long as required.

[1] Sturnick, M. I., and Gargill, S. L.: Clinical Assay of a New Synthetic Estrogen: Vallestril, New England J. Med. *247*:829 (Nov. 27) 1952.

SEARLE Research in the Service of Medicine



Improvement in 67 to 72% of patients with hypertensive heart disease[1]

Together with significant reductions of elevated lood pressure in 80 per cent of outpatient hyperensives,[1] Methium therapy may result in substantial mprovement in cardiac symptoms and signs.[1,2,3] Precordial pain, ventricular strain, heart failure and ypertrophy may all respond to careful treatnent.[1,2,3] Actual myocardial damage, however, eldom shows any improvement (only 8 out of 44 n one study[1]).

With continued management, up to or beyond a ear, blood pressure may be reduced and stabilized, nd cardinal symptoms arrested or reversed, without ny increase in dosage.[1]

As blood pressure is reduced, and even without eduction, hypertension symptoms have regressed. Retinopathy may disappear; headache, cardiac failure and kidney function may improve.

Methium, a potent autonomic ganglionic blocking agent, reduces blood pressure by interrupting nerve impulses responsible for vasoconstriction. Because of its potency, careful use is required. Pretreatment patient-evaluation should be thorough. Special care is needed in impaired renal function, coronary disease and existing or threatened cerebral vascular accidents.

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1. Moyer, J. H.; Miller, S. I., and Ford, R. C.: J.A.M.A. *152*:1121 (July 18) 1953.
2. Moyer, J. H.; Snyder, H. B.; Johnson, I.; Mills, L. C., and Miller, S. I.: Am. J. M. Sc. *225*:379 (April) 1953.
3. Kuhn, P. H.: Angiology *4*:195 (June) 1953.

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SCIENTIFIC ARTICLES

Hypopituitarism in the Adult

GEORGE F. KOEPF, M.D., AND CAROL BURD VIEILLARD, M.D., BUFFALO, NEW YORK

(From the Metabolic Clinic of the Buffalo General Hospital and the Endocrine Clinic of the E. J. Meyer Memorial Hospital)

During the past fifteen years the availability of potent steroid hormones for substitution therapy has radically improved the prognosis of patients with hypopituitarism.* For this reason greater efforts should be made to evaluate properly pituitary gland dysfunction. A missed diagnosis or poor understanding of the physiology involved in a recognized case of moderate to severe hypopituitarism will undoubtedly result in disabling fatigue and weakness and may result in early death. On the other hand, the prompt institution of well-planned therapy will usually result in striking improvement and economic rehabilitation of a large percentage of these patients.

In this report the results of our experiences with 30 adult cases of hypopituitarism will be evaluated.† Many of these patients have been under our observation for as long as thirteen years. It appears obvious that a complete study of the countless mechanisms involved in pituitary and "target" gland physiology in 30 such cases would be overwhelming and impractical. Nevertheless, in the course of study and treatment of these patients, many spheres have been investigated in quantities sufficient to comment upon quite accurately and at times even to supply crude statistics.

The following outline will illustrate the manner in which many of these cases suspected of hypopituitarism were handled or screened from a clinical and laboratory evaluation. These procedures can usually be undertaken in most general hospitals.

1. Clinical data from history and physical examination.
2. Organization of laboratory data and special studies.

- Thyroid
  - Basal metabolic rate
  - Protein-bound iodine
  - I^{131} studies
  - Serum cholesterol
- Gonads
  - Follicle-stimulating hormone excretion
  - Estrogen levels (female)
  - 17-ketosteroid (also adrenal cortex)
- Adrenal cortex
  - Carbohydrate studies
    - Fasting blood glucose
    - Glucose tolerance tests
  - Serum electrolyte levels
  - 17-ketosteroid excretion
  - Thorn test
  - Robinson-Power-Kepler water test
- Studies of value in other categories
  - Visual fields
  - Skull x-rays (sella)
  - Electroencephalogram studies
  - Air studies of the ventricles
  - Hickey-Hare test for diabetes insipidus
  - Renal function tests
  - Blood studies
    - Peripheral blood
    - Bone marrow

Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Medicine, May 14, 1954.

* The term hypopituitarism is used rather than Simmond's disease, Sheehan's syndrome, or panhypopituitarism because the authors feel that it is more descriptive of the wide clinical variations noted in the cases included in this study.

† Patients in this series were obtained from private practice and from the wards and metabolic clinics of the Buffalo General Hospital and the E. J. Meyer Memorial Hospital. Most of the tumor cases were kindly referred to us from Dr. Wallace Hamby's Neurosurgical Service.

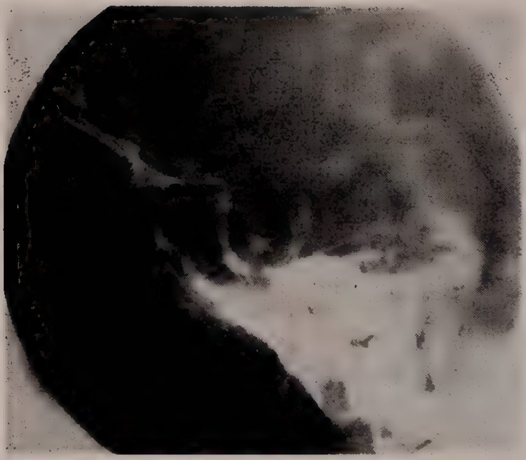

FIG. 1. Calcification in the region of the pituitary gland (G.S.).

TABLE I.—CAUSE OF HYPOPITUITARISM IN 30 CASES

Cause	Number of Cases
Postpartum hemorrhage	8
Tumors (14 cases)	
Craniopharyngioma	3
Chromophobe adenoma	9
Acidophilic	1
Hodgkin's	1
Undetermined	8
TOTAL	30

Etiology

The causes of pituitary insufficiency in the cases studied in this series are summarized in Table I. A tumor growth caused the insufficiency in 14 patients. Surgical removal of the tumor was done in ten patients by Dr. Wallace Hamby because of progressive constriction of the visual fields. Seven had chromophobe adenomata, and the other three had craniopharyngiomata. All ten of the operated patients had evidence of hypopituitarism prior to surgery and were given hormonal therapy preoperatively. In one other case (E.L.) removal of an eosinophilic adenoma was carried out because of persistent headache. No evidence of hypopituitarism was present preoperatively in this patient, but definite hypopituitarism has developed since surgery. One case (W.H.) had Hodgkin's disease with involvement of the pituitary gland and was studied at postmortem. The other two tumor patients (R.C. and J.M.) have been classified as chromophobe adenomata by the radiologist but have not been sent to surgery because they have had no visual symptoms.

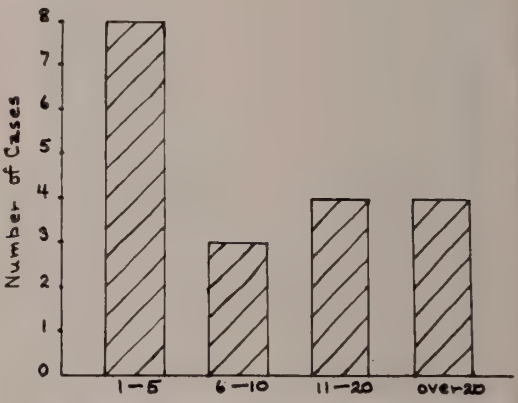

FIG. 2. Years of symptoms before diagnosis (19 cases not treated surgically).

TABLE II.—INCIDENCE OF SYMPTOMS

Symptom	Number	Per Cent
Muscular weakness	29	97
Fatigue	30	100
Gastrointestinal	20	66
Weight loss	26	86
Cold intolerance	21	70
Dry skin	21	70
Hair loss (pubic, axillary, or trunk)	26	86
Polyuria	7	23

The other 16 cases were equally divided between those giving a history of severe postpartum hemorrhage and those in whom no definite etiology could be determined. One of these patients (G.S.), classified etiologically as undetermined, has a calcified area that can be seen radiographically in the center of the sella turcica (Fig. 1). He gave a history of sustaining a head injury following a fall from a horse at the age of twelve. It would be difficult to determine whether the calcium is the result of hemorrhage or whether a calcified tumor is present.

The high incidence of tumors in this series may be due to the fact that one of the sources of patients for this study was Dr. Wallace Hamby's Neurosurgical Service at the Buffalo General Hospital. This no doubt influences the figures noted in Table I. In Farquharson's report[1] only 14 of the 92 cases were due to tumor.

The symptoms noted most frequently in this group of patients are listed in Table II. With the exception of polyuria, which will be commented upon separately, most of these appear to be due to a combination of two or three hormonal deficiencies involving the thyroid, adrenal cortex, or gonads.

In many cases a rather startling length of time elapsed following the onset of symptoms until a diagnosis was made (Fig. 2). It is obvious in

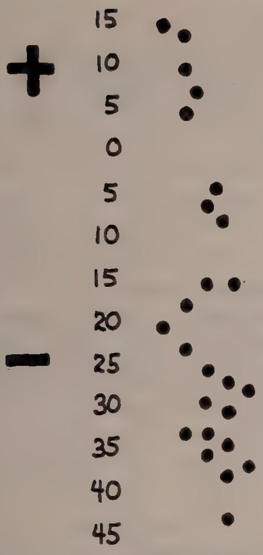

FIG. 3. Basal metabolic rates (20 untreated cases).

TABLE III.—SPECIFIC TARGET GLAND DEFICIENCIES

	Number	Per Cent
Thyroid deficiency	23	77
Gonadal deficiency	24	80
Adrenocortical deficiency	29	97

considering this time factor that those patients in whom surgical removal of the pituitary gland was carried out should not be included in this table for this alerts one to look for early signs and symptoms of hypopituitarism. Thus, only the data from the 19 patients not submitted to surgery has been included in Fig. 2. In these 19 patients the number of years which elapsed between the onset of symptoms and the date of diagnosis varied from three to thirty-three years. Farquharson[1] and Williams *et al.*[2] have noted similar situations. Eight patients had symptoms for ten or more years prior to diagnosis. Seven of these eight were patients in whom a severe postpartum hemorrhage had occurred, whereas the other patient (G.S.) was the male with the history of head injury (see above). Again, it must be stated that the importance of placing proper stress upon the medical history cannot be overemphasized.

When the available laboratory data and special studies were coordinated with the clinical picture, it was possible to group the patients according to the frequency of the three secondary target gland deficiencies (Table III). Twenty-two cases (73 per cent) showed definite evidence of hormonal deficiencies in all three categories, seven had involvement of two of the three target glands, and only one case (A.W.) was deficient in one category (adrenal).

TABLE IV.—POSTOPERATIVE RENAL WATER EXCRETION IN A HYPOPHYSECTOMIZED PATIENT (S.F.)

Postoperative Day	24-Hour Urine Volume (Cc.)	Blood Pressure
1	6,480	220/160
2	4,300	230/170
3	4,740	210/160
4	7,370	210/170
5	8,480	200/120
6	2,900	190/110
7	1,620	200/120

Polyuria

Before discussing in more detail the findings in these cases based on these three target gland deficiencies, it seems appropriate to discuss polyuria, which occurred in seven patients in this series and which cannot be classified under the heading of target gland deficiency. It has been established for many years that removal or destruction of the neurohypophysis or injury to the hypothalamic-hypophyseal tracts may lead to diabetes insipidus. This subject has been ably reviewed by Pickford.[3] It seems likely that several adrenal cortical hormones, as well as anterior pituitary hormones, are necessary for prompt water excretion and the preservation of the state of diabetes insipidus. The nature of this mechanism is not clear, but Guant *et al.*[4] have reviewed this topic extensively. If this mechanism functions in the untreated patient with hypopituitarism, it is possible that diabetes insipidus might be present, but the polyuria is prevented by a lack of several anterior pituitary hormones, as well as a concomitant secondary adrenal cortical insufficiency. Since data on this point are rather sparse in human subjects, the postoperative urinary volumes in one patient (not included in this series of 30 cases), who was hypophysectomized in an attempt to alleviate malignant hypertension, is shown in Table IV. It is felt that the initial diuresis, which began about two hours postoperatively, was readily explained by the clamping of the pituitary stalk and removal of the entire pituitary gland. Spontaneous diminution of the volume of urine after five days was thought to be due to the effect of secondary adrenal cortical insufficiency. Unfortunately, this patient died suddenly of cerebral complications on the ninth postoperative day, and the study could not be extended. How-

TABLE V.—RADIOIODINE UPTAKE IN 3 HYPOPITUITARY PATIENTS

	Per Cent Uptake		
Patient	Before TSH	24 Hours After TSH	Per Cent Increase
H. S.	3	9	200
C. T.	10	26	160
J. M.	5	12	140

ever, in the seven patients in this series in whom polyuria was one of the complaints, the administration of cortisone potentiated the polyuria. One patient (M.H.) uses the appearance of polyuria to determine her maximum cortisone dosage. Although evidence is incomplete in these humans with hypopituitarism and polyuria, it appears that a lack of adrenal cortical hormones influences polyuria more than the lack of anterior lobe hormones.

Alterations in Thyroid Function

Of the symptoms listed in Table II those which might be directly attributed to a state of hypothyroidism were cold intolerance and dry skin. Seventy per cent of the patients complained of both. The weakness and fatigue, of which all of the patients complained, might have been due, in part, to secondary hypothyroidism. When additional laboratory and special studies were coordinated with the clinical picture, it was possible to conclude that 77 per cent of the patients in this series were suffering from secondary thyroid deficiencies. As can be noted in Fig. 3, the basal metabolic rates were less than zero in most of the patients in this series. In 13 of them it was less than minus 25 per cent.

Some interesting diagnostic data have been obtained on six of the patients in this series by means of a tracer study with I^{131}. The twenty-four-hour uptake in all six was less than 11 per cent. Three of these patients were retraced after receiving 10 units of thyroid-stimulating hormone daily for three days. As can be noted in Table V, thyroid-stimulating hormone increased the I^{131} uptake in all three patients. As has recently been pointed out by others,[5] this response is of value in classifying hypothyroidism as primary or secondary. It has also been shown[6] that previously administered thyroid hormone does not prevent the response to thyroid stimulating hormone. The classification of thyroid deficiency as primary idiopathic or secondary to pituitary insufficiency is of utmost importance therapeutically. In patients with hypopituitarism manifest by secondary hypothyroidism as well as secondary adrenal cortical insufficiency, the added metabolic load created by the therapeutic use of thyroid hormone might precipitate a serious adrenal crisis unless the patient is treated initially with adrenal cortical hormone. This, in fact, did happen to one patient in this series (C.I.). Although the adrenal crisis which was precipitated in this patient gave a clue to the correct diagnosis, less drastic diagnostic measures should be used.

The anemia found in 22 of these patients might, at first thought, be attributed to hypothyroidism. The findings of many others, as summarized by Farquharson,[1] revealed that a hypoplastic bone marrow was frequently observed. In many instances in our series thyroid hormone was administered without appreciably affecting the anemia. Cortisone, however, has had a remarkably beneficial effect on this anemia in our patients. ACTH has been shown to have a similar effect in a case reported by Horrax.[7] Thus it would appear that the secondary hypothyroidism plays a minor role, if any, in the production of anemia in these patients.

Data obtained on cholesterol levels and protein-bound iodine levels in this series are not complete enough to comment upon.

Alterations in Gonadal Function

In this category clinical evidence of hypofunction of the gonads is often striking and frequently most distressing to the patient, whereas laboratory measuring sticks may be meager. The symptom of amenorrhea in the female is difficult to evaluate. In our group of patients, fortunately, only two of the females were in the postmenopausal age at the time of onset of the hypopituitarism. Eleven of the other 12 females gave a history of amenorrhea. Vaginal smears were done on nine in this group, and all revealed a poor estrogen effect. Twelve of the 16 males in this series complained of impotence, and 19 of the 30 patients of both sexes noted diminished libido. Twenty-five patients noted loss of pubic, axillary, or body hair. In the postpartum group and in the group of patients of unknown etiology, measurement of follicle-stimulating hormone excretion may be of some help diagnostically. It was possible to eliminate hypopituitarism as the cause of amenorrhea in many females by means of this measurement. All patients in whom follicle-stimulating hormone excretion was measured in this group had low values (less than 6.6 mouse units).

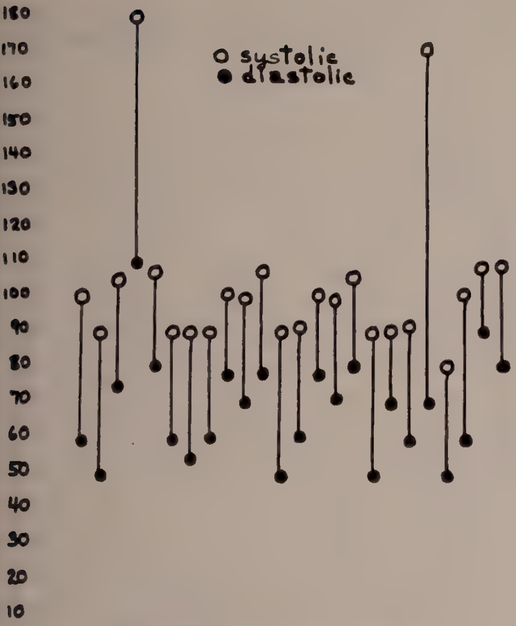

FIG. 4. Blood pressure before treatment.

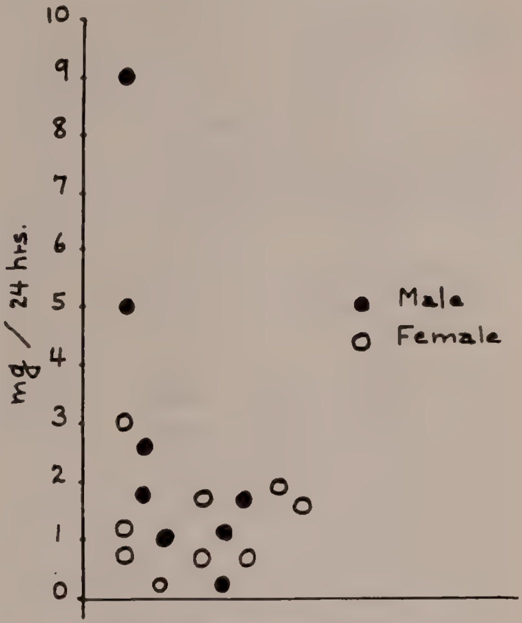

FIG. 5. 17-Ketosteroids in 18 cases.

Alterations in Adrenal Cortical Function

In hypopituitarism it is difficult to evaluate clinical evidence attributable to adrenal cortical insufficiency. This was noticeable in our group of patients, for practically all of them complained of weakness, fatigue, and weight loss. The hypotension which was noted in all patients with the exception of two could be attributed to multiple factors but probably was due in a great part to adrenal cortical insufficiency (Fig. 4). By means of laboratory and other special studies, however, 29 of the 30 patients were found to have evidence of adrenal cortical insufficiency.

Coma was seen in nine patients at some time or other in the course of their illness. All had marked hypotension, and in three patients blood pressure readings could not be obtained. Hypoglycemia was noted in those in whom a blood glucose was obtained prior to the institution of treatment. In three instances the level of blood glucose was found to be below 40 mg. per 100 cc.

The Robinson-Power-Kepler water test is valuable in screening patients when a diagnosis of adrenal cortical insufficiency is suspected. In 18 of the 30 cases it was thought expedient to do this test. It was positive in all 18.

In the males about one third of the 17-ketosteroid excretion is attributed to testicular function. In the female, however, all 17-ketosteroid excretion is presumably the result of adrenocortical activity, for in the female suffering from Addison's disease the 17-ketosteroid excretion approaches zero. In this series 17-ketosteroid excretion was measured in 18 patients. The values in these patients ranged from 0.1 to 9.2 mg. per twenty-four hours (Fig. 5). In none of the females did the excretion exceed 3.0 mg. per twenty-four hours, and in only two instances did the 17-ketosteroid excretion in the males exceed 3.0 mg.

Serum electrolyte levels were obtained in two thirds of the patients before treatment. Hypochloremia was noted in 13 of 22 patients, and hyponatremia was noted in seven of 20 patients. In six instances in which a normal serum sodium was obtained, the chloride measurement was low. The opposite was true in one patient. Serum potassium was elevated in three of 20 patients. It seems apparent in most cases of hypopituitarism that a rather marked state of secondary hypoadrenocorticalism must be present before it can be detected by changes in serum electrolyte levels. One rather peculiar situation was noted in patient R.C. For several years he had repeatedly low serum chloride values ranging from 86 to 87 mEq. per L. despite the fact that he was receiving sufficient hormone to keep him symptom

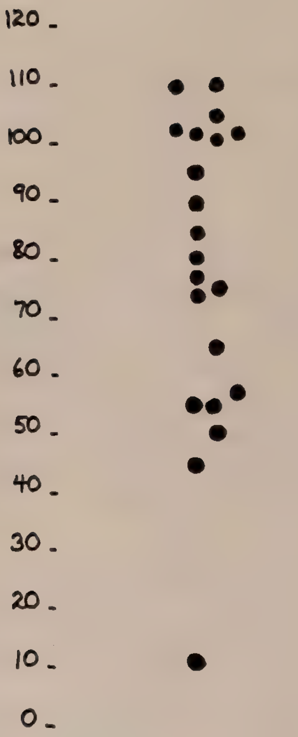

FIG 6. Fasting blood sugars.

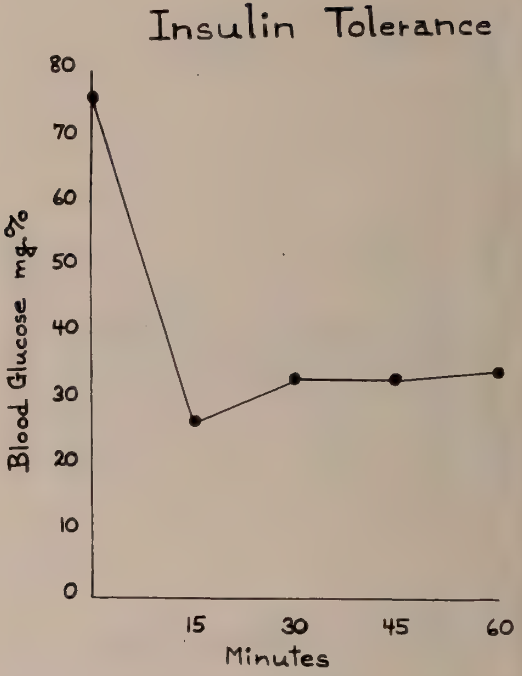

FIG. 7. Insulin tolerance test in patient G.M. (5 units regular insulin).

free, normotensive, and strong enough to carry on a fairly arduous occupation.

Most of the patients had some evidence of a carbohydrate disturbance. As can be seen in Fig. 6, the majority had a low or low-normal fasting blood sugar. An insulin tolerance test was done inadvertently by an ambitious house officer on case G.M., and it revealed marked sensitivity to insulin and a frightening drop of blood sugar in fifteen minutes to below 30 mg. per 100 cc. (Fig. 7). Intravenous glucose tolerance tests were done on several of the patients in this series. Most of them terminated with a very low blood sugar, and in several instances hypoglycemic symptoms were noted.

An interesting pair of Exton-Rose glucose tolerance curves are shown in Fig. 8. The patient on whom they were obtained (E.L.) had an eosinophilic adenoma of the pituitary gland for about twenty years. It was removed in 1951 because of severe, disabling headaches. Prior to surgery, however, a diabetic type of curve was obtained. After surgery a definite reversion toward normal was noted. In addition to this change, the patient now has other evidence of adrenal and gonadal deficiencies and requires androgenic and adrenal steroid therapy for maintenance of weight, blood pressure, muscular strength, and control of symptoms.

A third interesting carbohydrate abnormality was noted in patient W.H. (Fig. 9). This patient was known to have had diabetes mellitus for thirteen years and, as can be seen from the chart, required 30 to 35 units of insulin daily for control. Four years ago he was found to have Hodgkin's disease. As the disease reached its terminal stage, he gradually developed marked insulin resistance until he eventually required 580 units of insulin per day. One week later he began to have repeated hypoglycemic attacks, and over a period of three days the insulin was reduced to zero. During this three-day period the blood sugars obtained were as low as 36 mg. per 100 cc. The administration of ACTH in small dosage again caused hyperglycemia and glycosuria, and a small amount of insulin was needed for control of this situation. However, shortly afterward the patient expired. At autopsy the entire pituitary gland was involved with Hodgkin's disease, and a definite fat necrosis of the pancreas was seen.

Although the reliability of circulating eosinophil changes caused by the injection of ACTH and/or epinephrine has been questioned,[8] es-

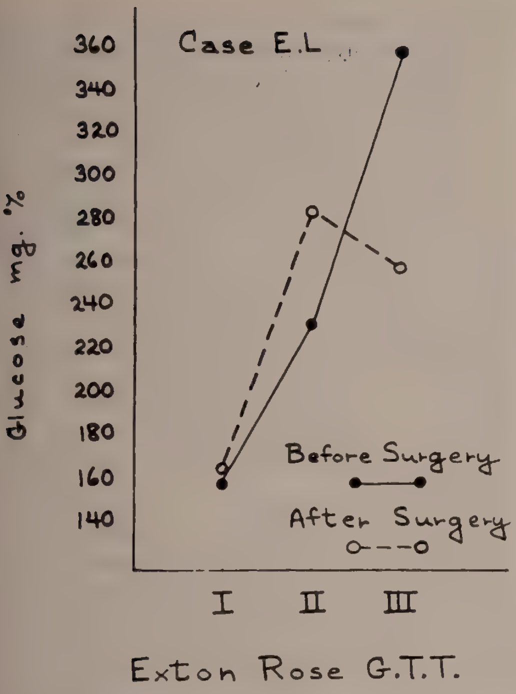

FIG. 8. Glucose tolerance as influenced by removal of an eosinophilic adenoma of the pituitary.

TABLE VI.—CIRCULATING EOSINOPHIL STUDIES IN 4 PATIENTS

Patient	Per Cent Change in Eosinophils After ACTH (25 Mg. IV)	Epinephrine (0.003 IM)
A. W.	−75	0
A. S.	−29	0
G. T.	−73	+29
M. W.	−30	−25

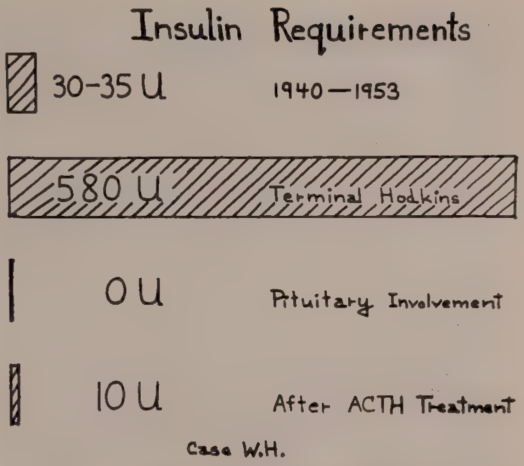

FIG. 9. Insulin requirements of patient W.H.

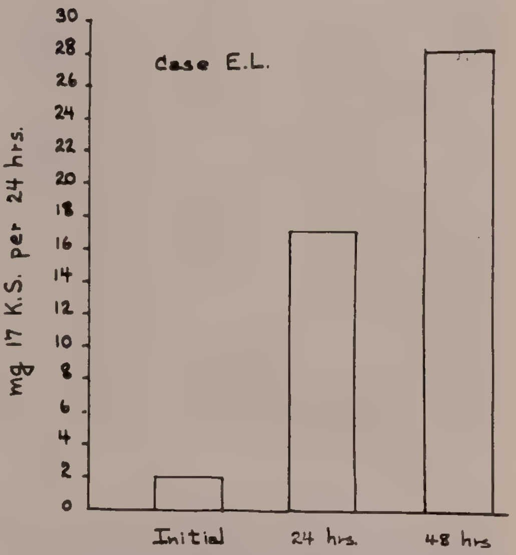

FIG. 10. Effect of ACTH (10 mg. every six hours) on 17-ketosteroids in a patient with hypopituitarism.

pecially when attempting to use this method in the diagnosis of adrenal cortical insufficiency, we have found some significant changes in three out of the four patients on whom eosinophil studies were carried out (Table VI). It will be noted that all four patients had a drop in eosinophils following the administration of ACTH. In our opinion two of these changes were significant, and the other two were of questionable significance. When epinephrine was given, however, two of the patients had no change whatsoever in the circulating eosinophils. In one patient an increase was seen, and in the other there was a decrease of the same order of magnitude as that following the administration of ACTH. It seems apparent that in some instances a lack of response to epinephrine may indicate diminution of a pituitary response to this stress. It has been noted by others that a drop in circulating eosinophils from epinephrine may be due to a direct effect of epinephrine[8] and does not necessarily indicate an intact adrenal-pituitary axis. This effect was illustrated in patient E.L. in whom a marked drop in circulating eosinophils occurred following the administration of epinephrine. However, when he was given a total of 80 mg. of ACTH in divided doses for forty-eight hours according to the method of Thorn[9] and the 17-ketosteroid excretion was followed for forty-eight hours, an increase from 2 to 28 mg. per twenty-four hours was obtained (Fig. 10). In this particular instance there was no question that the adrenal cortical insufficiency which was present was due to lack of stimulation by the adrenocorticotropic hormone, for this patient had had his pituitary gland removed surgically. In other patients this increase in 17-ketosteroid excretion caused by ACTH has been used to differentiate primary from secondary hypoadrenocorticalism. It is our feeling that it is of great value in this respect.

Treatment

It appears that all of the patients in this series, and certainly a large percentage of other patients with hypopituitarism severe enough to cause signs and symptoms, will require prolonged, if not lifelong, hormonal therapy. For this reason practical therapy does not necessarily imply idealistic therapy and vice versa. In long-term treatment, however, practicability may often mean therapy within the limits of the patient's means.

Replacement of the deficient pituitary hormones comes to mind as the first therapeutic choice. For practical reasons this is difficult to do. A glance at Table III, revealing the multiplicity of hormonal deficiencies, is one reason. The chemical nature of the pituitary hormones is another. Because of their structure, synthesis of these protein substances has not yet been achieved. All of the available pituitary hormones must be given parenterally to be effective, and with the exception of ACTH and ADH, data on the use of these substances in long term therapy are sparse.

The management of hypopituitarism in the adult depends upon many factors. Thus we have chosen to replace deficient target gland hormones. For this reason target gland deficiencies in each patient must be accurately diagnosed. In addition, the initial state in which the patient is found must be considered. For example, a patient suffering with hypopituitarism first seen in coma presents a different treatment problem from the ambulatory patient complaining of weakness, cold intolerance, impotence, or amenorrhea.

The comatose patient with hypopituitarism is in need of immediate therapy. Assuming that adrenal cortical deficiency is responsible for this state in most patients, treatment is aimed at its correction, and replacement of adrenal cortical hormones is started. In addition, it is comforting to know that whether the crisis is correctly recognized as primary or secondary hypoadrenocorticalism is of no importance if adrenal cortical replacement therapy is instituted. In our wards patients with hypopituitarism who are found in coma now are immediately given 50 cc. of adrenal cortical extract in aqueous solution intravenously and 50 cc. intramuscularly. At the same time they are given 5 mg. of desoxycorticosterone acetate in oil intramuscularly, 50 mg. of cortisone intramuscularly, and an intravenous infusion of glucose in normal saline. After initial improvement occurs, the therapy depends entirely upon the response of the individual. When the patient becomes alert enough, cortisone may be given orally and the use of adrenal cortical extract discontinued. In general, after the patient is out of shock and responding to therapy, the management becomes the same as that in the noncomatose cases.

When not faced with a coma problem, therapy for the most part depends upon the classification as to target gland deficiencies. In cases with an insidious onset life at a rather low level is possible, even without hormone therapy. In patient M.F. thirty-three years elapsed following a severe postpartum hemorrhage before a diagnosis of hypopituitarism was made. During this entire period the patient had amenorrhea, weakness, severe anemia, and sluggish cerebration (as did several of Sheehan's cases[10]). Despite this she became pregnant again. Following this pregnancy she again resumed a state of clinical hypopituitarism. All during this thirty-three-year period her local physician treated her on the average of four to six times a year with transfusions of a pint of blood for her anemia. It was not until this physician died and was replaced by another that a diagnosis of hypopituitarism was made and proper hormonal therapy was instituted with striking results.

Before the availability of cortisone, the adrenal cortical insufficiency in most of the cases in this series was treated with desoxycorticosterone acetate and sodium chloride. The hypotension disappeared, and a rather marked beneficial symptomatic effect was noted. However, it was not until cortisone was available that the full benefit of adrenal cortical replacement therapy was noted. Aside from its effect on carbohydrate metabolism, it was also noted cortisone had a definite corrective effect on the anemia. It was also found in this series that the use of cortisone alone did not benefit the patients sufficiently to warrant discontinuing the use of desoxycorticosterone or sodium chloride. For this reason, in

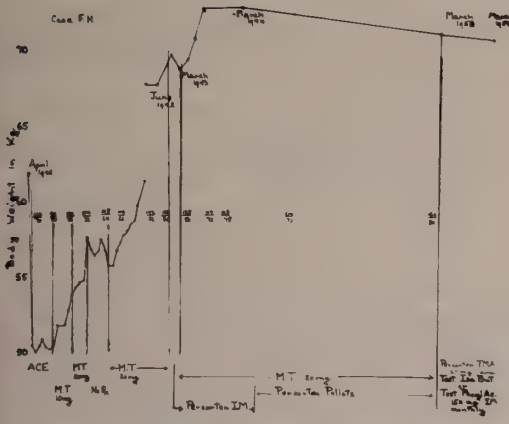

FIG. 11. Effect of therapy on body weight.

this series 25 of the 29 patients with adrenal cortical insufficiency are still receiving desoxycorticosterone and salt.

Twenty-four of the 30 patients were given androgenic substances. The females who received androgens were also given estrogenic hormone. Because of the lack of reliable measuring sticks, it is often difficult to evaluate the effect of androgens in these patients. In one instance it was possible to follow carefully a patient (F.H.) who was given androgen intermittently (Fig. 11). The beneficial effect on the body weight in this instance was most striking. Aside from its well-known effect on nitrogen retention, it is also felt that androgens have a great deal to do with correcting the anorexia noted in a large percentage of these patients. Both of these effects would contribute to the weight gain seen in most of the patients. Other beneficial effects noted following the use of androgenic hormones in these patients have been restoration of hair, increased potency, and increased sexual desire.

Some interesting observations in the method of administration of androgens and desoxycorticosterone were made in these patients. In the past many of the patients receiving desoxycorticosterone were treated with pellet implantation at yearly intervals, daily injections of desoxycorticosterone in oil, or in some instances the sublingual administration of desoxycorticosterone linguets. For the past two years, however, the 25 patients receiving desoxycorticosterone have been given Percorten trimethylacetate* intramuscularly once a month in a dosage of 25 to 60 mg. per day. Because of the multiplicity of factors involved in this disease, problems arise frequently, and a monthly visit will often solve these problems before they have become a major factor. For this reason, 16 of the patients receiving Percorten trimethylacetate were also given an intramuscular injection of 100 to 150 mg. of an aqueous suspension of testosterone isobutyrate or testosterone phenylacetate on the same day that the Percorten trimethylacetate was given. This dosage of either testosterone isobutyrate or testosterone phenylacetate appeared to supply adequate androgenic substance to these patients. It is not meant to imply by this that methyltestosterone orally or other testosterone preparations of known potency are not effective. These particular preparations have been used in this series because of the prolonged action which closely parallels the length of action of Percorten trimethylacetate suspension. Aside from this convenient coincidence, we have continued their use because of the lack of deleterious side-effects in our patients.

Only those 19 patients showing a marked thyroid deficit were given thyroid extract. When it had been established that the hypothyroidism was secondary to hypopituitarism, the thyroid hormone therapy was not instituted until after adrenal cortical hormone therapy had been started. It was found that the dosage of thyroid extract needed for an adequate response in these patients ranged from 15 to 120 mg. per day. In all but two instances, 45 mg. per day or less was adequate. The amount of disability seen in the patients with mild hypothyroidism in our series was not considered sufficient to warrant the use of thyroid extract in these patients.

One of the most striking results in the study of these 30 patients has been the survival rate. Only two patients have expired, and in neither case was the death due directly to hypopituitarism. One was an untreated case insofar as hypopituitarism is concerned. He had Hodgkin's disease involving his pituitary gland and developed hypopituitarism terminally. The other patient had had a chromophobe adenoma removed surgically. In addition to this, at the time of her surgery she was suffering from advanced atherosclerosis with severe myocardial degeneration. Moreover, she also had signs and symptoms suggestive of dermatomyositis.

It is rather difficult to tabulate the over-all results of therapy in the surviving 28 cases for, as noted previously, the hormonal therapy varied according to the disease. In general, all of the surviving patients noted remarkable relief of their general symptoms. Weight loss was checked in all, and in most instances a substantial weight gain took place after therapy. A striking regrowth of hair was noted in all of the cases in which hair loss had been present. Hypotension in the patients suffering from adrenal insufficiency was easily controlled by means of desoxycorticosterone preparations. Since the use of cortisone, we have not seen a hypoglycemic crisis while the patient is undergoing a stressful situation such as surgery or infection. At the time of the occurrence of these stressful situations, we have made it a practice to recommend doubling the daily cortisone dosage.

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* Percorten trimethylacetate, testosterone isobutyrate, and testosterone phenylacetate were kindly supplied by Drs. Cornelius Sullivan and Frank Mohr of the Ciba Pharmaceutical Company, Summit, New Jersey.

Regrowth of breast tissue and changes in the vaginal smear cytology were noted in many of the treated females. Estrogenic hormone was thought to be the cause of this.

As mentioned above, careful observation of these patients, once therapy has been instituted, is desirable. This is especially important in those with adrenal cortical insufficiency. We have felt that the interval should be no more than thirty days in this group. The chief reason for this is to prevent continued disability from undertreatment and to be on guard for signs and symptoms of side-effects or hormonal intolerance. Observations on blood pressure, body weight, heart size, and the presence or absence of edema are important in order to prevent desoxycorticosterone intoxication, and these measuring sticks are used in the monthly determination of the dosage of this hormone. It is not difficult to detect the effects of too much or too little thyroid hormone by means of observation of the pulse rate, skin texture, and by evaluation of the symptomatology. In several instances priapism has occurred in males receiving too much androgenic substance, and obviously adjustment of the dosage must then be made. An unfavorable reaction to cortisone was noted in only one instance. This low incidence of reaction to cortisone may be due to the low dosage used. This one reaction consisted of gastrointestinal hemorrhages with bleeding by rectum of such a magnitude that on one occasion transfusions had to be administered. Later it was noted that bloody stools and vague epigastric distress occurred each time this man was given cortisone. No blood was found in the stools after cortisone treatment was stopped. Radiographic studies failed to reveal the source of the bleeding.

TABLE VII.—HORMONAL THERAPY

Type of Therapy	Number of Cases
Androgen	1
Adrenal cortex	3
Adrenal cortex plus thyroid	3
Androgen plus adrenal cortex	7
Androgen plus adrenal cortex plus thyroid	16
TOTAL	30

Although seven of the patients showed polyuria, prolonged treatment with Pitressin was not necessary in any of them. As pointed out previously, this symptom can apparently be controlled quite well by proper control of the adrenal cortical hormone therapy. A summary of the hormonal therapy in the 30 patients in this series is shown in Table VII.

Summary

Clinical experiences with a group of 30 adult patients with hypopituitarism have been presented and discussed. Multiple target gland deficiencies have been found in all but one patient. These involve variously the thyroid, adrenal cortex, and the gonads.

The most effective therapy to date has consisted of selective replacement of some or all of the deficient target gland hormones. In 16 cases requiring androgen and desoxycorticosterone it was found that suspensions of Percorten trimethylacetate and testosterone isobutyrate or phenylacetate injected intramuscularly at thirty-day intervals were effective and convenient.

Since a review of the literature on hypopituitarism in adults has not been attempted, for this the reader is referred to a monograph by Farquharson[1] and the reviews by Perkins and Rynearson,[11] and Williams and Whittenberger.[2]

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Discussion

Thomas F. Frawley, M.D., *Albany.*—It is not frequent that one has the opportunity to observe such a wealth of material as the authors have over a long period of time and thereby be able to contribute significantly to our knowledge of a disease pattern. In the 30 patients described there are very many interesting points made. If there is one lesson to be learned from these observations, it is that some evaluation of the hypopituitary state may be made accurately and correctly without the aid of laboratory tests and procedures. The important point is to suspect it in the presence of the symptoms and signs which have been enumerated. However, it must not be forgotten that laboratory studies form an essential part in evaluation and to a great extent determine the type and form of therapy which is to be instituted eventually. The laboratory assists immeasurably by determining the degree and type of pituitary disease and the degree of end-organ involvement.

Generally speaking, all of the patients which the authors have described presented evidence of a panhypopituitarism involving the adrenals, thyroid, and gonadal structures. We have been interested in one phase of the problem of hypopituitarism. There are instances of singular deficiencies of a pituitary hormone, e.g., gonadotropic, adrenocorticotropic, which although often undetected clinically may be revealed by the use of laboratory technics. The most striking examples we have observed in our Endocrinology Department occurred in two patients with hemochromatosis. As we all know, hemochromatosis may invade the testicles causing destruction and replacement, but it is less widely known that the same process has occasionally been described in the pituitary gland. Whether it involves other discreet target glands under pituitary control is not known. One of our patients with hemochromatosis developed gonadal deficiency and adrenal cortical insufficiency but no thyroid insufficiency. It was possible to restore the adrenal function to normal with the use of adrenocorticotropic hormone. The second patient has shown gonadal involvement, mild thyroid insufficiency, and no lack of adrenal cortical hormones.

Selective pituitary failure has been described by Maddock and Myers in four men who showed failure of gonadotropin and adrenocorticotropin secretion but had intact thyrotropin secretion. There is still some question as to whether these cases and the two in our series which were described above are really instances of selective pituitary failure or represent instances of partial panhypopituitarism. The latter seems somewhat unlikely because certain tropic hormones appear to be fully intact. The question might be raised as to whether any of these cases of selective pituitary failure are really instances of the early stages of panhypopituitarism and that because of better technics and earlier diagnosis the first manifestations of the developing panhypopituitary state are revealed.

I believe we can all be encouraged by the excellent observations of Drs. Koepf and Vieillard and their analysis of the pituitary state, thus permitting early recognition and early treatment. Also through this work, plus the work of others in this field, it is now possible to bring pituitary surgery to a large number of patients who would not have previously survived because of a lack of knowledge regarding their preoperative and postoperative management. We also have had very satisfactory results with the Percorten trimethyl acetate but are less encouraged regarding the use of testosterone phenylacetate. Both of these drugs are long-acting and permit limiting injections to six- and eight-week intervals. The long-acting desoxycorticosterone is very helpful in treating Addison's disease, but desoxycorticosterone in any form is less frequently needed in panhypopituitarism.

In closing I should like to ask two questions. The first is that the authors make no mention of change in skin color. I wonder whether they would not consider this a useful index in evaluating patients with panhypopituitarism. The other question is related to the patients who developed polyuria while receiving cortisone. I would be interested in the authors' opinion as to the mechanisms involved in producing this situation.

Thomas Hodge McGavack, M.D., *New York City.*—The presentation we have just heard should do much to dispel the generally held misconception that severe endocrinopathies are rare museum specimens and of major medical interest only because each presents an experiment of nature only useful for further investigation in the field.

The authors' very practical and thorough analysis of their experience should do much to dispel any such notions and should enable this unfortunate group of patients to lead relatively normal lives. It has been said that the major function of a discussant is to develop some point of violent disagreement with the views expressed in the original presentation, even though this may bear little relationship to the main theme of the paper. I can find little here with which to quarrel. I see much which deserves emphasis.

In the first place this collection of 30 cases should teach us that the condition is not a rarity. In the second place methods are now available which should lead to earlier diagnosis as well as to the diagnosis of the mild, hitherto unrecognized or latent cases. In the third place arrival at this diagnosis no longer indicates a hopeless outlook with chronic invalidism as a foregone conclusion. In the fourth place treatment requires considerable individualization and, despite the fact that it must deal with substitution therapy for the target glands, should enable each patient to lead a satisfactory, active, and useful life.

For a moment, let us consider these points seriatim. The development of potent therapeutic agents for the maintenance of patients with panhypopituitarism of itself increases the number of living subjects; furthermore, better methods of diagnosis are enabling us to establish the diagnosis in mild cases.

You will recall that analyses of blood for sugar and electrolytes were not of much value diagnostically, only seven showing any disturbance of sodium level and three an increase in potassium. While the authors mention low fasting values for blood sugar, it has been our experience that in the absence of crisis or impending crisis such values are low normal or only slightly below accepted values, e.g., about 70 mg. per cent, rarely lower.

While perhaps the ideal way to arrive at a diagnosis would be to assay urine and blood for pituitary hormones, this is not a practicable procedure nor a very accurate one. We have found a relatively small battery of tests very useful in confirming the diagnosis. Each of these can be carried out in any good clinical laboratory and is relatively easy to perform. They test the function of target glands rather than that of the pituitary directly. They are as follows:

1. The Robinson-Power-Kepler water test, a test of adrenal cortex function, is based on the failure of diuresis following the administration of water in the individual with adrenal insufficiency. In our hands this test yields identical results in Addison's disease and panhypopituitarism. Incidentally this is not reversible with desoxycorticosterone acetate but definitely so with cortisone. What has been the authors' experience with regard to reversibility?

2. Urinary 17-ketosteroid excretion is an index of gonadal and adrenal activity; the values in panhypopituitarism are lower than in Addison's but not so low as in myxedema.

3. The intravenous glucose tolerance test checks both pituitary and adrenocortical functions. Similar data are obtained in Addison's disease. Watch for hypoglycemic shock. Never do an insulin sensitivity test. We have not been so lucky as the authors in this regard.

4. Basal metabolic rate (or I^{131} uptake) is never so low as in severe myxedema, about 20 to 30 per cent for the former or less than 15 micrograms per 100 cc. for the latter.

These four tests afford an indication of the activity of the thyroid, the gonad, and the adrenal. Rarely will they differentiate pituitary failure clearly from adrenal insufficiency. Is there any single test the authors have found useful for making this distinction? Even the much employed forty-eight-hour test of Thorn has not been too satisfactory in our hands.

The polyuria found on the administration of cortisone and its use as a guide to therapy are most interesting.

We have seen this same phenomenon in conjunction with the administration of desoxycorticosterone acetate in larger doses than are usually employed, 15 mg. or more per day, even in the presence of a low-sodium diet. Increases have occurred in urinary volumes from around 1,000 cc. per day to as much as 4,000 cc. per day.

There is little with which we can take issue in regard to the treatment of the authors' patients. In our cases, once a maintenance level of dosage is established for desoxycorticosterone acetate, testosterone, estrogen, and thyroid hormone, these are varied little if at all. Quite different is our usage of cortisone. For this too we establish a baseline dosage, ranging from 12.5 to 37.5 mg. daily. However, additional doses are used to meet stressful situations. One youngster with a craniopharyngioma requires an additional 50 mg. of cortisone on the afternoons he plays baseball; one business executive needs a similar amount for special conferences and as much as 100 additional units for a long day climaxed by a dinner or evening speaking engagement. It is really remarkable how tremendously increased over basic levels is the need for this hormone under stress of any kind. Each patient is taught to adjust and vary his own dosage in relation to these needs. What has been the authors' experience on this point?

In closing, I think it should be further emphasized that in a great majority of these patients all of the necessary therapy can be given by mouth. In some instances parenteral administration of testosterone and desoxycorticosterone acetate is necessary. The long-acting preparations mentioned by the authors have proved satisfactory, and so has the subcutaneous implantation of testosterone and desoxycorticosterone acetate. With testosterone this may have to be repeated at about five-month intervals and for the latter at about ten to twelve-month intervals.

Irresolution is a worse vice than rashness.—Owen Feltham

Allergic Eczema

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A UNIT for the study of the patient with allergic skin disease was instituted at the Vanderbilt Clinic in 1927. This included dermatologists, a psychiatrist, dietitian, and technical assistants. During the twenty-five years which followed, around 2,000 patients with allergic eczema were studied in some degree. The procedure included a detailed allergic history, skin testing and test diets, elimination of or immunization to offending allergens, psychotherapy, and the then current and local systemic therapy.

The little gained from this prolonged study and suggestions for the care of the patient with allergic eczema form the basis of this report.

Clinical History and Picture

The ages of the patients were from ten days to seventy years; about two thirds were less than six years old with the largest concentration between nine and twenty-four months of age. The onset in the young was usually before six months, and most of the older patients gave a history of eczema in infancy. Most sought relief from itching which so often interfered with the patient's sleep and that of their family.

HISTORY.—From the unhurried, sympathetic, well-directed questioning of the patient the most helpful information was obtained. Intensive inquiry almost invariably brought forth something which influenced the disease. Broadly, these influences were heredity, allergic and environmental, physical and mental. The tendency to develop allergies would seem inherited in that a familial history of major allergies was obtained in about 85 per cent of the patients. Asthma or allergic rhinitis occurred in about 40 per cent and urticaria in 30 per cent of the patients with eczema. Other allergies included drug eruptions in 4 per cent and dermatitis venenata in 12 per cent.

The following observations were brought out in the histories. A number of discerning mothers noted gastrointestinal symptoms previous to the onset of infantile eczema. Many adults with recurrent attacks and a history of eczema as babies were aware of foods which disagreed with them. Although a number of adults felt that they had overcome sensitivity to specific foods or that they avoided foods known to disagree, there were few indeed who did not know of a particular food which would intensify an outbreak of eczema.

The history of irritation from wool was obtained frequently from the mothers of children with eczema. Many adults volunteered that wearing certain weaves of wool made them itch.

Although there was often a history of the disappearance of eczema with an acute infectious disease, outbreaks were noted with coccal infections. In babies the eruption of a tooth was usually preceded by a flare of eczema.

Physical environment had a striking effect on most patients. The history was mostly one of freedom from eczema in summer if the skin became tanned. Sudden changes in weather, high humidity, cold and damp weather, and overheated rooms increased itching.

The emotional environment was equally striking in its effect on the eczema of the child and the adult. Many inquired if "nerves" had anything to do with eczema. Almost all felt that when they were upset or overtired, eczema reappeared or became aggravated. Thus it would appear that from the history alone most of the known factors influencing allergic eczema may be obtained.

PHYSICAL EXAMINATION.—After prolonged observation of a number of patients and the study of many others at various ages, the clinical expression of allergic eczema appeared remarkably constant. Its distribution seems dependent on the age of the patient and the severity of the disease. It is rarely continuous.

At some time most infants have a patch or two of eczema which requires little if any treatment. From the immunochemical viewpoint it may be that this is an interval of hypersensitization before immunity develops. It would then follow that in the patients about to be described the continuing hypersensitive state without immunity is expressed by eczema and other major allergies.

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Infantile eczema occurs more often in an overweight baby. It appears usually as a rather acute dermatitis on the cheeks and spreads over the face, tending to leave the tip of the nose and the circumoral areas free. Associated with this there may be the gradual symmetric involvement of the creases about the neck, extremities, and genitals. The remaining skin may become dry, slightly erythematous, and flaky. Occasionally the entire tegument is involved. At first it tends to be an acute process in which minute epidermal vesicles quickly erupt to form weeping, crusted, erythematous areas beneath which a variable degree of infiltration develops. Itching is most often intense. In this milieu a coccal or virus infection may be superimposed with its added impetiginous or rarely varicelliform eruption. With the subsidence of the acute attack the eczema may continue as a papular and desquamating erythematous eruption.

Children in whom eczema persists or recurs are usually thin and wiry. The face is less regularly and prominently involved. Rather, rounded areas of red scaly skin appear on the trunk and extremities, and lichenified, excoriated patches are frequent on the wrists and ankles. In Negroes slightly depigmented halos often frame the rounded patches. The remaining tegument is usually dry, and keratosis pilaris is frequent. During exacerbations most of the skin may become involved, but the eruption tends to be more of a papular or papulovesicular dermatitis.

Relative or complete remission is usual in late childhood. When the eruption recurs in adolescence or adult life, its distribution is almost pathognomonic. There is a diffuse dermatitis of the face, neck, and upper trunk and a localized lichenified eruption over the antecubital and popliteal areas and the wrists. Scattered patches appear elsewhere, particularly on the dorsum of the hands. The patient is usually of the ectomorph type and seldom a jolly person. The tegument is dry and thin. Hair growth is rather sparse over the body. With acute exacerbations white dermographism is common, and often the outer half of the eyebrows is worn down and the nails polished from rubbing or scratching. Recurrences of this type have been observed up to the age of seventy years.

With the exception of the usual infectious diseases, respiratory infections, and other allergies, the patients with eczema are remarkably healthy. Serious infections such as rheumatic fever, poliomyelitis, or tuberculosis are not encountered. Cataracts occur rarely in young adults. Eczema appears with equal frequency in both white and Negro children, but its persistence in adult Negroes is rare.

Nature of the Allergic Process

The question now arises as to why we consider this picture of eczema to be allergic. The history of major allergic symptoms in antecedents, siblings, and in the patient is indicative of an allergic constitution, but proof of hypersensitivity is necessary. It would seem that many observations made on patients with allergic eczema follow the general laws of experimental anaphylaxis. Most patients develop their first symptoms long enough after the absorption of the suspected allergen to permit the assumption that they have been sensitized by previous exposure.

The continuing contact with sensitizing substances which is necessary for an allergic response is ever present. It seems likely that allergenic food proteins absorbed from the gastrointestinal tract initiate the allergic response in the skin. With continued absorption of proteins from the intestine and later from the respiratory tract and from foci of infection, polyvalent sensitivity marks the progress of the disease.

Proof that this eczema is allergic would be exhibited in the complete subsidence of symptoms on withdrawal of the offending allergens, recurrence on re-exposure, and the ability to immunize the patient to the causative (specific) allergens. Corroborative evidence is to be had in the tests for the presence of cellular and circulating antibodies. It is also evinced in changes in eczema following the increase or decrease of absorbed allergen.

In our studies it has been possible to fulfill the above postulates in many infants and young children, thus proving that the eczema is on an allergic basis. Beyond this age corroborative evidence of allergy was possible in many.

The allergens which produced or contributed to an outbreak of eczema were foods, substances which the patients inhaled or with which they came in contact, bacteria, and occasionally saprophytic fungi.

Food as a Cause of Eczema

Proof that allergic eczema was initiated by sensitization to foods was shown by the disappearance of eczema when elimination diets were rigidly adhered to and by the reappearance of eczema when specific foods were again eaten. This occurred in about two thirds of the 400 children less than three years of age, and about one fifth were successfully desensitized to specific foods. In the remainder and in older children foods were often found to increase itching or contribute to outbreaks.

Corroborative evidence of specific sensitization to foods was furnished by skin reactions to percutaneous or intradermal tests in one half of the infants and children and by occasionally demonstrating the presence of specific antibodies in the blood serum.

In adolescents and adults with recurrent eczema it became increasingly difficult to assess the importance of sensitivity to foods. However, in 20 per cent corroborative evidence was obtained. This was shown by the marked improvement in eczema when the patients were on elimination diets and the flares which occurred when specific foods were added. Occasionally oral desensitization to specific foods improved the patient's eczema. Positive skin tests to foods were obtained in about 35 per cent, and occasionally the patients' serum contained antibodies to foods which caused exacerbations.

A sequence in sensitization was apparent in that young children tended to become sensitized to common foods. In order of frequency they were egg, milk, wheat, orange, tomato, cod, and potato. Older children and adults often tolerated one of the foods which previously precipitated an outbreak, with the exception of the rare anamnestic reactions. Sensitivity to one of the above foods was common, and in addition, reactions often appeared with ingestion of one of the following: chocolate, meats, nuts, fish, fruit, cereals, and vegetables other than those mentioned above.

The inestimable services of a dietitian interested and trained in the problem of food allergy made it possible to instruct each patient in the importance of finding out whether or not food had anything to do with his eczema. Taking into account the age of the patient and possible food sensitivities elicited from the history and skin tests, the physician prescribed one of two elimination diets.[1,*] The dietitian carefully went over the diet with the patient and gave him a copy with suggested menus and recipes. Frequently the patient was asked to keep a daily record of the foods eaten and the progress of his eczema. If there was no improvement after three weeks of rigid adherence to the first diet, a second diet containing none of the foods in the first was explained and given to the patient. If the patient had not cooperated fully in following the first diet, he was seldom given a chance at the second one.

If the eruption cleared on either diet or improvement was marked, a new food was added to the diet at three-day intervals. Foods causing an exacerbation were omitted and tried later on. If they again caused an outbreak and could not be avoided, gradually increasing amounts were fed daily beginning with minute doses. By this method of oral desensitization[2] about a hundred patients now eat foods which previously caused or contributed to their eczema.

Inhalants and Substances with Which the Skin Comes in Contact as a Cause of Eczema

Secondary to food as a cause of eczema are the so-called inhalants and substances with which the skin comes in contact. About 25 per cent of the patients developed a positive reaction at the site of percutaneous or intradermal test with protein extracts of common inhalants. These reactions in order of frequency were dust, wool, coverings of domestic animals and fowl, silk, ragweed, mixed grasses, and pyrethrum. It was not possible to prove that any of these substances was the sole cause of the eczema. Since patch tests with wool were negative, it was thought that the patients had been sensitized by inhalation of the wool fibrils and then reacted by itching when wool was worn. Patients who gave a positive reaction to wool or who felt wool disagreed were advised to avoid contact with it. Few were desensitized by the intradermal route during the summer months. Three adults whose eczema was greatly aggravated during the late summer and early fall and who reacted to

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[*] During the last ten years these diets were changed to the following:

CHILDREN'S DIET 1.—Goat's milk or Nutramigen, Tri-vi-sol, rice, rye, banana, apple, lemon, squash, beans, turnip, chicken, pork, bacon fat, gelatin, salt.

CHILDREN'S DIET 2.—Mull-soy, Vi-Penta, cornmeal, barley, soybean, pear, plum, prune, apricot, lime, sweet potato, kale, beets, chick peas, lamb, tuna, corn oil, gelatin, salt.

ADULT DIET 1.—Tea, cornmeal, hominy, lamb, pork, cabbage, corn, escarole, sweet potato, beans, asparagus, pineapple, banana, pot cheese, apricot, pear, lemon, corn oil, molasses.

ADULT DIET 2.—Milk, butter, rice, rye, beef, veal, chicken, carrot, beet, turnip, lettuce, squash, kale, grape, raisin, apple, prune, plum, gelatin, salt.

intradermal tests with ragweed protein were similarly desensitized. The improvement which followed suggested that inhalants were a contributing cause of the patients' eczema.

About 5 per cent of the adult patients with eczema reacted with a local vesicular eruption to a variety of substances used in patch testing. In order of frequency they were poison ivy extract, topical remedies, metals, cosmetics, plants, and other chemicals. These substances did not seem to cause eczema but rather aggravated an existing one or produced dermatitis venenata. In one patient sensitive to goose feathers, not only were the intradermal and patch tests positive, but the application of goose feathers to a clear area for twenty-four hours was followed by an area of dermatitis indistinguishable from the patient's eczema. In this patient passive transfer of circulating antibodies was possible.

On rare occasions short contact with foods, glue, hairs of domestic animals, or dog saliva produced an intense temporary erythema with marked itching at sites of previous eczema. This only confirmed the patient's previous experience.

Bacteria as a Cause of Eczema

Another contributing factor is the presence of bacteria either in the skin or as chronic foci in the sinuses or respiratory or intestinal tract. Many patients give a history of or are observed with infected eczema, furunculosis, and on occasion cellulitis or lymphangitis. Recurrences of eczema, particularly in patients with asthma, are frequent following respiratory infections. In addition, coagulase-positive staphylococci grow abundantly in the oozing eczema of many without causing suppuration, thus exhibiting the patients' altered reaction to the organism.

Intradermal tests were made with dilute solutions of staphylococcus and mixed bacterial filtrates obtained from throat infections. Reactions of both the immediate and delayed type resulted. Some 200 children and most of the older age group were tested. Reactions occurred in about 4 per cent of the younger age group and in 40 per cent of the older patients. Efforts to rid the patient of infection either by removal of foci or the use of antibiotics and immunization with toxoid or filtrates materially helped a number. Two adult patients in whom exacerbations were associated with recurrent cellulitis of the legs were rapidly immunized with staphylotoxoid while on cortisone orally. Since then cellulitis has not recurred, and the eczema has been well controlled with local therapy.

Fungi as a Cause of Eczema

Infrequently patients noted an exacerbation of eczema after they had been in damp, moldy buildings or in dusty attics or after eating foods on which airborne molds thrive.

Two hundred adults, often with asthma as well as eczema, were tested with filtrates and extracts of 18 common saprophytic fungi. About 10 per cent gave positive reactions to intradermal tests. In order of frequency these were to Alternaria, Aspergillus, Penicillium, Circinella, and Mucor. There were a few reactions to each fungus tested. In about 1 per cent either asthma, urticaria, or generalized itching followed shortly after the tests. Two to three days following tests with Alternaria, Circinella, or Penicillium eczema became aggravated in four patients. Patches of eczema were produced in three patients following the application of filtrates of the fungi to which a positive intradermal test had been obtained. In one of them, sensitization to Alternaria mali contributed to his eczema. This was manifest in asthma and an exacerbation of eczema on three occasions after inhalation of the filtrate, the presence of circulating antibodies in his serum, a positive patch and intradermal test to Alternaria extract, and the recovery of the fungus from a place which precipitated attacks.

Intradermal tests were done on an equal number of patients with filtrates and extracts of the common dermatophytes and Candida albicans and with the carbohydrate fractions of C. albicans and Trichyphyton gypseum. Immediate reactions to the carbohydrate fraction and immediate and delayed reactions to one or two of the extracts were obtained in 3 per cent. The organisms to which the patients reacted could not be obtained on cultures of the skin nor related to the patient's eczema.

Psychologic Factors

From the foregoing study it would seem that the patient with allergic eczema has an inherent hypersensitiveness which may be of importance in the occurrence and perpetuation of the eczematous state. It would also appear that his psyche selects this sensitive skin for the expression of internal conflict and that the level of sensitivity changes with emotional stress.

In the infant with severe eczema the reaction to itching is the normal one, although somewhat exaggerated, of scratching, irritability, and wakefulness. With persistence of the eczema in childhood these responses are usually continued, and in addition, the more unpleasant attitudes associated with growth are exaggerated. The child with eczema tends to be aggressive, demanding, shy, and without interest in group play. Scratching has become a habit, unconsciously initiated when he is tired or under tension, and consciously when he does not get his own way. The adverse effect on the family of the child's irritating habit of scratching, his appearance, his insomnia, and his preferential treatment mitigate against his recovery. The frustrated, overtired, and anxious parents tend to become domineering, overly protective, and resentful.

The dermatologist is not unaware of the effect of these deleterious stresses and includes their care in his treatment. However, in recalcitrant patients the association with a psychiatrist interested in eczema has been of real value. Intensive, although not unduly prolonged, psychotherapy given to the mothers of 40 children has facilitated the remission of severe eczema as disturbed child-parent relationships improved.

In taking the history from the older patient with persistent eczema the dermatologist gains insight into his personality and the effect of emotional responses on itching. The patient is often aware of habits and emotions which evoke itching, but he is unable to change them. The conspicuousness of the eruption, the overwhelming urge to scratch, the knowledge that the eruption is brought out or aggravated by so doing, the interruption of sleep, and the fear of recurrences necessarily impose emotional defenses. These often take the form of feelings of guilt, hostility, self-loathing, frustration, and depression.

Exacerbations are frequent before examinations at school, before marriage, shortly after the children are born, and following tragedies. Often during an outbreak the patient returns to his parents' home hoping for solace, but he disrupts the family by exciting the sympathy of one parent and the anger of the other.

It has been our observation that most adults in whom eczema recurs with great severity are emotionally immature. Most tend to be perfectionists, and although self-exacting, they are not sustained in their efforts. They are never able to get to bed on time because there is always something else that must be done. As the husband of one patient with severe eczema said, "My wife doesn't know how to be sick or how to be well; if she had heart attacks as I have, she would have learned how to live, and I don't think she would have eczema."

The dermatologist, on occasion with the necessary help of the psychiatrist, can sensibly manipulate the patient's environment and habits. Slowly the patient is sufficiently re-educated to abolish the necessity of scratching when under stress by giving vent to his feelings in a setting of understanding permissiveness. Gradually a better behavior pattern is fashioned in which the patient achieves greater inner freedom so that he may mature emotionally. With this accomplished 30 adults now view with disdain the minimal eczema which remains.

In addition, others have become acutely aware that when under stress they itch. They now tend to curb scratching and avoid situations producing emotional stress. By so doing there has been an appreciable reduction in the lichenification of the skin and exacerbations.

Physical Factors

Attendance in the clinic rose sharply in the late fall and winter months and tapered off in the late spring. Patients were encouraged to sunbathe as early as conditions permitted. When tanned, the eczema either disappeared or was minimal. Ultraviolet light therapy did not benefit a number of patients. A few with persistent incapacitating eczema moved to dry sunny climates with benefit.

The dryness of the skin which was exaggerated in winter was often improved by prolonged bathing and rubbing in protective oils or ointments directly after. Excessive perspiration in humid weather or following exercise was controlled by anticholinergic drugs. This reduced itching.

Skin Tests

During the first fifteen years of study percutaneous tests were started at the initial visit if the skin permitted. These were continued with each visit and, if negative, were followed by intracutaneous tests. Infants and young children were tested to most of the common sensitizing foods and inhalant substances. Older children and adults received additional tests to foods, inhalants, staphylo- and streptotoxin, mixed bacterial filtrates, old tuberculin, and some to fungi. Patch tests were performed on the older age group to substances commonly causing dermatitis venenata and to substances suggested from the history. During the last ten years the number of food tests was greatly reduced. The arms were used as test sites whenever possible, and a tourniquet, ice, and adrenalin were at hand.

About three fourths of the patients who were adequately tested gave an unequivocal positive reaction to some antigen and many to more than one. A very occasional patient developed dermographism at all test sites. At times it was necessary to retest patients because of lack of response during exacerbations or changes in sensitivity with persistence of the eczema. Among all the thousands of tests which were done, only ten caused systemic reactions. They occurred within a few minutes of testing and were manifested in intense generalized itching, urticaria, or asthma. In addition, one child with a history of asthma and urticaria developed an alarming anaphylactic reaction directly after a percutaneous test to milk.

Positive percutaneous or intradermal tests to foods occurred in about 65 per cent of infants and children and 35 per cent of adolescents and adults. It was unusual to obtain a markedly positive test to a food that could be eaten at all times with impunity. A specific food to which a positive skin test was obtained could be shown to produce an outbreak of eczema in 92 of 200 patients who were intensively studied. However, skin tests were negative to foods known to produce eczema in 25 of 100 children equally well studied.

Reactions to inhalants were obtained in about 25 per cent of the patients. More often they occurred in ones who had or developed other major allergies. The high percentage of reactions to bacterial toxins exclusive of old tuberculin was in conformity with the constant exposure to them and the frequency of infections.

Except in the most recalcitrant cases, the time consumed in testing and the little that could not be gained in some other way makes us doubt the necessity of doing so many tests.

Results of Questionnaire

Two hundred patients first observed prior to 1947 answered a follow-up questionnaire which sought to bring out their impressions of eczema. Thirty-five per cent are free from eczema, 45 per cent are improved, and 20 per cent are not. Allergic reactions to foods were of interest in that 65 per cent enumerated foods which had caused an outbreak or intensified an existing one. Forty per cent felt that wool clothing made eczema worse or made them itch. About 10 per cent listed other inhalants or substances with which they came in contact which produced the same result. The effect of infection, climate, and stress was similar to that given in the original history.

Of the 35 per cent free from eczema from five to twenty-six years all were less than twelve years of age when first observed. About two thirds attributed the "cure" to elimination or desensitization to specific foods and about one sixth to avoidance or desensitization to wool or other inhalants. The remainder gave the following reasons: living in a dry sunny climate, topical applications, or that they "just outgrew it."

One of the questions asked the 65 per cent who continued to have eczema was, "What gives you the most relief?" The majority relied on ointments and oral antihistaminics. Other answers included keeping cool, calm, and tanned, returning to a psychiatrist, trying to adjust to eczema, and taking cortisone or corticotropin.

Management of the Patient

The infant with allergic eczema becomes a challenge and offers the best chance of speeding the hypersensitive state to one of immunity before the skin becomes chronically hyperactive and habit patterns become fixed.

Certainly there is a considerable number who "outgrow eczema." How to determine which ones will be so fortunate is not now possible. To us it has seemed best to treat very seriously all the young in whom widespread eczema has persisted more than a few months. Persistence in ferreting out allergies and coping with them has been most rewarding in this age group.

When the physician is faced with an adult in whom eczema has persisted or recurred most of his lifetime, it is the art more than the science of medicine which is fruitful. The thwarted patient comes, hoping that somewhere he will find help. With mutual cooperation it is our impression that eczema in this age group is distinctly a treatable disease.

In general, the treatment of the patient with persistent allergic eczema revolves around changing the patient and changing the environment in which he lives. This must be achieved gradually, but quick relief from intolerable itching is paramount in the patient's mind. Accordingly, both topical and internal medications are prescribed at the outset.

In the use of topical therapy the importance of recognizing the tempo of the disease is to be emphasized, i.e., soothing the acute and stimulating the chronic inflammatory stages. Tar in various forms remains one of the most effective and least costly of local medications. Prolonged application will at times keep eczema well under control. New proprietary antipruritics, although more costly, are equally effective and usually more acceptable. When Hydrocortone ointment was supplied for investigative purposes, it was found to be remarkably effective in reducing the inflammatory process and itching.

Over the years many of the antihistaminics have been prescribed for oral use. The more than adequate number seem to fall in five chemical groups. If the one prescribed was not effective, the next was chosen from another group. Unwanted but not alarming effects were occasionally encountered. The sedative effect of the ethanolamine derivatives was advantageously used at bedtime.

During acute exacerbations some 50 adults have experienced gratifying temporary relief with the use of cortisone or corticotropin. Its judicious use, obtained through some measure of hyperadrenalism, enhanced cooperation in more orthodox forms of therapy. Continued small doses of either has permitted rapid immunization to specific foods or inhalant allergens in ten patients.

The treatment of the allergic component, which was the outstanding one in the young and of significance in the older age group, lay in the detection and then the avoidance of the sensitizing allergens. When this was impractical, specific immunization was attempted.

Conclusion

In conclusion, allergic eczema continues to be a convenient designation for infantile eczema, atopic eczema or dermatitis, flexural eczema, or neurodermatitis disseminata in which the phenomenon of sensitization is intrinsic.

Hypersensitivity either to foods, to substances which the patient inhales or with which he comes in contact, to bacteria or molds, or to combinations of these are demonstrable in most instances.

Elimination of or immunization to specific allergens together with re-education and medicaments tend to arrest the progress of the disease if it is treated in childhood.

In spite of consideration of all the known factors which influence eczema in the adult, the disease defies our efforts to arrest it permanently. This is borne out by answers to follow-up questionnaires. However, recognition of the allergic state and its treatment, psychotherapy, and the use of topical and internal medications improve the majority of adolescents and adults with allergic eczema.

References

1. Waters, I.: J. Allergy **2**: 225 (1931).

2. Hopkins, J. G., Kesten, B. M., and Waters, I.: *ibid.* **6**: 431 (1935).

Discussion

Marcus B. Einhorn, M.D., *Albany.*—Dr. Kesten has just given us a comprehensive review and summary of her findings in a group of 2,000 cases studied in the Allergic Skin Clinic of her hospital. She has also surveyed a follow-up group of 200 cases of the original study some years later and has presented many interesting facts. I am in full agreement with the context of her paper but would like to stress a few points.

The manuscript certainly confirms our knowledge up to the present time in making a diagnosis of allergic eczema: the inherited family history of asthma, hay fever, and infantile eczema, the presence of circulating antibodies in the bloodstream, the positive passive transfer tests, and the characteristic morph which follows exposure of the sensitive tissue to the specific allergens.

I should like to think of this form of eczema as "atopic eczema or dermatitis" for three reasons:

1. The word "atopic" connotes and confirms my concept of the inherited nature of the disease, the flexural morphology, and the presence of circulating antibodies in the bloodstream.

2. Atopic dermatitis is the official nomenclature designated for this disease by the A.M.A., and all charts should be labeled as such for the final diagnosis.

3. It fits all stages of the disease from the vesicular form in infants to the dry, lichenified type in the adult.

Skin testing is certainly of some value in older, selected, and recalcitrant cases, but as a general rule it offers very little aid in the diagnosis and treatment in infants. I have therefore abandoned skin testing in the very young except in a few selective cases. These infants respond adequately to topical remedies without the annoyance of skin testing. Some twenty years ago, when I attended a lecture on "Atopic Eczema" by the late Dr. Fred Wise, he told us then that skin testing was of no value in infants. Dr. Lewis Webb Hill,[a] who has written on "infantile eczema" for the past twenty years, wrote an article in 1952 in which he states that skin testing in infants was of limited value and that topical medication accomplished the desired result.

One must remember that in the growing infant and child, growth and development are most important. Therefore, elimination diets must be used with great discretion and proper foods substituted to prevent loss of weight. There is an old saying that it is better to have a healthy child with a rash than a sickly child with a clear skin. I agree with this.

I have followed cases of eczema in the newborn nursery and children's institutions for some twenty years and am fully convinced that teething, sudden changes in temperature, emotional upsets, silk and wool, and infections account for exacerbations in atopic patients. I have also noted a marked aggravation of eruption in children and adults during the pollinating season of spring grasses and ragweed.

Another point I would like to emphasize is that reassurance of the parents on their first visit to the doctor's office has been the most valuable aid in the management of these cases. It is well to reassure them that many outgrow the condition by the time they are six years of age, that the infant will grow and develop in spite of the rash, that the condition is not contagious, and that cooperative treatment is essential.

I would like to mention one more point. Dr. Lewis Webb Hill, of Harvard Medical School, feels that an X-factor is present in the skin of the atopic and that this X-factor is necessary to produce the characteristic eczematous process rather than just an urticarial reaction as in the nonatopic. He does not know what the X-factor is but is convinced that it is more than the offending allergen which elicits the atopic response. Dr. Sulzberger[b] also speaks of this same X-factor in his book on *Dermatological Allergy.* I feel that this X-factor may some day hold the key to this complex problem.

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[a] Hill, L. W.: Arch. Dermat. & Syph. **66**: 212 (1952).

[b] Sulzberger, M. B.: Dermatologic Allergy, Springfield, Ill., Charles C Thomas, 1940.

Wanted: Lightweight Academic Apparel

June is traditionally the month for graduating students from our high schools, colleges, universities, and professional schools. It is also—in the South, at least—often one of the warmest months of the year. In spite of the temperature, it is the accepted custom, at most undergraduate and graduate schools, to require the members of the graduating class and of the faculty to wear the medieval academic costumes, consisting of a robe, square cap with a tassel, and a multicolored hood. To the audience this gay apparel may seem glamorous, but to the poor victims who have to wear the outfit it is a sartorial torture chamber. The robes themselves are as warm as overcoats, and the hoods are equal in warmth to capes or shawls over the shoulders.

A medical journal is not a fashion magazine: but it should be devoted to the relief of human suffering. For this reason it is pertinent to suggest to those who manufacture these costumes that they consider seriously making them of lighter material. Surely, it should be possible to design a robe and hood that would be light and cool but would look as dignified as the present costume. Most of those in the graduating classes have figuratively, if not literally, had to sweat enough in order to earn their diplomas, without requiring them to suffer the punishment of a Turkish bath before being presented with them. Not many of the students, however, will have to go through the ordeal again, while the faculty members can only look forward to repeating the experience year after year.

Those who have read Dr. J. M. T. Finney's autobiography may recall his experience when he was asked to be president of Princeton University. After he had considered the offer seriously, the thought of himself as wearing an academic costume made him decide to decline it. It is possible that if a lightweight model had been available, he might have decided differently.—*North Carolina Medical Journal, June, 1954*

The Safety of Water Fluoridation

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The effectiveness of water fluoridation at optimal levels of 1.0 to 1.5 parts per million of fluoride in the prevention of dental caries is thoroughly documented and generally accepted. Extensive epidemiologic studies have demonstrated repeatedly that the DMF rate, that is, the number of decayed, missing, or filled permanent teeth per 100 erupted permanent teeth, is about 60 to 65 per cent lower in communities served by drinking water containing fluoride in this concentration from its natural sources than in similar communities served by fluoride-deficient water supplies.

There has been no reason to believe that supplementation of water supplies to bring it up to the optimal level of fluoride would not have caries-inhibiting effect of the same order of magnitude since there is no chemical difference in the fluoride ion whatever its source. The reduction in dental caries is rapidly approaching this point in various study communities as the number of years of experience with water fluoridation accumulates. In the Newburgh-Kingston study, for example, six and one-half years after the start of water fluoridation in Newburgh, the DMF rate has been found to be about 47 per cent lower in the six- to twelve-year-old children in Newburgh than in Kingston, although the rate in the latter was found slightly higher at the beginning of the study.[1]

The caries-inhibiting effect of the fluoride ion in drinking water supplies is not limited to childhood. This has been demonstrated by careful dental examination of the native population of two Colorado communities: Colorado Springs, with 2.5 parts per million of fluoride in its drinking water, and Boulder, with essentially fluoride-free water. The twenty- to forty-five-year-old age group studied in Colorado Springs had a rate 56 per cent lower than a similar group in Boulder.[2]

Fluoridation of water supplies cannot be expected to eliminate the problem of dental caries at a single blow. The force of this effect may be roughly compared to the impact of water chlorination on the incidence of typhoid fever. Following the institution of water chlorination a variety of control measures must still be used to eliminate the residual problem. In the absence of a safe water supply, however, application of all these other methods combined would have carried relatively little impact on the total problem. In the attack on the dental caries problem, water fluoridation, topical application of fluoride, reduction of free carbohydrates in the diet, and miscellaneous other measures have been proposed. Fortunately, the effectiveness of these various procedures is directly related to the ease with which they can be applied on a broad scale. While topical fluoride does not confer any additional benefit once the full effect of water fluoridation has been exerted, it provides a tool for use in the early years of water fluoridation or in areas in which water fluoridation is not possible.

By water fluoridation alone the amount of dental caries may be reduced to a level at which available dental treatment can handle it, even if no other preventive technics are applicable or used. One can only conclude, therefore, that no technical obstacles exist in bringing dental caries under control as a cause of tooth loss within the next few years.

Role of Medical Profession

Although water fluoridation is essentially a procedure in preventive dentistry, it is of the utmost concern to the medical as well as the dental profession. Physicians are interested in the promotion of good dental health as an end in itself, apart from whatever indirect benefits may accrue in general health. Physicians in private practice are often asked their opinion on community health problems by their patients. An informed answer may influence the opinion of citizens' groups at crucial times.

The influence of individual physicians is compounded many times when their voices are heard

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through their medical societies. Two outstanding examples of such enlightened action on the part of local medical groups deserve highlighting. One of these is the extensive study and report of the special committee on water fluoridation of the St. Louis Medical Society, which appeared in February of this year.[3] In this carefully documented report pertinent information bearing on the subject is summarized, and the arguments raised by the opponents of water fluoridation are examined and refuted in detail one by one. This was no mean task since many of the arguments were based on rumor or misunderstanding which were difficult to trace to their sources. This report is highly recommended as a store of reserve ammunition for those who may suddenly be confronted in public meetings with these many times refuted arguments.

The second instance was the action taken by the physicians in Colorado Springs, as members of the El Paso County Medical Society. This group of practicing physicians was in a strategic position to observe any possible systemic effects from prolonged ingestion of fluoride-containing water since the natural fluoride content of Colorado Springs water was well above the optimal levels for the prevention of dental caries. As recorded in last month's *American Journal of Public Health*, the Society passed the following resolution, after polling all physicians in the area:[4]

> "Whereas, there is substantial evidence that the water supply of Colorado Springs has contained a surplus amount (2.6 parts per million) of fluoride for a period of about seventy-five years;
>
> "*Be it resolved*, that during the long practice of medicine in Colorado Springs, it is the considered opinion of the members of El Paso County Medical Society that we have not experienced any clinical symptoms which can be attributed to the use of such water. It is known, however, that a condition known as "mottled enamel" can be produced by the use of water containing an excess of fluoride.
>
> "*Be it further resolved*, that this resolution be made a part of our permanent record and be put at the disposal of the dental profession."

It is true that this resolution is based on the uncontrolled clinical experience of practicing physicians in the area. However, it is equally true that with all the publicity given to the systemic effects of fluoride at toxic levels, any clinical manifestations suggestive of such effects would almost certainly have been noted and reported upon by the physicians in Colorado Springs.

The most recent reports indicate that 944 communities in this country, having a total population of about 17 million, were using fluoridated water as of March of this year.[5] The parent body of the medical profession in this country, the American Medical Association, has lent its weight to the movement for extending water fluoridation to additional communities. Supporting the American Medical Association in this stand are other leading professional organizations such as the American Dental Association, the American Public Health Association, the American Academy of Pediatrics, and the National Research Council. The latest organization to join these ranks is the Commission on Chronic Illness, whose voice is particularly effective on the possible systemic effects of fluoridated water on the adults and aging groups of our population. In none of these cases was the action a routine endorsement. On the contrary, the action taken in each instance was based upon careful weighing of available evidence.

In considering the safety of water fluoridation, as with almost all preventive or therapeutic procedures, the matter of dosage is all-important. Almost all substances on which continuation of life depends are toxic in sufficient concentration or amount. Even pure inert water, when taken in great excess, produces profound physiologic effects and possibly fatal intoxication. The question with regard to water fluoridation then is the width of the margin between the level of maximum effectiveness in the prevention of dental caries and the potential level of toxicity.

It is somewhat ironical to note that sodium fluoride was recommended at one time as a medication producing "good results in sympathetic headaches, intermittent fever and epilepsy in doses of less than a quarter of a grain."[6] Lest anyone gain the impression that I am recommending sodium fluoride as the drug of choice for the treatment of this quaint group of conditions, let me make haste to state that this treatment was recommended in 1886 and never gained any circulation since no further reference has been found to this form of therapy in the ensuing three score years and ten.

Evidence for Safety

A mass of convincing evidence has been produced and published bearing upon the safety of water fluoridation. Several excellent reviews have been published recently, and there is little point in going over the same ground in detail. Hence, this paper will be essentially a review of these reviews. I have already referred to the report of the St. Louis Medical Society.[3] Heyroth's paper[7] on "Toxicologic Evidence for the Safety of the Fluoridation of Public Water Supplies," which appeared a little over a year ago, is an excellent summary of scientific information on the subject. The statement of the Commission on Chronic Illness, in addition to summarizing the published information concisely, contains some otherwise unavailable material of great importance.[8] Knutson's "Case for Water Fluoridation" contains much material useful in preparing talks.[9] Finally, we are looking forward to the appearance of the monograph on water fluoridation to be issued by the American Association for the Advancement of Science, in which there appears the paper by Hodge and Smith entitled "Some Public Health Aspects of Water Fluoridation."[10] This paper will contain an extensive discussion of the basic question of the factor of safety in water fluoridation in relation to the possible acute lethal dose, retardation of growth, skeletal changes, and enamel hypoplasia.

Acute toxicity from fluoride salts manifests itself from within a few minutes to a few hours after ingestion of a toxic dose. Fluoride salts characteristically produce nausea and vomiting so that even heavy doses have not necessarily been lethal because comparatively little fluoride may have been retained and absorbed. Since the lethal dose of sodium fluoride as actually absorbed is about 5 Gm. it is impossible to drink enough fluoridated water at even 20 or 30 parts per million of fluoride to produce acute toxicity. Furthermore, it is not possible for any mechanical failure of water treatment equipment to raise the fluoride level to an acutely toxic level.

When fluoride is ingested over long periods of time, it has been shown that a large part of the fluoride is excreted in the urine. A direct relationship between fluoride intake and urinary excretion of fluoride can be demonstrated, at least up to a daily intake of 4 to 5 mg., which corresponds to a quart of water containing 4 to 5 parts per million. This same type of excretion pattern is found in individuals with damaged kidneys.[8] At higher doses significant quantities are stored mainly in the bones, to be excreted slowly in the urine after fluoride intake has ceased.

Apart from the teeth the bones are the most delicate index of excessive fluoride intake. Even at levels several times higher than those recommended for water fluoridation, no changes in bony structure have been demonstrable. There could be no conceivable hazard to the bony structures even if all the fluoride in water at concentrations of about 1 part per million were deposited in the bones. No radiographic evidence of skeletal fluorosis has been found in areas with less than 8 parts per million of fluoride in the drinking water. Even when some slight increase in bone density could be demonstrated by x-ray in a small proportion of persons living in areas with higher levels of fluoride in the drinking water, there was no apparent functional disability present in these persons. In practical experience bone fracture has not differed in areas having natural fluoride concentrations ranging from 0 to 6 parts per million. Bone fracture experience has not been studied in areas having higher concentrations, but this would be irrelevant to the discussion of water fluoridation in any case.

The possible effect of fluoride ingestion on growth has also been studied in communities with naturally fluoride-containing water supplies, and no differences in weight and height were demonstrated in these communities as compared to the population of communities with fluoride-deficient supplies. I will not report on the investigation of possible systemic effects of drinking fluoridated water being conducted as part of the Newburgh-Kingston study since these results are being presented in another paper by Overton and Chase.[11]

Only recently has any large body of evidence become available on the absence of any effect on mortality rates from specific causes in adult life. The Public Health Service has compiled data, based on 1949–1950 census reports, showing mortality rates in 28 cities with water supplies naturally containing 0.7 part per million or more of fluoride, compared in each instance with the average of three closely paired cities.[8] There were no significant differences in the death rates from cancer, heart disease, and nephritis adjusted for age, sex, and race.

Summary and Conclusions

Fluoridation of water supplies to optimal levels of 1.0 to 1.5 parts per million of fluoride has been conclusively shown to be effective in reducing the incidence of dental caries.

The medical profession has demonstrated its interest and active support in promoting this public health procedure.

Supplementation of fluoride-deficient drinking water supplies to the desired level is safe and produces no demonstrable systemic effects.

The status of general health in communities with fluoride-containing water supplies with considerably more than 1.5 parts per million of fluoride has been found to be essentially the same as comparable communities with fluoride-deficient supplies.

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Newburgh-Kingston Caries Fluorine Study

VI. Pediatric Aspects—Current Status

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Not infrequently physicians express concern about the poor condition of the teeth of their own children. Although these children may eat a nutritious diet with plenty of milk and brush their teeth regularly, dental caries continue to develop and require extensive care. For the population as a whole it has been stated that dental caries is the most widespread of all diseases, probably afflicting 98 per cent of our people.[1] Fortunately, there is at the disposal of any community a chance to prevent approximately two thirds of its dental caries problem through controlled water fluoridation. In natural fluoride areas protection against tooth decay acquired in early childhood is carried over into adult life.[2] Although the dental benefits resulting from fluoridation have been widely publicized, physicians are constantly seeking medical information to enable them to provide support for fluoridation in their own communities.

The Newburgh-Kingston Caries Fluorine Study was initiated in 1944 by the New York State Department of Health to investigate water fluoridation and covers both the dental and pediatric aspects of the subject. This research project has been guided by an advisory committee† of highly qualified experts who periodically review the study's progress and offer suggestions for further investigation. The research staff is greatly indebted to this committee for its advice and counsel. The present report will concern itself with the current status of the Newburgh and Kingston pediatric evaluations, the dental findings having been reported elsewhere.[3]

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* By invitation.

Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Preventive Medicine and Public Health, May 14, 1954.

† Chairman of the committee is Dr. Harold Hodge, Professor of Pharmacology at the University of Rochester School of Medicine and Dentistry. Other members include Dr. Katherine Bain of the Children's Bureau in Washington, D.C.; Dr. Basil Bibby, Director of the Eastman Dental Dispensary, Rochester, New York; Dr. John Caffey, Professor of Clinical Pediatrics in the College of Physicians and Surgeons of Columbia University; Dr. John Fertig, Professor of Biostatistics, School of Public Health, Columbia University; Dr. William J. Gies, Professor of Biological Chemistry, Columbia University; Dr. Samuel L. Levine, Professor of Pediatrics, Cornell Medical School.

Location of Study

The cities of Newburgh and Kingston were selected as the localities for this study because they are comparable in many respects. Geographically and climatically, they are well matched: both cities are situated on the Hudson River about 30 miles apart. They are similar in size, each having about 30,000 population. They bear a fairly close resemblance to each other in general racial, social, and economic conditions, and the two cities have similar upland reservoir water supplies. Since May 2, 1945, the Newburgh water supply has been supplemented with sodium fluoride. The fluoride concentration is maintained at a level of 1.0 to 1.2 parts fluorine per million parts water.

Pediatric Study Group

The purpose of the pediatric examinations is to study the health and growth and development of a group of children drinking fluoridated water, compared with a control group drinking essentially fluoride-free water. The first series of pediatric examinations began in 1944 and were completed in 1946. At that time approximately 500 children were selected for study in each city. A special effort was made to secure a representative geographic distribution in both cities. The age distribution of the original group examined was approximately as follows:

Under 1 year	100
1 to 2 years	100
2 to 5 years	200
5 to 9 years	100

During each of the succeeding three years, 1947 through 1949, 100 additional infants under one year of age were enrolled. No new infants were enrolled after 1949 since it was not considered worth while to enroll children who could not be carried beyond the age of six or seven before the termination of the study. From 1944 to 1949, 1,602 children were brought under periodic pediatric appraisal, 891 in Newburgh and 711 in Kingston. Of this group, 963 have been followed to the time of the present report, 529 in Newburgh and 434 in Kingston.

Description of Examinations

The pediatric research staff is composed of a pediatrician, public health nurse, laboratory technician, and clerk-receptionist. For each child in the study the following information was recorded on cumulative history forms: pertinent data about the child's family; prenatal care of the mother; birth, neonatal, and developmental history of the child; information about feeding, illnesses, operations, and injuries. In addition, a physical examination is performed by the pediatrician at each visit. Special attention is paid to the hair, nails, skin, mucous membranes, thyroid gland, and possible orthopedic conditions. Physical measurements which are recorded at each visit include standing and sitting height, circumference of head, and circumference of chest, all to the nearest $^1/_4$ inch and weight to the nearest $^1/_4$ pound.

X-ray films of the wrists and knees of each child are taken in the research clinic in both cities annually. X-rays of these rapidly growing bones are studied for bone density, rate of maturation, and possible pathologic conditions. The films are reviewed by Dr. John Caffey, Professor of Clinical Pediatrics at the College of Physicians and Surgeons of Columbia University.

Each year 25 children in Newburgh received special ophthalmologic and otologic examinations including tests of visual acuity, outlines of visual fields and blind spots, examinations of the cornea and lens, ears, nares, and nasopharnyx, and an audiometric test using a pure-tone diagnostic audiometer.

For the first series of examinations in Newburgh and Kingston, laboratory examinations were performed on all children in the study. Laboratory examinations included routine urine analysis, blood hemoglobin (using the Sahli hemoglobinometer standardized so 14 Gm. per 100 cc. is 100 per cent), and total leukocyte and erythrocyte counts. Differential white blood cell counts were performed on children with abnormal total counts. Thereafter, the laboratory work in Kingston was discontinued. From 1947 to 1951 laboratory work was limited to one third of the Newburgh study group. Since 1952, with the study nearing its close, hemoglobin determinations and urine analyses have been performed for all of the Newburgh study group at each examination. For the sake of completeness it is planned to carry out the laboratory examina-

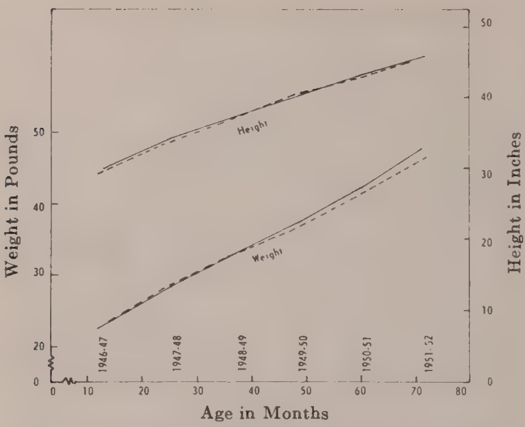

Fig. 1. Average height and weight at successive examinations of boys ages seven to eighteen months in 1946–1947 examinations. (Solid line represents Newburgh children, broken line Kingston.)

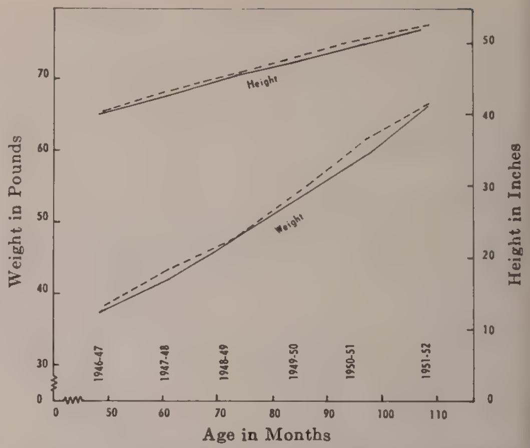

Fig. 3. Average height and weight at successive examinations of boys ages forty-three to fifty-four months in 1946–1947 examinations. (Solid line represents Newburgh children, broken line Kingston.)

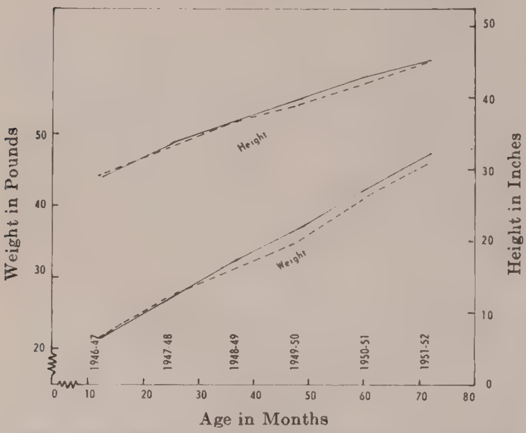

Fig. 2. Average height and weight at successive examinations of girls ages seven to eighteen months in 1946–1947 examinations. (Solid line represents Newburgh children, broken line Kingston.)

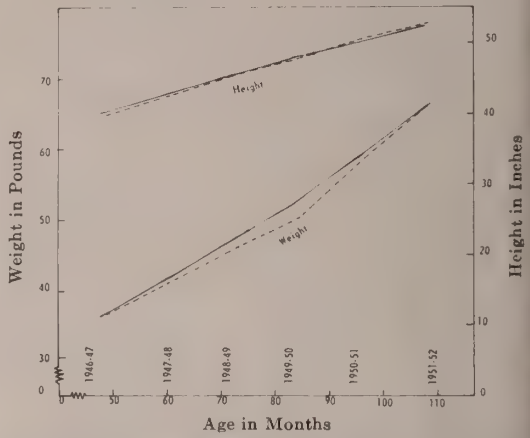

Fig. 4. Average height and weight at successive examinations of girls ages forty-three to fifty-four months in 1946–1947 examinations. (Solid line represents Newburgh children, broken line Kingston.)

tions for both the Newburgh and Kingston study groups in the final year of the study, 1954–1955.

Findings

The present report covers the pediatric examinations in the 1952–1953 series. The children examined ranged from four through seventeen years of age (to the nearest birthday). The maximum period of ingestion of fluoridated water for any given child is a little over seven years. For children under seven years of age in Newburgh, this means that they have been drinking fluoridated water all their lives.

Comparison of the medical histories and physical examinations of Newburgh children and Kingston children in the 1952–1953 series failed to show any pathologic deviations in any of the factors studied. The one difference which was noted and aroused some interest was the higher proportion of tonsillectomized children in Newburgh. After investigating further, it was found that a similar disproportion existed prior to fluoridation and consequently could not be attributed to fluoridation. Based on medical histories and physical examinations, it may be stated that no clinical evidence of adverse effects was found among the Newburgh children when compared with those from Kingston.

A previous report presented graphically the height and weight of boys and girls who were

TABLE I.—HEMOGLOBIN DETERMINATIONS OF 529 CHILDREN,* NEWBURGH, 1952–1953

Hemoglobin (Gm. Per 100 Cc.)	Number of Children	Age (Years)		
		4 to 8	9 to 12	13 to 17
11.5 to 12.4	4	3	..	1
12.5 to 13.4	22	13	6	3
13.5 to 14.4	180	96	63	21
14.5 to 15.4	218	82	91	45
15.5 to 16.4	94	27	37	30
16.5 to 17.4	10	..	2	8
No specimen	1	..	..	1
TOTAL	529	221	199	109

* Ages four to seventeen years to nearest birthday.

two years old in the 1946–1947 examinations.[4] Two additional age groups are represented in Figs. 1 to 4. These charts summarize the height and weight of boys and girls who were one year old and four years old at the time of the 1946–1947 examinations. The children are grouped by age to the nearest birthday in the 1946–1947 series. For that examination and for all subsequent examinations their average heights and weights are plotted against the average age. No significant difference in the slopes of the lines is evident. This observation is consistent with the previous report and indicates that there has been no generalized acceleration or retardation of growth among the Newburgh children.

For the 1952–1953 series x-rays were taken and reviewed for 519 children in Newburgh and 411 children in Kingston. Dr. Caffey reports that there are no significant differences in bone density, rate of maturation, or pathologic conditions between the two groups of children. This observation assumes increasing importance as the study progresses since a considerable proportion of the children have passed through the period of maximum rate of growth.

Of the 25 Newburgh children who had special examinations of the eyes and ears in 1953 (approximately eight years after fluoridation of the water supply), 21 were able to read the 20/20 line or better on a Snellen test chart. Three children showed myopic refractive errors, but with use of corrective lenses they had 20/20 vision. One child with alternating esotropia had 20/20 vision with the use of corrective lenses. The visual fields of all children were apparently normal for form, and the blind spots were of normal size and form in all 23 children for whom they could be mapped. Two children, one with myopia and one with alternating esotropia, were unable to concentrate enough to have the blind spots delineated. The fundi were normal in all children in the group. The special otologic examinations of the same group of 25 Newburgh children in 1953 showed no children with significant hearing loss. In four instances there were deviations of less than 2 per cent below the baseline in one or both ears. The results of these special examinations are well within the range of expected variation and certainly indicate no pathologic trends coincidental with fluoridation of the Newburgh water supply.

In the 1952–1953 series of pediatric examinations no laboratory tests were performed in Kingston so that it is not possible to present comparative data on laboratory examinations in the two cities. The results of the hemoglobin determinations for the Newburgh children four through seventeen years of age are given in Table I. These values correspond closely to the hemoglobin values according to age as summarized in Holt and McIntosh.[5] The results of the urinalyses have shown no significant trends. There was one instance of pathologic findings consistent with chronic glomerulonephritis. On two successive annual examinations the urine specimens of this child showed 3 plus albumin and contained occasional red blood cell casts. This case is being followed by the family physician. There was also one case of diabetes mellitus which was diagnosed in 1949; however, the urine was negative for sugar at the time of the last examination. Isolated cases of both conditions are to be expected in any group of children followed over periods of time.

Maternal and Infant Mortality

A considerable number of inquiries regarding maternal and infant mortality have been received by the New York State Department of Health since the publication of a report on the fluorine content of placental tissue.[6] Using routinely tabulated mortality data, it is possible to compare the resident infant and maternal mortality experience in Newburgh and Kingston for several years before and after the introduction of sodium fluoride to the Newburgh water supply.

Infant deaths are defined as all deaths under one year of age and are presented for Newburgh, Kingston, and upstate New York for the fourteen-year period 1939 through 1952 (Table II). Each city has experienced a downward trend during this interval. The period 1939 to 1944 can be considered the prefluoride period, while 1945 to 1952 can be labeled the fluoride period. During

TABLE II.—Resident Infant Mortality: Newburgh, Kingston, and Upstate New York, 1939 to 1952

	Deaths Under One Year			Live Births			Deaths per 1,000 Live Births		
Year	Newburgh*	Kingston	Upstate New York†	Newburgh*	Kingston	Upstate New York†	Newburgh*	Kingston	Upstate New York†
1939	18	18	3,608	435	413	87,703	41.4	43.6	41.1
1940	17	16	3,615	440	392	91,812	38.6	40.8	39.4
1941	25	24	3,469	464	409	98,888	53.9	58.7	35.1
1942	11	17	4,066	492	450	115,425	22.4	37.8	35.2
1943	14	24	4,129	589	459	117,739	23.8	52.3	35.1
1944	24	10	3,738	575	408	108,925	41.7	24.5	34.3
1945	19	13	3,640	583	388	108,009	32.6	33.5	33.7
1946	29	12	4,137	691	557	135,811	42.0	21.5	30.5
1947	22	19	4,631	833	659	155,826	26.4	28.8	29.7
1948	18	18	4,164	628	560	147,601	28.7	32.1	28.2
1949	19	21	3,994	724	591	148,829	26.2	35.5	26.8
1950	12	19	3,695	647	579	150,379	18.5	32.8	24.6
1951	16	18	3,725	693	589	160,931	23.1	30.6	23.1
1952	17	19	4,009	717	615	170,080	23.7	30.9	23.6

* Water supply fluoridated beginning May 2, 1945.
† New York State exclusive of New York City.

TABLE III.—Resident Stillbirths: Newburgh, Kingston, and Upstate New York, 1939 to 1952

	Stillbirths			Total Births			Stillbirths per 1,000 Total Births		
Year	Newburgh*	Kingston	Upstate New York†	Newburgh*	Kingston	Upstate New York†	Newburgh*	Kingston	Upstate New York†
1939	10	14	2,386	445	427	90,089	22.5	32.8	26.5
1940	6	11	2,384	446	403	94,196	13.5	27.3	25.3
1941	16	18	2,455	480	427	101,343	33.3	42.2	24.2
1942	20	9	2,766	512	459	118,191	39.1	19.6	23.4
1943	16	9	2,741	605	468	120,480	26.4	19.2	22.8
1944	15	11	2,496	590	419	111,421	25.4	26.3	22.4
1945	15	5	2,486	598	393	110,495	25.1	12.7	22.5
1946	16	11	2,966	707	568	138,777	22.6	19.4	21.4
1947	20	12	2,981	853	671	158,807	23.4	17.9	18.8
1948	16	15	2,805	644	575	150,406	24.8	26.1	18.6
1949	6	11	2,686	730	602	151,515	8.2	18.3	17.7
1950	10	10	2,649	657	589	153,028	15.2	17.0	17.3
1951	6	13	2,746	699	602	163,677	8.6	21.6	16.8
1952	16	10	2,755	733	625	172,835	21.8	16.0	15.9

* Water supply fluoridated beginning May 2, 1945.
† New York State exclusive of New York City.

the prefluoride period there were 109 infant deaths and 2,995 live births in Newburgh (a rate of 36.4 per 1,000 live births) and 109 infant deaths and 2,531 live births in Kingston (43.1 per 1,000 live births). During the fluoride period there were 152 infant deaths and 5,516 live births in Newburgh (27.6 per 1,000 live births), while in Kingston there were 139 infant deaths and 4,538 live births (30.6 per 1,000 live births). For five of the six prefluoride years the infant death rate for Kingston was higher than the Newburgh infant death rate, the only exception being 1944. Similarly, during the eight fluoride years the Kingston infant mortality rate was higher than that for Newburgh except for one year, 1946. The only change in the Newburgh infant mortality over the fourteen-year period is the downward trend which has not been disturbed since fluoridation. A similar trend is noted in the control city, Kingston. Neonatal mortality in the two cities presents essentially the same picture as total infant mortality.

In upstate New York (New York State exclusive of New York City), stillbirths are required to be registered if the period of gestation is twenty weeks or more. Table III presents the data regarding stillbirths for Newburgh, Kingston, and upstate New York for the same fourteen-year period considered above. During the prefluoride period there were 83 stillbirths and 3,078 live and stillbirths in Newburgh (a rate of 27.0 per 1,000 total births) and 72 stillbirths and 2,603 total births in Kingston (27.7 per 1,000 total births). During the fluoride period there were 105 stillbirths and 5,621 total births in Newburgh (18.7 per 1,000 total births) and 87 stillbirths and 4,625 total births in Kingston (18.8 per 1,000 total births).

Although showing considerable variation from year to year due to the small number of stillbirths in any one year, the same downward trend is evident in both cities.

The number of maternal deaths (deaths due to complications of pregnancy, childbirth, and the puerperium) has not exceeded two in either Newburgh or Kingston in any calendar year from 1939 through 1952. During the prefluoride period Newburgh had four maternal deaths and 3,078 births (live and stillbirths) while Kingston had five maternal deaths and 2,603 births. The rates are 1.3 and 1.9 per 1,000 births, respectively. During the fluoride period Newburgh had six maternal deaths and 5,621 births, while Kingston had six maternal deaths and 4,625 births. During this period the rates were 1.1 and 1.3 per 1,000 births, respectively. There appears to be no difference in maternal mortality between the two cities before or since fluoridation.

Summary and Conclusions

The findings of a control study of 529 children in Newburgh and 434 children in Kingston to evaluate the possible effects of drinking fluoride-supplemented water are presented. This report covers the findings seven years after fluoridation. The study will be continued for a total of ten years.

Comparison of the medical examinations and x-rays of Newburgh children and Kingston children in the 1952–1953 series fails to show any pathologic deviations in any of the factors studied.

Clinical laboratory tests on the children examined in Newburgh in 1952–1953 show blood hemoglobin values and urine analyses within the limits considered normal for children.

The downward trend in infant mortality was not disturbed with the introduction of fluoridation. For the eight-year period, 1945 to 1952, the rate was 27.6 per 1,000 live births in Newburgh and 30.6 per 1,000 live births in Kingston.

The stillbirth rates, although showing considerable variation from year to year due to small numbers, are indicative of a downward trend. For 1945-1952 the stillbirth rate was 18.7 per 1,000 total births in Newburgh and 18.8 per 1,000 total births in Kingston.

The maternal mortality experience in the fluoride period remained essentially unchanged. For the years 1945-1952 the rate was 1.1 per 1,000 total births in Newburgh and 1.3 per 1,000 total births in Kingston.

Within the limits of the technics used in the study, the present report confirms earlier findings that, apart from the known dental benefits, water fluoridation has no demonstrable systemic or developmental effect on children.

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It Pays to Advertise?

A lion met a tiger
As they drank beside a pool.
Said the tiger, "Tell me why
You're roaring like a fool."
"That's not foolish," said the lion,
With a twinkle in his eyes.
"They call me king of all the beasts
Because I advertise."
A rabbit heard them talking
And ran home like a streak,
He thought he'd try the lion's plan,
But his roar was a squeak.
A fox came to investigate—
Had luncheon in the woods,
So when you advertise, my friends,
Be sure you've got the goods.

—*Tonics and Sedatives, J.A.M.A., May 29, 1954*

Congenital Disorders of the Larynx

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The size and structure of the infant larynx is such that almost any type of congenital abnormality is apt to give rise to respiratory as well as phonatory disturbances. Congenital disorders of the larynx are not unusual. As a rule, they can be easily recognized by examination including direct laryngoscopy. The management of some of the congenital lesions may offer a formidable problem. The laryngologist may have the task of doing an operative procedure at birth, including direct laryngoscopy and tracheotomy. Moreover, he may also have the same patient under his care through infancy and childhood and even as an adult. Different types of congenital disorders of the larynx will be presented and discussed. Particular importance will be given to the diagnosis and management of the various anomalies. The congenital disorders of the larynx which are discussed include congenital laryngeal stridor, cysts, webs, paralysis, stenosis, angiomas, and tumors.

The symptoms of congenital laryngeal disease include obstructive dyspnea, hoarseness, stridor, weak or absent laryngeal sounds, and dysphagia.

The glottic chink at birth averages 7 mm. by 4 mm.[1] Most types of congenital disorders cause a narrowing of either the glottic chink or the superior aperture or the subglottic region resulting in obstructive dyspnea. Phonatory disturbances, including hoarseness and inability of the child to cry normally, are suggestive of an anomaly at the level of the vocal cords. Stridor is the most common symptom and is brought about by the passage of air through a narrowed lumen. Vibratory sounds arising in the aryepiglottic folds are not unusual. Dysphagia may be due to actual obstruction of the food passage by a lesion which affects the pharynx and esophagus as well as the larynx. More often the feeding problem that takes place in the congenital laryngeal disease is due to the obstructive dyspnea. The infant has to keep using his respiratory apparatus in order to get enough oxygen and will refuse all nourishment because the act of swallowing will cause further respiratory embarrassment.

Congenital Laryngeal Stridor

The most common disorder is congenital laryngeal stridor.[2] The infant may have noisy breathing at birth, or the stridor may develop within the first month. The cause of the condition is an abnormality of the superior aperture of the larynx. The disorder can be visualized by direct laryngoscopy. There is usually an exaggerated folding backwards of the epiglottis with approximation of the aryepiglottic folds. On inspiration these folds come in contact with each other and vibrate, giving rise to the stridor. Occasionally, the epiglottis may show an abnormality. Montreuil[3] reported a patient with a bifid epiglottis. There may be unusual softening of the structures at the superior aperture which allows the aryepiglottic folds or arytenoids to be sucked into the larynx on inspiration. Schwartz[4] felt that a better term for the condition was inspiratory laryngeal collapse. He found that micrognathia was frequently associated with the condition and played a casual role. The last two patients observed with congenital laryngeal stridor showed a mild degree of micrognathia.

The diagnosis of congenital laryngeal stridor is not difficult. The stridor is usually inspiratory but can also occur on expiration. The stridor may be increased when the infant is disturbed. It may disappear if the infant is placed on his stomach. As a rule, there is very little respiratory embarrassment. Severe dyspnea or cyanosis are rare and should call for a more thorough investigation as to the cause of the stridor. The noisy breathing does not disturb the infant but has its effect mostly on those who take care of the child. Feeding is usually normal. The infant's color remains good, and growth takes place normally. In rare instances obstructive

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dyspnea may be such as to require a tracheotomy. Clerf[5] cites a case where an infant with congenital laryngeal stridor had obstructive dyspnea and a typical chicken-breast deformity. A tracheotomy was peformed, and the child then had a normal chest development. The patient was decannulated at sixteen months of age.

An important cause of stridor at birth is stricture of the trachea due to anomalies of the aorta and other vessels. A double aortic arch or a persistent right aortic arch may be present causing a vascular ring. The constriction of the trachea gives rise to stridor and obstructive dyspnea.

If the esophagus is also within the vascular ring, then the swallowing of food will further increase the obstruction in the trachea. Attacks of dyspnea and cyanosis are not uncommon during feeding. In addition to direct laryngoscopy, an x-ray of the chest and esophagus and tracheobronchogram are necessary to establish the diagnosis.

The prognosis of congenital laryngeal stridor is excellent. The stridor usually disappears after the first year of life without treatment. A congenital vascular ring requires surgical relief. Successful surgery on this type of anomaly was first reported by Gross.[6]

Congenital Webs

Congenital webs are next in frequency in the opinion of this observer. In a period of twenty years beginning in 1933, a total of 11 patients with congenital web of the larynx was observed at Babies Hospital. The embryonic fusion theory as discussed by Clerf[7] is the most satisfactory explanation for the development of a web. Signs and symptoms depend upon the location and the extent of the web. Usually, the web is between the anterior portion of the vocal cords. Occasionally, it may involve the ventricular bands or the subglottic region. In ten of the 11 patients studied the web was between the vocal cords. In the other patient the ventricular band and vocal cords were both involved anteriorly, leaving a small lumen posteriorly. In every instance there were disturbances in the voice. Either the infant did not cry at birth, or the cry was weak. If the web was large, the voice was very weak, and obstructive dyspnea was present.

Four of the 11 patients required tracheotomy because of dyspnea. There were two deaths, one of which occurred on the first day of life. The other death was due to an aspiration pneumonia.

The treatment of laryngeal web consisted of incision followed by dilatation of the larynx twice a week. The period of treatment required depended on the thickness of the web. If the latter was thin, the response to therapy was prompt and usually was completed in a few months. Webs which involved the subglottic region along with the vocal cords were the most difficult to treat. One patient has been under treatment for three years. She wears a tracheotomy tube. Her web has been incised on six different occasions, and she has been dilated regularly. The web has always reformed with an increasing amount of scar tissue. Her larynx, however, has continued to grow. She will require a thyrotomy in the future. There are three children who have a persistent web between the anterior third of their vocal cords in spite of treatment. Voice disturbances are present, but there is no dyspnea. They have high-pitched and weak voices. Incision of the web and dilatation have not produced the desired result. A thyrotomy will be performed with the insertion of a tantalum keel as advocated by McNaught.[8]

Cysts of the Larynx

Congenital cysts of the larynx are not uncommon. There were five infants with this disorder. The symptoms included hoarseness and obstructive dyspnea. In no instances were the cysts discovered at birth. The youngest patient observed was three months of age, and the oldest was fourteen years old. In one instance the cyst occurred in the left ventricle suggesting a laryngocele. There was one small cyst of the right vocal cord. In two patients the cyst was located in the aryepiglottic fold. The lateral border of the epiglottis was the site in the remaining patient. A tracheotomy for relief of obstruction was required in two of the five patients. The oldest child, age fourteen, had a cyst in the right aryepiglottic fold which extended laterally to the pharyngeal wall. A lateral pharyngotomy was necessary to remove the cyst.

The prognosis for congenital cysts of the larynx is excellent. Excision or incision and drainage may be accomplished by direct or suspension laryngoscopy. Occasionally, an external operation is necessary. All of the five patients are well and free of laryngeal symptoms.

Paralysis of Vocal Cords

Congenital paralysis of the vocal cords has been reported by Holinger and Johnston.[9] They state that bilateral paralysis may occur from central hemorrhage. Unilateral paralysis is most often due to a cardiovascular anomaly. The writer has seen but one case of unilateral paralysis of congenital origin. The cause was undetermined.

Congenital Stenosis

Congenital stenosis of the larynx has been reported by Tucker[1] and Glaser, Landau, and Heatley.[10]

O'Kane[11] reported in detail a case of congenital stenosis of the larynx. A follow-up on this patient is presented.

The patient, P. C., a female, was born on August 20, 1935. She had marked obstructive dyspnea at birth which required an immediate tracheotomy. A direct laryngoscopy revealed an obstruction in the subglottic space which would not permit the passage of a 3-mm. bronchoscope.

This patient has been followed by the writer since birth. She is now eighteen years old. Her history is of interest. After the tracheotomy was performed, she had repeated laryngeal dilatations without any noticeable effect. Her voice was very weak and consisted mostly of sounds arising in the throat.

At three years of age treatment with rubber core mold, as advocated by Jackson and Jackson,[12] was begun. The size of the molds were increased from 14 to 20 French. With a 20 French mold in the larynx, the patient developed a severe perichondritis, and the treatment had to be discontinued. The intralaryngeal reaction to the core mold was severe, and her stenosis increased markedly so that there was practically no lumen demonstrable. At this point laryngeal dilatations were again carried out for a period of two years without success. She had no voice and was unable to get air through her larynx.

In December, 1940, a thyrotomy was performed, and all scar tissue in the larynx was removed. A rubber tube was anchored in the larynx and allowed to remain for three months. The tube was removed, and it was then possible to get a 30 French laryngeal bougie through the new laryngeal lumen. The patient developed a voice for the first time. She continued to wear her tracheotomy tube and was finally discharged from the hospital on October 8, 1941, at six years of age. She received dilatations of her larynx at infrequent intervals after her discharge from the hospital. It was noted that her larynx did not grow in keeping with the rest of her body. She continued to have a weak but satisfactory voice. Her tracheotomy tube was corked off, but there was considerable breathing around the tube.

On July 8, 1952, she was again admitted to the hospital, and a thyrotomy was again performed. The thyroid cartilage had not grown and was about the size seen in a five-year-old child. The vocal cords and ventricular bands were replaced by scar tissue. The subglottic lumen was markedly reduced. All the scar tissue was removed, and a skin graft over a rubber tube was inserted in the larynx. The graft was successful, but the laryngeal lumen was not appreciably enlarged due to the small size of the thyroid and cricoid cartilages. The patient developed a fair voice and was again able to keep her tube corked off. There was considerable breathing around the tube. At present, she has an inadequate larynx from the standpoint of size and function. The patient has made an excellent adjustment to her disability. She has now completed her second year of college.

Other Congenital Diseases

Angiomas of the larynx are rare.[13–15] The writer has observed one patient with a lymphangioma in the subglottic region which was proved by biopsy. A tracheotomy was necessary because of obstructive dyspnea. The lymphangioma was treated by x-ray with an excellent result. There were two infants who had extensive hemangiomas of the face, mouth, pharynx, and larynx. A tracheotomy was required for relief of laryngeal obstruction. One patient has been decannulated. Both have received all known forms of therapy for the hemangiomas. Their response has been slow.

Sturge-Weber's disease has been reported in fatal cases of hemangioma of the larynx. In this disease there is a combination of a vascular nevus with intracerebral calcification, convulsions, ocular abnormalities, and mental retardation.[16]

There were no congenital tumors of the larynx observed. A group of infants with cystic hygroma of the neck, mouth, and pharynx was reviewed. The intrinsic lumen of the larynx was not involved in any instance. The lingual surface of the epiglottis was involved in two cases. Three patients with cystic hygroma required a tracheotomy because of obstruction due to compression of the hygroma on the larynx.

Other anomalies reported include laryngeal stenosis associated with tracheoesophageal fistula. Sayre and Hall[17] reported two cases of subglottic cartilaginous stenosis in patients with a fistula.

Allen, Towsley, and Wilson[18] have presented case histories of children whose symptoms of respiratory embarrassment were apparently due to overactive autonomic reflexes rather than organic obstruction. The reflexes may cause stridor, respiratory and cardiac depression, and even convulsions. They believe there are trigger areas in the upper respiratory and gastrointestinal tracts.

Comment

The diagnosis of congenital disorders of the larynx is not difficult. Some of the anomalies may produce marked obstructive dyspnea. Death of the infant may occur unless the condition is recognized and proper therapy is immediately instituted. Tracheotomy is usually necessary to relieve the obstruction.

The laryngologist has a real responsibility to the patient with a congenital disease of the larynx. Laryngeal obstructions, if present, must be relieved. If the infant has had a tracheotomy, then planned therapy designed to eliminate the need for the tracheotomy tube should be carried out. The growth and development of the larynx through infancy and childhood must be assured. It is of paramount importance that the patient ultimately should have a good voice as well as a good airway.

Laryngeal dilatations are still of great use in the treatment of laryngeal stenosis. Rubber core molds caused a severe reaction in one patient and has reduced my enthusiasm for their use. External surgery on the larynx with disturbance of the intrinsic structures should be performed only as a matter of necessity. The slightest degree of cicatrical change or organized swelling in an infant will bring about a failure. If the growth centers of the cartilages are disturbed, the larynx may not develop normally, and this will interfere with the restoration of laryngeal function.

Summary

Various types of congenital laryngeal disorders have been presented.

The most common anomaly is congenital laryngeal stridor which has an excellent prognosis.

Treatment of laryngeal disorders varies with the condition which is present. Most types of therapy can be carried out by direct laryngoscopy.

The majority of patients with congenital diseases of the larynx develop a good functioning larynx.

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Discussion

Stanley L. Edmunds, M.D., *Glens Falls.*—This is indeed a very important subject and one which, in my opinion, has been somewhat overlooked by many of us. As has been stated so many times recently, the importance of the tracheotomy must be constantly borne in mind, and in congenital lesions of the larynx, as in all diseases affecting the larynx, it is frequently a lifesaving measure. At the same time, however, it has indications which should by all means not be ignored until the patient is in a state of extremis, and I am still frequently surprised by the reluctance on the part of many attending physicians to recommend a tracheotomy.

It goes without saying that every obstetric unit should have a complete emergency tracheotomy tray set up at all times and, in addition, should be prepared to do an immediate direct laryngoscopy and bronchoscopy as well as laryngeal and broncheal aspirations on the newborn.

It is interesting to note that congenital lesions are not always immediately apparent at birth since many of them have a delayed effect. For example, the swelling of a congenital web which only partially covers the larynx, leaving sufficient opening to support respiration at first, at a later date may become swollen at the margins from trauma or infection, thus creating a serious stenosis. Congenital webs of the larynx may also interfere with the elimination of bronchial secretions, thus causing the patient literally to drown in his own secretions at a later date.

The vestibule of the larynx, consisting principally of the epiglottis, has to rely on the elasticity of the cartilage to hold it open. This lack of stiffness, probably one of the commonest anomalies of importance, allows the epiglottis to act as a check valve during the inspiratory effort.

In other cases a looseness of the periepiglottic tissues, rather than a lack of elasticity, is encountered as exemplified by the case where the stridor can be relieved by simply changing the patient's position.

Exaggerated infantile features of the larynx as an anomalous folding of the epiglottis into a narrow tubelike structure, pulling together the aryepiglottic folds and arytenoids by the inward rolled edges of the tubelike epiglottis, will also severely encroach upon the airway.

The incidence of "congenital stridor," as a symptom of this general group of cases, is fairly common in any hospital and is the one symptom that demands a thorough study both by x-ray and laryngoscopy as stated by Dr. Baker. Only in this way can congenital lesions be differentiated from lesions of traumatic origin which occasionally follow a difficult delivery with a resultant recurrent laryngeal nerve paralysis, cricoarytenoid dislocation, or simple glottic edema, keeping in mind at the same time the extrinsic anomalies which can cause symptoms of congenital stridor and obstructive dyspnea.

One cannot help but be impressed by the increased interest, as is shown in the recent literature, by the many articles on the function of the larynx and its role in both health and disease. These investigations on the physiology and pathology of the larynx and its general systemic effects are extremely important and timely topics and must result in a more rational understanding and intelligent therapeutic approach.

I can only say in closing that my experience with cases of this type parallels very closely that of Dr. Baker, and I wish to congratulate him on a very interesting paper.

Actuarian Report on Ulcers, Gallbladder Disorders

Ulcers, caught in time, do not necessarily represent any unusual hazard to longevity. This is indicated in a study of fifteen years mortality experience among 725,000 life insurance policyholders with some known health impairment, just published by the Society of Actuaries.

Of about 45,000 cases with a record of ulcers, 96 per cent of them men, those who had been medically treated, without an operation and without having had a hemorrhage, were found to have had a relatively favorable mortality experience during the fifteen years covered.

On the other hand, those with a history of surgically treated ulcers had a materially higher than average mortality experience, despite advances in surgical technic. Also, those unoperated, but with a history of hemorrhage, appeared to be somewhat poorer than average risks.

It was found that three fourths of the total ulcer cases were duodenal, the balance being gastric.

Policyholders with a history of gallbladder disorders experienced a slightly higher than average mortality from heart disease, which is in line with clinical observations pointing to some association between gallbladder disorders and coronary artery diseases.—*Institute of Life Insurance*

Experience with the Carlens Double-Lumen Catheter for Anesthesia in Thoracic Surgery

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IN OCTOBER, 1949, Carlens described a new flexible double-lumen catheter for bronchospirometry in the *Journal of Thoracic Surgery*.[1] The possibility of using this catheter for endotracheal anesthesia was early recognized and reported. In July, 1950, in the *Journal of Thoracic Surgery*[2] and again in January, 1953, in *Anesthesiology*, Bjork and Carlens[3] reported on the use of this catheter for endobronchial anesthesia.

Different methods have been described to prevent the transbronchial spread of disease during lung surgery. Endotracheal anesthesia provides good but not optimal conditions for the surgeon and does not completely eliminate the danger for the patient of sudden drowning by excessive mucopurulent secretions or blood. This is particularly true in patients who have a bronchopleural fistula, lung abscess or cyst, or severe bronchiectasis with large amounts of secretions.

Several authors such as Gale and Waters in 1932,[4] Magill in 1936,[5] Rovenstine in 1936,[6] Crafoord in 1940,[7] Ruth in 1948,[8] Bonica in 1951,[9] and others[10–12] have variously described the use of cuffed endobronchial catheters to separate the diseased from the healthy lung. Endobronchial intubation may be performed under direct vision with the use of the Ruth-Bailey or Woodbridge tubes and "blindly" as described by Bonica with his modifications of the tubes and technic. All of these authors indicate that these methods offer certain advantages and are ideal in certain conditions but also emphasize the technical difficulties encountered with the endobronchial technic.

The introduction of these single-lumen endobronchial catheters is rather difficult, particularly into the left main bronchus because of its greater angulation from the trachea, and when introduced into the right side, it often occludes the right upper lobe bronchus since it comes off from the main stem bronchus at a higher level than on the left. Other problems associated with this procedure are difficulty in aspirating accumulated secretions while maintaining light planes of anesthesia and unavoidable dislodging of the cuffed tube during position changes in a prolonged operation. These technical difficulties have undoubtedly discouraged many anesthesiologists from using the endobronchial technic. Controlled respiration with the carbon dioxide absorption technic is necessary for this type of endobronchial anesthesia. The introduction of the Carlens endobronchial catheter has eliminated many of these problems.

In 1952 we obtained our original Carlens catheters and started using them on the Thoracic Service at the Metropolitan Hospital. Later, when our experience in this technic was developed, the catheters were introduced at the Flower and Fifth Avenue Hospitals.

It was early recognized that the use of these catheters was a valuable addition to our armamentarium and had considerable possibilities. Our residents quickly and easily learned the technics, which require no great skill or complex equipment to place in the correct position, and soon became proficient.

Description of Catheter

The Carlens double-lumen rubber catheter is made in two sizes. The lumen of each side of the catheter has a diameter of 7 mm. for men and 6 mm. for women with an outside diameter of 13 and 11 mm., respectively. They are about the size of a 39-36 French catheter. The catheters are provided with a little hook which is automatically engaged by the carina when properly introduced and which can be tied down with a silk slipknot until passed between the cords. Due to its curvatures it can only be introduced one way but requires a fairly deep level of anesthesia or a relaxant drug. As the catheter is gently pushed downward in the introducing position and between the cords, it is turned auto-

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matically 90 degrees to the left, the tip exerting pressure on the left tracheal wall, and enters the left main bronchus. With a slight pressure downward the hook, which has been released, can be felt engaging the carina. The correct position is tested by inflating first the smaller cuff, occluding the right side, and then inflating the left lung. By reversing this procedure with the large intratracheal cuff inflated, a tight system is assured.

Anesthetic Management

Our usual anesthesia management consists of the premedication and topical anesthesia employed for bronchoscopy. About one and a half hours before surgery a hypodermic injection of morphine sulfate (10 mg.) or Demerol (50 to 100 mg.) with atropine, 0.6 mg., is administered. Anesthesia of the throat and larynx is secured by the spraying of 5 per cent Cyclaine, 2 per cent Pontocaine, or 10 per cent cocaine solution and is a valuable supplement.

Usually under a Pentothal 0.4 per cent drip (about 300 to 500 mg.) and a relaxant such as curare or succinyl chlorine with controlled respirations and hyperventilation, the cords are relaxed and open, and the tube can be easily and quickly introduced. Subsequent maintenance can be ether-oxygen or cyclopropane or a combination of these inhalants. We have also carried them under Pentothal, nitrous-oxide-oxygen, and a relaxant, such as succinyl choline, drip together with small repeated intravenous doses of Demerol, which has the added advantage of being a nonexplosive mixture when the cautery or electro-coagulation is being used.

Procedure During Operation

We of course prefer the supine position for surgery and have usually persuaded the surgeons to maintain that position or a slight modification in many of our cases. I have personally preferred a MacIntosh blade for the laryngoscope, but others have used other types with good results.

No attempt is made to present a detailed analysis of all the data on these cases. The technic has been used for a variety of intrathoracic operations on patients of all ages from sixteen to seventy and all types of risks as seen in a city hospital (Table I).

TABLE I.—SUMMARY OF 100 CASES

Surgical Procedure and Disease	Number of Cases
Lobectomy or segmental resections	35
Tuberculosis	20
Bronchiectasis	10
Fistula	3
Abscess	2
Pneumonectomy	30
Tuberculosis	15
Cancer	10
Bronchiectasis	5
Exploratory thoracotomy	25
Carcinoma of lung	12
Tuberculosis	8
Carcinoma of esophagus	2
Mediastinal tumor	3
Miscellaneous	10
Decortication of lung	2
Excision, mediastinal tumor	2
Drainage of lung abscess	3
Closure of bronchopleural fistula	3

Active control of secretions during removal of an infected lung is often necessary. The oldest and most commonly used method is repeated tracheobronchial aspirations by catheter, but often this is not entirely satisfactory, particularly when it is almost continually necessary and in light planes of anesthesia. Further, there is often need for some mechanical device to prevent flooding of unaffected lobes with pus or blood from sudden hemorrhage during the operation. These disadvantages are avoided by use of the Carlens flexible double-lumen catheter so that anesthesia and/or suction can be applied to each lung separately. During resection the tube to the involved lung can be left open with a suction catheter in it providing continuous suction of any secretions and facilitating closure of the bronchus on that side.

Intermittent inflation of part or all of the involved lung can be carried out until the bronchus is closed, thereby facilitating surgery as well as improving cyanosis if it develops. Usually with only one channel open, assisted or controlled respirations of the sound lung are necessary. With pneumonectomies when the bronchus is ready for division and the bronchial tree dry, the catheter is pulled out 1 cm. for right-sided pneumonectomies and 5 cm. for left-sided pneumonectomies to avoid injuring the catheter when the clamp is applied. The anesthesia is continued to the remaining lung through both lumina of the catheter with only the proximal cuff inflated.

Summary and Conclusions

1. Experience with the Carlens flexible rubber double-lumen catheter has been described and its advantages emphasized.

2. Double-lumen catheter has been adopted to prevent the transbronchial spread during pulmonary resections. One lung anesthesia with atelectasis of the operative side facilitates surgery and allows necessary suction of secretions, which may be continuous if required.

3. The bronchus can be divided whenever this is suitable and left open until convenient to close, during which a catheter is left in place for continuous suction.

4. In cases with sudden, profuse bleeding or requiring repeated aspirations, one lung is always ventilated, and the necessary light plane of anesthesia can be maintained.

5. It affords a closed system in the presence of a bronchopleural fistula without the loss of anesthesia.

6. Assisted or controlled respirations may be introduced at any time but are not usually required throughout the procedure.

7. The double-lumen catheter because of its size has the advantage of being too obstructive in some cases.

8. Difficulty in removing blood and secretions has at times been a problem due to the use of small and inadequate size catheters through the narrow lumina. Our best results have been with plastic suction catheters.

9. Our initial enthusiasm has somewhat cooled, and we feel that in most pneumonectomies, particularly of the right side, a larger single-lumen catheter gives better results.

10. We feel that this is another valuable technic, which has many advantages in certain selected cases and, indeed, has been lifesaving in some. It should be used only when indicated, particularly in lobectomies, and should be available to all doing thoracic surgery as a valuable aid in our increasing armamentarium in producing better anesthesia for all.

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Discussion

Sylvan N. Surks, M.D., *New Hyde Park, Long Island.*—Dr. Butman has presented an excellent summary of the various technical advantages of the double-lumen endobronchial catheter. He very properly pointed out that this catheter in some cases proves to be too obstructive. Therefore, it should be used only for certain specific indications, i.e., where a very real danger exists of sudden flooding of both main bronchi with blood or pus.

The obstructive possibility of this catheter is worthy of re-emphasis. Recently a study of the resistance of the double-lumen catheter was reported by MacKrell and coworkers.[a] Similar studies have been completed by Orkin.[b] It has been shown that in the physiologic range of flow rates, the number 39 French, Carlens-Stille catheter has a resistance curve lying somewhere between the curves for the 23 French and 26 French single-lumen catheters. It was also found that occlusion of one side of a double-lumen endobronchial catheter results in more resistance to ventilation in a normal adult than does a 26 French catheter. The latter is a very small size indeed for an adult.

The high flow rates of spontaneous respiration result in turbulent flow and relative respiratory obstruction when the double-lumen catheter is employed. This, together with any diminution in size of the airway due to secretions, markedly increases the resistance. At low flow rates, as in controlled respiration, resistance to air passage is decreased. Therefore, the employment of controlled respiration would seem to be a useful technic in minimizing the increased resistance attending the use of the double-lumen catheter.

It should be recalled that in the report on endobronchial anesthesia made by Bjork, Carlens, and Friberg spontaneous respiration was stopped by producing respiratory paralysis with curare. Shortly before the pleura was opened, controlled respiration was started and maintained with the spiropulsator until the chest was closed airtight. Perhaps this is one of the reasons for their enthusiasm and apparent good results. However, they also found that when one side of the double-lumen catheter was occluded, it was necessary to increase the inspiratory pressure of the machine to 25 cm. of water because of increased resistance due to the smaller lumen.

From a description of the catheter it would seem as though it should invariably enter the left main bronchus. It came as a surprise to learn from some of our Canadian colleagues that this was not always the case. I had one such experience recently in a case of right-sided bronchopleural fistula with empyema following a pneumonectomy. In this case the tube was introduced under topical anesthesia in the conscious state. Following this, occlusion of the right side of the double-lumen catheter resulted in complete respiratory arrest and, very shortly thereafter, sudden cardiac arrest. Apparently the distal end of the Carlens catheter had entered the fistula of the right bronchial stump. This was probably due to shift and distortion of the carina. Prior to occlusion of the right side of the tube, breathing could take place around the tube through the distal end of the right channel of the catheter. However, occlusion of the right side under these circumstances resulted in obstruction of the only possible remaining avenue for ventilation. Fortunately the patient was successfully resuscitated. As a result of this unhappy experience, however, it would seem a wise precaution in similar situations to ascertain the exact position of the catheter by fluoroscopy before continuing with the procedure and certainly before occluding one side of the catheter.

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Atheromatous Internal Carotid Arteries Pressing on Optic Nerves

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IMMEDIATELY behind the optic foramen the optic nerve lies above the internal carotid artery which at this point curves upward and backward. If the internal carotid is hardened through arteriosclerosis and enlarged, pressure on the optic nerve is exerted from below. This was discussed more than a hundred years ago.[1] The upper edge of the optic foramen forms a point of resistance from which there is no escape for the compressed nerve, and cases of optic atrophy have been interpreted as caused by this mechanism.[2] In a unique case McLean and Ray[3] saw at operation arteriosclerotic plaques of the carotids hammering against flattened optic nerves. That aneurysms of the internal carotid artery can compress the optic nerve and cause atrophy together with other well-known symptoms is not disputed, but opinions have been divided on whether in the absence of aneurysm formation arteriosclerotic enlargement of the internal carotid may injure the optic nerve. Saphir[4] noted in autopsy studies that considerable distortion of the nerve may be accompanied by relatively minor histologic changes without having produced visual disturbance during life, and Knapp[5] concluded that atheromatous carotid arteries alone cannot cause descending atrophy.

Histologic studies in cases of compression

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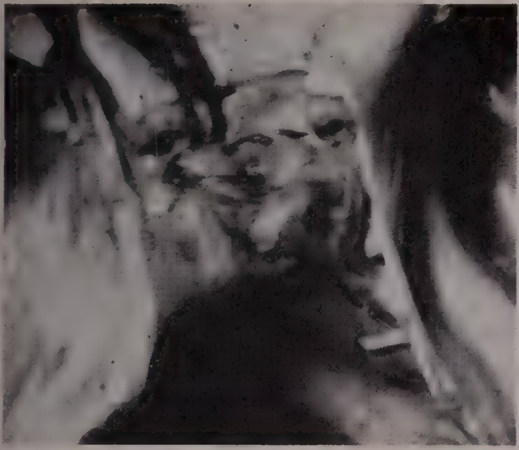

FIG. 1. Flattened optic nerves above enlarged internal carotid arteries. The roof of the left orbit has been removed.

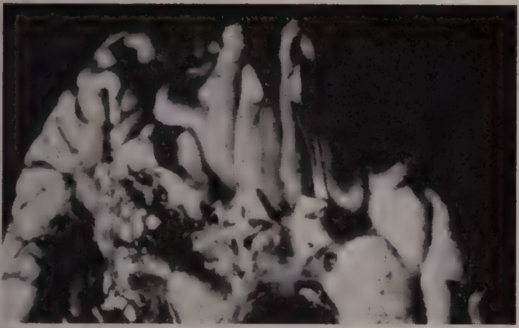

FIG. 2. Appearance of optic nerves at base of brain. Notice marked flattening of left optic nerve.

with loss of vision are needed to evaluate this question.

Case Report

Mr. M. B., a former stonecutter, was admitted to our hospital in 1950 at the age of seventy-one years. In 1930 he had been treated for tuberculosis. In 1931 he was admitted to a hospital in an alcoholic stupor. In the hospital he suffered a stroke which affected his right side. In 1934 he was again hospitalized following an alcoholic excess, and during convalescence he suffered two more cerebral vascular accidents that resulted in a hemiparesis on the left side. At that time an optic atrophy was noticed. Although there was no history of a syphilitic infection and the blood Wassermann test was negative, a diagnosis of syphilis was made. A "full course" of antisyphilitic treatment was given, but little change in his condition was noted. From 1938 on he was a patient in hospitals of the Veterans Administration.

His serologic reactions for syphilis were negative at all times, and a spinal fluid examination showed no abnormal findings. He was irritable and querulous and became progressively careless in appearance and childish in attitude. The heart was not enlarged; the heart sounds were hard and somewhat rough without murmurs. His blood pressure during early observations was 170/100 and over the years gradually decreased to 120/100. The electrocardiogram revealed myocardial damage. Over the base of the right lung there was a slight dullness on percussion. Chest x-rays showed productive lesions in the apex of the right lung which had disappeared by 1946. Residual bilateral opacities were interpreted as calcified pleuritis. His left extremities were spastic with hyperactive deep reflexes, ankle clonus, and sustained Babinski reflex. There was also some spasticity of the right leg. The patient was barely able to take a few steps without assistance. The left arm was slightly contracted.

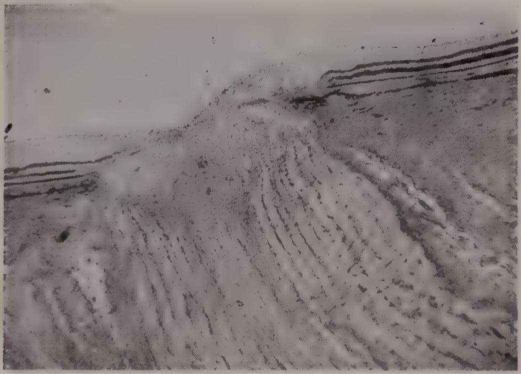

FIG. 3. Left optic nerve. No pathologic cupping present. Note coarseness of arachnoid trabecules, atrophy of the nerve, and thickening of septa. (Hematoxylin-eosin stain)

The pupils were small, about equal, and reacted to light. During earlier observation a picture of slight bilateral optic atrophy was seen ophthalmoscopically. In 1947 visual acuity was 20/30 on either side with glasses; the fundi were described as apparently normal. On September 7, 1952, the pupils were small and reacted to light and accommodation. A small central opacity was noted in the right lens. The visual acuity was 20/50 on either side with glasses. The optic disks showed temporal pallor; the blood vessels were described as commensurate with the age of the patient. Because of the mental state of the patient visual field examinations were not done.

From 1949 on the patient suffered from dermatitis of the legs and an ulcer of the right lateral ankle which did not respond to physiotherapy and dermatologic treatment. Calcification of the femoral arteries was seen radiographically. On October 12, 1952, the patient suffered a syncope, and following

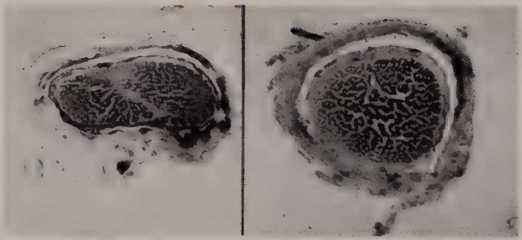

FIG. 4. Cross sections through right and left optic nerve at the same level of the intracerebral portion. Left nerve is flattened, and areas of demyelination are present. (Weil's myelin sheath stain)

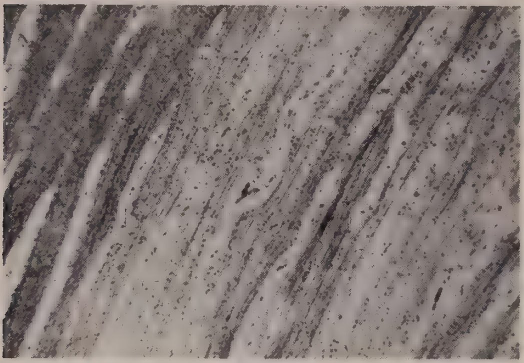

FIG. 5. Longitudinal section of left optic nerve. (Weil's myelin sheath stain)

episodes of coronary insufficiency and cardiac decompensation he expired on October 24, 1952.

Autopsy findings included arteriosclerotic heart disease; arterio- and arteriolosclerotic contracted kidneys; atheromatosis of the aorta with thrombosis of the lower abdominal portion, extending into both common iliac arteries; beginning gangrene of the legs; silicosis in the apex of the left lung; calcified bilateral pleuritis. No evidence of syphilis was found, and the elastic layer of the thoracic aorta was found to be intact on microscopic examination.

The skull was of not unusual configuration. On removal of the brain the internal carotid arteries were hard, and their cross sections showed marked thickening of the walls with very pronounced increase in the diameter of the vessels, especially on the left (Figs. 1 and 2). The optic nerves were slightly upward convex, and the left was severely flattened. The carotid arteries were uniformly thickened in their entire intracranial course, while other portions of the circle of Willis showed circumscribed atheromatous plaques. Almost the entire right parietal lobe was the site of an old encephalomalacia.

Microscopic examination of the optic nerves showed bilateral changes of identical nature, although more pronounced on the left. In the retrobulbar portion the arachnoid trabecules were plump (Fig. 3). Bundles of nerve fibers in the orbital as well as in the intracerebral portion showed demyelination (Figs. 4 and 5), and in Bodian stains demyelinated areas showed partial destruction of axis cylinders. Van Gieson and trichrome stains showed in places fibrous thickening of the septa, and in hematoxylin-eosin and Nissl preparations scattered minimal accumulations of lymphocytes and microglial cells were found. There were also a few corpora amylacea. The ophthalmic arteries had patent lumina and showed no arteriosclerosis, and the small nutrient vessels in all portions of the nerve were intact. The papillae of the optic nerves showed no cupping; of the retinal vessels a few arterioles showed minimal endarteritis without loss of lumen, while most of them were delicate. The retina showed no histopathologic changes (Fig. 6). The internal carotids were severely atheromatous.

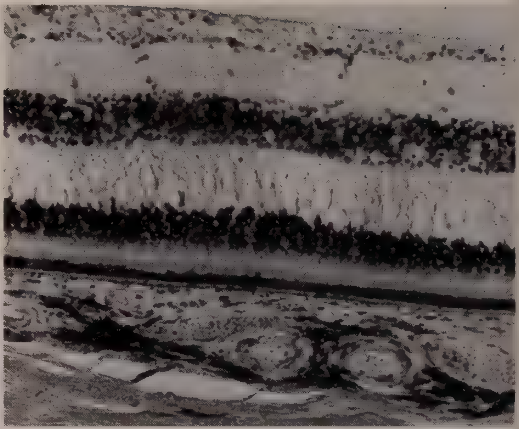

FIG. 6. Retina of left eye. Note adequate blood supply. (Hematoxylin-eosin stain)

In summary, a seventy-three-year-old white male had suffered cerebrovascular accidents at the ages of fifty-one and fifty-three years with a resulting hemiplegia. Subsequently he showed symptoms of arteriosclerotic psychosis. Following the strokes slight loss of visual acuity and mild optic atrophy were noted, which progressed slowly during twenty years. The patient succumbed to effects of widespread severe arteriosclerosis. Autopsy revealed no evidence of syphilis. Atrophy of the optic nerves was explained by pressure from arteriosclerotic enlarged internal carotid arteries without involvement of the nutrient vessels of the optic nerves or of the retinal vessels.

Comment

The case is presented because it shows that compression of the optic nerve with atrophy and loss of visual acuity can be caused by arteriosclerotic enlarged internal carotid arteries in the absence of aneurysm formation and without involvement of the nutrient arteries of the optic nerve or of the retina. The encephalomalacia is unrelated to the eye findings. It could not explain the peripheral optic atrophy and the progressive course. If it had led to visual disturbance, it would have been hemianoptic in nature, a fact that could not have been easily overlooked clinically.

A clear understanding of this form of pressure atrophy of the optic nerve seems to be of considerable practical importance in view of the increasing predominance of geriatric problems such as this. Severe and widespread arteriosclerosis is more commonly seen today than previously. Parin[6] found 75 cases of optic atrophy due to pressure from arteriosclerotic carotids in the literature. There may be some doubt about the pathogenesis in some of these cases because most of them are purely clinical observations. However, many other instances are likely to have been overlooked or misdiagnosed. Radiologic evidence of calcification of an internal carotid serves little to prove that it is the cause of an optic atrophy because such shadows are so commonly seen. The highest frequencies reported are by Goede[7] in one third of patients more than fifty years old and by Siegert[8] in almost half of patients over sixty years old. Nevertheless, the diagnosis can be made from the presence of widespread arteriosclerosis, the ophthalmoscopic findings, visual fields, and exclusion of other space-consuming processes as well as such causes as syphilis.

Schloffer in 1934[9] suggested as treatment for the condition surgical removal of the roof of the optic canal, an operation which Adson[10] performed with good result in a case of fusiform aneurysms of the internal carotids.

Ley[11] observed that although fusiform aneuryms are usually bilateral, the onset of clinical symtoms is usually first on the left side. In our case also the severity of the condition was much greater on the left side. The concept of soft glaucoma which has been connected with pressure atrophy of the optic nerve has unfortunately confused the issue. While true glaucoma does not occur without increase of intraocular pressure, at least at times, the excavations of the papilla in cases of descending optic atrophy are either shallow, or if they are deep, they may not be centrally located. Our case illustrates the fact that excavation of the papilla is not necessarily a part of the picture. Shallow excavations may be caused by atrophy and loss of myelin sheaths immediately behind the lamina cribrosa. Deep excavations seem to be the result of malacias in the optic nerve probably due to vascular disturbances. Their presence may indicate that one is not dealing with an uncomplicated case of pressure atrophy which might be amenable to surgical intervention.

Conclusion

Pressure atrophy of the optic nerve with loss of visual acuity may be due to arteriosclerotic enlarged internal carotid arteries without aneurysm formation or arteriosclerotic damage to nutrient vessels. Awareness of this form of descending optic atrophy is important because of the possibility of surgical intervention.

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For the young physician who by force of circumstances needs to make for himself a reputation as soon as possible, I would suggest two things. First, deliver some babies. If you don't interfere too much with nature, your fame will grow and spread. Then, don't miss an opportunity to stop the pain, soothe the nerves, and restore normal function in as many accidents as possible. The young mothers and the injured citizens will sing your praises and oftentimes pay your bill.—*Dr. James H. Spencer, from an address delivered at Williamsport, Pennsylvania, December 11, 1953*

Treatment of Hyperthyroidism with Radioiodine

Clinical Evaluation of 142 Cases

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(*From the Isotope Service and Thyroid Clinic of the Bronx Hospital*)

Since the introduction of radioiodine in the therapy of hyperthyroidism by Hertz and Roberts in 1942,[1] many thousand of patients have been treated. Reports for substantial series of patients have come from various thyroid clinics.[2-5]

In this paper we will report on our therapeutic experiences with 142 patients treated at the Bronx Hospital Isotope Service over the past three years. Our experience has indicated that a sharp distinction must be drawn in radioiodine therapy between diffuse Graves's disease as typically seen in the younger age group and toxic nodular goiters seen in the older age group. While such a distinction has sometimes been questioned on clinical and pathologic grounds, there is no doubt that a substantial therapeutic difference exists between these groups.

Selection of Cases

Our material with a few exceptions was limited to ambulant patients over thirty years of age. Of the 142 cases 94 had Graves's disease, and 48 had nodular goiters. Patients who had previous thyroidectomies but were still toxic were treated regardless of age. Twelve of the patients were under thirty years of age. Three had undergone thyroidectomy, and nine refused surgical therapy. Despite the misgivings that had been felt by some investigators regarding the use of radioiodine therapy in young people, we felt justified in so doing rather than insisting on thyroidectomy.

Pregnant patients were not irradiated because after twelve weeks the radioiodine passes the placental barrier and may affect the fetal thyroid to cause cretinism.

Age and Sex.—There were 119 females and 23 males in this series, a ratio of about 5:1. The age incidence was as follows:

19 years	2
20 to 30 years	10
30 to 40 years	30
40 to 50 years	36
50 to 60 years	33
60 to 70 years	23
70 to 80 years	8

Diagnosis

There is no single test for hyperthyroidism that is 100 per cent diagnostic. No substitute exists for clinical experience and diagnostic acumen. The two tests that are most reliable are as follows:

1. The percentage of radioiodine taken up by the thyroid gland in four and twenty-four hours, euthyroid range 15 to 45 per cent. (Although most normals fell within the 15 to 45 per cent range, a certain number of normals exceeded 45 per cent, and conversely, some undoubted hyperthyroids fell below 45 per cent.)

2. The protein-bound radioiodine in the blood plasma (method of Silver and Fieber[6]). Our hyperthyroid range is 4.2 or more counts per second in the gas flow counter.

The thyroidal plasma radioiodine clearance rate (method of Berson *et al.*[7]) usually paralleled the other two tests. Normal clearance is up to 50 ml. per minute. The urinary excretion of radioiodine in twenty-four hours was not so reliable as the previous procedures and was not done routinely.

A properly taken basal metabolic rate was a valuable diagnostic aid in a large majority of hyperthyroid patients. One must be cognizant of the fact that there are cases of hypermetabolism that are not due to hyperthyroidism. Elevated basal metabolic rates are found in heart failure, leukemias, anemias, some malignancies, pregnancy, anxiety states, hyperadrenalism, and in some hypertensives.

The basal metabolic rate was especially help-

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ful in the follow-up of patients who received a therapeutic dose of radioiodine. Some of those treated had a high radioiodine uptake although they were euthyroid clinically with a normal basal metabolic rate. This had also been observed by others.

The blood cholesterol studies were not a diagnostic aid in doubtful cases.

It is important to remember that patients who have had recent iodine therapy or ingested iodine while undergoing gallbladder x-rays or had an intravenous urography or bronchography give low radioiodine uptakes in twenty-four hours.

Dosage

The ideal dose is that quantity of radioiodine which will destroy or inactivate just enough hyperactive thyroid tissue to bring about a euthyroid state. Factors to be considered are the size and weight of the thyroid gland, the type of hyperthyroidism—whether Graves's disease or toxic nodular goiter, the amount of radioiodine taken up by the gland, the distribution of the radioiodine within the thyroid, and the rapidity with which the radioiodine is excreted by the gland.

In our cases of Graves's disease where the twenty-four-hour uptake was uniformly above 50 per cent, the dose was proportional to the estimated gland weight. We gave about 100 microcuries per Gm. of estimated thyroid tissue.* These patients received from 4 to 6 mc. as an initial dose. In the older age group with thyrotoxicosis associated either with a nodular goiter or an isolated adenoma, 150 microcuries per Gm. of estimated thyroid tissue was given, an initial dose of 7 to 9 mc.

In patients with thyrotoxicosis who have a persistence or recurrence of toxicity following thyroidectomy, it is difficult or impossible to estimate the amount of residual glandular tissue. In such patients the initial dose was between 2 and 3 mc. for patients with Graves's disease and 5 mc. for nodular goiters. Patients who were markedly toxic received Lugol's solution for two to three weeks beginning two days after the therapeutic dose of radioiodine.

After about three months it is possible to evaluate the clinical effect of the radioiodine and determine if a second dose is indicated.

One hundred and thirteen of the patients required a single dose to become euthyroid, an incidence of 79.6 per cent. Twenty-two needed two doses, and seven required three or more. To date the largest dose for a nodular goiter was 25 mc. and for Graves's disease 18 mc.

Association with Other Diseases

Twenty-one patients had clinical heart disease, and of these there were 15 with auricular fibrillation. Only two of the latter reverted to a normal rythm after they became euthyroid.

There were 12 patients with diabetes mellitus. They will be reported in more detail at a later date. The insulin requirements of ten patients remained unchanged when they became euthyroid. Two required less insulin.

One patient had pernicious anemia, one Addison's disease, and in another thyrotoxicosis was associated with periodic potassium paralysis.

Eight patients had one or more thyroidectomies prior to therapy with radioiodine.

Results

Analysis of the cases treated is significant. Ninety-two per cent or 132 patients became euthyroid in a period ranging from eight weeks to one year. Five patients are still toxic and will require further irradiation. Five are hypothyroid.

In cases of Graves's disease the thyroid gland shrank rapidly in size and usually became nonpalpable. Nodular goiters also became smaller and firmer.

Radiation sickness was not noted. With the exception of mild neck discomfort for a few days in a small number of patients, there were no other untoward effects.

Complications

Complications were minor. In three patients exophthalmos increased. For example, exophthalmometric readings on patient F. N. increased from 22 to 26 mm., in patient M. M. from 15.5 to 21 mm., and in patient L. R. from 13 to 18.5 mm.

Fifteen patients developed hypothyroidism. In ten of these, the thyroid function returned to normal within one year. Five patients require maintenance doses of thyroid extract after a year and will probably have permanent hypothyroidism. It is interesting to note that only one case of nodular goiter developed transient hypothyroidism.

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* Millicurie (mc.) referred to in dosage is the New York millicurie which is about 20 per cent higher than that of Oak Ridge.

Three patients who became euthyroid died of unrelated causes, two of heart disease and the third as a result of mesenteric thrombosis.

Case Reports

The following two cases will illustrate (1) the usual response of Graves's disease to radioiodine therapy and (2) the development of hypothyroidism following a single therapeutic dose.

Case 1.—N. Z., a thirty-seven-year-old white female physician, came for consultation on November 7, 1953. She became jittery and developed palpitation six weeks previously following an emotional shock. She felt warmer than usual, was weak, and lost 8 pounds in six weeks. Basal metabolic rates were plus 40 and plus 50 per cent. Physical examination was typical of Graves's disease; exophthalmos with exophthalmometric readings of 20 mm. in the right eye and 18 mm. in the left (Hertel exophthalmometer was used); moist, warm hands with a 2 plus tremor; uniformly enlarged thyroid gland weighing about 35 Gm.; normal sinus tachycardia with a rate of 110 per minute; blood pressure 140/70; weight 143 pounds. The radioiodine uptake study was 89 per cent in twenty-four hours; thyroid clearance 184.5 ml. per minute.

She was given 4 mc. of radioiodine on November 12 and two days later Lugol's solution, 10 drops twice a day for two weeks. Results were as follows:

Date		BMR	Pulse	Blood Pressure	Weight
December	1	+16%	90	125/85	147
	18	+ 8%	78	140/80	154
January	20	+ 5%	72	125/90	159

She regained her former strength, lost the palpitation, and was no longer jittery or nervous. She became euthyroid in nine weeks.

Case 2.—L. H., a forty-three-old white woman, was admitted to the Isotope Service on March 4, 1952, for typical Graves's disease. The thyroid gland was about 50 Gm. in weight and was slightly nodular.

The radioiodine uptake was 67 per cent in four hours and 65 per cent in twenty-four hours. She was given a therapeutic dose of 5 mc. on March 11.

She became euthryoid within two months. However on July 24 she complained of marked fatigability, puffiness around eyes, and slight hoarseness. A radioiodine uptake was 6.6 per cent in four hours and 4 per cent in twenty-four hours, a typical myxedema uptake. The basal metabolic rate was minus 24 per cent. She was given thyroid extract and improved rapidly. However, to date, she still requires a daily maintenance dose of 2 grains of thyroid extract.

These two cases demonstrate that to date there is no way of determining the exact amount of radioiodine necessary to inactivate a given amount of hyperactive thyroid tissue. This fact accounts for the incidence of 4 per cent permanent hypothyroidism found in this series.

Comment

At present there are three satisfactory methods of treating hyperthyroidism: (1) thyroidectomy preceded by treatment with a thiouracil compound and/or iodine, (2) thiouracil compounds, and (3) radioiodine. Let us compare these methods as to morbidity and loss of time, mortality, complications, and rate of cure.

Thyroidectomy carries a definite morbidity with a loss of time of two to three weeks. The mortality from surgical excision preceded by thiouracil and/or iodine therapy varies from 0.25 to 2 per cent, depending upon the surgeon and the age and condition of the patient at the time of thyroidectomy. Recurrent laryngeal paralysis occurs in 1 to 3 per cent, tracheotomy in 1 per cent, hypoparathyroidism in 1 per cent, hypothyroidism in 5 to 10 per cent, recurrence or persistence of toxicity in 5 to 10 per cent. Thyroid crises are rare today.[8,9]

Therapy with thiouracil compounds entails no loss of time. There are some minor gastrointestinal disturbances and dermatologic reactions. In 2 to 3 per cent of cases fever develops which makes cessation of therapy imperative. One fourth of 1 per cent of the patients develop agranulocytosis. However the permanent cure rate is only 50 to 65 per cent.[10,11] The remaining patients have to be on a maintenance thiouracil dose to stay well.

Treatment with radioiodine entails no loss of time. There is no morbidity and no mortality. Practically every case can be cured, provided the dose is adequate. Hypothyroidism was the only complication. This occurred in 10 per cent of the cases, but it was permanent in only 4 per cent. (We considered a patient permanently hypothyroid if a maintenance dose of thyroid extract was required for over a year.)

Two unknown quantities remain at this time, namely, the danger of malignancy developing in the future as a result of the radioiodine administered and the possibility of a malignant nodule being left in the thyroid gland.

Hyperthyroidism has been treated with radioiodine for over ten years,[12] and to date the incidence of malignancy is no greater for these cases.

TABLE I.—Results of Treatment in 142 Hyperthyroid Patients

	Number of Patients	Number of Treatments 1	2	3 or more	Euthyroid	Hypothyroid Temporary	Permanent	Toxic After 1 Year
Graves's disease (94 patients)								
Post-thyroidectomy	6	6	0	0	6	0	0	0
Previously untreated	88	67	16	5	80	9	5	3
Nodular goiters (48 patients)								
Post-thyroidectomy	2	0	2	0	2	0	0	0
Previously untreated	46	40	4	2	43	1	0	2

Malignancy developing as a result of radioiodine therapy is probably only a theoretic danger.

With reference to a malignant nodule in the thyroid, experience has shown that toxic goiters are rarely carcinomatous. The incidence of malignancy in toxic goiters was found to be 0.25 per cent in Graves's disease and 1 per cent in toxic nodular goiters.[13,14] The vast majority of toxic adenomas in this series occurred in patients over forty years of age, 47 out of 48 cases. They were in patients with arteriosclerotic heart disease, diabetes mellitus, or other serious pathology, and the mortality and morbidity from subtotal thyroidectomy for these individuals would be much greater than that resulting from an unrecognized malignant thyroid nodule.

Our indications for surgical therapy have been (1) patients with very large nodular goiters, (2) patients with goiters that give pressure symptoms, and (3) nodular goiters in young people.

Summary and Conclusions

One hundred forty-two patients with hyperthyroidism were treated with radioiodine.

Forty-eight patients had nodular goiters and 94 Graves's disease.

There was a 5:1 ratio between females and males.

Ninety-two per cent became euthyroid in a period ranging from eight weeks to one year. Five patients are still toxic after one year of therapy.

Nodular goiters required one and a half to two times more radioiodine than did Graves's disease.

Ten per cent developed hypothyroidism. Four per cent are probably permanently hypothyroid.

Twenty-one patients had heart disease, 15 auricular fibrillation. Only two of the latter reverted to a regular sinus rhythm after they became euthyroid.

Twelve patients had diabetes mellitus. Treatment with radioiodine did not as a rule lessen insulin requirements of patients whose diabetes was established prior to the onset of hyperthyroidism.

Therapy with radioiodine is a very effective method of treating hyperthyroidism with a minimal loss of time, morbidity, and complications. There is no mortality.

We are indebted to Miss Olga Gallego, assistant physicist, for her assistance in compiling the statistics.

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The most important events in the world are not deliberately brought about, they simply occur.

Modern Concepts of Thumbsucking

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From their clinical experience and research, dentists have long recognized that persistent thumbsucking and similar habits which result in persistent or repetitive pressure upon the oral structures can deform them. Although heredity[1] and other factors may be of greater importance than persistent sucking habits in the etiology of structural abnormalities of the mouth which require orthodontic correction, these habits appear to be of sufficient importance to be of concern to dentists and others who are interested in child development. This report is an attempt to present views regarding the genesis, significance, and treatment of thumbsucking and related habits from the dental, pediatric, and psychiatric literature and some of the author's impressions derived from clinical experience.

Review of the Literature

Jackson[2] in 1904 and Angle[3] in 1907 reported their observations that thumbsucking, continued after the eruption of the permanent teeth, resulted in open-bite and other displacements of the teeth. Hellman[4] in 1916 was the first American dentist to offer scientific evidence that thumbsucking was causative of malocclusion. His conclusions have subsequently been confirmed by many other observers. Lewis[5-7] was able to demonstrate a typical deformity due to thumbsucking with serial models of the dental structures of children in a study carried out at the Merrill-Palmer School in Detroit. He showed that the upper anterior teeth and the premaxilla were displaced forward, but the lower anterior teeth were displaced backward and to the side of the thumb sucked. Lewis concluded from his studies that if the thumbsucking habit was given up before five years of age, i.e., before the eruption of the permanent teeth, self-correction of the deformity occurred. Sillman[8,9] reported a remarkable long-term study of 1,000 young children followed from the newborn period until five years of age with serial cast impressions of their dental structures in which he noted that restitution of the oral structures to normal or near normal alignment occurred if the causative thumb or fingersucking habit stopped before the age of five years, confirming the conclusion of previous reports. Other dental investigators, using a variety of technics, have supported the conclusion that repetitive or persistent pressure upon the tissues of the mouth and face can distort their structure.[10,11]

It is generally agreed that the mechanism of sucking is well developed at birth. Fat pads in the cheeks, composed of relatively nonabsorbable palmitic and stearic fatty acid, prevent collapse of the cheeks in sucking, thereby facilitating sucking efficiency even in starvation states.[12] The neuromuscular mechanism of sucking is fairly well developed even in the fetus; its neural components are laid down by the third fetal month. The center of the sucking reflex is thought to be in the mammillary bodies situated in a well-protected portion of the brain; these nuclear structures are very vascular at birth and decrease in vascularity with the extinction of this reflex after the first year.[13] The fifth, seventh, and ninth cranial nerves supply the oral and labial mucosa insuring adequacy of the afferent component of the sucking reflex.[14]

It has been found that the fetus is able to make sucking movements as early as the fifth postconceptual month[15] and to suck its thumb and fist during the last trimester.[16,17] Most newborns are able to suck sufficiently well to insure successful nursing, although there are various degrees of sucking vigor in the newborn period ranging from ravenous activity to sleepy, uninterested behavior[18,19] and even rejection of the nipple.[20,21] The newborn's sucking efficiency improves rapidly during the sucking experience of the first week of life.[22] In the early months of life thumbsucking and fistsucking occur mainly when the hand accidentally contacts the lips and mouth during the random arm movements which occur as part of the generalized muscular activity when an infant is tense from hunger or other states of discomfort. However, by the age of three months, eye-hand-mouth coordination is sufficiently developed so that most infants can purposefully bring the fist or thumb to their mouths.[23] Since the young infant tends to keep his thumb within his closed fist during the first year, thumbsucking per se is less frequent than fistsucking during this time; later, the thumb becomes functionally available for this activity.

In the second half of the first year, mouthing objects becomes a very frequent activity with the infant.[23] His psychologic and psychomotor development results in a curiosity about external objects and an ability to grasp them; his instinctual oral drive prompts movement of the hand with the object towards his mouth. Mouthing of objects provides experience in testing them to learn about them, just as in the adult handling and looking at an object gives information about them to the observer. During the second year of life the sucking reflex gradually becomes physiologically extinguished, but thumbsucking may continue to occur from time to time in the healthy child, particularly when he is tired, ill, or tense from fright, anger, or frustration. Often this activity is associated with accessory movements such as twirling the hair, pulling the cheek or ear, and rubbing the nose.[24]

Observations have demonstrated that the sucking reflex has two primary functions: (1) for the ingestion of food and, therefore, the relief of hunger and (2) for the satisfaction of oral eroticism necessary for healthy personality development in infants. David Levy,[24] a psychiatrist who has devoted much of his attention to the problems of children, reported observations of 112 unselected children of one year or more of age, of which 28 were thumbsuckers. He noted that most of the nonthumbsuckers had had unscheduled feedings or frequent scheduled feedings, especially at night, or had been provided with pacifiers during the first year. Many of the thumbsuckers, on the contrary, had been forcefully withdrawn from the breast after about a fifteen-minute feeding, even though the milk was still flowing, because of adherence to prevalent concepts regarding infant feeding. Most of the thumbsuckers had shortened feeding periods which were scheduled and were long intervals apart. Insufficient food was a factor in only a few cases. Many of the infants started thumbsucking before five months of age. Levy's interest in this field caused him to investigate the sucking behavior of puppies[25] and the pecking behavior of chickens[26] who were deprived of early oral experiences; the results of these animal studies paralleled Levy's conclusions from his clinical studies of thumbsucking children.

Subsequently pediatricians and psychiatrists have made further observations upon the sucking behavior of infants and children. Klackenberg[27] in 1949 found that 54 per cent of thumbsucking children began this activity before three months of age and 90 per cent before nine months. In an original experiment he found that children who were provided with frequent extraprandial sucking of a rubber nipple during the first three months rarely developed the thumbsucking habit but that 50 per cent of children in the control group sucked their thumbs at some time during their infancy. Margaret Ribble,[28] a psychoanalyst who for many years has been interested in factors of the personality development of infants, observed a marked sensitivity of the hard palate which could be stimulated by a nipple to make the sucking behavior more intense; she noted that young infants sucking vigorously at the breast developed deeper, more regular respirations and improved color and muscle tone; on the contrary, she states that young infants who were deprived of sucking experience may become stuporous, shocky, and required hypodermoclysis. She postulated that sucking in the young infant was an important factor in personality development and was a "defense against regressive action in which all tactile reflex sensibility may become abandoned and the organism deteriorate to a vegetable-like state."

In her psychoanalytic studies of children Anna Freud,[29] like her father before her,[30] noted the importance of early feeding experiences in the development of object love for the mother figure which is one of the bases for later interpersonal relationships. She pointed out the relationship between jealousy, greediness and ambivalence, and fluctuations between hyperphagia and anorexia. She concluded that thumbsucking is an oral pleasure resorted to when the child is lonely or needs comforting and that sucking may become a substitute for feeding. Kaplan,[31] summarizing the literature of the psychologic implications of thumbsucking, states that prolonged thumbsucking is a substitute gratification when interpersonal relationships fail; thus, it is a symptom of difficulty in the development of interpersonal relationships in infancy. He reiterates the common observation that thumbsucking normally increases in the first year, decreases in the second year, and, in general, should be abandoned by the end of the third year, after which it may be considered psychopathologic, especially if continued regularly.

Sucking behavior, then, in infants is a physiologic activity with survival value which usually extinguishes itself during the second and third years of life. Exercise of this activity in the first year of life does not necessarily increase the probability of establishing it as a thumbsucking habit but may enhance its extinction in the process of normal psychologic development. The work of Levy[24] and Klackenberg[27] already referred to supports this thesis. In a study of infantile (three-month) colic treated with unrestricted sucking on a pacifier (blank rubber nipple), Levine[32] reported that of 25 infants so treated in the first three months, only two sucked their thumbs in a follow-up study at eighteen months or more; these two infants sucked their thumbs only when going to sleep. Margaret Mead[33] reports that thumbsucking is nonexistent in primitive cultures because, she believes, sucking behavior is never denied infants and young children by these peoples and since feeding of infants is done according to the infant's needs. In my own pediatric and pediatric-psychiatric experience, I have noted that those infants who were allowed frequent sucking experiences at the breast, bottle, or with a pacifier during the first year of life tended to give up sucking habits during the second or third year if their care was adequate with regard to their other infantile emotional needs.

The psychopathology of persistent thumbsucking and related habits appears to be a more complex phenomenon than can be explained solely in terms of deficient sucking activity in the first or second year of life. A study of several hundred infants who were cup fed from early life because of prematurity, harelip, cleft palate, and other reasons which made feeding by nipple impractical revealed "no more thumbsucking than nipple fed babies."[34] Although this aspect of the report was not well documented, the author pointed out that cup feeding might be psychologically advantageous since this type of feeding requires that the young infant be held in his mother's lap for each feeding period, thus eliminating the impersonalized practice of bottle propping; he also points out that the psychologic trauma of weaning is eliminated with this method.

The following are two cases which I believe illustrate possible relationships between persisting sucking habits and emotional disturbances.

Case Reports

LIP SUCKING SUBSTITUTED FOR INHIBITED THUMBSUCKING

W. S., a ten-year-old boy, was referred for a psychiatric evaluation because of unexplained vomiting of two and one-half months duration for which no organic cause could be found. In the diagnostic study it was found that the patient had a receding lower chin and had the habit of sucking his lower lip, especially in his sleep.

His father had been orphaned at an early age and was raised in a mission school; at sixteen years of age he rebelled against the strictly regulated regime of this school and left it. He was perfectionistic in his expectations of his children and suppressive of their hostile and aggressive behavior.

The patient's mother was an attractive, repressed woman who was inclined to indulge her children and to reprimand them with such guilt-provoking statements as "You don't love me," "You hurt me." She was emotionally upset throughout her pregnancy with the patient but had a normal delivery. She breast-fed him for four months, suddenly weaning him because she was losing weight. Toilet training was accomplished by fourteen months. During the first year the child frequently sucked his thumb; this activity was successfully inhibited by pulling his thumb from his mouth and slapping his hand. By the end of the second year it was recalled that he no longer sucked his thumb but had begun to suck his lower lip, awake or asleep.

This habit became more frequent after he was hospitalized at three and a half years of age with laryngeal pertussis during which he had severe paroxysms of coughing and cyanosis. Since then he had been restless, tense, and had had an overdetermined motivation to conform to his parents' wishes and had developed a chronic rash on his face and extremities which proved to be due to self-inflicted scratches.

The lip sucking occurred only at night when the child was seen at ten years of age; it continued throughout his sleeping period and was so intense that it was difficult to pull the lower lip from within his mouth. He had a moderate overbite apparently due to a receding chin.

The present illness of vomiting for two and a half months proved to be psychogenic and was related to his fantasies of oral impregnation precipitated by observing the birth of kittens with his mother.

Impression.—This neurotic, ten-year-old boy's infantile thumbsucking tendencies were inhibited by his perfectionistic, rather rigid parents early in life. He conformed to their wishes by discontinuing the thumbsucking but substituted lip sucking which he continued to do in his sleep, apparently resulting in underdevelopment of the mandible. The lip sucking was only one of many symptoms of emotional inadequacy.

THUMBSUCKING INTENSIFIED BY ATTEMPTS TO INHIBIT THE HABIT

S. P., a six and one-half-year-old girl, was referred for psychiatric workup because of anorexia, stubbornness, intense fears, and persistent thumbsucking which had apparently contributed to forward displacement of the upper teeth and premaxilla and backward displacement of the lower incisors. She had always tended to suck her thumb, but the habit became more persistent and intense when her mother began working when the patient was two years of age; it had been a most intense habit in the last two years since she was hospitalized for one week to have her tonsils and adenoids removed. It was noted at the time of this study that the pressure of her thumb on her palate had become so intense that it was difficult to remove the thumb from her mouth even when she was asleep.

She was an unwanted child born to a forty-five-year-old neurotic woman, who believed the amenorrhea of this pregnancy to have been symptoms of her menopause and the enlarged uterus an abdominal tumor. When the diagnosis of pregnancy was made at the seventh month, she was very angry and complained that she was too old and too nervous to mother an infant and regretted that she would be forced to give up her position as a grocery store cashier which she had taken several years before "for her nerves."

The child was born at term and weighed $5^1/_2$ pounds. The delivery was unremarkable, lasting about eight hours. While in the hospital, the mother was forced to breast-feed the child. On returning home she immediately weaned the baby to a bottle which, initially, the baby was reluctant to accept. The feedings were rigidly scheduled for the mother's convenience, and the infant was allowed to "cry it out" between feedings. Pacifiers were never used, and she was weaned from the bottle before she was a year old. She sucked her thumb or fingers occasionally during the first two years.

Toilet training was forcefully started early in the first year. At the age of eight months she wet her bed for the last time; this seemed to frighten her, and she repeatedly cried "no, no." Since then she had been afraid of cribs and refused to sleep in them, choosing to sleep with other members of the family.

Four childless maternal aunts lived nearby and frequently visited the child's home to indulge her with play and gifts and compete for her affection. Another maternal aunt lived with the family during most of the child's infancy, assuming much of her care, particularly in the evenings and on week ends. When the child was a year and a half, this aunt left the home following an argument with the child's mother because the latter had cursed the child and locked her in a room for being messy in her feeding habits.

When the child was two years of age, the mother started working in the morning, leaving her daughter in a neighbor's care. Subsequently, the child became anorexic, finicky in her feeding habits, demanded that the mother hold her at mealtime, and began to suck her thumb much more. The mother's reaction to the anorexia was to force the child to eat by pleading with her, threatening her, and forcing food into her mouth. It was noted that when the patient visited the home of some of her aunts, she ate fairly well.

When the child was three years of age, the mother started working all day at her job, and the child's symptoms became worse. In the following two years she had many attacks of nasopharyngitis, otitis media, suffered from chronic cervical adenitis, stomatitis, and fetid breath.

When she was four and one-half years of age, she was admitted to the hospital for the first of two tonsillectomies. For the first time since she was eight months of age, she was placed in a crib. She screamed almost continuously for the week that she was in the hospital. The nurses' attitude was that she was a spoiled child who needed control so she was kept in a room by herself. When she returned home, she was very tense, was hoarse from crying, and began to exhibit phobias such as fear of the dark and being alone; she began to have nightmares, and the thumbsucking became very much increased, contributing to the subsequent deformity of her oral structures.

Her weight which had been $5^1/_2$ pounds at birth, 20 pounds at ten months of age, and 30 pounds at two years of age, was $27^1/_2$ pounds at six and one-half years, the weight of the average girl of two and one-half years. At this time her height was 40 inches tall, the average height of a four and one-half-year-old girl.

Impression.—Psychiatrically, she was an emotionally immature, overstimulated girl with strong dependent needs. The thumbsucking, one of many manifestations of her insecurity and frustrated instinctual needs, appeared to be a substitute gratification for the emotional deprivation she experienced in her relationship with her mother.

Comment

The cases presented demonstrate pathologic sucking behavior as one of many symptoms of emotional disturbance. In both children thumbsucking in the first year of life was forcefully inhibited and was intensified when dependency was frustrated by separation of the child from his mother: (1) when the girl's mother went to work and (2) when the boy was hospitalized for a severe, anxiety-provoking illness. These separations intensified the sucking activity and precipitated other symptoms of emotional disturbance.

Attempts to inhibit the girl's thumbsucking failed to modify the pattern except to intensify it; the more conforming boy modified this habit by substituting his lower lip for his thumb. Deformity of the oral and paraoral structures resulted in both cases. In terms of the libido theory the sucking behavior may be interpreted as being a regressed autoerotic device which helped compensate for the emotional deprivation felt by the children in their relationships with their parents. Both children and their mothers had neurotic personalities and were in need of psychiatric treatment.

Treatment of thumbsucking and its related habits has been a difficult problem for dentists, pediatricians, and psychiatrists, as well as parents. The title of Mack's paper, "The Dilemma in the Management of Thumbsucking,"[35] illustrates the feelings of dentists and others who are interested in this problem. Mack points out some of the discrepancies between modern psychiatric and dental concepts regarding the treatment of this activity. He states that some psychiatrists seem to "have refused to see or believe anything but the psychic picture" and have not accepted the fact that this activity can do irreparable physical damage. He presents his own suggestions for treating thumbsucking and stresses the necessity of preventing permanent deforming defects. However, he also emphasizes the importance of psychologic factors in the genesis and treatment of thumbsucking and suggests that intraoral appliances not be used until the child is "free of tension."

The attitudes of American dentists toward sucking habits vary. Sweet[36] believes that the habit should be inhibited in the early months of life to prevent its development and recommends for treatment the use of arm restraints, application of bitter-tasting preparations on the hands, and dental appliances. Massler and Wood[37] feel that thumbsucking should not be treated dentally unless the child requests it since they believe that dental devices do not help if he does not want them; they suggest that the dental surgeon win the child's confidence and explain each procedure clearly, never punishing or threatening the child patient. Other dental clinicians have concurred with this attitude.[38,39]

Bakwin,[40] a pediatrician, states that he believes thumbsucking does cause deformity of the teeth as well as calluses on the thumb but that forceful restraints tend to promote tongue sucking. I have noted that tongue sucking is common among cerebral palsied children who are unable to gratify their early sucking needs because of muscular weaknesses or incoordination of the mouth and arms. Spock[41] also supports the thesis that early gratification of sucking needs is desirable in infants and that it does not tend to promote thumbsucking. Pearson,[42] a child psychiatrist, reports several cases of thumbsuckers which he has studied and whose habits were forcefully broken, resulting in substitute neurotic symptoms: one became a behavior problem, another began to stutter, and a third substituted tongue sucking with accessory clutching of the throat.

Studies of infants and young children indicate that sucking is an innate physiologic reflex with survival value; primarily it is a device important for the ingestion of food, but it is also the main source of erotic pleasure in the young infant and seems to promote relaxation and the alleviation of tension and anxiety. With growth in an environment in which the infant's psychologic needs are met, the personality develops through successive stages during which old sources of pleasure are used less as new and more mature ones develop. If, however, the instinctual needs are frustrated to a degree beyond the infant's limit of tolerance or the infant endures other types of psychologic trauma, he may become fixed upon a current type of erotic pleasure for solace[43] or regress to a type of erotic pleasure of an earlier stage of development. Thus, thumbsucking may be a fixed habit from early infancy in a child whose early environment was not conducive to a normal personality development which would enhance the extinction of this activity, or it may be a symptom of regression in a child who had given it up but, in the face of psychologic trauma beyond his tolerance, has resorted to this age-inadequate pleasure. In either case persistent thumbsucking after infancy may be a symptom of a disturbance in emotional development; the removal of such a symptom does not treat its cause.

The dentist's dilemma is that he is called upon to correct the physical deformity resulting from excessive and prolonged thumbsucking and related habits in children who persist in this infantile activity because of retarded or distorted emotional development; like any responsible group the dental profession is interested in the prevention of these deforming habits, the causes of which are outside the scope of their practice. The resolution of this problem is basically part of the mental health problem in which all of us have a responsibility: parents, dentists, pediatricians, psychiatrists, educators, and those of every discipline interested in the welfare of children.

Although our knowledge regarding the emotional development of infants is far from complete, there is evidence that the prevention of pathologic thumbsucking depends on (1) the provision of adequate sucking experience and satisfaction of other physiologic and emotional needs during infancy and (2) a healthy infant-parent relationship. The need to suck cannot be considered abnormal during the first two years; transitory periods of sucking during the third year need not be symptomatic of psychopathology, but persistent, intense sucking activity after the third year may be indicative of a problem in the child's emotional development. The prevention of the thumbsucking habit is basically a problem of pediatric practice; its treatment is a psychiatric problem, and the correction of distorted development of the oral structures due to this activity is an orthodontic problem. The psychiatric problem cannot be resolved by orthodontic technics, nor is the orthodontic problem amenable to psychotherapy. Forceful inhibition of thumbsucking can only change the symptom and may cause more regression and even greater difficulty in the personality development.

Summary

1. Sucking behavior is a normal reflex activity in infancy which increases during the first year of life and physiologically extinguishes itself during the second and third years of life. Persistent, intense thumbsucking and related habits may be indicative of difficulty in emotional development if continued after the third year.

2. The prevention of sucking habits is a pediatric problem of infancy and is dependent upon (1) the satisfaction of the physiologic and emotional needs of the infant, especially the sucking needs, and (2) a healthy, continuous interpersonal relationship with a loved person.

3. Correction of pathologic thumbsucking is primarily a psychotherapeutic problem. Forceful inhibition of thumbsucking may alter the symptom and may result in more regressed symptomatology but cannot eradicate its cause.

4. Correction of the deformity of the oral structures which may result from prolonged and intense sucking activity is an orthodontic problem which should not be initiated until the sucking activity is terminated and the child shows readiness to accept this prolonged dental program.

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Operation for Relief of Vesical Neck Obstruction in the Female

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URINARY retention in women due to vesical neck obstruction is more common than generally realized. Recent articles by Powell and Powell,[1] Emmett, Hutchins, and McDonald,[2] and by Hutchins,[3] indicate increased interest in this problem. The mechanism of the obstruction is still a matter of controversy. In obstruction associated with urethral stricture, pelvic tumors, or procidentia the cause is obvious. In other cases cystoscopy may show a bar or fold at the vesical neck or inflammatory changes in that area as a possible cause of the obstruction. In still other cases there is nothing to suggest the nature of the obstruction, and cystoscopic findings are entirely negative. On the other hand, changes which are regarded as potential obstructive factors may be present in women with normal micturition. Emmett and his coworkers[2] have pointed out that diagnosis and decision as to treatment cannot be made on the basis of cystoscopic findings but rather from the patient's symptoms and the amount of residual urine present. Histopathologic study of the tissues of the vesical neck and urethra has been of little help in clarifying the cause of the obstruction. Tissue obtained by transurethral resection usually shows varying degrees of inflammation, epithelial hyperplasia, or fibrosis or hyperplastic urethral glands but at times shows only normal muscle and connective tissue. Hutchins[3] has suggested that vesical neck obstruction may be caused by loss of normal relationship of bladder base to urethra and that descent of the bladder base and proximal urethra, while the distal urethra remains in its normal position, may produce an angulation halfway down the urethra. To support his view he reports one case unrelieved following two transurethral resections and one case unimproved following repeated urethral dilatations. Both were relieved by repair of a moderate cystourethrocele.

The accepted treatment of vesical neck obstruction of uncertain etiology is transurethral resection of the vesical neck and posterior urethra. Results are usually good, but some patients are not relieved in spite of multiple resections. In others with initial good results, urinary retention recurs after weeks or months. Emmett, Hutchins, and McDonald report an over-all 18 per cent failure in 76 cases. Hutchins concludes that the indications for resection should be either one or a combination of the following: (1) visible obstructive tissue at the vesical neck, (2) definite obstructive symptoms, (3) consistent, significant residual urine, and (4) residual urine which is infected. If the symptoms are not entirely relieved by two transurethral resections, evidence of some other etiologic factor should be sought.

The present paper is concerned with those cases of vesical neck obstruction that were unrelieved by transurethral resections and with those in which no relief can be expected from a resection. As Muellner and Fleischner[4] have shown, the chief factor in the closure mechanism of the female urethra is a high position of the posterior urethra and vesical neck. This results in a slight angulation at the urethrovesical junction which produces a valve effect at the vesical neck. Elimination of this valve effect by lowering of the bladder base and posterior urethra is necessary before the bladder can empty. Therefore, any process which interferes with the elimination of this valve effect will tend to produce urinary retention. Consequently, the following obstructive mechanisms should be considered:

1. Obstructing tissue: Tissues protruding into urethral lumen may produce an additional valve effect which persists in spite of adequate descent of the bladder base and posterior urethra. The obstructing pathology may be a congenital fold, a tumor, glandular hyperplasia such as the "female prostate," granulation tissue, or edema caused by chronic inflammation. The treat-

ment of choice will be transurethral resection of the protruding tissue.

2. Rigidity of the vesical neck tissues: This prevents adequate descent of the vesical neck which is essential to straighten the urethrovesical angulation. The most frequent cause of vesical neck rigidity is chronic inflammation. Cystoscopically these cases may or may not show a barlike projection at the vesical neck. Transurethral resection cannot be expected to give good results if vesical neck rigidity is the chief obstructive factor. Even if the urinary retention is relieved, recurrence is likely because of renewed scarring in the operative area.

3. Excessive angulation at the urethrovesical junction or in the midurethra (Hutchins[3]): Extreme cases are found in procidentia. However, minor relaxation of the supports of the bladder base can cause urinary retention if the posterior urethral wall remains fixed in high position. Straining results in adequate descent of the bladder base but fails to straighten the acute urethrovesical angulation, or the descent of the bladder base may actually increase the urethrovesical angulation. In this type of urinary retention transurethral resection will have the greatest number of failures. Logical treatment would be to elevate the bladder base by repair of a cystocele if present or to depress the tissues supporting the vesical neck and posterior urethra if no or only a minimal cystocele is demonstrable.

4. Spasm of the pelvic floor muscles: Some types of neurogenic bladder belong in this category. Obviously, elimination of the cause of the spasm should be the logical treatment, and only limited benefit can be expected from transurethral resection. However, elimination of the cause is not always possible or practicable. The next best procedure would be one which decreases the urethral resistance by relaxing the tissues which support the vesical neck and posterior urethra.

The chief support of the vesical neck and urethra is the pubovesical fascia. Therefore, relaxing this structure seemed the most promising approach to this problem, and the following operation was devised.

Technic

The patient is placed in lithotomy position and prepared in the usual manner for vaginal procedures. The bladder is filled with 300 to 500 cc. of sterile water. The amount of urethral resistance can then be roughly judged by manual compression of the bladder in an attempt to force the water through the urethra. A Young's prostatic tractor is passed into the bladder, the blades spread, and gentle traction applied. The exact location of the vesical neck can be palpated at the angle between the shaft and the posterior blade of the tractor. A midline vertical incision is made in the mucosa of the anterior vaginal wall from a point about 1.5 cm. below the external urethral meatus to a point about 1 cm. below the vesical neck (Fig. 1). The incision is then carried through the pubovesical fascia in the same line.

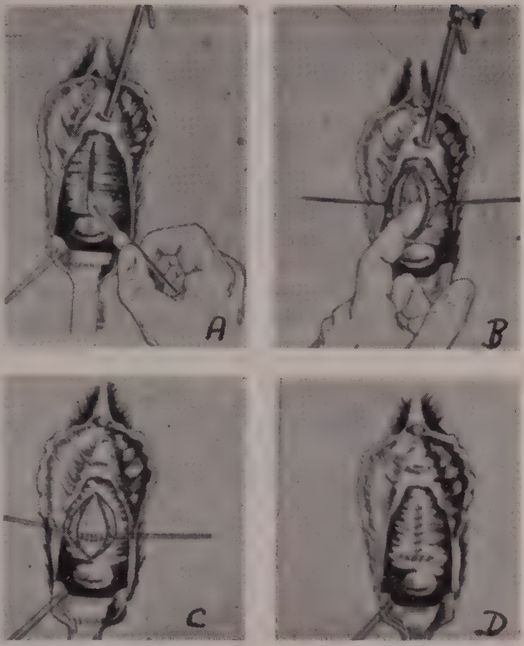

FIG. 1. Operation for relief of vesical neck obstruction: (*A*) line of incision, (*B*) vesical neck and posterior urethra freed from pubovesical fascia, (*C*) transverse suture of pubovesical fascia (may be omitted), and (*D*) closure of vaginal mucosa.

By combined blunt and sharp dissection the posterior and lateral walls of the posterior urethra and vesical neck are freed from the supporting fascia. Young's tractor is removed and manual expression of the bladder repeated, noting the amount of infravesical resistance. Should the resistance still be marked, further liberation of the urethra and vesical neck is indicated. The pubovesical fascia can either be excised, left retracted, or closed transversely. The vaginal mucosa is then closed using interrupted number 3-zero chromic catgut sutures. A Foley catheter is anchored and the vagina packed. The pack is removed on the first postoperative day, the catheter on the third to fifth postoperative day.

Case Reports

Case 1.—A. L., female, aged thirty, had been followed since childhood by the neurologic service because of congenital, spastic diplegia involving both lower extremities. She was admitted to the neurosurgical service and a neurinoma of the left posterior tibial nerve was removed on March 4, 1953. Following surgery it was noted that the patient voided frequently and in small amounts. Residual urine was obtained and varied between 400 and 900 cc. With this considerable residual urine the patient was not particularly uncomfortable. Urinalysis revealed a mild pyuria and Staphylococcus aureus was cultured. Blood count was within normal limits, nonprotein nitrogen 34 mg. per cent. An excretory urogram showed essentially normal upper urinary tracts.

Cystoscopy showed moderate trabeculation of the bladder with a few, shallow diverticula. There was no evidence of organic obstruction at the vesical neck nor in the urethra. Pelvic examination revealed a markedly spastic pelvic floor but was otherwise essentially negative. The anal reflex was present, and the patient could perceive hot and cold stimuli to the bladder. Cystometry revealed a hypotonic bladder with first desire to void at about 600 cc., bladder capacity 900 cc., and a maximum voluntary pressure of 44 cm. of water. Following bilateral pudendal nerve block patient voided approximately 350 cc. at a time, and her residual urine varied between 125 and 300 cc. Three days after the pudendal block the patient was again unable to void, and there was overflow of small amounts of urine. Residual urine at this time was 750 cc.

On April 8, 1953, the above-described surgical procedure was performed. A strip about 3 cm. long and $^3/_4$ cm. wide was excised from the pubovesical fascia. Catheter was removed on the fifth postoperative day. Immediately the patient voided spontaneously in amounts averaging 400 cc. Residual urines, determined daily for ten days, varied between 70 and 280 cc. The patient is still under observation. On her last visit on August 24, 1953, she had no particular complaints, and the residual urine was 180 cc.

Case 2.—J. P., female, aged thirty-two, was first seen on April 14, 1953, complaining of marked difficulty in voiding and, at times, inability to void, bloating of the abdomen, and occasional dysuria. These symptoms had begun immediately following a panhysterectomy and bilateral salpingo-oophorectomy for polyposis of the endometrium in August, 1952. The patient had had an appendectomy in 1940 and an exploratory laparotomy in 1951, at which time peritoneal adhesions were lysed and a Webster-Baldy type of uterine suspension was performed.

Physical examination revealed a distended bladder palpable 5 cm. above the symphysis and suprapubic midline and right lower quadrant abdominal scars. Pelvic examination revealed absence of the uterus and cervix, a moderately tender vesical neck and slight bulging of the anterior vaginal wall, but no definite cystocele. Residual urine was 340 cc., and following catheterization the bulge in the anterior vaginal wall disappeared. The urine contained four to six pus cells per high power field; urine culture grew Escherichia coli. Cystoscopy revealed a normal mucosa and two moderate-sized diverticula. No bladder neck bar or other infravesical obstructing factor was noted. Retrograde pyelogram showed essentially normal upper urinary tracts.

On April 16, 1953, 2 Gm. of tissue were resected transurethrally from the entire circumference of the bladder neck. Pathologic report was fibromuscular tissue showing chronic active inflammation. Catheter was removed on the third postoperative day, and patient was discharged two days later voiding freely in large amounts. Residual urine was 20 cc.

Three weeks after the operation the obstructive symptoms recurred, and a residual urine of 200 cc. was obtained. Prolonged indwelling catheter, urethral dilatations, and cholinergic drugs were ineffective. She was readmitted on May 30, 1953. Urine contained 30 to 40 pus cells per high power field and Bacillus proteus was cultured. A cystometrogram showed a normal curve with first desire to void at 400 cc. and a maximum voluntary pressure of 62 cm. of water. The anal reflex was present, and patient could perceive hot and cold stimuli to the bladder. Residual urine was 750 cc.

Operation as described above was performed on June 5, 1953. In this case the pubovesical fascia was split longitudinally and then sutured transversely. Bladder catheter was removed on the fifth postoperative day. Subsequent studies failed to reveal any residual urine. Patient was discharged two days later voiding with ease and perfect control. She has had no further difficulties during a follow-up period of five months.

Summary and Conclusions

1. Transurethral resection of the vesical neck is the most effective single procedure for the relief of urinary retention of obscure etiology in the female. About 18 per cent of the patients so treated are not relieved in spite of multiple resections.

2. Several mechanisms which may cause vesical neck obstruction have been discussed.

3. A new operation for the relief of vesical neck obstruction in the female has been described.

This operation is indicated in those patients who have no demonstrable cystocele and are not relieved by transurethral resections or in whom no relief can be expected from a transurethral resection.

4. Two cases in which this operation was successfully employed are reported.

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Sam, the Surgical Dresser

The Surgeon scrubbed long at the washbowl
(For he by the session were paid)
Then spoke very humble to Sister,
Of whom every man were afraid
—All excepting one dresser, his Chief's right-hand man
A lad by the name of Sam Small;
And he and the Sister were both daggers drawn,
They thowt nowt of each other at all.
Now as Sister leans over a needle to grab
She happens to brush against Sam,
It knocks the retractor clean out of his hand
Which falls to the ground with a slam.

"Pick it oop" says Sister, abrupt-like but cool,
But Sam with a shake of his head,
Says "Seeing as tha' knocked it out of me hand,
P'raps tha'll pick the thing oop instead."

The Staff-nurse goes off and says she'll come back
When squabbling had come to decision.
The Sister takes mask off and lights up a fag.
The Chief weeps into his incision.
"Sam, Sam," says Chief coaxingly,
"Come on lad now be good and chuck it."
But Sam says, "She knocked it doon, and she picks it oop,
Or it stays where it is—next to bucket."

At the sound of high words the Anaesthetist woke,
And sought for the cause of the trouble,
For all other students and nurses and pros,
Were full of excitement and bubble.
"Come stop all this nonsense and do what tha's told,"
The Anaesthetist says with a roar.
But Sam says, "She knocked it doon and she picks it oop,
Or it stays where it is—on't floor."

The H.M.C. Chairman in boardroom above
Were waiting for members to meet.
He stumps down the stairs at the sound of these words
To deal with the shouting and heat.
"Dresser Small pick that oop" the Chairman directs,
A man for strictness renowned,
But Sam says "She knocks it doon, so she picks it oop,
Or it stays where t'is—on't ground."

Now little Nurse Ramsbottam were just passing through
When these stubborn words she did hear,
She trips right across and speaks a few words
Into Sam's external ear.
"Sam, Sam," she says very soft,
"Come on lad now just to please me,
Sam Sam, come pick it oop now—
Or I'll no come to pictures with thee."
And Sam goes deep red—he dare not resist,
And feeling round underneath table,
He picks up retractors from where they had fell,
And retracts as best he is able.

So the op. soon were done,
And the Chief were that pleased,
As the cheering and clapping rose high,
He goes to the sluice and he picks out for Sam
A gallstone to wear in his tie.

—*The Lancet, July 3, 1954*

CASE REPORTS

Neurilemmoma (Schwannoma) of the Neck

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NEURILEMMOMA is a neoplasm which is not frequently encountered; yet it is by no means a rare one.[1] This tumor has been reported in the literature under various terminologies, such as a solitary or encapsulated neurofibroma, neurinoma,[2,3] neuroma,[4] peripheral glioma, gliofibrosarcoma, perineural fibroblastoma, and lemmoma.

The classification and description of this growth by Stout[5] is presently the one accepted:[6] "It is a neuroectodermal neoplasm-supportive tissue, type-benign. It is a characteristically solitary, encapsulated tumor occurring in the peripheral, cranial, and sympathetic nerves; and arising from the sheath of Schwann."

Neurilemmomas are believed to originate in the cervical sympathetics, the roots of the spinal trunks, and the spinal accessory and vagus nerves. While it may arise in any part of the body where nerve sheaths exist, there is a large percentage occurring in the head, and of these most are in the neck (26 and 43 per cent by two different reporters[7,5]). The reason given for this anatomic occurrence is that there is a relatively large number of peripheral nerve trunks grouped in this area.

The age incidence does not seem to be of any significance since cases have been reported during the first year of life, and the present case was seventy-seven years of age. Neurilemmoma is a slow-growing tumor. In this instance the patient gave a history of at least thirty years duration. Except for the palpable or visible mass it is usually asymptomatic except when it causes pressure, which may give rise either to hoarseness or dysphagia or both. Except for its slow and painless growth there is no way of diagnosing the growth preoperatively except by aspiration biopsy.[7]

Extirpation is the only rational procedure for treatment. Schwannomas are highly radioresistant; hence radiation is not indicated either pre- or postoperatively.

Indications for operation include deformity because of the size of the tumor and when pressure causes either dysphagia or dysphonia or both. In asymptomatic cases, if aspiration biopsy proves the nature of the growth to be a neurilemmoma, operation may be postponed indefinitely if the patient so prefers or if for other systemic reasons the subject is not a good surgical risk.

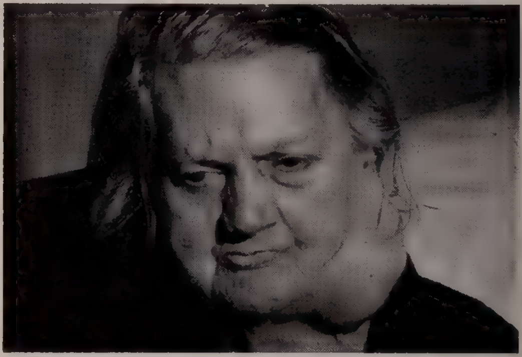

FIG. 1. Neurilemmoma of thirty years duration.

Case Report

R. H., seventy-seven-year-old female, when first seen gave a history of a growth on left side of neck of at least thirty years duration. She thought it had increased considerably for the past two or three years. In addition to the deformity, her chief concern was with difficulty in swallowing and a resulting loss of weight. Only because of this last complaint was an operation advised in a patient of such an advanced age.

The essential physical finding was a large, smooth, bulging tumor mass in the left side of neck, extending from the tip of the mastoid to the clavicle (Fig. 1).

Before submitting the patient to surgery the question of a possible growth into the esophagus was considered. The patient was referred for an x-ray of the esophagus. The radiologist's report indicated that the opaque material passed through the esophagus after the initial delay in the oral pharynx.

The surgical procedure was done under intratracheal anesthesia and proved more uneventful than anticipated. A large encapsulated mass was

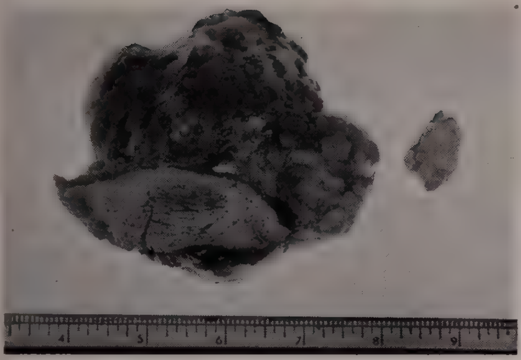

FIG. 2. Operative specimen.

encountered. This peeled out with ease and with practically no bleeding. A left facial palsy ensued. The patient left the hospital on the fifth postoperative day. She has been enjoying comparatively good health to date, one year after the operation.

The following is the report of Dr. F. D. Speer, pathologist: "A large mass measuring 12 by 14 by 20 cm. was examined (Fig. 2). Microscopic study of the tumor from the neck showed the so-called Verocay arrangement of parallel neurilemmal cells and intercellular fibers. These cells lay in transverse parallel ranks separated by nucleus-free zones of densely aggregated fibers. Other areas showed the Antoni type tissue composed of loosely arranged cells and showing no palisading. Areas of necrosis and hemorrhage were also seen. Diagnosis was neurilemmoma of long duration showing areas of necrosis."

Summary

1. A case of neurilemmoma in a patient seventy-seven years old with a history of over thirty years duration is reported, the oldest patient and longest time of growth on record.

2. Indications and contraindications for surgery are given.

3. The benign nature of this tumor is re-emphasized.

4. The futility of radiotherapy either before or after the operation is stressed.

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Ex-Prisoners of War May Still Have Snail Disease

Approximately 2,000 Americans are believed to have been affected by a snail-carried disease during World War II and were never treated.

Two Coral Gables, Florida, physicians reported in the July 17 issue of the *Journal of the American Medical Association* on one case discovered in a former Japanese prisoner-of-war. They said the discovery of the disease after ten years stresses "the importance of looking for the disease in similar persons."

Schistosomiasis, also known as katayama disease, is not native to the United States and presents no public health problem here. However, about 1,500 cases were diagnosed and treated during the Leyte campaign and thousands more may have occurred without being found. It was prevalent among prisoners-of-war in the Philippines. The disease results in thickening of the intestinal wall, cirrhosis of the liver with its complications, and urinary bladder disease and attacks man through free-swimming larvae developed in snails. The larvae burrow into the skin, usually during swimming or bathing.

The former prisoner-of-war treated by Drs. John L. Wolford and John M. Rumball had been interned at Mindanao for two years, during which time he labored in rice paddies from sunup to sundown. These areas are known to be infested with schistosoma larvae.

The physicians pointed out that symptoms of the disease may go unnoticed and it is difficult to diagnose. They said it should be considered in any person who has been in the infested area and who has vague complaints or an enlarged liver, since early treatment can prevent further damage.

Cat-Scratch Disease

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(*From the State University of New York College of Medicine at New York City*)

CAT-SCRATCH disease was apparently recognized as a clinical entity over twenty years ago,[1] but descriptions of it have appeared in the literature only during the past few years. Since the initial reports, either the disease has been increasing in incidence, or it is being recognized more frequently. It has been found to be present in various sections of the United States and in foreign countries on several continents.[2,3] Hanger[1] himself has apparently been a subject of the disease, but details as to the place and source of his infection are not recorded. The following case is being described to document the presence of the disease in New York City and to call attention again to its existence.

Case Report

G. K., a forty-two-year-old white woman, a resident of Brooklyn, presented herself on November 7, 1953, complaining of a swelling in her armpit. The patient had been seen on numerous occasions during 1953 for abdominal distention and eructation. On October 26, 1953, the patient had an exacerbation of her gastrointestinal symptoms but otherwise felt well. On November 7 these complaints were minimal, but the patient was troubled by a tender lump in her right armpit. She had first become aware of the lump on November 5. There were no associated symptoms, and the patient was aware neither of any preceding or concomitant infections of her fingers or hand nor of any lymphangitic streaks.

Examination on November 7 disclosed the presence of a circumscribed, indurated, erythematous, slightly tender and elevated lesion, 1 cm. in diameter, on the dorsal surface of the proximal phalanx of the right ring finger. There was a small yellow crust surmounting the center of the lesion. In the right axilla there was a tender, oval, 1 by 1.5 by 2.5-cm., firm, movable lymph node. There was no lymphangitis, splenomegaly, or other lymphadenopathy, and the remainder of the physical examination was negative.

Further questioning revealed that the patient had an apparently healthy, seven-months-old cat at home and that she was continually being scratched by it. The lesion on the finger had first been noticed by the patient about two weeks prior to November 7. She had thought this to be an ordinary cut incurred during her household chores, but it had lasted much longer than her usual lacerations.

A clinical diagnosis of cat-scratch disease was made. Because of the apparent mildness of the patient's disease it was decided to withhold antibiotics, at least initially, and to observe the course of the disease. The patient was afebrile throughout the illness. The only possible systemic reaction was a mild exacerbation of her gastrointestinal symptoms. On November 13 the axillary node was slightly larger than previously noted, measuring approximately 1 by 2 by 3 cm.; it was still tender. By November 17 the node had definitely decreased in size and was only minimally tender. It had decreased to 0.3 by 0.5 by 1.2 cm. by November 24, which size it maintained during subsequent observation; all tenderness was gone by December 11.

Between November 13 and November 17 a small amount of pus was said to have exuded from the lesion on the finger. Subsequently, this lesion underwent gradual resolution, but on February 1, 1954, a residual 2-mm. area of erythema was still readily apparent.

A chest x-ray on November 16 revealed no hilar or mediastinal adenopathy. On the same day the white blood cell count was 4,000 per cu. mm. of which 41 per cent were segmented polymorphonuclear leukocytes, 10 per cent nonsegmented polymorphonuclear leukocytes, 42 per cent lymphocytes, and 7 per cent monocytes. A white blood cell count on December 15 was 3,600 per cu. mm. with essentially the same differential. The erythrocyte sedimentation rate (Westergren) was 34 mm. per hour on November 16 and 15 mm. per hour on December 15. An intradermal test with cat-scratch antigen* was performed on January 11, 1954. Forty-eight hours later there was a 4-mm. indurated papule at the site of the injection; this was surrounded by an irregular, erythematous, indurated, moderately tender area which measured 2.5 by 5.7 cm. in its maximum dimensions. This is a positive reaction to the antigen.

Comment

The constant features of cat-scratch disease are localized lymph node enlargement and a positive skin test with potent cat-scratch antigen. The nodes are usually tender, and a history of contact with cats can be elicited from the majority of patients.[1-3] Fever of varying severity and duration and nonspecific generalized symptoms such as malaise and headache are found in most patients. A rash is an infrequent finding. Some patients, such as the one reported here, are afebrile throughout the course of the disease and are disturbed only by a minimally tender lymph node which undergoes spontaneous resolution. Other patients have moderately to markedly elevated temperatures accompanied by constitutional symptoms for several weeks. In this latter group the lymph nodes are more likely to suppurate and to require drainage or excision. The disease is usually self-limited and heals without complications, but several cases of encephalitis and other neurologic involvement have been reported.[4,5]

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* Supplied through the courtesy of Dr. Worth Daniels, Washington, D.C.

Various antibiotics and the sulfonamides have been utilized to treat the disease, but they are of questionable value. It is believed by some that they may alter the constitutional symptoms without having any effect on the diseased lymph nodes.[2]

The pathologic findings in the lymph nodes consist of reticulum cell hyperplasia followed by the appearance of small scattered abscesses which are surrounded by a layer of epithelioid and multinucleated giant cells. The findings are considered to be sufficiently characteristic to suggest a diagnosis of cat-scratch disease even in the absence of clinical suspicion.[3,6]

The etiology of the disease is unknown, but it has been proposed that it is a virus similar to that causing lymphopathia venereum. The usual site of entry of the infecting agent is considered to be the broken skin. In about half of the patients a papule, ulcer, or inflamed scratch mark can be found in the area of drainage of the involved lymph nodes. Because the cats usually seem to be healthy, it is postulated that they merely serve as a carrier and as a means of inoculation of the infecting agent. Various other sources of cutaneous inoculation, e.g., thorns, splinters, and insect bites, have been suggested in the minority of patients with no history of exposure to cats.

The conjunctivae may in some cases be the site of inoculation with production of Parinaud's oculoglandular fever. The respiratory tract has also been suggested as an infrequent portal of entry.[7] The disease has been transmitted to one of four human volunteers and to several monkeys by the intracutaneous injection of infected tissue.[8] Injection of infected material into a variety of other animals and into incubating hens' eggs has been nonrevealing.

The antigen used in performing the skin test is prepared from purulent material obtained from infected lymph nodes. The materials prepared from different patients have varying potencies. In addition, a given suspect person may have dissimilar reactions to several proved potent antigens so that it may be necessary at present to test such a person with several preparations before deciding that the test is negative.[1] False positive reactions have not been obtained. A positive test has been obtained within sixteen days after the appearance of the nodes.[9] The earliest point in the course of the disease at which a positive skin test can be elicited has not been determined. This is due to delay in suspecting the diagnosis or unavailability of antigen when the diagnosis is suspected early in the course of the disease. A positive skin test can be obtained four or more years after the acute episode. Other laboratory tests have not been of consistent help in establishing the diagnosis. Leukocytosis and elevation of the erythrocyte sedimentation rate may be present. Agglutination tests for tularemia are negative. Lygranum skin tests are usually negative, although the Lygranum complement fixation test is occasionally positive. No organisms have been isolated from the aspirated pus, and none have been found in sections of the lymph nodes.

Cat-scratch disease may be confused with any disease which causes lymphadenopathy and should therefore be considered in the differential diagnosis of any patient with lymphadenopathy the cause of which is not readily apparent. When the extremities are involved, the disease is usually unilateral, but when the nodes of the head and neck are involved, both sides may be affected. The involved lymph nodes may present in unusual locations and guises; one patient has been operated upon with a preoperative diagnosis of chondrosarcoma of the sternoclavicular joint.[10] Cat-scratch disease must also be considered in the diagnosis of encephalitis.

The recognition of cat-scratch disease is important for several reasons. If the diagnosis is established or suspected sufficiently early, the patient may be spared a surgical procedure. Ascertaining the diagnosis in an early stage of the disease will relieve the anxiety of the family and physician in those cases where diseases with a graver prognosis are considered in the differential diagnosis. Further knowledge concerning the incidence, epidemiology, clinical characteristics, and response to therapy of cat-scratch disease is dependent upon accurate and early recognition of the disease. Recognition of such cases will enable supplies of potent antigen to be developed; such supplies are essential for diagnostic purposes in individual patients and also for investigational needs.

Summary

1. A case establishing the existence of cat-scratch disease in another community is reported.

2. The clinical and laboratory features of the disease are briefly reviewed.

3. The necessity of searching for and recognizing patients with this disease is stressed.

118 Eighth Avenue

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Cough Syncope

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The clinical entity of cough syncope has been described largely in foreign journals under a variety of names, and only recently has it been adequately described in the American literature.[1,2] This syndrome, not a disease, is not well known to American physicians. It has been defined as "loss of consciousness preceded by coughing" by Kerr and Derbes[1] who recently collected 25 cases and described fully the clinical picture.

Case Report

The patient, A. B., a sixty-three-year-old white male, was seen on December 29, 1953, complaining of recurrent "blackouts" during the past three and one-half years, associated with coughing while eating or drinking. The first episode was in March, 1950, when he coughed while drinking coffee and suddenly fainted, falling off his chair and striking his head. He immediately regained consciousness and felt perfectly well. He was well until August, 1951, when he had another episode of transient loss of consciousness while eating; he stated that he "gagged" and fell to the floor. In February, 1952, he had a "blackout" while sitting on a stool at a food counter; he coughed while eating and fell to the floor, suffering a scalp laceration that required several sutures at the emergency room of a local hospital. On December 27, 1953, two days prior to this examination, he had a similar episode while eating at home. He coughed and fell to the floor injuring his right eye and right forehead. In between these attacks he felt well. He was observed during these attacks by various members of his family, and no convulsions were ever seen.

The past history revealed that he had had thromboangiitis obliterans since 1935, at which time he had gangrene of all his toes, which were surgically amputated. In spite of this he was a heavy smoker for years, at present consuming about one and one-half packs of cigarets daily. He drank alcoholic beverages moderately, estimating 2 to 4 ounces daily. For many years he had recurrent bouts of "bronchitis" during which he noted mild wheezing and an exacerbation of his chronic cough which almost never left him. In 1952 he had nasal polyps excised. There was no family history of epilepsy.

Physical examination revealed a stocky, obese male who exhibited ecchymoses of his upper right eyelid and of the right frontal area of the scalp. The only abnormalities noted were an emphysematous chest with occasional high-pitched musical rales on expiration, absence of peripheral pulsations of both lower extremities, and surgically absent toes bilaterally. The blood pressure was 136/80. The urine was negative. An electrocardiogram was normal, and fluoroscopy of the heart and lungs was negative. Carotid sinus pressure was attempted on alternate sides without any appreciable effect. Neurologic examination was negative.

The patient was considered to have (1) thromboangiitis obliterans, (2) chronic bronchitis with early pulmonary fibrosis and emphysema, and (3) cough syncope. He was advised to stop smoking, lose weight, eat slowly, and only in the presence of another person, discontinue alcoholic beverages, and to stop driving an automobile.

Comment

Kerr and Derbes[1] have described the syndrome of cough syncope as being characterized by sudden syncope following vigorous unproductive cough, often occurring during eating or drinking, appearing in middle-aged obese men who are heavy drinkers, eaters, and smokers and who often have associated chronic pulmonary disease, emphysema, and bronchial asthma. We believe our patient is an example of this syndrome. The course of this syndrome is variable, paralleling the underlying respiratory disease. This syndrome is usually benign, although Kerr and Derbes[1] had one fatality in their series of 25 cases, a man with serious cardiovascular disease. According to them the mechanism of cough syncope is unproved.

This syndrome was first described in 1876 by Charcot[2] who called it "laryngeal vertigo," and later it was named "laryngeal epilepsy" until 1946 when Rook[3] observed three examples of syncope due to coughing in 500 cases of loss of consciousness in personnel of the Royal Air Force and questioned the importance of epilepsy, favoring the factors of cerebral congestion and anoxia. McCann *et al.*[2] studied two cases extensively and concluded that the term "tussive syncope" was more appropriate for this syndrome than "laryngeal epilepsy" since the syncopal response is dependent on circulatory disturbances due to coughing and not to epilepsy.

Treatment is symptomatic. In the obese weight reduction is important. Smoking and alcoholic beverages should be discontinued. If possible, the underlying cause of the cough should be eradicated. Kerr and Derbes[1] reported one case who had a lobectomy for chronic bronchiectasis with no recurrences. According to them cocainization of particularly sensitive areas and procaine block of the superior laryngeal nerve have been useful. Other attempts to diminish the sensitivity of the cough reflex are indicated. Patients subject to this syndrome should be warned not to drive an automobile. Atropine can be tried but has not been very successful.

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Use of Cortisone in Fulminating Serum Hepatitis

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(From the Medical Service of the Beekman-Downtown Hospital)

INFECTIOUS hepatitis usually appears as a mild and subacute condition, but occasionally it pursues a fulminating and even fatal course. Mallory[1] has stated that at least 99.6 per cent of all patients with infectious hepatitis eventually recover. In its fatal or fulminant form, however, hepatitis may cause death in less than ten days. The subacute infection, on the other hand, not infrequently lasts three to four months longer and appears to be a self-limited disease. Various means of treatment are utilized in addition to absolute bed rest, such as a high-protein, high-carbohydrate, low-fat diet, high-dosage vitamin therapy, especially of the B-complex and lipotropic substances. The importance of and the emphasis placed upon complete bed rest during the active stage of the disease is an indication of the inadequacy and lack of specificity of the remaining portions of the treatment. Very little improvement in the morbidity of the average case is added by their use.

The fulminant type of infectious hepatitis has always presented a difficult, harassing, and challenging problem without a definite form of therapy. Recently, however, with the utilization of purified adrenal cortical steroid and adrenocorticotropic hormones, powerful weapons have been added to the therapeutic armamentarium of this disease. Wildhirt,[2] treating patients with precomatose viral hepatitis, employed intravenous adrenal cortical extract, choline, and levulose. The reported effect of the treatment was dramatic. Ducci and Katz[3] also have treated fulminating hepatitis cases with antibiotics and large doses of cortisone with apparently better results than formerly. These and other encouraging reports appearing in the literature suggest that the new purified steroids, especially cortisone, have a definite place in the treatment of fulminant viral hepatitis. The following case is of interest because of the length of time the patient remained in coma and his dramatic response to cortisone despite the belief of some that death was imminent.

Case Report

P. M., a fifty-seven-year-old white male, was admitted to the Beekman-Downtown Hospital on April 13, 1953, because of increasing jaundice and persistent vomiting. The jaundice had first been noted by the patient's wife on April 7. The history revealed that he had been admitted to this institution in December, 1952, and at that time a bilateral orchiectomy and prostatectomy for carcinoma of the prostate were performed. During this previous admission, between January 7 and February 23, 1953, the patient received eight blood transfusions. An incidental finding at that time was a rectal polyp.

Examination revealed a well-developed, mentally alert patient who exhibited a marked icteric tint to his skin and sclera. There were no other significant physical findings. The liver was not palpable or tender. The laboratory findings on admission and subsequently are given in Table I. On the third hospital day the patient lapsed into coma despite the fact that he had been at complete bed rest and receiving the accepted treatment for viral hepatitis, including intravenous glucose. Cortisone therapy, 100 mg. intramuscularly every eight hours, was started. After a comatose period of seventy-two hours, the patient rapidly improved. Oral cortisone was given as soon as feasible and the dose decreased

TABLE I.—LABORATORY FINDINGS

	April			May		June			July
	13	20	25	6	20	3	10	24	1
Icterus index	79.8	...	137.2	62.5	41.3	31.5	...	17.9	16.5
Albumin (mg. per cent)	3.45	...	...	...	...	...	...	4.0	...
Globulin (mg. per cent)	5.35	...	...	...	...	...	...	3.60	...
Alkaline phosphatase (Bodansky units)	7.5	...	11.2	4.5	...	...	...	...	2.9
Van den Bergh (mg. per cent)									
Direct	...	11.65	9.65	...	1.9	1.30	0.45	0.55	0.15
Indirect	...	8.45	6.90	...	1.15	0.30	0.50	0.15	0.30
Acid phosphatase (King-Armstrong units)	4.5	...	...	...	...	3.8	...	...	...
Cephalin flocculation	3+	3+	3+	1+	Trace	0	0	0	...
Cholesterol (mg.)	...	...	189	...	...	...	...	...	...
Cholesterol esters (mg.)	...	...	157	...	...	...	...	...	...
Bromsulfalein (5 mg. per Kg.)	...	...	...	...	...	...	...	3% in 45 minutes	...
Urobilinogen	0	0	0	Positive 1:10	...	...	...	...	...

gradually. On the thirty-seventh hospital day the patient was given ACTH in addition. Two days later, both cortisone and ACTH were discontinued. The treatment also included the use of a high-calorie, high-protein, high-carbohydrate, low-fat diet, crude liver extract, and vitamin B complex. Potassium chloride was administered during the cortisone therapy. The patient was discharged improved on July 8, 1953. He was observed in clinic four months after discharge. His appetite was excellent. No evidence of progressive changes in the liver was noted.

Comment

It is conceivable, in view of apparently parallel cases which have survived, that recovery might have taken place with conservative management alone, i.e., bed rest, intravenous glucose, and massive doses of vitamin B complex. However, the rapid decline in the patient's condition while receiving this supportive therapy inclines us to believe that the addition of cortisone was lifesaving in this instance. The patient's progress report shows miraculous response in what was believed to be a lost cause.

It is becoming increasingly apparent, as more and more reports are accumulated on the effects of cortisone and ACTH in general, that the salutary action of these drugs in disease states is not directly associated with their known physiologic effects. Actually little is known as yet of the detailed mode of action of these powerful metabolic agents. It has been suggested that cortisone and ACTH may exert a polyvalent antitoxic effect that in some way protects multiple body cells against multiple toxins.[4] The "antitoxic" effect of ACTH or cortisone might act in one or more of three ways:

1. By destroying the toxin or absorbing it. The agent would then be acting as does diphtheria antitoxin in neutralizing the diphtheria toxin. In this connection some of the early work revealed an increase in the titer of certain of the circulating globulins which immediately followed lysis of lymphocytes and other cellular elements.
2. By altering the permeability of the cell membranes and in that way preventing entrance of the toxins into the cells.
3. By direct intracellular protecting action on enzyme systems, thereby preserving the integrity of the cell.

Summary

A case of fulminating viral hepatitis is presented in which the prognosis appeared very grave and in which the use of cortisone apparently effected an immediate and favorable response. Several theories on the mode of action of cortisone and ACTH are discussed.

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The reason why worry kills more people than work is because more people worry than work.—WASHINGTON TIMES-HERALD

Physicians' Home

Its Purposes, Aims, and Policies

BEVERLY C. SMITH, M.D., CHAS. GORDON HEYD, M.D., AND J. MILLER WALKER, NEW YORK CITY

(*President, Chairman of the Board of Trustees, and Vice-President and General Counsel of the Physicians' Home*)

PHYSICIANS' Home is a corporation which was organized in 1919 under the Membership Corporations Law of the State of New York. As currently administered, its purposes are to give financial and other assistance to aged and indigent physicians and their wives, widows, and needy minor children.

The members of the corporation consist of those individuals who make contributions to the corporation, of which its voting members are those who make regular annual contributions as prescribed by the bylaws. The general management of its business and affairs is conducted by a board of 27 directors, each of whom has a three-year term of office and one third of the members of which are elected annually at the annual meeting of members. The care, custody, and management of the property of the corporation is the responsibility of a board of five trustees, each of whom has a five-year term of office and one of whom is elected annually at the annual meeting of members. Directors are chosen from among individuals approved for the purpose by the Council of the Medical Society of the State of New York. The trustees report regularly their activities to the board of directors, and the board of directors reports annually to the members at their annual meeting. The signal development of the idea which is Physicians' Home has been due in no small measure to the faithful and loyal service as directors and trustees of many prominent physicians and other professional men.

The income of the corporation is derived from contributions received directly from members, contributions collected from members by the county medical societies, donations from women's auxiliaries of the county societies, and bequests under wills and other extraordinary gifts. Expenditures of the corporation consist primarily of beneficial aid extended to its guests, with a relatively small expense for necessary administrative, legal, and accounting services. Generally speaking, the ordinary income of the corporation is utilized each year in extending beneficial aid to guests and in defraying administrative expenses, and its extraordinary income from bequests and similar gifts has been set aside in an effort to build up an endowment fund, maintained to a very large extent in high-grade securities.

During its early years the corporation endeavored to maintain its guests in a physical home, located from time to time in different places. After some experience the directors concluded that in most cases elderly physicians and dependents did not desire to live segregated and necessarily somewhat regimented lives in such a home but were much happier when maintained in familiar surroundings or with other relatives. For many years now the efforts of the corporation have been directed toward the granting of beneficial aid in the form of financial assistance given directly to the beneficiary.

In the light of the provisions of the certificate of incorporation and bylaws and the traditions of the corporation, the board of directors has always had a clear conception of its benevolence as intended for, and only for, the benefit of physicians who have spent a considerable portion of their lives in the practice of medicine in the State of New York. To that end and in order that its benevolence should not be applied to purposes beyond its limited resources, the corporation has established and follows certain general policies with respect to the granting of beneficial aid, including the following:

1. Beneficial aid should be extended only to a physician who is a citizen of the United States of America, who continuously resided in New York State for ten consecutive years, and who had continuous membership in a county medical society of New York State for ten consecutive years, or to the wife, widow, or dependent child of such a physician.
2. Beneficial aid should be extended for the purpose of providing shelter, food, maintenance, and necessary living requirements and to enable maintenance in a moderate and reasonable style of living, but not to the extent of maintaining beneficiaries in their former or customary style of living, nor to enable beneficiaries to continue to practice or enter into new enterprises.
3. Except in exceptional circumstances, beneficial aid should not be extended to individuals in cases requiring institutional treatment or custodial care or in cases of positively diagnosed mental diseases.
4. Beneficial aid should not be extended to individuals in cases in which the result would be a lessening of the responsibility to those individuals of other proper welfare agencies.

In line with accepted practice among charitable organizations of like character, the corporation endeavors to obtain from beneficiaries their agreement to transfer and assign to the corporation ownership of funds or property which the beneficiary may at any time own. The purpose of this requirement is to assure the equitable result of reimbursement to the corporation for its expenditures on any guest out of any windfall or unexpected income he may receive. The requirement would be enforced only if, under all the surrounding circumstances, enforcement would be proper, and it is waived in any case in which a relative of the guest or other person has a superior moral claim to the property.

As a matter of administrative policy and in addition to such special investigations as the officers may make, all applications for beneficial aid are referred in the first instance to the secretary of the local county medical society for recommendation and thereafter in most cases are also investigated through a local social service organization. The application for beneficial aid, together with the recommendations of such county society secretary and social service organization and other pertinent supporting data, is then reviewed by the executive committee of the corporation which holds meetings each month or more frequently. Recommendations on the applications are then made by the executive committee to the board of directors, which in turn considers the matter and takes appropriate action. Periodical reviews and reinvestigations of individuals receiving beneficial aid are made, and appropriate action in that regard is taken periodically, depending upon the results of the review and reinvestigation.

The response to the appeal of Physicians' Home from the medical profession and others has been most gratifying over the past four decades. From meager resources and very small income in the early years, its annual income and endowment fund have progressively increased, until today, within the limitation of its financial means, it is making a significant social contribution within the profession. There are many instances of genteel poverty and terminal indigency among meritorious physicians and their families, caused by illness, misfortune, or other circumstances beyond their control. The extent to which the corporation may in the future broaden its benevolence, reduce anxiety, and brighten the sunset years within the profession will depend upon the continued interest and support of members of the medical profession.

63 East 84th Street

WORKMEN'S COMPENSATION ANNOUNCEMENT

The following announcement has been received from the Workmen's Compensation Bureau, Dr. Gerald D. Dorman, chairman, and Dr. David J. Kaliski, director.

"We regret to state that our announcement in the New York State Journal of Medicine, July 15, 1954 issue, page 2111, that the fee for general practitioner's testimony before referees or the Workmen's Compensation Board had been increased from $10 to $15 was premature and was based upon a misunderstanding.

"The increase in fees for testimony under Section 13-f(2) of the Workmen's Compensation Law is under consideration by the chairman of the Workmen's Compensation Board at this time."

NECROLOGY

Silas Jeremiah Banker, M.D., of Morrisonville, died on July 29 at the age of ninety-seven. Dr. Banker received his medical degree from the University of Vermont in 1878 and practiced in Fort Edward from 1884 until 1944. For twenty years he served as secretary of the Washington County Medical Society, and also belonged to the Medical Society of the State of New York and the American Medical Association.

Eliot Bishop, M.D., of Brooklyn, died of a heart attack on July 26 while boarding a plane at the municipal airport in Portland, Maine. He was seventy-four years old.

Dr. Bishop received his medical degree from Dartmouth College in 1904 and interned at Methodist Hospital. He was a Diplomate of the American Board of Obstetrics and Gynecology, and a former president of both the Brooklyn Gynecological Society and the New York Obstetrical Society. Dr. Bishop was consulting gynecologist and obstetrician at the Brooklyn, Methodist, Norwegian, and Mather Memorial Hospitals. He was a member of the Kings County Medical Society and the Medical Society of the State of New York.

Leo Hubert Costigan, M.D., of New York City, died in French Hospital on July 21 at the age of seventy-two. A graduate of New York University and Bellevue Hospital Medical School in 1903, Dr. Costigan was head of the medical claims department of a life insurance company from 1918 to 1949. During World War I he was a captain in the United States Army Medical Corps with the 104th Field Artillery.

George J. Culver, M.D., of Au Sable Forks, died on July 4 at the age of sixty-four. Dr. Culver graduated from Albany Medical College in 1914 and interned at St. Peter's Hospital and the City Hospital in Boston, Massachusetts. He was on the honorary consulting staff of the Champlain Valley Hospital. During World War I, Dr. Culver organized the first evacuation ambulance company in the United States. He served as coroner of Essex County for many years and was health officer of the towns of Black Brook and Wilmington.

Dr. Culver belonged to the Essex County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Jack Fein, M.D., of the Bronx, died at his home on June 28 at the age of forty-nine. Dr. Fein received his medical degree from the University of Maryland in 1932 and interned at the Bronx Hospital. He was assisting attending adjunct gynecologist at the Bronx Hospital. Dr. Fein was a member of the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

J. G. William Greeff, M.D., of Great Neck, died on July 28 at the age of eighty. Dr. Greeff graduated from Columbia University College of Physicians and Surgeons in 1896 and interned at Lenox Hill Hospital. He was a member of the New York Academy of Medicine and was a consulting physician at Metropolitan Hospital.

Dr. Greeff was Commissioner of Hospitals from 1929 to 1933. He helped establish special committees for the study of infantile paralysis, cancer, and tuberculosis, and fostered plastic surgery clinics in all city hospitals.

Dr. Greeff belonged to the Nassau County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Frank Ross Haviland, M.D., of Syracuse, died on June 27 following a long illness, at the age of seventy-four. Dr. Haviland graduated from Syracuse University College of Medicine in 1903 and interned at Manhattan State Hospital. From 1914 to 1920 he was clinical instructor and clinical professor of psychiatry at the Fordham University Medical School, and from 1927 to 1937 he was clinical professor of psychiatry at the Long Island College of Medicine.

Dr. Haviland was a member of the American Psychiatric Association, the New York Society for Clinical Psychiatry, the National Association for Mental Health, and the Syracuse Academy of Medicine. He was consulting psychiatrist at Marcy State Hospital. Dr. Haviland belonged to the Onondaga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

H. Napier Lyons Hunt, M.D., of New York City, died on July 16 at St. Barnabas Hospital at the age of seventy-two. Dr. Hunt received his medical degree from Western Ontario University in 1902 and was a Licentiate of the Royal College of Surgeons, Edinburgh, Scotland, 1906. He was a Fellow of the International College of Surgeons, a past-president of the American Medical Editors Association, and had also been editor of the *American Journal of Surgery* and the *Medical Mentor*. Dr. Hunt served in both world wars, receiving a citation for anticholera work in World War I. He belonged to the New York County Medical Society, the Medical

Society of the State of New York, and the American Medical Association.

Abbott Trask Hutchinson, M.D., formerly of New York City, died on July 12 in Brattleboro, Vermont. Dr. Hutchinson received his medical degree from the University of Vermont in 1905 and interned at the Mary Fletcher Hospital in Burlington, Vermont and the New York Eye and Ear Infirmary. He was a Diplomate of the American Board of Otolaryngology, a Fellow of the American College of Surgeons, and a member of the American Academy of Ophthalmologists and Otolaryngologists and the New York Academy of Medicine.

Dr. Hutchinson was attending surgeon at the Roosevelt Hospital and honorary attending surgeon at the New York Eye and Ear Infirmary until his retirement in 1940. He belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harry E. Isaacs, M.D., of New York City, died on August 1 of a heart attack at the age of seventy-three. Dr. Isaacs graduated from Cornell University Medical College in 1905 and interned at Beth Israel Hospital. He was a clinical instructor at the New York Post-Graduate Medical School and Hospital from 1915 to 1919. At the time of his death he was consulting surgeon at Beth Israel Hospital. Dr. Isaacs was a member of the New York Academy of Medicine.

A former treasurer of the New York County Medical Society, he also belonged to the Medical Society of the State of New York.

Charles Irving Newton, M.D., of Geneseo, died on July 7 at the age of seventy. Dr. Newton received his medical degree from the Michigan Homeopathic Medical School in 1907 and was a member of the American Academy of General Practice. He was attending physician at the Wyoming County Community Hospital.

Dr. Newton belonged to the Livingston County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

William Rachlin, M.D., of Brooklyn, died on July 22 following a brief illness, at the age of eighty. Dr. Rachlin graduated from the New York University School of Medicine in 1898. He was a founder of the Beth Moses Hospital and a former head of its medical branch, where he served as consulting physician until his retirement in 1947. Dr. Rachlin belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Henry Aaron Rafsky, M.D., of New York City, died on July 31 at the age of sixty-four. Dr. Rafsky graduated from the New York University and Bellevue Hospital Medical School in 1913 and interned at the Harlem and Beth Israel Hospitals. He was a Diplomate of the American Board of Internal Medicine, a Fellow of the American College of Physicians and a member of the Pan American Medical Association, the American Gastro-Enterological Association, the New York Academy of Medicine, the New York Gastroenterological Society, and the National Gastroenterological Association.

Dr. Rafsky was attending gastroenterologist at Lenox Hill Hospital, consulting gastroenterologist at the Beth Israel and Rockaway Beach Hospitals, and chief of the gastroenterologic service in the Lenox Hill Hospital Outpatient Department. He had been president of the board of the Home and Hospital of the Daughters of Jacob since 1927 and conducted research there on the importance of vitamins in geriatric practice. He was also a pioneer in the use of color photography for diagnosis of stomach conditions.

Dr. Rafsky belonged also to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Lawrence Richard Smith, M.D., of Watertown, died of a heart attack on July 22 at the age of fifty-two. Dr. Smith graduated from Albany Medical College in 1927. He was attending physician at the Mercy Hospital and associate attending physician at the House of the Good Samaritan Hospital.

Dr. Smith belonged to the Jefferson County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Jacob Sobel, M.D., of New York City, died of a heart attack on July 25 at the age of eighty-one. Dr. Sobel graduated from Columbia University College of Physicians and Surgeons in 1895 and did post-graduate work in Berlin, Munich, and Vienna.

A founder of the Hospital for Joint Diseases, Dr. Sobel was a former president of its medical board. He was a past-president of the Harlem Medical Society. From 1921 to 1922 he had been professor of hygiene at Fordham University. Dr. Sobel was assistant director of the Bureau of Child Hygiene with the City Department of Health from 1918 to 1922 and served thereafter until 1933 as a member of the Health Department's advisory board. He was consulting pediatrician at the Hospital for Joint Diseases and the Gouverneur and Beth David Hospitals.

Dr. Sobel belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

George Scott Towne, M.D., of Saratoga Springs, died on July 22 at the age of eighty. Dr. Towne graduated from Albany Medical College in 1899 and was a Fellow of the American College of Surgeons. He was honorary consulting surgeon at Benedict Memorial Hospital in Ballston Spa and consulting surgeon at the Saratoga Hospital. From 1918 to 1945 he was president of the Homestead Sanitarium. Dr. Towne belonged to the Saratoga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Nathan Bristol Van Etten, M.D., (*see Editorial section*).

Theodore P. Wolfe, M.D., of New York City, died after a long illness in Taos, New Mexico, on July 29 at the age of fifty-one. Dr. Wolfe received his medical degree from the University of Zurich in 1927 and came to this country in 1941. He was a Diplomate of the American Board of Psychiatry and Neurology and a member of the American Psychiatric Association, the American Psychopathological Association, the New York Academy of Medicine, and the New York Society for Clinical Psychiatry. Dr. Wolfe belonged also to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

MEDICAL NEWS

Course in Laboratory Diagnosis of Tuberculosis—In cooperation with the Division of Special Health Services, Public Health Service, the Bacteriology Laboratories of the Communicable Disease Center, Chamblee, Georgia, will offer a course in the laboratory diagnosis of tuberculosis on the following dates: November 15 to 26, 1954.

This course is open to all grades of employed laboratory personnel who are approved by their state health officers. Practical laboratory training in all phases of tuberculosis bacteriology, including preparation of culture media, microscopy, cultural procedures, diagnostic use of animals, and testing of drug sensitivity will be included in the course.

Laboratory directors and senior laboratory staff members may also make application for this course. No tuition or laboratory fees are changed. Reservations for this course should be made well in advance. Application forms may be obtained from Laboratory training service, Communicable Disease Center, Public Health Service, P. O. Box 105, Chamblee, Georgia.

Symposium for General Practitioners on Tuberculosis and Other Chronic Diseases—The third annual "Symposium for General Practitioners on Tuberculosis and Other Chronic Diseases," held in Saranac Lake in July, was attended by 35 doctors from twelve states, Canada, and Bermuda.

The symposium is approved by the American Academy of General Practice for twenty-six hours of formal credit for its members and is designed to cover all important aspects of chronic pulmonary diseases from the general practitioner's point of view. It is anticipated that the symposium will be held for the fourth time next year.

New York University—"Writing for the Medical and Scientific Journals" will be offered this fall by the Washington Square Center, New York University's Division of General Education, as a new workshop course. The workshop will meet from 8:10 P.M.to 9:55 P.M., Thursdays, September 30 to January 27. Milton L. Zisowitz is the instructor.

Bibliographic research, outlining, writing and rewriting, illustrations and tables, indexing, and final preparation of technical manuscripts for publication will be covered during the course. Enrollment for the course will be held from September 13 to October 1 at the offices of New York University's Division of General Education, 1 Washington Square North, New York 3, New York.

Hill-Burton Construction—Status of all Hill-Burton hospital construction in New York State up to June 30 was: No new projects had been approved for grants; completed and in operation are 65 projects at a total cost of $54,931,238 including Federal contribution of $16,718,592, and supplying 3,359 additional beds; under construction were 15 projects at a total cost of $52,835,314 including Federal contribution of $8,364,710, and designed to supply 1,457 additional beds. Approved but not yet under construction were 2 projects at a total cost of $6,162,893 including $1,063,450 Federal contribution and designed to supply 367 additional beds.

American College of Chest Physicians—The American College of Chest Physicians held its twentieth annual meeting in San Francisco in June. New York doctors elected to serve as officers for the year 1954 to 1955 were Dr. Donald R. McKay, Buffalo, chairman, Board of Regents; Dr. Edgar Mayer, New York City, Regent for the District, and Dr. Foster Murray, Brooklyn, Governor of the College for the State of New York.

Blood Banks Association Re-elects Officers—Dr. J. Stanley Kenney, New York City, president; Dr. John J. Clemmer, Albany, vice-president; Dr. James R. Reuling, Bayside, treasurer, and Dr. W. P. Anderton, New York City, secretary, were re-elected to their posts at the annual meeting of the Blood Banks Association of New York State in May.

National Fund for Medical Education—Grants of $15,000 plus $25 per undergraduate student have been awarded by the National Fund for Medical Education to the following medical schools in New York State: Albany Medical College, State University of New York College of Medicine at New York City, University of Buffalo School of Medicine, Columbia University College of Physicians and Surgeons, Cornell University Medical College, New York Medical College—Flower and Fifth Avenue Hospitals, New York University College of Medicine, University of Rochester School of Medicine and Dentistry, and State University of New York at Syracuse College of Medicine.

Meeting—Past

Medical Library Association

The Medical Library Association held its fifty-third annual meeting in June in Washington, D.C. At this time, Mr. Wesley Draper, librarian, Medical Society of the County of Kings and Academy of Medicine of Brooklyn, was elected vice-president and president-elect, and Miss Esther Judkins, Rockefeller Institute for Medical Research, New York City, was elected secretary. The 1955 meeting will be held at Marquette University School of Medicine, Milwaukee, in May.

Meetings—Future

Steuben County Medical Society

"Common Clinical Errors in the Care of the Elderly Patient" will be discussed at a meeting of the Steuben County Medical Society by Dr. Frederic D. Zeman, New York City, on September 9. The meeting will be preceded by a dinner at 6:30 P.M.

Dr. Zeman is lecturer in medicine, Columbia University College of Physicians and Surgeons, and chief, Medical Service, Home for Aged and Infirm Hebrews.

New Jersey Neuro-Psychiatric Institute

The second annual psychiatric institute of the New Jersey Neuro-Psychiatric Institute, Princeton, New Jersey, in conjunction with the New Jersey Neuro-Psychiatric Association and the New Jersey district branch of the American Psychiatric Association will be held on September 15 at Princeton.

Simultaneous meetings will be held in the morning following registration and a general meeting will follow luncheon with Dr. Kenneth E. Appel, past-president, American Psychiatric Association, presiding and Dr. Arthur P. Noyes, president, giving the address of welcome.

Reservations for luncheon and dinner must be made in advance and remittance should be sent to Mr. J. Lindsay deValliere, business manager, New Jersey Neuro-Psychiatric Institute, Box 1000, Princeton, New Jersey.

Fulton County Medical Society

S. Allan, Ph.D., Physics Laboratory, Francis Delafield Hospital, New York City, and director, Isotopes Program in New York City Hospitals, formerly in charge of the isotopes distribution program for the Atomic Energy Commission, will discuss "The Present Status of Radioactive Isotopes for Diagnosis and Treatment of the Different Diseases" on September 16, at the Hotel Johnstown, Johnstown, at a meeting of the Fulton County Medical Society. The meeting will begin at 9 P.M.

Dr. Equinn W. Munnell, assistant clinical professor of obstetrics and gynecology, Columbia University College of Physicians and Surgeons, will discuss "The Management of Ovarian Tumors" at a meeting of the Fulton County Medical Society on October 21 at the Hotel Johnstown. The meeting will begin at 9 P.M.

American Otorhinologic Society for Plastic Surgery

A meeting of the American Otorhinologic Society for Plastic Surgery will be held at the Waldorf-Astoria Hotel, New York City, on September 19.

Tompkins County Medical Society

"Investigation and Determination of the Cause of Sudden Suspicious and Violent Deaths" will be discussed by Dr. Theodore J. Curphey, Garden City, at a meeting of the Tompkins County Medical Society on September 20.

The meeting will be held at the Statler Club on the Cornell University Campus, Ithaca, and will begin with dinner at 6:30 P.M.

American Medical Writers' Association

The eleventh annual meeting of the American Medical Writers' Association will be held in Chicago, Illinois, at the Hotel Sherman, September 24. Among the speakers will be Dr. Russell L. Cecil, editor of *A Textbook of Medicine* and others, and emeritus professor of medicine, Cornell University, who will discuss "Textbook Medical Writing." Dr. Cecil will also receive the 1954 American Medical Writers' Association honor award for distinguished contributions to medical literature. This meeting will be held during the nineteenth annual meeting of the Mississippi Valley Medical Society.

Mississippi Valley Medical Society Meeting

The nineteenth annual meeting of the Mississippi Valley Medical Society will be held at the Hotel Sherman, Chicago, Illinois, September 22, 23, and

24. Among the speakers will be Alexander B. Gutman, New York City, professor of medicine, Columbia University, and director of medicine, Mt. Sinai Hospital, and editor, *The American Journal of Medicine*, who will take part in a panel on diseases of the heart and blood vessels.

Seventh Industrial Health Conference

The seventh industrial health conference will be held September 23 through 25 in Houston, Texas, at the Shamrock Hotel. Among the New York State doctors taking part will be Dr. Norman Plummer, medical director, New York Telephone Company, who will discuss "Absenteeism" as part of the symposium on "Absenteeism, Alcoholism, and Mental Health in Industry," and Dr. James H. Sterner, medical director, Eastman Kodak Company, Rochester, who will talk on "A Program for Large Industry" in the symposium "Establishing Effective Health Programs in Industry."

Personalities

Honored

Dr. Samuel Archer Munford, retiring dean of the medical staff, Clifton Springs Sanitarium and Clinic, at a testimonial dinner given by the board of trustees and the administrative and medical staff of the Sanitarium, when he was presented with a silver tray by Dr. Otis Rice, president, board of trustees, and staff member, St. Luke's Hospital, New York City, in recognition of his thirty-five years of service to the Sanitarium. . .the late Dr. William Ross Thomson, at the dedication of the nurses' residence of the new Wyoming County Community Hospital, at which Dr. Louis L. Klostermyer, former Warsaw radiologist, spoke.

Appointed

Dr. Albert L. Chapman, Washington, as Regional Medical Director of New York, Pennsylvania, New Jersey, and Delaware Region for the United States Public Health Service, in July. . .Dr. Benjamin G. Dinin, medical superintendent of Cumberland Hospital, as medical superintendent of Metropolitan Hospital, Welfare Island. . .Dr. Albert Ehrlich, as assistant pathologist and assistant medical examiner of the Westchester Department of Laboratories and Research. . .Dr. Herman E. Hilleboe, New York State commissioner of health, to the committee of the Commission on Intergovernmental Relations. . . Dr. Milton LeVine, Utica, as a school physician in Utica. . .Dr. Oswald J. McKendree, to succeed Dr. Herman B. Snow as assistant director of the staff of the Utica State Hospital. . .Drs. Hans S. and Alice Unger, formerly of Salamanca, to the staff of the Buffalo State Hospital.

Elected

Dr. Harold Hulbert, Dansville, secretary; Dr. Charles L. Steinberg, member of the medical staff of Rochester General Hospital, chairman; Dr. Thomas S. Cotton, member of the medical staffs of the Bethesda and St. James Mercy Hospitals, Hornell, vice-chairman, at the medical conference of the Rochester Regional Hospital Council held in Geneva in June. . .Dr. Norman S. Moore, Ithaca, as president of the American College Health Association, in May.

Speakers

Dr. Howard A. Rusk, director, Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, at the sixth world congress of the International Society for the Welfare of Cripples, September 13 to 17, in The Hague, Netherlands. . .Dr. George T. Pack, Memorial Hospital; Dr. William E. Smith, New York University-Bellevue Medical Center; Dr. Emerson Day, Strang Clinic of Memorial Center; Dr. Ernest L. Wynder, Sloan-Kettering Institute of the Memorial Center for Cancer and Allied Diseases, at the sixth international cancer congress held in July in Sao Paulo, Brazil.

New Offices

Dr. C. E. Dungan, former chief medical officer, Parker, Arizona, practice of obstetrics and gynecology in Hancock. . .Dr. Walter F. Harrison, Jr., former assistant chief, Surgical Service, Veterans Administration Hospital, Albany, practice of surgery in Glens Falls. . .Dr. Bernard R. Lustick, Syracuse, practice of pediatrics in Watertown. . .Dr. J. Bradford Millet, practice of general surgery in Utica. . . Dr. John R. Price, after completing a fellowship at the Mary Imogene Bassett Hospital, general practice in Adams. . .Dr. Lewis G. Reisner, practice of obstetrics and gynecology as a member of the Olean Medical Group in Olean. . .Dr. Margarette B. Rogler, general practice with Dr. John A. Richardson and Dr. Raymond W. Rapp in Utica. . .Dr. Justin Scheer, Tufts College Medical School, practice of internal medicine in Poughkeepsie. . .Dr. Francis B. Trudeau, Jr., practice of internal medicine with Dr. Francis B. Trudeau in Saranac Lake.

Reopens Office

Dr. Robert H. Wiese, general practice in Glenville, following his release from active duty with the U.S. Navy medical corps.

NEWS FROM THE MEDICAL SCHOOLS

State University of New York College of Medicine at New York City

Appointments—Dr. Howard W. Potter, professor and chairman of the College's Department of Psychiatry and director of Psychiatric Services at the Kings County Hospital, has been appointed acting dean as of September 1. Dr. Jean A. Curran, who has been dean of the College for the last seventeen years, will become associate executive dean of medical education of the State University, a post to which he was appointed in June. Dr. Potter will serve until sometime in the coming academic year when Dr. Curran's successor as dean will be appointed by the State University Board of Trustees.

Other appointments include those of Dr. Edward Meilman as clinical associate professor of medicine, Drs. Stanley Aronson and Irene Koprowska as assistant professors of pathology, and Drs. John P. Craig, Melvin M. Newman, and Frank S. Parker as assistant professors of microbiology, surgery, and biochemistry, respectively.

Research Fellowships—Nine students are working on research in five College departments during the summer under special fellowship grants.

Sheldon Bleicher and Rolf D. Zilversmit of the class of '56 and Sidney Levine of the class of '55 each received a $300 Lederle Medical Student Research Fellowship. Messrs. Bleicher and Zilversmit are working in the Department of Physiology and Pharmacology under Drs. Julius Belford and Frederick Kao on "The Effect of Ultraviolet Light on Hemoglobin Carbonmonoxide Association" and "Antagonists to Barbiturates," respectively. Mr. Levine is working under Dr. Arlene Seaman of the Department of Anatomy on the histochemistry of normal and pathologic prostate tissue.

Four grants of $250 each from the College's Alumni Memorial Research Fund went to Messrs. Eli Freidman (class of '57), Stanley Plotkin (class of '56) and Norwin Becker and Ira Tepper (class of '55). Mr. Friedman is working under Dr. Dorothy Kraemer in the Department of Anatomy on a project in histochemistry which is part of a research program on aging of the human aorta. Mr. Plotkin is working under Dr. Thomas Magill of the Department of Microbiology learning technics employed in solution of a simple research problem. Mr. Becker is participating in nutrition research under Dr. Robert W. Hillman of the Department of Environmental Medicine and Community Health and Mr. Tepper is working, under Dr. Leon Chesly, on determination of the changes in fluid spaces of the body associated with delivery and puerperium.

Gerald Hassan and Carl Teplitz of the class of '56 are each working under a $400 grant from the National Foundation for Infantile Paralysis. Mr. Hassan is working in physical medicine and rehabilitation under Dr. Duncan W. Clark of the Department of Environmental Medicine and Community Health and Mr. Teplitz is working on the function of the reticular formation and regeneration in the central nervous system under Dr. Chandler McC. Brooks of the Department of Physiology and Pharmacology.

Albany Medical College of Union University

Thailand Doctors and Professors Visit Albany Medical College—Three Thailand medical professors, Dr. Tanomruedee Pumipak, Dr. Vichien Diloksombandh, and Dr. Panit Keyanunda were guests for a week at the Albany Medical College. These doctors have been in the United States for the past year under the Foreign Operations Administration scholarships and are presently visiting a number of medical colleges throughout America for the purpose of gaining a broader perspective of our teaching methods, as well as familiarizing themselves with our approach to problems in their respective fields of interest.

Also a visitor to the College under the same program was Dr. Suthip Bardhanabaedya of the Physiology Department, Chulalongkorn Medical School and Hospital of Bangkok, Thailand.

Host to the visitors was Dr. Arthur Knudson, chairman, Department of Biochemistry, Albany Medical College.

Grant to Study Ancient Drug Awarded—Dr. Frank C. Ferguson, Jr., professor and chairman, Department of Pharmacology, will be responsible for the research on the effects of the ancient drug, colchicine, which is being underwritten by the United States Public Health Service. Colchicine is one of the best known treatments for gout but it is not known how or why the drug works in this disease.

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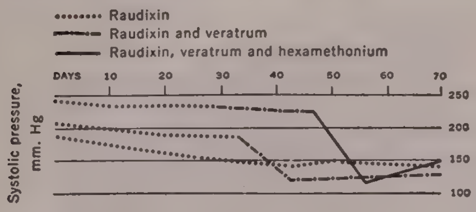

Raudixin Squibb rauwolfia

SQUIBB

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1. WILKINS, R. W., AND JUDSON, W. E.: NEW ENGLAND J. MED. 248:48, 1953.
2. FREIS, E. D.: M. CLIN. NORTH AMERICA 38:363, 1954.

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Woman's Auxiliary

to the MEDICAL SOCIETY OF THE STATE OF NEW YORK

Fall Conference of County Auxiliary Presidents and Presidents-Elect

The annual fall conference of county auxiliary presidents and presidents-elect comprises a series of talks and round-table discussions at which the county auxiliary officers discuss, describe, and decide how the most timely and important of county auxiliary projects can best be executed. Subjects reviewed include public relations, legislation, health publications, nurse recruitment, voluntary health plans, participation in case-finding surveys, the State Fair exhibit, the Health Poster Contest, philanthropic projects, and many other activities designed to promote lay interest in health and medical care programs in the different counties.

The State Auxiliary officers and chairmen also attend so that they will be available for consultation in regard to any matter a county officer presents to the conference.

Although the county auxiliaries are deeply interested in social and philanthropic projects, the fall conference is primarily devoted to reviewing the best methods the county auxiliaries can employ to supplement the socioeconomic programs of the parent county medical societies.

Two outstanding features of the fall conference are the annual dinner, featuring talks by an officer of the Medical Society of the State of New York and another prominent guest, and distribution of the Auxiliary's *Ladder*, a brochure of suggestions from the State Auxiliary chairmen to county auxiliary chairmen on how to implement State-approved projects in the counties.

This year the conference will be held in the Hotel Ten Eyck, Albany, on Monday, Tuesday, and Wednesday, October 4, 5, and 6, 1954. Mrs. Arthur L. Bennett of Buffalo, president, and Mrs. Isadore Zadek of New Rochelle, president-elect, of the Woman's Auxiliary to the Medical Society of the State of New York, are planning a program that will be of interest and value to every county president and president-elect in the State, and they appeal to every physician whose wife may be either president or president-elect to urge her to attend.

Physician visitors to the fall conference have often expressed surprise at the depth and understanding Auxiliary members possess in regard to the problems that medicine has been called upon to help solve. Several have also noted with pride the businesslike and thorough manner in which the county auxiliary attacks the projects county medical society officers have sought their cooperation in solving.

The State and county auxiliaries are grateful to officers and members of the Medical Society of the State of New York and its component county societies for the interest and support they take in the Auxiliary's program. An invitation is extended to any officer or member who is in Albany on October 4, 5, and 6 to attend the sessions of the fall conference so that you may witness one of the prime sources of Auxiliary enthusiasm and accomplishment.

Mrs. Michael Blase, *Chairman*
Fall Conference

The American Way

Too many college students, coached by a new breed of professors, favor government-supported and controlled medical schools; too few realize the meaning of "the American way." The challenging ideal of freedom to think, to work, to plan, to dream a dream, to stumble and fall and to rise again by one's own efforts has been sidetracked for the soft life of government-promised "security."

Frightening isms have reached across the sea into our schools, our government, our churches, and our press—isms which are twisting the mind, the character, and the soul of once free America. In many schools, children are being conditioned for socialism; they are being taught that, in preference to freedom, a government-controlled and owned economy would be more efficient and better for the majority.—*President, Woman's Auxiliary to the Iowa State Medical Association*

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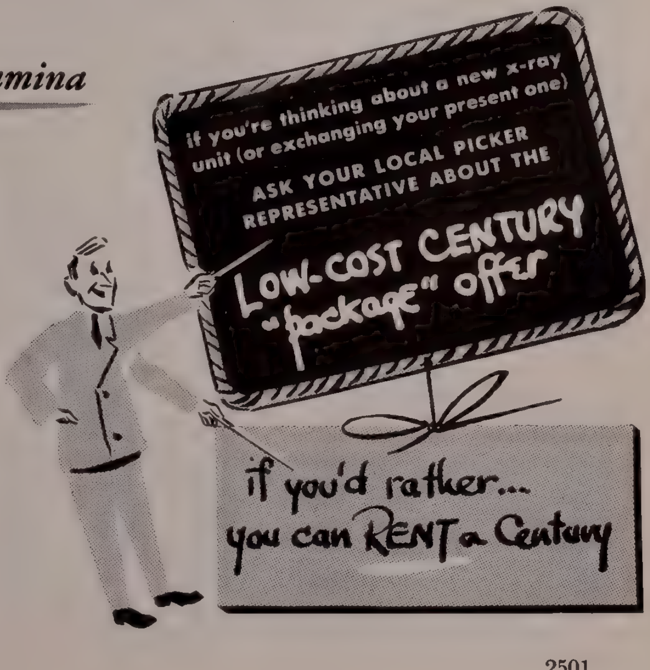
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SCIENTIFIC PROGRAMS

Forty-Eighth Annual Meetings

DISTRICT BRANCHES

Medical Society of the State of New York

SECOND DISTRICT BRANCH

Wednesday, September 15, 1954
Garden City Hotel, Garden City

Evening

6:30 P.M.—Registration

7:00 P.M.—Dinner
- Introduction of officers
- Business meeting—election of officers
- Address: **Renato J. Azzari, M.D.,** Bronx, president-elect, Medical Society of the State of New York
- Remarks: **Mrs. Arthur L. Bennett,** Buffalo, president, Woman's Auxiliary to the Medical Society of the State of New York
- "An American Doctor's Experiences in India"
- **Stuart T. Ross, M.D.,** Hempstead, surgeon in proctology, Meadowbrook Hospital, and proctologist, Nassau Hospital, Mineola, and Mercy Hospital, Rockville Centre

Officers—Second District Branch

President............George P. Bergmann, M.D., Mattituck
First Vice-President....Leo T. Flood, M.D., Hempstead
Second Vice-President..Arthur E. Corwith, M.D., Bridgehampton
Secretary............William R. Carman, M.D., Islip
Treasurer............Irving Drabkin, M.D., Rockville Centre

Presidents—Component County Societies

Nassau.......Stuart T. Porter, M.D., Floral Park
Suffolk.......Fred Bromberg, M.D., Bayshore

THIRD DISTRICT BRANCH

Thursday, September 16, 1954
Grossinger Hotel, Grossinger

Morning

9:30 A.M.—Registration

10:00 A.M.—Clinicopathologic Conference: Case presentations by **Sydney P. Schiff, M.D.,** Liberty Maimonides Hospital, Liberty; **Stanley A. Kornblum, M.D.,** Monticello Hospital, Monticello; **Luther F. Grant, M.D.,** Liberty-Loomis Hospital, Liberty

12:00 NOON—Business meeting—election of officers

12:30 P.M.—Luncheon
- Introduction of officers
- Address: **Renato J. Azzari, M.D.,** Bronx, president-elect, Medical Society of the State of New York
- Remarks: **Mrs. Arthur L. Bennett,** Buffalo, president, Woman's Auxiliary to the Medical Society of the State of New York

[Continued on page 2504]

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(1) Lawrence, E. D., W. J. Surg., Ob. & Gyn., 58, 236-7, 1950.

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[Continued from page 2502]

Afternoon

2:30 P.M.—Symposium and round table discussion: "The Rehabilitation of the Cardiac Patient"

John F. Filippone, M.D., Albany, associate professor of medicine, Albany Medical College; cardiologist, Albany Hospital, *Moderator*

1. "Traumatic Pericarditis"
   Lester Lipson, M.D., Monticello, attending physician, Liberty-Maimonides and Monticello Hospitals; associate visiting physician, Municipal Sanatorium, Otisville
2. "Complete Functional Recovery Following Coronary Occlusion and Insufficiency"
   Harold L. Rakov, M.D., Kingston, cardiologist, Kingston Hospital
3. "Surgical Rehabilitation of the Cardiac for Work"
   Allan Stranahan, M.D., Albany, assistant professor of surgery, Albany Medical College; assistant attending thoracic surgeon, Albany Hospital
4. "Method of Evaluating Work Capacity of the Cardiac Case"
   Harry Gross, M.D., New York City, associate attending physician, Montefiore and City Hospitals; chief cardiologist, Welfare Island Dispensary; associate clinical professor of medicine, New York Medical College, Flower and Fifth Avenue Hospitals; associate clinical professor of medicine, Columbia University College of Physicians and Surgeons
5. "Compensation Problems Affecting Cardiac Patients"
   Irving Klein, M.D., New York City, associate compensation examining physician, Workmen's Compensation Board

Question Period

Officers—Third District Branch

President	John H. Wadsworth, M.D., Cobleskill
First Vice-President	Ranald E. Mussey, M.D., Troy
Second Vice-President	Everett A. Jacobs, M.D., Hudson
Secretary	Henry Joseph Noerling, M. D., Valatie
Treasurer	William M. Rapp, M.D., Catskill

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Albany	Harold P. McGan, M.D., Albany
Columbia	Joseph P. Gold, M.D., Hudson
Greene	Vincent F. Tuzio, M.D., Cairo
Rensselaer	Vincent T. Laquidara, M.D., Troy
Schoharie	Virginia Oliver, M.D., Cobleskill
Sullivan	William Fernhoff, M.D., Woodridge
Ulster	Robert A. McCaig, M.D., Saugerties

ANNOUNCEMENTS

The following announcements concerning suspension, revocation, annullment, and cancellation of medical licenses have been received from Dr. Stiles D. Ezell, secretary, Board of Medical Examiners, University of the State of New York, State Education Department:

License Suspended.—Peter Austin Cassella, Schenectady: medical license number 31742, issued under date of August 24, 1936, suspended for a period of one year. The order of suspension was served on Dr. Cassella's attorney on October 26, 1953. His license stands suspended for one year from October 26, 1953 to October 26, 1954.

License Revoked.—Paul Diamond, New York City: medical license number 43973, issued under date of January 31, 1946, revoked, annulled, and canceled. The order was served on Dr. Diamond on March 18, 1954, and his medical license stands revoked as of that date.

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Officers—County Medical Societies—1954

TOTAL MEMBERSHIP AS OF SEPTEMBER 1, 1954—23,748

County	*President*		*Secretary*		*Treasurer*	
Albany	Harold P. McGan	Albany	Albert Vander Veer, II	Albany	Frances E. Vosburgh	Albany
Allegany	Leon F. Roper	Belmont	James H. Gray, Jr.	Friendship	Kurt Zinner	Wellsville
Bronx	Charles Sandler	Bronx	Frank LaGattuta	Bronx	Joseph A. Landy	Bronx
Broome	Mark H. Williams	Binghamton	Charles Steenburg	Binghamton	Alden K. Boyd	Binghamton
Cattaraugus	James W. Taft	Little Valley	Richard A. Loomis	Ellicottville	John Godfrey	Olean
Cayuga	William L. Dorr	Auburn	Charles C. B. Richards	Auburn	Bernard J. Hartnett	Auburn
Chautauqua	Garra L. Lester	Chautauqua	Edgar Bieber	Dunkirk	Charles B. Mosher	Dunkirk
Chemung	Lawrence L. Hobler	Elmira	Earle G. Ridall	Elmira	William M. Kelly	Elmira
Chenango	Ben L. Dodge	Bainbridge	Hugh D. Black	Norwich	Hugh D. Black	Norwich
Clinton	Dana A. Weeks	Plattsburg	Harold Singer	Plattsburg	Hans Littna	Plattsburg
Columbia	Joseph P. Gold	Hudson	Roger C. Bliss	Hudson	Roger C. Bliss	Hudson
Cortland	George F. Nevin	Cortland	Howard D. Kelley	Cortland	Robert T. Corey	Cortland
Delaware	Ernst Burian	Sidney	Philip Hust	Sidney	Philip Hust	Sidney
Dutchess	Arthur M. Sullivan	Wingdale	Reuben T. Lapidus	Poughkeepsie	Philip V. Buckley	Poughkeepsie
Erie	Antonio F. Bellanca	Buffalo	Eugenia L. Fronczak	Buffalo	Max Cheplove	Buffalo
Essex	James Monroe	Ray Brook	James E. Glavin	Port Henry	James E. Glavin	Port Henry
Franklin	Richard P. Bellaire	Saranac Lake	Daisy H. Van Dyke	Malone	Daisy H. Van Dyke	Malone
Fulton	William H. Raymond	Johnstown	Kingston Larner	Gloversville	John D. Sponnoble	Johnstown
Genesee	George S. Young	Batavia	Ralph B. Smallman	Batavia	Ralph B. Smallman	Batavia
Greene	Vincent F. Tuzio	Cairo	William M. Rapp	Catskill	Mahlon H. Atkinson	Catskill
Herkimer	Arthur Leistyna	Ilion	Arthur H. Mulligan	Herkimer	Arthur H. Mulligan	Herkimer
Jefferson	Howard F. Drayer	Theresa	Charles A. Prudhon	Watertown	Lawrence Henderson	Watertown
Kings	Solomon Schussheim	Brooklyn	Abraham D. Segal	Brooklyn	Nicholas H. Ryan	Brooklyn
Lewis	John H. Brooks	Lowville	William Reed	Lowville	William Reed	Lowville
Livingston	Vincent I. Bonafede	Sonyea	Charles Greenberg	Sonyea	Charles Greenberg	Sonyea
Madison	Marvin Brown	Cleveland	Felix Ottaviano	Oneida	Wallace B. Nixdorf	Oneida
Monroe	Frederick W. Bush	Rochester	John H. Schultz	Rochester	Robert J. Calihan	Rochester
Montgomery	Roger Conant	Amsterdam	Julius Schiller	Amsterdam	Max L. Dreyfuss	Amsterdam
Nassau	Stuart T. Porter	Floral Park	Louis Bush	Baldwin	Joseph G. Zimring	Long Beach
New York	Peter M. Murray	New York	Herbert S. Ogden	New York	George W. Fish	New York
Niagara	Harry J. Bylebyl	North Tonawanda	Charles M. Dake, Jr.	Niagara Falls	Robert D. Glennie, Jr.	Niagara Falls
Oneida	John S. Fitzgerald	Utica	Leonard V. Marrone	Utica	Harold H. Katzman	Utica
Onondaga	Byron S. West	Syracuse	William J. Michaels, Jr.	Syracuse	Charles A. Gwynn	Syracuse
Ontario	Philip W. Skinner	Geneva	James A. Stringham	Canandaigua	James A. Stringham	Canandaigua
Orange	Frederick T. Seward	Goshen	Earl C. Waterbury	Newburgh	Earl C. Waterbury	Newburgh
Orleans	Arden H. Snyder	Holley	Kenneth J. Clark	Medina	John G. Ellis	Albion
Oswego	John J. Brennan	Oswego	Eugene W. Anthony	Fulton	Eugene W. Anthony	Fulton
Otsego	Olaf J. Severud	Cooperstown	Elfred L. Leech	Oneonta	Elfred L. Leech	Oneonta
Putnam	George H. Steacy	Lake Mahopac	Garrett W. Vink	Carmel	Matthew H. Jacobs	Mahopac
Queens	Sol Axelrad	Woodhaven	George J. Lawrence, Jr.	Flushing	Anthony A. Mira	Forest Hills
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Richmond	Max Werner	Staten Island	John Beck	Staten Island	Abraham Leikensohn	Staten Island
Rockland	John C. Petrone	Suffern	Robert L. Yeager	Pomona	Marjorie R. Hopper	Nyack
St. Lawrence	Abraham J. Levine	Massena	William R. Carson	Potsdam	Maurice J. Elder	Massena
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Schoharie	Virginia Oliver	Cobleskill	Donald R. Lyon	Middleburg	Duncan L. Best	Middleburg
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Seneca	Oscar K. Diamond	Willard	Bruno Riemer	Romulus	Bruno Riemer	Romulus
Steuben	J. Frederick Kenzie	Bath	Milton Tully	Hornell	Milton Tully	Hornell
Suffolk	Fred Bromberg	Bayshore	Benjamin L. Feuerstein	Bayshore	Warren H. Eller	Sayville
Sullivan	William Fernhoff	Woodridge	Deming S. Payne	Liberty	Deming S. Payne	Liberty
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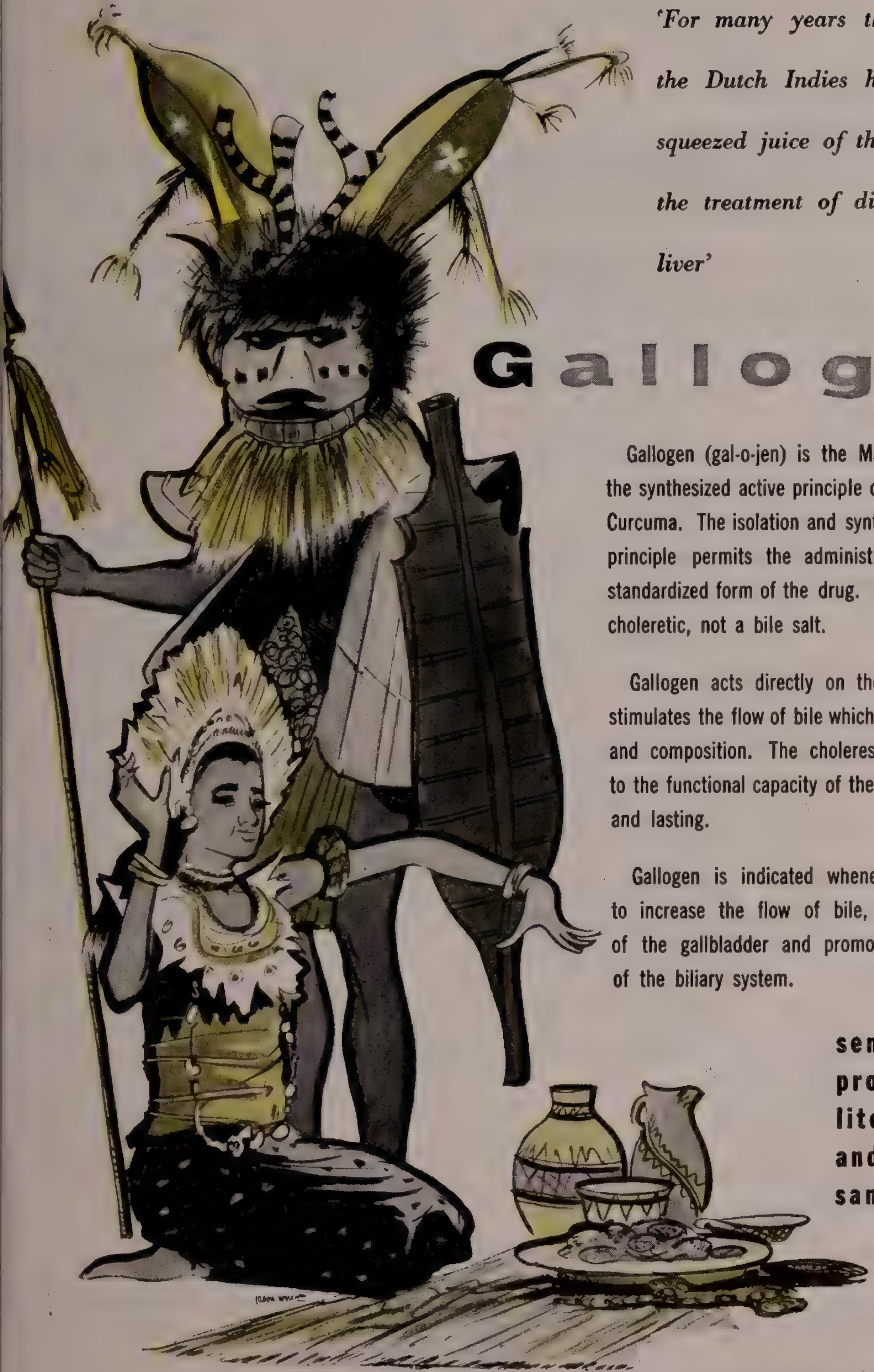

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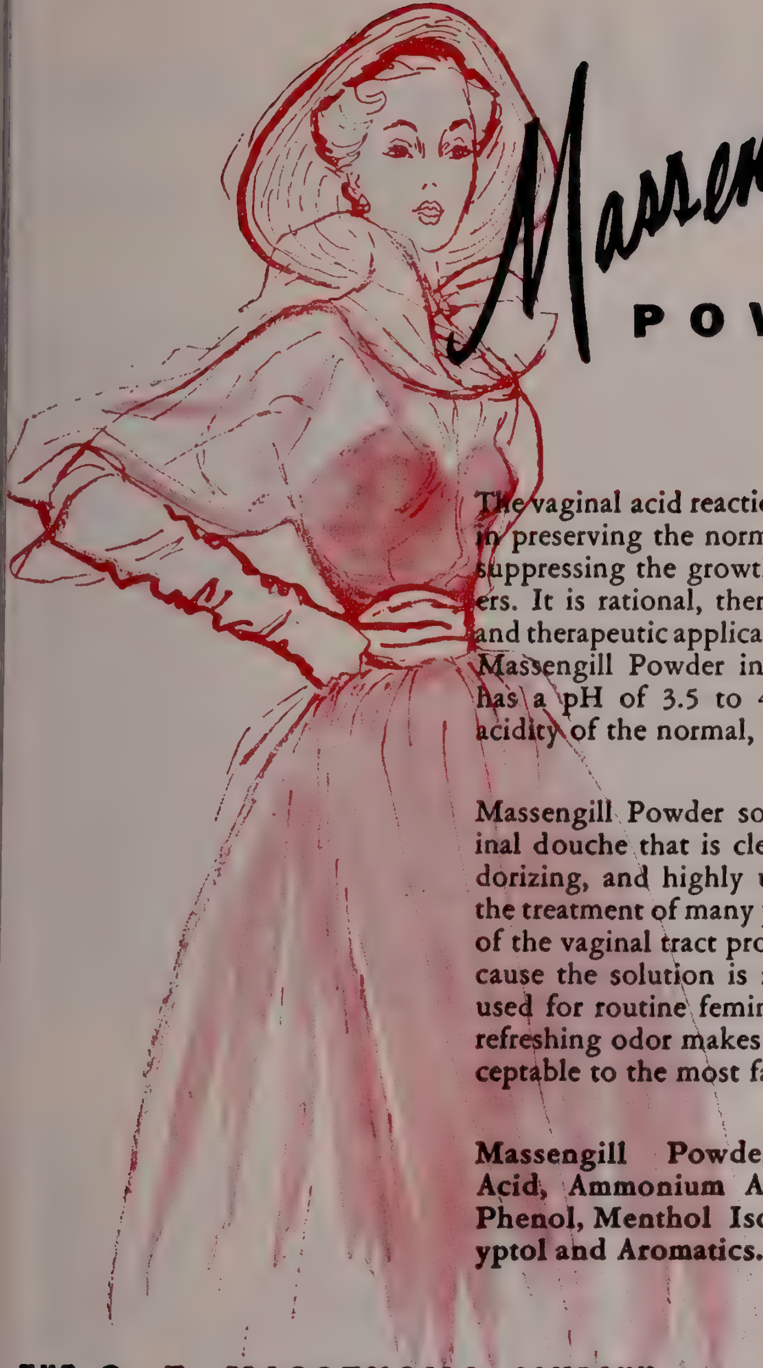

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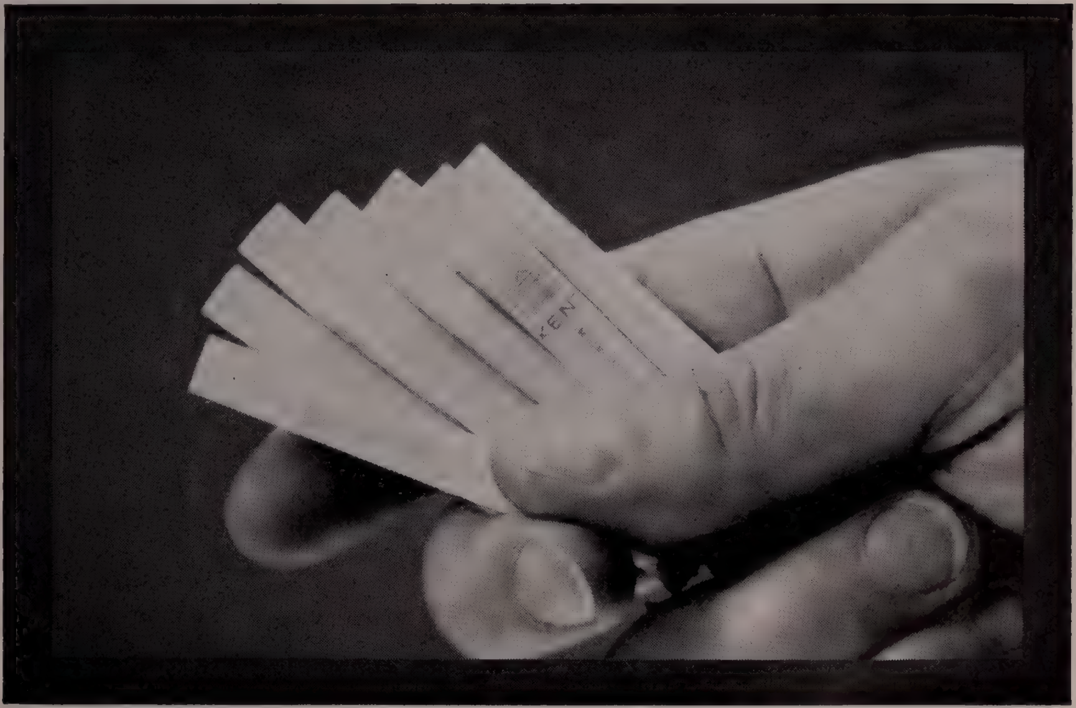

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†Fromer, J. L., and Cormia, F. E.: J. Invest. Dermat. 18: 1, 1952.

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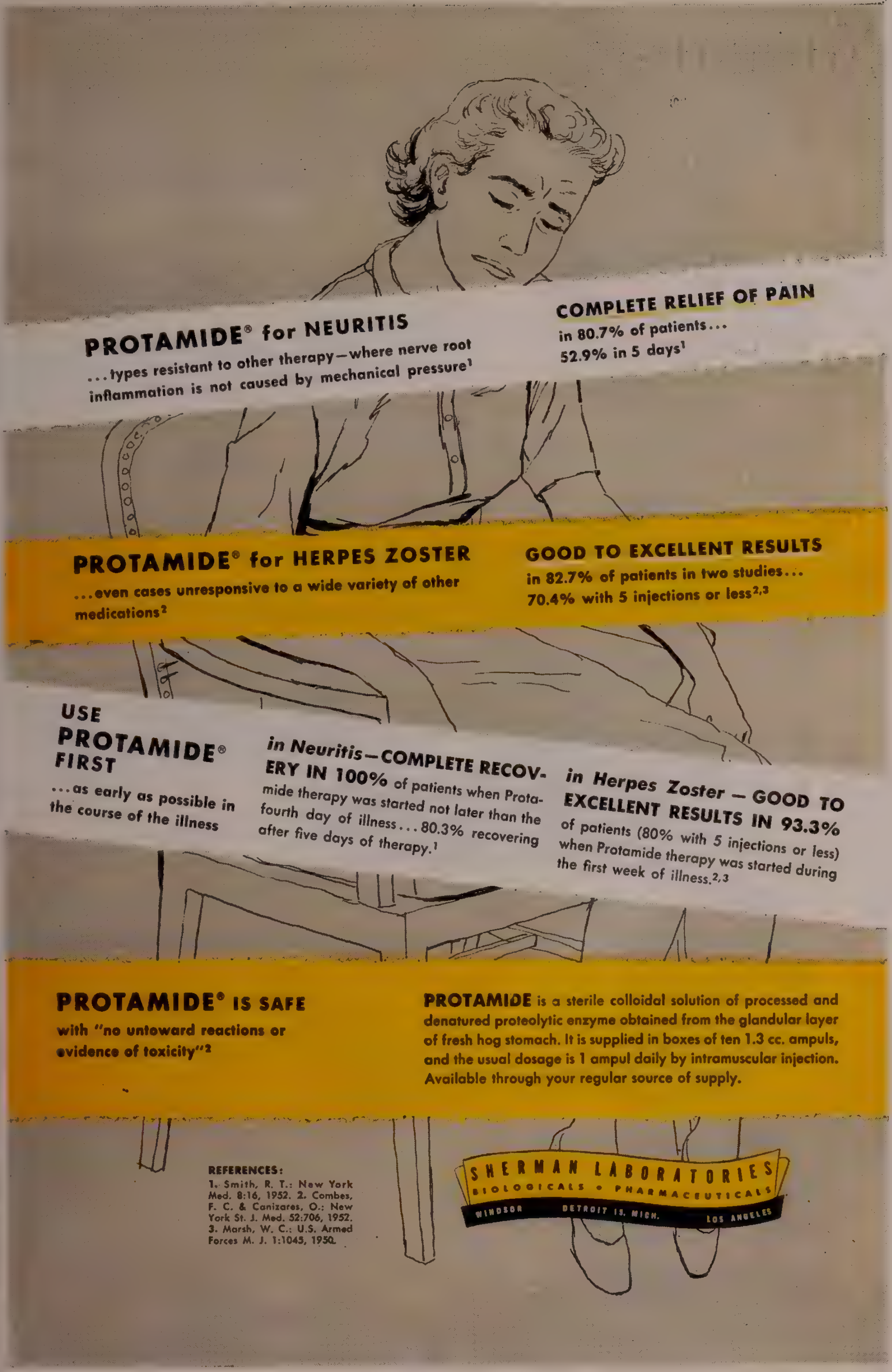

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1. Smith, R. T.: New York Med. 8:16, 1952. 2. Combes, F. C. & Canizares, O.: New York St. J. Med. 52:706, 1952. 3. Marsh, W. C.: U.S. Armed Forces M. J. 1:1045, 1950.

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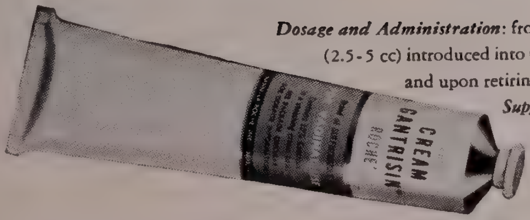
1. wide antibacterial spectrum, plus high solubility, plus low incidence of sensitization.
2. acid pH (4.6) providing unfavorable medium for vaginal pathogens.
3. aesthetic appeal—pleasant white vanishing cream.



Dosage and Administration: from one-half to one applicatorful (2.5-5 cc) introduced into the vagina twice daily (in the morning and upon retiring).

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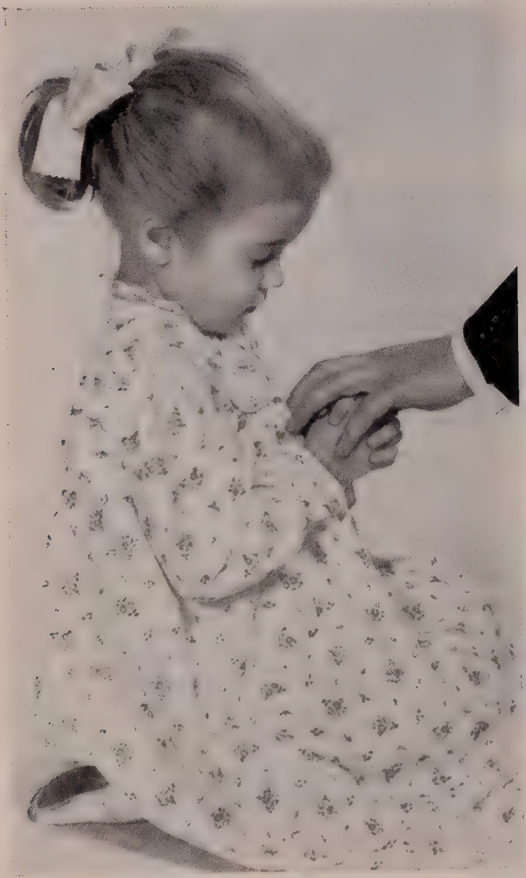

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1. Editorial, J. Allergy 23: 279, 1952.

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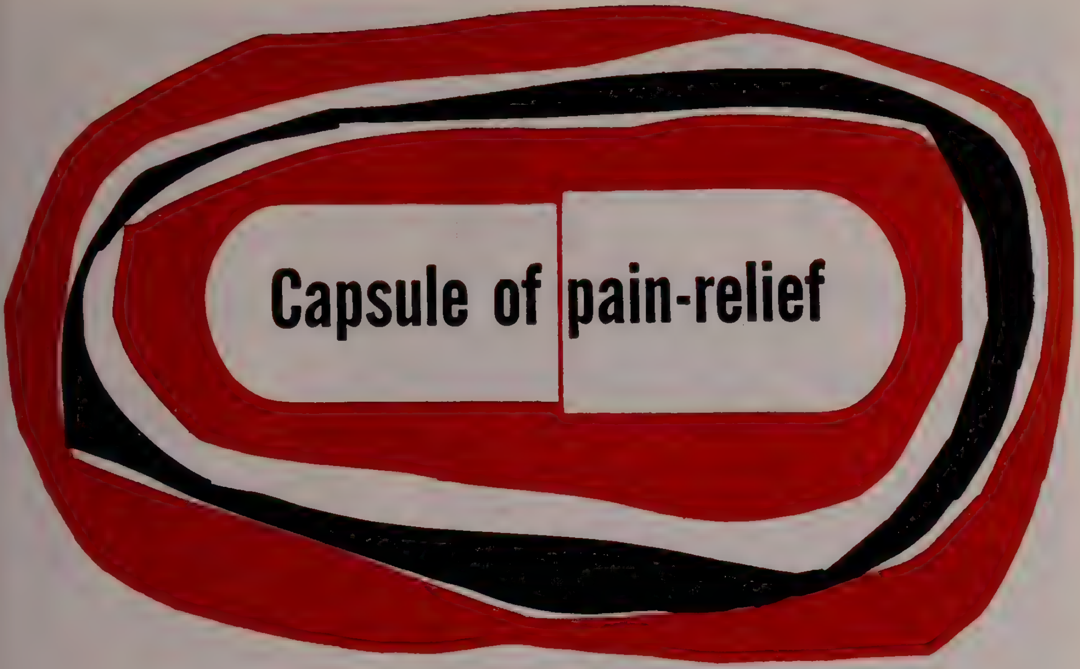

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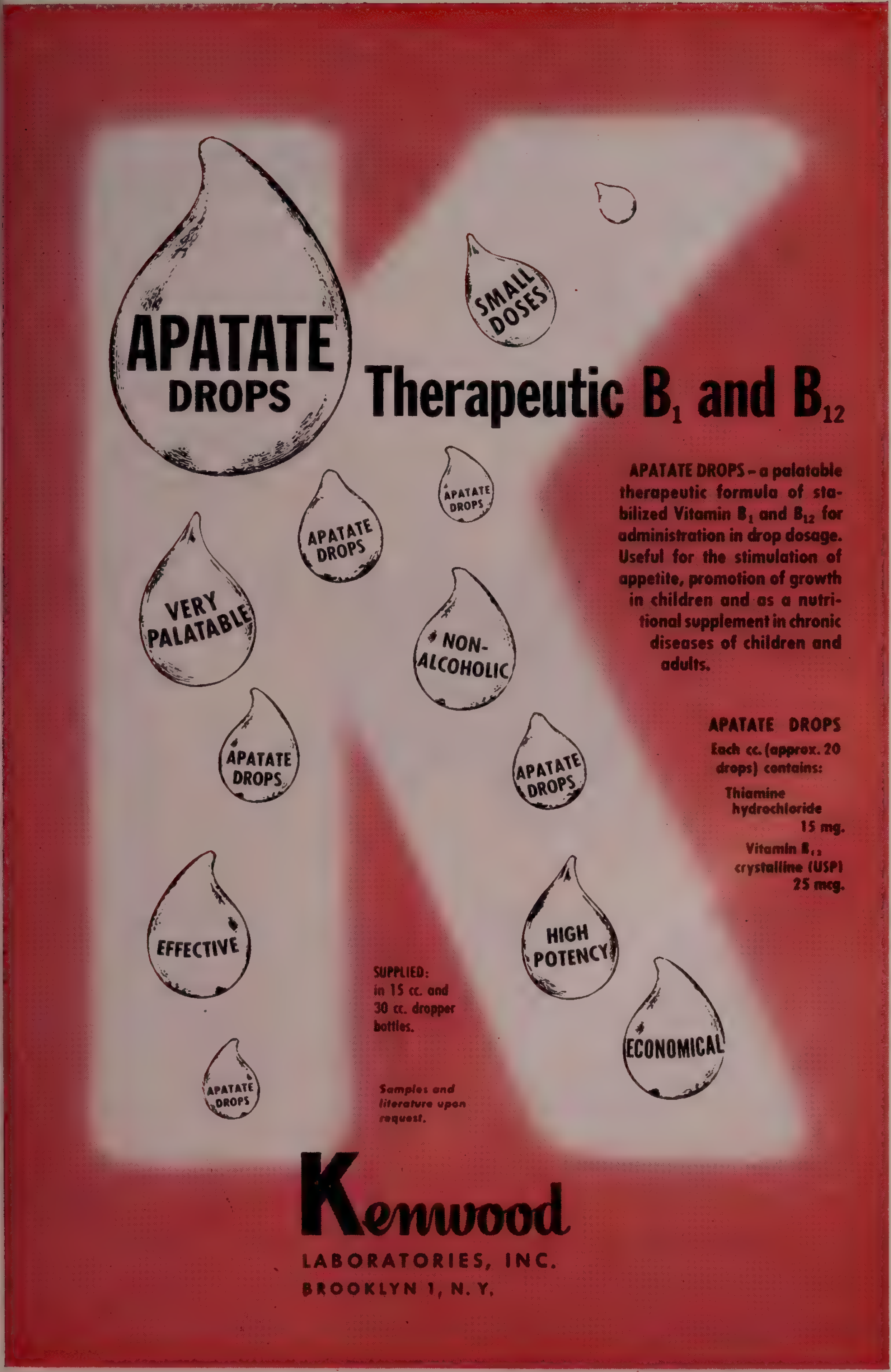
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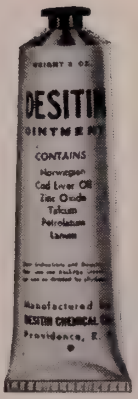

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1. Grayzel, H. G., Heimer, C. B., and Grayzel, R. W.: New York St. J. M. 53:2233, 1953.
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4. Turell, R.: New York St. J. M. 50:2282, 1950.

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DOSAGE: One tablet of each t.i.d., after meals

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REFERENCES

1 Eggers, H.: "Lipotropic substances for the absorption of vitreous opacities," New York St. J. Med. 51:2255, 1951.

2 Kopetzky, S. J.: "Reversal of the biochemical processes in cases of cochlear and vestibular dysfunction," J. Int. Coll. Surg. 13:139, 1950.

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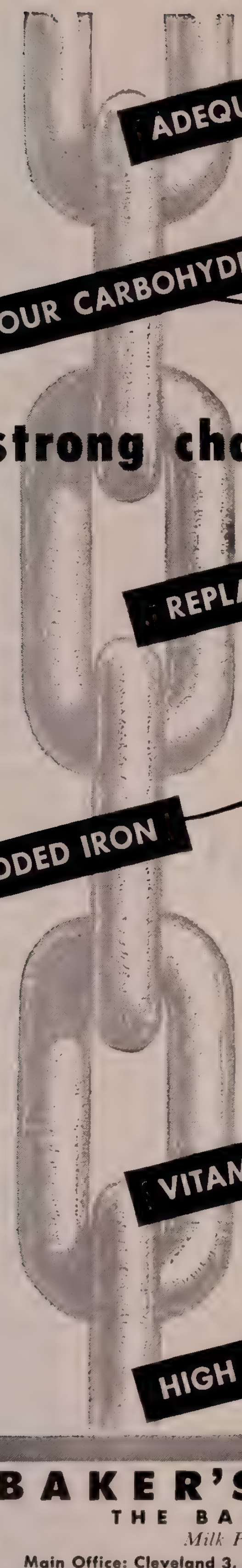

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1. Silbert, N.E.: GP 8(6):35 (Dec.) 1953.

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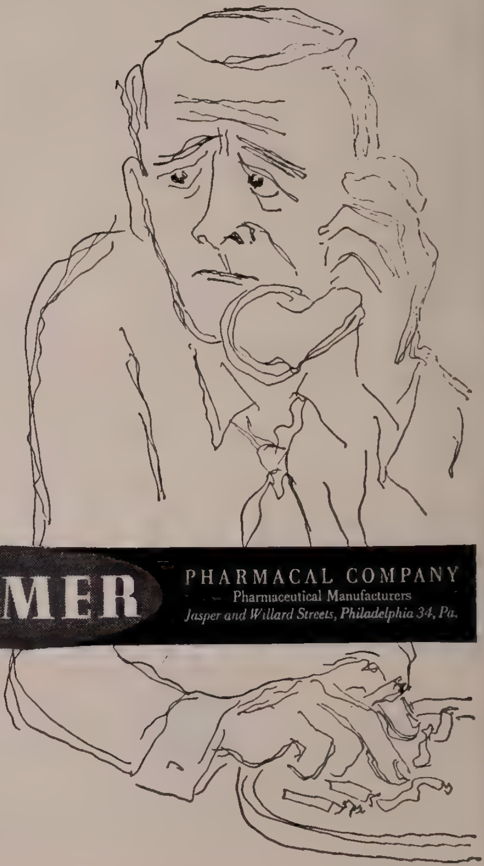

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1. Krantz, J.C. & Carr, C.J.: Pharmacological Principles of Medical Practice, Williams & Wilkins Co., Baltimore, Md., 1951.
2. Goodman, L. & Gilman, A.: The Pharmacological Basis of Therapeutics. The Macmillan Co., New York City, 1941.

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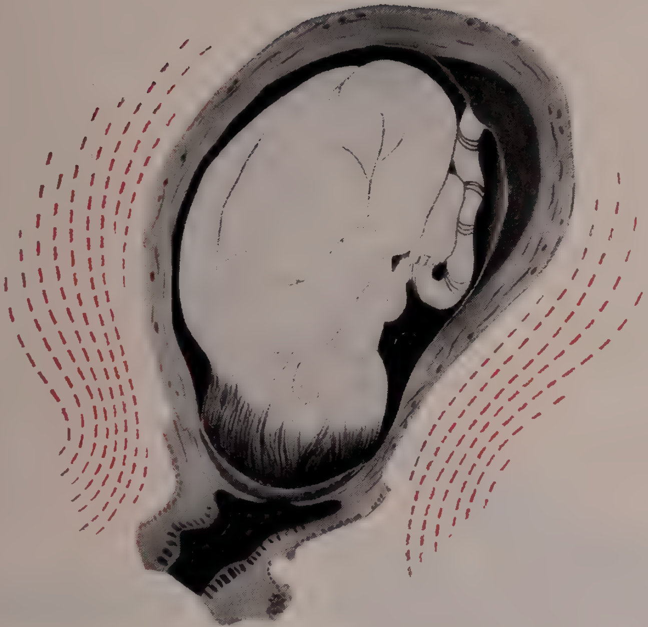

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*Kaufman, R. H.; Mendelowitz, S. M., & Ratzan, W. J.: *Am. J. Obst. & Gynec.* 65:269, 1953.

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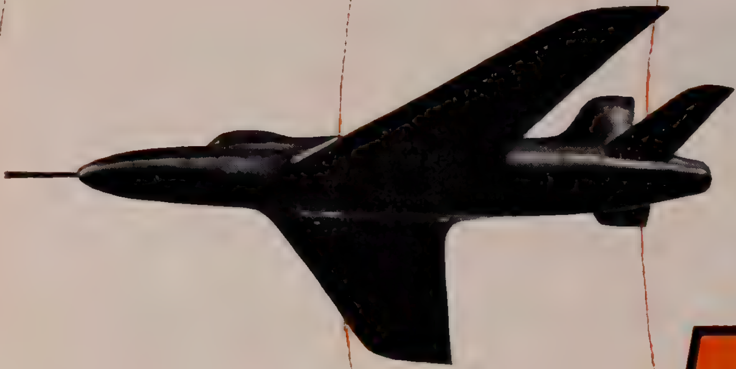

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EDITORIALS

Opinions of Readers

During the Annual Meeting of the Medical Society of the State of New York many doctors visiting the JOURNAL booth were questioned by members of the staff about the NEW YORK STATE JOURNAL OF MEDICINE. Somewhat over 350 people were interviewed during three and one-half days. Since the JOURNAL is published for the benefit of the membership, the opinions derived from the interviews could be taken as an indication of the satisfaction or dissatisfaction of the Society with its publication.

A majority of those interviewed were favorably impressed with the new format and expressed approval of the quality of the scientific articles. Nearly all thought that the index on the cover was a great convenience and a time-saver for busy readers. The use of color in the civil defense articles was approved by all but one doctor who thought that it might unnecessarily increase the cost of production. Actually, and for the information of others who might think the same, as long as color is used in the advertising section in the right places, no extra press run is involved in such use of color in the text. All readers were agreed that color lent increased interest and was arresting.

Many said they found the editorials indicative of the Society's thinking. About 100 said they read the editorials if nothing else in the JOURNAL. Nearly four out of five said they were too busy to read the long articles. Some suggested abstracts, but others were inclined to feel that abstracts did not always include the essential parts of a longer article, although admittedly for busy doctors having little time to read, abstracts in spite of some faults might possibly be considered. In view of these comments by readers themselves, authors submitting articles for publication in the JOURNAL might be well advised to shorten them. In this regard publication costs might be somewhat reduced since with shorter texts more material could be printed in less space. Also the volume of editor-author correspondence could be materially lessened.

Among those interviewed all were emphatic that the clinicopathologic conferences, the Cornell Conferences on Therapy, symposia, and postgraduate lectures were practical aids for busy doctors and asked for more frequent publication of the clinicopathologic conferences. Others requested more articles on the problems of legal medicine, and several would like to have the page listing the county society officers published more often. Many physicians would like more detailed summaries of the scientific articles.

The information obtained from these interviews has been worth while as a guide to the editors in their evaluation of the importance of various features of the JOURNAL.

Increase in Use of Hospitals

Much has been published about the increasing use of hospital facilities in this country. All physicians are aware of the trend. Very briefly the *Bulletin* of the Metropolitan Life Insurance Company discusses the reasons for and the extent of this growth.[1]

> Hospitals have been taking an increasingly important part in meeting the medical needs of the American people. In 1953 nearly 20 million patients were admitted to the 6,840 hospitals in the United States registered by the American Medical Association; this is two and three-fourths times the number of admissions twenty years ago. Population growth has been a relatively minor factor in this increase, the annual admissions per 1,000 rising from 57 to 126 between 1934 and 1953. Major factors in the growing use of hospitals have been the greater number of beds available and the decrease in the average length of stay per patient.
>
> The hospitalization of births has increased markedly in the past two decades, according to reports by the National Office of Vital Statistics. At present, about nine out of every ten babies are born in hospitals, compared with less than four out of every ten about twenty years ago. In large areas of the country, particularly in the Northeast and the Far West, the proportion now exceeds 98 per cent.

The proportion of deaths occurring in hospitals varies considerably for individual causes, the *Bulletin* says. In 1949 more than one third of all deaths from the cardiovascular-renal diseases, the dominant item in the total mortality picture, took place in hospitals. The proportion was about one half for such leading causes of death as malignant neoplasms, diabetes, influenza and pneumonia, and accidents. Other diseases are said to show even higher percentages of deaths in hospitals, the figure rising to more than 90 per cent for acute poliomyelitis and for appendicitis.

> An increasing number of people have been able to avail themselves of hospital services as

---

[1] Statist. Bull. Metropolitan Life Insurance Co. **35:** 5 (June) 1954.

a result of continued favorable economic conditions and the spectacular growth of voluntary hospital insurance on both an individual and a group basis. By the end of 1952 more than 91 million people in our country were protected against the costs of hospital care, or more than seven times the number covered only twelve years earlier. During this period the proportion of the total population in our country covered by voluntary hospital expense protection increased from less than one tenth to about three fifths. Even more rapid has been the development of surgical expense and medical expense insurance. Between 1940 and 1952 the number of people protected against surgical expense increased from about five million to more than 73 million, while those with medical expense coverage rose from less than three million to nearly 36 million.

The growing use of hospitals has resulted also from the marked increase in the facilities and services offered by these institutions.

With their modern facilities, services, and skilled medical and nursing personnel, hospitals have deservedly gained widespread acceptance among the American people.

Editorial Comment

A Doctor for Your Community. Under the heading, "Openings for Physicians in New York State," on page 2618 of this issue may be found a listing of various communities in the State requesting general practitioners of medicine.

From time to time, as such requests are received by the secretary of the Medical Society of the State of New York, they will be published for the information of those who may be seeking a location in which to practice.

For the information of communities seeking to have a physician locate in their areas, we respectfully refer them to a small pamphlet published by the Council on Medical Service, American Medical Association, 535 North Dearborn Street, Chicago, 10, Illinois. This booklet may also be obtained from the secretary of the Medical Society of the State of New York, 386 Fourth Avenue, New York 16.

Presidents of the American Medical Association. We are indebted to *Medical Economics*[1] for the following interesting research.

> The University of Pennsylvania has sent more of its graduates to the A.M.A. presidency than any other medical school—21 in all. That's almost twice as many as the second-ranking A.M.A. president-maker (Harvard, with 12), and three times as many as the third school (Columbia, with 7).
>
> Though 35 different medical schools have contributed graduates to the A.M.A. presidency, the top seven (Pennsylvania, Harvard, Columbia, N.Y.U.-Bellevue, Louisville, Jefferson, and Rush) have supplied some 60 per cent of the total.
>
> Of the 28 schools that supplied the other 40 per cent, six are now extinct. Among them was the alma mater of Nathan Davis, the only president to serve more than one term. This school closed its doors in 1840, seven years before the founding of the A.M.A.
>
> The first ten presidents took their M.D.'s at an average age of twenty-one, the next ten at twenty-two. Youngest of all was the son of a medical school professor, who became a doctor at eighteen (and president of the A.M.A. at forty-four).

---

[1] M. Economics 31: 21 (July) 1954.

Habit is the deepest law of human nature.—THOMAS CARLYLE

PRESIDENT'S PAGE

The Doctor in Civic Affairs

Dan Mellen, M.D.

Perhaps no citizen has a better opportunity than the doctor of medicine to observe the progress and the deficiencies of the community in which he lives and works. Nearly all activities of such a community are related to the health and welfare of its inhabitants and, therefore, bear upon the professional problems of the doctor of medicine and his patients.

Often one hears, and seemingly more often of recent years, among a group of doctors either at a social or a professional function something about what the community needs and what can be done about it. In community affairs what benefits one benefits all in most instances. And the doctor of medicine, going as he does into every home in whatever part of the locality, is in a good position to place the influence and respect for the profession behind many beneficial changes.

In addition to a well-run and well-equipped hospital, does the community need more and better nursing homes, recreational facilities? Does it have a chamber of commerce to promote employment by bringing in new business and industry? How about parks, playgrounds for the children and adults, a clean and sanitary beach or swimming pools, picnic areas? Is air pollution a problem? Are the increasing numbers of the aged adequately cared for? Is community planning to reduce hazards of traffic and to provide adequate housing receiving the attention it deserves? All these things the alert physician can observe for himself day by day in the locality where he works. Surely they deserve a place in his thoughts as he makes his rounds.

The tradition of the medical profession has always been that of forward-looking men and their accomplishments. They rode with saddle bags on the bridle paths or drove their horses along the hard and rutted roads of our pioneer settlements to bring their healing art to far-flung hamlets or isolated farms. Their voices were raised in the town meetings which brought orderly government to growing communities. When the science of public health became a necessity to control the ravages of infectious disease, physicians were among the first to further it. They have pioneered and implemented every extension of medical service to the public as the country developed.

Many in recent years have been so occupied with the burden of their growing professional work that they have tended to become cloistered in their offices and hospitals. They have not participated as they formerly did in the other than professional work of their communities. It is true that the isolated villages and towns have grown and merged, that the country has in many places become industrialized, the farms mechanized, that the civic problems of a modern age are different from those of a former day. But people are still people, and they do not live by bread alone.

The needs of modern communities are vast and complex. The best thought and constructive imagination of all our citizens are required to meet them. Are we to think that merely because conditions are different, the old energy, the old urge to leadership, the old traditions of independent thought and action that characterized the early physicians of the country are waning? I for one do not think so.

Dan Mellen

Dramamine's® Effect in Vertigo

Dramamine has become accepted in the control of a variety of clinical conditions characterized by vertigo and is recognized as a standard for the management of motion sickness.

Vertigo, according to Swartout, is primarily due* to a disturbance of those organs of the body that are responsible for body balance. When the posture of the head is changed, the gelatinous substance in the semi-circular canals begins to flow. This flow initiates neural impulses which are transmitted to the vestibular nuclei. From this point impulses are sent to different parts of the body to cause the symptom complex of vertigo.

Some impulses reach the eye muscles and cause nystagmus; some reach the cerebellum and skeletal muscles and righting of the head results; others activate the emetic center to result in nausea, while still others reach the cerebrum making the person aware of his disturbed equilibrium. *Vertigo may be caused by a disease or abnormal stimuli of any of these tissues involved in the transmission of the vertigo impulse, including the cerebellum and the end organs.*

A possible explanation of Dramamine's action is that it depresses the overstimulated labyrinthine structure of the inner ear. Depression, therefore, takes place at the point at which these impulses, causing vertigo, nausea and similar disturbances, originate. Some investigators have suggested that Dramamine may have an additional sedative effect on the central nervous system.

Repeated clinical studies have established Dramamine as valuable in the control of the symptoms of Ménière's syndrome, the nausea and vomiting of pregnancy, radiation sickness, hypertension vertigo, the vertigo of fenestration procedures, labyrinthitis and vestibular dysfunction associated with antibiotic therapy, as well as in motion sickness.

Any of these conditions in which Dramamine is effective may be classed as "disease or abnormal stimuli"* of the tissues including the end organs (gastrointestinal tract, eyes) and their nerve pathways to the labyrinth.

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The site of Dramamine's action is probably in the labyrinthine structure.

---

*Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP *8*:35 (Nov.) 1953.

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SCIENTIFIC ARTICLES

Present Status of Chemotherapy in Cancer

CORNELIUS P. RHOADS, M.D., NEW YORK CITY

(From the Department of Pathology, Cornell University Medical College, and Sloan-Kettering Institute for Cancer Research, Memorial Center for Cancer and Allied Diseases)

A PRODIGIOUS effort has been made in recent years to achieve improved control of cancer. That this effort has met with only limited success is largely the result of two factors. First, the principal emphasis has been on more extensive application of procedures already established as useful, even though they are difficult, cumbersome, and capable of limited improvement only. Second, the erroneous but widely held belief has prevailed that really effective means for the control of cancer cannot be attained until some wholly new and fundamental concept of biology develops. Because of this misconception, a substantial part of the public and private funds available for cancer work has been used to extend our knowledge of the natural sciences in general. As a consequence, studies designed specifically to achieve new means for cancer cure and prevention have progressed slowly.

We now have had ten years experience with an intensive, heavily financed program of public education in the importance of early diagnosis of cancer and of professional education in the most effective application of existing methods of diagnosis and extirpative therapy. Two definite conclusions can now be drawn: First, the disease can be detected in a somewhat increased number of cancer patients at a stage when curative therapy is possible. Second, extirpative procedures —mostly surgical—can be made to achieve moderately improved rates of cure.

Both of these, however, can be accomplished only at an expense prohibitive to the average person. We observe, therefore, over the past decade, a lessened death rate from certain forms of cancer, particularly neoplasms of accessible tissues. This has been submerged under a greatly increased death rate from cancer in general because of the greater average age of the population and because of an enormous increase in the incidence of cancer of the lung.

It is clear from these facts that a radical revision of existing policy is required if we are to achieve substantially better cancer control. We now know the limits of extirpative therapy and early diagnosis by existing means. Manifestly something new is required, some means for the control or cure of disseminated cancer. In the foreseeable future at least 65 per cent of all patients with cancer will fall into the group having widely disseminated disease, and, furthermore, this group will increase rather than lessen in number.

Efforts to achieve the control or cure of patients with disseminated cancer have met with little encouragement from the medical profession. Clearly, the reason for this lack of interest is the ingrained conviction that no means now exist or ever can exist, beyond the administration of sedatives, for bringing relief to the patient with intractable neoplastic disease. This attitude toward the patient with advanced cancer, which often closes the door to even palliative care, has driven the patient and his family into the arms of unreliable physicians. It has engendered on the part of the public a deep distrust of organized medicine which is widely viewed as unwilling to spend time and energy in the alleviation of a medical problem of very substantial extent and severity. Finally, it has enormously handicapped productive research toward cancer chemotherapy.

Now, however, we are coming to the end of the period devoted to defining the limits of early diagnosis and of extirpative treatment, a period associated with a rising death rate from cancer

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, General Sessions, May 13, 1954.

and an increasing public sensitivity to the serious nature of the problem. During this decade real progress actually has been made toward the control of disseminated disease, but it has received little attention—and that often of a critical nature.

It is now clear, however, that our efforts to achieve new biologic principles upon which can be based a scientific program to achieve chemical control of advanced cancer have met with success. Chemotherapy for cancer in man, although limited, difficult, and not curative, is a fact today. Furthermore, the cure of transplanted cancer in animals now can be accomplished with considerable regularity for a substantial number of animal tumors. Finally, every indication exists that the new principles developed can be effectively employed to achieve the discovery of new agents of greater usefulness. In short, despite the skepticism of the uninformed and the criticism of the disinterested, substantial progress has been made toward the control of disseminated cancer in human beings by chemical means, and much more is to be hoped for.

That progress has been made can be supported by the following evidence: It is now clear that the cancer cell, even though it arises from the existing cellular structure of the body, can be regarded and attacked as just another invading microorganism. The cancer cell has been disclosed as differing in substantial degree from its normal parents and siblings, to such a degree, indeed, as to permit the temporary inhibition of its growth in man and its complete destruction in many instances in experimental animals. The cancer cell, in short, now can be made to perform the tricks which characterize disease-producing parasitic microorganisms.

This means that the postulates of Koch, long established as proof that an organism is etiologic of a particular disease, now have been complied with. They can now be applied to cancer cells today as well as they could to the tubercle bacillus seventy years ago. The original postulates of Koch are three: (1) The organisms must be regularly present in the affected tissues; (2) it must be possible to cultivate the organism in pure form; (3) it must be possible to reproduce the disease by inoculation of the organism. To these requirements, there now has been added a fourth, that of acquisition by the cell of resistance to therapeutic agents.

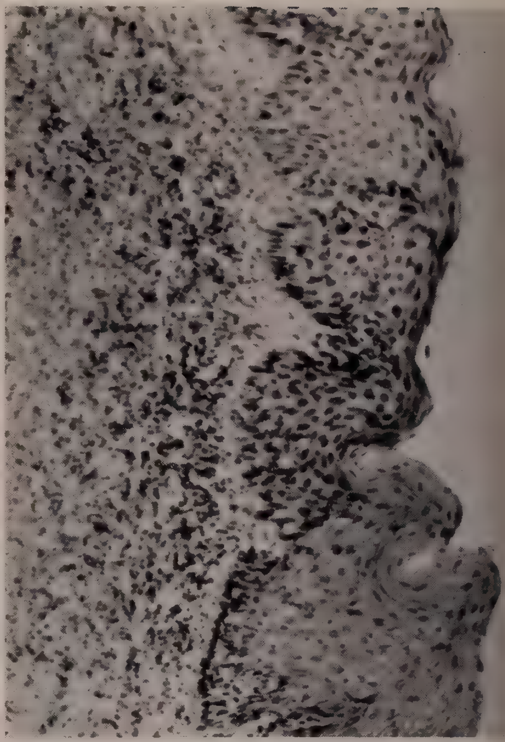


FIG. 1. Carcinoma in situ of the cervix uteri.

The demonstration of neoplastic cells in the lesion they cause is as old as cytologic microscopy, dating from the days of Johannes Mueller and Virchow. Characteristic stromal reaction to these cells is so obvious and so long recognized that its analogy to the reaction of tissue to invading bacteria has been overlooked. We have searched so long for a cause of the cancer cell that we have failed to recognize it as itself an etiologic agent. As far as the patient is concerned, it makes no difference whether the cell arises by action of a virus, a chemical, or ionizing radiation. Similarly, once tuberculosis is progressive, it makes no difference whether the bacilli are inhaled from someone's sneeze or distributed from a long quiescent primary tubercle. In both instances we must achieve the selective chemical destruction of the invaders if they are too far disseminated to permit their total removal by surgical or other means.

In Fig. 1 is shown a photomicrograph of in situ carcinoma of the cervix uteri. Here the preneoplastic cells, obviously different and sharply demarcated from the normal ones, have not broken through the basement membrane. Nevertheless, the inflammatory reaction to them is quite as intense as it might be to a deposition of

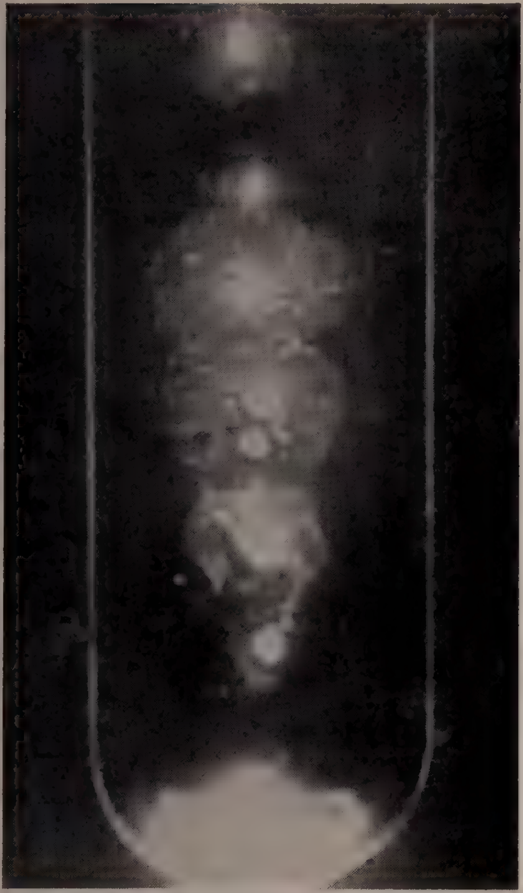


FIG. 2. Growth in roller tubes of human cancer cells derived from the cervix epithelium. (*Courtesy Alice E. Moore, M.D., Sloan-Kettering Institute for Cancer Research*)

pathogenic microorganisms in this area. This reaction can mean only that the neoplastic cells to which the reacting cells respond differ sufficiently from the normal structures from which they were derived to evoke a protective response on the part of the host.

The second postulate requires that the suspect etiologic organisms be cultivated in pure form outside of the human body, in glass or in experimental animals. This has now been accomplished for neoplastic cells (Figs. 2, 3,[1] 4, and 5).

The third postulate requires that the cultivated microorganisms, upon reinoculation into the normal animal or human, produce lesions of the type from which they were originally cultivated. This has now been accomplished for cancer cells. In our laboratory typical neoplastic cells, maintained for months outside of the human body in pure culture, have been reimplanted subcutaneously in the patient from which they were originally derived.[2] This was done with the consent

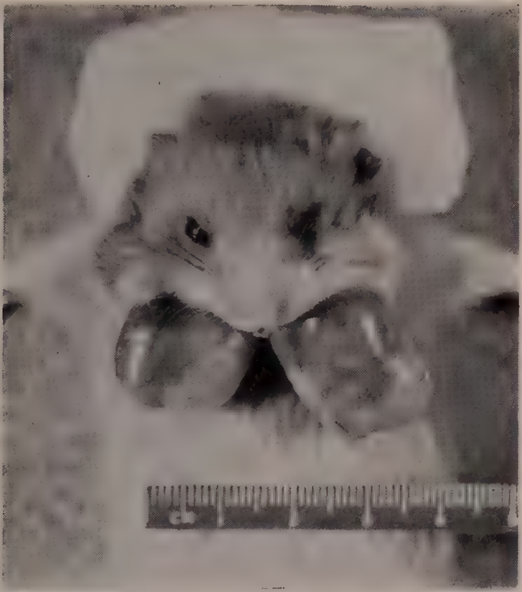


FIG. 3. Growth in experimental animals, cortisone-treated, of implants of human fibrosarcoma. (*Courtesy Helene W. Toolan, M.D.*)

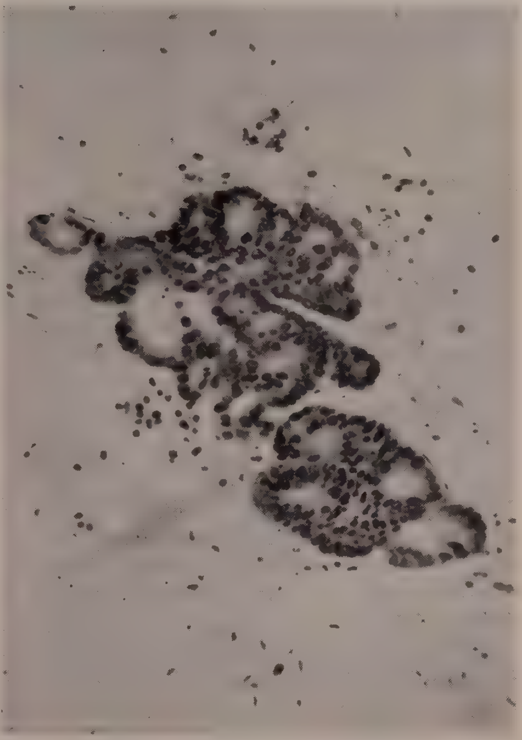


FIG. 4. Hepatic metastasis of an adenocarcinoma of the large intestine, as removed at operation.

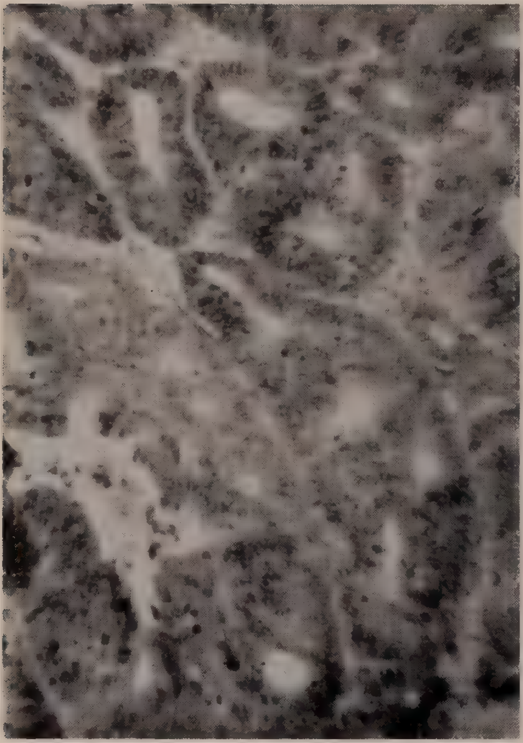


FIG. 5. Same tissue as shown in Fig. 4 after twelve days growth in animal transplant. It will be observed that the histologic structure is even more typical after transplantation than it was in the original metastatic deposit.

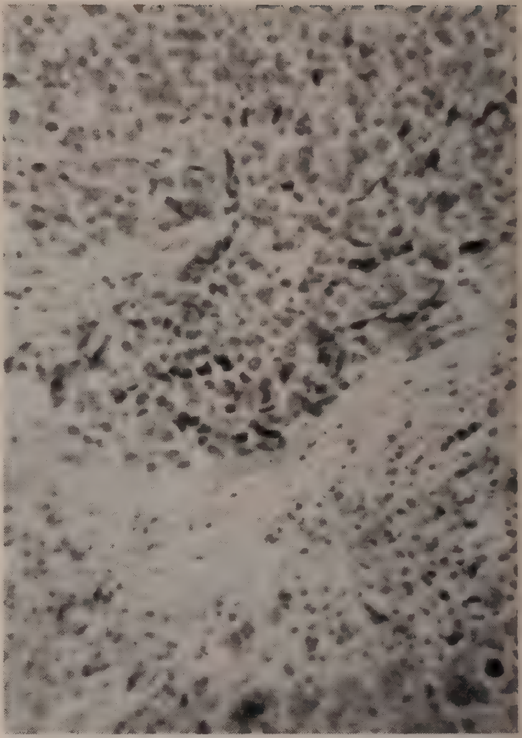


FIG. 6. Deposit of metastatic epidermoid carcinoma of the cervix removed from the inguinal node of the patient.

and the full knowledge of the patient involved. The tissue grew well, and upon excision and examination four weeks after inoculation, revealed a cytologic structure indistinguishable from the cultured cells and from the original implant from which the culture was made (Figs. 6, 7, and 8).

The fourth characteristic of invading microorganisms, their ability to develop resistance to therapeutic agents which inhibit or destroy many, but not all, of the organisms, now has been established for neoplastic cells of experimental animals and almost certainly of man. The first demonstration was that of Burchenal[3] and is shown in Fig. 9.

The cells of mouse leukemia, which grew despite the suppressive action of agents functioning as antimetabolites of folic acid, were transplanted into successive generations of antifolic-treated animals. In this manner all leukemic cells except those with antifolic resistance were suppressed and an adapted strain of cells produced which is completely resistant to these compounds. This principle has been extended by Law[4] in a number of animal neoplasms to a point at which the neoplastic cells are actually dependent upon the agent which strongly inhibits the growth of their forerunners and close relatives.

A similar acquisition of resistance to growth-suppressing therapeutic agents has been amply established as characteristic of many pathogenic and other bacterial strains. Penicillin-resistant staphylococci and streptomycin-resistant tubercle bacilli present serious therapeutic problems at the present time. The ability to demonstrate similar properties as acquired by the neoplastic cell is the final proof that it can be similarly regarded and treated as another invading microorganism.

Cancer and its control have emerged from the mysterious and unapproachable areas of medical investigation. This is the consequence of the demonstration that the neoplastic cell has many properties in common with conventional bacterial invaders. Hence an orderly program of research leading to cancer control could be established by the methods which have achieved the cure of bacterial disease. This has involved a serious effort to develop therapeutic chemicals

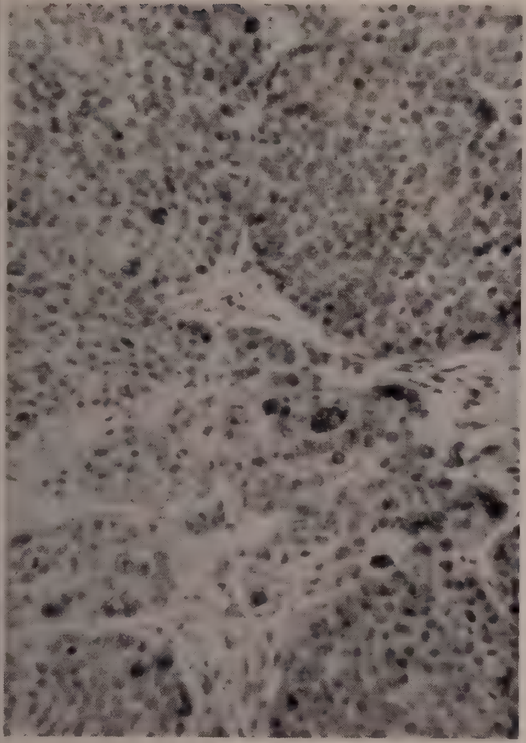


FIG. 7. Same tissue as shown in Fig. 6 twelve days after transplantation in the experimental animals.

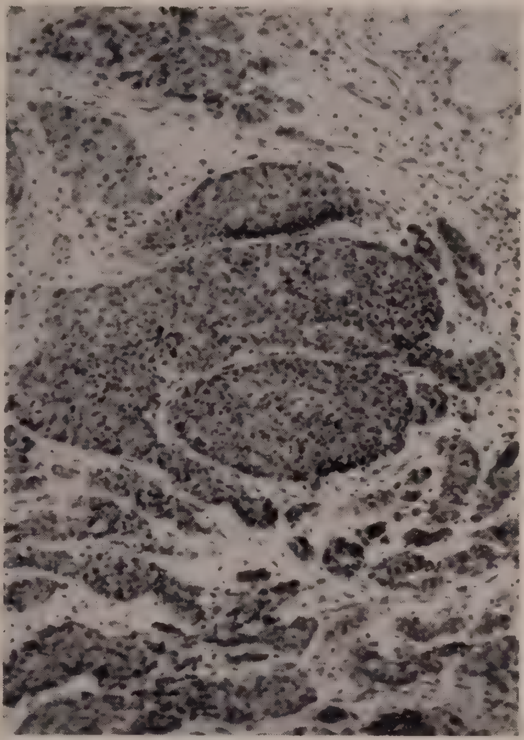


FIG. 8. Nodule which grew following the subcutaneous implantation of third generation of neoplastic cells shown in Figs. 6 and 7 in the donor patient.

acting to inhibit selectively the growth of cancer as compared with any normal cells of the body. Much evidence justifies this approach, and pilot success has been achieved.

For over fifty years cancer of the breast has been shown to be susceptible to inhibition by the removal of the sources of those chemicals (hormones) which are required for the growth of normal breast tissue. This principle was extended by Huggins[5] in 1941 to the control of prostatic cancer by the removal, through castration, of the testicular androgenic stimulus to the growth of prostatic tissue. Once this had been demonstrated, a similar effect obviously could be exerted by treatment of the male individual with feminizing chemicals of the estradiol type.

This was our first chemotherapeutic approach to the restraint of cancer growth in human beings. It was based upon the similarity of the neoplastic cell to its normal prototype and the susceptibility of the latter to inhibition by chemicals capable of neutralizing those chemicals required for normal growth of the tissue involved. The therapeutic effects of the administration of testosterone to women with mammary cancer are too well established to warrant comment. The use of cortisone in the control of neoplasms of lymphoid tissue, one highly susceptible to inhibition and indeed to actual destruction by chemicals with adrenocortical activity, is another example of the restraint of cancer by chemicals which injure normal related structures.

The second advance in the chemotherapy of cancer came through the development of the nitrogen mustards[6] and similar compounds capable of exerting radiomimetic effects (effects simulating those of ionizing radiation).[7] These compounds, the products of military research during World War II, exert toxic effects in proportion to the rates of growth of the affected cells. Since some neoplasms grow with speeds approaching those of the most rapidly reproducing normal tissue of the body, they can be strongly inhibited by these agents. Usually, however, the effect takes place only at therapeutic levels which exert some adverse effect upon rapidly reproducing normal tissue, as of the intestinal lining, oral mucosa, and hematopoietic structure. Presumably the inhibition of growth of the neoplastic

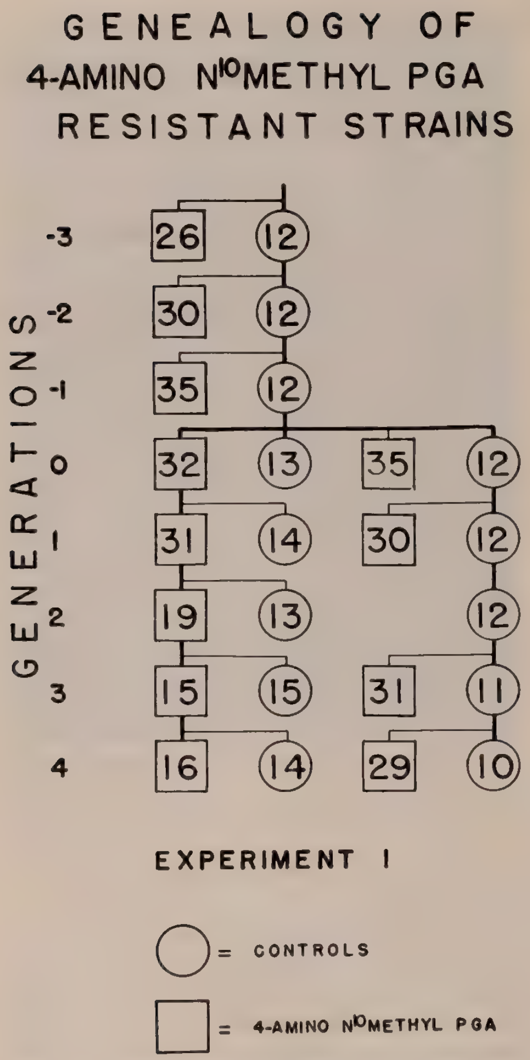
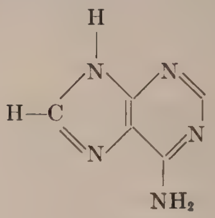


FIG. 9. Development of resistance to therapeutic agents by neoplastic cells of experimental animals.

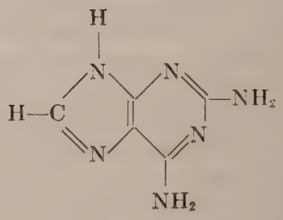
cells of acute leukemia in man by compounds negating folic acid activity[8] is exerted by a similar mechanism as part of a toxic effect proportioned to the rate of growth of the affected cells. A mass of evidence indicates that folic acid is required for the replication of all cellular nuclei, a process without which division cannot take place. Hence, the effects of antifolics are again in proportion to the rate of cell division, because of the need of division for folic acid and so the sensitivity of this essential function to lack of folic acid.

More recently, however, a new principle has been developed, upon which it seems possible that truly specific cancer chemotherapy can be developed. This principle is that each kind of cell has its own specific and characteristic need for certain chemicals that function as repair or building blocks for the nucleic acid of which the hereditary structure is principally composed, and which must be duplicated when the cell divides. This principle of "heterogeneity of nucleic acid anabolism" was first established by Bendich[9] and subsequently confirmed in a number of laboratories. It affords an explanation of the highly specific effects upon particular types of cells which are capable of being exerted by analogs of nucleic acid components. The antimalarial action of Daraprim, developed by Hitchings of the Wellcome Research Laboratories, is an example.

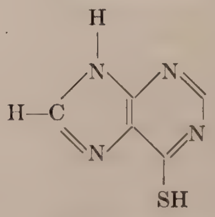
Based upon this principle, a series of compounds has been synthesized with a molecular configuration likely to inhibit selectively cells with particular requirements for their normal analogs. The close chemical relationship between the compound adenine, a normal constituent and required building block for the repair of cellular nucleic acid, and the compounds 2, 6-diaminopurine and 6-mercaptopurine* is shown below:



Adenine



2,6-Diaminopurine



6-Mercaptopurine

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* Synthesized by Dr. George Hitchings of the Wellcome Research Laboratories.

These modified adenines are capable of exerting highly specific effects in blocking the ability of certain cells to reproduce. In the case of special cell types highly specific, injurious effects can be exerted by these compounds.

Test of these and similar compounds against normal[10] and neoplastic cells of animals and man growing side by side in roller tube tissue cultures has revealed their abilities to induce highly specific and selective toxic effects.[11] Despite the fact that these two types of cells are growing at the same rate, complete destruction of one without serious injury to the other can be regularly demonstrated. This is the first proof of the ability of compounds to exert on cancer cells specific and selective cytotoxic effects as characteristic as those exerted upon certain bacteria by chemicals with antibacterial chemotherapeutic activity.

Not only is selective cancer restraint possible in the test tube, but also it can be demonstrated easily in the living animal. Indeed, the search for agents capable of evoking this type of effect has only been successful because promising compounds can be picked out by their ability to restrain transplantable cancer in laboratory rodents. These neoplasms can be employed for reproducible experiments on almost any scale and so have been enormously valuable. Only recently, however, has anything more than the transient restraint of their growth been possible. In the last year or two, however, with the acquisition of new agents exerting highly specific effects, complete destruction (cure) of these neoplasms has become a standard procedure.

In our laboratories, in experiments by Drs. Stock, Sugiura, Philips, Clarke, and their associates[12] in more than 2,000 experimental animals bearing six different types of transplantable cancer, over 70 per cent of the neoplasms have been completely destroyed with cure of the hosts. This is the case despite the fact that well-established neoplasms were employed, and the animals were observed for considerable periods after the tumors had disappeared. Further proof of the total destructive power of the chemotherapeutic agents used is at hand in the demonstrable failure of the implanted tumor in the treated animal to grow when back-transplanted into normally susceptible, untreated animal hosts.

It may well be argued that the ability to control or cure transplanted neoplasms in mice has no relation to the cure of cancer in human beings. This possibility, of course, exists and is the first to be acknowledged by those who strive for effective cancer chemotherapy in man. It is nevertheless true, however, that almost all of the therapeutic procedures that are effective in man today have been contrived by the route of animal experiments. Despite the dissimilarities between species a new biologic principle established in one is usually applicable to another, even though some modification may be required.

TABLE I.—Sequential Treatment of Acute Leukemia in Children

	Number of Patients	Per Cent Surviving 1 Year or More
No treatment	218	5
Cortisone and a-methopterin	154	29
A-methopterin, cortisone, and 6-mercaptopurine	52	52

There are, furthermore, substantial indications that the specific cancer chemotherapeutic activity exerted in experimental animals by newly devised chemicals already can be converted into limited therapeutic usefulness in human beings. The best example of this is, of course, found in the neoplasms of hematopoietic and lymphatic tissue, but there can be no doubt of our ability to restrain temporarily other neoplasms for very brief periods of time.

An outstanding example of progress in the field of cancer chemotherapy is at hand in the newly described compound 6-mercaptopurine or Purinethiol. This was synthesized by Dr. George Hitchings and his associates of the Wellcome Research Laboratories under a cooperative enterprise with the Sloan-Kettering Institute, with financial assistance from the Charles F. Kettering Foundation. This compound appears to be one of the most useful so far devised for the transient control of acute leukemia in children and adults, as well as of chronic myeloid leukemia. It seems to have little effect upon Hodgkin's disease, lymphoid, or other neoplasms.

In a recent symposium attended by representatives of 25 clinics that have employed this compound, the reports were remarkably uniform. By its use a high incidence of transient improvement can be exerted in children with acute leukemia and, for the first time, in a small number of adults with this disease. In children the addition of this compound to the group of antileukemic agents, which includes cortisone and chemicals with antifolic activity, has brought the percentage of patients surviving for over one year from 29 per cent to 52 per cent (Table I). Many of these children are comfortable and able to lead normal lives during their remission periods, even though their disease will inevitably recur, as far as we know now.

Summary

The development of cancer chemotherapy has been a prolonged, expensive, and arduous enterprise. It has taken place in the face of skepticism and even antagonism expressed by those who concern themselves with the neoplastic process as an abstract problem and not with its control as a proper function of medical research.

Adequate proof is at hand, however, that transplantable cancer can be destroyed completely in experimental animals and that certain forms of cancer can be transiently restrained in human beings. Rapidly accumulating new information proves that specific in vitro cancer cytotoxic effects can be exerted by the series of compounds now available. We may thus hope for a future, perhaps not too far distant, when chemicals will be available which will be as restraining of one or the other form of cancer as certain antibacterial agents are today for one or the other bacterial strain.

In any event, we must, in light of all available evidence, strive to attain this desirable end.

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ANNOUNCEMENT

SECTION ON ALLERGY ESTABLISHED

A new scientfiic section, the Section on Allergy, has been established by the House of Delegates of the Medical Society of the State of New York and will hold its first meeting at the 149th Annual Meeting, May 9 to 13, 1955, at the Hotel Statler, Buffalo.

Officers of the new section are:

Carl E. Arbesman, M.D., *Chairman*....................................Buffalo
William B. Sherman, M.D., *Vice-Chairman*.....................New York City
Harry Leibowitz, M.D., *Secretary*....................................Brooklyn
Harry Leibowitz, M.D., *Delegate*....................................Brooklyn

Any member interested in reading a paper at the 1955 meeting of the new Section on Allergy is requested to communicate with the chairman, Dr. Carl E. Arbesman, 40 West North Street, Buffalo 2, New York.

Feminization in an Adult Male with Adrenal Cortical Carcinoma

WILLIAM J. STAUBITZ, M.D., F.A.C.S., OSCAR J. OBERKIRCHER, M.D., MELBOURNE H. LENT, M.D., GROSVENOR W. BISSELL, M.D., AND WELLS E. FARNSWORTH, PH. D.,* BUFFALO, NEW YORK

(From the Roswell Park Memorial Institute, and the Departments of Urology and Medicine, University of Buffalo School of Medicine)

FEMINIZATION in the male due to adrenal cortical carcinoma is a rare phenomenon. The literature contains less than 20 cases of adrenal tumor associated with increased urinary excretion of estrogens and feminization in the male. During the past year the authors had an opportunity to treat and study such a case at the Roswell Park Memorial Institute. Both androgen and estrogen studies have been done in this case and are presented with a review of the literature.

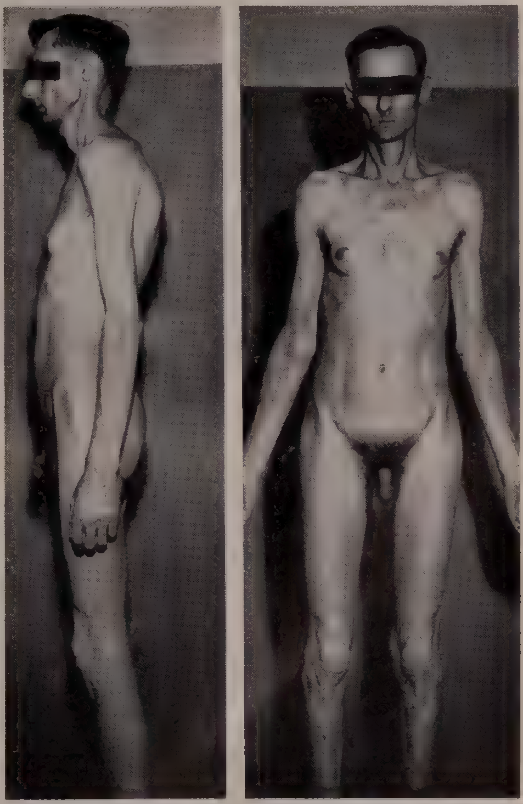

FIG. 1. Preoperative photograph of patient. Note bilateral enlargement of breasts.

Case Report

M. S., a thirty-eight-year-old white male, was first seen at the Roswell Park Memorial Institute on September 27, 1948 (Fig. 1). His chief complaints were upper chest pain, headaches, weight loss of 10 pounds, enlargement of both breasts, and loss of libido.

Physical examination showed a thin white male. He had some small shotty nodes in the posterior cervical triangle and in the right submaxillary area. Bilateral gynecomastia and atrophy of both testicles were found. Blood pressure was 125/90. Hemoglobin was 14.4 Gm., red blood cells 4,920,000 per cu. mm., white blood cells 7,750 per cu. mm. with normal differential. Urine was clear and yellow; specific gravity 1.020; reaction acid; albumin negative; sugar negative; no cells seen in sediment.

X-ray of the chest showed some irregular thickening at the hila. Lung markings were slightly increased in the lower portion of both lung fields. On the lateral view of the chest there was some increased density in the region of the hila and a suggestion of nodulation in that area. X-ray of the skull was normal. It was recommended that the patient be hospitalized for further examination and study. However, the patient refused hospitalization at that time.

The patient was seen again on March 5, 1952. At that time he was complaining of pain in his right upper abdomen and right lumbar area. There had been a progressive, painful enlargement of his breasts. The libido was still absent.

Physical examination showed a palpable soft node in the right submaxillary region. He had shotty lymphadenopathy in both posterior cervical triangles. His breasts were enlarged, and the nipples were tender. A mass was palpable in the right flank. Both testes were atrophic. Intravenous pyelograms at that time showed good function of both kidneys. Both renal collecting systems were well outlined and appeared normal in structure. Ureters appeared to be of normal position and size. No evidence of tumor or obstructive disease was found at this time. The patient was given an appointment for a chest

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* By invitation.

Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Urology, May 13, 1954.

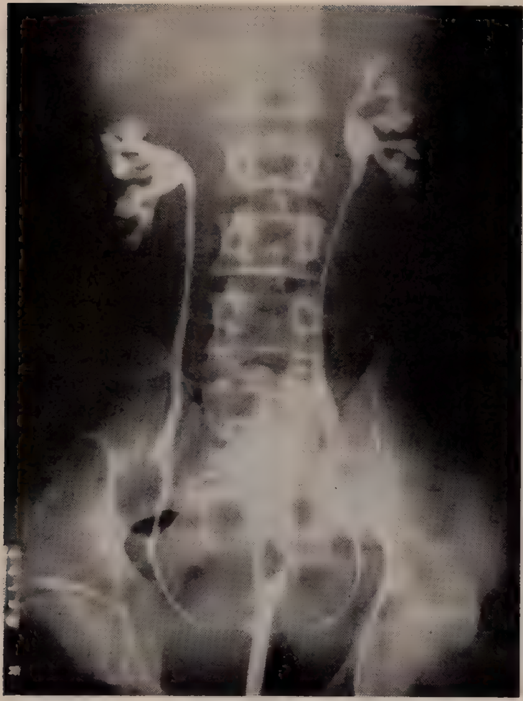

FIG. 2. Retrograde pyelograms showing downward displacement of right kidney.

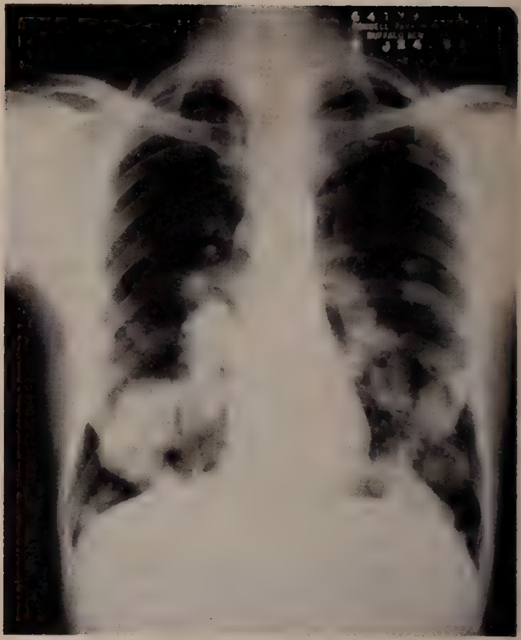

FIG. 3. Chest x-ray showing multiple lung metastases.

x-ray and retrograde pyelograms. However, he did not keep this appointment.

He was next seen April 27, 1953. Accompanying him at that time were chest x-rays taken on December 29, 1952. These x-rays showed numerous nodules of various sizes in both lower lung fields.

Physical examination showed a thin, emaciated man, forty-three years of age, with sunken cheeks and other evidence of weight loss. Temperature was normal. Blood pressure was 130/78. Breath sounds in both lower lobes were rough. There were a few rales in each lung base. Examination of his abdomen showed tenderness in the right upper quadrant. There was a questionable mass in the right subcostal and flank region which was thought to be an enlarged right kidney. Rectal examination showed no masses. The prostate felt normal. His genitalia showed atrophy of both testes. His breasts were both enlarged. There was tenderness of the right nipple. There was some small, shotty adenopathy in both axillae and in both posterior cervical regions.

Laboratory findings were as follows: urinalysis normal; hemoglobin 8.8 Gm., red blood cells 4,160,000, white blood cells 9,700 with normal differential; sedimentation rate 21 mm. per hour; blood sugar 81 mg. per cent; blood nonprotein nitrogen 31 mg. per cent; serum albumin 3.54 Gm. per cent; serum globulin 3.43 Gm. per cent; urine culture sterile.

On April 28, 1953, cystoscopy was performed. The urethra and bladder were normal. Catheters were passed easily up to each kidney pelvis. There was normal function from each kidney with the indigo carmine test. Retrograde pyelograms were done. Study of the pyelograms showed normal structure of each collecting system. However, the pelvis and calyces on the right side seemed to be somewhat depressed from their normal position (Fig. 2). No definite mass could be made out above the collecting system. X-ray of the chest showed the cardiac and mediastinal shadows to be within normal limits. Scattered throughout the lower half of both lung fields were numerous nodular shadows of increased density varying from 0.5 to 2 cm. in diameter (Fig. 3). The bony cage was intact. The general appearance was that of metastatic involvement of both lungs.

On April 28, 1953, under intravenous Pentothal anesthesia, an aortogram was performed. In this procedure 40 cc. of 70 per cent Urokon were injected into the abdominal aorta at the level of the twelfth thoracic vertebra. Films taken after this injection showed the midportion of the abdominal aorta to be well outlined. The renal, hepatic, and splenic arteries were well demonstrated and normal in appearance. There was no definite evidence of tumor pathology (Fig. 4).

On May 9, 1953, a presacral air insufflation was

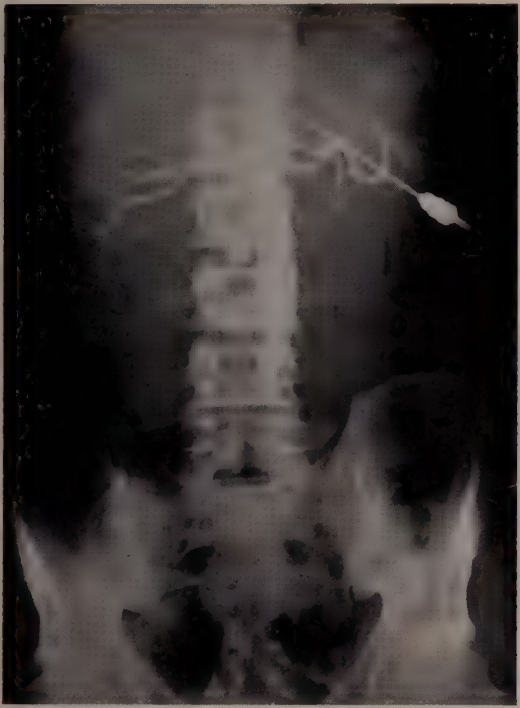

FIG. 4. Aortogram.

carried out (Fig. 5). X-rays following this procedure showed the left kidney to be well outlined. The lower border of the right kidney was well defined and outlined and showed no evidence of abnormality. The upper border of the right kidney was poorly defined. There was a shadow of increased density in the region of the upper pole of the right kidney. This was suggestive of tumor pathology. A preoperative 17-ketosteroid determination of a twenty-four-hour urine collected on May 13, 1953, was 29.3 mg. per twenty-four hours.

On May 14, 1953, under intratracheal gas-oxygen-ether anesthesia the mass was approached through a right flank incision. During the procedure it was found that there was a huge tumor occupying the area of the right adrenal and upper pole of the right kidney. This mass along with the entire kidney was removed (Fig. 6).

Pathologic examination showed a tumor mass measuring 12 by 10 by 7 cm. It was attached to the right kidney at the upper pole by dense, fibrous adhesions. The tumor presented a mottled appearance, being pinkish white in coloration with other areas of yellow and red. In these areas the tissue showed degenerative changes. Microscopic examination showed a diffuse carcinoma with the tumor cells being rather large with prominent nucleus and granular cytoplasm. This tumor appeared to have its origin in the adrenal cortex (Fig. 7).

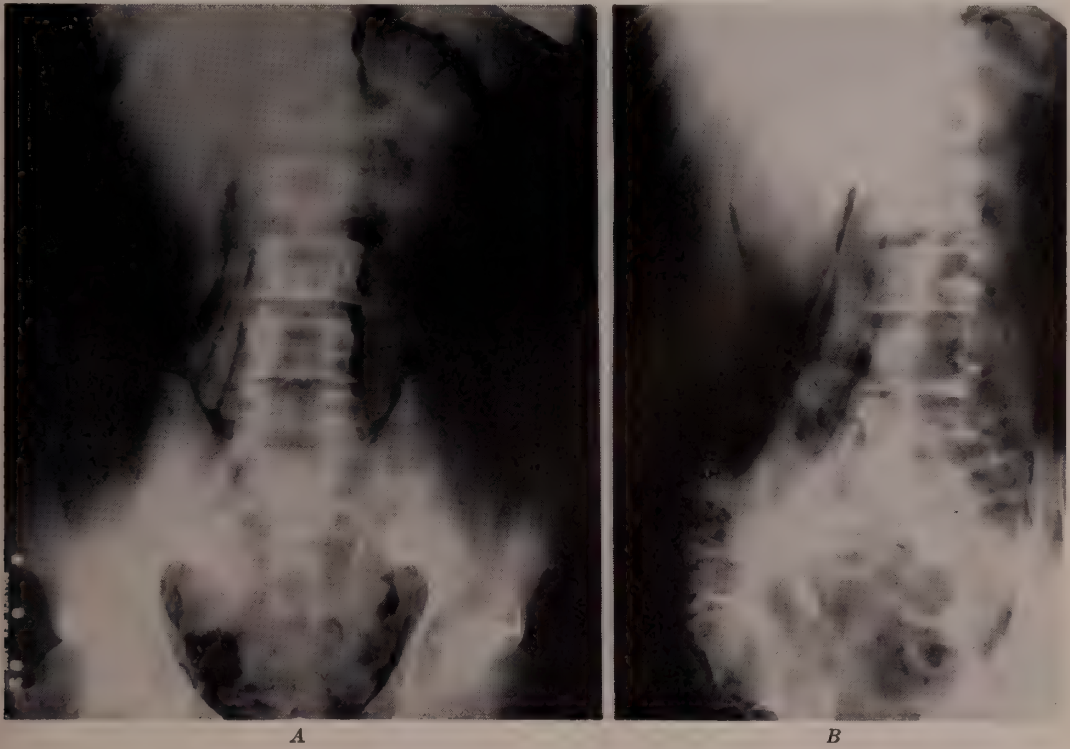

FIG. 5. Presacral air insufflation. Note mass above right kidney: (*A*) anteroposterior view; (*B*) oblique view.

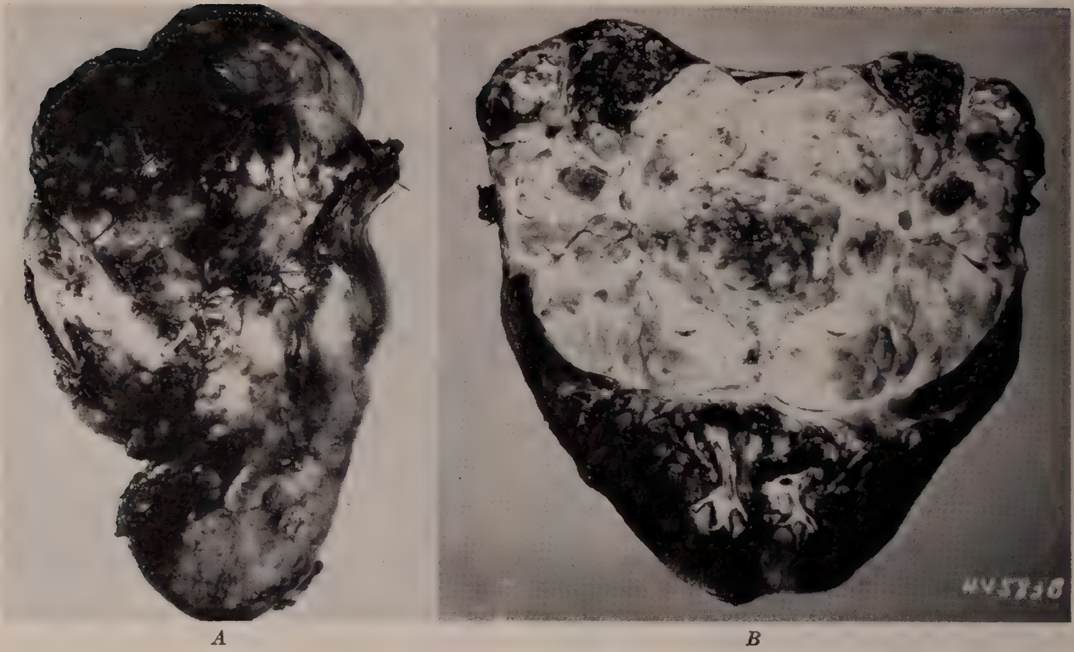

FIG. 6. Gross specimen of right adrenal tumor with attached kidney: (*A*) uncut specimen; (*B*) cut specimen.

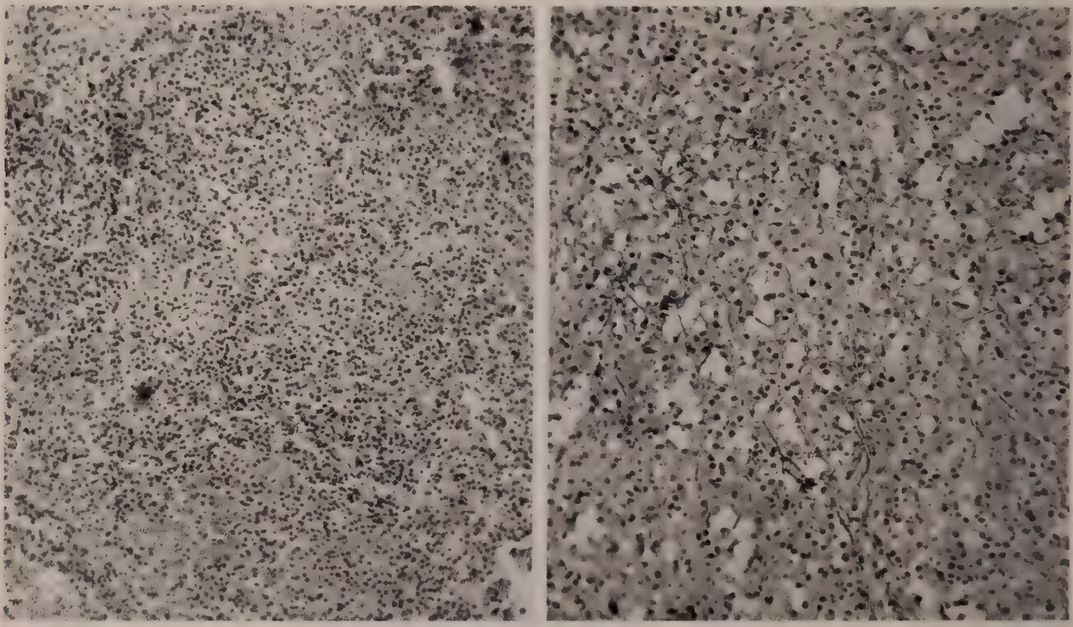

FIG. 7. Photomicrograph of the adrenal cortical carcinoma. Note large cytoplasmic cells with distinct, dark-staining nuclei.

The patient made an uneventful postoperative recovery from his surgery. Aschheim-Zondek tests done on the urine both preoperatively and postoperatively were negative. Total 17-ketosteroids done on the twenty-four-hour urine on May 14, 1953, was 26 mg. Biopsy of each testis was performed under local anesthesia on August 6, 1953. Examination of these biopsies showed atrophy of each testis (Fig. 8).

Urine estrogen levels following surgery averaged 3,341 international units per twenty-four hours. Gonadotropin assay showed 3.2 mouse units. Post-

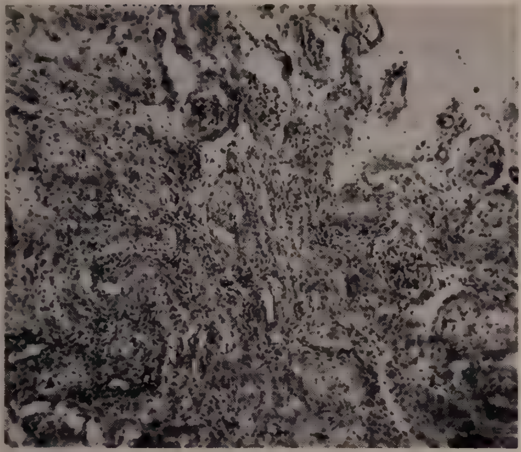

FIG. 8. Photomicrograph of testicular biopsy. Note replacement of testicular tubules by marked fibrous reaction.

operative 17-ketosteroid determinations ranged from 26.2 to 55.3 mg. per twenty-four hours.

A small, tender nodule about 1 cm. in diameter was found on the scalp on June 30, 1953. This was removed and found to be metastatic carcinoma of the same type that was removed at the primary operation on the right kidney and adrenal.

The patient was given high power x-ray therapy with the 250-kilovolt machine to the anterior and posterior chest regions from June 11 to August 11, 1953. He had a total tumor dose of 4,360 r. Repeated x-rays of his chest showed no evidence of progression or recession of the nodules in the lung fields. The patient left the hospital on September 5, 1953.

He has been seen periodically since his discharge from the hospital on September 5, 1953. The pulmonary symptoms and x-ray findings have remained unchanged. His breasts are still enlarged. The testes remain atrophic, and the sexual urge is still absent.

Discussion of Endocrine Studies

These studies must be interpreted with some reservation due to two facts: (1) Most of the determinations were obtained after the primary tumor had been removed, and (2) the patient was receiving radiation therapy while some of the urine specimens were being collected. However, it may well be that the preoperative values differed little from those found postoperatively since two preoperative 17-ketosteroid determinations did not differ significantly from a number of values obtained subsequently, and further, the patient's clinical status did not appear to be influenced by either the operative procedure or by x-ray.

Urinary estrogen determinations performed in three different laboratories all showed a marked hyperestrinuria. The values obtained by slightly different methods reduced to a common denominator of international units (by Dr. Wells E. Farnsworth) show that the patient was excreting an average of 3,341 international units per twenty-four hours on several occasions (normal for adult men approximately 25 to 130 international units per twenty-four hours).

Assays using the Aschheim-Zondek method were negative both pre- and postoperatively for chorionic gonadotropins. A gonadotropin assay performed by a modification of the Albright method revealed a value of less than 3.2 mouse units (normal values 6.6 to 53 mouse units). The diminished gonadotropin excretion is probably related to the high estrogen production since estrogens are known to be suppressive to pituitary gonadotropin production.

Preoperative 17-ketosteroid determinations were 29.3 mg. and 26 mg. per twenty-four hours on the day of operation. Subsequently, a number of ketosteroid determinations ranged from 26.2 to 55.3 mg. per twenty-four hours. Chromatographic studies (by Dr. W. Q. Wolfson) would seem to indicate that approximately 25 per cent of the ketosteroid output is dehydroepiandrosterone. Further studies are in progress in an attempt to identify other metabolites in this patient's urine but are still in a preliminary stage, and their exact significance is too hypothetic to report at this time.

It would seem that the findings recorded above reflect the metabolic functions of the metastases since the function of the remaining adrenal gland would appear normal, and there is no evidence of hepatic or renal disease which might modify the results.

Review of Literature

Only 17 cases concerning feminization in males associated with adrenal tumors have appeared in the literature. Bittorf[1] reported the first case in 1919 in a patient twenty-six years of age. His presenting complaints were enlargement of the breasts, loss of libido, and decrease in the size of the testes. The patient expired, and the autopsy was performed by Mathias[2] who reported the case independently in 1922. At necropsy a malignant cortical hypernephroma was found.

Parke Weber[3] in 1926 and Zum Busch[4] in 1927 independently reported another case. The patient was a twenty-seven-year-old male with gynecomastia and lactation. Autopsy revealed a malignant hypernephroma with metastases to the lungs, pleura, and mesenteric lymph nodes.

Holl[5] added two cases in 1930. A forty-four-year-old male had gynecomastia, decrease in the size of the testes, and loss of libido. A diagnosis of left adrenal tumor was made preoperatively. The left adrenal tumor and kidney were removed. Postoperatively, the breasts decreased in size, the testes regained normal size, and libido returned. Holl's other case was a fifteen-year-old boy who had gynecomastia. An inoperable large right adrenal tumor was found. The patient expired, and there was no autopsy.

In 1936 Lisser[6] reported a case of a thirty-three-year-old male with gynecomastia, lactation, and a palpable left upper quadrant mass. The patient expired, and at autopsy a large left retroperitoneal mass was found with metastases to the lungs. The microscopic diagnosis was "adrenal cortical carcinoma."

In 1938 Levy-Simpson and Joll[7] reported the first case with androgen and estrogen studies. The patient was a thirty-four-year-old physician. His complaints were gynecomastia, atrophy of the testes, and reduced libido. A left adrenal tumor was removed through the transperitoneal approach. On the first postoperative day estrogenic content of the urine was determined by means of a bioassay method. A minimal content of 500 mouse units of estrin per L. of urine was found. Immediately following the removal of the primary tumor the breasts became smaller, the genitalia enlarged, and there was return of sexual urge and potency. These changes never approached normalcy, however. The patient was given deep x-ray therapy postoperatively. Approximately nine months after surgery the original symptoms returned. A laparotomy was done twenty-two months after the removal of the primary tumor. There was metastatic disease in the liver and at the site of the left adrenalectomy. The patient expired two months after the exploratory procedure. Over a period of sixteen months a series of quantitative estimations of comb growth and estrogenic hormones of the urine were obtained. In September, 1934, the values of androgen were 50 capon comb units per L. and estrogens 100 mouse units. These values progressed until January, 1936, when the values were androgen 100 capon comb units per L. and estrogens 6,400 mouse units.

In 1940 Pico Estrada[8] reported two cases. One patient was thirty years of age with gynecomastia and testicular atrophy. No androgen or estrogen studies were obtained. The patient expired, and metastatic disease was found. The other patient was forty-one years old. He had gynecomastia. This patient also expired, and metastases were present.

In 1942 Roholm and Teilum[9] reported the second case with androgen and estrogen studies. Their patient was forty-four years old. He had gynecomastia, decreased size of the testes, and reduced libido. The androgen level in the urine was reported as 5 to 80 capon comb units per twenty-four hours, and the estrogen level was 5,000 mouse units per twenty-four hours. The patient expired with metastases.

In 1946 McFadzean[10] reported a case of a twenty-nine-year-old lance-corporal. The presenting complaints were gynecomastia, loss of libido, and a palpable mass in the left subcostal area. At operation an adrenal cortical carcinoma was found and removed. Following surgery there was a return of libido and sexual urge. However, no change was noted in the size of the breasts.

In 1948 Wilkins[11] reported the only case of feminization due to an adrenal tumor in a male child. The boy was five years of age with marked gynecomastia and had an encapsulated adenoma of the right adrenal cortex. After removal there was a gradual decrease in the size of the breasts and no evidence of recurrence after four years. The 17-ketosteroid excretion was 4.1 mg. per twenty-four hours. Assay of urinary estrogen showed an excretion of 5 rat units per twenty-four hours.

Also included in Wilkins' 1948 report was an unpublished case of W. W. Scott.[12] The patient was forty-three years of age with enlargement of the breasts, atrophy of the testes, and loss of libido. The estrogen bioassay was 5.3 mouse units per twenty-four hours as estradiol. The 17-ketosteroids were 196 mg. per twenty-four hours. The patient died, and metastatic disease was present.

In 1948 Armstrong and Simpson[13] reported a case of a forty-year-old policeman with a palpable left subcostal mass and gynecomastia. A laparotomy revealed an inoperable left adrenal carcinoma. The patient expired soon after surgery, and an autopsy showed metastases to the lung, liver, and spine. The preoperative values of 17-ketosteroids showed 34 mg. per twenty-four hours. Three months after surgery the urinary 17-ketosteroids were reported as 108 mg. per twenty-four hours.

In 1951 Mortenson and Murphy [14] reported a case of a thirty-eight-year-old male with gynecomastia, loss of libido, and atrophy of the testes. The 17-ketosteroid estimation was 7.6 mg. per twenty-four hours. A right adrenal tumor was found and removed. Ten days after the operation there was noted a decrease in the size of the breasts and a return of libido.

In 1953 Dohan *et al.*[15] reported increased urinary estrogen excretion associated with adrenal tumors in three males. Their respective ages were thirty, fifty-eight, and twenty years. The thirty-year-old patient, a teacher of mathematics, had gynecomastia, testicular atrophy, and a tumor of the right adrenal cortex associated with greatly increased urinary excretion of estrogens but normal excretion of neutral 17-ketosteroids and gonadotropins. Urinary estrogen values returned to normal in nine days after removal of the tumor. Eighteen months after removal of the tumor the gynecomastia disappeared.

The fifty-eight-year-old merchant had a large tumor of the left adrenal associated with hypertension, gynecomastia, and increased urinary estrogens. Urinary estrogen values returned to normal after removal of the tumor. Six months after removal of the tumor he succumbed to widespread metastases.

The twenty-year-old boy had an early onset of puberty, small genitalia, obesity, abundant body hair, high excretion of estrogens, and elevated neutral 17-ketosteroids and dehydroepiandrosterone, associated with a large tumor of the left adrenal. Following removal of the adrenal cortical adenoma he was given 25 mg. of cortisone and 5 mg. of desoxycorticosterone acetate daily for the first month and then only cortisone for two additional months. Twelve months after the operation the urinary hormone assays were normal.

A feature common to all cases was gynecomastia. The triad of gynecomastia, atrophy of the testes, and loss of libido was present in eight cases.[1,5,7,9,12,14,15]

In eight cases[5,7,10,11,14,15] following the removal of the tumor there was noted a decrease in the size of the breasts, enlargement of the testes, return of libido, and a return to normal of urinary estrogen values. This regression of symptomatology was only temporary in two cases, however. Levy-Simpson and Joll's[7] cases showed a return of sexual urge and potency, decrease in size of the breasts, and enlargement of the genitalia immediately following surgery. These changes never approached normalcy, and nine months later the original symptoms returned. The patients later expired with metastatic disease.

The fifty-eight-year-old merchant reported by Dohan *et al.*[15] had the urinary estrogens return to normal after removal of the tumor. He expired with metastatic disease six months after surgery.

The remaining six cases in which the symptoms regressed all survived excision of the tumor and have been free of metastases. Hormonal studies were made in ten cases.

Summary and Conclusions

1. A case of feminizing adrenal cortical carcinoma is presented in detail.

2. Physical signs of feminization include gynecomastia, testicular atrophy, and loss of libido.

3. The patient, a forty-three-year-old male, has lived a total of six years and seven months from the time of onset of symptoms and one year since the removal of his primary tumor. He has been known to have multiple lung metastases for at least two years and six months.

4. Urine studies of estrogens, 17-ketosteroids, and gonadotropins showed the following: (*a*) marked elevation of estrogens (after removal of the primary tumor); (*b*) moderate elevation of the 17-ketosteroids (both before and after removal of the primary tumor); (*c*) reduction of the gonadotropin levels (after removal of the primary tumor). This signifies that the metastases are hormonally functional, even though the primary tumor has been removed.

5. Diagnosis in this case was made by physical examination, pyelograms, aortograms, and presacral air insufflations, the first and last of these showing the most significant evidence.

7. A review of the literature shows 17 feminizing adrenal cortical tumors in males up to the present time. This case is the eighteenth. Ten of these 17 cases died of metastatic spread of their disease in relatively short times. Six were alive and well at the time of the reports. One had died of an unrelated tumor.

8. Feminization due to adrenal cortical tumor is a rare and fascinating phenomenon.

The authors gratefully acknowledge the cooperation of Drs. William Q. Wolfson, William Maddock, and Albert Segaloff who performed numerous of the assays aiding in the study of this case. In fact, their efforts are presently continuing in further classification of the findings in this patient.

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What a Physician Should Be

When a man has been in private practice for more than twenty-five years and has made a success of it, you might think he would have some good advice for those who have still to set out on their careers. You'd be right in the case of Dr. Julian Price, Florence, South Carolina. Recently, he had occasion to talk extemporaneously to a group of medical students with no manuscript and no recording of his speech. Here's approximately what Dr. Price had to say about what a physician should be.

1. A physician should be well trained. Nowadays, the medical schools and internships and residencies take good care of that. When a doctor is ready to start practice, the chances are he's well prepared scientifically.

2. The kind of physicians worth having will keep up with scientific and other advances in medicine by taking advantage of such opportunities as good medical journals and fine meetings. It's so easy not to keep abreast; there are so many distractions you must kick yourself to make you do it.

3. A doctor needs a large amount of the spirit of skepticism—the tendency during training days in school and just afterward for doctors to think that their stock of information is without parallel. They know it all. Fortunately, most of them outgrow this tendency—to some extent. This may come about when a doctor suddenly realizes that an authoritative source for information like a brand new textbook is far out of date when it's first published. Or skepticism may be fostered when the unexpected happens. An example is the case of the young resident who was instructed by his professor to administer mercurochrome intravenously to a patient having puerperal sepsis. (This was in the days before there were any good chemotherapeutic agents for such infections.) A couple of days later the patient's temperature was normal and she was much improved. Seeing her again on ward rounds, the professor was elated. He exclaimed, "It worked!"

"What worked?" asked the resident.

"The mercurochrome, of course," replied the professor.

"Oh that," said the resident, "I forgot to give it."

In some kinds of practice in some places, skepticism is especially important, especially in pediatrics, particularly in the "sticks." So, keep a question mark in your mind all the time. Don't ever suppose that the final answer is in.

4. Doctors need to be patient-minded. . . .We need doctors who think primarily of their patients. Remember, when a doctor responds to a patient's call at 2 A.M., that's not news; when he doesn't, that is news!

5. Doctors must have character. It's easy for a physician to pull a fast deal, to get away with untruths, to be not exactly honest. An example we hear about now and then is the doctor who gets caught in an attempt to evade payment of income tax. Fortunately, there are not many crooked doctors. But there is a small group who give the profession a black eye. We need to get rid of them, and we need to be sure that newcomers to the profession are men of integrity and character.

6. The medical profession should be made up of men who are not afraid to taken their place in the community. Our nation is founded on community life. This has advantages for all of us, and it creates special obligations for some of us. Those in the medical profession must remember that they are not just physicians—they are citizens too. The average medical student never thinks about this, but when he goes into practice he must do his part as a citizen in support of schools, the Boy Scouts, philanthropic organizations, and all other parts of life in the community in which he lives and practices. The attitude of other people toward the medical profession depends upon what individual physicians do in their practice, but it also depends upon what these men contribute as citizens.

Editorial comment on Dr. Price's remarks would be gilt for the lily. Let this end with the thought that Dr. Price does more than talk about things like these. His career in medicine is a vital example of what a physician should be.

—*Medical Annals of the District of Columbia, April, 1954*

The Diagnosis and Treatment of Traumatic Lateral Ankle Instability

BARNARD KLEIGER, M.D., NEW YORK CITY

(*From the Hospital for Joint Diseases*)

In a normal ankle the talus fits snugly within the mortise and cannot move laterally any significant amount if the foot is held at 90 degrees because powerful ligaments hold the tibia and fibula together and the talus in the mortise. These ligaments are the anterior, posterior, and posterior transverse tibiofibular ligaments, the interosseous ligament and membrane, and the internal and external collateral ligaments. With or without a fracture of the fibula, if the appropriate ligaments are torn, the talus and the distal end of the fibula are detached from the tibia and can move laterally. The degree of lateral mobility depends upon the degree of ligament damage. Since I know of no other name for this abnormal motion and since it is important that this instability be distinguished from the better known inversion instability due to a tear of the external collateral ligaments, I call it lateral ankle instability. This condition may be present with or without separation of the tibiofibular syndesmosis, or what is commonly known as diastasis. It is most often associated with oblique fractures of the distal end of the fibula, although it may be present without fracture. This type of instability is caused by an injuring force in a lateral direction, either eversion or external rotation.

The frequency with which lateral ankle instability is found is directly proportional to the intensity with which it is sought. The usual anteroposterior, lateral, and oblique roentgenograms may not show instability. By taking roentgenograms with the ankle under external rotation stress lateral mobility of the talus can be clearly demonstrated (Fig. 1). Lauge-Hansen[1] found instability in 31 per cent of consecutive ankle injuries examined by stress roentgenograms. It is important, therefore, to be aware that this condition is frequent, and when it is missed, the persistent lateral instability is serious enough to warrant every effort to establish the diagnosis, for what first appeared to be a simple oblique fibular fracture without displacement may, if not adequately studied and treated, end up as a painful, unstable ankle which will ultimately become arthritic.

The presence of lateral ankle instability indicates a serious tear of the anterior fibers of the medial collateral ligaments and of the anterior tibiofibular ligament. If diastasis is also present, then the posterior tibiofibular, the posterior transverse tibiofibular ligament, and the interosseous ligament and membrane must also have been torn. When all these ligaments tear, the fibula is detached from the tibia and may be displaced from the groove on the lateral aspect of the tibia. It is important to appreciate that lateral ankle instability may occur with or without tibiofibular diastasis. Specifically, the talus may move laterally, although the fibula is held in its groove if the posterior tibiofibular ligaments are intact or if the fibula fractures below the interosseous ligament.

Clinical examination may indicate the presence of lateral ankle instability if after an injury there is tenderness over the medial collateral ligaments as well as over the tibiofibular ligaments. The diagnosis can occasionally be confirmed clinically when the talus can be felt to move laterally as the foot is rotated externally. This is possible only when swelling is slight and the talus can be felt with the examining finger. The diagnosis can best be established by taking roentgenograms with the ankle under external rotation stress. Every ankle injury without noticeable displacement, whether of the ligaments alone or when accompanied by a fracture of the fibula, should be examined by stress views.

To take external rotation stress views the foot is strapped in a plastic foot holder which holds the foot at 90 degrees, and an anteroposterior view is taken (Fig. 2). The patient then turns towards the uninjured side, while the foot remains fixed in the foot holder. This rotates the leg in-

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Orthopedic Surgery, May 13, 1954.

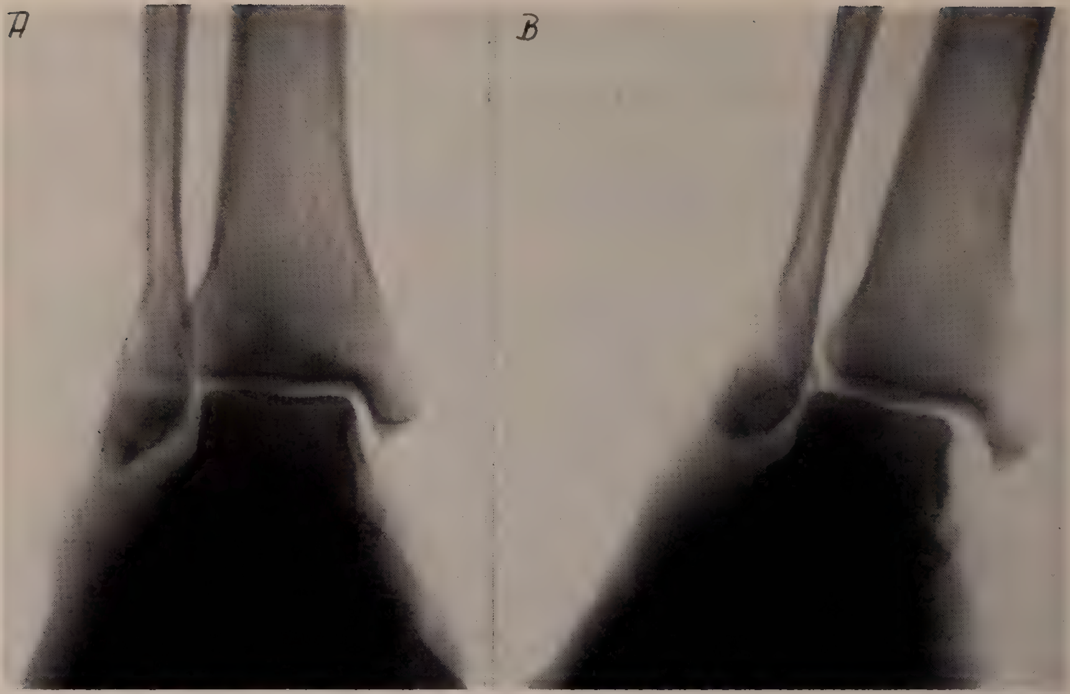

FIG. 1. Fracture, distal end of fibula: (*A*) with foot in the neutral position; (*B*) with the foot under external rotation stress. There is moderate lateral displacement of the talus with minimal displacement of the fibula from the tibial groove.

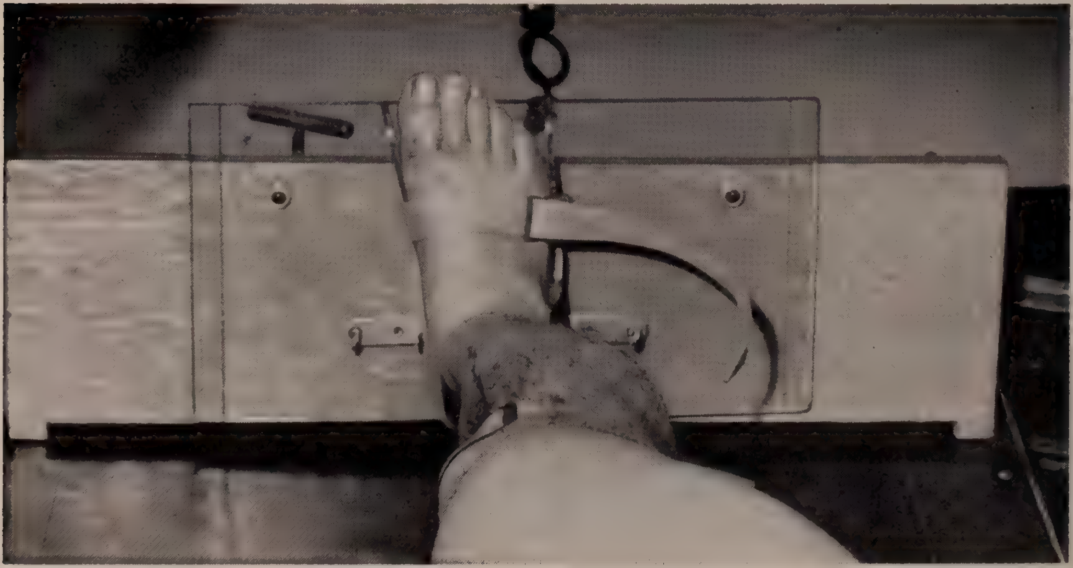

FIG. 2. Method of taking external rotation stress films. The foot is held in the neutral position as the patella and leg are rotated internally.

ternally, leaving the foot in relative external rotation, and another anteroposterior view is taken. Anesthesia, local or general, is usually unnecessary if the patient is allowed to turn himself and if the procedure is carried out slowly and carefully so that pain is kept at a minimum. When necessary, because pain or a good deal of muscle spasm exists, anesthesia should be used. If the

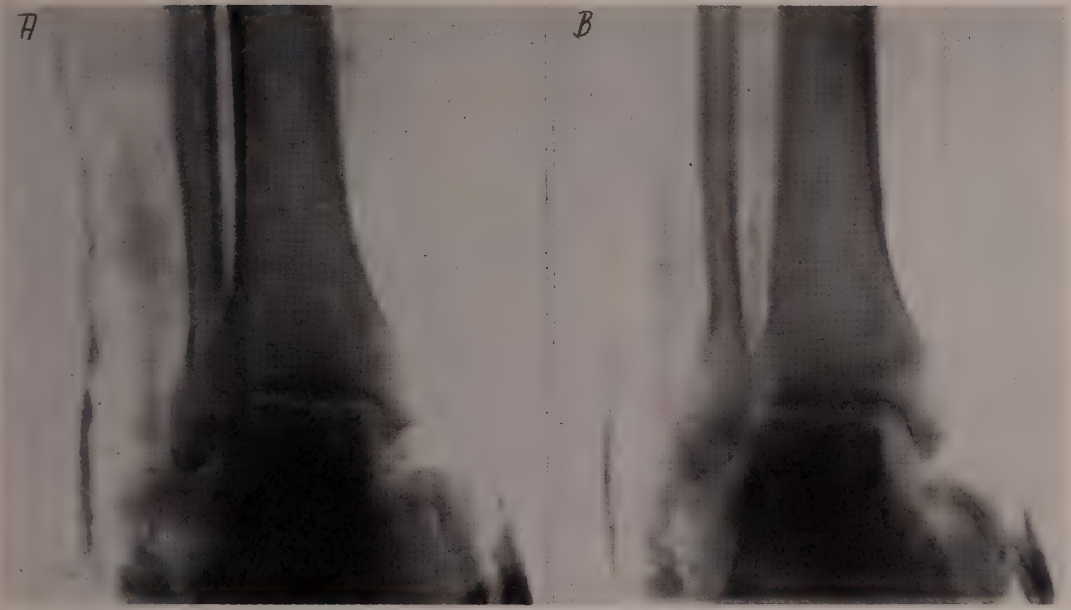

FIG. 3. Fracture of distal end of fibula immobilized in a plaster of paris boot: (*A*) with the foot in the neutral position; (*B*) with the foot under external rotation stress there is lateral displacement of the talus.

ankle is unstable, the talus will be seen to have moved laterally away from the medial malleolus; this clearly demonstrates the lesion roentgenographically.

Adequate treatment of lateral ankle instability requires that the following criteria be met:

1. The lesion must be recognized early.
2. The talus must be completely reduced, and if diastasis is also present, the fibula should be replaced in the tibial groove.
3. Immobilization must be adequate and of sufficient duration to permit complete healing of the torn ligaments.

This plan of treatment is simple, but to get good results it must be followed carefully. Any delay in recognition of the lesion permits the torn ends of the ligaments to scar sufficiently to prevent normal healing. Delay, even of a few days, makes the prognosis worse, and a week after the injury the ligament ends have scarred enough so that the ligament may not heal in continuity, and if it does, it will be too long. If the talus is completely dislocated from the mortise, reduction can be effected readily by using general anesthesia and manipulating in internal rotation.

However, if the displacement is incomplete, reduction is possible without anesthesia by a very simple method. A plaster boot is applied with the foot in the neutral position and is allowed to harden. The foot and plaster are then rotated internally about 15 to 20 degrees and held in that position by extending the plaster to midthigh with the knee slightly flexed. This thigh plaster is necessary in lateral ankle instability because a plaster to the knee will not immobilize the ankle adequately and in a below-knee plaster the talus can rotate laterally away from the medial malleolus by externally rotating the foot (Fig. 3). The thigh plaster is worn for from four to eight weeks depending on the degree of instability. Then a plaster boot is applied with a rocker type walking heel for another two weeks. Before discarding immobilization the stress films are repeated to make certain that healing is firm. It would be appropriate at this time to mention that the common "U" type, peg, or swivel walking irons should not be used for this type of ankle injury. With such apparatus the patient learns to walk by externally rotating the foot and leg, which puts stress on the injured ligaments and tends to displace the fragments again. Further rehabilitation is carried out as required.

The results with this form of treatment have been excellent (Fig. 4). Ankle stability has usually been restored. Occasionally, the torn ligaments will heal with abnormal calcification or with sufficient scarring to restrict motion slightly, but the functional results have been excellent.

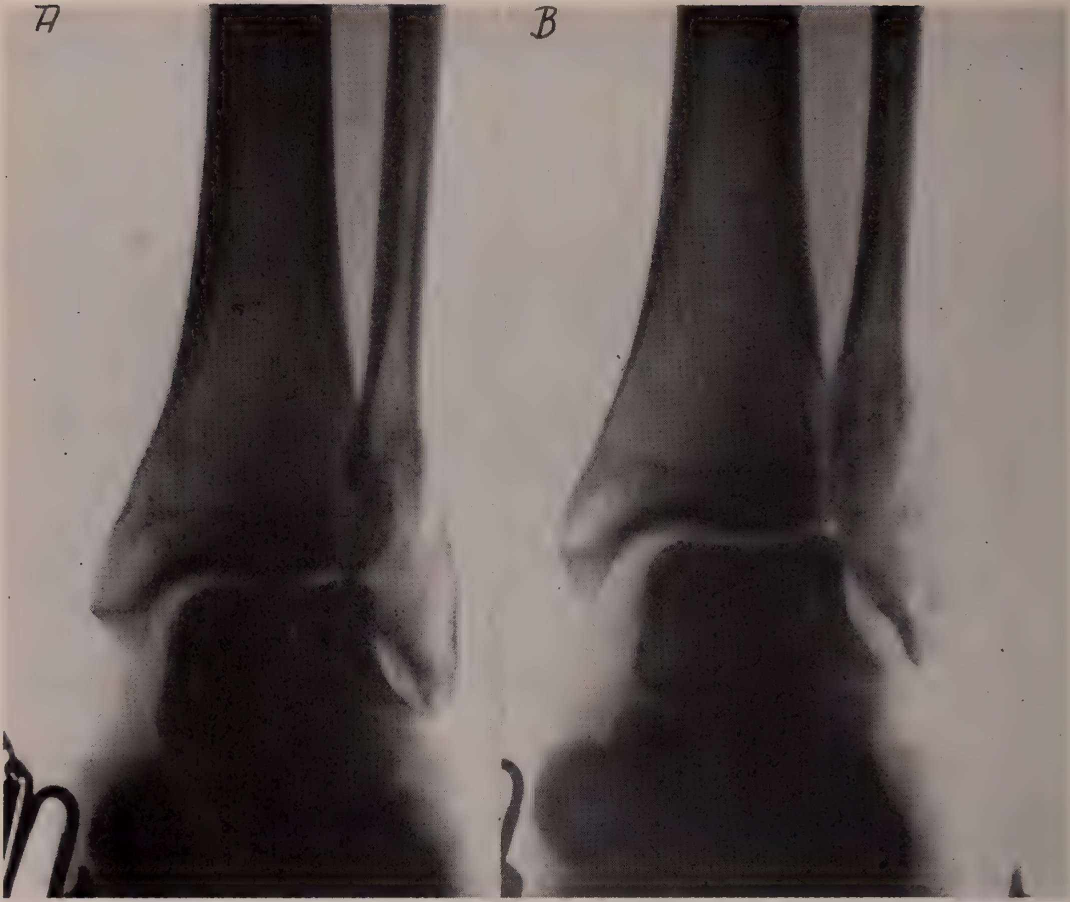

FIG. 4. Healed fracture of the distal end of the fibula: (*A*) neutral position; (*B*) with external rotation stress the talus is displaced laterally, although there is no tibiofibular separation.

Surgical correction by means of tibiofibular fixation with a screw or bolt has been used, but the author has discarded this form of treatment. First, the nonoperative treatment has been so successful that operation has been unnecessary. Second, tibiofibular fixation will in no way repair the medial collateral ligaments holding the talus to the medial malleolus, and lateral ankle instability may persist even after tibiofibular fixation. Therefore, such fixation is inadequate. At this time there is no proved surgical procedure to repair both the medial collateral and the tibiofibular ligaments.

Summary

Lateral ankle instability may follow either an external rotation or eversion injury. It may be present with or without tibiofibular diastasis. This type of instability is more frequent than is generally realized. To establish the diagnosis external rotation stress films should be taken. If the ankle is promptly immobilized with the foot in internal rotation in a plaster to mid-thigh, healing will be good, and surgery will be unnecessary.

1150 FIFTH AVENUE

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Discussion

Victor Mayer, M.D., *New York City.*—There is much in this excellent presentation to agree with and some to disagree with. Dr. Pohlidal of Easton, Pennsylvania, and myself made this disturbance of the ankle mortise the subject of intensive study. A simplified classification was devised which we published in January, 1953,[a] wherein the basic pathology was this instability. I was glad to hear the peculiarities of the anatomy of the ankle restated and the necessity for adequate x-rays. From our observation of this lateral instability of the ankle we found that it need not follow *only* external rotation or eversion injuries. It may result from injury in almost any plane.

From surgical exploration I have noted cases wherein the medial collateral ligament and anterior tibiofibular ligament were intact, but there still was lateral instability. I still find a well-deserved place for open reduction, internal fixation plus exploration, and suture of the medial collateral ligament. I find it hard to believe that the anatomic reduction which we all seek can be obtained in all the possible types of lateral ankle mortise instability by closed methods and particularly by internal rotation. A common finding of a displaced torn medial collateral ligament between the astragalus and the medial malleolus, the presence of bony fragments in the joint proper, the displacement of tendons such as the posterior tibial, the interposition of the periosteum and ligamentous structures between the fracture fragments all have been observed and seen to interfere with adequate reduction. Then one must consider the fractures other than the oblique which would be influenced poorly by internal rotation.

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ANNOUNCEMENT

SCIENTIFIC EXHIBITS

1955 ANNUAL CONVENTION

MEDICAL SOCIETY OF THE STATE OF NEW YORK

Applications for space for the scientific exhibits should be made directly to the Chairman of the Subcommittee on Scientific Exhibits of the Convention Committee:

William L. Watson, M.D.
340 East 72nd Street
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The Annual Convention will be held May 9 to 13, 1955, at the Hotel Statler, Buffalo.

No applications can be considered after January 1, 1955.

There will be two groups of awards:

Group I: Awards in Group I are made for exhibits of individual investigation, which are judged on the basis of originality and excellence of presentation.

Group II: Awards in Group II are made for exhibits which do not exemplify purely experimental studies and which are judged on the basis of presentation and correlation of facts.

W. P. Anderton, M.D., *Secretary*
Medical Society of the State of New York

Restoration of Vascular Continuity by Homologous Grafts

JERE W. LORD, JR., M.D., NEW YORK CITY

(*From the Department of Surgery, New York University Post-Graduate Medical School*)

The ideal in restoration of arterial continuity following trauma is direct end-to-end anastomosis of the ends of the artery. When properly performed, blood flow is normal and eventually the site of union difficult to identify. However, there are occasions when the injury results in a substantial loss of arterial substance, and end-to-end anastomosis is either impossible or is performed unwisely with excessive longitudinal tension, usually a prelude to dehiscence and secondary hemorrhage. Under these circumstances the gap in the artery should be bridged by some form of vascular graft or prosthetic device. Table I shows the common types of trauma wherein an artery may require a graft to maintain or restore continuity with a normal blood flow.

TABLE I.—COMMON ARTERIAL TRAUMA REQUIRING GRAFTS

- Trauma occurring outside of the operating room
  - Bullet wound
  - Knife wound
  - Glass
  - Fractures
    - Sharp fragments—laceration of artery
    - Angulation of fracture—contusion of artery with thrombosis
  - Dislocation of knee, shoulder, elbow joints
  - Blunt compression type of trauma leading to contusion and thrombosis
- Trauma occurring in the operating room
  - Inadvertent injury to an artery in the course of hernioplasty, node dissections, osteotomies, etc. Deliberate resection of a segment of artery
    - Congenital lesion, i.e., coarctation of aorta
    - Aneurysm
    - Chronic arterial thrombosis—as in Leriche syndrome
    - Extensive cancer surgery

Experimentally the autogenous arterial graft is the ideal material to bridge a gap between the ends of an artery inasmuch as it lives, functions perfectly, and is exactly similar to the artery which is being repaired. Unfortunately, clinically there is no readily sacrificable artery to serve as donor material in the patient at hand. The second best substance is the fresh autogenous vein graft since it lives, functions well, and is readily available. The saphenous and cephalic veins will usually suffice, but occasionally the superficial femoral vein will be required. In all peripheral arterial injuries where a gap exists, the fresh autogenous vein graft is ideal because of availability, size, and the ability to cover it with muscle or fascia. However, vein grafts must not be used in the aorta for three reasons: (1) the disproportionate size between the diameter of the vein graft and the aorta, a factor of considerable importance when analyzing the reasons for thrombosis in grafts, (2) the lack of support by muscle and/or fascia around the graft which is necessary to prevent the development of aneurysmal dilatation, and (3) the high pressure in the great arteries which is not well tolerated by the venous graft. In addition to the aorta, the use of vein grafts probably should be avoided in restoring continuity in the innominate, left subclavian, and common iliac arteries for the same reasons.

Since continuity of the aorta must be restored by grafts of relatively equal size, recourse has been made to the use of aortic segments taken from fresh cadavers. However, it proved a most difficult task to obtain such material at a moment's notice; hence the development of an arterial bank became a necessity. In arterial banks grafts have been stored in a wide variety of media and under several different environmental states as shown in Table II. At the present time there are only a few adherents to the original Gross[16] technic, i.e., basic salt solution (modified Tyrode solution) with 10 per cent homologous serum stored in the refrigerator at 3 to 4 C. The proponents hold that the graft may be viable (ability for a piece of the graft to grow in tissue culture) at the time of implantation and may therefore "live" in the host for a sufficient length of time to allow for better healing to and replacement by the host's tissues. However, even the most ardent backer of this method accepts the fact that the graft eventually "dies" and is replaced. Nevertheless, this type of preservation and study

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Chest Diseases, May 14, 1954.

TABLE II.—Methods of Storage of Blood Vessels for Grafting[1-16]

- Preservation of vessels in fixatives
  - Alcohol (Guthrie, Carrel)
  - Formalin (Guthrie, Levin, Peirce)
  - Phenol (Guthrie)
- Preservation of vessels in antiseptics
  - Mercurials (Carrel)
  - Silver nitrate solution, 1 per cent (Carrel)
- Preservation of vessels in vital conditions
  - Storage in saline solutions at low temperatures
    - Carrel (1912)
    - Gross (1949)
    - Swan (1950)
  - Storage in saline solutions with inert gas
    - Helium—Gross, Hufnagel (1949)
    - Nitrogen—Gross, Hufnagel (1949)
  - Storage in 100 per cent concentrate homologous serum
    - Swan, Robertson, and Johnson (1950)
    - Miller, Callow, and Welch (1950)
  - Storage in serum ultrafiltrate with or without 100 per cent homologous serum
    - Johnson and Kirby (1951)
  - Storage in basic salt solution with 10 per cent homologous serum
    - Peirce, Gross *et al.* (1949)
    - Keefer *et al.* (1951)
  - Storage in basic salt solution with 7.5 per cent autologous or homologous serum and embryo extract
    - Lazzarini (1951)

experimentally may lead towards the solution of the problems of tissue transplantation. The opponents of this method (including Gross) at the present time hold that, first, the expendability of the graft, around forty to sixty days because of degenerative changes making clinical use dangerous, increased the difficulty in maintaining a solvent bank with an adequate supply of grafts; second, transport of the grafts is difficult, and, third, the personnel and materials required to run such a bank are expensive and require considerable technical training.

There are two other methods of storage of arterial grafts which have proved quite satisfactory in the hands of several groups of workers. First, the method of preservation in dry ice at −56 C., sterilization by the cathode x-ray machine within a few days of procurement, and then apparently permanent, or at least long-term, storage in a dry ice medium. Gross has used this method exclusively for three years and has not had any complication due to the graft in over 20 cases. It is inexpensive, grafts can be procured without rigid aseptic technic, and finally, the period of safe storage is many months at least. Linton and his associates[17] also have employed this method successfully. Unfortunately, the major deterrent to widespread use of this technic is the fact that there are only a few cathode x-ray machines of more than a million volts throughout the United States.

The second and apparently most universally practical method of storing grafts is the one originated by Hyatt and his associates[18] and Marrangoni and Cecchini.[19] This technic of rapid mechanical dehydration (lyophilization) has been modified by Hufnagel *et al.*[20] so that grafts can be procured without regard to asepsis, sterilized by exposure for a few minutes to ethylene oxide, frozen, dehydrated under a high vacuum, and stored in vacuo for indefinite periods. When ready for use, the graft is placed in sterile distilled water and is reconstituted, as a rule, within one hour. Its appearance resembles a fresh graft; it is easy to suture and has an outstanding record of function as a conduit and of maintenance of gross structural integrity. Such grafts are obviously dead when used but show little change microscopically during three years of study. It is Hufnagel's opinion that the relative absence of clotting noted even in small lyophilized arterial grafts is due to the relative absence of electrical charges on their intima. This method of banking grafts is practical, relatively easy to run, and after an outlay of perhaps $2,500 is not expensive to maintain. These grafts can be transported easily and apparently stored without regard to time, hence making possible the accumulation of a large number of grafts in the bank.

Because of the success of homologous arterial grafts preserved by the technic of lyophilization, Hufnagel studied experimentally heterologous grafts from calves, pigs, and sheep implanted into dogs and later into man. Although some of his early experiences were favorable, other workers have not been so fortunate in their results in experimental animals. The obvious great advantage of the heterologous graft would be its ease of procurement and, eventually, possibly a commercial basis of manufacture.

In spite of the relatively rosy picture sketched above, several clinicians have continued to study experimentally synthetic plastics in the hope of discovering a readily available and inexpensive material which could be fashioned into a tube of desired length, size, and type to fit any gap in the aorta and its branches encountered at operation. Blakemore and Voorhees[21] have studied for several years a plastic known as Vinyon "N" cloth. It is readily sewn into a tube of desired length, shape, and size, can be sutured easily to the host's aorta, and is well tolerated by the tissues of the experimental animal. The host's fibroblasts grow into the interstices of the cloth, an endothelial lining is quickly formed, and thrombosis is rare. There are no late changes, up to two years, of calcification, aneurysm formation, or arteriosclerotic changes. This is in contrast to late calcification of the walls of the autogenous vein grafts (not deleterious to function, however) and to late calcification of some of the homologous arterial grafts, stored either by the nutrient media or in the frozen state.

The most obvious defect in the use of Vinyon "N" cloth is its characteristic of "weeping" blood when the clamps are released and flow is resumed. Quantities up to 1,000 cc. of blood may be lost. This is a temporary phenomena lasting less than a minute and may be largely avoided by preclotting the tube with the host's blood and then expressing the clot prior to suture. Clinically Blakemore and Voorhees have had some favorable experiences with this plastic material but still regard it as "on trial."

Hufnagel has independently been studying experimentally another plastic called Orlon which has many of the same features of Vinyon "N" cloth but a lesser tendency to "weep" temporarily.

At this time it is still too early to predict whether these plastic substances will eradicate the need for the arterial bank. Hence, for the practical clinical technic of bridging gaps and restoring continuity in large arteries such as the aorta, surgeons will continue to use for some time homologous aortic grafts stored preferably by the freeze-dry (lyophilized) technic of Hufnagel or the freeze-cathode x-ray technic of Gross, and for smaller arteries gaps will be bridged and arterial continuity will be restored by autogenous vein grafts.

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Ten Rules for the Coronary Club

Believe it or not, the following ten rules for membership in the coronary clubs of this country were written by a layman. They are printed here as medical advice in reverse; that is, from the layman to his physician:

1. Your job comes first; personal considerations are secondary.
2. Go to the office evenings, Saturdays, Sundays, holidays.
3. Take the briefcase home on evenings you don't go to the office.

This way you can review completely all troubles and worries of the day.

4. Never say no to a request; always say yes.
5. Accept all invitations to meetings, banquets, committees, etc.
6. Don't eat a restful relaxing meal—always plan a conference for the meal hour.
7. Regard fishing, hunting, golf, bowling, billiards, cards, gardening, as a waster of time or money.
8. Believe it's poor policy to take all the vacation allowed you.
9. Never delegate responsibility to others; carry the entire load yourself at all times.
10. If your work calls for traveling, work all day and drive all night to keep the next morning's appointment.

Doctor, just a question . . . . Are you getting close to eligibility?—*The Bulletin, Utica Academy of Medicine and the Medical Societies of the Counties of Oneida, Herkimer, and Madison, June, 1954*

Surgical Treatment of Pancreatitis

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(*From the Cleveland Clinic Foundation and the Frank E. Bunts Educational Institute*)

THE literature on pancreatitis suggests that this disease is subject to control by a variety of medical and surgical treatments. The following surgical procedures have been reported to be of benefit: splanchnic blocks, cholecystostomy, cholecystectomy, drainage of common bile duct, sphincterotomy, vagotomy, gastric resection and vagotomy, choledochoenterostomy, side-to-side anastomosis of the pancreatic duct and duodenum, subtotal pancreatectomy, and total pancreatectomy.

This imposing therapeutic armamentarium should give the surgeon a feeling of confidence in his ability to cope with the disease. Almost all of the list of procedures are alleged to give excellent results in 80 per cent or more of the patients treated. If two or more of the procedures are employed, it should be possible to raise the rate of cure to 160 per cent or higher! But, unfortunately, it is the experience of surgeons that treatments are effective in inverse proportion to the number recommended. Usually when many different forms of therapy are advocated, it is because none of them is satisfactory in all cases. This is the situation in the therapy of pancreatitis.

It is difficult to evaluate the results of any treatment in pancreatitis because the natural course of the disease is quite unpredictable. Occasionally a patient will have a single attack or one or two attacks and then remain well indefinitely.

In other cases the disease progresses relentlessly to calcification, pancreatic lithiasis, and diabetes, and the pain becomes so intolerable that many of the patients become addicted to morphine. In some patients simple alterations in the mode of living with avoidance of overeating and alcohol will effect a satisfactory therapeutic result. In others, of the so-called chronic relapsing variety, surgical intervention becomes mandatory.

Evaluation of Therapeutic Measures

Splanchnic blocks have been advocated in the treatment of the acute case and are alleged to give prompt relief of the symptoms and to shorten the duration of the attack. It is difficult to obtain statistical data on such a problem as this unless alternate cases are so treated and the remainder are left untreated as controls. Such a study has not to my knowledge been performed, and the value of splanchnic block remains unproved.

For many years it has been recognized that simple cholecystostomy will sometimes relieve pancreatitis. The rationale of this procedure is not difficult to understand if one believes in the theory that pancreatitis is the result of regurgitation of bile in a pancreatic duct which shares with the common bile duct a common opening into the duodenum. In such cases it is obvious that decompression of the biliary pressure by cholecystostomy will prevent the tendency of bile to regurgitate into the pancreatic duct and will control the attacks of pancreatitis.

Cholecystectomy for chronic cholecystitis may benefit pancreatitis by removing a focus of infection in the biliary tract. Even in the absence of infection, cholecystectomy may abolish the reflux of bile that occurs when the gallbladder contracts and raises the pressure in the common duct.

Drainage of the common duct is identical in its effects with cholecystostomy in that it decompresses the biliary tract. When stones are present in the common bile duct, choledocholithotomy frequently gives good resulst because impaction of the stone at the ampulla can block the flow of bile and cause reflux of bile into the pancreatic duct.

It has been suggested that severance of the vagus nerve alone or coupled with resection of the antrum of the stomach should control pancreatitis by decreasing the stimulus to the pancreas to secrete its juice. Experimental evidence indicates that pancreatitis can be induced in animals by a combination of blockage of the

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pancreatic duct and the stimulation of the pancreatic secretion by drugs. The results of treatment designed to abolish stimulation of the pancreas have been equivocal and are difficult to evaluate.

Sphincterotomy has been advocated in the treatment of pancreatitis and is perhaps the most popular operation at the present time. Unfortunately, however, in the hands of those who are not experienced in the procedure and probably occasionally even in experienced hands, the operation may induce an acute hemorrhagic pancreatitis. It appears to be of value chiefly in the early cases, but again it is difficult to evaluate results because in most cases operations upon the biliary tract such as cholecystectomy or removal of common duct stones are performed simultaneously. It is difficult to tell whether the good results are from the sphincterotomy or from the associated biliary tract operation.

Splanchnic section has been advocated in the control of pain, but it does not affect the underlying disease, and many times its effects appear to be transitory, the pain recurring after a year or two.

Choledochoenterostomy, either side-to-side or end-to-side with division of the common duct, has been advocated and is of value for the same reason that drainage of the common duct is of value: it decompresses the biliary tract and prevents regurgitation of bile. This type of operation is satisfactory, particularly in cases in which the common bile duct is dilated and in which there is a question of obstruction of the bile duct by fibrosis.

Subtotal pancreatectomy has been employed in those cases in which there are cysts or localized areas of pancreatitis confined to the body and tail, but such cases are rare, and subtotal pancreatectomy does not of necessity give complete relief of symptoms in patients with diffuse disease involving the head as well as the body and tail of the pancreas. This operation tends to produce diabetes if the head is extensively damaged by the disease, and many times pain persists in the right side so that a right splanchnic section is required in addition to subtotal pancreatectomy. The operation is not technically difficult if the spleen is resected along with the tail and body of the pancreas, but the procedure has the disadvantage of sometimes being complicated by the development of a postoperative pancreatic fistula, particularly if there is any tendency for the pancreatic duct to be obstructed at the ampulla.

Total pancreatectomy has been advocated as a desperate measure in patients who have proved resistant to all other forms of therapy. It is an operation which requires resection of the duodenum and the distal portion of the stomach as well as of the pancreas and carries with it a relatively high mortality rate, produces diabetes, and is attended many times by nutritional disturbances. It should be avoided whenever possible.

Comment

From the above résumé of the various forms of treatment for chronic pancreatitis, it is apparent that there is no single satisfactory answer to this problem at the present time. It appears that the simplest measures should be tried first and that all pathology in the biliary tract should be removed before more radical attacks are made upon the sphincter or upon the pancreas itself. Simple measures such as cholecystectomy or removal of common duct stones will give good results in 75 per cent of the cases. The more dangerous operations upon the sphincter and bile duct and direct attacks upon the pancreas should be reserved for those patients who prove resistant to the simpler measures.

Summary

The rationale and results of various forms of surgical treatment of pancreatitis are discussed, and it is concluded that there is no single treatment which is both safe and effective in all cases. The simpler measures should be tried before resorting to any more complicated and dangerous operations.

He that sips of many things drinks of none.—THOMAS FULLER

Neurologic Complications of Osteoarthritis of the Cervical Spine

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VARIED and complex neurologic and neurovascular syndromes may result from involvement of neural structures in the cervical region by degenerative changes implicating the uncovertebral or the apophyseal joints or both at the same time. The osteoarthritic spurs which subsequently develop from the uncovertebral joints possess far greater pathogenic significance than those originating in the apophyseal joints (Fig. 1).

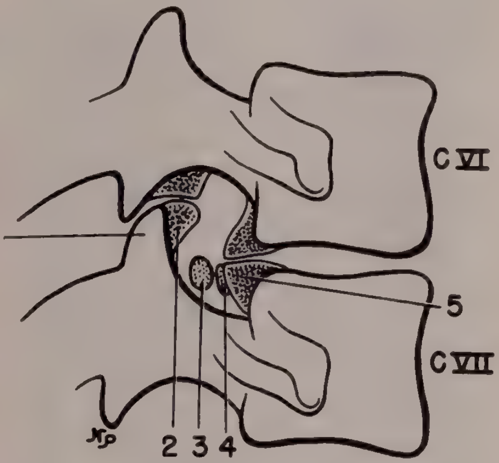

FIG. 1. Diagram showing intervertebral foramen between the sixth and seventh cervical vertebrae: (*1*) superior articular process of seventh cervical vertebra, (*2*) apophyseal osteophyte, (*3*) dorsal nerve root, (*4*) ventral nerve root (both roots are contained in the lower part of the intervertebral foramen), (*5*) uncovertebral osteophyte compressing seventh cervical ventral root. (*Modified after Lacapère*)

Osteoarthritic proliferations in the cervical spine may rub or compress and irritate the following nervous structures (Fig. 2): (1) the cervical segment of the spinal cord, (2) the ventral and dorsal nerve roots, (3) the vertebral nerve, (4) the sympathetic plexus surrounding the vertebral artery, (5) the deep sympathetic chain of ganglia in the transverse foramina between the fourth and seventh cervical vertebrae,[1] and (6) the autonomic nerve fibers which pass through the fifth to eighth cervical and first thoracic ventral roots.[2,3]

The sensory, motor, reflex, vasomotor, and trophic disturbances caused by involvement of the nervous structures just listed may give rise to the following syndromes: cervicobrachial neuralgia (radiculalgia), lower motor neuron syndrome, shoulder-hand syndrome ("neurotrophic rheumatism of the upper extremity"), ocular lesions including optic neuritis, "intricated" and pseudoangina, headache, facial pain ("atypical facial neuralgia"), syndrome of Barré-Lieou, and clinical pictures closely resembling degenerative affections of the spinal cord.

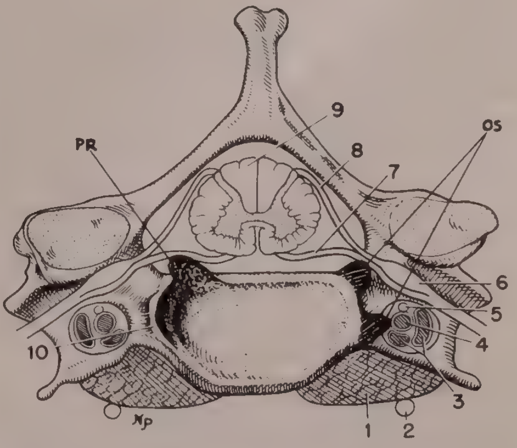

FIG. 2. Diagrammatic cross section through neck at sixth cervical level: (*1*) prevertebral muscles, (*2*) cervical sympathetic trunk, (*3*) vertebral veins, (*4*) vertebral artery, (*5*) vertebral nerve (3, 4, and 5 are contained in the transverse foramen), (*6*) spinal ganglion, (*7*) ventral root, (*8*) dorsal root, (*9*) spinal cord, (*10*) uncinate process; (*PR*) protruded disk; (*OS*) uncovertebral osteophytes.

Uncovertebral Joints

Luschka (1858)[4] found that in the adult the upper surfaces of the third cervical to first thoracic vertebral bodies have lipped edges on both sides which extend headward. He named them "eminentiae costariae." Trolard (1893)[5] called the upward projecting lip "processus uncinatus," and Giraudi (1931)[6] refers to it as the "processus lunatus" (Fig. 2). The French use the term "apophyse semilunaire." In line with

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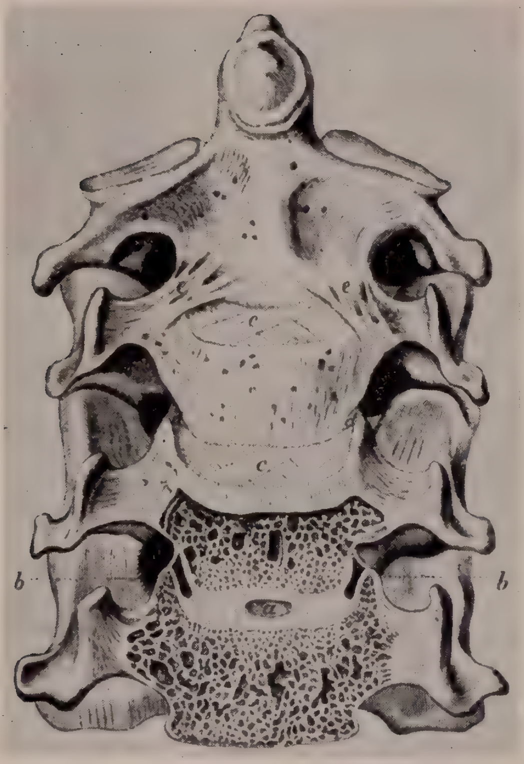
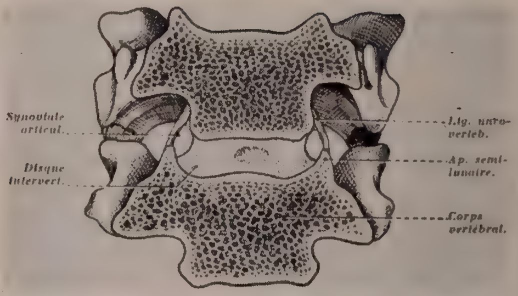
* Presented at the annual meeting of the American Rheumatism Association, San Francisco, California, July 19, 1954.



(*From H. von Luschka*[4])

FIG. 3. Drawing showing second to fifth cervical vertebrae of the cervical segment of the vertebral column: (*a*) central cavity of a vertebral synchondrosis, (*b*) laterally placed joints between vertebral bodies, (*c*) external layers of annulus fibrosus, (*d*) capsular membrane of lateral joints, (*e*) radiate ligament of lateral joint.



(*Courtesy of Masson & Cie, Paris*)

FIG. 4. Uncovertebral joint.[10]

prior studies of Meckel,[7] Testut[8] regards the uncinate process as the rudimentary head of a rib.

Luschka[4] used the designation "sinus costarius" for the slightly concave facets on each side of the lower surfaces of the second to seventh cervical vertebral bodies. With the corresponding uncinate processes the facets constitute a form of joint. Luschka[4] named the joints "hemiarthroses intervertebrales laterales" or "half joints" or *Halbgelenke* (Fig. 3). Trolard[5] speaks of "uncovertebral joints" (which term is used in this review); British writers[9] use the name "neurocentral joints."

On the bodies of the third to sixth cervical vertebrae the uncinate processes are placed laterally and sagittally; on the seventh cervical and first thoracic they are placed more dorsolaterally (Fig. 3). Because of their topography the uncinate processes are in close relationship to both the intervertebral and the transverse foramina (Fig. 2). In the small cavity of the cervical half joints Luschka found a fibrous capsule lined with synovial membrane and containing synovial fluid (Figs. 3 and 4).

The uncovertebral joints are characteristic of man and anthropoid apes. The joints are of the arthrodial type where movement is effected by gliding. Although there is disagreement as to the exact nature of the jointlike structures between the dorsolateral parts of the bodies of the cervical vertebrae, they do mark the site where reactive osteogenic processes occur which lead to formation of new bone in the form of osteophytes (exophytes, exostoses).

Osteoarthritis of the Cervical Spine

Osteoarthritis affects the cervical spine of the middle and advanced age groups. It is the terminal stage of disk disease (discopathy). This begins with degenerative changes in the intervertebral disk which may lead to annular protrusion or nuclear herniation, segmental dislocation of the cervical spine, and may end, as a last phase, in osteoarthritis.

Schmorl[11] found that exostoses develop only in areas covered by the anterior longitudinal ligament which is firmly attached to the body of the vertebra a short distance from its edge. The posterior longitudinal ligament is attached to the intervertebral disks and to the margins of the vertebral bodies, an anatomic feature adverse to osteophyte formation.

The studies of Schmorl,[11] however, did not include observations on the cervical spine. Here, according to de Sèze,[12] degenerated disk material infiltrates into the uncovertebral joint, traverses it, and, on reaching the joint's posterior ligament, subjects the latter to abnormal stress and strain. As a consequence osteophytic spurs form on both sides of the uncovertebral gap opposite a nerve root. Other mechanisms which may induce formation of cervical osteophytes are as follows: Degeneration of an intervertebral disk tends to lead to abnormal vertebral movements which subject the uncovertebral ligaments to increased strain with resultant development of osteophytes. Degeneration of a disk also tends to reduce or abolish its shock-absorbing properties with the effect that the stress of weight-bearing and movement directly strikes the adjacent bone with consequent production of exostoses on the spinal aspect of the cervical vertebrae.

Osteophytic spurs emerging from the dorsal or dorsolateral part of the uncovertebral joint may jut into the spinal canal or encroach on the corresponding intervertebral foramen; laterally situated osteophytes from the midpart of the joint may strike the vertebral nerve and the vertebral artery mounting upward in the transverse foramina (Fig. 2).

Roentgenologic Findings

Roentgenologically, osteoarthritis is characterized by narrowing of the disk space, condensation of subchondral bone, and osteophytic spurring on the anterior, lateral, and posterior margins of the vertebral bodies, especially of the fourth to seventh cervical. The vertebral bodies themselves are often deformed.

Uncovertebral joints and uncovertebral osteophytes are best visualized in anteroposterior views, provided that the central ray has the proper ascending oblique incidence in accord with the downward sloping plane of the lower disks. In osteoarthritis, narrowing of the uncovertebral joint space, osteophytic spurs, and osseous condensation may be noted. Right and left oblique views may disclose deformed and constricted intervertebral foramina and may show the extent to which uncovertebral osteophytes jut into them. Because osteophytes are capped with cartilage, in reality they are larger than revealed in roentgenograms. Fifth and sixth, sixth and seventh, and fourth and fifth cervical levels are the sites of predilection of the structural changes.

Intervertebral disk spaces, abnormalities of the cervical curve, and misalignment of the vertebrae are best revealed in the lateral projection. The following alterations are commonly found: complete or segmental decrease, loss or reversal of the physiologic lordotic curve, displacement forward or backward of a vertebra over the next lower one, or rotation of a vertebra, and in advanced cases subluxation of one or more apophyseal joints.

Pathogenic Considerations

The heart of the problem is the very important question: Is there a causal relationship between the cervical osteophytic spurs and the clinical manifestations? Osteophytes protruding into the spinal canal or the intervertebral and transverse foramina may traumatize their neural contents and thus produce neurologic disturbances. On the other hand, roentgenologic evidence of osteophytes encroaching on the spinal canal or the intervertebral and transverse foramina does not necessarily imply that they are the cause of neurologic complications. Although cluttered with large osteophytes, the cervical spines of persons over fifty are usually asymptomatic. In other instances severe neurologic disturbances occur in the face of little structural change. Furthermore, it is a common experience that the clinical manifestations which are attributed to compression of nervous elements through osteophytic spurs frequently respond favorably to conservative treatment, e.g., roentgen therapy, while the osteophytes themselves remain unchanged. Last, while the level of the lesion responsible for the neurologic abnormalities often coincides with the level of the roentgenologic change, the causative lesion is often located above or below the latter.

To explain these discrepancies, it is assumed that in conjunction with the mechanical factor of compression, an inflammatory factor[13] resulting from irritation of adjacent soft tissues through osteophytic spurs, particularly an inflammatory edema produced within the cord and nerve roots, brings about neurologic manifestations.

The inflammation may spread to the membranes which envelop the spinal cord and the nerve roots and may lead to the production of spinal arachnoiditis with cyst formation.[14] The cyst in turn may further increase the mechanical irritation of the cord. Girard[15] believes that the neurologic disturbances should be ascribed to the chronic arachnoiditis rather than to compression of the cord and roots. Microscopic examination of spinal cords from patients who had disk disease revealed foci of gliosis and degenerative changes in intramedullary blood vessels.[14,15] Such findings could explain why cord compression syndromes often lead to a mistaken diagnosis of multiple sclerosis or amyotrophic lateral sclerosis.

Minimal roentgenologic abnormalities, even a normal roentgenogram, however, does not rule out root involvement as a source of symptoms. Frykholm[16,17] operated on patients with roentgenologically normal cervical spines in whom he found evidence of "root sleeve fibrosis" which alone caused radicular signs through sharp angulation and constriction of the cervical roots. Root sleeve fibrosis could explain the instances in cases of cervical spondylosis where the neurologic manifestations do not coincide with the level of roentgenologic change.

Neurologic Syndromes

The principal neurologic syndromes caused by compression and chronic irritation of the neural structures in the spinal canal, the intervertebral and the transverse foramina through posterior or posterolaterally or laterally placed osteophytes originating in the uncovertebral joints, on the one hand, and through apophyseal osteophytes, on the other, are as follows:

CERVICOBRACHIAL NEURALGIA (RADICULALGIA).—Osteoarthritic spurs from cervicovertebral joints protruding into the intervertebral foramina may through mechanical irritation of nerve roots (radicular nerves) produce intense cervicobrachial pain in the distribution of the fifth to eighth cervical or first thoracic nerve roots.

Although the pain in cervicobrachialgia is generally attributed to involvement of the somatic sensory fibers in the dorsal root, Frykholm[16,17] demonstrated by application of mechanical stimuli to cervical nerve roots exposed at operation that pain may be elicited from the ventral root also. The ventral root pain is deep, constant, and boring and is felt in the proximal parts of the upper extremity. The ventral root pain is myalgic in type and involves the myotome.

Pain due to pressure on the ventral root is ascribed to some change produced in the muscle fibers with resultant activation of sensory endings. From the muscles the afferent impulses travel centripetally by way of sensory pathways, dorsal root ganglia, and dorsal roots to the spinal cord. Here the impulses are transmitted via neurons of higher order to higher cerebral centers where they are perceived as pain. Mechanical stimulation of the dorsal root reproduces the neuralgic component of rhizopathic pain which is felt as a sharp and stabbing pain or as an electric shock rushing down the upper extremity into the fingers. Here the dermatome and the sclerotome are implicated.[16,17] In the opinion of Ricard, Girard, and Dupasquier[18,19] stimulation of the autonomic fibers contained in the lower cervical ventral roots is responsible for part of the pain in the upper limb.

Concurrently with cervicobrachial radiculalgia, tender spots (myalgic spots) may develop in the muscles of the shoulder girdle and in other deep structures. Myalgic spots and "trigger points" in the upper and dorsal aspects of the shoulder girdle (scapulalgia) are generally regarded as the primary source of varied patterns of pain radiation. This form of muscular and deep tissue hyperalgesia frequently gives rise to faulty diagnoses, such as arthritis, fibrositis, fibromyositis, fasciitis, bursitis, tendinitis, neuritis, scapulocostal syndrome, etc. Misdiagnoses are made particularly in cases in which roentgenograms fail to show any bony abnormality. Neither absence of roentgenologic evidence of a pathologic lesion in the cervical spine, however, nor the fact that local infiltration of the myalgic spots and trigger points with procaine benefits the patient are valid arguments against their radicular origin. It is unknown as yet whether involvement of the ventral or the dorsal root is responsible for the occurrence of deep hyperalgesia in cervicobrachial radiculalgia. The tenderness may be due to localized muscle spasm caused by irritation of the ventral root, or it may be referred from the affected dorsal nerve root.

In rhizopathic cervicobrachialgia segmental disturbances of sensation are usually slight. Depression of tactile and pain sensibility may be encountered in the dermatome concerned, or these modes of sensibility may be increased. Sometimes sensory impairment spreads beyond the distribution area of one cervical root. Changes in the biceps and triceps reflexes, usually diminution, may be found associated with cervicovertebral lesions involving the sixth, seventh, and eighth cervical nerve roots.

LOWER MOTOR NEURON SYNDROME.—Pressure exerted by osteophytes on the somatic motor fibers in a cervical ventral root may give rise to a lower motor neuron syndrome. This is characterized by disturbances in muscle function in a root area, such as weakness, atrophy, fasciculation, tremor, and spasm in the muscles of the arm, forearm, and hand. In some instances the muscles of the hand present the Aran-Duchenne type of atrophy. In addition, muscular atrophy of autonomic origin may develop due to implication of the autonomic fibers in the ventral cervical roots. The radicular area of sensory disturbances may or may not overlap with the impaired motor segment.

In some patients periarthritis of the shoulder, consisting of pain and stiffness, is superimposed on cervicobrachial pain of rhizopathic origin. Periarthritis is generally attributed to disuse and, in addition, to a peculiar constitutional and emotional state which Coventry[20] terms "periarthritic personality." Periarthritis may be imitated by spasm of the humeroscapular muscles secondary to ventral root stimulation.[16,17] Contractures of fingers which decrease manual skill may also be observed.

SYNDROMES FROM INVOLVEMENT OF THE AUTONOMIC NERVOUS SYSTEM.—The presence of sympathetic centers in the spinal cord at the fifth to eighth cervical and first thoracic levels has been demonstrated by Laruelle.[2] Furthermore, Delmas, Laux, and Guerrier[1] discovered a deep sympathetic chain of ganglia set against the posterior wall of the transverse canal between the fourth to seventh cervical levels.[3] The autonomic fibers arising from the sympathetic centers emerge from the cord via the fifth to eighth cervical and first thoracic ventral roots and reach their areas of distribution by way of nerve trunks and perivascular plexuses. Some of the autonomic fibers establish synaptic contact with postganglionic neurons in small ganglia belonging to the deep sympathetic chain.[1] A number of the postganglionic neurons reach the external and internal carotid arteries and their branches by way of the carotid plexus; other autonomic fibers in the ventral roots proceed to the subclavian artery and the brachial plexus, while a third group of fibers establish contact with the cardioaortic plexus, the phrenic nerves, and the thoracic branches of the axillary artery.[21]

Clinical observations and physiologic experiments allow the conclusion that the autonomic fibers in the cervical ventral roots may induce vasoconstriction or active vasodilatation.[22,23] By way of continuations of the carotid plexus, postganglionic neurons in synaptic junction with autonomic fibers in the ventral roots extend along the trunk of the internal carotid artery and its branches, giving off fibers to blood vessels which supply a large part of the brain and also the optic nerve.

Ocular Lesions.—The syndrome of Fuchs (heterochromia of the iris) is attributed by Paufique, Girard, and Étienne [22,24] to cervical disk disease, roentgenologic evidence of which was demonstrated in their patients.

Thévenard and Taptas (1949)[25] were the first to indicate possible causal relationship between optic neuritis and pathologic lesions of the cervical spine. Roentgenograms of the cervical spine of their patient disclosed narrowing of the fifth to sixth cervical disk space and "posterior" osteophytes on the fourth to seventh cervical vertebrae. The optic neuritis was improved by surgical intervention on the lower part of the cervical spine. Girard[15] observed 15 cases of optic neuritis, the development of which he ascribed to cervical discopathy. Stretching of the cervical spine by traction cleared up the optic neuritis in his patients.

Development of optic neuritis is attributed to contusion and irritation of the autonomic fibers in the cervical ventral roots by cervicovertebral lesions. This causes vasomotor disturbances (vasodilatation) in the internal carotid artery and its branches with consequent impairment of the optic nerve.[22-24] Such etiology should be considered when the ocular lesion is unilateral and associated with homolateral vasomotor disturbances (acroparesthesias) affecting the upper limb. Drop in the retinal arterial pressure, roentgenologically abnormal cervical spine, and improvement or recovery through application of cervical traction or by means of surgical liberation of the ventral roots concerned are additional evidence in support of the causal link between optic neuritis and a pathologic cervical spine.

Acroparesthesia.—Acroparesthesias occur often in middle-aged women. The paresthesias consist of unpleasant sensations of "pins and needles," tingling, crawling, and numbness which are felt in the hand and fingers. They plague the patient at night, especially after midnight, are of transient nature, and vanish after a few weeks or months.[26,27] Some acroparesthesias may be accompanied by slight swelling of the hands and fingers and are often associated with cervicobrachialgia indicating simultaneous involvement of both the sensory fibers in the dorsal roots and the autonomic fibers in the ventral roots. In such instances cutting of the dorsal root fails to abolish the acroparesthesias. This points up the fact that involvement of the sensory fibers is not responsible for them.[3]

Shoulder-Hand Syndrome.—Other clinical manifestations arising from vasomotor and trophic disturbances produced by irritation of the autonomic fibers in the lower cervical ventral roots range from a minimal swelling of the hand and fingers to the full-blown clinical picture of the "neurotrophic rheumatism of the upper extremity" described by Ravault[28,29] in 1946 or "the shoulder-hand syndrome" of Steinbrocker.[30] In Oppenheimer's[31] patients with "swollen atrophic hand" roentgenograms revealed foraminal constriction at one or more levels of the upper four cervical vertebrae.

The shoulder-hand syndrome consists of painful shoulder disability and painful swelling of the hand and fingers on the same side. The swelling of the hand is followed by trophic changes characterized by wasting of the musculocutaneous tissues, flexion deformity and contractures of the fingers, contracture of the palmar fascia, and signs of local vasodilatation or vasoconstriction.

Although the shoulder-hand syndrome is generally attributed to reflex neurovascular dystrophy,[30] some cases are probably brought about by cervical rhizopathy produced by osteoarthritis of the cervical spine. Pressure on the autonomic fibers in the ventral roots headed for the upper limb can effect vasodilatation or vasoconstriction in localized areas of the upper extremity and can also produce trophic disturbances which may affect bones, muscles, tendons, fasciae, and skin.

Changes of the palmar aponeurosis simular to Dupuytren's contracture or true Dupuytren's contracture may also result from irritation of the autonomic fibers in the ventral roots.[32]

Pseudoangina.—Implication of the autonomic fibers in the ventral roots is held responsible for precordial pain[16–19] imitating cardiac or coronary disease ("pseudoangina"). False and true angina pectoris may affect the same individual, mutually influencing each other. The lesion in the cervical spine may potentiate the anginal pain and may multiply the anginal attacks; the coronary artery disease, on the other hand, may intensify the pain of cervicovertebral origin. Froment[33] calls this "intricated coronary angina."

Intricated coronary angina is not a rare occurrence. Cervical traction reduces the intensity and the number of anginal attacks and eliminates nocturnal attacks.[33] Like an experiment the favorable response to traction therapy proves the significant impact of cervicovertebral disease upon true angina.

Headaches and Facial Pains.—Chronic irritation of the radicular autonomic fibers through arthritic spurring from the cervicovertebral joints may produce headaches and facial pains by causing vasomotor disturbances in the distribution of the external[18,19] and internal [34] carotid arteries. The pain which is felt in the areas supplied by the carotid arteries is continuous but interrupted by paroxysmal exacerbations. A sensation of dullness and heaviness is most frequently experienced in the occipital or cervico-occipital region. From here the pain may radiate toward the ear or upward toward the vertex of the skull and into the parietal and frontotemporal areas. Often the area behind the ear, the mastoid region, and the side of the neck are the main sites of pain.[3] A deep, aching pain, often accompanied by diminished vision, may be felt about the eye, deep within the eyeball, and behind it.

Headaches and facial pains are frequently throbbing in nature. The cephalic symptoms may occur together with cervicobrachial neuralgia, acroparesthesias, and sensation of heat or cold in the fingers. These additional manifestations should stimulate consideration of cervicovertebral pathology as a possible cause of the headache and craniofacial pain. Often, sustained contraction of the posterior cervical muscles, itself a frequent consequence of a pathologic cervical spine, is held responsible for the headaches and facial pains. From what has been stated it follows that the cervical spine should be roentgenologically explored when one is confronted with headaches or facial pains of obscure origin.

Syndrome of Barré-Lieou.—In opposition to the anterior cervical sympathetic syndrome of Claude Bernard-Horner, the posterior cervical sympathetic syndrome (posterior cervical nervous syndrome or posterior cervical syndrome) was established and defined by Barré[35] in 1925 and was studied in detail by his pupil, Lieou,[36] in 1928. The syndrome of Barré-Lieou[37] consists in the main of atypical headaches and cervical pains which are most acutely felt in the occipital or occipitonuchal region. Other characteristic features of the syndrome are vertigo, tinnitus, pharyngolaryngeal paresthesias, aphonia, ocular lesions, and paroxysms of vasomotor disturbances. Attacks of vasomotor troubles come suddenly and involve especially the face and are characterized by flushing, flashes of heat, sensation of burning, sweating, rhinorrhea, and salivation. The duration of such an attack ranges from five to ten minutes.

Barré[35] pointed to irritation of the vertebral nerve and the sympathetic plexus surrounding the vertebral artery as the source of the symptoms. Figure 2 shows that laterally placed uncovertebral osteophytes may strike the autonomic neural structures ascending in the transverse foramina. These autonomic structures supply innervation to the vertebral and basilar arteries whose branches furnish blood to the bulbopontine region. In this part of the brain are located the nuclei of the fifth, sixth, seventh, eighth, ninth, tenth, and eleventh cranial nerves. Implication of this region through vasomotor disturbances (vasoconstriction) initiated in the vertebrobasilar vascular tree by irritation of the posterior cervical sympathetic system would account for the manifestations of the syndrome of Barré-Lieou.[38]

Lazorthes,[39] on the other hand, believes that the pain of sympathetic origin caused by pathologic lesions in the cervical region travels along sympathetic neural pathways to the face and head, thus giving rise to the syndrome of the posterior cervical sympathetic.

In accordance with the dominant clinical features, the chief forms of the syndrome are as follows: facial, pharyngeal,[40] vertiginous, cenestopathic,[41] and asthenocephalopathic.[42] In the course of the syndrome manifold ocular lesions were noted, such as recalcitrant and recurrent corneal ulcers,[43] extreme miosis,[43] corneal hyporeflexia, pain within and behind the eyeball often felt as pulling at the posterior pole of the globe, sensation of heaviness in the eyes, foggy vision, "mouches volantes," phosphenes, photophobia, asthenopia, sensation of squinting, blepharospasm, and lacrimation.

Syndromes Due to Compression of the Cervical Segment of the Spinal Cord.—Early signs of cord compression through osteophytes in the cervical region usually occur in the lower limbs; they consist of progressive spastic paraplegia which usually develops slowly, muscular weakness, hyperreflexia, and disturbed coordination. Sensory changes are infrequent and mild. Some loss of vibration sense and of joint position sense in the toes may be noted.[44] Unilateral cord compression may produce the hemiplegic syndrome of Brown-Séquard with contralateral impairment of pain and temperature sensation. Simultaneous compression of both the cord and the nerve roots creates a combination of neurologic abnormalities of both central and peripheral origin (pain and paresthesias in the upper limbs associated with atrophy and fibrillations of muscles and reduction of motor power). It has been pointed out[14,15] that neurologic semeiology depends less on actual compression of the cord than on repeated contusions and tractions and friction consequent to movements of both the cervical spine and cord. This leads to development of chronic adhesive and cystic arachnoiditis and to production of intramedullary alterations, such as foci of gliosis and degenerative changes in the vessels. These observations explain the discouraging results of surgery and the difficulties of differential diagnosis. The syndromes produced by the "compression" of the cervical segment of the spinal cord through cervicovertebral osteophytes are easily confused with certain primary degenerative diseases of the spinal cord, notably with multiple sclerosis, amyotrophic lateral sclerosis, syringomyelia, and subacute combined degeneration of the cord. Cervical osteoarthritis may also produce a syndrome resembling progressive muscular atrophy.[45]

Psychoneurotic Reactions.—The great variety and abundance of symptoms, on the one hand, and the paucity of signs, on the other hand, too often prompt one to suspect a psychoneurotic syndrome in patients afflicted with osteoarthritis of the cervical spine. In some patients psychologic symptoms superimposed upon the original somatic features may become so prominent as to overshadow the symptoms formerly in the foreground. Physicians unaware of the structural alterations of the cervical spine are prone to attribute the manifestations of somatic origin to mental and emotional factors. Because of faulty interpretation, therapeutic measures are employed, for instance, electroshock, which only add more damage to the diseased cervical spine. Such inappropriate therapy aggravates the somatic changes, the neurologic complications, and the somatopsychic manifestations. Too many such patients are still labeled and dismissed as neurotics and neurasthenics.

Summary

1. The joints described by von Luschka, called uncovertebral joints by Trolard, are joint-like structures between the posterolateral parts of cervical vertebral bodies.

2. The uncovertebral joints mark the site

where reactive osteogenic processes occur, leading to development of osteophytes consisting of new bone. Some writers claim that the osteophytes are indicative of osteoarthritis; others use the term spondylosis to designate the presence of osteophytes at the uncovertebral joints.

3. Osteophytic spurs from uncovertebral and apophyseal joints may cause compression and chronic irritation of nervous structures in the spinal canal, the intervertebral and the transverse foramina in consequence of which a variety of neurologic syndromes may develop.

4. The main syndromes are as follows: (*a*) Cervicobrachial neuralgia which is produced by irritation of the cervical dorsal nerve roots. (*b*) Lower motor neuron syndrome which results from involvement of the cervical ventral nerve roots. (*c*) Stimulation of the autonomic nerve fibers contained in the fifth to eighth cervical ventral roots cause vasomotor and trophic disturbances in the distribution of the vascular trees of the head, the neck, the upper extremities, and the chest. The resultant syndromes include headache, facial pain, ocular lesions including optic neuritis, shoulder-hand syndrome, "intricated" and pseudoangina. (*d*) Irritation of the posterior cervical sympathetic system is responsible for the syndrome of Barré-Lieou.

5. Compression of the cervical segment of the spinal cord causes syndromes which may be mistaken for multiple sclerosis, amyotrophic lateral sclerosis, or syringomyelia.

6. The psychoneurotic reactions which may complicate the neurologic disturbances consequent to compression and irritation of neural structures by cervicovertebral osteophytes are briefly discussed.

30 GRACE AVENUE

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Let the people know the truth and the country is safe.—ABRAHAM LINCOLN

The Prevention of Contact Dermatitis

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THE skin is the barrier separating the body from all the substances—gaseous, liquid, and solid—which all together constitute man's environment. It has many physiologic functions, and one of the most important is the protection of the tissues within it.

In exerting its protective function the skin itself can be injured by many of the substances it comes in contact with. These substances may be well-recognized, potent, primary irritants such as solvents, acids and alkalis, or milder irritants which do not harm until their use is excessive, such as soap. They may also be substances which ordinarily are not irritating but which, with frequent and prolonged contact, the skin eventually is sensitized, such as wool, flour dusts, and plastics. The body's own excretions, urine, saliva, rectal and vaginal discharges, can produce dermatitis.

The extent to which the skin is exposed, either at home or in industry, to innumerable substances which can do it harm make it small wonder that the dermatologist is confronted with more dermatitis due to contact irritants and sensitizers than due to any other cause. A large majority of these cases are housewives, especially new mothers whose contact with soaps and synthetic detergents has been suddenly increased by their redoubled efforts towards the maintenance of cleanliness of everything surrounding their babies. Osborne *et al.*[1] described "Eczematous dermatitis of the hands in housewives as one of the most refractory conditions for which dermatologists are consulted. Although we recognize that a diversity of allergens may cause this type of dermatitis, it is our belief that the majority of cases are caused by hypersensitivity to ingredients of soaps and allied cleansers." Dermatitis from this source is frequently seen also in nurses, dentists, physicians, and others whose occupation requires frequent skin contact with soap, alkalis, and other cleansers. Other irritants which can injure the skin and are commonly found in the home are polishes, waxes, bleaching compounds, cosmetics, perfumes, hair waving preparations, clothing dyes, leather, dust, wool and other fabrics, and foods.[2]

Children with a history of atopic eczema do not tolerate soap, wool, and other contactants well. Continuous exposure of the buttocks to ammoniacal urine is the primary cause of diaper dermatitis.

Contact irritants responsible for industrial dermatitis are too numerous to mention. The most common are solvents and fuels such as gasoline, carbon tetrachloride, mineral spirits, and turpentine; water-soluble irritants, such as alkalis, acids, chromates, and other rust preventatives and antioxidants, soaps and allied cleansers, dyes, plastics, rubber, resins, and many dusts. The incidence of industrial dermatitis has been estimated as high as 60 per cent of all occupational disease.[3] Its prevention is, therefore, of major interest to those concerned with industrial health.

Sites of Predilection

"The hands bear the brunt of contact dermatitis because their function as organs of touching and doing naturally exposes them more."[2] Other areas of skin not covered by clothing, such as the arms, face, neck, and wrists, are more subject to contact dermatitis because of their greater exposure. However, irritant dusts, fumes, and oils may permeate the clothing and cause dermatitis on the sites covered by them.

Recognition of Contact Dermatitis

The differentiation of contact dermatitis from infectious or eczematous dermatitis is often a difficult problem. A careful history and physical examination are important. Patch testing may give corroborative information as to the suspected contactants involved. Determination of the specific irritants is often difficult and at times impossible. Sometimes the best clue to their identity is afforded by what happens when the cleared patient is returned to exposure with the suspected substances, but this should naturally be avoided. When the physician suspects the dermatitis to be of contact origin and the cured patient cannot avoid re-exposure, every protective measure must be taken to prevent recurrence of the skin injury.

Protective Measures

Avoidance of the causative irritants is the best solution to the problem of recurrences of contact dermatitis. This is a practical impossibility with many patients, industrial or otherwise. In such cases the next best solution is the instruction of the patient as to precautions to be taken to minimize contact with irritants and allergens as much as possible.

At home the mechanization of chores which involve exposure, such as dishwashing, the use of protective gloves, and finally the use of an effective protective cream should be advised. In children the maintenance of adequate skin cleanliness and the use of protective creams are often the only practical preventive measures available.

In industry "by experience we have learned that occupational dermatitis can be prevented, both by efficient engineering control methods and by personal protective measures."[4] The personal protective measures include the use of protective clothing, safe industrial cleansers, and protective ointments.

Schwartz[5] in 1942 stated, "While protective ointments are low on the list of preventive measures, they are often the only available means of protection. In other instances they protect the skin from irritants which may escape into the air in spite of other preventive measures. Again, the face cannot be covered by protective clothing and often the work must be carried on with bare hands, gloves being unsuited for work or impeding the speed of the operation. Moreover, workers dislike to wear gloves and seem to like to use protective ointments."

Protective ointments by the hundred are available to the industrial worker. While the great need for truly effective preparations is well recognized, the value of those available, until the recent advent of the silicones, has been seriously questioned. Most of these have been marketed without the publication of reports of their adequate laboratory and clinical evaluation.

The Silicones as Skin Protectives

Silicone fluids are polymerized methyl siloxanes derived from common sand. Their medical use was first considered by Barondes *et al.*[6] who predicted their value as skin protectives, citing their properties of stability, durability, water and oil repellency, and nontoxicity. They are of extremely low toxicity[7,8] and are nonirritating and nonsensitizing.[2,6-8]

Talbott, MacGregor, and Rowe[7] reported good results from their use of a 30 per cent silicone in petrolatum as a preventative of irritation induced by body fluids and excretions. More recently Suskind[8] ran an extensive, systematic evaluation of Pro-Derna (a cream containing 52.5 per cent silicone in a bentonite base) in two large industrial plants and noted: "The formulation under study appears to have considerable protective value clinically against light petroleum oils and irritants such as rust preventives dissolved in such media, against insoluble cutting oils, soluble coolants, aqueous solutions of sulfuric acid and metallic dusts. . .Relative protection was observed clinically against low boiling point petroleum fractions such as Stoddard Solvent and mineral spirits when the cutaneous exposure was intermittent and when the solvent contained a small amount of light petroleum oil. No clinical protection was observed with frequently repeated cutaneous contact with gasoline, naphtha, Stoddard Solvent, mineral spirits, lacquer thinner."

Finnerty[2] obtained results similar to those of Suskind with his industrial dermatitis cases and reported excellent protection among housewives against dusts, soaps, and other water-soluble irritants.

Method Used in This Study

A total of 84 contact dermatitis patients, consisting of 36 housewives, five nurses, six secretarial workers, 14 children, and 23 industrial workers were studied. They included only those who, when the acute dermatitis was cleared, returned to their previous exposures and who were observed at intervals for at least four weeks after such return.

All of these patients were first seen with acute dermatitis and were cautioned to refrain from exposure to the offending contactants. These were determined by history and patch testing. They were treated with the usual wet dressings, soothing lotions, creams, and anti-infectives. Early experience had indicated that the protective cream exacerbated the inflammation if used during the acute stage. The 52.5 per cent silicone cream

TABLE I.—Protective Efficacy of Silicone Cream Against Contact Dermatitis in 36 Housewives, 5 Nurses, and 6 Secretarial Workers

Contact Irritants		Associated Conditions		Area Involved	
		Good Results—41 Cases			
Soaps and Detergents	10	Congenital polycystic disease	1	Hands	25
Cloth dyes	2	Infectious eczematous dermatitis	4	Arms	7
Shoe leather	2	Lichen sclerosis et atrophicus	1	Legs	5
Cosmetics	2	Lichen vidal	1	Neck	6
Lacquer	1	Psoriasis	2	Face	5
Plastics	1	Nummular eczema	1	Feet	2
Jewelry	1	Cheilosis	1	Back	1
Rubber	1	Dyshidrosis	1	Trunk	1
Nylon	1			Anus	2
Vegetables	1			Mouth	1
Saliva	1				
Hair waving	1				
Weeds	1				
Shoe polish	1				
Undetermined	15				
		Poor Results—6 Cases			
Soaps and detergents	2	Atopic eczema	1	Hands	6
Undetermined	4	Infectious dermatitis	2		
		Dyshidrosis	1		

TABLE II.—Protective Efficacy of Silicone Against Contact Dermatitis in 14 Babies and Children

Contact Irritants		Associated Conditions		Area Involved	
		Good Results—11 Cases			
Wool	3	Infantile eczema	2	Hands	3
Food	1	Atopic dermatitis	2	Arms	4
Diaper	1	Cheilosis	1	Legs	2
Plastic	1	Diaper rash	1	Buttocks	3
Cloth dye	1	Irritation plague (friction)	1	Trunk	2
Rubber	1			Mouth	1
Friction	1				
Undetermined	2				
		Poor Results—3 Cases			
Undetermined	3	Infantile eczema	2	Arms	3
		Atopic dermatitis	1	Legs	3
				Trunk	1
				Face	1

was, therefore, provided the patient when the dermatitis had cleared; he or she was given instructions as to how to use it and was sent back to his or her occupation. These instructions were as follows:

1. Adults: Apply a thin film of the cream on the clean, dry skin before starting work in the morning. Wipe the excess off with a soft rag or tissue paper. Wash the protective cream off with a mild detergent cleanser (Lowila cake or pHisoderm) before lunch. Reapply before the afternoon work period, and wash off as above when the period of exposure is over.
2. Children: After the day's bath, using the above-mentioned soapless skin cleanser, apply a thin film of the cream on the clean, dry skin.

Results

Only in those patients who were completely free from dermatitis for at least four weeks after re-exposure were the results considered good. All others were classified as poor results. Housewives, nurses, and secretarial workers were considered as one group since the type of contactants involved are similar. Table I lists the results obtained, the contactants, conditions associated with the contact dermatitis, and the areas of skin injured.

Of the group including 36 housewives, five nurses, and six secretarial workers, 41 were protected by the silicone cream, and six were not. It was not possible to identify the specific contactants responsible for the skin injury in the 15 patients who were protected and in four of the cases where the results were poor. As is to be expected, soaps and other cleansers, as well as cloth dyes, shoe leather, cosmetics, and other irritants with which women come into contact daily, were responsible for the dermatitis. Too, the hands, arms, legs, neck, and face were the sites most often involved.

Table II analyzes the results obtained with the

TABLE III.—Protective Efficacy of Silicone Cream Against Contact Dermatitis in 23 Industrial Workers

Occupation		Contact Irritants		Associated Conditions		Area Involved	
			Good Results—15 Cases				
Clothier	2	Oil and grease	3	Pruritus ani	2	Hands	8
Toolmaker	2	Cutting oil	2	Psoriasis	2	Arms	5
Mechanic	2	Cloth dye	1	Pruritus hemalis	1	Face	1
Salesman	2	Paint thinner	1	Mosaic warts	1	Legs	2
Painter	1	Nylon	1	Stasis eczema	1	Feet	1
Weaver	1	Gasoline	1	Lichen vidal	1	Neck	1
Machinist	1	Formalin	1			Groin	1
Electrician	1	Soaps	1			Anus	2
Carpenter	1	Undetermined	4				
Laundry supervisor	1						
Pharmacist	1						
			Poor Results—8 Cases				
Porter	1	Soaps	1	Infectious eczema	1	Hands	7
Factory worker	5	Solvents	1	Nummular eczema	1	Arms	1
Chemist	1	Oils	1	Dyshidrosis	5	Trunk	1
Trichologist	1	Formaldehyde resin	1				
		Undetermined	3				

pediatric cases. Eleven were benefited by Pro-Derna silicone protective cream; three were not protected.

Table III lists the results obtained with the group of industrial workers. In 15 of these the results were good. In eight the silicone cream did not prevent recurrence of the contact dermatitis. The table lists the occupational contactants, associated conditions, and areas of skin involved. It will be noted that five of the eight cases which were not protected had dyshidrosis of the hands as a complication. This was also true of one case unprotected and one case protected listed in Table I.

Comment

While it was not possible in every case to identify specific contactants responsible for the dermatitis, the histories of each of these cases, as well as effects of unprotected re-exposures, indicated all of them to be of contact origin. Our experience with contact dermatitis leads us to believe that in most of these cases the skin injuries would have recurred within four weeks after re-exposures if the patients had not used the silicone protective cream. In the housewife-nurse-secretarial group, the use of Pro-Derna prevented the recurrence of contact dermatitis in 87 per cent of the cases. Eighty per cent of the pediatric group and 65 per cent of the industrial group were protected.

Silicone protective creams and ointments, because of their extreme occlusive properties, should not be used on acutely inflamed or infected skin. We also have observed that dyshidrotic skin does not tolerate the silicone cream. It can actually cause severe irritation in these cases.

One of the poor results in the housewives group and five in the industrial group can be directly attributed to irritation of dyshidrotic skin by the silicone cream. It is reasonable to assume that the percentage of patients in the industrial group who were protected would have been higher than 65 per cent if use of the silicone cream had been avoided in those where dyshidrosis was a complication.

This clinical appraisal is an attempt to evaluate not the silicone protectives in general but only one type of such protective. It is subject to many possible statistical and experimental errors. Among these might be mentioned the following:

1. The patient's inability or lack of desire in applying the protective properly.
2. The occasional carelessness in application on inflamed skin despite precautions to the contrary. At least two patients were guilty of this and, hence, were thrown into the group of poor results.
3. The lack of control where definite contactants are recognized. The patients often hesitate to "experiment" with re-exposure and unconsciously steer clear. This makes proper evaluation difficult.

Summary

1. Pro-Derna is of definite value as an adjunct to prevention of contact dermatitis. Its use should not lull one into a false sense of security resulting in careless exposure to the contactants.

2. No evidence of sensitization to Pro-Derna has been found to date.

3. Dyshidrosis as a primary or associated entity contraindicates the use of Pro-Derna.

4. This protective cream fulfills most of the requirements of a good protective in that it is easy to use, is nonirritating, does not stain, is not greasy, and works as an invisible barrier. It has limited to no protective value against the solvents and fuels.

5. The silicones as a group should be widely studied in industrial usage. It is suggested that patch tests be done on skin sites which are treated with a silicone barrier. This may serve as a control to the comparable sites left untreated.

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Urinary Schistosomiasis

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URINARY tract infestation by Schistosoma haematobium represents the most common disease seen in Egypt. In many areas over 90 per cent of the populace are infected,[1] and almost all Egyptian farmers are involved.[2] Bitschai[3] has estimated that 11 of 18 million Egyptians have urinary tract schistosomiasis (bilharziasis). Its incidence is so common and is such an integral part of Egyptian medicine that Bitschai has termed the vast field which encompasses the treatment of schistosomiasis and its complications, "Egyptian urology." In an old Arabian book of geography written seven centuries ago, hematuria was described as "menstruation" of the male.[2] Ova have been described in Egyptian mummies 1250 to 1000 B.C.

Endemic areas are reported not only in Egypt but in Arabia, East Africa, South Africa, Israel, Australia, parts of Europe, and Portugal.[4] The disease is extremely rare in the United States and Canada. All reported cases in North America have been in individuals who have lived in endemic areas. Peters, Huntress, and Porter[5] in 1945 reported the thirty-sixth and thirty-seventh cases seen in North America. Miller[6] added a case in the same year. Berberian, Paquin, and Fantauzzi have recently observed an additional case.[7]

During the past eight years we have observed nine cases in four U.S. Public Health Service Hospitals in Baltimore, Maryland; New Orleans, Louisiana; Norfolk, Virginia; and Mobile, Alabama. One case has previously been reported.[6] Miller, Broncato, and Muelling[8] of the U.S. Public Health Service Hospital, Seattle, Washington, are reporting an additional interesting case in which serial bladder biopsies have been studied during a period of Fuadin therapy.

Etiology and Pathogenesis

Schistosoma haematobium (of Weinland) or Bilharzia haematobium are unisexual trematodes inhabiting vein lumina, especially mesenteric, portal, vesical, prostatic, uterine, and rarely pulmonary veins and even the vena cava. The parasite may remain active and produce viable ova as long as thirty-seven years after the initial infection.[7,9]

Upon leaving the human host, eggs hatch into a ciliated embryo, the miracidium ("little boy"), whose life span is twenty-four to forty-eight hours. Within this time period an intermediate, fresh-water snail host must be reached. These intermediary molluscan hosts vary according to endemic area, with the genus Bulinus predominating. The miracidia lodge in the fleshy portion of the snail and thence migrate to the liver or digestive gland. When the ova are present in overwhelming numbers, the snail dies. Otherwise, a sporocyst develops, subsequently followed by daughter sporocysts. Within four to six weeks numerous cercariae appear within the sporocysts and escape from the pulmonary cavity of the snail. The cercariae pierce the skin or buccopharyngeal mucosa of the human host, shedding their tails after penetration. Infection occurs either by wading in snail-infested fresh waters, in which the water movement attacts the cercariae, or by drinking polluted water.

Skin penetration is possible by virtue of the tail and a lytic secretion which often causes a transient dermatitis at the entry site. Young flukes (schistosomula) are carried by the general circulation to various body parts. Only those which reach the portal area survive and mature. Maturity occurs in eight to ten weeks. The adults copulate, and the male, which has four to five testes, then carries the somewhat larger female in its groove, down the portal system tributaries. Most migrate against the mesenteric venous stream to the hemorrhoidal vein and thence to the vesical venous plexis. Urinary bilharziasis results from S. haematobium in almost all instances, but in rare cases the S. mansoni has been found. Ova penetrate the mucosa and even the bladder wall. Finally, ova leave the human host via the urine, and the cycle has been completed.

Pathology

There is no one genitourinary lesion which characterizes Schistosoma infection. Whereas bladder disease predominates, other organs of the urogenital tract are involved in many instances, and the bladder itself suffers various types of pathologic aberrations under different circumstances. Bilharzial effects vary to a great extent with degree and duration of infection. Beyond the fact that bladder involvement is almost a certainty in all cases, further generalization is unwarranted.

The following outline includes the types of lesions which have been associated with S. haematobium infection and its sequelae.

I. KIDNEY
    A. Secondary to ureteral and bladder involvement
        1. Hydronephrosis
        2. Pyelonephritis
        3. Pyonephrosis
        4. Cortical abscess
    B. Primary renal
        1. Pyelitis
        2. Pelvic papillomas
        3. Cortical and medullary bilharzial lesions

II. URETER
    A. Secondary to bladder, prostatic and urethral involvement
        Hydroureter
    B. Primary Ureteral
        1. Ureteritis
        2. Edema
        3. Ureteritis cystica
        4. Ulceration and cicatrization of intravesical ureter
        5. Fibrosis
        6. Dilatation, atony, tortuosity, and kinking
        7. Hyperplasia
        8. Bilharzial granuloma of meatus
        9. Calcification
        10. Calculi
        11. Papillomas
    C. Periureteritis
    D. Reflux

III. BLADDER
    A. Acute and chronic cystitis
        1. Bullous edema and vesicular cystitis
        2. Granular and papillary cystitis
        3. Nodular
        4. Hemorrhagic
        5. Bilharzia cystica
        6. Panmural involvement of all bladder layers with intramural fibrosis
        7. Ulceration and necrosis
        8. Calcification
        9. Contraction and fibrosis
    B. Calculi
    C. Tumors
        1. "Bilharzioma"
        2. Papilloma
        3. Carcinoma
            (*a*) Villous
            (*b*) Nodular

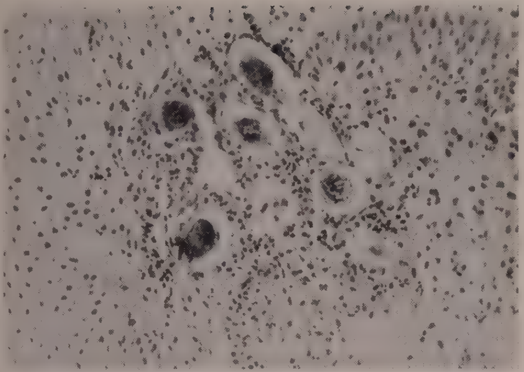

FIG. 1. Bladder biopsy illustrating typical Schistosoma haemotobium ova with severe cystitis and characteristic eosinophilic cellular infiltrate.

        - (c) Infiltrative
        - (d) Squamous
        - (e) "Spheroid cell"
        - (f) Adenocarcinoma
    - D. "Bladder palsy"
    - E. Bladder neck contracture
    - F. Pericystitis
    - G. Vesical fistulas and sinuses
- IV. URETHRA
    - A. Urethritis
    - B. Stricture
    - C. Abscess
    - D. Fistulas
        - 1. Urethroperineal
        - 2. Urethroscrotal
- V. PROSTATE
    - A. Hyperplasia with deposition of ova
    - B. Abscess
    - C. Atrophy and fibrosis
    - D. Calculi
    - E. Cysts
- VI. SEMINAL VESICLE—Hyperplasia with deposition of ova
- VII. CORD STRUCTURES AND EPIDIDYMIS—"Bilharzial rosary"
- VIII. PENIS
    - A. "Pseudo-elephantiasis" with deposition of ova
    - B. Chordee
- IX. SCROTUM
    - A. Primary involvement
    - B. Secondary to urethral fistulas with urinary extravasation

Of 653 patients with bilharziasis studied by Sayegh[10] over a two-year period (1945–1947) at the American Hospital in Tonta, Egypt, there was bladder involvement in 462, ureteral in 127, urethral in 29, cord and epididymal in 34, and kidney in one.

KIDNEY.—Renal lesions secondary to ureteral involvement are frequently observed. Many victims of this disease die in renal failure. Severe hydronephrosis, pyelonephritis, and pyonephrosis terminating in cortical abscesses with septicemia often follow ureteral stricture and fibrosis. Primary renal involvement by Schistosoma ova is rare. In Sayegh's one case pyelograms resembled tumor. Kidney sections revealed cortical and medullary bilharzial lesions.

URETER.—Whereas hydroureter may follow vesical and infravesical, especially prostatic, bilharzical disease, the predominant lesions result from actual ureteral involvement by deposited ova. Stricture below the pelvic brim is the most characteristic lesion according to Sayegh. Vermooten[11] considers dilatation and tortuosity of the pelvic ureter as almost pathognomonic. It was Fairley[9] who first emphasized the importance of lower ureteral involvement and noted the frequent "golf-hole" appearance noted so often in other inflammatory processes. Complete ureteral stricture and calcification have been reported and are not uncommon.[2] Dilatation is noted and is a more frequent lesion than stricture per se. Gelfand in examining 110 ureters noted dilatation in 25 and stenosis or stricture in only three.[12–14] It is this dilatation, lengthening, and infolding upon itself which is apparently responsible for its characteristic "S-shaped" curve on pyelography. Gelfand noted the intravesical portion of the ureter to protrude above vesical mucosal level. Obstruction and reflux are possible sequelae.

Ureteral calcification is often characteristic. Periureteral abscess simulating acute appendicitis has been noted.[10] Sayegh has described three patients with lower ureteral carcinoma in whom bilharzical ova have been found in the wall.

BLADDER.—By far the most common organ involved in this fascinating disease entity is the urinary bladder. Varieties of acute and chronic cystitis are legion, and all result from actual deposition of ova in the wall. Early in the disease there is hyperemia with vesicular and papular elevations which on biopsy reveal the presence of ova with a characteristic surrounding eosinophilic cellular infiltrate (Fig. 1). Grossly, on cystoscopy these are manifest as pinpoint, grayish tubercles, often termed "bladder acne," which are surrounded by a hyperemic zone. Phosphatic deposition on these nodules produce what are called "sandy patches." Such a bilharzical nidus may be responsible for true calculous formation. Bitschai has described such stones, formed "in loco," as "autochthonous." Stone formation has also been described in which the bilharzical papilloma, discussed below, has served as a nidus.

Bladder ulceration secondary to chronic infection with decrease in blood supply has been termed true "trophic ulceration" by Sayegh. Severe inflammatory reaction may terminate in bladder contraction, fibrosis, and calcification of the wall.

It has been generally assumed that the incidence of carcinoma of the urinary bladder is much higher in this group than in a non-Schistosoma infected populace.[2] Several factors favoring such a cause-effect relationship include the following:

1. This is the most common carcinoma in patients with schistosomiasis.
2. The geographic distribution of carcinoma and bilharziasis is similar.
3. A history of infection is almost always present.
4. Carcinoma cells and schistosoma ova are intimately associated.
5. Ibrahim has also noted that carcinoma of the urinary bladder is more common than the next four most common carcinomas in Egypt. In an analysis of all cancer admissions to two leading Egyptian hospitals between 1942 and 1946, he found the cancer distribution to be as follows: breast 378, cervix 337, rectum 178, stomach 74, and urinary bladder 1,022.
6. Calcification has been observed in 84 per cent of bladder carcinomas.[9] Calcification of bladder carcinoma in this country is rare, to say the least.

It would appear to be fairly obvious, statistically, that schistosomiasis may be a cancer precursor. Arcadi,[15] however, quotes Goebel who reported an incidence of carcinoma in schistosomiasis in only 4.3 per cent of his patients. Arcadi has also compared schistosomiasis with Hunner's ulcer as a cause of chronic irritation, with the conclusion that since the incidence in Hunner's ulcer is almost nil, then the effects of bilharziasis too cannot be accepted as an etiologic factor in the pathogenesis of vesical carcinoma.

Several types of carcinoma have been observed. Benign papillomas with or without phosphatic encrustation are not uncommon. Villous, nodular, infiltrative, squamous, "spheroid cell," and adenocarcinoma have all been described.[2] Most tumors accompanying schistosomiasis are highly malignant, grade 3 or 4, when first seen. They grow locally and metastasize late very extensively. The bladder base is involved in 90 per cent so that segmental resection is usually a worthless procedure. Ibrahim states that the average duration of infection prior to the development of carcinoma is approximately twelve years.

Other interesting bladder complications have been noted. Gelfand[13] has recently described an increasing incidence of what he termed "bladder palsy." While schistosomiasis has not been incriminated as the one etiologic factor, all patients with this syndrome are infected. The subjects are seen in complete urinary retention without discomfort. Catheters pass easily, and the retention is relieved, only to recur. After several days of bladder atonia, complete recovery follows. Neurologic examination is normal.

Bladder neck contracture with prostatic involvement has been described. Perivesical disease and vesical fistulas may follow extensive bladder wall infiltration.

URETHRA AND PROSTATE.—Lesions similar to those observed in the bladder have been described by Sayegh. Milton emphasized the frequency of urinary fistulas in this disease.[9] Prostatic, membranous, and bulbar urethral involvement with abscess formation, extravasation, and perineal and scrotal urinary fistulas are described.[10] Prostatic infiltration is often so extensive as to produce severe grades of atrophy. In these cases open prostatectomy is most difficult. Seminal vesicular involvement with hemospermia and spermatorrhea has been noted.[9]

Extensive nodular spermatic cord infiltration ("bilharzical rosary"), occasionally necessitating orchiectomy, is also described.[9] The penis may be so deformed as to produce elephantiasis.[9]

Diagnosis

If suspected, the diagnosis is not difficult. Any patient from an endemic area with hematuria, especially terminal in type, has the disease until proved otherwise. In those who have formerly lived in endemic areas, ova may be passed as long as twenty to thirty-seven years after initial infection.[7,9] Dysuria, frequency, and tenesmus vary with the stage and severity of involvement.

Gelfand[13] studied 50 patients with schistosomiasis, reporting 32 per cent to be normal on gross cystoscopic examination. Biopsies were taken from ten of these normal-appearing bladders, and ova were found in nine. He concludes that a normal cystoscopic appearance does not preclude infection.

Ova may be observed in fresh tissue at the time of biopsy by pressing it between two slides.[16] In an extensive study of the microscopic diagnosis of the disease, Meeser examined 1,300 urine specimens. Thirty-five cases not diagnosed microscopically were found by his hand lens method of macroscopic examination. Eighty-eight not diagnosed macroscopically were found on microscopic study. He concludes that this method is a quick and reasonably accurate one.

Eosinophilia is noted in the majority of patients. The cystoscopic picture depends upon the stage and extent of involvement and upon the absence or presence of complications. Complete description of the various cystoscopic appearances may be found in the standard urologic texts and in the writings of El-Sadr,[1] Bitschai,[3,4] Sayegh,[10] and others.

X-ray features again depend upon extent of disease and complications and include hydronephrosis, pyelonephritis, pyonephrosis, and abscess; ureteral strictures, dilatation, kinks, reflux, calcification, calculi, papillomas, and displacement by periureteral disease; vesical contraction, cystitis, calcification, calculi; filling defects secondary to tumor and fistulas; urethral strictures and fistulas.

Treatment

Messent[17] has recently described results utilizing two treatment schedules. With Miracil D (Nilodin), 60 mg. per Kg. per day orally in divided doses, a cure rate of 52.6 per cent is obtained. When the dosage is increased to 75 mg. per Kg. per day, the cure rate is 64 per cent. He concludes that Nilodin is superior to sodium antimony tartrate and anthiomaline. Watson[18,19] utilized even higher dosage schedules of Nilodin, 80 to 120 mg. per Kg. per day, and obtained cure rates of 67 per cent. He believes Miracil to be as effective as tartar emetic, more effective than Fuadin, and less toxic than either. The latter author has also utilized a 6 per cent trivalent sodium antimony gluconate solution intravenously with excellent results in five cases.

Of 653 patients reported by Sayegh, 168 required surgery, 253 were treated medically, 175 required no treatment, and 57 were too ill for definitive therapy. It is not within the scope of this paper to discuss the surgical management of bilharziasis and its complications. My personal experience has been limited to the medical management of a small series. The reader is referred to the more detailed works of Sayegh,[10] Bitschai,[3,4] Ibrahim,[2] El-Sadr,[1] Makar,[20] and Gelfand[12–14] who have had extensive experience with this disease.

Clinical Material

With the exception of two Americans who contracted the disease while stationed in Africa in 1943 to 1945, the seven other patients in whom a diagnosis of schistosomiasis has been made were British seamen of Egyptian or African nationality. It should be mentioned that foreign seamen who become ill while in this country are usually treated in various U.S. Public Health Service Hospitals.

Another patient, not described, was examined by Dr. John S. Haines at the U.S. Public Health Service Hospital in San Francisco. The chart is not available, and the data are therefore not included in this report, although the diagnosis was proved by biopsy. Another case was described from the U.S. Public Health Service Hospital, Norfolk, Virginia, in 1922 by Dr. E. M. Townsend.[21]

Hematuria was one of the chief complaints in five of the nine patients. Fever was noted in two and abdominal, flank, or suprapubic pain in five. There were no characteristic physical findings.

Urinalyses revealed the presence of Schistosoma ova in five patients; seven contained red blood cells. In the oldest patient, fifty-one years of age, infection by both S. haematobium and S. mansoni was found. Eosinophilia was noted in six patients. Eosinophil counts varied from 8 to 70 per cent; in four eosinophilia between 19 and 70 per cent was noted.

Pyelograms were normal in all except for slight calyectasis in one and hydroureter in another. There was no evidence of ureteral or bladder calcifications.

Cystoscopic examinations were performed in individual instances by Drs. Theodore Burkholder, Joseph Kovacs, and John B. Spriggs. In one instance the cystoscopist is not known; in the others cystoscopy was carried out by the author. In one patient cystoscopy was not performed, and the diagnosis was made by history and by the presence of ova in the urine. In the case examined by Dr. Burkholder, the patient had been referred with a diagnosis of carcinoma of the urinary bladder. Cystoscopy revealed a tumor mass on the left lateral wall and dome grossly characteristic of carcinoma. Biopsy revealed only chronic cystitis with ova. The lesion improved on Fuadin.

Characteristic lesions consisting of cystic-like nodules and grayish-white tubercles scattered throughout the bladder and in the dome were noted in all. True Schistosoma ulceration was seen in two. In one case papillomatous changes with accompanying cystitis and ulceration were described. Ova were found in the bladder biopsies of five. Four patients were treated with Fuadin and two with intravenous tartar emetic. Results were good in all.

Comment

When one considers the millions of patients infected by the S. haematobium, a report of nine additional cases is rather superfluous. The importance obviously lies in the fact that these were seen in this country and in two instances in Americans. The effect of global warfare and world-wide travel in the dissemination of infectious diseases from endemic areas has been emphasized. In this particular instance the diagnosis is easy and can be assumed in all patients with terminal hematuria who have resided in known endemic areas. These patients could easily have been screened, diagnosed, and treated by immigration and port health authorities without ever having been admitted to the country. There is, however, no danger that the disease may become endemic in this country. The snail host necessary for the completion of the life cycle is not found in this country.

Summary and Conclusions

The subject of urinary schistosomiasis has been discussed with regard to incidence, etiology, pathology, pathogenesis, diagnosis, and treatment. Nine cases have been added to the list of those previously seen in this country.

The diagnosis is relatively simple and may be assumed in almost all instances on the basis of a history of hematuria in one who has at one time resided in endemic areas. It is important to remember that ova may be passed as many as thirty-seven years after initial infection.

Infection by the S. haematobium is one of the few genitourinary infections causing eosinophilia.

Undoubtedly many cases are admitted to this country without being diagnosed. When one considers the number of foreign vessels staffed by personnel who are natives of endemic areas, this fact becomes apparent. It should be emphasized, however, that there is no danger of the disease becoming endemic in this country. Sanitary conditions are certainly different, and we lack the intermediate snail host.

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No matter how crowded the field seems to be, not all the places have been taken. No matter how many have found good opportunities, there is still opportunity for you also. No matter how much you may feel that you have reached the limit of your ability, you have reserve strength for a further climb. No matter what changes have taken place, there is still a niche for you.

No matter how many efforts have turned out not too well, there is another effort that you can make that will turn out well.

—*York (Pa.) Trade Compositor*

The Management of Backache

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When one attempts to condense the facts and factors to be considered in the diagnosis, treatment, and management of backache, it is obvious that it cannot be accomplished in as short a period of time as allotted to this part of the program.

From a practical standpoint if we start out on a premise that backache is a symptom and that in and of itself it is not a disease, we are on pretty good ground. The taking of the history, as in every other field, is most important. Many times the adequate history will focus attention upon cardinal points which may lead one to the triggers or mechanisms that set the entire picture in motion.

Patients will often give a history of a catch or a kink in their backs or a lumbago which came on slowly, and such a point may lead the examiner into one channel or another. Did the patient have an acute upper respiratory affair within the last few weeks? What position was he in, and what unusual strain was placed upon the back by lifting while in the bent-over position? Were the knees straight or bent? We must be ever mindful of the fact that one does not need to be lifting or straining to initiate low back pain for it is a well-known fact that merely bending in an abnormal or unusual position may so traumatize the back as to produce a herniated disk. Recurrence is another point to consider. What makes the back better, and what makes it worse? Determine and record periodicity, the presence or absence of radiating pain, the aggravation of such by coughing, sneezing, bowel movements, or assumption of certain positions.

Such positions as being on one's face while sleeping may produce pain in the low back which is most often in the lumbosacral area. The patient may give a history of being unable to sit through a double feature in a theater. At this point it might be well to record the significance of such a complaint. An individual sitting in the average theater seat would have his feet resting on a floor which slopes away from him, and the lumbosacral joint is hyperextended. Our modern concept of proper posture in automobiles is rapidly changing, and we are getting away from the car seat which drops the driver down low and at the same time backward in the car to allow for plenty of "leg room." Backache brought on by driving may be alleviated by pulling the seat forward so that both hips and knees are in moderate flexion.

Improper sitting positions assumed at work may often produce low backache. To exemplify the point it is worthwhile to relate that a group of women working on an assembly line, with their arms at shoulder level part of the time, all had backache which was relieved by putting a foot bench in front of them so that their hip and knee flexions were better accomplished and maintained. The backaches present in this instance disappeared along the production line when the feet were elevated. This information is not new, for one needs but to look at the old pictures of the English bookkeepers; you will note that their feet were on the rungs of the high stools with their knees practically tucked up under their chins.

As for the types of pain, patients who have pain brought on while standing in one position or with excess strain superimposed upon a developmental deformity, as in a spondylolisthesis or a post-traumatic low back sprain, will be relieved by rest as a rule. The morning pain in the patient who gets up and states that, "I am in tough shape for the first fifteen to thirty minutes, but once I get under way I am relieved," comes, most often, under the classification of the inflammatory type of lesion. Night pain is present in tuberculosis particularly and in tumors of neurogenic or osseous origin in the spine. The constant pain that nothing seems to relieve should put one on the alert for a malignancy.

Many backaches are being classified as disks today much the same as they were sacroiliac sprains in the past. It is believed that it is anatomically possible for a disk to be a so-called herniating one and for another to be a frankly rup-

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tured one. Both may produce the same clinical picture, but the herniated one will very often respond to conservative management and rest, whereas the ruptured disk represents a loose body in the canal and excision is the procedure of choice.

Acute infectious processes which result in osteomyelitis must be kept in mind, and, strangely enough, pyogenic osteomyelitis of the nontuberculous variety of the spine does not behave or impress one like osteomyelitis in the long bones. Tuberculosis, an insidious involvement, may take many, many months to manifest itself, but it must always be in the mind of the examining physician.

Evaluation of the low back involvement in practically all cases calls for complete x-ray studies to give one an appreciation of the anatomy of that individual's spine and pelvis. There are dozens and dozens of points to be considered in x-ray interpretation, but the salient and significant ones will be mentioned here. Measurement of the lumbosacral angle is important because it determines whether an individual does or does not have a sway back, and it might be added that the films should be laterals taken in the standing position for determination of this. The angle of incidence of the lumbosacral joint in the normal person is 42 degrees or less. This angle is the plane of the superior surface of the first sacral segment in relation to the horizontal.

By inference this brings us to the point of what type of x-rays are most valuable in the routine examination of the back. Routine films should include an anteroposterior view of the pelvis, with the patient standing for a scout survey including the hip joints and at the same time to allow one to determine whether there is or is not a developmental shortening on one side. The lateral lumbosacral view will determine the extent of the sway back, and this too should be taken with the patient standing. It is further felt that oblique views should always be done to show the details of the zygoapophyseal joints. It is worth the time and the effort of every physician to discuss with his roentgenologist the radiologic findings in the case of every backache. In going over the films have him show you the "Scottie dog" outline showing the interlocking of the facets. A study such as this will give you a much better appreciation of the planes and the integrity and possible changes that take place in these particular facets. The anteroposterior view will rule in or out the presence of development anomalies or enlargements of the transverse processes, whereas the obliques shed light upon the possible defects, particularly in the pars interarticularis, and the lateral x-ray films will give you a better appreciation of the relationship of the fifth lumbar vertebra to the first sacral segment.

The physical examination starts with an analysis of the standing posture, sitting posture, walking posture, even the ferreting out of the various sleeping positions assumed and their results upon the back involvement. Our younger generation today walks down the street with the shoulders sloped, the lumbar lordosis increased, the abdomen protruding in the lower portion, the knees snapping back into full extension, and the feet externally rotated and pronated. We are seeing more backaches in sixteen, seventeen, and eighteen-year-old girls than we should.

Relative to a poor standing posture, it should be kept in mind that where the individual is standing with his legs astride, his knees hyperextended, the feet externally rotated and pronated and his abdomen relaxed, you have a person who is not in dynamic balance. This has long been recognized by such men as football coaches who will instruct quarterbacks to play the ball toward defensive men who are standing poorly because they will be slower on the takeoff to intercept passes or stop an offensive play.

Sitting postures with our present-day furniture certainly need a great deal of attention and revision. When we sit, the centers of our knees should be higher than the centers of our hips, for only in this manner will the lumbosacral joint angle be decreased rather than increased and the fifth lumbar vertebra will ride on the top of the first sacral segment. Sitting on an inclined plane is associated with a sway back and fostered by the patient's reaching for the floor with his feet from a chair which is too high or too deep or both. Again, one needs but to look at the old cuts and pictures of the legendary English bookkeepers decreasing their lumbosacral angles.

Investigation for extraneous causes of backache such as gastrointestinal disturbances, genitourinary involvements, pulmonary and cardiac difficulties, and the like should all be considered where the diagnosis is on the more obscure side. The neurotics, the malingerers, and "compensationitis cases" all pose real problems for the examiners.

Too often, snap diagnoses are made as far as back involvements are concerned without the examining physician even seeing the patient's back. If a personal note were inserted in this discussion at this point, it would be confessed that shingles over the distribution of the inferior gluteal nerve were missed on examination because the patient was not uncovered by the author.

To begin with the examiner should have an unobstructed view of the patient's back with a good light upon it. One of the first points to be observed is the level of the pelvis. Where there is a developmental shortening on one side, a trigger point will often be found at the junction of the gluteus maximus and the tensor fascia on the other side. This calls for elevation by means of blocks to level the pelvis and notation of the reaction thereto from the standpoint of tenderness, freedom of motion on lateral flexions, and also from the standpoint of the over-all general alignment of the spinal column above. This is a point too often overlooked and one which brings about excellent relief in many instances by its correction. The aforementioned anteroposterior view of the pelvis, taken with the patient standing, will confirm a suspected shortening and also give one the opportunity to measure the extent of it directly. In disk lesions, for example, intersegmental splinting or loss of motion will be noted on right and left lateral flexion with the patient very often having less flexion when he bends away from the side involved.

Unfortunately it has become essential for examining physicians to suspect many patients complaining of backache following trauma, and it becomes necessary to trap them. With the patient in the standing position, check anterior flexion as well as right and left lateral bending and hyperextension, and then, as the patient sits on the side of the examining table, extend the leg at the knee and flex the thigh on the trunk, ostensibly to look at the feet. This is straight leg raising. Bring both legs up, and then flex or bend the neck down toward the chest, and you have certainly doubly checked the man as far as the above-mentioned maneuver is concerned. Then with the patient on his back on the examining table straight leg raising is again attempted, and many, many times the patient will allegedly not tolerate but very few degrees of the same.

Obviously this is a contradiction, and inability to allow straight leg raising is nullified. The primary purpose of the straight leg raising test is to measure sciatic involvement.

The Patrick test, which consists of flexion, abduction and external rotation of the thigh at the hip, has been described as an excellent one for sacroiliac involvement, but the Gaenslen test is thought to be an even better one. To repeat what has been said before, too many low backaches are classified as sacroiliac sprains. One needs but to check a skeleton in the laboratory which has been denuded of all musculature but which still has the ligamentous structures attached, and you can appreciate the fact that such simple strains as described could never sprain or disrupt a sacroiliac joint. This is further borne out by the fact that many times trauma producing fractures of the pelvic ring will split the ilium lateral to the sacroiliac joint without evident disruption of that same joint. The Gaenslen test is performed by having the patient flat on his back at one edge of the table and then the table side lower extremity is acutely flexed at the knee and the hip, bringing the knee up against the abdomen and having the patient hold it. Then the straightened lower extremity is hyperextended over the edge of the table in a scissors-like action. The acutely flexed extremity locks the lumbosacral joint and the hyperextended, straight extremity exerts torsion upon the sacroiliac joint on the ipsolateral side.

The Ober test should be included in the examination as a determinant of a tight tensor fascia lata. This is performed by having the patient on his side with the down or table side lower extremity acutely flexed against the abdomen. The other extremity is held by the examiner with the knee flexed to 90 degrees, and then the hip joint is brought into extension, and one allows the knee to approach the table top. In the cases of a tight tensor fascia the knee will not drop down to contact the table top, and the patient will have increased pain running along the iliotibial band with a tender, trigger point at the junction of the tensor fascia lata and the gluteus maximus on the up side.

A knowledge of dermatome distribution of sensation and significance of reflex changes is a necessity in the armamentarium of the examiner. Muscle weaknesses should also be evaluated and their meanings considered.

What to do about the acute back always poses a problem from a diagnostic and therapeutic standpoint. Summarily speaking it might be said that the best treatment is to immobilize him in a Gatch type of bed, flex the hips and knees slightly, rather than have him out flat using bed boards and, if necessary, bring into play bilateral traction in the amount of 8 to 10 pounds. Anodynes should be used to the point that the patient is "snowed under" for a forty-eight to seventy-two-hour period. After the patient quiets down, further investigative studies are in order including proper x-ray examination, and subsequent treatment is administered as indicated.

The vast majority of low back involvements associated with trauma come under the classification of sprains and strains, and it might be said that the treatment thereof could be compared with that administered to an athlete who develops a "Charley-horse." The athlete is not rested without exercise for a period of time and then put back into competition and expected to retain his place. It might be said that neither should the low back sprain be treated along these lines. The athlete is put on a judicious exercise program, and the low back sprain should be treated in a similar manner.

Exercises may be started in bed as the patient's pain subsides. Three essential exercises readily performed on a firm surface will build up the abdominal musculature, the gluteal and paraspinal musculature, and stretch the lumbosacral fascia within tolerated ranges.

These are performed by having the patient place his feet flat on the resting surface with the hips and knees flexed. The first exercise is to raise the buttocks gently just clear of the resting surface, thereby tightening up gluteal and paraspinal musculature without putting a strain on the lumbosacral joint which has been stabilized by the hip and knee flexion. The second exercise is to have the individual fold his arms across his chest and attempt to raise the shoulders off the resting surface, thereby tightening up the abdominal musculature. The third is performed by having the patient passively pull his knees to his chest, stretching the lumbosacral fascia. As a rule, flexion exercises performed with the lower extremities in extension place too much strain upon the lumbosacral joint to be of value in the convalescing low back sprain. However, hamstring stretchings, when necessary, are done by this method.

Following recovery from the acute phase of the low back involvement it is essential that the patient be taught twenty-four-hour living with a proper posture. The sitting positions with the knee levels higher than the hip levels, feet firmly placed on the floor, with any swayback eliminated have been mentioned above. Standing with the feet parallel, the knees not hyperextended, the abdomen pulled in and the shoulders squared describes the basic standing position. The sleeping position is best exemplified by the patient in a hospital bed with the upper portion of the bed cranked up a few degrees and the knees slightly flexed.

Industry is awakening to the fact that lifting, pushing, pulling, and the like should be done with the workman's hips and knees slightly flexed to avoid strains of the lumbosacral area and adjacent musculature. Too often they are brought on by such maneuvers being performed with the knees locked in hyperextension and so forth. One should learn to lift with the legs and not the back.

It is obvious that all phases and facets of backache could not be condensed into any one paper of this length, but it is sincerely hoped that recognition of some of our faults and poor habits will lead to more understanding, proper diagnosis, and better treatment of this ever-increasing problem.

Three elderly gentlemen were discussing the ideal way in which they would prefer to die. The first, aged seventy-five years, announced that he would like to crash in a car traveling at 80 miles an hour and go out quickly.

The second, aged eighty-five years, said that this showed little imagination and declared that he would like to take off in a jet plane and crash into a hill at 400 miles an hour.

"I've got a better idea," said the third, aged ninety-five years. "I would like to be shot by a jealous husband." —*Tonics and Sedatives, Journal of the American Medical Association, May 15, 1954*

Traumatic Implantation of Cilia into the Anterior Chamber

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To find cilia inside the eyeball is uncommon, although by no means rare. Over a hundred cases of cilia in the anterior chamber have been recorded in the literature, and hairs have been implanted experimentally in animals' eyes.[1-8] Cilia may be introduced into the eyeball through a traumatic or even an operative perforation of the cornea or sclera. No surgical case has ever been reported in the literature, although it is quite possible inadvertently to introduce a cilium or fragments of cilia during an operative opening of the globe. In the case of trauma the history is sometimes difficult to elicit since the injury may have been forgotten or passed unnoticed.

The initial concern, when cilia implantation occurs, is the danger of infection. In cases of infection, however, the pathogenic organisms are generally traced to the perforating object rather than the implanted cilium. Inflammation at the time of injury has also been attributed to chemical irritation from fats and oils on the shafts of the cilia. When a cilium lies in contact with tissue, as the iris, it generally excites a mild or minimal foreign body reaction, becoming encapsulated by fine fibrous tissue, consisting of epithelioid cells with or without giant cells. When it lies free in the anterior chamber, there is little or no reaction except that in the course of time it becomes depigmented.

At the time of injury cilia may carry into the eye epithelial cells derived from the epidermis, the roots of the cilia, the conjunctiva, or the cornea. After a period of time circumscribed cysts may develop from proliferation of these cells. The characteristic lesion attributed directly to the cilium is the "pearl" cyst, caused by proliferation of hair root cells. This is a round or oval solid tumor lined by a layer of cornified epithelium, which usually starts in the iris and develops in the anterior chamber. A translucent serous cyst of the iris may result from the introduction of corneal or conjunctival epithelium. With development of cysts glaucoma and blindness may ensue. It has long been known, however, that frequently cilia within the anterior chamber are well tolerated and may remain inert for years.

As to treatment, early removal, when feasible, is considered best. Removal, however, does not guarantee against the later development of a cyst. When a cilium is discovered that has been in the eye for a long period of time, it is wisest to leave it undisturbed unless it is causing inflammation.

Case Reports

Case 1.—V. P. N., thirty-three-year-old male, had been under observation since February, 1950. After repeated questioning he stated that at the age of two he was hit by a truck while playing in the street and was hospitalized for about four months at St. Vincent's Hospital, New York City, with fracture of the skull and other bones and unspecified injury to the eyes.

He was a veteran of World War II. In 1943 at Fort Dix the presence of something unusual in the right eye was first called to his attention. In 1945 he was hospitalized for three days in Liege, Belgium, and for five weeks thereafter in England for a disturbance of the right eye and a mild functional gastritis. The Army record stated that the vision of the right eye blacked out completely while the patient was firing on the range; that the vision returned in about two hours; that on examination the right eye showed a corneal leukoma and a cilium in the anterior chamber; that the origin of these findings could not be determined and was judged to be unrelated and to antedate the disturbance for which he was being treated.

Ophthalmic examination of recent date revealed VOD 20/15 + 0.75 sphere = 20/12.5; VOS 20/40 + 1.00 cylinder × 165° = 20/15. The left eyeball was normal in all respects. The right globe was white. There was a faint opacity of the lower temporal cornea. The pupil was round, reacted actively to light, and dilated uniformly with mydriatics. In the anterior chamber a foreign body was grossly visible, 10 mm. long, lying almost vertical, extending from the back of the cornea at 10:30 o'clock, 2 mm. from the upper limbus, into the chamber angle at 7:30 o'clock limbus (Fig. 1). The fundus was entirely normal. Intraocular pressure was normal. On biomicroscopy

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Presented in part at a meeting of the Brooklyn Ophthalmological Society, December 17, 1953.

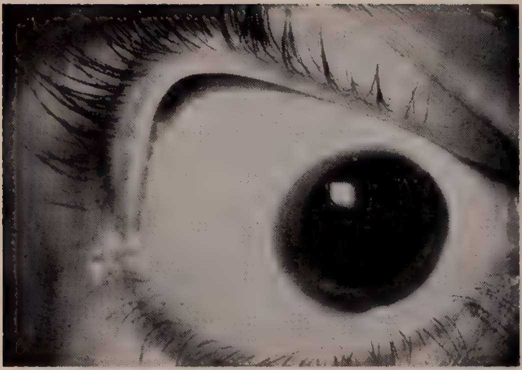

FIG. 1. *Case 1*—Cilium in anterior chamber of right eye for thirty-one years. Pupil is dilated with mydriatic.

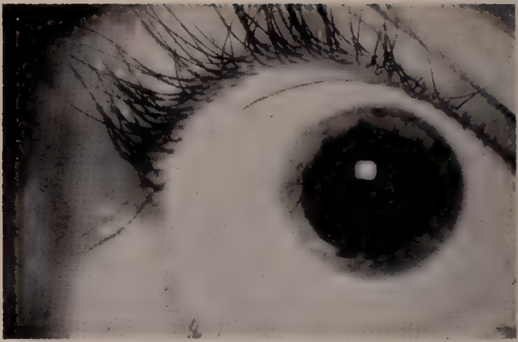

FIG. 2. *Case 2*—Cilium, comma-shaped, in temporal periphery of anterior chamber of right eye, starting at 8 o'clock limbus. Pupil is dilated with mydriatic.

the corneal opacity appeared grayish white and irregularly V-shaped and extended into the deep stroma. The foreign body showed a pure white, bulbous extremity where it adhered to the posterior corneal surface; a few irregular brownish specks clung to it near this end. The main portion of the foreign body was pale yellow, cylindric, and almost homogeneous in appearance. There was a small, triangular defect in the lower temporal iris near the sphincter with the base at the sphincter and the apex pointing down; the loss of stromal tissue was greatest at the sphincter. The contour of the pupil was undisturbed. On the anterior capsule of the lens, nasally, in the pupillary zone there were aggregations of fine, stellate, brown pigment. There were no synechiae, and there was no evidence of inflammation. An x-ray of the globe on March 13, 1953, was negative for opaque foreign body.

CASE 2 (*Patient of Dr. Milton Welt*).—P. T., twenty-six-year-old female laboratory technician, on June 19, 1952, was hit in the eyes by glass fragments from an exploding ampule. Examination revealed tiny glass particles embedded in the corneas of both eyes and a perforation of the right globe. There was a horizontal, irregularly shaped perforation of the temporal cornea, 4 mm. long, the lips of which contained minute glass fragments; a slitlike pupil, with iris incarcerated in the wound; a flat anterior chamber; and a cilium between the cornea and the iris at 7 o'clock.

The patient was hospitalized and put to bed. Eserine solution was instilled in the right eye and a binocular bandage applied. Tetanus antitoxin and typhoid vaccine were given. After twenty-four hours the iris appeared free of the wound. Attempts were made to remove glass particles from the corneas during dressing of the eyes, but none of the deeper fragments could be removed. The anterior chamber remained flat for two weeks, then reformed permanently. The cilium was attached at its apex at 8 o'clock, and its base was free in the anterior chamber, covered with a translucent exudate (Fig. 2).

On discharge from the hospital, the vision of each eye was 20/20. There was a low-grade uveitis of the right eye, and the left eye showed a few small corneal scars. Examination on July 30, 1952, showed in the right eye cells in the aqueous and precipitates on Descemet's membrane, some of which were pigmented. On March 26, 1953, cellular deposits were observed on Descemet's membrane of the left eye, and the possibility of sympathetic ophthalmia had to be considered. Dr. Mortimer Lasky and later Professor A. Franceschetti, of Geneva, Switzerland, were consulted. Both advised against removal of the cilium. Professor Franceschetti attributed the irritation of the left eye to the scarring of the cornea at the time of the accident.

At present (March, 1954) the eyes are free of inflammation, and vision of each eye remains 20/20. The cilium in the chamber appears unchanged.

CASE 3 (*Patient of Dr. Nicholas P. Tantillo*).—G. D., thirty-three-year-old male employe of the Department of Sanitation, on August 14, 1953, was pulling a spring with a pair of pliers when the pliers slipped and the spring struck the right eye, smashing his eyeglasses. The eyebrow and upper lid were lacerated and the upper nasal cornea perforated, and an eyelash entered the anterior chamber (Fig. 3). The injuries healed uneventfully with conservative therapy; deep scarring of the upper cornea remained. No attempt was made to remove the cilium. Vision in the injured eye in March, 1954, is 20/25 with correction.

CASE 4 (*Patient of Dr. Nicholas P. Tantillo*).—F. C., young male, was injured on October 27, 1950, when a wire struck his left eye. There was a puncture wound of the sclera near the limbus at 3 o'clock; a laceration of the cornea at limbus at 10 o'clock, extending 1.5 mm. into the sclera and 5 mm. into

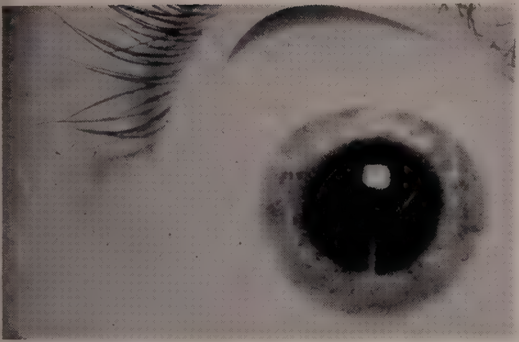

FIG. 3. *Case 3*—Cilium lying obliquely in anterior chamber of right eye and attached to posterior cornea above.

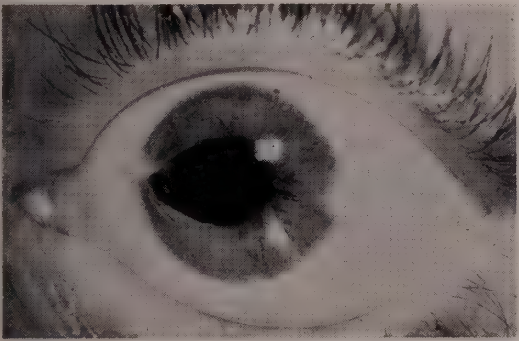

FIG. 4. *Case 4*—Healed wounds at limbus, 3 and 10 o'clock, left eye. Cilium in nasal periphery of anterior chamber below scar.

the cornea, with prolapse of iris; two cilia in the anterior chamber; and a small amount of blood in the chamber. On the day of accident the prolapsed iris was excised and the globe repaired. On November 3, 1950, one of the cilia in the anterior chamber was removed, but the second could not be taken out.

The injured eye healed well and has remained free of inflammation to date (March, 1954) with corrected vision of 20/15. The cilium in the chamber remains unchanged (Fig. 4).

CASE 5 (*Patient of Dr. Ralph I. Lloyd*).—This patient, seen many years ago, presented an adherent leukoma of the upper cornea with three cilia embedded in the anterior chamber and a traumatic cataract (Fig. 5). There had been a penetrating injury nineteen years before. The eye was free of infection.

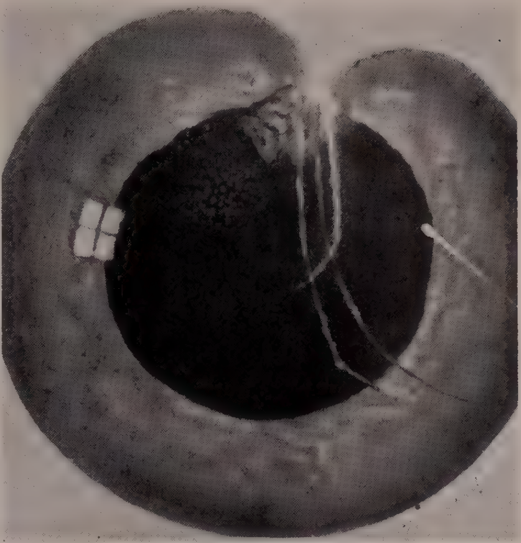

FIG. 5. *Case 5*—Painting of eye. Healed wound at upper limbus. Two cilia attached to wound above and one cilium in periphery. Traumatic cataract. Nineteen years after injury.

Summary

1. The problems raised by the presence of cilia in the anterior chamber are reviewed briefly.

2. Five cases are reported. In Case 1 the cilium was an incidental finding in an apparently normal eye. Study revealed a deep corneal opacity and a small iris defect, indicative of a perforating injury which probably occurred thirty-one years ago. Cases 2, 3, and 4 presented recent perforating injuries in which cilia carried into the anterior chamber have remained without apparent harm to date. Case 5 showed three cilia imbedded in the anterior chamber for nineteen years. In none of the five instances did the cilia produce any lasting complications.

515 OCEAN AVENUE

I am indebted to Dr. Milton Welt and Dr. Nicholas P. Tantillo for permission to utilize the records of their cases and to photograph the affected eyes and to Dr. Ralph I. Lloyd for the painting in Case 5.

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CASE REPORTS

Survival in a Case of Barbiturate Poisoning with Arrest of Spontaneous Respirations for Thirty-Four Hours

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THE barbiturates represent a valuable group of hypnotics. Unfortunately however, since the introduction of the first barbiturate, "Veronal" (barbital) fifty years ago, their use has resulted in abuse to such an extent that today the number of barbiturate suicides is second only to carbon monoxide poisoning.

By depressing the central nervous system the barbiturates lead to sleep. In large doses they inhibit the dehydrogenase system of the brain and reduce oxygen utilization[1] and may even lead to actual necrosis of the higher brain centers and ganglia[2] unless the patient expires due to respiratory failure[3] before such changes can occur.

In the treatment of barbiturate poisoning open airways, adequate oxygen, intravenous fluids, analeptics to overcome the central nervous depression, antibiotics to prevent, if possible, pneumonic complications, and first rate nursing care with frequent turning of the patient to avoid hypostasis are of prime importance. Gastric lavage because of the possibility of aspiration pneumonia should only be done if it reasonably can be assumed that significant amounts of the hypnotic are still present in the stomach.

To keep open the airways, suction may be needed, and when spontaneous respiratory movements cease, artificial respiration with a respirator is essential to save life, as shown by our own case and that of others reported in the literature.[4,5]

Although the value of analeptics in barbiturate poisoning has been denied by a few authors,[6,7] their arguments have been refuted by many writers[8-12] and best by the many excellent clinical results reported in the literature.[13-15]

Case Report

The present case concerns a thirty-nine-year-old white male pharmacist who was admitted to the medical service of Fordham Hospital in coma at 11:30 A.M., March 20, 1952. The patient was last seen in a conscious state at 9:30 A.M. At 10:30 A.M. he was discovered comatose by his wife. The latter also contributed a history of the patient's mental depression for the past several months. Following recovery it was learned that the man had consumed 90 to 100 capsules containing 0.1 Gm. Nembutal (9 to 10 Gm.) at 10:00 A.M. The further history was noncontributory.

Physical examination on admission revealed a comatose, cyanotic white male with very shallow respirations at the rate of 10 per minute. The pupils were constricted, equal, and did not react to light. All corneal, gag, and deep reflexes were absent. The blood pressure was 70/20, ventricular rate was 120 per minute, and the heart sounds were feeble and distant. During the examination at 11:45 A.M. the pupils became dilated without reaction to light, cyanosis increased, and respirations stopped. The radial pulse could not be felt, heart sounds were inaudible, and the blood pressure was 0/0. Manual artificial respiration was immediately instituted, and 2 cc. of coramine, which was at hand, were injected intracardially. Thereafter, feeble heart sounds at the rate of approximately 150 per minute became audible, while the blood pressure rose to 70/20. In view of the very small dose of coramine it seems probable that the mechanical irritation of the heart muscle by the needle also exerted an effect. At any rate the cyanosis gradually improved but recurred whenever artificial respiration was stopped. An orientation dose of 3 cc. of Metrazol was given intravenously as suggested by Alexander[16] and repeated ten minutes later without any change in the patient's reflexes.

Since the authors felt sure that they were dealing with a case of barbiturate intoxication, 6 mg. of picrotoxin, 20 mg. of Benzedrine Sulfate, and 3 cc. of Metrazol were given intravenously at 12:10 P.M. and repeated every half hour for 15 doses. During all this time the patient did not breath spontaneously, although he was at frequent intervals given ample opportunity to do so by stopping artificial respiration. The patient was, therefore, at 1:10 P.M. placed in an Emerson respirator. Physical examination at this time revealed mild generalized cyanosis, absence of spontaneous respiration, sinus tachycardia at the rate of 120 per minute, and a blood pressure of 70/20. An endotracheal tube was inserted, and continuous oxygen was given while suction was done every fifteen minutes.

At 1:30 P.M. the patient's stomach was washed out. Chemical analysis of the contents was positive for barbiturates. An intravenous infusion of 5 per cent glucose was started, and the combination of the three stimulants, Benzedrine Sulfate, Metrazol, and picrotoxin, was injected directly into the tubing. A Foley catheter was inserted to determine urinary output, and 600,000 units of procaine penicillin were given.

At 5:00 P.M. the pupils reacted to light, the pulse was 90 with a regular rhythm, and the blood pressure was 100/60. At 7:30 P.M. stimulants, consisting of 24 mg. of picrotoxin, 40 mg. Benzedrine Sulfate, and 12 cc. of Metrazol, were added to each 1,000 cc. of 5 per cent glucose and given by continuous drip.

At 10:00 A.M. on March 21, when the respirator was stopped routinely, the patient attempted a few respiratory movements but did not continue to breathe spontaneously. He became cyanotic so that the respirator had to be restarted. After this the respirator was stopped at more frequent intervals to give the patient the opportunity to breathe spontaneously. At 2:00 P.M. the temperature spiked to 101 F., at which time the procaine penicillin was increased to 1,200,000 units per day. Streptomycin, 0.5 Gm. every twelve hours, and caffeine with sodium benzoate, 0.5 Gm. intramuscularly every two hours, were now added to the therapy.

At 9:30 P.M. irregular spontaneous respiratory movements were noted which continued. However, due to the feeble respirations the patient was maintained for another twelve hours in the respirator. Following the return of spontaneous respiration, deep reflexes could be elicited, the patient responded to painful stimuli with movement of the extremities and head, and the gag reflex returned, necessitating the removal of the endotracheal tube.

At 10:00 A.M. on March 22 the patient was removed from the respirator, and all stimulants were discontinued. He was at this time still lethargic but was able to answer questions by nodding or shaking his head. The total intravenous fluid intake for the previous forty-eight hours was 4,000 cc. and the urinary output approximately 1,600 cc.

The patient from then on made an uneventful recovery and on March 24 was transferred to another institution for psychiatric treatment.

Summary

A case of barbiturate poisoning without audible heart sounds, with zero blood pressure, no palpable radial pulse for two minutes, and respiratory arrest for thirty-four hours is presented. The Emerson respirator, antibiotics, fluids, and a combination of various stimulants were used to maintain the life of this patient. The total amount of each stimulant used was as follows: Metrazol 87 cc., picrotoxin 162 mg., Benzedrine Sulfate 420 mg., caffeine with sodium benzoate 7.5 Gm., and coramine 2 cc.

The use of the Emerson respirator in this case represented the main agent in the survival of this patient, and we are of the opinion that all cases of barbiturate poisoning with respiratory distress should be given the benefit of this form of treatment. At the same time the clinical response of our patient to the analeptics serves to prove their effectiveness. Without them it seems most improbable that such a severely poisoned and apparently doomed individual could have been aroused and restored to full consciousness in the short space of forty-eight hours.

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Economy is the wealth of the poor and the wisdom of the rich.—ALEXANDRE DUMAS

Mondor's Disease

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FELDMAN *et al.*[1] in February, 1954, reported the twenty-third case of Mondor's disease, referring to the report of Leger[2] in 1947. Four other cases have been reported, two in 1949,[3] one in 1950,[4] and one in 1951.[5]

The present case occurred in 1945, although it has not been reported until now, thus antedating all cases except those reported by Leger.

Case Report

H. C. S., age forty-six, was admitted to the Samaritan Hospital on March 5, 1945, complaining of pain in his left side. The onset of his symptoms occurred suddenly two weeks previously when he happened to take a deep breath and felt something rip in his left side. He remembered that "it acted like a cold in his muscles." There was no history of trauma. He recalled that he had had pain in the joints of his right hand one month prior to the onset of the present illness. Past history was noncontributory.

Physical examination showed a well-developed, well-nourished man apparently in excellent health with a moderately thick chest wall. On the left side of the chest anteriorly at about the level of the seventh, eighth, and ninth ribs, there was an area of skin in which several cordlike structures of small caliber were evident underneath the skin surface, running roughly obliquely from the nipple line toward the costal margin. These cordlike masses gave the impression that they were pulling the skin taut like the ribs of an umbrella underneath the covering or like the webbed foot of a bird. The breast tissue showed no abnormalities.

A film of the lower portion of the left hemithorax and left side of the abdomen showed no evidence of abnormality. Blood count and urinalysis were normal. Blood chemistry was within normal limits, Wassermann was negative, and temperature, pulse, and respirations were normal.

The patient was admitted for biopsy of this unusual lesion, the working diagnosis being "possible thrombosed vein." Under local infiltration with novocaine 1 per cent, an elliptic piece of skin about $^{3}/_{4}$ by $^{1}/_{4}$ inch was excised with underlying cordlike structure and subcutaneous tissue. After excision of this segment the tension was relieved, and the cordlike strand was no longer evident. The pathologic report was "lipoma, negative fat and fibrous tissue; a small segment of nerve is present."

The postoperative course was uneventful, and patient recovered. He has been seen on subsequent occasions with no complaints relative to this condition.

Comment

The classification of this case was not suspected until the report of Feldman *et al.*[1] The essential features of this case conform to the descriptions of Mondor's disease. Although the tissue diagnosis did not indicate thrombophlebitis, the clinical diagnosis of "thrombosed vein" had been made without reference to any previously known report.

Further Studies

Mondor and Bertrand[6] reported ten further cases and studied in detail the microscopic pathology. Microscopic findings vary greatly in this disease depending on the stage of the disease and the level at which the specimens are taken. In several cases there was more or less complete thrombosis of the lumen of the vessel. However, this is not the typical thrombosis of the lumen of the vessel as in a vein of the extremities, but rather a periphlebitis causing the vein to be surrounded by a thick sheath which remains recognizable by its middle coat. In other cases this periphlebitis envelops adjacent capillaries. Fatty degeneration may occur with nerve fibers embedded in the periphlebitic plaque. There is no leukocytic invasion indicative of an inflammatory process. In more advanced cases all traces of the tunica media of the vein disappear. At the ultimate stage the clinical indurated cord shows no evidence of vascular formation.

Summary

An additional case of thrombophlebitis of the anterolateral wall of the thorax has been presented. The etiology, symptoms and signs, course and prognosis, and the microscopic pathology correspond to the original description of Mondor's disease.

71 SECOND STREET

Acknowledgment is made to Dr. Tulio Estrada Angel for his assistance in the translation of Dr. Mondor's article.

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Concurrent Infection of Shigellosis and Amebiasis

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THE paucity of reports in the literature of cases wherein bacillary dysentery and amebic dysentery are concomitantly present in the same individual forms the basis of this report of a single case.

Garfinkel *et al.*[1] in their review of 1,408 cases of bacillary dysentery also referred to cases of amebic infections, and their cases were actually divided into Shigella, Salmonella, and amebic types. They failed to mention any occurrence of amebic and Shigella infestation concurrently in the same individual. Their cases were composed of patients from prisoner-of-war camps. The majority of patients with bacillary dysentery were quite ill and fulfilled the typical textbook description. The most predominant type was the Flexner group, followed by Shigella sonne and Shigella shiga.

Hardy, Markel, Frazier, and Hammerick[2] reviewed 3,128 patients who had various types of dysentery. In their study, made also from Korean prisoners of war, amebiasis salmonellosis, and shigellosis occurred simultaneously, but no mention was made of a case wherein a mixed infection occurred at one time in the same individual. This latter report dealt primarily with the various methods of obtaining most suitable cultures.

Martin *et al.*[3] recently reported 538 cases of amebic dysentery treated with the broad-spectrum antibiotics. They also did not refer to a single case of mixed infection. Likewise, in Vegas' report[4] of 264 cases of amebiasis histolytica there was no mention of the concurrent infection of amebiasis and shigellosis. In his experience 33 per cent of all cases (office) demonstrated Endamoeba histolytica on stool examination. It is of interest that in his report the over-all incidence of amebiasis in Caracas, Venezuela, ranged from 10 to 25 per cent of the total population.

Radke[5] reviewed autopsy findings in 96 cases of amebiasis. A number of cases prior to death had clinical diagnoses other than amebic infection. Bacillary dysentery was clinically suspected in five cases. However, culture and necropsy studies were not compatible with shigellosis since all five cases emerged as amebic infections.

Moreover, the isolation of three different serotypes of Shigella paradysenteria from one patient was reported in 1950 by Elrod *et al.*[6] They cultured the serum in S. S. agar and EMB plates and developed four colonies from the former and two from the latter. All were transferred to Kligler's medium, whereupon agglutination tests were performed and three specific types were identified. There was no clinical or laboratory evidence of amebiasis in this patient.

Collins[7] of the Cleveland Clinic informed one of us (E.M.C.) that in his experience he has never encountered a mixed infection as herein described. Golden,[8] working in a prisoner-of-war camp, revealed that it was not a rare situation to encounter simultaneous infections of amebic and bacillary dysentery in the same individual. However, no mixed infection had been observed in the American or UN personnel. Similarly, Campbell[9] associated with a prisoner-of-war field hospital had observed mixed infections among prisoners, although this was not considered to be a very common occurrence.

The present patient was seen in a medical dispensary in South Korea and had been ill with unexplained diarrhea. Repeated laboratory tests were performed, and because they were inconclusive, the patient was finally sent to the 21st Station Hospital for a proctoscopic examination where the diagnosis was immediately established.

Case Report

F. L. M., age thirty-five, had entered the 133rd Medical Detachment on routine sick call on February 9, 1953, with a chief complaint of nonbloody diarrhea of seven months duration. The diarrhea had averaged about ten times over a twenty-four-hour period and ranged anywhere from five to 20 times daily. At no time had he noticed any purulent, bloody, tarry, or foamy stools. There had been an associated weakness, fatigue, and moderate anorexia. The only instance whereupon the patient experienced any fever was the morning of February 9, 1953. During subsequent examinations the patient was afebrile.

This patient had enjoyed good health prior to the present illness. There was no history of cancer or tuberculosis. There was no contact with animals, and there was no history of insect bites.

Physical examination revealed blood pressure 124/80, pulse 88, respirations 18, and temperature 101.2 F. Examination of the head and neck was not remarkable except for the presence of a few herpetic lesions about the angles of the mouth.

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The heart and lungs were normal to auscultation and percussion. There were no palpable lymph nodes. Examination of the abdomen revealed no masses to be palpable; there was a moderate amount of tenderness in both lower quadrants, but no masses could be felt. Rectal examination elicited exquisite tenderness at the posterior rectal wall at the level of about 3 inches superior to the anal orifice. The extremities were normal. Examination of the central nervous system was not unusual.

Laboratory tests showed hemoglobin 14 Gm.; sedimentation rate 98 per cent (Westergren), 14 mm. in one hour; white blood cells 8,350 per cu. mm. with differential of 67 per cent polymorphonuclears, 29 per cent lymphocytes, 3 per cent monocytes. Urine specific gravity was 1.018 with a pH of 6.0 and no sugar or albumin; occasional white blood cells were seen. Blood sugar was 90 mg. per cent; urea was 14 mg. per cent. Three stools were negative for ova and parasites, (performed at the 12th General Dispensary). One stool culture for Salmonella was negative, and cultures for Shigella were positive for Shigella flexneri II on March 21, 1953, confirmed by the 1st Medical Field Laboratory. The lapse of time between the time the initial culture was taken and the final report was submitted was in part due to the distance involved in confirming the report by 1st Medical Field Laboratory. A colon x-ray was done at the 21st Station Hospital and was reported negative.

The initial proctoscopy at the 21st Station Hospital was performed on March 10 and revealed multiple, small, superficial, bloody, ulcerated areas 1 to 2 mm. in diameter and small amounts of mucus and blood. Many active trophozoites with red blood cells were seen under microscopic examination. Further follow-up from the proctoscopic viewpoint on March 23 revealed one small ulcer, but no gross blood was observed. On April 1 the examination was normal.

On March 11 the patient was placed on Terramycin, 0.5 Gm. every six hours for ten days. This was followed by carbarsone, 0.25 Gm. three times a day for seven days. After five days of treatment the diarrhea decreased to five or six times daily and a few days thereafter to one or two times a day. On March 23 the stools were perfectly normal with a slight tendency towards constipation. The anorexia, weakness, and fatigue began to subside at this time. A repeat stool culture on March 28 showed no Shigella present. Twenty days after initial therapy had been instituted the patient was in excellent health, and physical examination was negative. Proctoscopic examination at this time revealed normal mucosa to 8 inches except for an erythematous area on the anterior rectal wall 2 by 3 mm. in size just above the anal margin. No ulcers were seen anywhere along the rectosigmoid wall. Since that time repeated outpatient visits have revealed no recurrence of symptoms and no abnormalities on physical examination.

Summary

1. A case of a concurrent infection of amebic and bacillary dysentery is herein reported.
2. A brief review of recent extensive studies has failed to reveal a case identical to the one presented.

Addendum: Since the report of this case the patient developed amebic hepatitis which required hospitalization and evacuation.

The authors wish to express their thanks to Corporal James Brown for performing the tests and compiling a great majority of the laboratory data.

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Everyone knows so much nowadays that the hardworking authors of even the lightest fiction have to verify the heaviest facts. As a result gross medical mistakes are disappointingly rare in modern novels. But I did find an old friend in an American whodunit the other day—the jugular artery. I first met the artery in a best-seller of 1908. Curious the fascination this word "jugular" has for authors: a strong word with its hint of gurgling noises and garotting. Calculi are occasionally met in fiction, and not so long ago biliary stones provided valuable evidence in a famous murder trial; but the superlaryngologist, who, in a recent novel, successfully removed a pancreatic stone from the windpipe, perhaps pushed things too far.—*The Lancet, July 3, 1954*

HISTORY OF MEDICINE in New York State

Editor
FREDERIC D. ZEMAN, M.D.

EDITOR'S NOTE: The accompanying article by Dr. Paul E. Bechet, who practiced in New York City from 1912 to 1942 and is now active in Elizabeth, New Jersey, finds republication here because of its fascinating story of a single service in a great municipal hospital. We would like our readers to take Dr. Bechet's work as an example and record stories of their own experiences in hospitals all over the State. Such accounts as these are invaluable in giving life, color, and reality to the Sesquicentennial History of our Society. We are indebted to Dr. Paul A. O'Leary, editor of the *A.M.A. Archives of Dermatology and Syphilology,* for permission to reprint this paper which appeared in that journal, volume 39, page 672, April, 1939.

The City Hospital

A History of Its Dermatologic Division

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AN UNDERTAKING which eventually proves of extraordinary value to a community almost always experiences early difficulties and an almost hopeless struggle for continued existence. This was particularly true of the City Hospital. Most of the first forty years of its life were marked by an administration honeycombed with graft, dishonesty, and incompetence, which terminated only with the downfall of the Tweed ring in 1874.

A notable exception occurred in 1845, when on a temporary wave of reform Dr. W. W. Sanger was placed in charge. Sanger was the author of that classic work "A History of Prostitution," and most of the material forming the basis of this book originated at the City Hospital. How temporary was this reform was proved by the election of the warden of the penitentiary as Sanger's successor.

The squalor and misery of the following years can best be illustrated by an experience related by Dr. John F. Metcalfe which occurred durring the epidemic of typhus in 1863. I quote verbatim:

> The patients had been removed to one of the garret-like wards immediately beneath the roof. The shingles were rotten, and the beds, on account of the great number of victims, had to be placed so closely that the drip pans, which were employed by the prisoner-nurses to catch the floods of rain, could no longer be kept on the floor, but were placed upon the beds. The treatment consisted chiefly of stimulation with raw ward whiskey. On one occasion, in the dead of Winter, I visited the ward and ordered an increased ration of toddy for all the patients, because of the extreme cold. Early in the morning, fearful that disaster might have overtaken them, I rose and struggled to the hospital through a blinding blizzard which had been raging since the afternoon before. On climbing the last steps and opening the creaking door, I encountered a horrible sight. The two jail bird nurses lay in a drunken stupor upon the floor. Snow had drifted in through the rifts in the rotten roof and lay in great white sheets about the room. It covered the dirt. On some of the beds it had been in part brushed away by the dying patients. On twelve beds its surface was unbroken, for beneath it were twelve corpses who could move no more.

During the Civil War about 2,500 sick soldiers were treated there—or more truthfully stated, mistreated—for many of them contracted tuberculosis and syphilis during their stay at the hospital, owing to the neglect by the inmates of the penitentiary then acting as orderlies and nurses.

Piffard related that in 1875 he was detained on the island by a violent storm. He took the man who had rowed him over from New York to the dermatologic ward and told the nurse to give him supper and a bed. Two weeks later the man reported at the hospital suffering from scabies, which had been contracted that night, when he was assigned a bed occupied by two patients suffering from this disease.

D. Bryson Delavan described conditions in the surgical rooms as follows:

> Patients were brought in for operation without the slightest attempt at washing the parts. Knives were wiped upon a towel after previous operations. The operator put on an old frock coat which he buttoned to his chin to protect his clothing from being spattered. It was encrusted with the remains of several years of former operations. Its odor was that of the dissecting room. The hands of the assistants remained most of the time unwashed.

Of course it must be clearly understood that these remarks of Dr. Delavan's apply to the preaseptic era of surgery. On the lighter side, Delavan mentioned a particularly good cook for the doctor's mess, who was, as usual, an inmate of the workhouse. She was so wonderful as a cook that on the day of her discharge a purse was made up by the physicians and duly presented to her. She left on the 9 o'clock boat, after cooking breakfast for the staff. Shortly after reaching the city she became drunk and disorderly, was taken to court, sentenced, sent to the workhouse at 3 P.M., returned to Charity Hospital and at 6:30 served dinner to the staff.

Piffard stated that "four ounces of whiskey was the unit of coinage for the Island-realm." In the month of April, 1867, 160 quarts (151.4L.) were prescribed for patients alone. No wonder that the inmates of the workhouse and penitentiary with special political influence remained to serve as nurses and orderlies for months after their discharge, without pay other than daily rations of whisky. These conditions did not exist alone at the City Hospital; they were equally true at Bellevue Hospital, and they were brought about entirely through the political chicanery of the period. The medical staff throughout the years was of a high order and did its duty to the best of its ability but was powerless in the hands of the political machine and could accomplish little in the shape of reform. The patients of the hospital were from the lowest strata of society. Of 2,541 patients treated in 1851, 1,141 suffered from primary syphilis and delirium tremens.

Welfare Island was called by the Indians Minnahanonck. They conveyed it to the Dutch Governor Wouter Van Twiller in 1637, and its name was changed to Varken, or Hog Island, because of the large number of wild hogs running over it. A Captain Francis Fyn obtained the island by grant in 1651, and it was held by him until the outbreak of the war with the Indians in 1666. It subsequently passed into the hands of a Captain Manning, whose stepdaughter married Robert Blackwell, and by precedent the property took the family name and was known as Blackwell's Island.

In 1828 or shortly thereafter a penitentiary building was begun on the island, and in 1832 the Penitentiary Hospital was established. It kept this name until 1857, when it became the Island Hospital. In 1866 the name was changed to Charity Hospital, and it was not until 1892 that its present name was given to it.

On the morning of Saturday, February 13, 1858, in the midst of a severe blizzard, the hospital was completely destroyed by fire. The conflagration resulted from the fraudulent construction of the building, the walls of which were built largely of loam. Owing to the gallantry of the hospital personnel, there was no loss of life.

On July 22, 1858, the cornerstone of the present hospital was laid, and in the spring of 1860 it was formally opened to the public. In its first year 5,694 patients were received. For many years, half, if not a small majority, of the total number of patients were inmates because of venereal disease or alcoholism. According to Sanger the ratio of patients with venereal diseases to the total number of patients was extraordinarily high—for example, in 1854 it was 37.4 per cent; in 1855, 58.7 per cent, and 1856, 73.1 per cent.

Because of the paucity of records, information pertaining to the establishment of the dermatologic service at the City Hospital is exceedingly meager. In the report of the Society of the Alumni of the City Hospital for 1904 it is stated that the first dermatologic ward in the hospital was established in August, 1872, and that in 1876 another ward was added, yet Piffard, who served as house physician in 1864, stated that at that time the hospital was divided into medical, surgical, gynecologic, dermatologic, and venereal services. Added confusion is caused by the fact that a number of the men received other appointments at the hospital before being transferred to the dermatologic department. Still others were active in the venereal service, which was so large at one time that the hospital was considered as a venereal disease center for the city. For these gentlemen the dermatologic department was naturally considered as of secondary importance.

Dr. Freeman J. Bumstead apparently received the first appointment as visiting dermatologist in 1866. Bumstead served until 1871 and was appointed consulting dermatologist in 1879. He was professor of venereal diseases at the College of Physicians and Surgeons and had a high reputation as an author. He had studied dermatology in Hebra's clinic in Vienna, Austria, and at the Hôpital St. Louis in Paris, France.

Edward L. Keyes was appointed in 1870. He was one of the founders of the New York Dermatological Society and an honorary member from 1897 until his death in 1924. Although deeply interested in genitourinary surgery, he made many valuable contributions to dermatologic literature. He had a keen sense of humor and was most genial. He sang well and frequently entertained his colleagues of the New York Dermatological Society at its social sessions. He resigned from the hospital in 1876 and was appointed consultant in 1877.

A. W. Stein served the hospital from 1871 to 1895. He was also a founder of the New York Dermatological Society and most active in his chosen specialty.

Henry G. Piffard was house physician in 1864 and became attending dermatologist in 1871 and consulting dermatologist in 1885. Whoever was responsible for his appointment deserved the highest praise for his discernment, for Henry Granger Piffard played a most important role in the development of American dermatology. With the brilliant, many-faceted mind of a near genius, he focused the attention of America, if not Europe, on his specialty, which during his early years was still in its infancy. Its growth to lusty manhood was due in part to his devoted ministrations.

Piffard was born in Piffard, New York, on September 10, 1842. He graduated from the University of the City of New York in 1862 and received his medical degree from the College of Physicians and Surgeons in 1864. His interest in dermatology manifested itself soon after his graduation. He left for Europe to perfect himself in the specialty and visited various medical centers but spent most of his time with Dr. Tilbury Fox at the latter's dermatologic clinic at the University College Hospital in London, England. On his return from Europe he established himself in New York City. He helped materially in the founding of the New York Dermatological Society on May 18, 1869. Piffard was also one of the organizers of the American Dermatological Association and later on its president. He became professor of diseases of the skin in the medical department of New York University in 1874 and served this institution for many years. He was its emeritus professor at the time of his death. Piffard wrote "Elementary Treatise on Diseases of the Skin" in 1876. It was the second textbook on cutaneous diseases to be published in America, but as early as 1868 he had translated Hardy's "The Dartrous Diathesis, or Eczema and Its Allied Affection." In 1881 "A Treatise in the Materia Medica and Therapeutics of the Skin" appeared.

According to Andrew R. Robinson, Piffard deserves the credit for the first use of the term tuberculid, as he described the lesion in 1892, four years before Darier's work on the subject. Henry G. Piffard had a warm heart, and although he was most combative at times, even to the point of eccentricity, he was a lover of peace and good will. As George Henry Fox aptly put it, he was "a blazing meteor in our dermatologic firmament."

Foster Swift served the hospital from 1866 to 1872, and J. H. Ripley from 1873 to 1886. They were both active in the early years of the New York Dermatological Society. Fessenden N. Otis, who made a great reputation in genitourinary surgery, served from 1875 to 1888.

Next to Keyes and Piffard, Prince A. Morrow was probably the most prominent of the earlier group of attending dermatologists. Morrow was born December 19, 1846, at Mount Vernon, Christian County, Kentucky. He received the degree of Bachelor of Arts in Kentucky in 1864 and that of Doctor of Medicine from New York University in 1873. After two years of postgraduate work in dermatology, syphilology, and genitourinary diseases in Europe, he located in New York, where he rapidly rose to eminence. He became professor of genitourinary diseases at the University and Bellevue Hospital Medical College in 1883. He was also an attending physician to the department of cutaneous and venereal disease of the New York Hospital. He was a corresponding or honorary member of most of the foreign dermatologic societies, and he served as secretary of the International Congress of Dermatology and Syphilology in Paris, France, in 1890 and in Vienna, Austria, in 1893.

He edited the *Journal of Cutaneous Diseases* with Piffard from 1883 to 1888, and with Fordyce, from 1888 to 1891.

Morrow gained his greatest fame in the prophylaxis of venereal diseases, devoting most of his later life to this work. He was the founder of the American Society of Sanitary and Moral

Prophylaxis. He founded *Social Diseases*, a journal devoted to that subject. Morrow was tall, handsome, and dignified almost to the point of austerity, but with his intimate friends he proved a congenial companion.

With the advent of Bronson, Gottheil, and Fordyce, the dermatologic division of the City Hospital entered on a new phase. Hitherto its visiting staff had been venereologists first and dermatologists second, owing to the great preponderance of venereal diseases, but with the advent of these three the dermatologic division became pre-eminent. Syphilis was assigned to it, and genitourinary diseases were treated in a separate division. Bronson was appointed in 1886, Fordyce in 1893, and Gottheil in 1901.

Edward Bennett Bronson had a distinguished career. He received his medical degree from the College of Physicians and Surgeons in 1869. After serving as an intern in Bellevue Hospital, he spent three years abroad in postgraduate medical work, chiefly dermatologic. He was professor of dermatology in the New York Polyclinic Medical School and Hospital from 1882 to 1904. He was a prominent member of the New York Dermatological Society and one of the editors of the *Medical Record* and the *Archives of Dermatology*. Bronson's writings were scholarly and written with meticulous care. He was modest and dignified and proved himself a man of high ideals and principles. He was fond of outdoor exercise, and his hair, of which he had a plentiful supply, remained dark even at the age of seventy. His health was exceptionally good, even until his death by asphyxiation on November 18, 1925, from a fire which occurred in his home.

John Addison Fordyce served the City Hospital from 1893 to 1925, at which time his death terminated his devotion to that institution. There is no doubt that he was the most able of the large group of dermatologists attending the hospital. An enumeration of his honors and achievements would be beyond the scope of this paper; suffice it to say that he was a prolific writer, and —what is more important—of his more than a hundred monographs, many marked an advance in the specialty to which he devoted his superabundant energy. In his long career he became at different times the presiding officer of the various important dermatologic societies in America. He had the unique distinction of serving two medical colleges. He was professor of dermatology and syphilology at the University and Bellevue Hospital Medical College from 1893 to 1912; he then resigned to accept a similar position from the College of Physicians and Surgeons, which he held for the balance of his life.

Despite a large private practice, extensive teaching, and much hospital work, he always found time to encourage and help the younger physicians, no matter how obscure. The consolidation of syphilology with dermatology in colleges and other medical organizations was greatly aided by his efforts. He was a great histopathologist, his bent in this direction having developed under the inspiration of Kaposi. Like most great men he was modest and extremely diffident.

American dermatology suffered an irreparable loss in his death, on June 4, 1925, two weeks after an appendectomy. As George M. MacKee aptly put it, "He died in harness, as would have been his wish."

William S. Gottheil joined the hospital in 1901 and remained as attending dermatologist until his death in 1920. He did much original work and was most active in advocating the use of insoluble mercury salts, particularly the salicylate, in the treament of syphilis. Gottheil was an adjunct professor of dermatology at the Post-Graduate Medical School and Hospital from 1907 to 1912, when he resigned to become professor of dermatology at Fordham University. This chair he held until his untimely death. Gottheil was the main factor in the founding of the Manhattan Dermatological Society on November 21, 1900. He was extremely devoted to this society and attended almost every meeting from its inception to his death. Gottheil was an artist. At the time of his death he had a large collection of moulages of various dermatoses, most of which were made by him at the City Hospital. He also published an illustrated atlas of cutaneous diseases and a stereopticon set illustrating rare dermatoses.

In this necessarily brief presentation of the salient facts in the lives of that brilliant galaxy of dermatologists serving the City Hospital for the past sixty years, one is struck with the thought that the meanness and political trickery of its early political managers were as nothing compared to the luster given it by that group of stalwarts of the past headed by Piffard, Keyes, Morrow, Bronson, Fordyce, and Gottheil. If the City Hospital had accomplished nothing else, its part in the development of these men would still deserve the gratitude of American dermatology.

THE MONTH IN WASHINGTON

While Congress didn't enact all the health bills President Eisenhower's administration wanted to put through, it did mark up an imposing record of accomplishment. In fact it passed more health and medical legislation than any Congress in many, many years. The A.M.A. actively supported most of the bills finally enacted and opposed none of them.

Four important new laws were written into the statutes before session ended: expansion of the Hill-Burton hospital construction program, expansion of the vocational rehabilitation program, amendment of the income tax law to allow more liberal deductions for medical expenses, and transfer of the responsibility for health of the Indians to U.S. Public Health Service.

For years a group of state health officers have been working to bring about the transfer of Indian hospital and medical service from the Indian Bureau in the Department of Interior to Public Health Service in what is now the Department of Health, Education, and Welfare. The health officers could show beyond any question that the Indians were receiving far less medical care than the rest of the population. They maintained that if the Public Health Service were made responsible for the Indians' health, there would be a rapid change for the better on the reservations.

What might be called governmental inertia succeeded in holding up the legislation for a time, but this Congress decided to make a shift. Public Health Service, which will take over on the reservations next July 1, already has plans under way to insure the Indians more and better medical care.

The demands for a more dynamic vocational rehabilitation program have been building up outside the Federal government as well as in Washington. The problem facing this administration was to get more people rehabilitated but at the same time to induce the states to take a more active part in the work. The law now enacted promises to do this. It authorizes gradual increases in the Federal appropriations but at the same time is aimed at bringing the states up to the position of full financial partners by the end of five years. The goal is to rehabilitate at least 200,000 persons annually in place of the present 60,000.

If local communities are willing to raise from one third to one half of the cost, the new Hill-Burton program should result in the construction, within three years, of possibly a half billion dollars in new facilities—rehabilitation centers, diagnostic-treatment clinics, chronic disease hospitals, and nursing homes. (This program was discussed in detail last month in this space.) The new construction will be in addition to the continuing Hill-Burton grants for complete hospitals.

On the medical cost deduction question, too, economists long have felt that families with unusually large medical expenses should be given more liberal tax deductions. The new law will allow them to deduct medical expenses in excess of 3 per cent of taxable income. Under the old law the figure was 5 per cent. A $3,000-income family with $150 in medical expenses under the old plan could deduct nothing, but under the new law they may deduct $60. The Treasury estimates that the total saving to families will be 80 million dollars.

The general public probably read and heard more about the one bill that was defeated—reinsurance—than it did about all the health and medical legislation that passed. That defeat (in the House) was a surprise and a disappointment to the President. His advisers might have told him that all was not well, but obviously they did not. Opposition was not confined to the A.M.A. Also lined up against it were most of the health insurance companies, the U.S. Chamber of Commerce, and a number of other professional groups. The labor unions would accept it but wouldn't work to get it. Most significant of all, it had lukewarm support at best from the lawmakers who know most about it, the Senate and House committees that conducted the hearings.

Prepared by the Washington Office of the American Medical Association, Washington, D.C.

Surprise!

A castaway on a desert island, following another shipwreck, pulled ashore a girl clinging to a barrel.

"How long have you been here?" asked the girl.

"Thirteen years," said the castaway.

"All alone—then you're going to have something you haven't had for thirteen years," said the girl.

"You don't mean to tell me there's beer in that barrel?" said the castaway.

—*Current Medical Digest, July, 1954*

OPENINGS FOR PHYSICIANS IN NEW YORK STATE

GENERAL PRACTICE

Allegany County

Belfast.—Population about 2,500. Hospital at Cuba 15 miles away. Rural community. Posts as school physician and local health officer perhaps available. Nearest physician at Houghton 8 miles distant. Contact Dr. James H. Gray, Jr., Friendship.

Cayuga County

Cayuga.—Population 500; service area with population 2,000 plus. Two hospitals at Auburn 9 miles distant. Contact Dr. Frank A. Graceffo, Secretary, Medical Society of the County of Cayuga, 9 William Street, Auburn.

King Ferry.—Population 200. Area of 75 square miles, radius varying from 2 to 15 miles, including towns of Ledyard, Poplar Ridge, Sherwood, Goodyears Corners, Lake Ridge, Myers, Five Corners, and Little Hollow. Position as school physician available. Hospitals 20 miles distant at Auburn and Ithaca. Contact Mrs. Leona B. Stoner, R.N., King Ferry.

Meridian.—Population 400. Surrounding prosperous farming area within 17-mile radius includes Cato, Baldwinsville, Jordan, Weedsport, Fair Haven, and Wolcott; population about 2,000. Hospitals at Syracuse 22 miles and Auburn 8 miles. House available. Contact Mrs. Ruth C. Daniels, Meridian.

Chautauqua County

Cassadaga.—Population 700. Two villages within 4 miles; population 600. Additional 1,000 population in surrounding country. Radius to be covered about 5 miles. Industrial-farming community. General hospital at Dunkirk 12 miles; two at Jamestown 25 miles; tuberculosis hospital 3 miles. Position of town health officer available. Contact Mr. Raymond Haines, Mayor, Cassadaga, (phone Cassadaga 31-F2).

Chenango County

McDonough.—Population 200; population 1,000 within a radius of 10 miles. Hospital at Norwich 18 miles; Greene 13 miles; Binghamton 32 miles. Contact Mr. J. J. Duell, Town Supervisor, McDonough.

Clinton County

Altoona.—Population 2,000. Radius about 15 miles including villages of Ellenburg, Mooers Forks, Sciota, and West Chazy. Two hospitals in Plattsburg, about 20 miles. Excelsior mill and milk plant. Private residence, rent free for one year. Appointments as school health officer and medical officer for industries available. Contact Mr. Halsey J. Stark, County Clerk, Altoona.

Mooers.—Population 500; population 3,000 to 5,000 in 12-mile radius served. Hospitals in Plattsburg 25 miles. Position of school physician available, possibly district health officer. Contact Mr. M. B. Stewart, Mooers, and Dr. Aaron Davis, 9 Rugar Street, Plattsburg.

Rouses Point.—Population 1,990 within 2 miles, 3,000 within 5 miles. Dr. Harris Sklaire, only active physician in community, desires a colleague. School, industrial health, and railroad positions will become available. Contact Dr. Harris Sklaire, Rouses Point.

Essex County

Lake Placid.—Population about 3,000; summer population considerably larger. Contact Mr. John H. Servis, Administrator, Placid Memorial Hospital, Lake Placid.

Franklin County

St. Regis Falls.—Population about 1,000 within 12-mile radius. Hospital at Malone 20 miles distant. Positions as town health officer and school physician available. Contact Mrs. Frances Baxter, R.N., St. Regis Falls.

Lewis County

Port Leyden.—Population 900; population 5,000 in working area. Temporary replacement desired. Lowville Hospital 18 miles. Positions available as school physician, health officer, examiner for two insurance companies, and compensation doctor for three mills. Well-equipped office and good living quarters available. Contact Dr. John P. Meyers, Port Leyden.

Madison County

Madison.—Population 2,500; area 100 square miles; five villages. Doctor expecting to come by the day. Hospitals at Hamilton 7 miles, Oneida 20 miles, Utica 25 miles, Syracuse 40 miles. Positions as school physician and town health officer available. Contact Dr. B. L. Rockwell, Oriskany Falls.

Monroe County

Scottsville.—Population about 3,000 in area. Fifteen miles from Rochester which has good hospitals and medical college. Contact Mr. Adrian Hanna, 3 Church Street, Scottsville (member of Town Board), and Dr. Clarence Pearson, Scottsville.

Oneida County

Clayville.—Population 719; 3,800 more population within 6-mile radius in prosperous farming territory. Three industries in Clayville with 525 employes. Hospitals and laboratory facilities in Utica 8 miles distant. District health officer position probably available. Home and office of former doctor for sale, possible equipment. Contact Mr. M. Donohue, Real Estate Broker, Sauquoit (phone Utica 7-7383).

Ontario County

Hall.—Population 300; population 2,000 within surrounding prosperous farming area. Midway between Penn Yan and Geneva, each about 8 miles distant. Fifty-bed hospital at Penn Yan; 80-bed hospital at Geneva. Rochester 45 miles; Syracuse 60 miles. Contact Dr. Ray E. Deuel, Jr., 508 Castle Street, Geneva, or Mr. Joseph Robson, Hall.

Honeoye.—Population 1,300; population 4,000 in area. Present doctor leaving to specialize. Hospital at Canandaigua. Positions of local health officer and school physician available. Contact Dr. William J. Meyer, Briggs Street, Honeoye.

Victor.—Population 3,000 within 6-mile radius. Hospital at Canandaigua 12 miles. One factory. Farming community. Contact Mr. R. March Calkins, Village Treasurer, Victor.

Orange County

Unionville.—Population 500; additional 400 population within 8 or 10-mile radius. Hospital at Sussex, New Jersey, 8 miles; two at Middletown, New York, 13$^1/_2$ miles. Contact Mr. A. R. Blanchard, Orchard Street, Unionville, or Mrs. Julia Roche, Postmistress, Unionville.

Oswego County

Altmar.—Population 1,800. No doctor at present. Positions of school physician and town health officer may be obtained. Hospital facilities 45-minutes drive at Syracuse, Oswego, Utica, Watertown, Fulton, and Rome. Local ambulance service. Contact Mr. Norman B. Spear, Supervisor, Town of Albion, Altmar.

Otsego County

Morris.—Population about 600; population 3,500 in surrounding area, 10-mile radius. Possibility of obtaining appointments as school physician and as town health officer for Morris, New Lisbon, and Laurens. Garrattsville, Burlington, and Hartwick also in area. Hospitals at New Berlin 9 miles and Oneonta 14 miles. Contact Mr. Lynn Secor, Lewis Rutherford Morris Central School, Morris.

Otego.—Population 3,000 in 6-mile radius. Fox Memorial Hospital (95 beds) at Oneonta 8 miles; Mary Imogene Bassett Hospital at Cooperstown 39 miles; a 58-bed hospital in Sidney 16 miles. Positions as local health officer and school physician available. Contact Mr. Albert L. Bonner, Committeeman, Otego Rotary Club, Otego.

Schenectady County

Pattersonville.—Population about 1,300. Two hospitals at Schenectady and two hospitals at Amsterdam, each about 7 miles distant. Contact Mr. W. Eriksen, R.D. #1, Pattersonville, (phone Tulip 7-8776).

Schuyler County

Burdett.—Population 500; 3,000 within surrounding area. Three miles from Watkins Glen. Area includes village of Hector, Valoise, Bennesburg, and Mecklenburg. Positions of town health officer and school physician available. Hospital 4 miles distant at Montour Falls. Contact Dr. Paul F. Willwerth, Montour Falls.

St. Lawrence County

North Lawrence.—Township of Lawrence, population about 1,625 in three villages. Radius of approximately 7 miles east to west and 16 miles north to south. Hospitals at Massena 18 miles and at Malone and Potsdam 22 miles. Contact Mr. Robert E. Driscoll, Town Supervisor, Lawrence.

Steuben County

Jasper.—Population 500. Service area includes Hedgesville, Troupsburg, and South Canisteo. Two hospitals at Hornell 18 miles; others at Corning and Bath about 30 miles. Possibility of district health officer and school physician positions. Contact Mr. George L. Johnson, Principal, Jasper Central School, Jasper; advisable to see Dr. Fayette MacDonald, Woodhull, 6 miles away.

Suffolk County

Fishers Island.—Population 500 in winter; summer population about 2,000. Community will provide free dwelling and office. Hospital 5 miles by boat at New London, Connecticut. Contact Mrs. Lee Ferguson, Jr., Box 431, Fishers Island, New York.

Sullivan County

Grahamsville.—Population 300; about 2,500 population in radius of 10 or 12 miles, including Neversink, Claryville, Sundown, and Grahamsville. Hospital at Ellenville 16 miles; two hospitals at Monticello 18 miles; two hospitals at Liberty 14 miles. Contact Mr. Robert Many, Grahamsville (phone Grahamsville 2941).

Washington County

Hartford.—Population 1,308. Surrounding territory includes towns of Argyle and Hebron. Posts as school physician and district health officer (New York State Department of Health) will be available. Possibility of bonus from town of Hartford.

Contact Mr. Howard Hanna, Town Clerk, Hartford.

Wayne County

Clyde.—Population about 2,300. Surrounding prosperous farming area in radius of 6 to 8 miles. Contact Dr. James D. Tyner, President, Wayne County Medical Society, 208 Mason Street, Newark, New York.

Wolcott.—Population about 1,500. Surrounding prosperous farming area within radius of 12 to 15 miles. Contact Dr. James D. Tyner, President, Wayne County Medical Society, 208 Mason Street, Newark, New York, as well as Mr. Richard D. Camp, Mayor, Wolcott.

EYE, EAR, NOSE, AND THROAT

Steuben County

Hornell.—Population 16,000; population of 40,000 in area. Three men in above-mentioned specialty. Office space of recently deceased physician available. Centrally located, dual office building occupied by urologist. Living quarters available. Industry primary source of income. Protestant, Catholic, and Jewish churches. Service and social clubs of all types in community. Contact Dr. Kenneth T. Rowe, 33 Center Street, Hornell.

ANNOUNCEMENT

PRIZE ESSAYS

The Lucien Howe Prize and the Merrit H. Cash Prize will be open for competition at the next Annual Convention of the Medical Society of the State of New York, May 9 to 13, 1955, in Buffalo.

The *Lucien Howe Prize* of $100 will be presented for the best original contribution on some branch of surgery, preferably ophthalmology. The author need not be a member of the Medical Society of the State of New York.

The *Merrit H. Cash Prize* of $100 will be given to the author of the best original essay on some medical or surgical subject. Competition is limited to the members of the Medical Society of the State of New York who at the time of the competition are residents of New York State.

The following conditions must be observed:

> *Essays shall be typewritten or printed with the name of the prize for which the essay is submitted, and the only means of identification of the author shall be a motto or other device. The essay shall be accompanied by a sealed envelope having on the outside the same motto or device and containing the name and address of the writer.*

If the committee considers that no essay or contribution is worthy of a prize, it will not be awarded.

Any essay that may win a prize automatically becomes the property of the Medical Society of the State of New York, "to be published as it may direct."

All essays must be presented not later than *February 1, 1955,* and sent to the Chairman of the Committee on Prize Essays of the Medical Society of the State of New York, 386 Fourth Avenue, New York 16, New York.

R. Townley Paton, M.D., *Chairman*
Committee on Prize Essays

NECROLOGY

William Vladimir Capowski, M.D., of Milton, died on August 5 in his office at the age of forty-five. Dr. Capowski received his medical degree from Georgetown University Medical School in 1937. He was a member of the Ulster County Medical Society and the Medical Society of the State of New York.

Bert Fuchs, M.D., of New York City, died of a coronary occlusion on August 2 at the age of sixty-four. Dr. Fuchs received his medical degree from Heidelberg University in 1914. He was admitting physician at the Metropolitan Hospital. Dr. Fuchs belonged to the Rudolph Virchow Society, the New York County Medical Society, and the Medical Society of the State of New York.

John Henry Gutmann, M.D., of Albany, died on August 13 at the age of seventy-seven. He graduated from Albany Medical College in 1902. Dr. Gutman was associate attending surgeon at Albany Hospital. A past-president of the Albany County Medical Society, Dr. Gutmann also belonged to the Medical Society of the State of New York and the American Medical Association.

Frederick Newman Guyer, M.D., of Albany, died on July 29 in Albany Hospital at the age of eighty-three. Dr. Guyer graduated from Albany Medical College in 1897 and interned at St. Peter's Hospital. He was the deputy health officer for Albany from 1910 to 1920 and was on the courtesy staff of Albany Hospital. Dr. Guyer belonged to the Albany County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Edmund Henry Hubner, M.D., of Yonkers, died on August 2 in the Yonkers General Hospital at the age of sixty-three. Dr. Hubner graduated from the New York Homeopathic Medical School in 1921. He was a Fellow of the American College of Surgeons and a member of the Yonkers Academy of Medicine. Formerly an instructor in obstetrics and gynecology at the Flower and Fifth Avenue and Metropolitan Hospitals, Dr. Hubner was adjunct attending obstetrician and gynecologist there and attending obstetrician and gynecologist at the Yonkers General Hospital. During World War II he served as a lieutenant commander in the United States Navy.

Dr. Hubner belonged to the Westchester County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles Mark Kent, M.D., of Jackson Heights, died on August 14 at the age of sixty-four. Dr. Kent received his medical degree from the University of Prague in 1914 and, prior to coming to the United States in 1947, had been on the faculty of Charles University in Prague, Czechoslovakia. He was a member of the Rudolph Virchow Society and was clinical assistant attending physician at the Beth David Hospital. Dr. Kent belonged to the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John Rankin MacElroy, M.D., of Jonesville, died on August 3 at the age of eighty-three. Dr. MacElroy graduated from Albany Medical College in 1894 and had practiced in Jonesville for sixty years. He was county health officer for thirty years, school physician for thirty years, and delivered more than 2,000 babies. He had also served as president of the State Health Officers Association. In 1950 he was named "General Practitioner of the Year" by the Medical Society of the State of New York.

Dr. MacElroy was a member of the American Academy of General Practice and was associate attending physician at the Saratoga Hospital. He belonged to the Saratoga County Medical Society, of which he was a past-president, the Medical Society of the State of New York, and the American Medical Association.

Gustavus C. Mannel, M.D., of Rochester, died on July 2 at his home at the age of seventy-nine. Dr. Mannel graduated from the University of Buffalo School of Medicine in 1898. He was a member of the Rochester Academy of Medicine. Dr. Mannel had been retired for several years.

Elizabeth H. Merle, M.D., of Rochester, died on July 17 at the age of seventy-two. Dr. Merle graduated in 1907 from the University of Buffalo School of Medicine and interned at Buffalo Children's Hospital. She was a member of the Rochester Academy of Medicine. Dr. Merle was a physician for the Monroe County Welfare Department for twenty-three years and had been chief of anesthesia at the Park Avenue Hospital. She belonged to the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Maxwell Sidney Merriam, M.D., of Brooklyn, died on August 10 of a heart attack in the

Saranac Lake Hospital. He was fifty-seven years old. Dr. Merriam graduated from the Long Island College Hospital School of Medicine in 1920. He was a Diplomate of the American Board of Obstetrics and Gynecology and a Fellow of the American College of Surgeons. Dr. Merriam belonged to the Brooklyn Gynecological Society and was attending obstetrician and gynecologist at Maimonides Hospital.

He was also a member of Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Herman Ostrow, M.D., of New York City, died on August 8 at his home at the age of fifty-eight. A graduate of Long Island College Hospital School of Medicine in 1917, Dr. Ostrow was a Diplomate of the American Board of Ophthalmology. He was honorary assistant ophthalmologic surgeon at the New York Eye and Ear Infirmary.

Fred L. Ritter, M.D., of Syracuse and Oceanside, California, died on July 9 in Oceanside. He was sixty-nine years old. Dr. Ritter graduated from Albany Medical College in 1912. He was a Diplomate of the American Board of Surgery and had been assistant professor of gynecology at Syracuse University and was a member of the Syracuse Academy of Medicine. He joined the United States Army Medical Corps in 1940 and before his retirement was commanding officer of the U.S. Army Hospital in Atlanta, Georgia. Dr. Ritter belonged to the Onondaga County Medical Society and the Medical Society of the State of New York.

Joseph Roby, M.D., of Rochester, died on July 15 in Strong Memorial Hospital at the age of eighty-two. Dr. Roby graduated from Columbia University College of Physicians and Surgeons in 1896. He served as deputy health officer from 1903 until 1940. For some years he was chief of the Rochester General Hospital's medical staff and retained a post as consultant. Dr. Roby was also consulting physician to the Baden Street Dispensary. He was a member of the Rochester Academy of Medicine and the Rochester Pathological Society.

Dr. Roby belonged also to the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Louis Sheinman, M.D., of New York City and the Bronx, died on August 2 at the age of seventy-one, while vacationing at Pine Hill. Dr. Sheinman graduated from Columbia University College of Physicians and Surgeons in 1911 and interned at the Lebanon Hospital. He was a Fellow of the American College of Surgeons and a member of the Bronx Surgical Society. Dr. Sheinman had been an attending surgeon at Lebanon Hospital and director of surgery at Mount Eden Hospital. He belonged to the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Emily Newbold Titus, M.D., of Glen Cove, died on August 7 in the North Country Community Hospital at the age of ninety-one. She graduated from New York Medical College in 1892 but discontinued the practice of medicine in 1904 because of ill health.

Galen Rowe Wright, M.D., of Dansville, died on July 3 in the Dansville Memorial Hospital at the age of seventy-six. Dr. Wright graduated from the Medico-Chirurgical College of Philadelphia in 1901. He was manager of the Physical Culture Hotel in Dansville and resident physician for the Bernarr Macfadden Health Center.

Civil Defense

For the general population, biologic warfare defense is centered upon the rapid recognition, reporting, and treatment of cases. Until detection procedures are available, efforts can be directed only at minimizing rather than preventing casualties. Specific countermeasures are limited in number and applicability. . . No entirely new problems will be created and the present health facilities, especially in the laboratory field, will form the principal bulwark. There is no need to change the programs, but it is necessary to bring about continuing, overall improvement in personnel, facilities, equipment, and procedures to strengthen this defense. . . .

Even though deficiencies exist, the United States is better equipped to meet this threat than many other countries. This approach depends upon the availability and distribution of professional personnel, particularly in the diagnostic laboratory. Since the duties of the diagnostic laboratories are essentially unchanged, no unusual training is envisioned. Refresher courses may be needed in the diagnosis and treatment of communicable diseases. Programs must be designed to bring understanding to all levels of the population. Since defense finally is always a personal affair, the final goal is the orientation of the individual citizen to the danger and his responsibilities.—*J. J. Phair, M.D., Dr. P.H., American Journal of Public Health, January, 1954*

MEDICAL NEWS

New York State Academy of General Practice to Meet

The sixth annual scientific assembly and congress of the New York State Academy of General Practice will be held in Syracuse on October 11, 12, and 13, with an estimated attendance of 3,000 New York doctors.

Some of the papers to be presented will deal with the progress of research in such fields as cancer and Parkinson's disease, while several round tables and symposiums are planned to give the general practitioner a complete review of medical problems often encountered in everyday practice. Attendance, therefore, will enable the busy doctor to familiarize himself not only with recent work being done in major research centers, but will also provide information of an immediately practical nature.

The convention will open on Monday morning, October 11, with a welcoming address by Dr. William G. Richtmyer, president of the New York State Academy of General Practice, and greetings from Dr. Dan Mellen, Rome, president of the Medical Society of the State of New York, and Dr. William R. Willard, dean of the State University of New York College of Medicine at Syracuse.

The Monday morning speakers include the following: Dr. Raphael Isaacs, Michael Reese Hospital, Chicago, Illinois, "Recent Advances in Anemia"; Dr. Joseph H. Burchenal, Memorial Hospital, New York City, "Recent Advances in Leukemias"; Dr. Otto Steinbrocker, Lenox Hill Hospital, New York City, "Arthritis and Allied Diseases"; Dr. Harry A. Feldman, State University of New York College of Medicine at Syracuse, "New Concepts of Prevention of Rheumatic Fever." On Monday afternoon a symposium on diabetes will be presented by Dr. Elliott P. Joslin, Dr. Howard Root, and Dr. Priscilla White, of the Joslin Clinic, Boston, Massachusetts, who will also present a public forum on diabetes that night.

Tuesday's program opens with a symposium on headaches conducted by Dr. Arnold Friedman, Montefiore Hospital, New York City, and his group, which includes Dr. Percy Brazil, Montefiore Hospital; Dr. Joseph Ranschohoff, Columbia-Presbyterian Medical Center; Dr. Joseph Harkavy, Montefiore Hospital; Dr. Daniel Baker, Columbia-Presbyterian Medical Center, and Dr. Max Chamlin, Montefiore Hospital. Other Tuesday speakers include Dr. Sherman Gilpin, Jr., Temple University, Philadelphia, Pennsylvania, "Recent Advances in Epilepsy and Parkinson's Disease"; Dr. Robert D. Whitfield, Albany, "Facial Pain"; Dr. Howard English, Utica, "Differential Diagnosis of Convulsions"; Dr. J. Worden Kane, Binghamton, "Backache"; Dr. Gene Eppinger, Peter Bent Brigham Hospital, Boston, Massachusetts, "Problems of Heart Diseases for the General Practitioner"; Dr. Walter F. Bugden, Syracuse, "Chest Diseases—Diagnosis and Practical Points"; Dr. J. Englebert Dunphy, Peter Bent Brigham Hospital, Boston, Massachusetts, "Acute Abdomen—Differential Diagnosis."

On Wednesday the program will open with a paper by Dr. John Norris, Rochester, on "Industrial Medicine: The General Practitioner and His Role." Other speakers will be Dr. Perrin H. Long, State University of New York College of Medicine at New York City, "Recent Advances in Drugs and Antibiotics—What Dangers Ahead"; Dr. Robert Greenblatt, Georgia University, Augusta, Georgia, "Recent Advances in Gynecology"; Dr. Oswald S. Lowsley, New York City, "Recent Advances in Urology." A symposium on cancer will be presented with Dr. Lemuel Bowden, New York City, as moderator, and Dr. Glen H. Leak, Buffalo; Dr. Thomas Walsh, Albany, and Dr. Russell Wigh and Dr. Rose Ellison, New York City, participating.

Sessions of the convention will be held in the Onondaga County War Memorial Auditorium in Syracuse. Scientific and technical exhibits will be on display.

American Medical Education Foundation—Physicians from New York State who contributed to the American Medical Education Foundation during the month of July, 1954, include the following:

Alden—Dr. Raymond F. May; *Amsterdam*—Dr. Leslie Saunders; *Arcade*—Drs. George G. Davis and Leo L. Trnka; *Astoria*—Drs. Ignacy I. Alter, Morris Moskowitz, and William E. Robinson; *Baldwin*—Dr. Joseph J. La Vine; *Bath*—Drs. Stanley B. Chapman and Ernest P. Smith; *Belfast*—Dr. D. Grey; *Bethpage*—Dr. Erich Wiesen; *Binghamton*—Dr. F. E. Warner; *Brasher Falls*—Dr. R. L. Cudlipp, Jr.; *Brewster*—Drs. Robert S. Cleaver and A. Vanderburgh; *Bronx*—Drs. Gaetano Gialanella, William Horowitz, Sol Levinson, M. I. Salomon, G. S. Stern, and Marcus Widmann; *Brooklyn*—Dr. M. Waxgiser; *Buffalo*—Drs. Charles R. Borzilleri, Jr., John C. Brady, William D. Dugan, W. J. Fisher, Robert W. O'Connor, Heyman Smolev, Stanley T. Urban, and John W. Zerkowski.

Also: *Caledonia*—Dr. M. A. Hare; *Calverton*—Dr. B. J. Young; *Canton*—Drs. William Sapsin and

E. H. Stretton; *Castile*—Dr. G. S. Baker; *Chappaqua*—Dr. Harold F. Bishop; *Cold Spring*—Drs. Ralph M. Hall and Eugene J. Lusardi; *Cornwall*—Dr. B. J. Troidle; *Corona*—Drs. Sidney Bennett and George W. Herlitz; *Farmingdale*—Drs. John Axelrad and Werner B. Sandelowsky; *Fillmore*—Dr. Stefan B. Rose; *Flushing*—Drs. R. V. Grieco, Forrest Hayes, Sidney S. Leshine, and Samuel Wenger; *Franklin Square*—Drs. Bruno Landau and Ira S. Rubenstein; *Garden City*—Drs. Eben Breed, Earle G. Brown, T. J. Curphey, B. F. Dennis, and William K. Haas; *Geneseo*—Dr. G. B. Manley; *Geneva*—Dr. Martin J. Coyne; *Glen Cove*—Dr. John M. Galbraith; *Glen Head*—Dr. Will N. Spear; *Gouverneur*—Drs. E. L. Adler and G. H. Hanlon; *Great Neck*—Drs. L. J. Dunne, F. E. Lane, and S. R. Sherman; *Groton*—Dr. Hans Seligman.

Also: *Hamlin*—Dr. Paul Marx; *Hempstead*—Drs. Ruel L. Alden, William P. Bartels, Dwight T. Bonham, Kenneth B. Brown, Carl F. Freese, A. E. Gold, John G. Harrison, Otho C. Hudson, Wendell L. Hughes, Janith S. Kice, Ward L. Mould, R. R. Steen, Richard H. Walden, P. A. Williams; *Heuvelton*—Dr. G. C. Alverson, Jr.; *Hewlett*—Dr. John M. Butterfly; *Hudson Falls*—Dr. C. V. Latimer, Jr.; *Interlaken*—Dr. Stanley B. Folts; *Jackson Heights*—Drs. Maurice A. Golden, Fred S. Grunwald, and S. Weinberger; *Jamaica*—Drs. Oscar Baumgarten, William Stark, Vincent G. Tosti, and M. I. White; *Kings Park*—Dr. I. M. Rossman; *Kingston*—Dr. Saul Ritchie; *Lackawanna*—Dr. Louis A. Chojnacki; *Lancaster*—Dr. Albert J. Addesa; *Lawrence*—Dr. Howard E. Wiener; *LeRoy*—Dr. Charles C. Casey; *Levittown*—Dr. David J. Posner; *Lima*—Dr. E. A. Sanders; *Locust Valley*—Dr. Wilfred R. Brewer; *Long Beach*—Drs. Frances Karp and Joseph G. Zimring; *Long Island City*—Dr. Abraham Jackson.

Also: *Mamaroneck*—Dr. Milton Drexler; *Manhasset*—Drs. A. G. Borden, F. A. Hill, William H. Horan, Irving E. Miner, and Ralph U. Whipple; *Massena*—Drs. A. J. Levine, Philip Mardon, P. T. McGreery, J. B. Pike, U. R. Plante, and L. C. Weston; *Maybrook*—Dr. Daniel Rakov; *Middle Village*—Dr. Morris Schwartz; *Millbrook*—Dr. William W. Bennett; *Mineola*—Dr. Lyman G. Fussell; *Mount Kisco*—Dr. Grant S. Sanger; *Mount Morris*—Dr. G. E. Murphy; *Mount Vernon*—Dr. M. B. Brahdy; *Nanuet*—Dr. Leo G. Weishaar, Jr.; *Newburgh*—Dr. M. L. Cote; *New Hyde Park*—Drs. Walter Niemann, Arthur B. Nightingale, and Walter I. Spinrad; *New Rochelle*—Drs. Philip B. Becker and William H. Oetting, Jr.

Also: *New York City*—Drs. Leonora Andersen, W. P. Anderton, Joseph C. Andriola, George G. Arato, Frank L. Babbott, Leon A. Bader, Louis Barash, Saul Bernstein, Arthur I. Blieden, Paul H. Brauer, Winifred Bronson, Leonard B. Burness, Charles L. Burstein, Ramon Castroviego, Harry Cohen, John M. Converse, Maurice J. Costello, Stuart L. Craig, Hugh P. Davis, Harry C. De Brun, Ernest De Santo, Charles L. Fox, Jr., M. L. Freundlich, Joseph L. Frey, David B. Friedman, Sidney T. Friedman, Emil Froeschels, Joseph Gaar, J. C. Greenwald, Leonora L. Greteman, Armand C. Grez, Helen Harrington, Isaac Hartshorne, Louis A. Hauser, Robert G. Hicks, Walter Hipp, John Herrlin, Jr., Hubert S. Howe, B. J. Hyman, George H. Hyslop, J. A. Kapland, Naomi Katcher, A. Kaye, F. G. Kojis, Charles E. Kossman, Shepard Krech, L. S. Kubie, Norman F. Laskey, Thomas E. Lee, Paul J. Lepore, Charles W. Lester, F. L. Liebolt, Alfonsa A. Lombardi, William F. MacFee, John L. Madden, M. S. Mahler, A. R. Martin, Hayes Martin, Samuel Marton, Arthur M. Master, Joseph J. McDonald, William T. Medl, Herbert W. Meyer, Samuel Milbank, David T. Mintz, Erika Mohr, James W. Monsour, Eli Moschowitz, Thomas M. Mulcahy, Daniel A. Mulvihill, Peter M. Murray, John Neilson, Jr., Joseph Neuberger, Herbert S. Odgen, Kermit E. Osserman, Lilly Ottenheimer, Harold E. Pardee, Z. R. Parker, R. T. Paton, Robert L. Patterson, Jr., George E. Peabody, Samuel M. Peck, Thomas C. Peightal, Hugo Peiser, M. M. Peshkin, Bernard J. Pisano, A. C. Posner, Pro V. Prewitt.

Also: *New York City* (*continued*): Drs. Elias Rapoport, John B. Rearden, William Rechter, Richard Reens, Annie Reich, Ada C. Reid, Charles R. Rein, J. D. Richards, D. J. Richardson, Robert M. Richman, Nathan Robbins, M. W. Rodgers, Nathan N. Root, M. E. Ross, Herman S. Roth, Milton Rothman, Antonio Rottino, Udall J. Salmon, Thomas V. Santulli, Albert C. Santy, Leo M. Satloff, C. A. Scarano, A. Schiff, Herman Schneck, G. Schnerb, Sigmund Schutz, Irving Schwartz, David Schwimmer, T. R. Seidman, W. Seligmann, Matthew Shapiro, Robert L. Sharoff, David E. Silberman, Ellen I. Simon, Norman Simon, Arthur B. Sincoff, Eli Sinins, Beverly C. Smith, Carl A. Smith, Harry P. Smith, Harry A. Solomon, Irving Somach, Leo A. Spiegel, Anthony N. Spinelli, Sophie Spitz, Andrew Sporer, Edward F. Stanton, Maus W. Stearns, Jr., Charles F. Stewart, Frank E. Stinchfield, George J. Stivala, Leo Stone, Lee R. Straub, Raymond P. Sullivan, Ralph M. Sussman, Chester S. Svigals, M. P. Sykes, Nathan Tandet, Henry M. Taterka, Samuel F. Thomas, Clara M. Thompson, T. C. Thompson, A. E. Timpanelli, J. A. Trackman, S. C. Trattler, Lester Unger, Jerome A. Urban, Bella S. Van Bark, B. M. Vance, William G. von Stein, Jerome P. Webster, Harry I. Weinstock, Samuel Weiss, William P. Whalen, C. B. Wilbur, Byard Williams, Philip D. Wilson, Philip D. Wilson, Jr., William R. Woolner, and Herbert Zerner.

Also: *Niagara Falls*—Dr. Beatrice Smith McKay; *Northport*—Dr. Cyril E. Drysdale; *Nunda*—Dr. H. J. Schneckenburger; *Ogdensburg*—Dr. S. L. Pettit; *Olean*—Dr. George Kardos; *Parishville*—Dr. Max Thaler; *Patterson*—Dr. Frank C. Genovese; *Penn Yan*—Drs. William G. Roberts and Bernard S. Strait; *Perry*—Dr. Willard J. Chapin; *Pleasantville*—Dr. John W. Ferree; *Port Chester*—Dr. John R. Finlay; *Port Jervis*—Dr. A. H. Keniston; *Port Washington*—Drs. Charles F. Begg and Helen-Anne Garcia; *Potsdam*—Drs. Jennie D. Carson and W. R. Carson; *Queens Village*—Drs.

[Continued on page 2626]

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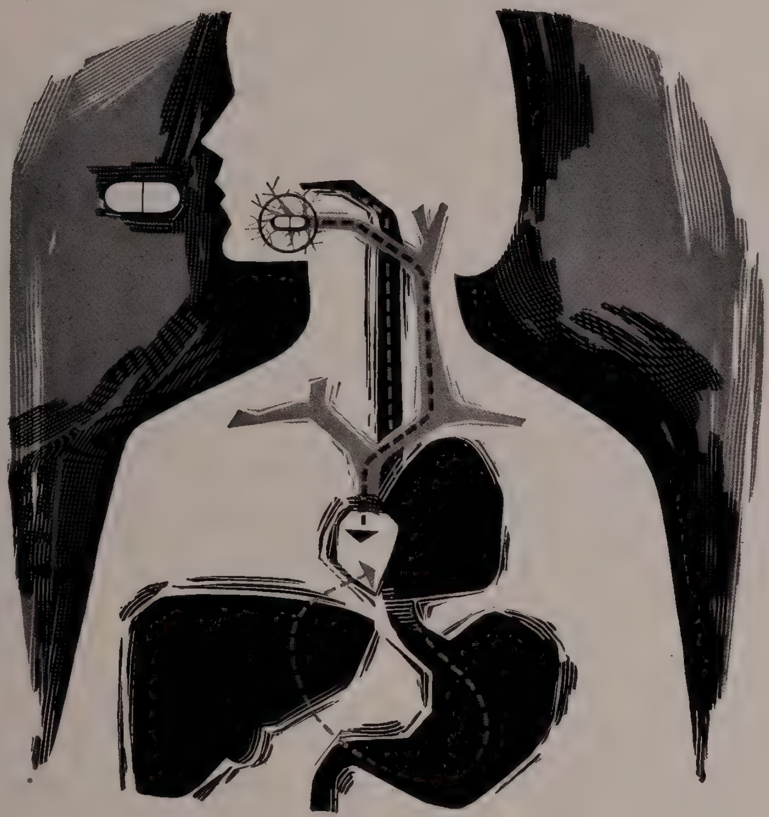

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1. ESCAMILLA, R. F., AND GORDON, G. S.: J. CLIN. ENDOCRINOL. 10:248 (FEB.) 1950.

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[Continued from page 2624]

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Also: *Scarsdale*—Drs. Roy F. Leighton, Jane Lester, and Jan J. Waller; *Schenectady*—Drs. Roland L. Faulkner, F. A. Groff, Jr., William M. Mallia, Frank P. Marra, Ralph D. Reid, Joseph G. Vacca, C. A. Welsh, and Richard L. Woodruff; *Sea Cliff*—Dr. Frank C. Nichols; *Seneca Falls*—Drs. Emil J. Bove and Robert D. Gibbs; *Suffern*—Dr. Paul B. Van Dyke; *Syracuse*—Drs. William J. Michaels, Jr., and Charles N. Needham; *Utica*—Drs. Karl W. Gruppe and John W. Platt; *Valatie*—Dr. H. J. Noerling; *Valley Stream*—Drs. Samuel Jackson and John G. McCauley; *Vestal*—Dr. Charles R. Minch; *Waddington*—Dr. L. Auerbach; *Warsaw*—Drs. John W. Leachman, Cletus J. Regan, Charles D. Wagenhals, and Richard T. Williams; *Waterloo*—Drs. W. Raymond Holmes and William P. Magenheimer; *Westbury*—Drs. Karl H. Behm and Hiram Symons; *West Forest Hills*—Dr. Meyer Monchek; *White Plains*—Drs. James M. Greer, Thomas S. Harper, D. T. Phillips, and Daniel M. Rolett; *Whitestone*—Drs. Saul B. Monto and N. F. Teracino; *Williston Park*—Dr. Lindon L. Davis; *Windsor*—Dr. Austin J. Stillson; *Winthrop*—Dr. R. L. Cudlipp, Sr.; *Woodside*—Dr. Harry K. Stone; *Yonkers*—Drs. Carmelo E. De Angelis, Felix P. Loiacono, James G. Morrissey, and Angelo R. Onorato.

Civil Defense Training Institutes—The Office of Medical Defense and the Regional Health Offices of the State Department of Health will conduct a series of nine one-day training institutes during the fall. The subjects for discussion will be: nursing, messenger and messenger leader training, postattack births, reserve (or continuing) training, and orientation for those who did not attend the 1953 Medical Aide Institutes.

All doctors playing an active part in civil defense are urged to attend. Institutes will be held on September 15 for Broome County at the IBM Country Club, Johnson City; on September 17 for Utica at the Utica State Hospital; on September 29 for Rochester at the Rochester Academy of Medicine; on October 1 for Syracuse at St. Joseph's Hospital; on October 8 for New York City at the Bear Mountain Inn; on October 25 for Schenectady, Albany, and Troy at Fire Station 10 in Schenectady; on October 28 for Erie County at Gowanda State Hospital in Helmuth; on November 4 for Nassau County at Meadowbrook Hospital, and on November 9 for Niagara Falls at the Y.W.C.A. in Niagara Falls.

Columbia University Plans Pharmacy Bicentennial Conference—On October 14 and 15 a special scientific congress devoted to a review of the present status of research and treatment of critical diseases will be sponsored by Columbia University's College of Pharmacy.

Leading speakers from the fields of medicine and science will take part in this tribute to the nation's practicing pharmacists.

Civil Defense Leaflets Now Available—Copies of the leaflet, *Insignia of Personnel in Emergency Medical Services*, are now available for local distribution and requests for additional copies should be addressed to the Office of the Regional Health Director.

Clinical Fellowships of the American Cancer Society—Fellowships offering graduates in medicine opportunities for postgraduate training, emphasizing diagnosis and treatment of cancer, are available for one year on and after July 1, 1955. Fellowships are awarded to institutions only upon application by deans, executive officers, or department heads. Applications for fellowships for the year 1955 to 1956 must be submitted prior to September 15, 1954. Further information may be obtained from the American Cancer Society, Professional Education Section, 47 Beaver Street, New York 4, New York.

Postgraduate Program on Closed Circuit TV—On September 23, from 6:00 P.M. to 7:00 P.M., the American College of Physicians will use a national closed TV circuit over the Columbia Broadcasting System to carry a "Symposium on the Management of Hypertension." This program may only be seen by attending one of the 23 receiving station throughout the country and will not be visible on home sets. Distinguished physicians from all over the world will make up the panel and include Dr. Cyrus C. Sturgis, president, American College of Physicians, and Dr. F. H. Smirk, New Zealand, a world authority on the methonium compounds.

Research Grant Awarded Cornell University—Cornell University received a research grant made by Sharp and Dohme, Division of Merck & Company, to ten universities throughout the nation, for research and clinical studies.

Meetings—Future

Philadelphia Proctologic Society

The first fall meeting of the Philadelphia Proctologic Society will be held September 23 at the Philadelphia County Medical Society. Members of the medical profession are invited to attend this meeting during which a panel on proctology, conducted by the American Board of Proctology, on "Anorectal Infections," "Hemorrhoids, Prolapse, and Proci-

[Continued on page 2628]

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[Continued from page 2626]

dentia," and "Benign and Malignant Tumors of Rectum and Colon" will be held.

New York State doctors taking part will be Dr. Stuart T. Ross, president-elect, American Proctologic Society, and proctologist, Nassau, Mercy, and Meadowbrook Hospitals, and Dr. A. W. Martin Marino, president, American Proctologic Society, and associate clinical professor, New York State University.

Institute on Alcoholism

The Western New York Committee for Education on Alcoholism will sponsor an institute on "Alcoholism" at the Samuel P. Capen Hall of the University of Buffalo School of Medicine on September 24. Drs. Berwyn F. Mattison and Milton G. Potter will take part in this multidisciplinary approach to the problem.

Kings County Postgraduate Education

The fall program of the joint committee on postgraduate education of the Kings County Medical Society and the State University of New York College of Medicine at New York City will begin October, 1954.

The following courses will be offered: Recent advances in internal medicine, allergy, basic electrocardiography, interpretation of the electrocardiogram, electrocardiography for the general practitioner, clinical ballistocardiography, hypertension and nephritis, gastroenterology, gastroscopy, medical and gynecologic endocrinology, child psychiatry, dermatology for the general practitioner, proctology, x-ray diagnosis, and office surgery.

Printed catalogs and detailed information may be obtained by writing to the Registrar, 1313 Bedford Avenue, Brooklyn 16, New York, or calling STerling 3-6900.

Ontario County Medical Society

Mr. William F. Martin, New York City, counsel, Medical Society of the State of New York, will speak on "Problems of Malpractice Insurance" at a meeting of the Ontario County Medical Society on October 12. The meeting will be held at the Hotel Canandaigua in Canandaigua, and will start at 5:30 P.M.

American Geriatrics Society

In keeping with the objectives of the Society to make readily available to the medical profession knowledge of the latest clinical practices having to do with this broad field, the American Geriatrics Society will give a graduate sympsoium on "Geriatric Medicine" at the Roosevelt Hotel, New York City, November 12 and 13.

This is a service provided by the Society for its Fellows and all members of the medical profession. Distinguished specialists from leading medical schools and teaching hospitals will conduct the symposium. All interested physicians are invited to attend this symposium. There will be no registration fee.

Symposium on Nutritional Aspects of Blood Formation

The National Vitamin Foundation, in cooperation with the University of Cincinnati, will hold a symposium in Cincinnati, Ohio, on October 22, 1954, on various aspects of nutrition and blood formation.

Dental Guidance Council for Cerebral Palsy

The annual meeting of the Dental Guidance Council for Cerebral Palsy will be held at the Hotel Statler, New York City, October 31 at 10 A.M. A symposium will be held, and among those taking part will be Dr. S. Sverdlik, chief, Department of Physical Medicine and Rehabilitation, St. Vincent's Hospital, New York City.

Further information may be procured at the offices of the Dental Guidance Council for Cerebral Palsy, 47 West 57th Street, New York 19, New York.

Personalities

Honored

Dr. Philip I. Nash, by a resolution adopted by the Coney Island Chamber of Commerce urging that the name of the Coney Island Hospital be changed to the Philip I. Nash General Hospital in recognition of Dr. Nash's fifty years of service in the area.

Elected

Dr. B. Edmund Thomas, as president of the North Shore Hospital medical staff.

Appointed

Dr. Irwin Alper, a colonel in the Army Reserve Corps, as chief medical officer for the Utica Civil Defense organization...Dr. Robert Louis Boettjer, to the staff of the Hampton Medical Center...Drs. Simeon L. Feigin, Harry H. Moorhead, Laurence Loeb, Lucile M. Ware, and James R. Ware, Jr., to the psychiatric staff of the New York Hospital... Dr. Henry D. Lauson, as professor and chairman of the Department of Physiology, Albert Einstein College of Medicine, Yeshia University, and visiting pediatrician at the Bronx Municipal Hospital Center.

New Offices

Drs. Arthur Applegate and G. Roger Weeden, Jr., practice of medicine and surgery in Mohawk... Dr. Charles M. Brown, practice of general surgery in Rome...Dr. William H. Brown, joining Dr. K.

[Continued on page 2635]

Advertisement

PARITY AND CONCEPTION CONTROL

A report covering a total of 425 patient years of exposure

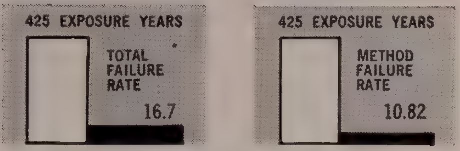
A meticulous study[1] of 325 patients using jelly alone as a contraceptive measure notes a markedly higher degree of effectiveness for this technic "among patients of lower parity."

Apparently this significant conclusion can be attributed mainly to the anatomic factor. The less relaxed vagina in the lower parity group permits a more successful confinement of the jelly to the region of the external os.

For a period of three years, Guttmacher and associates[1] studied the efficacy of jelly-alone technic for contraception among multiparas and patients of lower parity. Although the method achieved marked success among all groups, a few unplanned pregnancies did occur. It was possible to categorize all of these unplanned pregnancies into either "method failures" or "patient failures." Patient failures were those wherein patients readily admitted occasional or frequent omission of the use of the jelly before intercourse. Method failures were attributed only to those cases where patients averred a complete adherence to the use of the jelly.

With 325 patients using the jelly-alone [RAMSES VAGINAL JELLY] technic for periods ranging from 3 months to 3 years, a computation showed that there was a total of 425 exposure years involved. The total unplanned pregnancy rate averaged only 16.7 per 100 patient years of exposure.

When method failures only were computed, the unplanned pregnancy rate dropped to 10.82 per 100 years of exposure.



Conception control in 325 patients using RAMSES Vaginal Jelly for 3 months to 3 years[1]

On the basis of observations, the conclusion is valid that while RAMSES VAGINAL JELLY is markedly effective as a jelly-alone technic, the method is "one of choice" in patients of lower parity and, of course, among the nulliparous.

Because parity, motivation, and patient intelligence all play a major part in the success of a contraceptive technic, the final basis for selection of the contraceptive method must rest with the physician whose judgment is predicated on a thorough evaluation covering all of these factors.

When in the judgment of the physician, parity, anatomic factors, or motivation indicate the use of the diaphragm-and-jelly method of contraception, the RAMSES® TUK-A-WAY® Kit is recommended. The RAMSES® diaphragm is flexible and cushioned—provides an optimum barrier and utmost comfort. In combination with RAMSES jelly it offers a reliable contraceptive technic.

Physicians may now obtain a complimentary package of RAMSES VAGINAL JELLY*. Requests on your prescription blank should be mailed to Dept. YA1, Julius Schmid, Inc., 423 West 55th Street, New York 19, N. Y.

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[1] Finkelstein, R.; Guttmacher, A., and Goldberg, R.: Am. J. Obst. & Gynec. 63:664, Mar., 1952.

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SCIENTIFIC PROGRAMS

Forty-Eighth Annual Meetings

DISTRICT BRANCHES

Medical Society of the State of New York

SEVENTH DISTRICT BRANCH

Wednesday, September 22, 1954

University of Rochester School of Medicine and Dentistry, Rochester

Morning

9:30 A.M.—Registration, Strong Memorial Hospital

10:00 A.M.—MEDICAL CLINICS

"Iron Metabolism and the Management of Iron Deficiency States"
Frank Furth, M.D.
"Adverse Reactions to Antibiotics"
H. R. Morgan, M.D., and **T. W. Mou, M.D.**
"Fainting"
George Engle, M.D.

SURGICAL CLINICS

"Differential Diagnosis of the Acute Abdomen"
Harry Kingsley, M.D.
"Peripheral Vascular Disease with Emphasis on Varicose Veins"
W. J. Merle Scott, M.D.
"Present-day Scope of Cardiac Surgery: Selection of Patients and Procedures Used"
Earle B. Mahoney, M.D.

PEDIATRICS AND OBSTETRICS CLINICS

"Technics for the Diagnosis and Management of Intraepithelial Carcinoma of the Cervix"
Curtis J. Lund, M.D.
"Office Management of Normal Infants"
William Bradford, M.D.
"The Problem of Convulsions in Infancy and Childhood"
Gilbert Forbes, M.D.

Afternoon

1:00 P.M.—Luncheon
Introduction of officers
Address: **Renato J. Azzari, M.D.,** Bronx, president-elect, Medical Society of the State of New York
Remarks: **Mrs. Arthur L. Bennett,** Buffalo, president, Woman's Auxiliary to the Medical Society of the State of New York

2:00 P.M.—"The Third Phase of Medical Care"
Joseph A. Benton, M.D., New York City, medical education director, Bellevue Medical Center
This will be followed by a clinicopathologic conference, the material for which will be presented at registration.

4:00 P.M.—Social hour

WOMAN'S AUXILIARY

Morning

9:30 A.M.— Registration
10:00 A.M.— Tour of hospital
11:00 A.M.— Business meeting
12:00 NOON—Address: **Mr. Robert N. Abbott,** director of civil defense, Monroe County

Afternoon

1:00 P.M.—Luncheon
2:00 P.M.—Auxiliary members may attend lecture given by Dr. Joseph A. Benton, or visit the George Eastman House, historical photographic museum.
4:00 P.M.—Social hour

[Continued on page 2632]

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[Continued from page 2630]

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Ontario	Philip W. Skinner, M.D., Geneva
Seneca	Oscar K. Diamond, M.D., Willard
Steuben	J. Frederick Kenzie, M.D., Bath
Wayne	James D. Tyner, M.D., Newark
Yates	Henry S. Waters, M.D., Dundee

NINTH DISTRICT BRANCH

Wednesday, October 6, 1954

Sleepy Hollow Country Club, Scarborough

Afternoon

3:00 P.M.—Registration

3:30 P.M.—Symposium: "Blood Transfusions"
Aaron Kellner, M.D., New York City, associate professor of pathology, Cornell University Medical College; director, Central Laboratories, New York Hospital; president, American Association of Blood Banks, *Moderator*

1. "Cross-matching Procedures and the Identification of Unusual Antibodies"
   Dr. Kellner
2. "Use and Abuse of Transfusions"
   Arthur Sawitsky, M.D., Jamaica, associate visiting physician in charge of blood bank, Queens General Hospital; chief of blood bank and hematologist, Long Island Jewish Hospital
3. "Exchange Transfusions"
   George J. Brancato, M.D., Brooklyn, consulting hematologist, Norwegian Lutheran Deaconesses' Home and Hospital; attending hematologist, Bay Ridge Hospital and Victory Memorial Hospital
4. "Hepatitis as a Complication of Blood Transfusions"
   Roger H. Unger, M.D., New York City, clinical assistant visiting physician, Bellevue Hospital; assistant in medicine, University Hospital; instructor in clinical medicine, New York University Post-Graduate Medical School
5. "Blood Substitutes"
   Robert G. Hicks, M.D., New York City, assistant attending anesthesiologist, St. Vincent's Hospital

5:00 P.M.—"District Branch Problems"
John F. Rogers, M.D., Poughkeepsie, president, Ninth District Branch

5:20 P.M.—Business meeting—election of officers

5:30 P.M.—Cocktail hour

Evening

6:30 P.M.—Dinner
Introduction of officers
Address: **Dan Mellen, M.D.,** Rome, president, Medical Society of the State of New York
Remarks: **Mrs. Arthur L. Bennett,** Buffalo, president, Woman's Auxiliary to the Medical Society of the State of New York
"Human Relations in Industry"
Mr. Dean Arnold, president, Arnold Bakers, Port Chester

Officers—Ninth District Branch

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First Vice-President	Harold S. Heller, M.D., Spring Valley
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Orange	Frederick T. Seward, M.D., Goshen
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Fee for the course $50.00. Limited to 50 applicants.

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BOOKS RECEIVED

(The following books were received during the month of July)

Depression. Edited by Paul H. Hoch, M.D., and Joseph Zubin, Ph.D. The Proceedings of the Forty-Second Annual Meeting of the American Psychopathological Association, held in New York City, June, 1952. Octavo of 277 pages, illustrated. New York, Grune & Stratton, 1954. Cloth, $5.50.

The Optometrist's Handbook of Eye Diseases. By Joseph I. Pascal, M.D., and Harold G. Noyes, M.D. Octavo of 300 pages. 155 illustrations and 3 color plates. St. Louis, C. V. Mosby Co., 1954. Cloth, $9.50.

Legal Medicine. Edited by Comm. R. B. H. Gradwohl, M.C. U.S.N.R. (Ret.) Quarto of 1,093 pages. 222 illustrations. St. Louis, C. V. Mosby Co., 1954. Cloth, $20.

Introduction to Psychiatry. By O. Spurgeon English, M.D., and Stuart M. Finch, M.D. Octavo of 621 pages. New York, W. W. Norton & Co., 1954. Cloth, $7.00.

The Psychiatric Interview. By Harry Stack Sullivan, M.D. Edited by Helen Swick Perry and Mary Ladd Gawel. Octavo of 246 pages. New York, W. W. Norton & Co., 1954. Cloth, $4.50.

Lectures on the Scientific Basis of Medicine. By the British Postgraduate Medical Federation, University of London. Volume II, 1952–53. Octavo of 380 pages, illustrated. London, England, University of London, The Athlone Press (New York, John de Graff), 1954. Cloth, $6.00.

Clinical Chemistry in Practical Medicine. By C. P. Stewart, Ph.D., and D. M. Dunlop, M.D. Fourth edition. Octavo of 320 pages, illustrated. Edinburgh, E. & S. Livingstone (Baltimore, Williams & Wilkins Co.), 1954. Cloth, $5.00.

Parents' Magazine Book for Expectant Mothers. By Adeline Bullock, R.N. Octavo of 246 pages, illustrated. New York, McGraw-Hill Book Co., 1954. Cloth, $3.75.

Biochemistry and Human Metabolism. By Burnham S. Walker, M.D., William C. Boyd, Ph.D., and Isaac Asimov, Ph.D. Second edition. Octavo of 904 pages, illustrated. Baltimore, Williams & Wilkins Co., 1954. Cloth $10.

BOOKS RECEIVED

Psychoanalysis and the Education of the Child. By Gerald H. J. Pearson, M.D. Octavo of 357 pages. New York, W. W. Norton & Co., 1954. Cloth, $5.00.

Diencephalon. Autonomic and Extrapyramidal Functions. By Walter Rudolf Hess, M.D. Octavo of 79 pages, illustrated. New York, Grune & Stratton, 1954. Cloth, $4.00. (Monographs in Biology and Medicine, Vol. III)

Social Science in Medicine. By Leo W. Simmons, Ph.D., and Harold G. Wolff, M.D. Octavo of 254 pages. New York, Russell Sage Foundation, 1954. Cloth, $3.50.

MEDICAL NEWS

[Continued from page 2628]

H. Meyerhoff in the practice of obstetrics and gynecology in Schenectady...Dr. Harold Gertzog, former resident in pediatrics at Buffalo Children's Hospital, practice of pediatrics in Canandaigua... Dr. Joseph P. Giardino, practice of pediatrics in Gloversville...Dr. William J. Goldwag, former resident physician in medicine at Kings County Hospital, general practice in Ossining...Dr. Harold E. Hunter, as an associate of the Canandaigua Medical Group, in Naples...Dr. Arthur A. Petronio, former teaching fellow at Tufts Medical College and the Harvard University College of Medicine, practice of internal medicine in Utica...Dr. Peter C. Pulrang, former senior pediatrics resident at St. Christopher's Hospital for Children in Philadelphia, practice of pediatrics in Plattsburg...Dr. Forrest A. Rowell, formerly on the staff of the St. John's Riverside and Yonkers General Hospitals, practice of medicine and obstetrics in Yonkers.

A.M.A. Meeting Sites Announced

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1956—Chicago, Illinois
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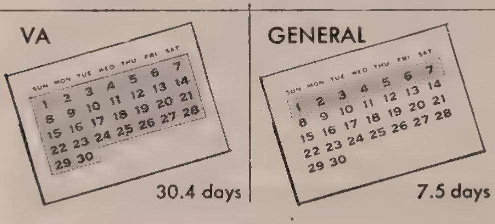
In Viewing the VA Medical Program . . .

comparison of length of stay in VA and general hospitals GM&S



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1. Meller, R. L., and Resch, J. A.: *Postgrad. Med.*, 6:452, Dec., 1949.
2. Berris, Harold: *Neurology*, 4:116, Feb., 1954.
3. Carter, Sidney, and Merritt, H. H.: *Am. Pract. & Digest Treat.*, 3:547, July, 1952.

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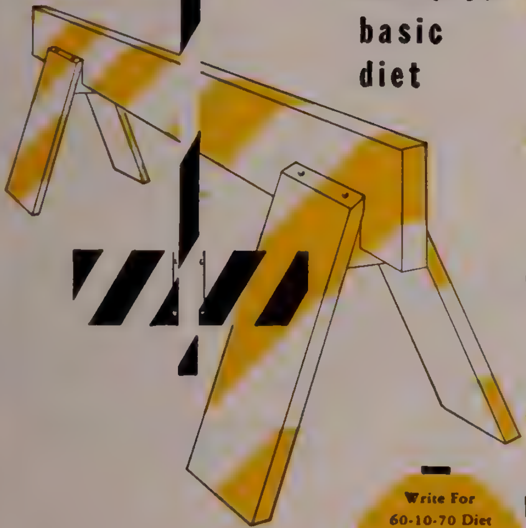

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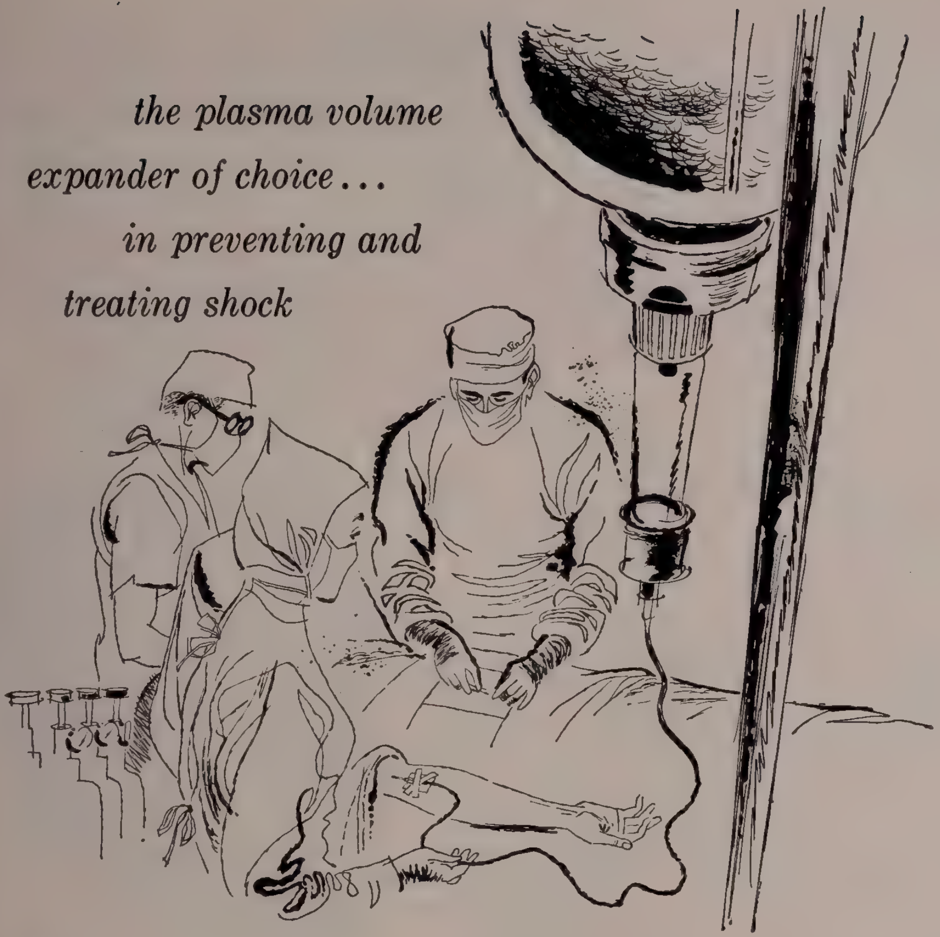

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[1] BOYD, A. M.: FLETCHER, F., and RATCLIFFE, A. H.: Supportive Therapy, An Improved Type of Dextran, *Lancet, Jan. 10, 1953, p. 59.*

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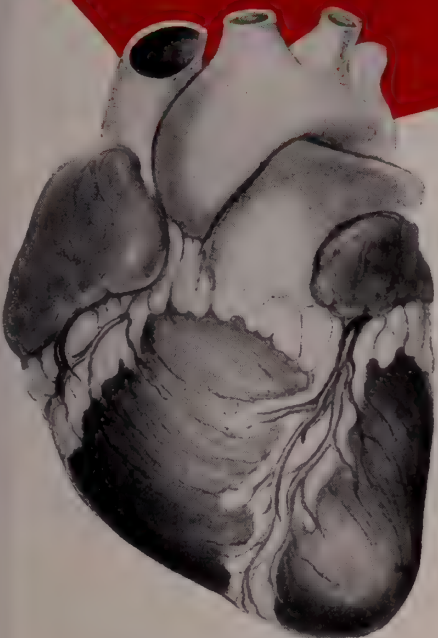

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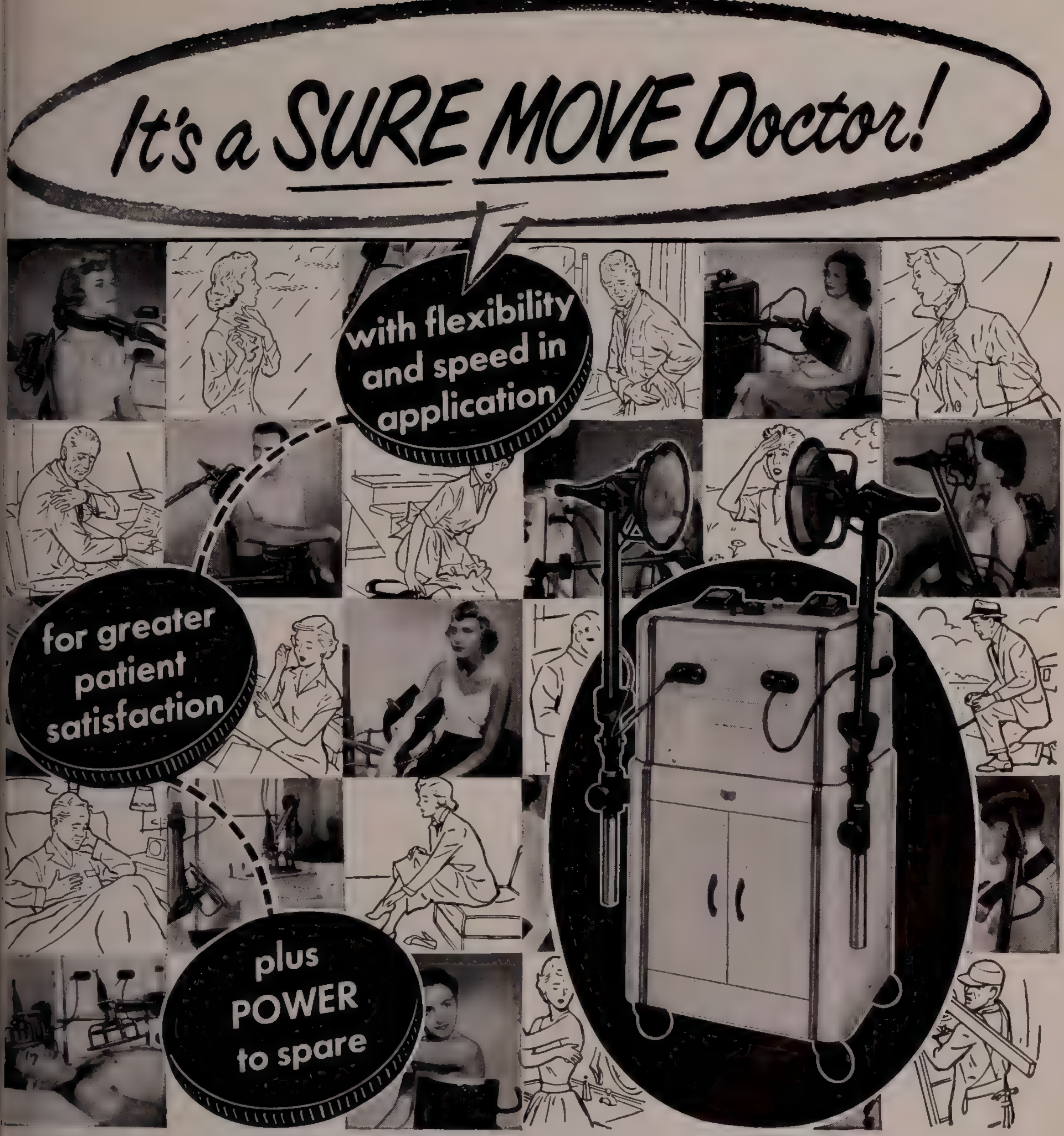
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to cover Gram-negative bacteria
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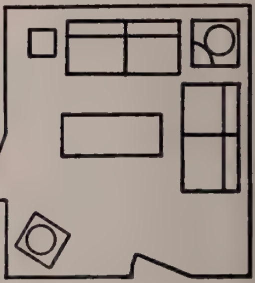

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Riboflavin	1.2 mg.
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Dispersible Powder
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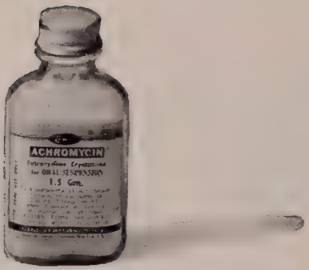
PEDIATRIC DROPS: *Cherry flavor. Approx. 25 mg. per 5 drops. Graduated dropper.*



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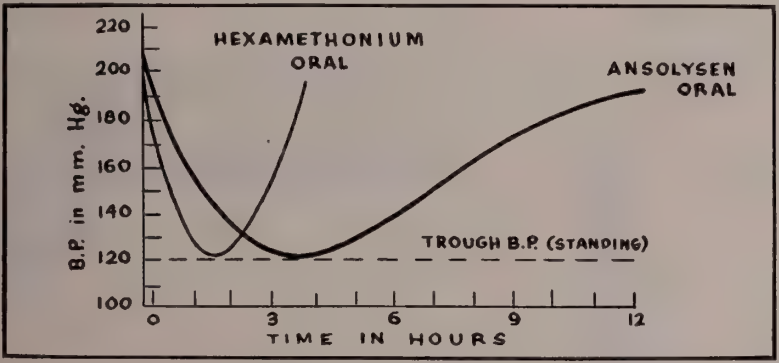

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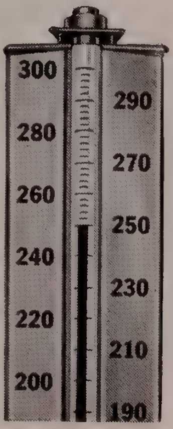
[1] Freis, E. D., and others: Circulation 9:540 (April) 1954

[2] Smirk, F.H.: New Zealand M.J. 52:1 (Oct.) 1953



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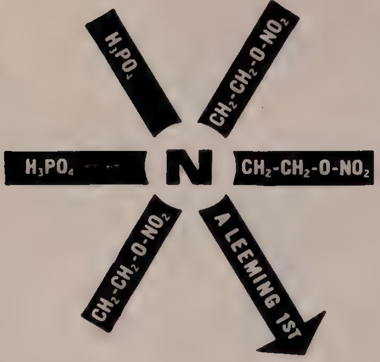

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(1) Lawrence, E. D., W. J. Surg., Ob. & Gyn., 58, 236-7, 1950.

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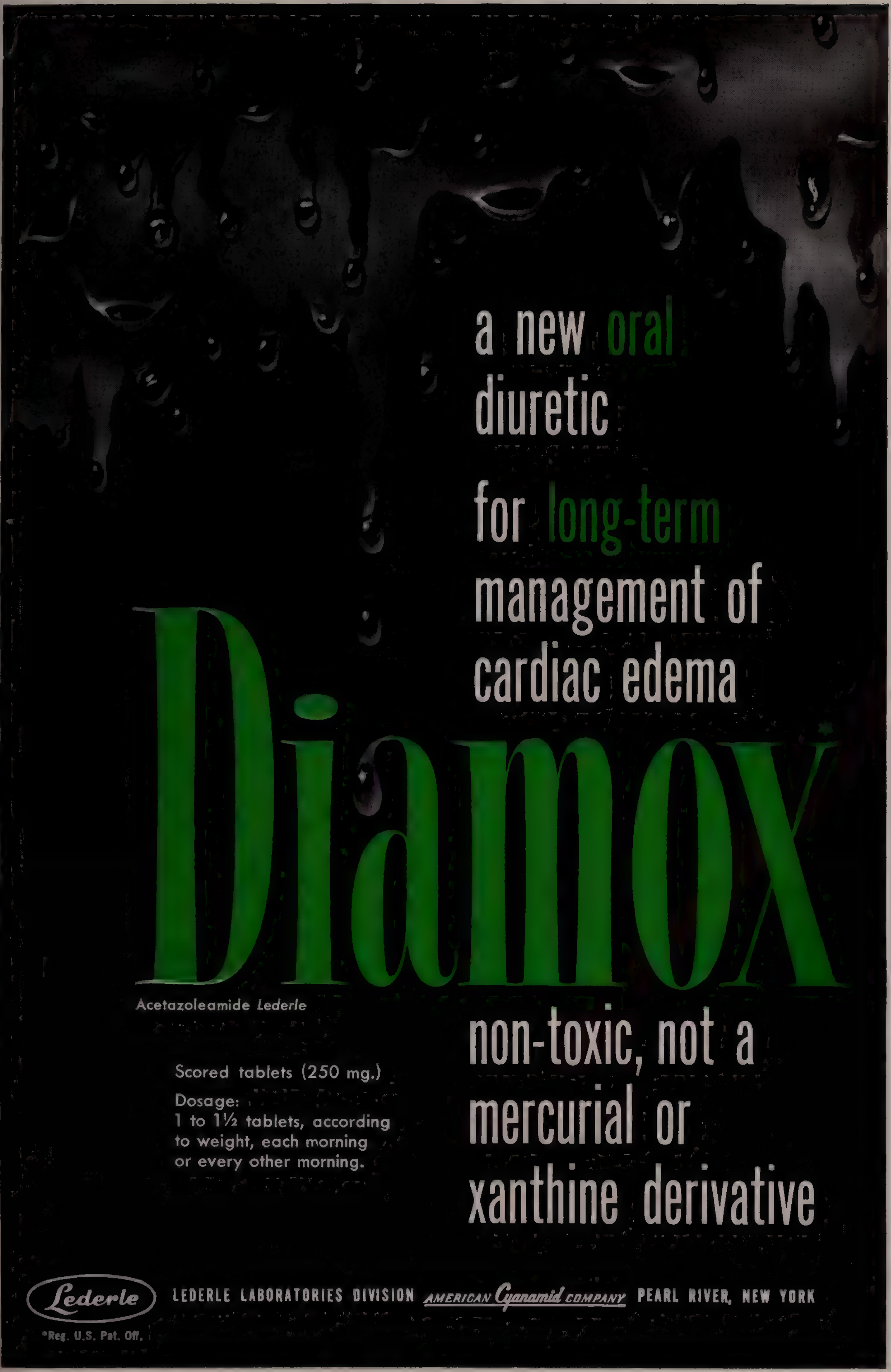

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Personal communication (Apr. 12, 1950)

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Svartz, N.: Acta. Med. Scandinav. 141:172, 1951.

1952 In a series of 52 patients with chronic ulcerative colitis 30, or 58%, showed significant improvement after treatment with Azulfidine.

Morrison, L. M.: Gastroenterology 21:133, 1952.

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Morrison, L. M.: Rev. Gastroenterology 20:744 (Oct.) 1953.

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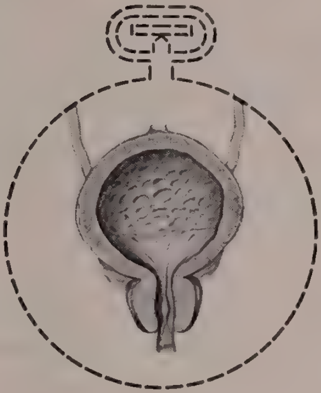

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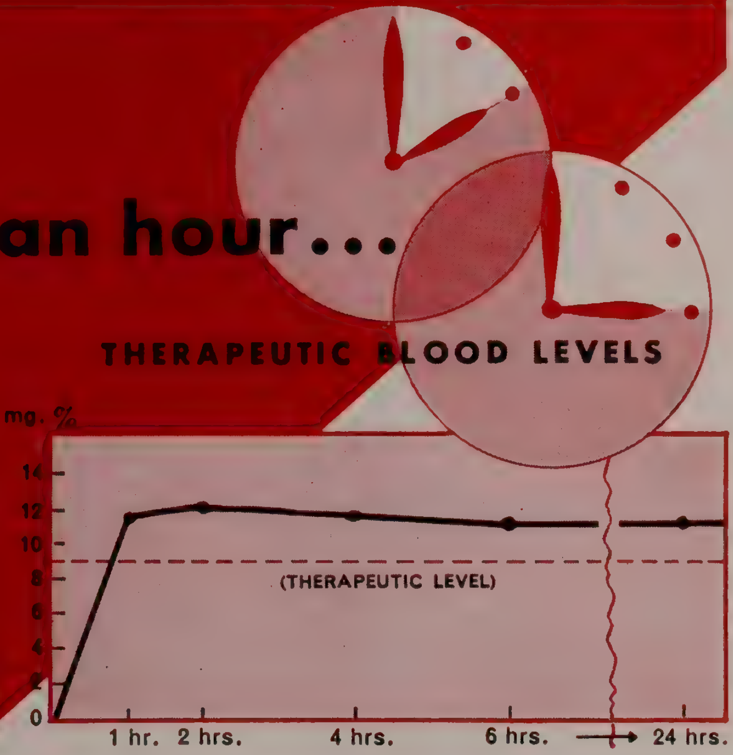

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*Meyer, R. J.: Personal communication to the Medical Department, Armour Laboratories, 1954.

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The role of the male in TRICHOMONAL RE-INFECTION

"A Frank Discussion"

The concept that trichomonal infestation is not peculiar to the female genitalia alone is now established authoritatively. Numerous investigations[1-6] have confirmed the presence of the infesting organisms in the male prepuce, urethra, prostate, or bladder.

The symptomatology observed in the male varies widely and apparently causes no serious residual lesions.[1] Frequently the chief complaint is a nonpurulent discharge with an almost complete lack of accompanying reaction.

According to Lancely in his investigation,[1] the infection can even exist in a nonsymptomatic state. A recent study of 735 male patients, reported in *The Journal of the American Medical Association*, verified conclusively that the "... preputial sac, urethra, or prostate may all be sites of infection ... and that the spread of disease by coitus is not uncommon."

Other studies[2-6] amply support these findings. Crossen,[2] in his notations on persistent and therapy-resistant cases of trichomonal vaginitis in the female, reports many avenues of re-infection, listing among others — douche nozzles, fingers, and the sexual partner. He emphasizes the importance of checking the husband as a possible focus of re-infection.

Bernstine and Rakoff[3] point up the necessity for checking the husband "... particularly as a source of infection in the female ..." Reich and Nechtow[6] similarly advocate such a procedure, stating, "The male, too, may be a source of re-infection. The prostate should be checked as a possible source of trichomonads." Wharton[5] notes "... the infection returns after coitus ..." and again, "Occasionally the husband is the reinfecting focus."

Increasingly, data and studies point up the need for prophylactic measures in coitus, as an effective adjunct to routine trichomonal therapy of the female. The importance and rationale for the use of a condom should be explained carefully. Rakoff et al.[3] are quite definitive in an exposition of treatment and prophylaxis for trichomonal infection and re-infection.

"If the male harbors trichomonads, condoms should be used during sexual intercourse until it is certain the infestation has been cleared up entirely. When the condition exists in the female alone, coitus is best avoided until the vaginitis and active stage of treatment are over: thereafter the husband should use condoms for a period of at least three months after the last treatment ..."[3]

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references:

1. Lancely, F.: Brit. J. Ven. Dis. 29:213-217, Dec., 1953; abstracted, J.A.M.A. 154:1467, Apr. 24, 1954. 2. Crossen, R. J.: Diseases of Women, ed. 10, St. Louis, C. V. Mosby Company, 1953, p. 294. 3. Bernstine, J. B., and Rakoff, A. E.: Vaginal Infections, Infestations, and Discharges, New York, The Blakiston Company, Inc., 1953. 4. Meigs, J. V., and Sturgis, S. H.: Progress in Gynecology, vol. 2, New York, Grune and Stratton, Inc., 1950, p. 433. 5. Wharton, L. R.: Gynecology, Including Female Urology, ed. 2, Philadelphia, W. B. Saunders Company, 1947, pp. 446, 448. 6. Reich, W. J., and Nechtow, M. J.: Practical Gynecology, Philadelphia, W. B. Lippincott Company, 1950, pp. 263, 267.

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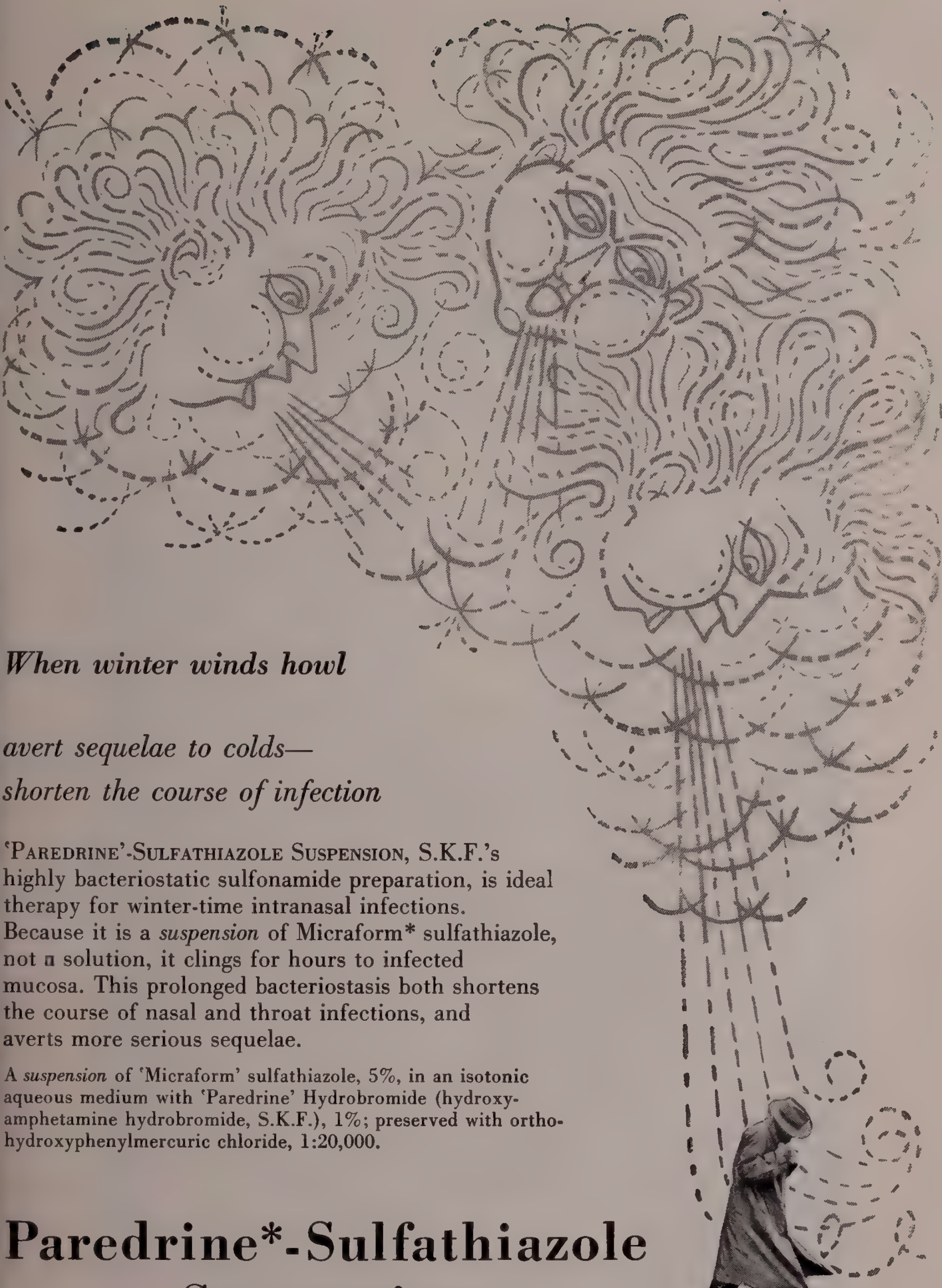

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EDITORIAL

Medicine and the Press

Medicine, both the science and the art, is a field of legitimate interest on the part of the public. Progress in these fields stands between the man in the street and his expectancy of illness, incapacity, or death. This is surely news of absorbing interest to most citizens, and they look for it—not in scientific publications which they do not understand, but in the public prints which they read daily.

The Medical Society of the State of New York has been a pioneer among other agencies in developing means to place the facts as they have developed at the disposal of the press. *New York Medicine*[1] comments editorially upon the development of the solutions of common problems in handling of such news by the press and the medical profession. We believe that every member of the Society should be informed of the progress that has taken place through many hours of conference in the public interest.

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[1] New York Med. **10**: 563 (July 20) 1954.

A quarter century ago, the medical profession could rightly criticize the reporting of medical news on the grounds of inaccuracy. Since the formal founding of the Science Writers Association in 1934, however, there has been a steady improvement in the caliber of writer assigned to report upon the advances of medicine. One needs only to mention names like Laurence, Blakeslee, Kaempffert, Davis, and Dietz, who have earned justified national reputations, to emphasize the point.

As the caliber of the writers advanced, the spirit of cooperation between physicians and scientists and the writers also improved. Medicine, to pinpoint the problems, began to realize that medical articles could be prepared with accuracy and a sympathetic understanding by the writer of the research spirit. Medical societies, from the A.M.A. on down, began to establish press rooms at meetings and to assist the established writers to obtain the true medical facts quickly.

At the same time, and as this increasing cooperation mounted, the medical societies began to realize that the press was not an enormous and diabolical monster seeking only to pry into medical secrets. And the county and state medical societies began to realize, also, that the press required news information in connection with accidents, sickness of prominent persons, and needed also, on occasion, to take pictures.

Over the past decade as a result there has been a growing movement to liberalize, to some degree, the former rigid rules of the Code of Ethics in the matter of what the medical profession calls 'advertising' but which the press calls free publicity. While the medical profession—in the interest of the public—must curb the physican who tries to build his reputation by publicity methods rather than on his medical ability, the medical profession realizes that the writers or editors (also in the public interest) may wish to obtain information on new medical discoveries as matters of science news. The Code of Ethics now permits physicians to cooperate in providing such legitimate information if they will only inform their county medical society of this fact and be guided by the advice of their own medical society.

A further step, in press cooperation, has been the creation of "Codes of Press Cooperation" formulated by several state medical societies. Colorado enjoys the distinction of being the first in this field.

Parenthetically, it may be pointed out that the use of the word 'Code' has irked some editors who claim that this gives a connotation of press censorship which is abhorrent to them.

Wisely, therefore—and specifically in the case of the Medical Society of the State of New York—the term has been changed to "Guide for Cooperation."

The guide is in a constant state of fluidity, being subject to revision through conferences by the parties at interest as a consistent program of the Bureau of Public and Professional Relations of the Medical Society of the State of New York. The character of the problems faced by the profession and the press changes somewhat from time to time as might be anticipated, but increasingly good relationships in their solution hinge upon the successful maintenance of fluidity. What may have been a satisfactory answer to a given problem yesterday may not necessarily be so tomorrow. That this fact is recognized both by the profession and the press is a matter for congratulation to all concerned.

Editorial Comment

Immunization Against Poliomyelitis. According to a report just issued covering the current status of passive and active immunization against poliomyelitis by Kenneth S. Landauer, M.D., Assistant Medical Director, National Foundation for Infantile Paralysis, the first phase of the trial of the Salk polyvalent poliomyelitis vaccine, the inoculations, has been completed.

The Poliomyelitis Vaccine Evaluation Center at the University of Michigan is maintaining observations on 1,800,000 children who are in one way or another participating in the poliomyelitis vaccine program. An individual record punch card is being set up and maintained for every single one of these children. Of these 1,800,000 children in the first three grades in school, approximately 650,000 have received three inoculations each—440,000 with the Salk vaccine, 210,000 with a placebo.

Inoculations were given in a total of 217 test areas throughout the United States. These areas were selected on the basis of many criteria, including that of an anticipated high incidence of poliomyelitis during 1954. The evaluation records also include 25,000 children in Canada and 20,000 in Finland.

The need for "big numbers" in conducting a valid evaluation study of the Salk vaccine (or any other poliomyelitis preventive for that matter) arises from the fact that statistically significant data cannot be obtained in any other way. It is notoriously difficult to describe or measure events that "don't happen"—that is, to say how many cases of poliomyelitis, which might otherwise have occurred, have been prevented by the use of the specific preventive measure. If the incidence of poliomyelitis among the 1,800,000 children six to nine years of age in the 217 areas under test were to follow the pattern of the previous five-year average of incidence, a total of only 600 to 800 cases of paralytic poliomyelitis could be expected among them in 1954. Hence, the difference between anticipated cases and actual cases in comparable groups in the test areas will serve as one statistical facet of the evaluation of the Salk vaccine. But this is by no means the complete evaluation procedure.

Elaborate plans have been made for the follow-up study of every case of poliomyelitis occurring in the test areas this summer and early fall. Blood and stool specimens will be taken from each patient and from large numbers of family contacts. These will be tissue-culture tested for the presence of poliomyelitis virus. Blood specimens also will be studied for presence of poliomyelitis antibodies. Furthermore, standardized muscle examinations of poliomyelitis patients in the test areas will be made by selected physical therapists under the direction of a physician at two periods, ten to twenty days after onset of the disease and again fifty to seventy days after onset.

We shall know with a high degree of accuracy just how efficient the Salk vaccine is in preventing paralytic poliomyelitis under natural conditions of exposure. This information will determine the future use of the vaccine.

Because of the comparatively small number of cases of poliomyelitis that can be anticipated among the 1,800,000 children whose records are under observation at the Poliomyelitis Vaccine Evaluation Center, it is important to the validity of the ultimate findings that as few cases as possible be "lost" from the study. A significant fraction of the children under observation may travel away from their homes during the summer. If any of them should contract poliomyelitis while outside their home areas, this fact should be known to the Poliomyelitis Evaluation Center. Hence, any physician in the United States may be called upon to play some role in the current evaluation procedure.

It is sincerely requested that any physician who was called to diagnose or treat any ease of poliomyelitis this summer be sure to ask as part of his history-taking, "Were you or any member of your family or any children in your school vaccinated against poliomyelitis ('polio shots') this year?" If the patient cannot answer, parents or relatives undoubtedly can. If the answer is "yes," the attending physician is requested to report this information as promptly as possible to his local or state health authorities, who will pass it on to the Evaluation Center for follow-up.

Suspected cases of poliomyelitis should be promptly reported; the attending physician should not wait until paralysis is unequivocal before reporting the case. Cases in which the diagnosis later proves to be something other than poliomyelitis can be eliminated from the evaluation study. It is hoped, however, that no opportunity will be missed to collect early in the course of the disease necessary blood and stool specimens that can help confirm or establish the diagnosis of poliomyelitis.

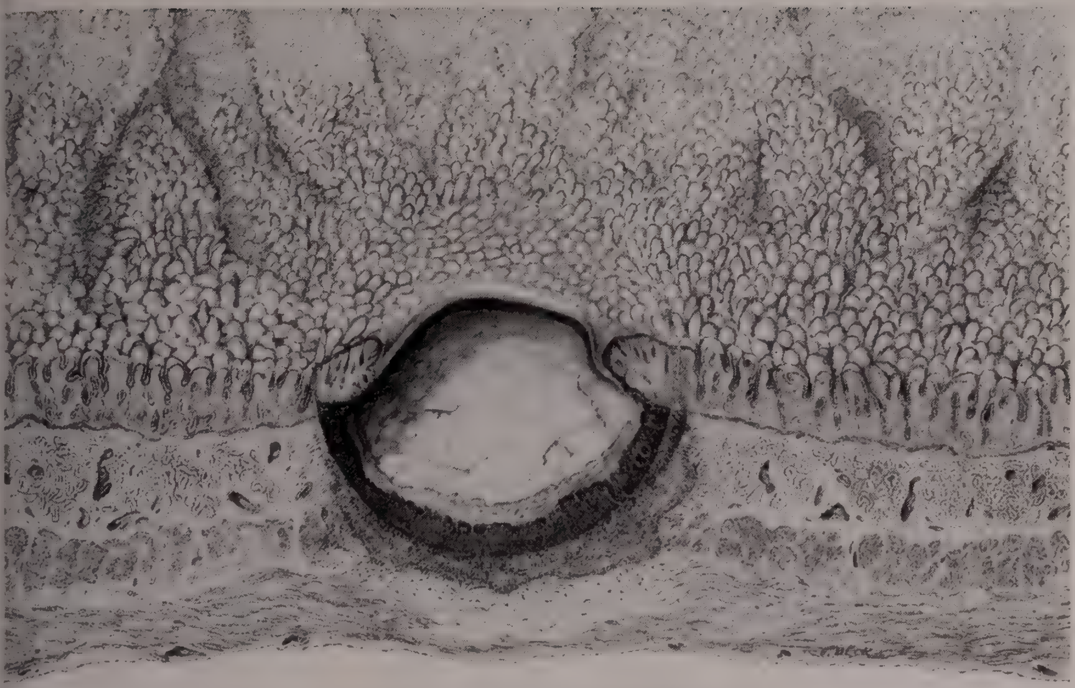
Possible Cascade Effects of X-rays in Fluoroscopy. In the correspondence column of this issue, page 2748, will be found a short discussion of the possibility of cascade effects of x-rays in passing through the fluoroscopy protection screen. Our correspondent poses the question whether "x-rays also cascaded and so perhaps might be responsible for the alleged preponderance of leukemia in physicians who fluoroscope their patients."

Apparently there is a possibility that "a certain number of stray electronic particles may get around the screen or even occasionally bounce off the apparatus or other objects in the room," although the screen appears to afford adequate protection from direct radiation. We direct the attention of those doing fluoroscopy to this discussion of the possible hazards.

1954
DISTRICT BRANCH MEETINGS

MEDICAL SOCIETY OF THE STATE OF NEW YORK

District Branch	*Date*	*Place*	*Time*
Fourth	Thursday October 21	Queensbury Hotel Glens Falls	Afternoon Dinner Evening
Fifth	Wednesday October 20	Hotel Onondaga Syracuse	Afternoon Dinner Evening
Sixth	Wednesday October 27	Statler Club Ithaca	Afternoon Dinner
Ninth	Wednesday October 6	Sleepy Hollow Country Club Scarborough	Afternoon Dinner



Cross section of active duodenal ulcer.

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". . . our studies indicate that ulcer pain in the uncomplicated case is invariably associated with abnormal motility. . . .

"Prompt relief of ulcer pain by ganglionic blocking agents . . . coincided exactly with cessation of abnormal motility and relaxation of the stomach."

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One of the typical cases cited by the authors[2] is that of a male patient who refused surgery despite the presence of a huge crater in the duodenal bulb.

"This ulcer crater was unusually large, yet on 30 mg. doses of Pro-Banthīne [q.i.d.] his symptoms were relieved in 48 hours and a most dramatic diminution in the size of the crater was evident within 12 days."

Pro-Banthīne is proving equally effective in the relief of hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm. G. D. Searle & Co., Research in the Service of Medicine.

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[1] Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.

[2] Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

You can prevent attacks in angina pectoris

Prolonged prophylaxis

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1. *reduce the number of attacks in almost 80 per cent of patients*[2,3]
2. *reduce the severity of attacks which cannot be prevented.*

Available in 10 mg. tablets in bottles of 100, 500 and 5000.

References:

1. Russek, H. I.; Urbach, K. F.; Doerner, A. A., and Zohman, B. L.: J.A.M.A. *153*:207 (Sept. 19) 1953. 2. Winsor, T., and Humphreys, P.: Angiology *3*:1 (Feb.) 1952. 3. Plotz, M.: N. Y. State J. Med. *52*:2012 (Aug. 15) 1952.

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SCIENTIFIC ARTICLES

Combined Antibiotic-Cortisone Therapy in Infectious Asthma

The Rationale of Its Early Application

WALTER FINKE, M.D., ROCHESTER, NEW YORK

THE efficacy of antibiotics and cortisone in chronic asthma signifies a decisive advance in the management of this stubborn and capricious disease. Moreover, the knowledge that these potent therapeutics control bronchial infection and inflammation reveals important causes of this type of asthma and opens the door for its prevention.

Up to now the use of antibacterial agents in asthma has been limited chiefly to checking "superimposed" respiratory infections and that of cortisone to intractable cases not responding to conventional methods of treatment. This practice reflects the widely accepted view that chronic asthma, like "extrinsic," paroxysmal asthma, is basically an allergic disease and, therefore, should be treated primarily as such. Specific allergens can, however, rarely be determined in "intrinsic" asthma, while pyogenic obstructive bronchitis is nearly always present and, in fact, initiates and perpetuates most cases of chronic asthma.[1]

Brief antibiotic therapy often fails to eradicate suppurative bronchopulmonary infection even in its early stage, and suppresses a chronic infection only temporarily.[2–4] Cortisone, even though it increases the patency of bronchi and bronchioli by reducing inflammation,[5–8] cannot reverse the sequelae to longstanding bronchostenosis, such as chronic emphysema and bronchiectasis. This steroid, moreover, lacks antibacterial properties and, therefore, by itself cannot eliminate the infection that causes and sustains the inflammation. For this reason, the use of cortisone alone in chronic asthma is inadvisable and even hazardous because of the possible spread of uncontrolled infection which may be masked by such therapy.[6–8] It seems logical then to use cortisone in conjunction with antibiotics in asthma associated with respiratory infection and to give such combined therapy not only to ease advanced asthma, but even more to prevent this chronic disease. The following study is based on this approach.

Material

In a series of 40 adults and 38 children under sixteen, treated and followed for from three months to eight years for infectious asthma, cortisone was used at some time as an adjunct to long-term antibiotic therapy. Eighty per cent of the adults had a history of recurrent, severe respiratory infections since childhood, and a similar percentage of the children had been subject to such illnesses since infancy. Half of the adult group had been affected by pneumonia or by influenza at the end of World War I, and one third of the younger group had had one or more attacks of pneumonia. As found in other studies, exposure to intimate household contacts with chronic respiratory infections appeared also in this group of children to be most responsible for significant respiratory ailments of childhood.[2,3,9–11] Seventy-five per cent of the adults and more than one third of the children presented an advanced stage of bronchopulmonary disease with chronic emphysema and fibrosis. Bronchographic studies done in 33 cases revealed early or chronic bronchiectasis in 15 patients, eight of

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Medicine, May 14, 1954.

them children. Eighteen of the 78 patients had respiratory symptoms which could be related clinically to common extrinsic allergens. Even in children, however, the severity of the chest ailment seemed to be determined less by these allergic manifestations than by other factors. Of the 17 advanced cases in the younger group, for example, ten had a history of pneumonia, 16 of tonsillectomy, and only three of true respiratory allergy, the corresponding figures in the 21 milder cases being four, five, and eight. Regardless of previous, temporary improvements in some cases under antiallergic or other conventional management, all 78 patients were in poor respiratory health when first seen.

Treatment

The principles of long-term antibiotic therapy used in this and other groups with chronic bronchitis and infectious asthma have been outlined in previous publications[4,12] and need only be summarized here. Penicillin was the most frequently used antibacterial agent. Because of possible health hazards and to avoid long penicillin-free intervals, parenteral administration was replaced in the course of this study as far as possible by oral penicillin in daily doses varying between 500,000 and 3,000,000 units and/or penicillin aerosol, 200,000 to 1,000,000 units. The problem of providing the patient with an effective and inexpensive aerosol method for regular home treatment usually could be solved by simplified technics such as a unit consisting of a hand pump, pressure tank, and nebulizer* which produces sufficient volume and pressure for aerolization.[12]

The combination of penicillin with streptomycin or a broad-spectrum antibiotic proved very effective in most instances, especially in the beginning of treatment or during acute flareups; moreover, multiple antibiotic therapy eliminated the need for excessive doses of a single antimicrobial agent. At times a change from penicillin to another antibiotic improved the results; such a replacement was, of course, indispensable in patients hypersensitive to penicillin.

The intensity and duration of antimicrobial therapy was determined by the severity of the condition and by the ultimate results to be expected. Vigorous, continuous treatment over several weeks or months was given in the initial phase of therapy, the daily dosage of antibiotics being decreased gradually as the patient's condition improved. In certain cases of chronic disease continuous treatment was eventually changed to intermittent treatment given only in acute flareups. In patients, especially children, in whom complete recovery could be hoped for, continuous antibiotic treatment was carried on for a number of years if possible. Thus the 78 patients in this study have received an average of two and three-fourth years of antibiotic therapy; 19 have been treated for over three years, seven of them for more than five years.

Significant although not serious skin reactions or gastrointestinal disturbances due to antibiotics taken orally or as aerosol occurred in four of the 78 patients. In two additional cases an injection of penicillin was followed by a moderately severe anaphylactoid shock. No serious ill effects occurred in children.

Cortisone* was given orally to this group in 128 courses, the duration of a single course varying between two weeks and sixteen months and averaging three and one-half months. The daily dose rarely exceeded 100 mg., even in the beginning of treatment. This initial amount was gradually reduced to 50 or 25 mg. or even less for maintenance therapy and was tapered off when discontinuation of hormonal treatment was contemplated.

In seven adult patients, most of them elderly people, the occurrence of pronounced edema or hypertension in the beginning of cortisone treatment necessitated its discontinuation. In four children sudden gain in weight, gastric disturbances, or enuresis occurred but could be controlled by reducing the amount of cortisone.

While under combined antibiotic-cortisone treatment no patient was submitted to antiallergic management or to surgical procedures on the respiratory system. Expectorants were continued as long as inspissated bronchial secretion produced mechanical obstruction, and epinephrine, aminophylline, and other "bronchodilators" helped to keep the dosage of cortisone at a minimum. Antihistamines were given for relief of coexistent respiratory allergy if the infection was controlled, and even then only cautiously because of their atropine-like drying effect.[13]

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* Manufacturer: Lassco Products, Inc., Rochester, New York.

* Supplied for this study as Cortone by Merck and Co., Inc., Rahway, New Jersey.

Results

Selecting as criteria the amount of therapy required, the clinical improvement achieved, and the frequency and duration of any disabling respiratory illnesses, the results of treatment could be considered excellent or good in 80 per cent of cases. Excellent results were achieved in 30 per cent of the adults and 70 per cent of the children; 35 per cent of the older patients, but only 5 per cent of the younger, showed no significant improvement. Intermittent antimicrobial therapy induced prolonged remissions, even in some chronic cases. The best results, however, were obtained by a long-term prophylactic antibiotic regimen similar to that given for the prevention of rheumatic fever recurrences. The addition of cortisone to antibiotics usually sped up the improvement. Moreover, such a combination allowed smaller doses of the steroid and usually achieved longer remissions than reported from cortisone treatment alone. Thus 22 patients, after having discontinued cortisone therapy, did not require this drug again for an average of nine months, eight of them for a year or longer. An additional nine cases have been using cortisone only occasionally over periods varying between four and eighteen months.

Acute respiratory infections which have been reported as a disturbing feature of cortisone therapy in other series of asthma patients did not constitute a major problem in this study in which suppression of bacterial infection was the primary goal of treatment. During 1953, of the 71 cases which were given combined antibiotic-cortisone therapy, nine experienced a severe respiratory episode, but only three of them had to be hospitalized. All of these nine patients were advanced cases of chronic asthma when they entered the study.

In the great majority of cases respiratory symptoms could be controlled with symptomatic medication or a temporary increase in the dosage of antibiotics or cortisone.

The patient's ability to cope with his condition was paralleled by gains in his working capacity which constituted another important step toward his rehabilitation. Thus, the 15 employed cases of this group, most of them with a previous record of excessive absenteeism, lost an average of only 7.6 days per year while under treatment. On the other hand, in established chronic cases no essential improvement of pulmonary pathology could be observed roentgenologically, and in 33 adults the average vital capacity of 2.7 L. rose only 10 per cent.

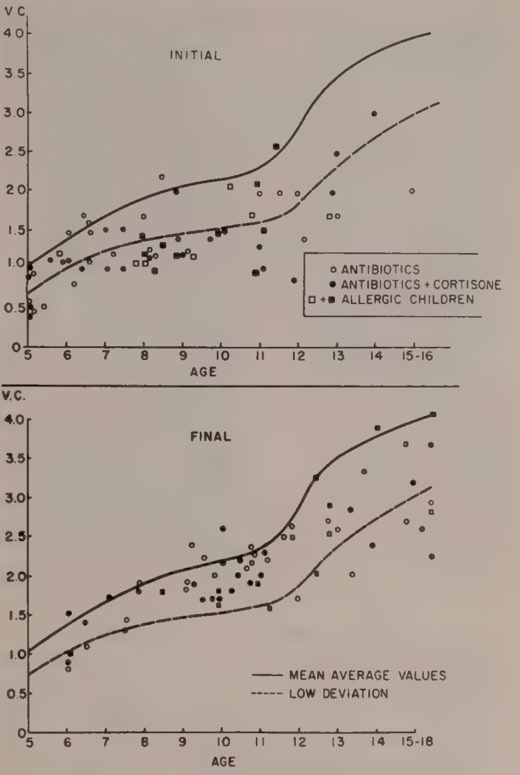

Fig. 1. Vital capacity of 62 children with infectious asthma before (*above*) and during (*below*) antibiotic or combined antibiotic-cortisone therapy (normal values compiled from Ferris[14,15]).

In the children's group in which advanced disease with irreversible pulmonary lesions was less prevalent, the improvement was more complete, often approaching cure, and the addition of cortisone to antibiotics proved more beneficial. In a previous study of children with chronic bronchitis and infectious asthma, continuous antibiotic treatment reduced the incidence of pneumonia and otitis media and mitigated measles and epidemic respiratory infections.[4] In the present investigation absenteeism from school because of respiratory sickness approximated 6 per cent of possible school days in 29 children treated with antibiotics plus cortisone, against 10 per cent in 24 children with infectious asthma who continued under conventional therapy.

Improvement of pulmonary function in the children of the present series seemed even more significant. Figure 1 shows the vital capacities of 62 children with infectious asthma prior to treat-

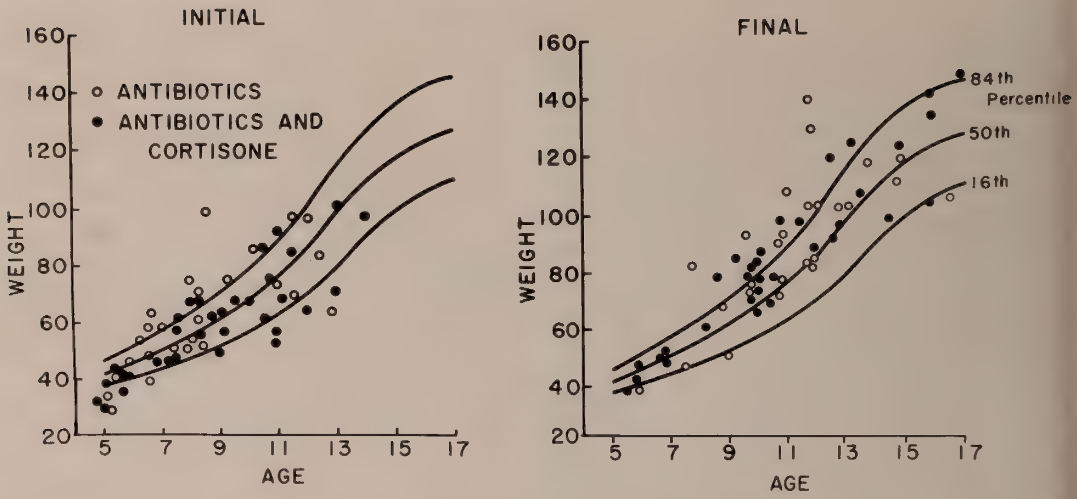

Fig. 2. Weight of 59 children with infectious asthma before (*left*) and during (*right*) antibiotic or combined antibiotic-cortisone treatment (normal values compiled from Jackson[16]).

ment, plotted against normal age-vital capacity values. Less than 15 per cent reach mean averages, and in more than 50 per cent the vital capacity is under the low deviation range. Under and following antibiotic or combined antibiotic-cortisone treatment, a marked shift toward normal values is noticeable, bringing some 30 per cent of cases to mean average values or better and leaving only 20 per cent outside the lower deviation range. A breakdown of more than one thousand readings shows substantial differences in the yearly gain of vital capacity. This gain averaged 0.36 L. in 28 children treated with antibiotics alone and 0.61 L. in the 34 cases given combined antibiotic-cortisone therapy. After cortisone was discontinued in 15 children of the latter group, their average yearly gain fell again to 0.38 L. Most cases whose total and first-second vital capacity remained low were over ten years at the beginning of treatment, had a long history of severe respiratory infections, and presented extensive pulmonary damage. The presence of clinically appreciable respiratory allergy did not seem to have a bearing on the persistence of pulmonary dysfunction since allergy was not prominent in the more advanced cases.

The improvement of the respiratory ailment reflected favorably on the children's general health, and considerable weight gains could be observed, especially in cases which previously had been in reduced physical condition (Fig. 2). Gradual advances to higher weight percentiles were common in children who received antibiotics with or without cortisone, and satisfactory gains in weight continued after successful termination of all therapy. Children treated with antibiotics alone gained at an average of $8^1/_2$ pounds per year, this figure going up to 13 pounds in children treated with antibiotics plus cortisone.

That a combination of these two therapeutics can succeed where antibacterial agents alone fail may be illustrated by the two following cases.

Case Reports

Case 1.—D. H., a twenty-year-old girl with intractable asthma of several years duration, was started on intensive antibiotic therapy in November, 1949. Although improving, she continued to have frequent relapses. Even after two years of continuous anti-infectious treatment with postural drainage, expectorants, aminophylline, etc., she had to be hospitalized because of another exacerbation. A bronchogram done at that time showed extensive obstruction of bronchi and bronchioli with cylindric bronchiectasis in the left lower lobe (Fig. 3A). She continued the same treatment for eight more months without essential change in her condition until September, 1951, when cortisone was added. Within twenty-four hours after the initial dose she started to expectorate copiously, her respiratory distress subsiding at the same time, and her vital capacity increased from 1.6 to 2.5 L. A second bronchography seven weeks later showed better filling of the affected segment and reduction of bronchial dilatation (Fig. 3B).

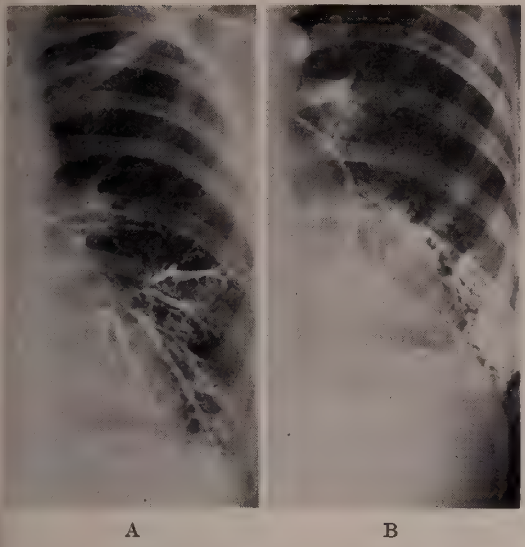

FIG. 3. (*A*) Bronchography of left lung in Case 1, showing bronchial obstruction and cylindric bronchiectasis. (*B*) Rebronchography showing better filling of bronchi and reduction of bronchiectasis.

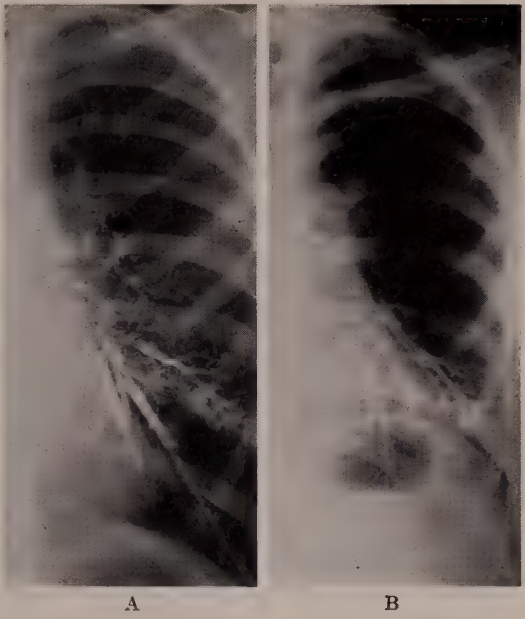

FIG. 4. (*A*) Bronchography of left lung in Case 2, showing bronchial obstruction and cylindric bronchiectasis. (*B*) Rebronchography showing normal filling of bronchi without definite evidence of bronchiectasis.

CASE 2.—R. W., an eleven-year-old boy with persistent cough and asthma since an attack of pertussis at the age of five, presented cylindric bronchiectasis with bronchial obstruction (Fig. 4A). He received antibiotic therapy with conventional adjunctive medication from March, 1948, to November, 1951. Under this treatment his respiratory and general condition improved considerably, and his school attendance became more regular. He continued to have asthma attacks, however, and his vital capacity did not increase satisfactorily. Two courses of cortisone given in addition to antibiotics during the following two years, each of two months duration, resulted in almost complete disappearance of asthmatic symptoms and continuous freedom from any other significant respiratory illness. A bronchography done in April, 1954, failed to show bronchial obstruction or definite evidence of bronchiectasis (Fig. 4B).

Now seventeen years old, he participates in all activities normal for his age. He has not used cortisone for one and one-half years but continues prophylactically one penicillin aerosol treatment a day. His vital capacity is 4.2 L., although a slight reduction of the first-second/total ratio (70 per cent), paralleled by moderate dyspnea on exertion, remains as a sequela to the pulmonary damage previously suffered.

Comment

The results of this study demonstrate that regardless of whether and how allergic or other mechanisms are involved in infectious asthma, treatment directed against the bacteria and bronchial obstruction seems most rational. The less irreversible pulmonary pathology present when treatment is initiated, the better the results to be expected, promising great relief and rehabilitation in many chronic cases and cure in early ones. Moreover, the observation that in infectious asthma treated with antibiotics and cortisone, wheezy dyspnea often disappears, while some cough may continue, indicates that in this condition the asthma is a symptom rather than an inherited, irrevocable disease.

Generally accepted treatments can mitigate bronchial asthma of any type, but it has not as yet been shown that chronic infectious asthma can be prevented by these methods, even if applied early in the disease. The importance of removing respiratory infection in asthmatic conditions now is widely realized. The potentialities of early anti-infectious treatment as a causal therapy of chronic asthma were outlined by the writer eight years ago[1] but thus far have hardly been given consideration. The capacity of cortisone to suppress early exudative inflammation is currently being utilized to prevent crippling rheumatic heart disease.[17,18] It seems reasonable to apply this steroid also to combat obstructive bronchial inflammation before pulmonary fibrosis, emphysema, and bronchiectasis have occurred rather than afterward.

Bronchiectasis, a frequent finding in patients including children with "bronchial asthma,"[19–22] in its early stages is not necessarily associated with permanent structural lesions.[23] The vital capacity studies here reported and other investigations[5] show that emphysema too is found in young asthmatics more often than is generally believed, although it is preceded by reversible bronchial obstruction. Therefore, any therapy that can forestall or minimize permanent pathology, especially in children, warrants serious thought.

It is true that as in other conditions, a correct diagnosis of infectious asthma may be difficult at the onset, although a history of recurrent significant respiratory infections from the beginning of or prior to the asthma is in itself rather characteristic. Demonstrable allergic components and other contributory elements may confuse the clinical picture; their concomitant treatment usually clarifies the situation and accomplishes more if the infection is controlled and bronchial obstruction is relieved. The overlooking of these two major causes, however, while searching for and treating other possible causes, all too often accounts for a hazardous delay of more effective therapeutic measures.

The reluctance to use antibiotics and cortisone in milder cases of infectious asthma is largely due to widespread fears of possible dangers involved. Although no potent therapeutic should be used indiscriminately, there is no justification for withholding these two great healing agents when they are indicated and are most beneficial and when their serious health hazards are avoidable to a great extent. With the exception of parenteral penicillin and large doses of broad-spectrum antibiotics, severe complications from supervised antimicrobial therapy are rare, even in asthmatic patients.[4] Ill effects are almost negligible in children,[24,25] especially if compared with the immense benefit obtained and with complications due to other treatments of asthma. The in vitro phenomenon of acquired resistance, fortunately, has rarely if ever been substantiated indisputably by clinical observations, failures of antibiotic therapy usually being due to advanced disease or insufficient treatment.[4] By the same token cortisone therapy, if carried out cautiously, is proving less risky than was originally believed. The fact that hormonal therapy in combination with antibiotics proves effective and safe in infants with bronchiolitis,[26] a frequent precursor of infectious asthma, shows that it is not justifiable to delay its application until an asthmatic condition has reached the intractable stage.

The future may prove that a dynamic, prophylactic approach to infectious asthma based on our increased knowledge of its pathogenesis will contribute to reducing substantially the high incidence of chronic asthma, thus eliminating more and more the need for involved treatments, including prolonged antibiotic-cortisone therapy.

Summary

Combined antibiotic-cortisone therapy seems rational in infectious asthma because such treatment combats two outstanding causes of the disease, bronchial infection and bronchial inflammation.

Thirty-eight children and 40 adults with infectious asthma in various stages were given antibiotics for an average of two and three-fourths years and additional cortisone for an average of three and one-half months. The results of treatment were excellent or good in 80 per cent of the whole group. The improvement often approached cure in early cases, as demonstrated by decreasing respiratory sickness and by increasing vital capacity and weight in children.

It is concluded that antibiotics and cortisone should be utilized not only to relieve and rehabilitate advanced cases of asthma with irreversible pulmonary pathology but even more as an early causal therapy to prevent a common and costly chronic disease.

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Discussion

Carl E. Arbesman, M.D., *Buffalo.*—There are so many valuable and practical points to discuss in this excellent presentation that it is difficult to know where to begin. However, one must first be agreed upon the term "infectious asthma." Dr. Finke states that in intrinsic asthma there is usually present longstanding respiratory infection. Certainly there are many patients with negative skin tests, wheezing, and eosinophilia who do not have infection, for example, individuals with drug allergy and others whose etiology has not as yet been determined. My impression of bronchial asthma with infection, or "infectious asthma," is the presence of mucopurulent or purulent sputum, pathogenic organisms, or an elevated white blood count, sedimentation rate, or perhaps an elevation of temperature in a person who has wheezing, cough, and dyspnea and often eosinophilia higher than in the atopic or allergic asthmatic. This infectious process could be the primary cause of trouble (bacterial allergy?) or superimposed on an allergic asthma.

In a series of 39 consecutive patients with chronic pulmonary disease and associated wheezing admitted to the Buffalo General Hospital, 20 had bronchoscopic cultures, and only one had pathogenic organisms, namely, Hemophilus influenzae and pneumococci; seven were sterile. In the remaining 12 patients organisms such as Streptococcus viridans, streptococcus nonhemolyticus, Staphylococcus albus, and Bacterium coli were present, which are usually not considered pathogenic in the respiratory tract. Sputum cultures of 21 of these 39 "asthmatics" showed pathogenic organisms of pneumococci, streptococcus hemolyticus, and H. influenzae in 11 patients, nine grew out "nonpathogenic" bacteria, and one was sterile.

These figures are in sharp contrast with the 77 per cent of Dr. Finke's 78 patients that had infection as the major factor. Only one of 20 patients with chronic bronchial disease of our series who were bronchoscoped showed "pathogenic bacteria" on culture.

If one can prove, not just assume, that infection is either the major cause or superimposed upon some other cause, then antibiotics are definitely indicated. I fully agree with Dr. Finke that in many cases infection is very important and must be treated. However, an attempt should be made to find the offending organisms. This is very difficult at times, and at the Children's Hospital in Buffalo we followed 12 asthmatic youngsters with weekly cultures of the nasopharynx for several months. More often than not, the flora and cultures were completely different each time; hence, the choice of the ideal antibiotic is not so easy. Surely, penicillin will attack the gram-positive organisms of streptococci and pneumococci, but 40 to 50 per cent of staphylococcus are resistant to penicillin. Also, if no cultures are taken and the predominant organism is a gram-negative bacillus such as Escherichia coli, the use of penicillin will kill off the gram-positive organisms and allow the E. coli to go on a rampage. The likelihood of the development of resistance to an antibiotic, as well as sensitivity to it, are greater when they are given over long periods of time than for short intervals. The prescribing of antibiotics prophylactically is not without danger and should not be used indiscriminately. I might add parenthetically that if a patient had the same organisms present on several cultures, in vitro sensitivity tests with the various antibiotics are often, but not always, of value. In these instances an autogenous vaccine is likewise prepared. I should like to ask Dr. Finke his opinion about autogenous vaccines.

In addition to the treatment of the acute or chronic infection, it is most important to treat the underlying extrinsic allergy if present. Certainly other etiologic agents should always be sought. This treatment does not mean antihistaminics (which are in my opinion of very little value in asthma) but specific hyposensitization therapy, elimination diets, and avoidances.

The use of cortisone, hydrocortisone, and ACTH have been employed in those patients who do not respond to the usual methods of therapy. Dr. Finke has used cortisone in conjunction with the antibiotics. It is very difficult to know whether the steroid and/or the antibiotic was effective. We reported in 1952 that even severe emphysema patients were given symptomatic relief with ACTH or cortisone, but their respiratory function studies did not improve on this treatment.

Cortisone, like the antibiotics, either alone or in combination, cannot be given with impunity over long periods of time. It is well known that cortisone is contraindicated in pulmonary tuberculosis, and, hence, careful x-rays, examinations, and follow-up of tuberculin tests, particularly in children, is most essential. The sense of euphoria which the patient experiences while on cortisone therapy should not give the physician a sense of serenity and complacency, since these steroids often mask infection and symptoms.

There is no doubt that both the antibiotics and the steroids, either alone or in combination, are useful adjuncts when indicated in the treatment of chronic bronchial disease, as Dr. Finke so ably demonstrated. However, both the antibiotics and steroids must be carefully prescribed and the patient closely followed because these substances can sometimes be more harmful than helpful.

Leonard Wolin, M.D., *Buffalo.*—The syndrome labeled asthma, characterized by chronic wheezing, shortness of breath, and cough, is one of the most common disabling respiratory conditions we as physicians are called upon to treat. At the same time the improvements in their management over the past decade have been spectacular, and as Dr. Finke has pointed out, many of these people are now able to be kept at work and employable, where formerly they were respiratory cripples. This has been due to three epochs of knowledge: (1) improved knowledge of the disease processes involved and of respiratory physiology and function, (2) antibacterial agents, and (3) the steroid hormones.

The first point, namely, knowledge of the disease processes involved and of respiratory physiology and function, although least spectacular, is perhaps the most important. As we apply the approach of the internist to this syndrome of chronic wheezing, shortness of breath, and cough, we find a large number of etiologic factors involved. It may be due to allergy or atopy, infection, paranasal infection, emphysema, pulmonary fibrosis, bronchiectasis, tumor, collagen disease, cardiac disease, psychogenic or endocrine factors, or to combinations or multiples of these and as yet unknown factors. Each problem must be separately evaluated and individualized.

The term, infectious asthma, as Dr. Arbesman has pointed out, must be strictly defined so that we may all speak on a common ground. "The art is long and experience fallacious." Our experience is mostly limited to the problem of asthma in the adult. In a large adult allergy clinic to which all cases of wheezing were referred, we have, for example, only one case of proved bronchiectasis. At the same time he is an atopic individual and at the moment doing very well on allergic management alone. On the other hand, in our atopic individuals who have chronic wheezing perennially, when we come to study this group further, we find that superimposed infection, emphysema with or without cor pulmonale, or failure to follow through on the allergic survey may be the perpetuating factor. We have been cautious about the diagnosis of "intrinsic asthma" because often this has been only a euphemism for failure to study the particular patient thoroughly. Each patient is thus individualized.

We have been using cortisone and/or ACTH for a number of years in some of these patients. We have confirmed its efficacy, as have others. We have employed it in both atopic and nonatopic individuals. We, along with others, do not know why it is effective. As with its use in other chronic conditions in medicine, rheumatoid arthritis for example, we found ourselves in the spot of the farmer and his steer—we could not let go. Our patients felt better and were able to work. When we reduced the dose or stopped it, their asthmatic symptoms returned. In following this particular ambulatory group, we observed no change in their timed vital capacity (we employed the Gaenzler apparatus).

As to the antibiotics, in cases of superimposed infection we have preferred on bacteriologic grounds the use of the broad-spectrum group, tetracycline (Achromycin) or chloramphenicol (Chloromycetin) by mouth. We have used these intermittently, based on the criteria of the clinical condition of the patient, the presence of a suppurative sputum, and the leukocyte count. Occasionally, in a long Buffalo winter this may approach Dr. Finke's continuous treatment. We have not been concerned so much with acquired resistance of the host but rather with "acquired resistance" of the bacterial flora. We had one patient this past year, for example, on both continuous cortisone and antibiotic administration who developed an atypical pneumonitis.

We have been impressed by the fact that attention to detail also becomes important in the management of these patients. The proper use of expectorants such as potassium iodide, bronchodilators such as ephedrine or its analogs, nebulized aerosol bronchodilators, the allergic regimen, and even judicious rest and relaxation must not be neglected. Along with others we are now engaged in evaluating the use of intermittent positive pressure breathing technics.

We have found no mass technic. Both diagnosis and treatment must be individualized.

Our results—I did not bring any statistics with me—we think they are good. Perhaps some of what I take home with me today will make them better.

Walter Finke, M.D., *Closing Remarks.*—As I mentioned in my presentation, the diagnosis of infectious asthma may be difficult in certain instances. Usually, however, the diagnosis can be established by correlating the case history with the presence of purulent expectoration and the more or less pronounced clinical and roentgenologic signs. Sputum cultures are not a reliable diagnostic guide because they do not disclose the clinical significance of the organisms which may or may not be pathogenic in a given case.

Autogenous vaccine therapy in infectious asthma, similar to tuberculin treatment in tuberculosis, attempts to alter immunologic processes initiated by bacteria. Even if such management has been reported as beneficial in certain cases, antimicrobial agents now at our command provide a more rational approach, namely, the destruction of these bacteria.

A Clinical Approach to Diagnosis in Heart Disease

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OF ALL the methods of approach to a diagnosis, the simplest and frequently the most accurate is the proper evaluation of the symptoms and signs presented by the patient. It is of practical value in this method of approach to classify at the outset those symptoms and signs of heart disease into two groups, those that are diagnostic and those that are suggestive of cardiac disease, as follows:

SYMPTOMS

Diagnostic

1. Pain of coronary insufficiency
    - (*a*) Angina pectoris
    - (*b*) Myocardial infarction

Suggestive

1. Dyspnea
    - (*a*) With effort
    - (*b*) Orthopnea
    - (*c*) Paroxysmal dyspnea (cardiac asthma), frequently nocturnal
    - (*d*) Pulmonary edema
    - (*e*) Cheyne-Stokes respirations
2. Cough, hemoptysis
3. Peripheral edema, abdominal swelling
4. Pain in right upper quadrant
5. Palpitation
6. Dizziness, faintness, and syncope
7. Weakness and fatigue

SIGNS

Diagnostic

1. Enlargement of the heart and/or abnormal contours of the heart
2. Diastolic gallop rhythm
3. Diastolic murmurs
4. Chronic auricular fibrillation, flutter, ventricular tachycardia, partial and complete heart block
5. Precordial thrills, especially basal or along left sternal border
6. Precordial friction rub
7. Pulsus alternans

Suggestive

1. Change in the character of the first or second heart sound
2. Systolic murmurs, grade III or higher
3. Signs usually associated with congestive heart failure, i.e., dilated neck veins, congestive signs in the lungs, hydrothorax unilateral or bilateral, enlarged liver, ascites, and peripheral edema
4. Clubbing of fingers
5. Cyanosis
6. Embolic phenomena

The above classifications will serve as an outline of the discussion of a method of approach to a clinical diagnosis of heart disease.

It is desirable to record, in a chronologic order from their earliest onset, the symptoms which the patient may volunteer or which may be obtained by appropriate questions. The details of a symptom at the very onset are of particular value because subsequent events may crowd out the diagnostic significance of the early symptom.

A past history of an authentic attack of rheumatic fever is particularly stressed in view of the high incidence of residual cardiac effects, especially upon the valves. A history of hypertension, nephritis, syphilitic infection, myocardial infarction, or thyroid disease also ranks high in importance. Family history, except for familial vascular vulnerability, is not usually very helpful.

Diagnostic Symptoms

CARDIAC PAIN.—If the pain of coronary insufficiency is present, a correct diagnosis of coronary artery disease or functional impairment can usually be established by history alone with perhaps later confirmation by physical signs or laboratory procedures.

Without digressing at length on nomenclature, the cardiac pain due to coronary insufficiency occurs in the clinical syndromes of angina pectoris and myocardial infarction. Coronary insufficiency is not a clinical syndrome but is a physiologic expression of inadequate blood flow relative to

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the metabolic needs of the heart. The disproportion between the coronary blood supply and the myocardial demands result in ischemia of the myocardium with consequent pain, arrhythmia, or congestive heart failure. Coronary insufficiency, which may arise from various anatomic or physiologic causes, is common to both angina pectoris and myocardial infarction. The particular syndrome which ensues depends upon the duration and intensity of the coronary insufficiency. The insufficiency, in turn, is determined by the metabolic demands of the heart, the rate and volume of coronary blood flow, the coronary vessels involved, the rate of narrowing or closure of the vessels, and the adequacy of collateral circulation.

The most frequent underlying *anatomic* defects in angina pectoris and myocardial infarction are variable degrees of coronary artery sclerosis, stenosis, and occlusion. Coronary thrombosis is included with the occlusion group. Rarer causes are coronary ostial stenosis due to syphilis, aortic stenosis, aortic insufficiency, coronary arteritis, and emboli to the coronary arteries.

Angina Pectoris.—The unique characteristic of the pain or distress of angina pectoris is its induction by effort and its cessation when the patient stops his activity. It is quantitative and corresponds to the amount of effort undertaken. The discomfort, felt as a retrosternal pressure or tightness, usually occurs while walking upgrade, on a cold day, and most often after a meal. The distress does not occur while eating but arises *after* eating, especially when walking. Other physical efforts peculiar to a person's activity and sudden emotional reactions are further examples of adequate precipitating causes for the anginal syndrome. The precipitation of the distress by effort and its subsidence with rest is more important than (1) its pressing quality, (2) retrosternal location, or (3) its spread into the left arm, significant as the latter three characteristics may be. Knowledge of this quantitative relationship of the distress to effort is especially helpful in the diagnosis of angina pectoris when the pain of the latter is felt in aberrant locations such as the interscapular region, left or right arm, neck, lower or upper jaw or when the pain occurs in the above regions and radiates to the chest in a retrograde manner.

The pain of angina pectoris, which at the onset may be very mild and disguised as a slight pressure or tightness, is a continuous one, of a few minutes duration and lasting only as long as the effort is sustained. It is not an intermittent sticking, stabbing, or cutting pain or a prolonged "heartache." On rare occasions the pain may occur in the inframammary region or radiate downward to the epigastrium. Relief of the pain with nitroglycerine may substantiate but does not establish the diagnosis of angina pectoris.

An unusual feature of the anginal syndrome, especially early in the course, is (1) the occurrence of the pain during the initial effort in the morning or during the first or second hole of a round of golf, (2) the ability to nurse it along by resting, and (3) its disappearance for the rest of the day or the remainder of the round of golf, the so-called "second wind of pain."

The history is the important part in the diagnosis of angina pectoris, especially the relationship of the distress to effort and rest. Physical signs and corroborative laboratory evidence, including the two-step and anoxemia electrocardiograph tests, are frequently absent.

Further helpful hints for the diagnosis of angina pectoris are (1) the predominance in the male sex, (2) the rarity in women under fifty without hypertension, diabetes, or a family history of coronary artery disease, (3) absence of aggravation of the pain by deep breathing which usually occurs in pleuritis or pleuropericarditis, and (4) a lack of tenderness over the precordium. The presence of angina pectoris does not preclude a diagnosis of cardiospasm, hiatus hernia, peptic esophagitis, or gallbladder disease which are frequently mistaken for the anginal syndrome. Indeed, one may excite the other.

Finally, angina pectoris may be induced or aggravated by the development of an anemia or hyperthyroidism. The correction of these complications frequently diminishes or abates the anginal syndrome.

Myocardial Infarction.—The pain of myocardial infarction differs from the pain of angina pectoris in degree and duration, not in site or extension. The prolonged pain in myocardial infarction is an indication of the prolonged and continuous coronary insufficiency. Myocardial necrosis accounts for the clinical features of shock, fever, leukocytosis, elevated sedimentation rate, congestive heart failure, and the characteristic progressive electrocardiographic changes. The usual anatomic defect is a closure of a coronary artery by thrombosis, subintimal hemorrhage, or an atheromatous plaque. However, myocardial necrosis may occur without an acute closure, especially in a heart that already has a compromised coronary circulation. Under these circumstances necrosis may ensue when the coronary blood flow is temporarily decreased or the work of the heart is suddenly increased. In these instances the collateral circulation cannot cope with the relative decreased blood flow to the heart.

Not infrequently, the cardiac pain is more prolonged than that consistent with angina pectoris. The episodes of pain, however, are not associated at the time with the clinical or electrocardiographic evidences of myocardial infarction. The pain occurs *spontaneously* or coincides with (1) *sudden increased demands* of the heart such as paroxysmal tachycardia, fever, infection, undue effort, or severe emotional distress or (2) *sudden decreased coronary blood flow* as in shock, dehydration, hemorrhage, postoperative reactions, or pulmonary emboli. This prolonged type of cardiac pain has diagnostic and therapeutic importance because it frequently is the forerunner of a myocardial infarction. Indeed, it may be a variant of myocardial necrosis, which cannot be detected by clinical or laboratory methods. In these instances of prolonged cardiac pain there is a greater need for bed rest and observation than in the usual cases of angina pectoris.

The anginal syndrome may also be an indication of an impending infarction, especially if the pain has been of recent origin or if it has suddenly increased in intensity and frequency.

Suggestive Symptoms

By contrast, a symptom in the suggestive group, which frequently occurs in noncardiac as well as cardiac diseases, requires corroboration from the clinical history, other associated symptoms, physical signs, x-ray, electrocardiogram, and other laboratory procedures.

DYSPNEA.—The gradual development of dyspnea on effort which previously did not disturb the patient may be the earliest suggestive clue of left ventricular failure or mitral stenosis.

Exertional dyspnea due to left ventricular failure is most commonly associated with an enlargement of the heart, predominantly the left ventricle. Cardiac enlargement in a clinical sense indicates dilatation and/or hypertrophy and is detected by palpation of the apical impulse, percussion, and roentgenologic examination. Concentric hypertrophy of the left ventricle, most frequently observed in arterial hypertension and aortic stenosis, is clinically recognized by palpation of a broad, heaving apical impulse which is not displaced laterally or downward. When the left ventricle is normal in size, dyspnea is not due to left ventricular failure but, most commonly, to noncardiac causes, especially pulmonary diseases or to mitral stenosis.

The dyspnea due to *acute* left ventricular failure following sudden insults to a previously normal myocardium is seldom associated with clinical enlargement of the heart, especially at the onset of failure. In these instances the proper evaluation of dyspnea is accomplished by an appraisal of the total clinical picture rather than by the detection of cardiac enlargement.

Exertional dyspnea, if due to mitral stenosis, is associated with an apical diastolic murmur and/or an enlarged left auricle. The latter finding is especially important in auricular fibrillation where the diastolic murmur may be difficult to discern or may be absent. Careful attention to the snapping apical first heart sound or the opening snap of the stenotic mitral valve may alert the examiner to this possibility. Demonstration of an enlarged left auricle by fluoroscopy, especially during a barium swallow, will confirm the suspicion.

Orthopnea, paroxysmal nocturnal dyspnea, acute pulmonary edema, and Cheyne-Stokes respiration represent particular modifications of dyspnea. The same principles in diagnosis apply to these symptoms as were applied in the discussion of exertional dyspnea, with these reservations:

1. Paroxysmal nocturnal dyspnea and acute pulmonary edema are more common in left ventricular failure than in mitral stenosis.

2. Paroxysmal nocturnal dyspnea and pulmonary edema may occur without previous exertional dyspnea, especially in conditions which predominantly strain the left ventricle. These are chronic arterial hypertension, aortic valvular disease, or recent and old myocardial infarction.

3. Paroxysmal nocturnal dyspnea, frequently called cardiac asthma because of the wheezing quality of respiration, is often mistaken for bronchial asthma. The converse also holds true. Differentiation is accomplished by a search for the causes of left ventricular strain and failure.

4. Cheyne-Stokes respiration usually occurs in primary cerebral diseases. If it is of cardiac origin, the periodic respirations are invariably

associated with left ventricular failure. The underlying disease is most often arterial hypertension associated with cerebral arteriosclerosis.

In all variants of cardiac dyspnea, inquiry must always be directed to the causes which increase or precipitate congestive failure and which may be therapeutically reversible. Reference is made to hyperthyroidism, anemia, fever, cough, tachycardia (especially of the paroxysmal type), auricular fibrillation, pulmonary embolism, and a superimposed myocardial infarction. Pulmonary embolism, usually from the lower extremities and most frequently in patients with chronic congestive heart failure, may precipitate a bout of breathlessness which is incorrectly attributed to the underlying heart disease.

Cardiac dyspnea is usually attributed to the pulmonary vascular congestion which limits the patient's respiratory capacity and reflexly stimulates the medullary center to increase ventilation through the Hering-Breuer impulses from the lung. The reduced breathing capacity and the increased ventilation reduce the patient's breathing reserve with consequent dyspnea, especially evident after effort. Dyspnea also occurs because of the increased mechanical effort necessary to ventilate the stiff, rigid, congested lungs. Anoxic stimulation due to interference with diffusion of gases across the alveolar membrane also plays a role.

All of the above pulmonary factors are the usual causes of dyspnea in the later phases of mitral stenosis or left ventricular failure. Recent investigations[1] have indicated that dyspnea early in the course of failure is not due to pulmonary congestion but to a diminished cardiac output relative to the increased demand of effort. The relatively reduced blood flow to the tissues, especially after effort, favors the development of anoxia and increased carbon dioxide content, thereby stimulating the respiratory center to increased breathing. The reduced blood flow to the respiratory muscles during activity also causes an excessive fatigue of these muscles with resulting increased effort of breathing. May not this be the mechanism in the early dyspnea on effort of mitral stenosis, aortic stenosis, or "silent" myocardial infarction?

Cough, Hemoptysis, and Insomnia.—Although cough, hemoptysis, and insomnia are due to heterogeneous causes, their occurrence in congestive heart failure is frequent. Insomnia and nocturnal cough, especially in the older age group, are frequently ineffectively treated until the underlying cardiac disability is discovered.

Hemoptysis, although a concomitant of left ventricular failure, may be the clue to unsuspected pulmonary emboli. The presence of congestive heart failure does not exclude pulmonary emboli.

Pain in the Right Upper Quadrant.—An early symptom of failure of the right ventricle, especially in mitral stenosis, may be pain, fullness, or discomfort on effort in the right upper quadrant. When the right ventricle cannot cope with the increased load during activity, the liver becomes acutely and painfully engorged with blood. The situation is reversible at the onset. When the liver becomes chronically congested and enlarged, the acute pain or discomfort in the right upper quadrant disappears. This early symptom of right-sided failure is frequently overlooked with the patient usually zealously treated for biliary disease. A careful search for the causes of right ventricular failure, especially mitral stenosis, should be instituted when the right upper quadrant pain is precipitated by effort.

Peripheral Edema and Abdominal Swelling (Ascites).—Peripheral subcutaneous edema, especially of the legs, and abdominal swelling are too readily attributed to right-sided heart failure. Unilateral leg edema is almost always due to mechanical dysfunction of the foot or to disease of the veins. Right-sided heart failure can be postulated in connection with the above symptoms when the right side of the heart is enlarged (with the exception of constrictive pericarditis), hepatomegaly is present, and the neck veins are dilated.

The dilated neck veins, a visible manometer of increased venous pressure, may not be evident by the usual inspection. Upward pressure on the liver, with the patient breathing quietly, may bring into bold relief the dilated neck veins (hepatojugular reflux). This is of value in determining a latent right-sided heart failure and in differentiating cardiac and noncardiac hepatomegaly. An enlargment of the liver without dilated neck veins and/or increased venous pressure indicates a noncardiac cause such as cirrhosis, hepatitis, or a tumor.

Finally, in cases of right-sided heart failure due to cor pulmonale, it may be difficult to demonstrate right-sided enlargement by the usual technics. The clinical picture of dilated neck veins, enlarged liver, plus a pulmonary disease competent to produce pulmonary hypertension suffices for a diagnosis.

Palpitation.—Palpitation is not a common symptom of heart disease. It occurs most frequently in nervous patients who have an overactive heart without structural damage or in association with hyperthyroidism. The uncomfortable sensation is observed objectively as a normal rhythm which is fast, average, or slow in rate. In these instances the palpitation is frequently associated with breathlessness, sticky pains in the chest, weakness, and fatigue, symptoms which are common in cardiac neurosis.

Palpitation due to an irregularity of rhythm or to an excessively rapid rate does not indicate heart disease. Premature beats and paroxysmal supraventricular tachycardia occur most often in normal hearts. An underlying cardiac disease, if present, is uncovered by evaluation of other signs and symptoms. Even chronic auricular fibrillation and flutter (and very rarely ventricular tachycardia), although diagnostic of heart disease in most instances, can occur in normal hearts.

A history of a sudden onset of palpitation, which may be of variable duration, suggests paroxysmal tachycardia. If not seen during an attack, the patient can be asked to demonstrate his attack by tapping out the rate and rhythm with his palm against the chest. However, for diagnostic purposes an effort must be made to see the patient at least once during an attack.

Chronic auricular fibrillation which is difficult to control with digitalis or rest suggests hyperthyroidism, infection, myocardial infarction, or pulmonary emboli.

Dizziness, Faintness, and Syncope.—These symptoms, although more frequent in noncardiac conditions, may suggest heart disease, especially if they occur as isolated symptoms. In such instances, the examiner should be alert to the possibilities of aortic stenosis, periods of Adam-Stokes syncope, or a hypersensitive carotid sinus. Less frequent causes are aortic insufficiency, myocardial infarction, paroxysmal tachycardia, and pericardial tamponade.

Weakness and Fatigue.—Weakness and fatigue are such frequent accompaniments of nervous disorders, chronic infections, malignancies, nephritis, anemia, and diabetes that they possess little value in assessing their significance in heart disease. The fatigue of the respiratory muscles to account for the dyspnea early in the course of left ventricular failure and mitral stenosis has already been described. Weakness, fatigue, and loss of weight are common occurrences in the late stages of congestive heart failure (cardiac cachexia).

Signs

The diagnostic and suggestive signs of heart disease have been recently described.[2] Not infrequently the first indication of definite heart disease is the finding of a diagnostic sign without an associated "cardiac history or symptom." The precise nature of the ailment is usually determined by other clinical and laboratory evidence.

Suggestive signs of heart disease, as in the suggestive symptoms, require further corroboration. Examples are as follows:

1. The accentuated first heart sound at the apex or the opening snap of a tight mitral valve may alert the examiner to the existence of a mitral stenosis. Careful auscultation may then elicit the characteristic diastolic murmur of mitral stenosis, or fluoroscopy with the aid of a barium swallow may reveal left auricular enlargement.

2. A diminished first heart sound with a normal second sound may indicate a first-stage heart block. Variations in the intensity of the first heart sound may suggest a Wenckebach phenomenon or a complete heart block if the ventricular rate is slow. The electrocardiogram will confirm the diagnosis.

3. A tambour second aortic sound may be the earliest finding in a luetic aortitis. A positive serologic test for syphilis or a localized dilatation of the ascending aorta, especially with calcification in the aortic wall, establishes the significance of the tambour second aortic sound.

4. A second pulmonic sound that is accentuated and greater than the second aortic sound may suggest pulmonary hypertension, especially if the patient is not in the young age group or is not of the hyposthenic habitus. The finding of left ventricular failure, mitral stenosis, cor pulmonale, or left-to-right shunts will explain the altered relationship between the second aortic and second pulmonic sounds.

5. A diminished or absent second aortic or second pulmonic sound may be the earliest clue to an aortic or pulmonic stenosis, especially if it is associated with a systolic murmur over the specific valves. A careful search is indicated for a thrill over the aortic or pulmonic area. At

times x-ray evidence of a calcified aortic valve may be the only confirmatory evidence of aortic stenosis. Poststenotic dilatation of the ascending aorta or the main trunk of the pulmonary artery are suspicious x-ray signs of aortic or pulmonic stenosis. The relative paucity of pulmonary vascular markings may also indicate pulmonic stenosis.

6. Systolic murmurs are frequently the earliest clue to a cardiac diagnosis. Systolic murmurs at the apex may be indicative of organic mitral insufficiency if there is a definite history of rheumatic fever and/or enlargement of the left ventricle. Clinical experience has also indicated that apical systolic murmurs of grade III intensity or louder are more apt to originate from mitral valvular deformity than from functional causes. A widening of the mitral ring due to a dilated left ventricle offers the greatest difficulty in interpretation.

Systolic murmurs, maximum over the second, third, or fourth intercostal space to the left of the sternum, may suggest the congenital lesion of pulmonic stenosis, patent ductus arteriosus, or interventricular septal defect. Confirmatory evidence may then be obtained by the associated thrills over the corresponding areas, by the characteristic fluoroscopic and x-ray findings, or in the case of patent ductus arteriosus by the associated machinery murmur.

Systolic murmurs over the aortic and pulmonic valve have already been mentioned as possibly arising from an aortic or pulmonic stenosis. Great caution must be exercised in interpreting systolic murmurs over the second pulmonic sound, the "acoustic area of romance" in children and thin individuals. Likewise, systolic murmurs over the second aortic sound may be due to the dilated aortic ring or dilated ascending aorta of hypertension or syphilis without implying an underlying aortic stenosis. The increased velocity of blood flow through the aortic valve during systole in the above condition also contributes to the basal systolic murmur.

A systolic murmur in the heart may be the sole clue to a diagnosis of bacterial endocarditis. This is especially so if the murmur is of recent origin or if there is fever of undetermined origin, unexplained anemia, clubbing of fingers, or embolic phenomena. The emboli may be very subtle in their location requiring minute search of the fundi, mucous membranes of the eyes and throat, fingertips, and microscopic examination of the urine. Left upper quadrant pain due to emboli to the spleen from a bacterial endocarditis are frequently misinterpreted.

Functional systolic murmurs are present in the hyperkinetic nervous heart, hyperthyroidism, anemia, and tachycardia. These conditions should always be considered when systolic murmurs are heard, especially if the heart rate is fast. The warm soft pink texture of the skin and the staring eyes in the case of hyperthyroidism and the blood count in the case of anemia may resolve the problem.

7. The signs usually associated with congestive heart failure do not necessarily indicate heart disease unless they are associated with enlargement of the heart. Exceptions to this are cases of (*a*) classic constrictive pericarditis, (*b*) some forms of cor pulmonale in which it is difficult to demonstrate right-sided enlargement, (*c*) pulmonary changes due to mechanical obstruction at the mitral valve without accompanying right ventricular failure, and (*d*) sudden acute congestive failures of myocardial infarction and nephritis. In the last instances a diastolic gallop rhythm and/or pulsus alternans may be the diagnostic clue to heart failure. The absence of an enlargement of the heart in a patient with pulmonary or systemic congestive signs and symptoms would in all probability exclude the heart as the cause (with the exceptions noted above). Noncardiac conditions such as primary pulmonary disease, superior or inferior vena cava obstructions, nephritis, cirrhosis of the liver, etc., should be considered rather than a primary cardiac involvement. It is obvious that in all such problems, the total clinical picture must be appraised together with such pertinent examinations as venous pressure, circulation time, x-ray of the chest, and the electrocardiogram.

Summary

A clinical procedure for evaluating the cardiac status of a patient is presented, utilizing the diagnostic and suggestive symptoms and signs of heart disease.

50 East 72nd Street

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The Treatment of Rheumatic Fever with Large Doses of Cortisone

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The evaluation of treatment is difficult in a disease like rheumatic fever which is so variable in its manifestations and for which there is no specific diagnostic test.[1] Our experience confirms and emphasizes the effectiveness of steroid therapy in controlling the acute phase of rheumatic fever.[2-7] Furthermore, based on our observations of consecutively treated patients in their first attacks of carditis, it would appear that *early* treatment with *large* and *individualized* dosages may prevent residual cardiac damage.[8]

This presentation summarizes our observations on the effect of cortisone on 56 patients with rheumatic fever and carditis and on five patients with chorea. All patients were children and adolescents under sixteen years of age. Twenty-nine patients were in their first attack of rheumatic carditis. Sixteen suffered from an acute recurrent attack, and 11 showed chronic low-grade active carditis. Nineteen patients in their first attacks of acute carditis were followed for two years.

Criteria for Diagnosis

The protean nature of rheumatic fever is characterized by a great variety of signs and symptoms of variable duration, occurring in different combinations and in widely diverging degrees of severity. This has made it necessary to establish clinical criteria to insure reasonably uniform diagnosis for the selection of cases for study.[9,10] However, there remains the variability of the course and final outcome in terms of residual cardiac damage. The course of rheumatic fever may be either acute and monocyclic, acute fulminating and fatal, or that of a chronic illness with low-grade activity for many months, punctuated by recrudescences. Furthermore, it is not possible at the beginning of an attack of rheumatic fever to predict its severity or duration or whether it will lead to permanent cardiac damage.

It becomes apparent that it is extremely difficult to select patients with rheumatic fever and carditis of comparable symptomatology, severity, and duration for a controlled study on the effects of a therapeutic agent. This accounts for the difference of opinion that still exists concerning the effect of salicylates in preventing permanent cardiac damage, despite their use for so many years.[11] Mindful of these many uncontrollable variables, it was decided by our group in 1951 to treat all patients with cortisone and to study particularly the effect on carditis and residual cardiac damage.[8]

Dosage and Plan of Treatment

The principal aim in cortisone therapy is to suppress the early exudative inflammatory response of rheumatic carditis in order to prevent or minimize the subsequent fibroplastic reaction and valvular deformity.[2,12,13] Furthermore, it may even be possible to influence the proliferative stage since cortisone has a direct effect on the proliferation of connective tissue elements.[14,15]

Early in our study it became apparent that the arbitrarily fixed dosage schedule, such as employed by the Cooperative Rheumatic Fever Study,[16] was insufficient and failed to suppress obvious signs and symptoms of acute inflammation. That particular schedule of 300 mg. cortisone for one day, followed by 200 mg. for four days, 100 mg. for three weeks, 75 mg. for the fourth and fifth weeks, and 50 mg. for the sixth week was inadequate to control the severe case. Furthermore, even 200 mg. of oral cortisone daily for seven to eleven days failed to suppress papular urticaria and erythema marginatum in

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The cortisone used in this study was generously supplied by Merck and Company, through the courtesy of Drs. Augustus Gibson and Elmer Alpert.

This study was aided by a grant from the Mildred Forman Foundation.

two of our patients whose disease was controlled otherwise. Doses as high as 400 to 500 mg. per day for one to two weeks have been administered to some of our patients before control of the disease was possible. It seems clear, therefore, that the action of cortisone in rheumatic fever is a pharmacologic one and that adequate dosage is necessary to control all the manifestations of the disease. A fixed dosage schedule, even though much greater than that required for hormonal substitution therapy (12.5 to 25 mg.), may not be adequate for treatment of all patients with rheumatic fever.

All our patients met the criteria of Jones,[9] as modified by Denny *et al.*[10] Furthermore, our criteria for the diagnosis of carditis were most critical and included (1) a new harsh systolic murmur at the apex transmitted into the left axilla, (2) a new diastolic murmur either at the apex, aortic area, or Erb's point, (3) pericardial effusion or a friction rub, (4) unmistakable cardiac enlargement in a first attack determined by the conventional fluoroscopic and x-ray examination, and (5) "overactive" heart, muffled quality of heart sounds, gallop rhythm, and a disproportionate tachycardia.

All patients in this series were at complete bed rest. The dietary sodium was restricted to 200 to 500 mg. a day. The caloric intake was adequate in that it maintained or increased the body weight. The diet was supplemented with daily vitamins. Enteric-coated potassium chloride (1 to 3 Gm. per day) was added when the daily dose of cortisone was above 200 mg. per day. Fluid intake was not restricted. For the first three hospital days 300,000 units of procaine penicillin were administered intramuscularly to clear the throat of beta hemolytic streptococci; 200,000 to 300,000 units of oral prophylactic penicillin were then administered daily. The initial total daily dose of oral cortisone varied from 200 to 400 mg. given in four divided doses. This dose was continued for two weeks or longer until the clinical and laboratory findings indicated maximal suppression of the disease. On the average 200 to 400 mg. were given for two to three weeks, 150 to 200 mg. for one to two weeks, 100 mg. for one week, and 50 mg. for one week. Duration of therapy varied from six to twelve weeks. Dosage and duration of treatment were individualized according to the severity of the disease and its course. It should be stressed that even higher doses have been administered by others (300 mg. per day for six weeks with gradual reduction in two weeks) in the treatment of acute carditis.[17]

Results of Treatment

The immediate beneficial effect of cortisone on the acute inflammatory manifestations of first attacks of rheumatic fever with carditis was similar to that already described in the literature.[2–7] Fever, toxemia, and arthritis subsided within one week. These effects were delayed in some of the acute recurrent and chronic cases. In most instances the delay was due to the inadequate initial dose. As a rule, larger doses were needed when the disease was recurrent or chronically active. Euphoria and increased appetite facilitated the management of these patients. The immediate suppressive effect of cortisone on symptoms of carditis was remarkable. In many severely ill children with recurrent acute rheumatic carditis superimposed on a previously damaged heart, cortisone therapy was considered lifesaving. In this we agree with the observations of Bunim[18] and Young and Rodstein.[19]

A two-year follow-up of the 19 patients treated during their first attacks of carditis in 1951 and 1952 indicates that the patient with a monocyclic attack of rheumatic fever has a good chance of escaping residual cardiac damage if treated with *large* doses *early* in the disease.[8] The observations of Wilson's[20,21] and Greenman's[17] groups are in agreement with this conclusion.

The response to early treatment of patients with acute recurrent rheumatic carditis was similar to that observed in first attacks. However, if the recurrent attack was treated late or with inadequate dosage, the response was similar to that of the patient with chronic, low-grade carditis. Larger dosage was required. Among 27 such patients there were some who needed 400 to 500 mg. for as long as three weeks before control of the disease was achieved. The effect on residual cardiac damage was difficult to assess in these patients who already had rheumatic heart disease. However, there was no progression of the disease in any of these children at the end of treatment. There was no reactivation or deleterious effect of the drug on these patients during the course of treatment. These observations are in agreement with those of Young and Rodstein.[19]

Five patients with chorea were treated with large doses of cortisone. In three patients unmistakable improvement was noted as early as one week after treatment. In one patient who had choreiform movements for more than one year, there was distinct benefit after one week of treatment with 200 mg. hydrocortisone daily.

Immediate Effect on the Heart

The immediate suppressive effect of cortisone on carditis was considered lifesaving in some cases with acute heart failure. Gallop rhythm usually disappeared within four days. Tachycardia and "overactivity" responded within one week, except in the chronic active cases and in those acute cases where carditis was already of several weeks duration before therapy was begun. Doses as high as 400 to 500 mg. for two to three weeks had to be administered to these patients before tachycardia, gallop rhythm, and "overactivity" were affected. That a larger dose of cortisone was sometimes necessary to control tachycardia has also been noted by Bunim and his coworkers.[21]

The P-R interval usually returned to normal within two weeks. No new murmurs developed in this series at the end of treatment. In rare instances an apical or basal diastolic murmur disappeared. The intensity of a murmur increased at times during therapy and was probably related to the slowing of the heart rate and increased stroke volume. In several patients cortisone produced sinus bradycardia and arrhythmia with nodal escape. This might be caused by a specific effect on carditis, by a nonspecific effect on the neurogenic control of the heart rate, or by a combination of both. In this respect it is of interest that atropine sulfate ($^1/_{100}$ grain intravenously) can abolish the bradycardia produced by cortisone.

The diagnosis of carditis is difficult and hazardous without new murmurs, increasing cardiac enlargement, pericarditis, or electrocardiographic changes. It is usually suspected when the heart is "overactive" and when there is a disproportionate tachycardia. One should guard against assuming that tachycardia is invariably due to carditis. In fact, cortisone may occasionally produce tachycardia as well as bradycardia.[22] Tachycardia may also follow reduction in dosage during the tapering off of treatment and may or may not be a manifestation of carditis.

Congestive heart failure may occur primarily as the result of severe rheumatic carditis. The heart failure may improve after the administration of cortisone. The beneficial effect of cortisone is due to the immediate suppression of carditis and to the control of constitutional symptoms and fever. In the case of severe carditis and heart failure, digitalis and mercurial diuretic should be used in addition to large doses of cortisone.

If the dietary intake of sodium is not restricted, sodium and water may be retained during cortisone therapy and lead to congestive failure. These congestive changes may occur without initial heart failure, or they may aggravate preexisting failure due to carditis. Digitalization, mercurial diuretic, and strict sodium restriction are indicated in this situation.

When exogenous sodium intake is restricted (200 to 500 mg. per day), cortisone may produce congestive changes within the first two weeks of treatment which result from an endogenous shift of water and electrolyte from the intracellular to the extracellular compartment.[23] The presence of distended neck veins, hepatomegaly, and ascites without gain in body weight and with good water and sodium excretion characterizes this type of "failure." These congestive changes are rectified spontaneously despite continued cortisone administration. Mercurial diuresis is dangerous because it may cause acute salt and water depletion.

Effect on the Laboratory Manifestations of Rheumatic Fever

The blood fibrinogen usually became normal within two to eight days, the sedimentation rate within seven to fourteen days, and the gamma globulin and albumin-globulin ratio within two to three weeks of treatment. The C-reactive protein usually disappeared within two weeks. The electrophoretically determined abnormal protein fractions tended toward normal, but there was a tendency for the beta globulin to become elevated with continued treatment.[24] Since the effects on the blood fibrinogen, sedimentation rate, and globulin have been observed in normals and in patients with carcinoma, there is the possibility that these changes are nonspecific.[25] Nevertheless, with our present knowledge the correction of these abnormalities serves as a laboratory guide to therapy.

There was a gradual fall of the antistreptolysin titer during cortisone therapy over a period of thirty to sixty days. In one patient a rise in titer was noted despite treatment.

Rebound and Relapse

When cortisone dosage is reduced or discontinued, there may be a recurrence of fever, tachycardia, or other signs of rheumatic activity. These clinical manifestations are usually associated with recurrence of abnormalities in the fibrinogen, sedimentation rate, and C-reactive protein. In some patients only the laboratory abnormalities recur. Some manifestations of the rebound phenomenon may occur as late as two weeks after therapy has been discontinued. In most instances the rebound after reduced doses of cortisone early in treatment represents a true escape or relapse of the rheumatic process. Furthermore, the accentuation of symptoms and signs may be a result of a relative adrenal insufficiency following the reduction of dosage.[27,28] The rebound phenomenon after discontinuation of intensive and prolonged cortisone therapy is most often not related to rheumatic activity but is probably a result of hormone-induced adrenal insufficiency. In the absence of a specific test for rheumatic activity a spontaneous subsidence of all clinical and laboratory abnormalities after a three-week period should suggest the diagnosis of rebound and not a relapse with continuation of rheumatic activity.

Complications and Deaths

Despite the high total dosage of cortisone employed, there were few complications. All patients developed the Cushing habitus, with moon face, obesity, striae, mild facial hirsutism, and acne. Elevations of the blood sugar and glycosuria were not encountered. One patient required vigorous antibiotic therapy, surgical drainage, and eventual discontinuation of therapy because of a rapidly spreading infection arising in a single hair follicle of the leg. Another patient with pneumonia and severe acute recurrent rheumatic fever could not be treated because of atelectasis and spread of the pulmonary infection after one week of cortisone.

The two deaths in this series of 56 patients were in two cases of severe acute recurrent rheumatic fever superimposed on previous rheumatic heart disease. In one patient death ensued after thirty-six hours despite a total of 600 mg. of cortisone. The other patient had been treated at home with small and irregularly administered doses of cortisone. In the hospital there was a severe fulminating relapse which could not be controlled in twelve hours with 140 mg. of hydrocortisone. These two patients might have benefited from even higher doses of hormone and more vigorous therapy of their sudden heart failure.

Summary and Conclusions

1. A review of the observations on the treatment of 56 patients with rheumatic fever and five patients with chorea has been presented.

2. *Early* treatment with *large* doses (in some cases up to 500 mg. daily) controlled the immediate effects of carditis. In some instances steroid therapy was considered lifesaving. A two-year follow-up of patients who had sustained initial attacks of carditis indicates that early treatment with large doses may prevent residual cardiac damage.

3. Unmistakable benefit was observed in three out of five patients with chorea. This small series precludes any final conclusions.

4. On the whole, larger doses were necessary in the acute recurrent and chronic active cases. No harmful effect was noted, even in the chronic active cases where the long-term result was not influenced by cortisone.

5. The abnormal laboratory manifestations of rheumatic fever were corrected by cortisone, but this may be a nonspecific effect.

6. The rebound phenomenon may be nonspecific or may represent rheumatic activity with or without relative adrenal insufficiency.

20 Plaza Street

This clinical study has been possible because of the cooperation of Drs. E. T. Heffer, N. H. Shackman, and R. D. Turin.

Special thanks and acknowledgment are due to Mrs. Ruby Hilton, R.N., Charge Nurse of the Rheumatic Fever Wards, and Miss C. P. Padowitz, Charge Nurse of the Cardiac Clinic, at the Jewish Sanitarium and Hospital for Chronic Diseases.

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Discussion

Walter T. Zimdahl, M.D., *Buffalo.*—I was pleased to hear that Dr. Kroop did not feel that an arbitrary fixed dosage schedule was sufficient. In the cooperative study group of the efficacy of cortisone, ACTH, and salicylates a fixed dosaged schedule has been used and, therefore, in my opinion does not adequately test hormone treatment of acute rheumatic fever. In this latter study treatment was stopped regardless of whether or not the patient had continued signs. I think those of us who have used the hormones in rheumatic fever certainly feel now that an adequate dose must be given to control all the manifestations of the disease and that the duration of the treatment must be patterned to each individual case.

Many investigators still feel that salicylates are the treatment of choice in acute rheumatic fever. However, no definite opinion concerning their effectiveness in preventing permanent cardiac damage can be made despite their use for so many years. In most cases ACTH or cortisone appear to be lifesaving.

A ten-year-old-boy was admitted with a recurrent acute rheumatic fever. His temperature was 102.8 F., pulse 130, and respiration 30. The heart rate was very rapid with poor heart sounds and a presystolic murmur at the apex. The electrocardiogram showed a prolonged PR interval. Fluoroscopy showed a markedly enlarged heart with pulmonary congestion. He was placed on salicylate therapy in high doses and penicillin. On this regime he showed no improvement. The temperature spiked to 104 F., the pulse remained elevated, and the liver was markedly enlarged. A grade 3 systolic murmur appeared over the precordial area. He was placed on digitoxin and a low-salt diet. However, the patient's general condition continued to deteriorate. On the seventeenth day of illness ACTH was started intramuscularly. Within twenty-four hours the temperature had dropped to normal, the pulse had slowed to 90, and his general condition improved dramatically. A repeat x-ray on the twenty-fourth day showed no evidence of pleural fluid. The heart was smaller in size, and the liver was no longer enlarged. The sedimentation rate returned to normal in nine days.

A follow-up two and one-half years later showed a slight enlargement of the heart by percussion with a grade 2 systolic murmur of the apex. The patient had suffered no recurrence of rheumatic fever.

It is when one sees cases like these, that ACTH and cortisone are appreciated. I think that the final answer lies in excellent studies such as this one of Dr. Kroop. Nineteen of our original group treated with ACTH and cortisone have been followed since 1951. Murmurs appeared in 11; seven of these went away, and four have remained the same. There have been no recurrences in these 19 patients, but most of them have been on prophylactic treatment with either sulfa or penicillin. Long-term follow-up, which is most important, will determine whether or not permanent cardiac damage has been prevented.

One word of caution should be interjected on the use of hormones. There is a possibility that subacute bacterial endocarditis may develop while the patient is taking hormones.

Eugene J. Lippschutz, M.D., F.A.C.P., *Buffalo*—There are three schools of thought—the ACTH, the cortisone, and the salicylate, the latter being my own Alma Mater.

Everyone is agreed that relief of the systemic symptoms is rapid with the use of cortisone. It is the question of the prevention of carditis which is controversial. Dr. Kroop has already indicated the difficulty of control in this study, but without such, any evaluation of this program becomes difficult.

Two years ago in Chicago the American Rheumatism Society presented a large series. Since that time it has been noted that, as to heart size with hormone therapy, there was some early enlargement, and with salicylate therapy the heart remains small. After eight months, however, there is no difference. This could be due to hydrating effect of the hormone and the well-known opposite effect of salicylates. The murmur disappeared more quickly with hormone therapy, but eight months later there was little difference in the two groups.

In conclusion I would like to ask three questions:

1. Is the admittedly common rebound (and I know of one fatality in this connection) considered serious?

2. Is the rapid reduction of the sedimentation rate an unmixed blessing since a valuable yardstick of future therapy is destroyed?

3. Last, since it would seem that the cure of congestive failure by the hormone alone would be the most valuable proof of the value of this treatment, in how many cases did this occur?

Certainly we must keep an open mind, and if this discussion has seemed less than enthusiastic, it is hoped that, for the sake of the children with rheumatic heart disease, Dr. Kroop will be entirely vindicated in the near future.

Irving G. Kroop, M.D., *Closing Remarks.*—I want to thank Dr. Walter T. Zimdahl and Dr. Eugene J. Lippschutz for their provocative discussion.

Although in animals steroid therapy does not seem to affect the extent of the experimentally produced valvular lesion, I would agree with Dr. Zimdahl that steroid therapy should be used with caution in the presence of subacute bacterial endocarditis and only after adequate control of the infection with antibiotics. The diagnosis of rheumatic activity in the presence of subacute bacterial endocarditis must be carefully evaluated.

The "rebound phenomenon," after reduction of cortisone dosage or upon discontinuation of treatment, may be serious in its consequences. Inadequate initial dosage in a severe case and poor control of rheumatic activity may upon discontinuation of therapy lead to a "rebound," which in reality is a severe relapse conditioned by previous inadequate steroid therapy. In the great majority of instances "rebound" may be minimized by a very gradual reduction of dose. In the event the "rebound" is severe and threatening after a few days observation, sufficient hormone in even higher dosage than originally given should be administered to avoid the fatality described by Dr. Lippschutz.

Although the return to normal of the sedimentation rate, plasma fibrinogen, albumin-globulin ratio, and C-reactive protein may be nonspecific, these tests are the only objective means for evaluating adequate therapy. After cessation of therapy a persistently positive sedimentation rate and C-reactive protein would still be indicative of rheumatic activity.

In five well-documented cases congestive failure with hepatomegaly was favorably influenced by cortisone therapy alone, without administration of digitalis or mercurials. However, this in itself need not be considered proof of a specific effect of the hormone on carditis. The salutary effect would be due to the prompt control of constitutional symptoms which adversely affect the heart, i.e., fever, toxemia, and tachycardia.

In conclusion, it is the feeling of our group that a study similar to the Cooperative Rheumatic Fever Study, but using higher dosage of hormone, is the only way to answer the question as to the specific effect of cortisone on carditis and residual cardiac damage.

ANNOUNCEMENT

SECTION ON ALLERGY ESTABLISHED

A new scientfiic section, the Section on Allergy, has been established by the House of Delegates of the Medical Society of the State of New York and will hold its first meeting at the 149th Annual Meeting, May 9 to 13, 1955, at the Hotel Statler, Buffalo.

Officers of the new section are:

Carl E. Arbesman, M.D., *Chairman*	Buffalo
William B. Sherman, M.D., *Vice-Chairman*	New York City
Harry Leibowitz, M.D., *Secretary*	Brooklyn
Harry Leibowitz, M.D., *Delegate*	Brooklyn

Any member interested in reading a paper at the 1955 meeting of the new Section on Allergy is requested to communicate with the chairman, Dr. Carl E. Arbesman, 40 West North Street, Buffalo 2, New York.

Congenital Polyposis of the Colon and Rectum

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CONGENITAL polyposis of the colon, also known as familial polyposis and diffuse adenomatosis, was first described as a clinical entity by Menzel in 1721 according to Schantz.[1] Early work of Lushka[2] in 1861 and Virchow's[3] report of the pathology in 1863 were very valuable contributions to our knowledge of the subject. In 1882 Cripps[4] definitely established the familial aspects of the disease by reporting three cases occurring in one family. Many excellent papers on the subject have been published in the past few years, and all authors emphasize two facts: (1) The condition is hereditary, probably a Mendelian dominant characteristic, and may be transmitted by either parent, and (2) the great danger exists that any one of the numerous polyps present may become malignant at any time and metastasize very quickly without the slightest warning. The author's interest in this condition was stimulated by encountering two families of seven and five children, respectively, direct descendants of two brothers, both of whom died with the characteristic symptoms of carcinoma of the colon. The purpose of this paper is to report these cases.

There is very little reason to confuse congenital polyposis of the colon with (1) simple polyposis where one or two polyps may be found in the rectum or colon or (2) polyposis which occurs as the healing stage of ulcerative colitis. The pathologic picture of congenital polyposis of the colon shows literally thousands of polyps of various sizes, both pedunculated and sessile, projecting from the mucous membrane into the lumen of the bowel (Figs. 1 and 2). In most cases the polyps extend from the anus to the ileocecal valve, although various degrees of the involvement of the colon are thought to exist. It is well established now that the entire colon will become involved in time since the entire mucosa of the large bowel has this same tendency to produce polyps.

While the condition is a congenital one, it usually does not manifest itself until about the time of puberty and, therefore, is found most frequently in young adults equally divided between the two sexes. McKenney[5] reported three cases in children under five years of age, but this is unusual. Lockhart-Mummery[6] reports an interesting case of Zahlman in which a woman was married twice. The first husband did not have polyposis, and she bore two healthy children by him. The second husband did have congenital polyposis and died of carcinoma of the colon, and the four children born of this marriage all developed congenital polyposis.

Very frequently the onset of the disease is so insidious that it may be overlooked for years. Yet however mild the onset may be, it eventually leads to the characteristic symptoms of diarrhea with the passage of bloody mucus by rectum and a corresponding loss of weight.

The diagnosis is very easily made by rectal examination and confirmed by barium enema or proctoscopic examination. The history is very often helpful in making the diagnosis, since it is very apt to show (1) that several members of the family have the same symptoms or (2) several members of the family have had congenital polyposis or have died of carcinoma of the colon or rectum.

The treatment of congenital polyposis of the colon should be surgical in every respect. Lilienthal[7] is given credit for making the first surgical attack upon this disease in 1901. The purpose of the surgical treatment should be to eradicate every polyp-bearing segment of the mucous membrane of the colon and rectum since this is the only way to remove the risk of malignant change in the polyps. This may best be done by total colectomy in one or more stages, with permanent ileostomy and complete removal of the rectum. Some surgeons[8,9] feel that colectomy with anastomosis of the terminal ileum to the rectosigmoid or rectum is sufficient if the polyps of the retained segment are removed by fulguration before the anastomosis is made. Since the polyps tend to recur in the rectal segment that is left, only that segment that may be completely visible through the proctoscope should be allowed to remain. The recurrent polyps must be fulgurated at fre-

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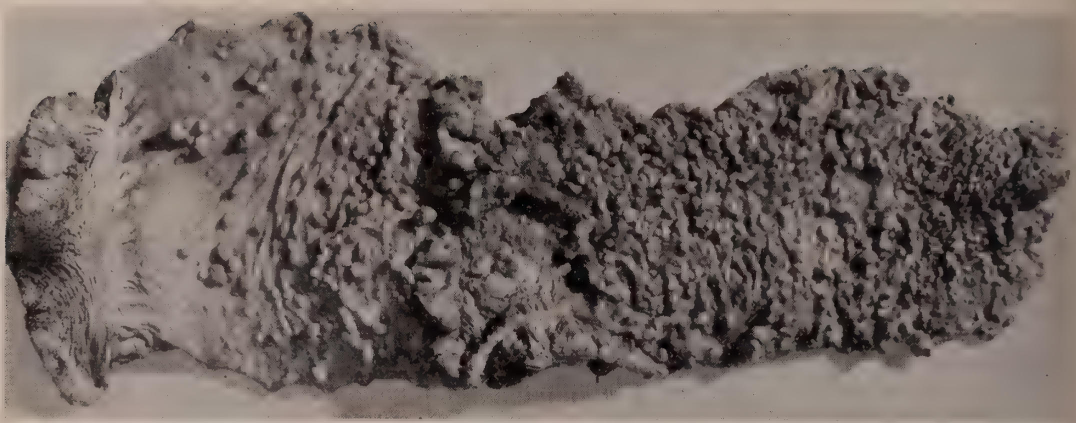


Fig. 1. Photograph of rectum of Case 1. Note polyps and carcinoma at midpoint of specimen.

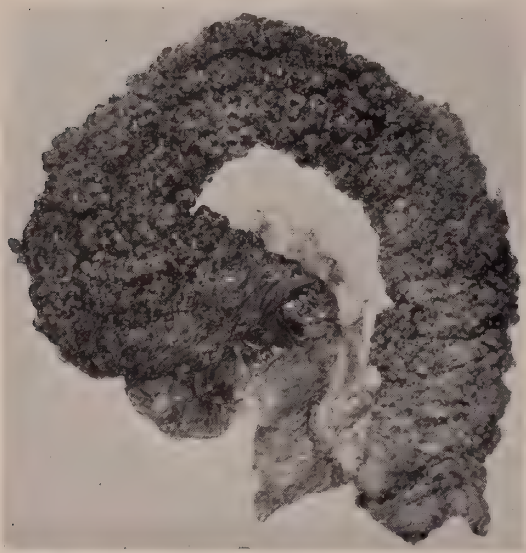
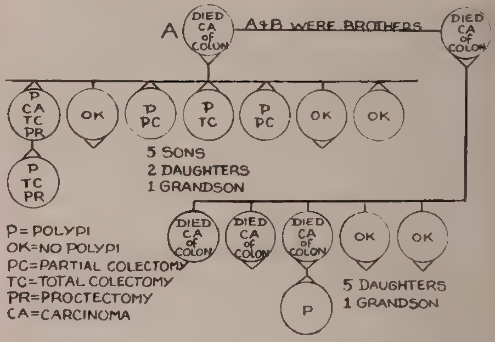


Fig. 2. Photograph of colon in Case 8. This is a typical colon of congenital polyposis.



A
DIED CA of COLON
A+B WERE BROTHERS
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B
P CA TC PR
OK
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P PC
OK
OK
5 SONS
2 DAUGHTERS
1 GRANDSON
P TC PR
P=POLYPI
OK=NO POLYPI
PC=PARTIAL COLECTOMY
TC=TOTAL COLECTOMY
PR=PROCTECTOMY
CA=CARCINOMA
DIED CA of COLON
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P
5 DAUGHTERS
1 GRANDSON

Fig. 3. Relationship of patients reported.

quent proctoscopic examinations as long as the patient lives. It is not infrequent that malignant change takes place in spite of the frequent careful proctoscopic examinations.

Black[8] gives some very interesting facts about fulguration of recurrent polyps:

> "Polypi were found in every case except one at each examination during the first four years postoperatively. Polypi may then be absent for several years but this does not mean that they will not return. In one case, polypi were fulgurated upon each examination for six years. They were absent during the seventh and eighth years but were found again at nine years. One patient had polypi at each examination for eight years, was free from polypi at twelve years but polypi were found again at fourteen years. In three other cases polypi continued to be found for eight, nine, and thirteen years. One patient remained well for thirteen years, then developed carcinoma of the rectum and was treated elsewhere."

These facts show how dangerous the polypi left in the retained segment may be.

From my own experience with the two families here reported, I am convinced that the surest method of removing the ever-threatening polyps is to do a total colectomy, proctectomy, and a permanent ileostomy. An ileostomy today is not the great handicap to the patient that it was a few years ago before the bags which are cemented to the skin were available. There is no reason now to leave a dangerous segment of bowel in situ just to avoid an ileostomy.

Case Reports

Anthony and Pedro, the fathers of the cases here reported, were brothers living in the Dominican Republic. Anthony died at the age of fifty years from pneumonia but had had "intestinal troubles" for several years before death. His wife is alive and well at the age of seventy-one years, and she has two brothers who are alive and well. Anthony had five sons and two daughters. Four of the five sons had congenital polyposis, and one of the four also had an abdominoperineal resection in 1930 for adenocarcinoma of the rectum. One grandson had congenital polyposis and has had total colectomy, proctectomy, and permanent ileostomy. Two daughters and one son had no polyps and no symptoms (Fig. 3).

Pedro died at the age of fifty years of carcinoma of the colon. He had five daughters, three of whom died of carcinoma of the colon. One of the daughters who died left a son who is twenty-five years old and has polyposis of the colon but has not been treated.

A very brief summary of Anthony's family follows, emphasizing the type of operation performed and the circumstances influencing this choice. These will be described according to their ages numbered from one to seven.

Case. 1—Male, age fifty-two, the oldest member of the family and the one responsible for sending his brothers and sisters here for diagnosis and treatment. He had abdominoperineal resection of the rectum at St. Luke's Hospital in 1930 for an adenocarcinoma of the rectum with congenital polyposis of the colon. He returned in 1943 complaining of diarrhea of four days duration, at which time the author saw him for the first time. Diagnosis of congenital polyposis of the colon was made by x-ray. Ileostomy and colectomy were done in two stages (Fig. 1). Convalescence was uneventful, and he has remained well to date. There is no reason given on his chart as to why he was allowed to go for thirteen years after resection of his rectum for carcinoma when congenital polyposis was also diagnosed at the first admission. Apparently, the danger of malignant change in the polyps was not appreciated in 1930.

Case 2.—Female, age forty-seven, has no polyps and no symptoms.

Case 3.—Male, age forty-five, had colectomy performed in another city in 1949. Rectum was not removed and still contains numerous polyps. These are being fulgurated at intervals, and the patient still hopes to have his ileum anastomosed to the rectum. He now has an ileostomy and is not a bit unhappy with it, and I am sure he would be very much safer to have his rectum removed.

Case 4.—Male, age forty-two, was admitted to St. Luke's Hospital, June, 1953, with a history that he had known for several years that he had congenital polyposis but has had very few symptoms. Ileostomy and colectomy to the sigmoid were done as first-stage and proctectomy as second-stage operation one month later. He has gained weight and is in splendid condition at present.

Case 5.—Male, age thirty-nine, was admitted to St. Luke's Hospital, June 12, 1952, with a diagnosis of congenital polyposis of the rectum and sigmoid colon only. The remainder of the colon seemed to be free from polyps by x-ray. Patient refused to have ileostomy and would consent to have only that portion of his colon removed which showed polyps. An abdominoperineal pull-through operation was then done in one stage, removing the rectum and sigmoid and substituting the descending colon for the rectum. I was sure that this was not the proper way to treat this patient, but he would have nothing further done. One and one-half years later, proctoscopy shows numerous polyps in the remainder of the colon. I hope that he is coming back to have the remainder of his colon removed and a permanent ileostomy, as he has promised to do.

Case 6.—Male, age thirty-eight, has no polyps and no symptoms.

Case 7.—Female, age thirty-six, has no polyps and no symptoms.

Case 8.—Male, age thirty-six, grandson of Anthony and son of Case 1, has had total colectomy, proctectomy, and permanent ileostomy (Fig. 2). He is doing very well.

All of these patients have from one to four children, most of them younger than the age at which the symptoms of congenital polyposis reveal themselves. All of the parents have been warned to have each child examined for congenital polyposis.

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Spinal Fluid Evaluation in Neurosyphilis

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THE management of neurosyphilis is primarily dependent on repeated spinal fluid examination results. Indeed, in asymptomatic neurosyphilis it is the only definitive method of follow-up available.

Nielsen found 15 cases or 13 per cent of severe clinical neurosyphilis in 113 patients who had routine antiluetic therapy for asymptomatic central nervous system syphilis one to thirty years previously.[1] Conversely, among 315 patients with negative findings on the first puncture, only one case of meningovascular neurosyphilis, in the form of absent knee jerks, was found, and there were no cases of severe clinical neurosyphilis.

We consider the cell count, total protein, colloidal gold, and complement fixation tests as essential in the spinal fluid evaluation. A cell count of over 4 per cu. mm. indicates definite evidence of inflammation. The quantitative sulfosalicylic test for total proteins if over 35 mg. per cent per 100 ml. is again indicative of luetic central nervous system activity. The Lange modification of the original colloidal gold test gives both quantitative and qualitative information. The color variations in the ten tubes are numbered from 0 to 20. A sum of more than 45 is considered abnormal in the absence of other causes and when other criteria of syphilis are present. The amount of reagin in the spinal fluid, as in the blood, is no indication of the severity of the syphilitic infection, but the drop in spinal fluid reagin titers following therapy is usually more rapid and continuous than in the case of the blood.[2] Improvement in most cases occurs first in the cell count and total proteins. The colloidal gold test is next, and the complement fixation test is as a rule last to show improvement.

Results of these tests must be interpreted as a whole. One item by itself will not give complete information on the central nervous system involvement. Dattner[3] states that the cell count indicates activity of the process; the total protein in association with the cell count may indicate activity; the colloidal gold test in its qualitative aspect gives a clue to the prevalent type of central nervous tissue involvement, and its quantitative values offer a revelation of the trend of the process. The complement fixation test signifies the specific nature of the disease, and the quantitative reagin readings, together with the other tests, inform us whether the syphilitic process in the central nervous system is progressing, abating, or has been definitely checked, all of which permit the intelligent management of a patient with neurosyphilis.

During 1951 and 1952 the Venereal Disease Control Division of the Erie County Health Department, Buffalo, New York, supplied penicillin for the treatment of 137 patients who had late asymptomatic neurosyphilis. Each had a positive blood serology, positive findings in at least two of the spinal fluid tests, and no clinical evidence of luetic involvement on physical examination. A total of 9,000,000 units of crystalline procaine penicillin G in sesame oil was given at a daily rate of 600,000 units intramuscularly. Treatment in all cases was completed within three weeks.

Thomas[2] states that at Bellevue Hospital a relapse was not observed in a patient treated for neurosyphilis more than fifteen months after completion of therapy. With this in mind we contacted all the treated patients sometime after fifteen months had elapsed following therapy. We were able to repeat the spinal fluid examination and compare results on 86 or about 63 per cent of our original patients.

When the results of each test are compared individually, although the total number of cell count comparisons is small, 100 per cent of the high counts improved (Table I). Of 77 abnormal colloidal gold counts, 56 or almost 73 per cent improved. The abnormally high proteins in 51 comparisons improved in 74.5 per cent. Complement fixation test titers decreased in 60.5 per cent.

When we consider comparative results of the completed tests reported for each patient on an

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TABLE I.—CEREBROSPINAL FLUID LABORATORY TEST RESULTS IN 86 PATIENTS WITH ASYMPTOMATIC CENTRAL NERVOUS SYSTEM LUES

	Cell Count	Colloidal Gold	Protein	Serologic Test for Syphilis
Before therapy				
Total	86	86	86	86
No test reported	68	8	31	0
Negative	11	1	4	43
Positive	7	77	51	43
Per cent positive of those tested	61.1	98.7	92.7	50
After therapy				
Not improved	0	21	13	17
Improved	7	56	38	26
Per cent improved	100	72.7	74.5	60.5

individual basis, it appears that the luetic process had progressed in 13 or about 15 per cent of our 86 patients. In other words, the remainder or 85 per cent of this group showed a satisfactory result of therapy.

The reliance on penicillin therapy in latent syphilis presents a problem. Reports in the recent literature are of interest in this assay of penicillin efficacy. Chester *et al.*[4] state that with proof of the effectiveness of penicillin in other stages of the disease, the drug has been widely used for treatment of latent syphilis. They note that six years after penicillin for late latent syphilis, the Kahn test on the blood serum was negative in only 30.5 per cent. Other tests became negative after this length of time in only 9.7 to 16.9 per cent of cases. However, the titered Kahn test decreased in 75 per cent of these treated cases after five years. Post-treatment titered serologies at intervals may supply at least part of the answer.

Barnett and his group[5] recently reported results in a large group of treated latent cases and evaluated effectiveness of therapy by the incidence of clinical progression per century of patient observation. In summary they state that when arsenic or bismuth was used, the incidence of progression was less among patients who had received more than 55 doses than among patients who had received fewer doses but only when previous therapy had been insignificant. Penicillin did not completely prevent progression, but the data are too meager to allow satisfactory comparison with metal therapy. It appeared, however, that a higher incidence of persistently positive Wassermann reactions followed penicillin therapy than metal therapy. This may be due to the fact that those treated with metal therapy were followed at a later time. Progressions totaling 4.2 per cent were more frequent in Wassermann-fast cases than in those that were not Wassermann-fast where only 1.4 per cent showed progression.

In our study spinal fluid comparisons pre- and post-treatment provide definite measuring devices. We can justifiably assume that since 85 per cent of our cases show abatement or have been definitely checked, then the treatment results in latent cases who received a comparative amount of penicillin should have a satisfactory result in 85 per cent of cases. Good as these figures are, what about the 15 per cent who show progression? Our responsibility as syphilologists does not end after treatment. Each patient with late syphilis, whether asymptomatic or not, should be impressed with the fact that, just as in other chronic diseases such as tuberculosis, annual revisits to his physician are absolutely necessary. Assuming that a negative spinal fluid has been obtained during the initial examination, if such examination is completed at least two years after infection and need not be repeated, this revisit should include a titered blood serology and complete physical examination, especially emphasizing the cardiovascular system. Many years and perhaps a lifetime of observation are warranted if we are to eradicate the serious, often fatal, complications of inadequately treated syphilis.

Summary

Final results of penicillin therapy of 86 patients with asymptomatic neurosyphilis are reported. Comparisons of spinal fluid examination results before and at least fifteen months after therapy show that the cell counts presented the highest percentage of improvement, the protein and colloidal gold tests next, while the complement fixation test showed a decreasing titer in the lowest proportion. When the completed tests for each patient were reviewed on an individual basis, 85 per cent of the group had a satisfactory treatment response. On this basis we must assume that 15 per cent of cases of other late treated cases will also show progression. A plea is made for periodic follow-up of all patients treated for late and latent syphilis to detect and prescribe for any serious late complications which may occur.

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Discussion

Rudolph Ruedemann, Jr., M.D., *Albany.*—This timely and worth-while paper brings to our attention the necessity for awakened interest in syphilis.

The simplification of antileutic therapy has placed treatment in the hands of the general practitioner, with doctor and patient too often lulled into a placid nonchalance as to the severity of the disease, overlooking the necessity for routine serologic follow-up of the blood, spinal fluid examination, and a good general checkup.

This paper emphasizes the value of complete spinal fluid examination since the activity and type of involvement is gauged by cell count, colloidal gold, and total protein abnormalities.

Evan Thomas[a] and others have demonstrated the gradual improvement in spinal fluid findings over a period of years, comparing the therapeutic value of penicillin and malaria. There remained a 52.6 per cent positive in spinal fluid reagin but no progression since persistence in reagin is not considered continued activity.

Barnett *et al.*[b] in comparing late latent syphilis with metal chemotherapy as against penicillin therapy believed that a persistently positive Wassermann reaction was more apt to follow penicillin. They do not justify the dismissal of a patient with a positive Wassermann after penicillin therapy. The question of progression in neurologic and late latent syphilis, as brought out by Dr. Rausch, merits our attention to this.

We are confronted frequently with the question of continued therapy in the more than adequately treated patient with a persistently positive Wassermann. This patient does not feel so secure and happy about this so-called "reagin scar" as does the doctor who sits on his negativity and says "forget it." A positive Wassermann can be very annoying in this age of blood banks, blood donors for a sick friend or relative, and pre-employment Wassermann.

DeMello and Vought[c] in a recent article showed the remarkable decline of syphilis in all stages in upstate New York from 1936 through 1952, with a sharp increase in early syphilis in 1946 and moderate increase in congenital syphilis the same year. This demonstrates that there is more to controlling syphilis than antibiotic and chemical therapy.

Public Health Reports[d] for 1953 show an increase in syphilis in 16 states and the District of Columbia. In New York State an increase in late and latent syphilis from 22,238 to 23,870 is shown. There is a tendency for the decrease to level off in all states.

The American Social Hygiene Association and other public health-minded organizations are much disturbed about radical government cuts in budget for V.D. control: 76 per cent in the last two years—from a $9,800,000 budget in 1953 to $5,000,000 in 1954 and to $2,300,000 in 1955.[e] They feel that early infectious cases are being missed, and a reservoir of late and latent syphilis is being accumulated with over two million individuals in the United States needing treatment.

A decrease in promiscuity has not kept step with a decreased incidence. The problem in teen-age groups and the fifteen to twenty-four-year period still faces us since the rate for gonorrhea and early syphilis remains high in this age group. There are too many factors militating against the immediate achievement of that ultimate goal. The eradication of syphilis as a public health problem may be "just over the horizon," but "the sun never sets" on promiscuity.

For these specific reasons is this paper considered timely since we have been hearing about recession, while perhaps recrudescence may be in the offing, and the syphilologist must remain alert to show the way.

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. . . There are voices in our country who daily sound alarms that our civilization is on the way out. Concentrated on the difficulties of our times, they see an early and dour end for us. But civilization does not decline and fall while the people still possess dynamic creative faculties, devotion to religious faith and to liberty. The American people still possess these qualities. We are not at the bedside of a nation in death agony. . .—Herbert Hoover

Infectious Mononucleosis

Report of a Case Presenting as Acute Anaphylactic Shock Treated with ACTH and Cortisone

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It is common knowledge that the clinical picture of infectious mononucleosis may be variable. Yet, despite the occasional case whose onset is accompanied by urticaria,[1-4] eye swelling,[2,4-9] or edema of the pharynx and larynx[10-12] and the suggestion by Pelner and Waldman[13] that an allergic background exists in all cases, documentation is lacking for an allergic basis to this disease. The following case is presented because of its unusual onset with the picture of acute anaphylactic shock.

Case Report

S. M., a twenty-two-year-old female patient, collapsed on the floor of her bathroom early in the morning of February 1, 1953, several hours after the onset of generalized urticaria, swelling and stiffness of the fingers, swelling of the lips and eyelids, and feverishness. She had eaten a salad containing shrimp several hours previously. Since the age of four she had had a history of allergy "to everything" which had improved with the onset of menstrual flow at the age of fourteen. On the average of once per year, since the age of fourteen, she had noted hives after eating shrimp, tomatoes, or chocolate, but these reactions had never been severe. Forty-eight hours prior to the present illness she had noted one hive on a finger. This had been transient. During the days preceding the present illness she had noted increasing fatigue, but she had paid little attention to it because of the excitement of her engagement announcement which was planned for February 1, 1953.

Examination two hours after the collapse revealed an extremely lethargic, young, adult female, prostrated in bed but able to respond lucidly to all questions. The right upper eyelid was edematous, closing the eye completely. The lips were edematous. The skin of the body was hot and dry; it was covered everywhere with different-sized areas of urticaria, some of which were erythematous. The skin of all four extremities bore an irregular circinate erythematous eruption. Her temperature was 105 F. (rectally). Pulse rate was 120 per minute and regular. Blood pressure was 80/40. Posterior cervical lymph nodes were palpable bilaterally. The lung fields were clear.

The tentative diagnosis was acute anaphylactic shock following ingestion of shrimp. Epinephrine (1:1,000) was administered subcutaneously in three doses of 0.33 cc. each over a period of one hour. Slight improvement in the quality of the radial pulse and decreased stiffness of the fingers were noted after the third injection of epinephrine with a rise in blood pressure to 85/45. At this point 50 mg. of ACTH were administered intramuscularly. Within the next few hours general improvement was obvious. The joint stiffness and swelling subsided. The urticaria completely disappeared, and only the swelling of the right eye and the lips remained. Erythema of the extremities was no longer visible. Her temperature fell rapidly and was normal by early afternoon, five hours after the injection of ACTH. The blood pressure rose to 105/60. The pulse rate slowed to 80 per minute. The quality of the radial pulse improved. At 3 P.M. that day, six hours following the first dose of ACTH, she was given 25 mg. of ACTH intramuscularly.

On the morning of the next day, February 2, 1953, her temperature had risen to 101 F. Nevertheless, she was comfortable. Blood pressure was 102/60. Pulse rate was 84 per minute. The skin was completely clear. The right eye and the lips remained swollen. Bilaterally the posterior cervical and angular nodes were enlarged. The right axillary node was also palpable. The pharynx appeared normal. The heart and lungs were negative. Neither the liver nor the spleen was palpable. She was given a final dose of ACTH (25 mg.) intramuscularly and started on oral cortisone (50 mg. in the early afternoon, 25 mg. that night, and 25 mg. in the morning of February 3, 1953).

The diagnosis remained acute anaphylactic reaction, but it was decided to investigate the possibility of an associated infection such as infectious mononucleosis.

By midday of February 3, 1953, she was feeling well, and her temperature had remained normal since the start of the cortisone medication. The facial

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TABLE I.—LABORATORY DATA

Date		Number of Days After Onset of Illness*	White Blood Cell Counts							Blood Chemical Examinations			Sedimentation Rate (Mm. in 1 Hour)	Heterophil Antibody Titers		
			Total (Per Cu. Mm.)	Per Cent						Thymol Turbidity (Units)	Cephalin Flocculation			Un-absorbed	After Absorption with	
				Neutrophils	Eosinophils	Monocytes	Basophils	Lymphocytes	Abnormal Lymphocytes		24 Hours	48 Hours			Guinea Pig Kidney	Beef Cells
February	5	7	7,900	30	1	5	..	64	32	2.3	..	..	20	1:<7	1:<7	1:<7
	9	11	13,500	27	1	5	..	67	35+	6.3	1+	2+	..	1:<7	1:<7	1:<7
	20	22	6,400	40	4	..	..	56	?	7.4	..	3+	..	1:448	1:56	1:<7
March	2	32	4,650	51	..	3	1	45	15	5.0	1+	2+	24	1:56	1:28	1:<7
	7	37	....	..	..	..	..	..	...	...	..	..	..	1:56	1:14	1:<7
	17	47	5,700	53	5	3	..	39	10	3.0	0	1+	17	1:7	1:<7	1:<7

* Onset January 30, 1953.

swelling was completely gone. Her appetite was still not up to par. Blood pressure was 104/60, pulse rate 76 per minute. The cervical nodes were smaller; the angular and axillary nodes were no longer palpable.

Her temperature rose to 101 F. in the afternoon of February 3, and, therefore, the cortisone dosage was increased to 25 mg. every six hours. On this regimen she felt well, and the temperature remained normal on February 4 and 5. Examination on February 5 revealed nothing remarkable except for laboratory data (Table I). The white blood cell count was 7,900 with 64 per cent lymphocytes including 32 abnormal forms. The heterophil antibody titer was normal (1:<7). The complement fixation test for trichinosis was negative.

Cortisone was continued at a total daily dose of 100 mg. on February 5 and reduced to a total of 75 mg. daily therafter.

She was re-examined on February 9 when she was fully ambulatory. Her only complaint was extreme fatigue in the past few days. Her temperature had remained normal. Blood pressure was 105/78. Pulse rate was 76 per minute. The cervical nodes were still palpable. Neither the liver nor spleen was palpable or tender. The white blood cell count this day was 13,500 with 67 per cent lymphocytes; more than half of the lymphocytes were abnormal forms (Table I). The heterophil antibody titer was unchanged (1:<7), but the thymol turbidity had risen to 6.3 units. The cephalin flocculation was 2 plus at forty-eight hours.

Cortisone was decreased to 25 mg. twice daily on February 9 and stopped thereafter. Her temperature rose to 100.4 F. during the evening of February 10. On the morning of February 11 it was 100 F. That night it rose to 101 F. On February 12 it was normal. She still tired easily. The liver area was now tender to palpation.

She was permitted to travel to Youngstown, Ohio, where she remained from February 13 to March 2. Pertinent laboratory data obtained on February 20, twenty-two days since the onset of the illness, included a heterophil antibody titer of 1:448 plus absorptions characteristic of infectious mononucleosis, a thymol turbidity value of 7.4 units, and a 3 plus cephalin flocculation at forty-eight hours.

Physical examination on March 2 was completely negative. The peripheral blood revealed 15 per cent abnormal lymphocytes. The heterophil antibody titer had fallen to 1:56, but the antibodies still gave the absorption characteristics of infectious mononucleosis antibodies.

On March 7 the heterophil antibody titer was unchanged. On March 17, forty-seven days since the onset of the illness, the titer had fallen to 1:7. The blood chemical tests were within normal limits. The peripheral blood still revealed 10 per cent abnormal lymphocytes. Minimal hepatic area tenderness was elicited. She had no complaints except that she tended to tire easily on undue exertion.

Differential Diagnosis

It is anticipated that questions will arise in the minds of some readers concerning the validity of the diagnosis of infectious mononucleosis in this case and the causation of the extreme allergic reaction (the anaphylaxis). Is it possible to explain the entire clinical picture in this patient as an allergic reaction and eliminate the diagnosis of infectious mononucleosis? Two alternative diagnoses would then enter into consideration: (1) serum sickness or (2) acute anaphylactic shock. (As used in this paper the latter is synonymous with allergic shock.[14] Furthermore, although on clinical grounds we are discussing these two possibilities as seemingly independent diagnoses, it is recognized that on immunologic grounds they are basically similar, immediate type allergic reactions which follow an antigen-antibody interaction at slightly differing time intervals.)

Let us first consider the diagnosis of serum sickness. The presumed allergen would then logically be the shrimp food, in the absence of any knowledge of any other possible offending agent including drugs. The sequence becomes a very rapid one following the ingestion of the shrimp, and the patient's symptoms of the previous two days are dismissed as meaningless or, at least, as unrelated and unexplained. The explosive onset with shock (tachycardia, low blood pressure, loss of consciousness) is unusual for serum sickness, either of the delayed or accelerated varieties. The high fever would be reasonably compatible. The remainder of the clinical picture (lymph node enlargement, arthralgia, urticaria, erythema, facial edema) is fairly typical of serum sickness. The response to ACTH and cortisone is what one would expect with serum sickness. The laboratory findings raise difficulties toward accepting this diagnosis. The lymphocytosis of 67 per cent is not incompatible with a serum sickness, but the very high percentage (more than 35) of abnormal lymphocytes in the peripheral blood is characteristic only of infectious mononucleosis (if lymphatic leukemia can be otherwise satisfactorily excluded). Occasionally these same abnormal lymphocytes are seen in allergic states but in considerably lower percentages.[15] The apparent disturbances in hepatic function as evidenced mainly by chemical tests could conceivably be due to changes in gamma globulin, and this could well occur in allergic disease per se. The result of the heterophil antibody tests, including the absorption with the differentiating antigens, *are not* characteristic of serum sickness but *are* diagnostic of infectious mononucleosis. It will be recalled that the heterophil antibodies characterizing these two states differ as follows:

	Absorbed by Guinea Pig Kidney	Absorbed by Beef Cells
Serum sickness	Yes	Yes
Infectious mononucleosis	No	Yes

For these reasons the diagnosis of serum sickness is not considered a tenable one.

Let us examine the possible diagnosis of acute anaphylactic shock on an allergic basis, with the shrimp food as the precipitant. As with serum sickness, the symptoms of illness during the preceding two days would necessarily be unexplained under this diagnosis. The abrupt onset of high fever with dry, hot skin suggesting the picture of heat stroke is difficult to ascribe to anaphylaxis. The acute collapse with generalized urticaria would be amply accounted for, although the absence of dyspnea and other evidence of respiratory embarrassment is unusual. However, the subsequent illness and fever of eleven days are not ascribable to an acute anaphylaxis which is usually an illness of relatively brief duration, no matter what the outcome. Thus, to rely upon this diagnosis as the sole explanation for the clinical picture in our patient is likewise not tenable.

Despite the writer's habit of ready suspicion of the diagnosis of infectious mononucleosis, this was not seriously considered until the third day of observation. During the several hours of the explosive onset of the illness concern was naturally focused on saving the patient's life which appeared definitely in the balance. When this threat was under control, we obtained a more detailed history and were struck by the fact that the patient had been ailing for at least two days prior to her ingestion of the shrimp salad and prior to her collapse. Although at that point we were reluctant to dismiss the ingested shrimp as the likely allergen which precipitated the anaphylactic reaction, we finally gave increased credence to the patient's insistence that in the past she had repeatedly eaten shrimp with relative impunity and that she had felt under par for at least forty-eight hours prior to eating shrimp this time. Nevertheless, our resolution to seek a possible constitutional illness as underlying the shock was not made until we had observed that, unlike the usual acute anaphylaxis and more like a serum sickness, fever was recurring when the dosage of ACTH or cortisone was reduced too far. The moderate lymphadenopathy, the anorexia, fever, urticaria, arthralgia, and facial and eye edema were all consistent with a diagnosis of infectious mononucleosis (or with serum sickness), as was the later observation of hepatic area tenderness and continuing fatigue on effort. However, as in all cases of infectious mononucleosis, the laboratory tests were essential for establishing the diagnosis. The peripheral blood picture with abnormal lymphocytes (virocytes[4,16]) exceeding 35 per cent was highly characteristic of infectious mononucleosis[4] (although the mere finding of these cells is not at all specific for this disease[16]). The blood chemical tests indicative of hepatic involvement were further support for the diagnosis. The elevation in heterophil antibodies with characteristic absorption pattern was finally conclusive. This last test, crucial in the differential diagnosis, established the diagnosis of infectious mononucleosis. This case illustrates the fact that on clinical grounds alone infectious mononucleosis cannot be distinguished from serum sickness.

The heterophil antibody studies in this case illustrate two points which the writer has previously emphasized[4,17] in the serologic diagnosis of infectious mononucleosis:

1. When the unabsorbed heterophil antibodies do not attain a titer sufficient by its magnitude alone to justify the diagnosis of infectious mononucleosis (at least 1:1,792), diagnosis must rest on proper absorptions with guinea pig kidney and beef cells.
2. When the serum is studied serially or the blood sample is first obtained during later weeks or in convalescence, absorption tests may permit the diagnosis, even when the unabsorbed titer is at seemingly "normal" levels (1:56).

Role of the Allergic Reaction

Finally, among the problems of diagnosis in this case, one must consider whether the anaphylactic reaction should be interpreted as part of the infectious mononucleosis or as a coincidental occurrence during the course of this disease. Several isolated observations may be utilized to support the view that there is an allergic component to infectious mononucleosis. Edema of the eyes and face is not uncommon[2,4–9]; extreme edema of the larynx and pharynx is occasionally described.[10–12] In a small proportion of cases an urticarial eruption of the skin is seen.[1–4,10,11,18–20] This has been observed by the writer in only one instance among 48 cases of infectious mononucleosis, excluding the case described herein.

Furthermore, it has been proposed by Pelner and Waldman[13] that an allergic background underlies every case of infectious mononucleosis. The writer's experience does not substantiate this thesis because in only six of his 25 most recently studied cases was a history of allergy elicited (24 per cent incidence). This occurrence is not striking or significant in the light of the reported 50 to 60 per cent incidence of both major and minor allergies in the general population.[21–23] However, the writer recognizes the unreliability of this statistical approach for evaluating the possible etiologic role of allergy in infectious mononucleosis because patients manifesting an allergic reaction need have no previous history of allergies.

Speculation on the possible relationship of allergy to infectious mononucleosis derives support from the following general observations: (1) the similarity of many features of the clinical picture of infectious mononucleosis to allergic states (lymphadenopathy, arthralgia, urticaria, facial edema, fever, enlarged liver and spleen); (2) similarities in certain laboratory features (lymphocytosis, appearance of abnormal lymphocytes, serum protein alterations, production of heterophil type of antibodies, abnormalities in so-called "liver function" chemical tests); (3) the low degree of contagiousness of infectious mononucleosis; (4) failure to identify an etiologic agent; (5) failure experimentally to reproduce the disease beyond question in animals and/or human volunteers. Finally, in persons dying suddenly due to anaphylaxis[14,24,25] or asthma,[26] lymphoid hyperplasia is frequently found. The possibility exists that the lymphoid hyperplasia in infectious mononucleosis is either related to an allergic phenomenon or leaves the patient more prone to subsequent allergic reactions. With this line of reasoning, it may be theorized that in our patient the basic illness made our patient more sensitive to an allergen than she had been heretofore and, therefore, her reaction to exposure to this allergen at this particular time was most intense. The part played by the high emotional pitch to which she was carried by her impending engagement announcement is difficult to assess, but it too may have had a role in intensifying her allergic reaction.

Unless an acceptable explanation is forthcoming along the lines raised by the above considerations, it is not possible to relate the extreme allergic reaction in our patient to her underlying infectious mononucleosis. It could be that they were entirely unrelated except as coincidental occurrences. In the present state of our knowledge, no definite conclusion can be reached on this point.

Difficulties in Distinguishing Infectious Mononucleosis from Allergic States

It is frequently difficult to distinguish clinically between infectious mononucleosis and various allergic states. The many similarities have already been stressed in this paper. For our purposes it is sufficient here to refer briefly to several pertinent reports.

Randolph and Gibson[15] observed significant numbers of atypical lymphocytes in the peripheral blood of 24 patients suffering with an allergy, usually the result of food. The average percentage was 10.3 with a range from 2 to 21 per cent. Although such lymphocytes were distinctly less in number than is commonly found in the acute stage of infectious mononucleosis, the blood findings in the allergic individuals were compatible with the subsiding phase of infectious mononucleosis. In addition, the frequent complaint of fatigue, characteristically unrelieved by rest, and the finding of enlarged cervical lymph nodes added to the confusion with infectious mononucleosis. It is important to point out that the fatigue accompanying infectious mononucleosis usually responds well to physical rest.

Randolph and Hettig[22] reported further on this possible diagnostic confusion in their study of 140 student nurses. It is noteworthy that infectious mononucleosis could be diagnosed in only one case among the 83 of these student nurses with an allergic background.

Finally, attention should be directed to a recent report by Lichtenstein and Cannemeyer[27] of eight cases of sensitivity to para-aminosalicylic acid which mimicked infectious mononucleosis in almost every respect except for the failure to demonstrate a positive sheep cell agglutination test. Possibly the most interesting finding in these cases was the reported presence of atypical lymphocytes in percentages varying between 1 and 21.

Treatment with ACTH and Cortisone

Unwittingly, as it turned out, this case represents the first instance of infectious mononucleosis which the writer has treated with ACTH and cortisone. It is not possible to draw any valid conclusions concerning the effect of these agents in this case, even though it is tempting to say that the duration of the asthenia and the expected period of morbidity were shortened. It is likely that the febrile course, extending over eleven days, was not shortened but merely suppressed during the nine days of ACTH and cortisone therapy, similar to the effect in rheumatic fever.[28] Many more cases must be treated and compared with proper controls before valid conclusions are justified. However, it does point the way toward the necessity for such a study of the use of these agents in infectious mononucleosis. Heretofore the writer had felt that these agents might be more properly withheld from patients with infectious mononucleosis unless the accompanying hepatitis was of very severe degree.

The author is aware of only two reports dealing with the administration of ACTH to patients with infectious mononucleosis. The first was an experiment by Saunders and Adams[29] who were studying the effect of a single dose on circulating leukocytes. The effect on the level of lymphocytes and eosinophils in the peripheral blood was the same as that observed in normal persons. This would imply that the adrenal cortex was functionally unimpaired. They noted no change in the heterophil antibody titers within eight hours after administering ACTH. The second report, by Doran and Weisberger,[30] describes its use in a patient with extensive liver involvement, jaundice, and renal insufficiency in whom a fatal outcome was feared. Rapid improvement followed the intravenous administration of ACTH. Isaacs[31] has reported the empiric use of oral adrenal cortical extract to overcome the asthenia syndrome of "chronic infectious mononucleosis."

No conclusions may be drawn in this case concerning the effects of these agents on the time of appearance and the titer of the heterophil antibodies. The time of the first detection of the antibodies, the twenty-second day of illness, is not unusual,[4] although in most cases they can be found earlier. The maximum titer of 1:448 is also not unusual. In our experience with 48 cases revealing positive absorption tests, the titer in 12 cases (25 per cent) did not exceed 1:448.

Summary

1. A case is presented of infectious mononucleosis in a twenty-two-year-old female whose illness was characterized early by allergic type of shock and who was treated with ACTH and cortisone.

2. Under a discussion of the differential diagnosis, the reasons are presented for discarding serum sickness or anaphylactic shock as the primary explanation for the patient's illness.

3. No definite conclusion is reached concerning the role of the acute allergic reaction in this case. The two possibilities of a coincidental or related occurrence are considered.

4. Difficulties in distinguishing infectious mononucleosis from allergic states are recounted.

5. The therapeutic effect of the ACTH and cortisone on the underlying illness in this case is not clear. Their effect on the acute allergic reaction was dramatically beneficial.

6. The necessity for a properly controlled study of the results of ACTH and cortisone treatment of infectious mononucleosis is stressed.

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Addendum: Since this article was submitted for publication, two additional articles have appeared on the use of cortisone and ACTH for the treatment of infectious mononucleosis.[32, 33]

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Summer Song

Erythroblast and normoblast,
Lymphocyte and Monocyte,
What's the Blood Count? When's the Meeting?

"Cast your fly just farther out Sor,
By the sally bushes there;
You remember, last July Sor,
How you hooked the big one there."

Minute fragments for biopsy,
Twenty cells, not more I vow,
"Please exclude a carcinoma,"
Try a Papanicolaou!

"Will I get the rods out now Sor,
Lovely morning, fresh and cool;
Daybreak's just the time you know Sor,
For a salmon in the pool."

Myocardium rather flabby,
Coronaries calcified,
Marked fibrosis, much stenosis,
"Can't you tell us why he died?"

Kerry skies and Kerry waters,
Men with time enough to spare,
Time to talk and stop and listen,
Lord, I wish that I were there.
Peace that fills the wide horizons,
Lakes and hills; the picture's clear;
Shore and stream so well remembered
But—I'll not be there this year.—*The Lancet, July 24, 1954*

The Diagnosis and Treatment of Hyperparathyroidism

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In spite of many excellent reviews on hyperparathyroidism which have appeared in recent years, this diagnosis is often not considered or proved. This is due in part to the widespread misconception that bone disease is a requisite of hyperparathyroidism. It is also due to the view that the diagnosis cannot be substantiated if only minimal hypercalcemia is present.

The purpose of this paper is fourfold. First, it is to re-emphasize that the presence of renal calculi is an indication for a careful study to rule out parathyroid overactivity; second, to point out that hyperparathyroidism may at times cause only a minimal elevation of serum calcium; third, to outline a concise and practical method of proving or ruling out hyperactivity of the parathyroid glands; and fourth, to emphasize the marked difference in the postoperative course of those cases of hyperparathyroidism with marked bone demineralization as compared with those lacking osseous change.

Three cases will be presented. The first is of a patient who, despite the presence of bilateral renal calculi and reported hypercalcemia, failed to present any evidence of hyperparathyroidism when careful metabolic studies were conducted. The second patient had bilateral renal calculi and minimal elevation of serum calcium with no skeletal changes. Because of concomitant persistent hypophosphatemia and hypercalciuria, an exploration of the neck was performed, and a parathyroid adenoma was found and removed. Finally, a patient with the classic syndrome of severe osteitis fibrosa cystica and renal calculi with typical chemical abnormalities was studied and operated upon successfully. The marked postoperative metabolic aberrations are presented, and appropriate treatment is discussed.

Case Reports

Case 1.—G. G., a forty-year-old white shoe worker, was admitted to the Maimonides Hospital of Brooklyn for removal of a suspected parathyroid tumor. Six months prior to hospitalization, he had had right renal colic, and roentgen studies confirmed the presence of renal calculi. At that time his serum calcium was reported to have been elevated. A tentative diagnosis of hyperparathyroidism was made. He was referred to one of us (J.A.) for surgical exploration. There were no symptoms suggestive of hypercalcemia, such as nausea, vomiting, anorexia, drowsiness, or polyuria. There were no patches suggestive of calcium deposition in the cornea or sclera.

X-ray examination revealed two radiopaque calculi within the right renal shadow. Complete roentgen studies of the bones failed to show any evidence of demineralization. Special lateral views of the anterior and superior mediastinum failed to demonstrate either a mass or any evidence of compression of the trachea or esophagus.

Minimal pyuria and moderate microscopic hematuria was observed. Qualitative analysis of the urine (Sulkowitch test)* while the patient was on an unrestricted diet showed an increase in calcium excretion. The serum concentrations of calcium were repeatedly normal (10.0, 10.2, and 9.6 mg. per cent), and the concentrations of serum phosphorus were low (2.7 and 2.1 mg. per cent). Because these data were inconclusive, the patient was fed the Bauer-Aub diet† containing approximately 135 to 140 mg. of calcium per day. The calcinuria was then 98 and 112 mg. on two consecutive days (the normal excre-

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* The Sulkowitch reagent is a solution containing 2.5 Gm. of oxalic acid, 2.5 Gm. of ammonium oxalate, 5 cc. of glacial acetic acid, and water to a final volume of 150 cc. When this solution is mixed with urine containing calcium, a fine white precipitate of calcium oxalate appears within a few seconds. By mixing this reagent and urine, one can differentiate between urine with no calcium (no precipitate), urine with a normal amount of calcium (moderate precipitate), and urine with an excessive amount of calcium (heavy precipitate).

† This diet is a neutral ash, low-calcium diet consisting of vegetables, fruits, meat, cereals, and oleomargarine. Butter, milk, cheese, cream, and cereals fortified with calcium are prohibited. The patient is fed this diet for one week; during this time the patient is not kept at bed rest. At the end of the week, a twenty-four-hour urine specimen is collected, and the calcium content is quantitatively analyzed. The exact content of the diet is presented on page 75 of Albright and Reifenstein's textbook.[1]

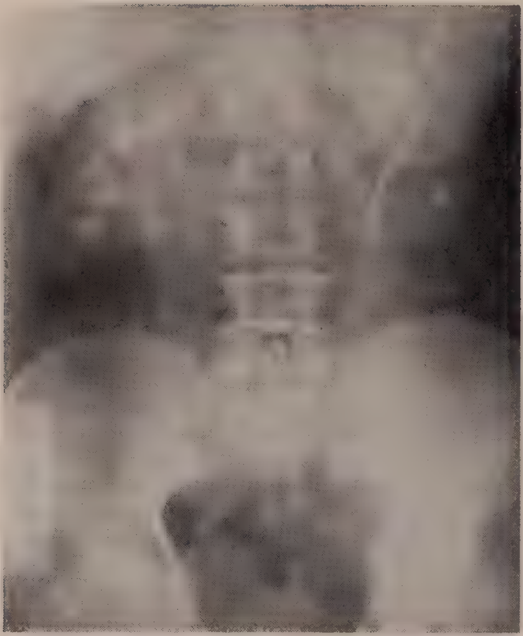

FIG. 1. *Case 2*—Bilateral renal calculi.

tion of calcium on this diet is less than 150 mg. per day).

Because the data failed to corroborate the initial clinical diagnosis of hyperparathyroidism, surgical exploration was not deemed necessary. One year later, on November 3, 1953, the urine Sulkowitch test was normal. The serum calcium was 9.0 mg. per cent, serum phosphorus 2.4 mg. per cent, and serum albumin-globulin concentrations were 4.1 and 2.7 mg. per cent, respectively.

CASE 2.—D. M., a fifty-six-year-old white male, was admitted to the Maimonides Hospital for the first time on February 25, 1952, complaining of flank pain, burning, and frequency of urination of two months duration. In December, 1950, he was admitted to another hospital because of urinary complaints, and study revealed bilateral renal calculi. No therapy was attempted, and he was released from the hospital one month after admission. One year later, in December, 1951, he was readmitted to the same hospital, and at that time a transurethral resection was performed for "hyperplastic prostatic tissue," and the patient was discharged. Two months later he was admitted to the Maimonides Hospital with the above complaints.

Past history and family history were irrelevant.

Physical examination showed pulse 85, respiration 20, and blood pressure 130/74. The only positive finding on examination was tenderness in both costovertebral angles.

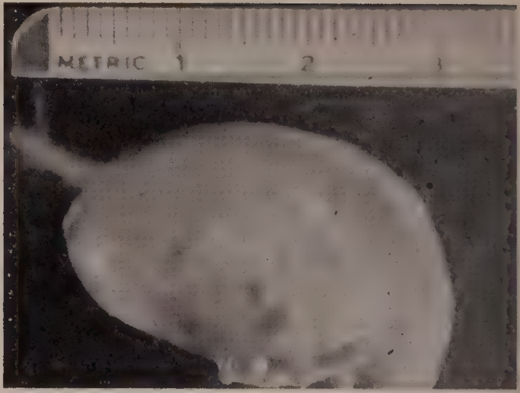

FIG. 2. *Case 2*—Parathyroid adenoma.

Cystoscopic examination revealed a small bladder capacity with moderate encrusted cystitis, which on biopsy revealed "cystitis cystica." Roentgenologic studies disclosed bilateral renal calculi with questionable calculi in the lower ureters (Fig. 1). Skeletal survey was normal.

Laboratory findings on admission were as follows: Urinalysis revealed 2 plus protein, many red and white blood cells, and Bacillus pyocyaneous on culture. Urinary Sulkowitch at that time was reported as negative. Hemoglobin was 98 per cent, blood urea nitrogen 26 mg. per cent, plasma protein 6.6 with 3.2 Gm. of albumin and 3.4 Gm. of globulin. Serum calcium on two occasions was 11.2 and 12.6 mg. per cent and inorganic phosphorus 2.6 and 2.4 mg. per cent. Alkaline phosphatase was 11.1 King-Armstrong units (normal in our laboratory is 4 to 10 units).

On March 18, 1953, a calculus was removed from the left renal pelvis. Postoperative course was uneventful. A Sulkowitch test was again performed at this time and was reported as 2 plus. Because of this finding and the persistent, although slight, hypercalcemia and hypophosphatemia, the diagnosis of hyperparathyroidism was made.

Operation was performed on April 23, 1953. A solitary, well-encapsulated tumor measuring 3 by 2 by 1.2 cm. was found behind the left lobe of the thyroid gland lying in close proximity to the esophagus. The tumor was completely excised (Fig. 2). Pathologic report was parathyroid adenoma.

His postoperative course was complicated by two episodes of thrombophlebitis which responded to anticoagulants. Postoperative hypocalcemia did not develop. He was discharged in good condition.

CASE 3.—I. S., a sixty-five-year-old white male, was first admitted to the Maimonides Hospital on March 28, 1952, complaining of pain in the right flank, dysuria, and frequency of urination. Twelve years prior to admission a solitary urinary calculus had been demonstrated in the right kidney, and six

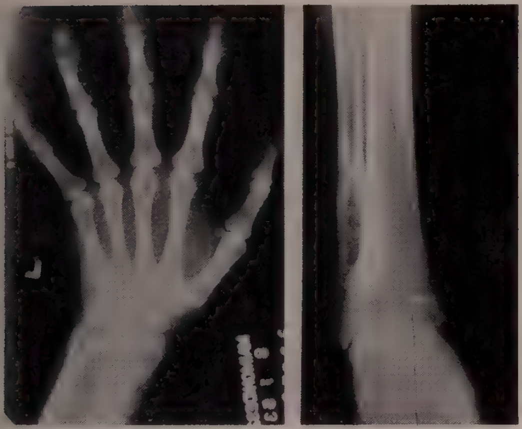

FIG. 3. *Case 3*—Widespread cystic bone changes in a case of hyperparathyroidism.

years prior to admission roentgenologic studies revealed bilateral renal calculi.

He was readmitted to the Maimonides Hospital on July 31, 1953, with a chief complaint of pain and weakness in the lower extremities. About one and a half years before admission he began to have pain in the thighs and legs, especially on the right side and on walking. The pain and weakness had become progressively worse in the past year. At the time of admission he walked with great difficulty and required the use of a cane to climb stairs.

Physical examination revealed pulse 92, respiration 18, and blood pressure 160/90. One examiner palpated a small nodule in the left cervical region along the trachea. The remainder of the examination was negative except for weakness and some tenderness in the bones of the lower extremities.

Laboratory findings were as follows: Hemoglobin was 11.2; red blood cells 3,720,000; white blood cells 9,000 with normal differential. Urinalysis was negative except for occasional mild pyuria. The Sulkowitch test was reported as 2 plus on two occasions. Blood urea nitrogen was 18 mg. per cent; plasma protein 6.3 Gm. per cent with 3.3 Gm. of albumin and 3.0 Gm. of globulin. Serum calcium was 13.1 mg. per cent, while inorganic phosphorus was 2.4 mg. per cent. Alkaline phosphatase was 127 King-Armstrong units.

Roentgenologic studies were made of the entire skeleton and of the urinary tract. Decalcification of varying degree was noted in the skull, long bones, ribs, and pelvis. The lamina dura about the few remaining teeth was absent. Cystic areas of rarefaction and subperiosteal resorption were found in the phalanges of the hands (Fig. 3A) and feet. A loculated zone of rarefaction was found at the lower end of the left fibula (Fig. 3B).

The left kidney appeared normal. The right kidney contained a large, irregular pelvic calculus with numerous small calyceal and possibly parenchymal calcifications (Fig. 4).

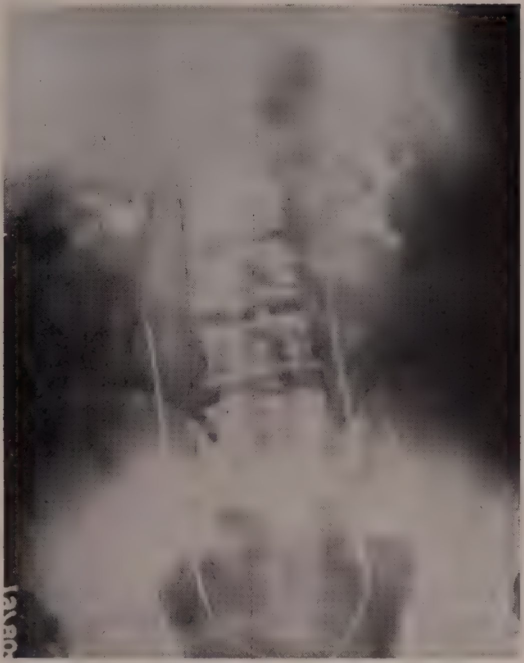

FIG. 4. *Case 3*—Renal calculi in patient with generalized osteitis fibrosis cystica.

The diagnosis of hyperparathyroidism was made, and operation was performed on August 10, 1953, eleven days after admission. A tumor mass measuring 2 by 1 by 0.6 cm. was found on the left side, behind the inferior thyroid artery, lying against the trachea. It was excised completely (Fig. 5). Pathologic report was parathyroid adenoma.

Postoperatively, the patient was given calcium gluconate intravenously during the first twenty-four hours and then calcium lactate orally, 9 Gm. daily, and in addition 4 mg. of dihydrotachysterol. His postoperative chemistry studies are shown in Table I.

The patient was allowed to walk on the day following operation and was discharged on August 19, 1953, nine days postoperatively. Oral calcium lactate and dihydrotachysterol were prescribed. When he was last examined on October 17, 1953, his condition was improved.

Clinical Features

The symptoms presented by patients with hyperparathyroidism are the result of altered calcium-phosphorus metabolism and may be divided into three groups: (1) those due to chemical changes in the blood and urine, (2) those due to secondary involvement of the urinary

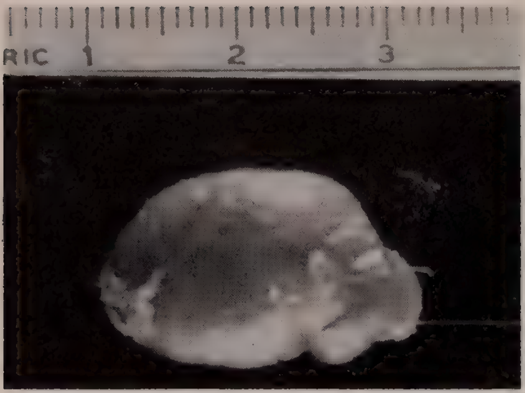

Fig. 5. *Case 3*—Parathyroid adenoma.

tract, and (3) those due to demineralization of the skeleton.

The chief symptoms associated with hypercalcemia are the opposite of those found in parathyroid tetany. There is a variable degree of weakness, fatigue, and muscular atony. Gastrointestinal symptoms such as nausea, vomiting, anorexia, and constipation are common. Because of the excessive excretion of calcium and phosphorus, there may be severe polyuria and polydipsia which at times has led to an erroneous diagnosis of diabetes insipidus. In the majority of cases these symptoms are vague and mild or even absent and are rarely of diagnostic value except in retrospect. The excessive excretion of calcium and phosphorus in the urine favors the formation of calculi in the renal pelvis or deposition of calcium in the renal tubules. Symptoms may be produced by the urinary calculi per se, by infection of the urinary tract secondary to the stones, or by impaired urinary function resulting from nephrocalcinosis. The stones are usually calcium phosphate, but in the presence of acid urine the more insoluble calcium oxalate may be formed. It should be emphasized that a mild degree of hyperparathyroidism may result in sufficient stone formation to kill the patient. Symptoms due to skeletal involvement vary from vague aches and pains to the extremely deforming generalized osteitis fibrosa cystica. In some instances there is generalized demineralization, while in others localized cysts or tumors occur. Pathologic fractures are frequent. In extreme cases there is kyphosis, loss of height, and other deformities. Epulis of the jaw is often suggestive of the disease.

Significance of Renal Calculi

Because of the bizarre and dramatic bone changes associated with hyperparathyroidism, it is not surprising that the skeletal aspect of the disease was recognized for many years before the renal aspect. In 1904 Askanazy[2] first called attention to the association of tumor of the parathyroid glands with disease of bone. It remained for Mandl,[3] who performed the first surgical extirpation of a parathyroid adenoma in a patient suffering from fibrocystic disease in 1925, to prove that the bone changes were due to a hyperfunctioning parathyroid tumor.

In 1934 Albright *et al.*[4] reported 17 cases of hyperparathyroidism observed during a short period and concluded that (1) hyperparathyroidism can occur without disease of bone, (2) involvement of the urinary tract is a more common and more important manifestation of hyperparathyroidism than involvement of the skeleton, (3) hyperparathyroidism is relatively common, and (4) it is the cause of renal calculi in an appreciable number of cases.

Recognizing the need for a deliberate search among patients with renal calculi for other evidence of hyperparathyroidism, Keating and Cook[5] at the Mayo Clinic were able to diagnose 24 cases in two and one-half years, as compared to only 14 cases in the previous fourteen years. Of the 24 cases 18 had symptoms referable to the urinary tract, whereas only six had symptoms referable to the osseous system. Cope[6] reviewed the clinical types of hyperparathyroidism at the Massachusetts General Hospital and reported that 55 per cent had renal calculi alone and another 14 per cent had both renal stones and decalcification of bone. Less than one third of their cases had osseous disease in the absence of urinary tract involvement. Thus, it has been

TABLE I.–Postoperative Chemistry Studies in Case 3

Date	Urine Calcium	Serum Calcium (Mg. Per Cent)	Serum Phosphorus (Mg. Per Cent)	Alkaline Phosphatase (King-Armstrong Units)
August 2	2 plus	11.3	2.3	72.5
14	0	8.2	1.0	94.0
September 17	0	8.4	2.8	62.0
October 10	0	9.0	2.5	51.4

well established that renal lithiasis is a prominent feature of hyperparathyroidism.

Is the converse true? Is hyperparathyroidism a common cause of renal calculi? Barney and Mintz[7] found that hyperparathyroidism was the etiologic factor in about 4 per cent of the cases of renal calculi that they observed. Cope has stated that between 10 and 15 per cent of the patients with renal stones investigated by his group are eventually proved to have hyperparathyroidism. Keating reported 24 cases of parathyroid adenoma and stated that this represented about 2 per cent of the patients seen with urinary tract calculi during the same period. These data indicate that approximately 5 per cent of patients with renal calculi have parathyroid overactivity as the cause of their stones.

Diagnostic Criteria

Because the parathyroid tumors may be difficult to find due to aberrant localization in the mediastinum, it behooves the internist to be quite certain of his diagnosis prior to advising surgery. The preoperative diagnosis of hyperparathyroidism depends upon the demonstration of disturbance of calcium and phosphorus metabolism. The chief criteria are (1) hypercalcemia, (2) hypophosphatemia, (3) hypercalciuria, and (4) elevated serum alkaline phosphatase.

The normal range of serum calcium is 8.5 to 10.2 mg. per 100 cc. In hyperparathyroidism the level is usually above 12. If there is but minimal elevation, the tendency is to discard the tentative diagnosis. However, some cases show only slight elevations above normal. The values are usually higher in the cases of classic bone disease than in those with minimal or no bone changes. Repeated determinations over a period of time are often necessary to establish the significance of slight changes in suspected cases. Since a portion of total serum calcium is combined with protein, the serum calcium determination is only valid when the total serum protein is normal. If the serum protein is elevated, a minimal degree of hypercalcemia may be of no significance, whereas a similar degree of hypercalcemia might be diagnostic in hypoproteinemic states.

The serum inorganic phosphorus varies normally from 3.0 to 4.0 mg. per 100 cc. The amount of depression of the phosphate level in hyperparathyroidism may be slight and may vary with repeated determinations, but this change is more constantly present than is hypercalcemia (Albright[1]). Therefore, hypophosphatemia enhances the diagnostic import of minimal serum calcium elevation. In about one fourth of his cases Keating found the value of serum phosphorus within normal range on at least one occasion, which again emphasizes the importance of repeated determinations. In the presence of renal insufficiency the depression of phosphorus may be obscured by the tendency toward phosphorus retention, and the serum phosphate level may be normal or slightly elevated in these cases. The determination of nonprotein nitrogen is essential to evaluate renal function in such instances.

The quantitative determination of twenty-four-hour excretion of calcium in the urine in patients maintained for several days on the low-calcium diet of Bauer and Aub is an accurate and valuable adjunct to the diagnosis of hyperparathyroidism. A normal individual excretes less than 100 mg. of calcium daily, while values above 150 are highly suspicious and above 200 definitely diagnostic if vitamin D intoxication, pyelonephritis, and certain metastatic carcinomas can be ruled out. This study, however, is too cumbersome for routine use, and the qualitative test devised by Sulkowitch[8] provides a means of rapid estimation of the presence or absence of excessive urinary calcium. The test can be performed at the bedside in a few seconds and serves well as a rapid and cheap method of screening such groups of patients as those admitted with renal calculi. Of course, in cases of advanced renal impairment there may occur diminution of calcium excretion.

The normal alkaline phosphatase value is 4 to 10 King-Armstrong units per 100 cc. There is usually elevation of alkaline phosphatase in cases with bone disease, while the level is normal in patients without skeletal changes. The level of circulating serum alkaline phosphatase is dependent in part upon the activity of the osteoblasts. Secondary to the decalcification of hyperparathyroidism, there is overactivity of the osteoblasts with resultant elevation in the serum alkaline phosphatase. It is thus a reflection of bone change rather than of hyperparathyroidism per se.

Certain changes in the bones on roentgenologic examination are considered characteristic of the disease and have been well reviewed by Pugh.[9] Lahey[10] directs attention to three abnormalities that may serve as clues to the diagnosis, namely, the absence of the lamina dura of the teeth, the presence of mandibular cysts, and the report of a giant cell tumor on biopsy of a bone cyst. Nathanson and Slobodkin[11] have pointed out the early subcortical rarefaction that may be found at the lateral ends of the clavicles.

In summary, it would appear advisable to determine the serum calcium, phosphorus, and and proteins, as well as the qualitative urinary calcium (with the Sulkowitch reagent), in all patients with renal calculi or with bone demineralization. If hypercalcemia, hypophosphatemia, and hypercalciuria are present, the patient should be placed on a Bauer-Aub diet and a quantitative urine calcium be obtained.

Pathologic Aspects

About 90 per cent of cases of primary hyperparathyroidism are caused by adenoma of the parathyroid gland. The remainder are due to diffuse hyperplasia of the parathyroid glands or, rarely, carcinoma. Of 100 cases studied by Castleman[12] six were found to possess two adenomas. This emphasizes the importance of completing the exploration of the neck, even after an adenoma is discovered.

In the presence of a hyperfunctioning adenoma the remaining three parathyroids undergo a variable degree of atrophy, making them more difficult to identify and therefore more susceptible to injury. Extreme care to avoid such injury must be taken to prevent serious postoperative tetany after removal of the tumor. It has been shown by Castleman and Mallory[13] that there is a rough correlation between the severity of the disease and the size of the tumor to be found. A normal parathyroid gland weighs 30 to 40 mg. and measures 6 by 4 by 2 mm. Parathyroid adenomas vary considerably in size and may weigh from 100 mg. to 100 Gm.[14] The majority weigh less than 2 Gm. They possess little fat and are, therefore, a darker brown than the normal glands. When small, they retain the shape of normal parathyroids, while the larger tumors are almost ovoid. The tumors are usually rather soft, and only occasionally can they be palpated on physical examination. The majority of adenomas develop in the inferior parathyroid glands. No appreciable difference has been found between the two sides of the neck.

Histologically, the normal parathyroid gland is composed of two types of cells, the chief cell and the pale oxyphil cell, which is believed to be an involuted chief cell. Other cell types often mentioned in the literature are probably variations of the chief cell. The adenomas are similarly composed of chief cells or their modifications. Usually the cells in the adenomas are seen in sheets or islands of contiguous cells, but occasionally acini are formed.

The location of normal as well as abnormal parathyroid glands is variable, depending in part upon embryologic descent and in part upon displacement in later life due to gravity or negative intrathoracic pressure. Although the majority of parathyroid glands are found in the region of the thyroid gland, they have been located from 1 cm. above the upper pole of the thyroid gland down into the mediastinum as far as the pericardium.[15]

Surgical Treatment

Once the diagnosis of hyperparathyroidism is made with reasonable accuracy, surgical exploration must be performed to locate and remove the parathyroid adenoma. This may be a relatively simple task when the tumor is found in the region of the thyroid gland, or it may be exceedingly difficult if the adenoma is situated in an aberrant position in the mediastinum, embedded within the thyroid gland, or if the disease is not due to an adenoma but to hyperplasia of all four parathyroid glands (8 per cent of cases).

The recognition of normal parathyroid glands requires a considerable experience in identifying them during thyroid operations supplemented by cadaver dissection. The operative procedure consists of a systematic search of the cervical region and, if no tumor (or diffuse hyperplasia) is found, extension of the search into the mediastinum. All four parathyroids should be identified, even after an adenoma is discovered, because of the possibility of multiple adenomas.

Although the superior glands are more constant in position, adenomas are more common in the inferior ones, and the exploration is usually begun in the region of the inferior thyroid pole. The inferior thyroid artery is an excellent guide to the parathyroids, since they obtain their blood supply from this vessel, even when the glands are in an aberrant position. It is essential to dissect the artery carefully and to preserve all branches coming from it since the vascular pedicle supplying a parathyroid gland may lead to its discovery, especially if the gland is displaced into the mediastinum. If a thorough exploration of the cervical region fails to reveal an adenoma and if less than four parathyroids are identified, it is necessary to investigate the superior mediastinum. The posterior mediastinum can be explored and visualized through the cervical incision but not so the anterior mediastinum. It is essential to split the sternum anteriorly and dissect the anterior mediastinum under direct vision.

Because of the possibility of carcinoma, adenomas should be completely extirpated. As stated above, hyperplasia of all four glands may be found instead of a solitary tumor. In such instances subtotal resection of each of the four glands is performed.

Postoperative Management

In the immediate postoperative period it is advisable to administer about 3,000 cc. of fluid per twenty-four hours to assure an adequate urinary output. As the calciuria and phosphaturia decrease, there is a tendency toward oliguria necessitating adequate fluid replacement.

The type of postoperative course depends to a large extent upon the symptomatology presented by the patient. In those cases without bone demineralization, as in Case 2, there is no significant postoperative hypocalcemia. Thus, no therapy to combat tetany is needed. On the other hand, patients with severe skeletal involvement soon develop marked decrease in both serum calcium and serum phosphorus. In addition, there may be a further increase in serum alkaline phosphatase due to the cessation of bone destruction and rapid increase in bone repair. Because of the severe osteomalacia large amounts of calcium phosphate are deposited in the bones with resultant hypocalcemia. Tetany will ensue unless massive doses of calcium without phosphate are administered. We have followed Albright's suggestion of giving 100 cc. of 10 per cent calcium gluconate in a liter of fluid by slow intravenous drip. Since bone remineralization shortly after operation is best kept at a slow rate (to prevent tetany), it is also advisable to restrict foods with a high phosphorus concentration, such as dairy products. During this phase repeated testing of the urine with Sulkowitch reagent will be helpful in indicating when the blood calcium level begins to reach normal. Sometimes, as in Case 3, this may take weeks or months. In such cases calcium salts should be given orally. Calcium lactate is preferable to calcium gluconate since gram for gram the former has more calcium. Calcium chloride may be used, but its value is limited since it is liable to cause acidosis which is harmful in patients with renal impairment.

Dihydrotachysterol (A. T. 10) may be used in order to increase calcium absorption. It can be discontinued as soon as the urine contains calcium as demonstrated by the Sulkowitch test. The same effect may be achieved with large doses of vitamin D.

The best guide as to ultimate recovery is the status of renal function at the time of operation. Postoperatively, in those with renal disease there may develop severe hypertension with or without renal insufficiency. It is most important, therefore, that the diagnosis of hyperparathyroidism be considered and proved before irreparable renal damage occurs, so that the removal of the parathyroid tumor will result in complete recovery.

Summary and Conclusions

1. Two cases of proved parathyroid adenoma are presented, one with urinary calculi alone, the other with both urinary calculi and osteitis fibrosa cystica. A third case with renal calculi in which hyperparathyroidism was suspected but not substantiated is also presented.

2. The clinical features, laboratory findings, and pathologic and surgical aspects of hyperparathyroidism are briefly discussed.

3. A concise and practical procedure for proving or ruling out hyperparathyroidism is described.

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Improved Method for Demonstration of Hiatus Hernia

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Although hiatus hernia was first described almost four hundred years ago, there has been such a resurgence of interest in this condition within the last several years that there is a common belief that this syndrome is a relatively new discovery.

The existence of a hiatus hernia has undoubtedly been missed by competent radiologists even after repeated gastrointestinal studies. The problem is, furthermore, not so simple as it appears since it has been found[1] that the normal esophagogastric junction may extend as much as 3 cm. upward into the thoracic cavity. The mucosa at this junction appears to be mobile over the underlying tissues and is capable of considerable automatic migration, presumably through longitudinal contraction of the muscularis mucosa.

Most radiologists ignore the small hiatus hernia which is almost physiologic in the aging patient, especially the female. The clinically significant hiatus hernia is, however, found at any age, and the failure to demonstrate it may be embarrassing.

There is a common belief shared by those who are not radiologists as well as by radiologists that the use of the Trendelenburg position with a barium-filled stomach will demonstrate this condition.[2] This writer has noted that reliance on the Trendelenburg position may cause a clinically significant hernia to appear small or clinically insignificant and at times that it may not be demonstrable at all. The reason for this may be readily explained by a study of a partially filled stomach taken laterally across the table in the supine or Trendelenburg position. It will be noted from Fig. 1 that the dependent portion of the fundus lies considerably lower than the esophageal orifice so that the pool of barium does not enter the enlarged esophageal orifice. Some writers[3] have advised overdistending the stomach and the application of upward pressure.

Figure 2 is a view of the stomach in the Trendelenburg position. The appearance is that of a normal stomach, yet in the right anterior oblique view, taken during the act of swallowing, a

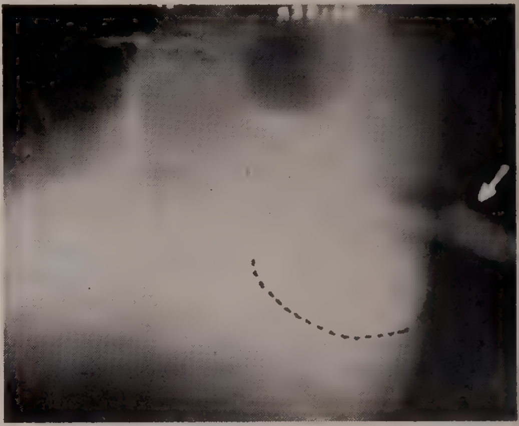

Fig. 1. Lateral view of a normal stomach in Trendelenburg position showing that the dependent portion of the stomach (dotted line indicates fundus) lies considerably lower than the esophageal orifice (arrow).

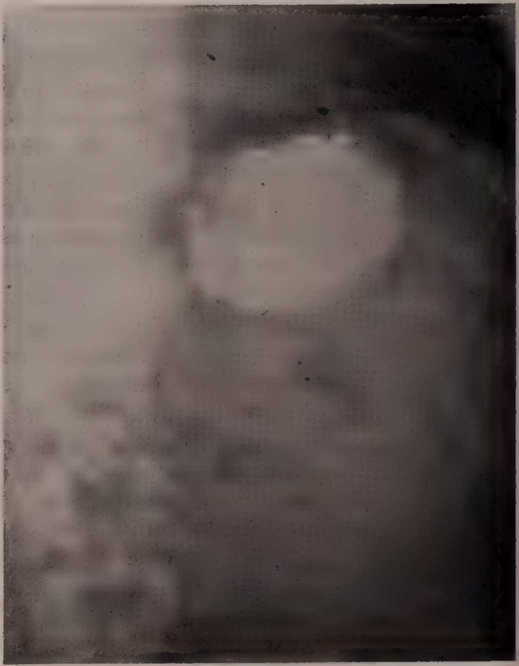

Fig. 2. *Case 1*—Trendelenburg position. The appearance is that of a normal stomach.

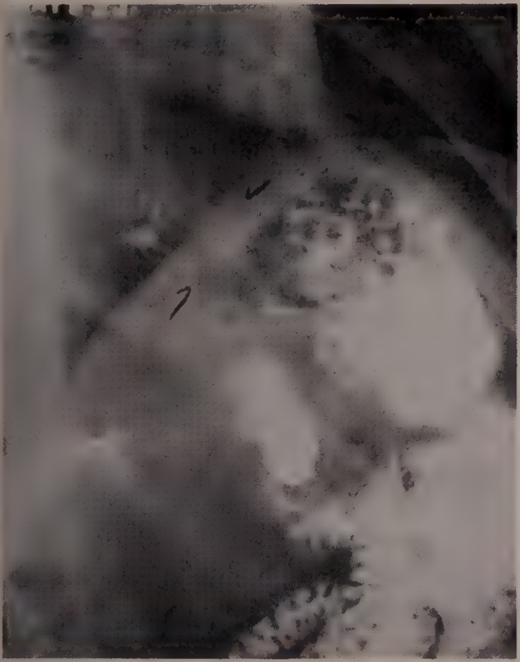

FIG. 3. *Case 1*—Right anterior oblique position during act of swallowing, demonstrating a moderate-sized hiatus hernia. Rugal markings are seen above the diaphragm.

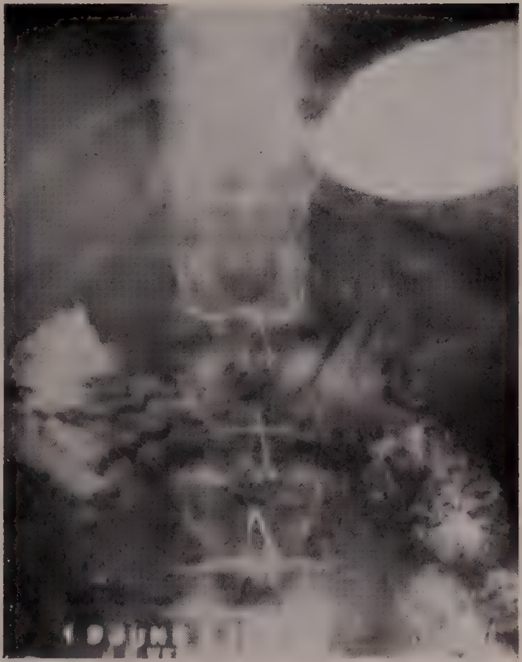

FIG. 4. *Case 2*—Trendelenburg position. The appearance is that of a normal stomach.

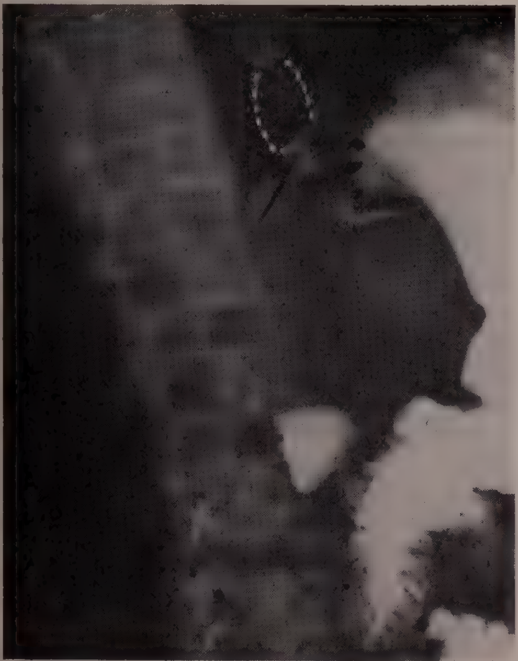

FIG. 5. *Case 2*—Right anterior oblique position during act of swallowing. A strongly suggestive gas-filled hiatus hernia (dotted lines) is demonstrated.

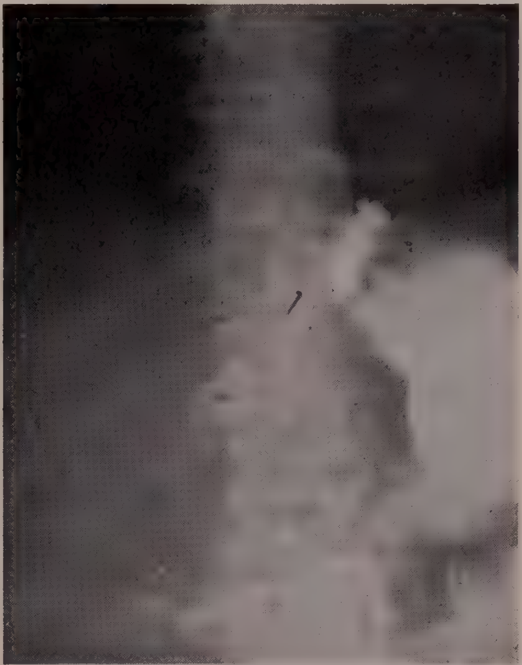

FIG. 6. *Case 3*—Trendelenburg position. Questionable hiatus hernia.

moderate-sized hiatus hernia is demonstrated by the presence of rugal markings above the diaphragm (Fig. 3). Similarly, Fig. 4 reveals a

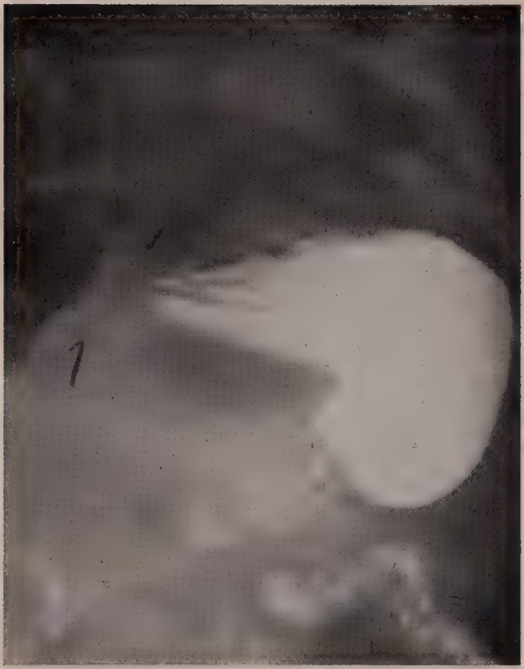

FIG. 7. *Case 3*—Right anterior oblique position. A fairly large, gas-filled hiatus hernia is clearly demonstrated.

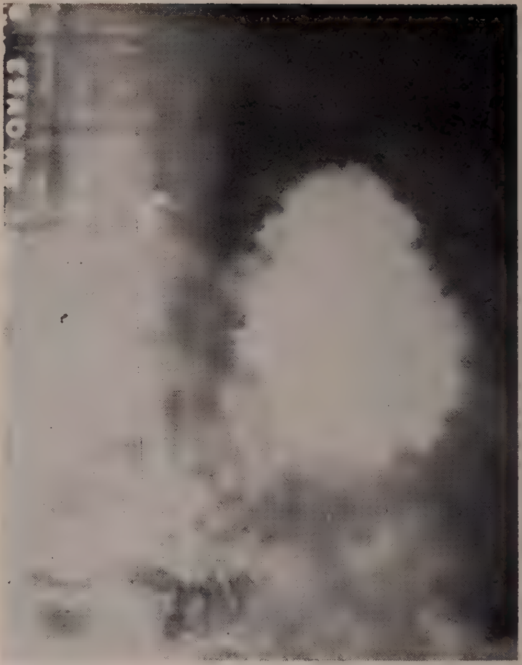

FIG. 8. *Case 4*—Trendelenburg position. Small, apparently insignificant type of hiatus hernia.

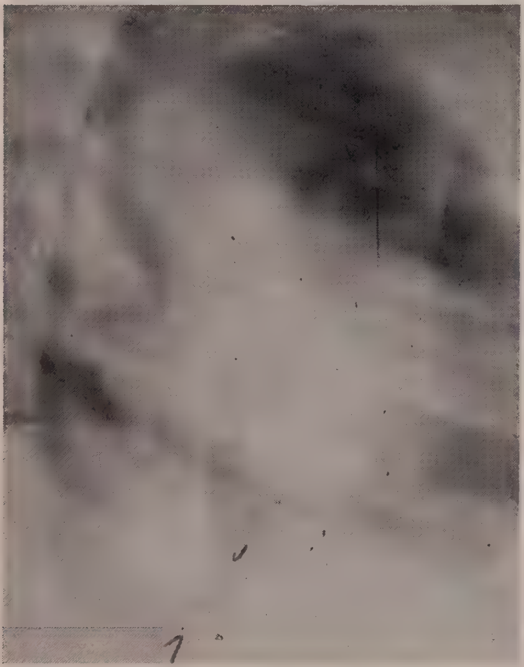

FIG. 9. *Case 4*—Right anterior oblique position during act of swallowing. The hiatus hernia now appears larger and clinically significant.

normally appearing stomach in the Trendelenburg position, whereas the right anterior oblique view taken during the act of swallowing reveals a gas-distended hiatus hernia (Fig. 5). Figure 6 reveals a small questionable hiatus hernia (Trendelenburg position), whereas the swallowing study reveals a large gas-filled hernia (Fig. 7). Figure 8, again taken in the Trendelenburg position, reveals a small, almost physiologic hiatus hernia, whereas the swallowing film reveals a hernia which was clinically significant (Fig. 9).

After a number of diaphragmatic hernias were missed, the writer felt that the swallowing film should be a part of every routine gastrointestinal study. Since it is difficult to "catch" the lower esophagus during the act of swallowing a mouthful of barium suspension without undue film wastage, it was found that routinely excellent swallowing studies could be obtained in the right anterior oblique view by having the patient sip the suspension continually from a piece of rubber tubing dipped into a glass of barium meal during the exposure.

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Culdoscopy in Amenorrhea

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(From the Gynecologic Service, House of the Good Samaritan)

SINCE 1943 Decker[1] and others[2,3] have used culdoscopy successfully for a variety of obstetric and gynecologic indications. The procedure, in essence, consists of insertion of an endoscopic device, similar in part to a cystoscope, through the cul-de-sac of a female patient in knee-chest position. When performed properly, it allows adequate observation of the pelvic viscera.

The indications for culdoscopy are in the diagnosis of ectopic pregnancy, to identify pelvic endometriosis, to localize and help determine the significance of a pelvic mass. There is considerable difference in the management of a small, pedunculated uterine fibroid and a solid ovarian tumor. The diagnostic acumen of the digital pelvic examination done by the gynecologist is often taxed considerably in localizing exactly a small pelvic mass. Direct visualization with the culdoscope obviates this difficulty.

Culdoscopy is often used in search of an organic lesion in an attempt to explain pelvic pain. The reassurance that one can give a patient whose pain is of psychosomatic origin is justified by the confirmation of normal pelvic organs verified by culdoscopy. The modality of therapy in such cases can be intelligent.

The indiscriminate exploratory laparotomy in the apparent gynecologic problem may serve as an impetus to the symptomatology of the neurotic patient. It may make it possible for the nongynecologic surgeon, not familar with gynecologic pathology, to remove organs merely suspected of producing symptoms. Culdoscopy can supply information equivalent to that obtained with pelvic laparotomy.

Culdoscopy is also of merit in the study of infertility problems; it has also been used as a diagnostic aid in endocrine problems.

It has been our practice to use culdoscopy in the aforementioned indications, but we have extended its use to selected cases of nonobstetric amenorrhea. This usage has enabled us in some cases to identify definitely the etiologic basis of the amenorrhea and to carry out the proper therapy when indicated.

Amenorrhea signifies the absence of menstrual flow. When pathologic, this state is of interest not only to the gynecologist but also to the internist and endocrinologist since a wide variety of systemic conditions may be responsible for absence of menses. The structures which are commonly involved are the pituitary, ovary, and uterus. The thyroid and adrenal may be concerned, and such an etiology may be suggested by certain clinical manifestations.

It is because of this possible diversity of causes that detailed physical examination, vaginal smear studies, 17-ketosteroid determinations, basal metabolism studies, sugar tolerance tests, and x-ray studies of the pituitary may also be indicated. The identification of the causative levels in the pituitary-ovarian-uterine relationship, as outlined by Meigs and Sturgis[4] and accomplished by selective hormonal administration, is nice in theory but often ineffectual in practice. Hormonal assays of blood and urine may be informative, but such technics are infrequently available to practitioners in smaller communities.

Stein-Leventhal Syndrome

In 1935 Stein and Leventhal[5] reported a type of ovarian dysfunction characterized clinically by amenorrhea and sterility and producing the pathologic picture of ovaries which may be large and typically are pale, smooth, and polycystic. It has been demonstrated by Stein and Cohen,[6] Meaker,[7] and Ingersoll and McDermott[8] that normal ovarian function can be established in a high percentage of these women by a simple plastic operation on the ovary. Recently, the possible effectiveness of oral cortisone has been suggested in conjunction with surgery or without it.[9]

The diagnosis of this disorder is not always easy for the bilateral enlargement of the ovaries may be only moderate, and frequently they are not palpable. Stein[5] employed gynecography with pneumoperitoneum to demonstrate the abnormal ratio in ovarian size. Decker[1] has used culdoscopy in identifying this condition.

Through culdoscopy we have made this diagnosis five times in the past year, and the following case illustrates the ease of diagnosis and effectiveness of treatment.

Case 1.—Mrs. S. H., a twenty-two-year-old, white married female, was first seen at a time when she was contemplating marriage. The patient stated that her menses began at age thirteen, continued irregularly for approximately one year, and in the succeeding eight years she had been amenorrheic except on occasions when various physicians treated her by injection therapy. Previous parenteral hormone therapy at times had caused episodes of bleeding per vagina but were never successful in causing resumption in cyclic bleeding. She had had no therapy in the past two years. The remaining history was not pertinent.

Physical examination was not remarkable except for some mammary hypoplasia. There was supralabial hirsutism which the patient believed to be familial. The distribution of hair on the lower abdomen was not atypical.

The introitus was normal. The cervix was of normal size and well covered. The uterus was anterior, of normal size, with regular contour, and freely movable. The adnexae were not enlarged; no distinct masses were palpated. The clitoris was not enlarged.

Temperature charts showed a uniphasic course. Vaginal smear studies were done which showed adequate cornification. Repeat endometrial biopsies were done which showed proliferative endometrium.

Empiric courses of estrogen and progesterone, singly and in combination, given orally and parenterally were equivocal in localizing possible uterine or ovarian pathology. Skull x-rays were negative.

Culdoscopy was performed with observation of moderate, bilateral ovarian enlargement. The ovaries appeared pale and smooth and grossly suggestive of Stein-Leventhal ovaries. The pathologic findings were consistent with Stein-Leventhal syndrome.

At a later date laparotomy was done. Appendectomy and bilateral wedge resection of the ovaries were performed. Three weeks following discharge from the hospital she had three days of bleeding per vagina. In the succeeding eight months she continued with cyclic menses, and her basal temperature chart showed a predominantly biphasic curve.

By means of culdoscopy the diagnosis was made in four additional cases, and essentially the same results were obtained with bilateral ovarian wedge resection.

Turner's Syndrome

Utilizing culdoscopy, we have also been able to confirm the existence in one patient of a syndrome first described by Turner[10] in 1938. This syndrome has been variously titled Turner's syndrome, the congenital syndrome of aplastic ovaries, and ovarian agenesis. As originally described by Turner, it consists of amenorrhea, short stature, congenital webbing of the neck, and an increase in the carrying angle of the elbows. The syndrome was further elaborated on by Varney, Kenyon, and Koch,[11] by Albright, Smith, and Fraser,[12] and by Wilkins and Fleischmann.[13] The present concept of this disease is that it is based upon a genetic factor which is responsible for failure of the ovaries to develop normally.

Goldberg *et al.*[14] and Lisser *et al.*[15] have described the syndrome in detail. They state that studies have shown that the ovarian tissue in these cases is represented by attenuated, elongated, glistening white structures which are described as "streak ovaries." Histopathologic examination of these structures revealed the absence of germinal epithelium and primordial germ cells and showed them to consist entirely of stroma.

> The typical case is characterized by short stature though normal or tall height has been encountered as exceptions. The breasts are usually underdeveloped; pubic and axillary hair is usually present though sparse. The external genitalia are infantile and the adnexae are impalpable. Webbing of the neck may occur, also cubitus valgus. Hypertension may be present and incidental anomalies of the cardiac, skeletal and nervous system may occur. The amenorrhea that is present is usually primary.
>
> Urinary 17-ketosteroids may be excreted in lower than normal concentrations and the urinary gonadotropin titer is excessively high, approximating the titers found in castrate or postmenopausal women.[14]

Therapy is directed to the prevention of premature fusion of the epiphysis of the long bones in the younger age groups so that normal growth may be maintained. In the older patients the prevention of osteoporosis and premature senility is the therapeutic goal. The administration of an oral estrogen is sufficient to accomplish these ends, and the cyclic use of such a preparation with periodic withdrawal can simulate menstruation when this is deemed psychologically necessary.

Hormone therapy carried out for a sufficient interval re-establishes the secondary sex characteristics and is a concomitant of adequate treatment which must be lifelong. In selected cases male hormone therapy may be utilized for its beneficial effect on growth and general anabolism.

Goldberg and Lisser have proved the diagnosis by peritoneoscopy or by exploratory laparotomy in six cases. We have made the diagnosis by culdoscopy in one case and verified it subsequently at laparotomy for acute appendicitis.

Case 2.—Miss H. B. was a twenty-one-year-old white female with the chief complaint of never having menstruated. Except for the usual childhood diseases this patient had been entirely healthy. At the age of sixteen, when her menses had not occurred, she consulted a physician who advised no therapy but observation. Intermittently during the past four years, on the recommendation of other physicians, various hormone preparations were used both parenterally and orally with limited success in initiating uterine bleeding. No bleeding episodes ever occurred spontaneously or without the prior administration of hormones.

On physical examination this patient was tall (5 feet 7 inches) and thin (105 pounds). Breast tissue was hardly apparent; pubic and axillary hair was minimal. The external genitalia were infantile. The vaginal mucous membrane was drier than normal, and the cervix and corpus uteri were very tiny. No structures were palpated in the adnexae. The only other recognized stigma of the disease was an increased carrying angle of the elbows.

The vaginal smear showed atrophic changes. Repeat endometrial biopsies were done in the office with no tissue obtained.

At the time of culdoscopy the Lilliputian character of the uterus was confirmed, and despite adequate visualization no distinct ovarian tissue was identified. In its place white, elongated strands of tissue could be seen. Following this procedure the patient was informed of the diagnosis and the impossibility of childbearing. Hormonal therapy was suggested at this time but was refused.

At a later date the patient was seen with signs and symptoms of acute appendicitis. Laparotomy was done with removal of an acutely inflamed appendix. At the time of surgery a biopsy of the "streak ovaries" was done. Pathologic examination of the material obtained showed connective tissue elements resembling ovarian stroma.

Following surgery the patient was placed on cyclic, oral estrogenic therapy. This has been responsible for an increase in the size of breast development and periodic uterine bleeding. In the course of one year no marked increase in the size of the uterus is apparent, but vaginal smear studies show a high degree of cornification.

Summary and Conclusions

Culdoscopy is of value in a variety of obstetric and gynecologic indications.

In selected cases of amenorrhea culdoscopy is a diagnostic aid that may contribute to the recognition of the causative state and thus to proper therapy.

The use of the culdoscope in the recognition of five cases of the Stein-Leventhal syndrome and one case of Turner's syndrome is discussed.

Franklin Street

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Scandalum Magnatum

The felon waiting—condemned to die
Is treated so much better than I.
A full and hearty meal he'll rate
Before he walks to meet his fate.
But I, who never robbed a bank
Or shot a gun in willful prank
Must starve while I wait in dread to see
What the x-ray says is wrong with me.
When they said "No Breakfast," I had
no hunch
That would also mean "No Lunch."
And though I long for figure thinner,
I'll raise a row if they say "No Dinner."
—*Current Medical Digest, July, 1954*

CLINICOPATHOLOGIC CONFERENCE

MEADOWBROOK HOSPITAL

HEMPSTEAD, NEW YORK

Conducted by THEODORE J. CURPHEY, M.D.

APRIL 16, 1954

Case History

ADMISSION TO TUMOR CLINIC

T. L., a white male, age sixty-four, was first seen in the Tumor Clinic on February 3, 1953, with chief complaint of pressure in the chest of six weeks duration associated with dry cough. There was no history of recent cold or hoarseness, and patient did not smoke.

System review was essentially negative except for weight loss of 40 pounds in past six months.

Previous history revealed bronchopneumonia thirty years ago. Family history indicated that one brother had died of carcinoma of the stomach.

Clinical Summary.—The chest and axillae showed no abnormality. X-ray of the chest on February 3, 1953, revealed a smooth, circular, "cannon-ball" density, 9 cm. in diameter, in the right lower lung field behind the right border of the heart. The lung fields were otherwise clear. Hemoglobin at this time was 12 Gm., white blood cells 8,400 with 63 neutrophils, 28 lymphocytes, and 2 eosinophils.

On February 16 fluoroscopy of the chest was performed. The heart revealed no evidence of abnormality. The large radiopaque mass was noted as reported in the previous x-ray. The lung fields surrounding the mass were well aerated. The trachea appeared natural and in midline. The diaphragms moved normally. On barium swallow the esophagus appeared normal.

On February 27 bronchoscopy was performed. The larynx and visible bronchi showed no abnormality. Bronchial washings were taken; no tumor cells were seen.

On March 27 the patient complained of severe, intractable pain in the right shoulder with loss of motion. There was tenderness on palpation anteriorly and posteriorly. An x-ray of the shoulder at this time revealed no evidence of metastatic disease.

HOSPITAL ADMISSION

The patient was admitted to the hospital on April 17, 1953. The admission history recapitulated that described above with additional complaints of poor appetite for the past several months. For the two weeks immediately prior to admission there had been a fairly constant, boring pain in the right chest radiating around to the front of the chest. It was particularly severe in the two days just prior to admission. There was no cough, and the pain was not aggravated by breathing or coughing. Four weeks prior to admission the patient noted the presence of a hard lump in the right side of his neck while shaving. He stated that it had not increased in size since.

Physical Examination.—The patient was a tall, well-developed, sixty-four-year-old white male with evidence of weight loss. He appeared to be in constant, moderate distress. Pulse was 80 and regular, and blood pressure was 120/80.

The skin of the arms was freckled, and an occasional flat nevus was present. No lymph nodes were palpable. The ears, nose, and throat were not remarkable. There was a hard nodule in the right lower neck which moved with swallowing and was apparently attached to the thyroid.

The chest was clear to percussion; at the right posterior base there were occasional fine crackles. At the right lateral base a definite pleural rub was heard. Heart showed regular sinus rhythm with no murmurs.

The spine showed no abnormalities and no costovertebral angle tenderness. In the abdomen the liver and kidneys were not palpable. There was no clubbing or edema of the extremities.

The genitalia showed normal male testes descended bilaterally; the prostate was soft with 2 plus enlargement; brown feces were present in the rectum, and no abnormal masses were palpable.

Laboratory Data.—Repeated urinalyses were essentially normal except that 1 to 3 red blood cells and 2 to 3 white blood cells per high-power field were noted.

Blood examinations were as follows: April 18—hemoglobin 12.4 Gm. (78.5 per cent), red blood cells 4,200,000, white blood cells 15,200 with 81 neutrophils, 15 lymphocytes, and 4 monocytes; May 14—hemoglobin 11.2 Gm. (71 per cent); May 28—hemoglobin 10.5 Gm. (67 per cent), red blood cells 3,670,000, white blood cells 21,950 with 89 polymorphonuclears, 7 lymphocytes, 3 monocytes, and 1 eosinophil.

On April 18 Wassermann, Kahn, and VDRL were all negative; blood urea nitrogen was 26, sugar 90, alkaline phosphatase 16.5, acid phosphatase 2.4.

Stools were negative for blood on April 17 with a faint trace on April 22. A basal metabolic rate on April 27 was plus 45.

X-ray Examinations.—Chest x-ray on April 20, 1953, again showed large, rounded mass in the right lower lobe. It was not so distinct as on previous study which may have been due to poor penetration.

Intravenous pyelogram on April 23 was negative. Lumbar spine changes were seen.

Spine, rib, and pelvis x-rays on April 29 revealed no evidence of bony destruction in the ribs and dorsal spine. Osteolytic changes were noted involving the third and fourth lumbar bodies on the left side. The pedicle on the left side of the third lumbar appeared to be absent. The intervertebral disk space was narrowed, and there appeared to be some evidence of collapse of the body. There was considerable productive change around the narrowed intervertebral disk space. There was also some narrowing of the disk space between the fourth and fifth lumbar vertebrae on the right side with considerable sclerosis. The impression on these films was of destructive changes involving the third, fourth, and fifth lumbar vertebral bodies. The lesions were considered to be consistent with metastatic lesions, although the picture was not typical because of apparent involvement of the disk space.

The large density in the right lower hemithorax was again noted, and the rib cage was intact on x-rays of the chest and spine on May 29. The cervical spine showed no evidence of destructive change. The dorsal spine showed minimal wedging of one of the lower segments with productive changes, possibly on the basis of old trauma. The pedicle of the eleventh dorsal appeared to be eroded, and metastatic disease involving the tenth, eleventh, and twelfth dorsal vertebrae was suspected. There was some destruction of the third lumbar body. The impression was that the lesions involving the tenth, eleventh, and twelfth dorsal and third lumbar bodies represented malignant disease on a metastatic basis.

Clinical Course.—On April 21, 1953, the patient was examined in the Tumor Clinic. There was described in the right lower neck beneath the sternomastoid a tumor mass, 5 cm. in diameter, which moved and arose from the right lobe of the thyroid. Both vocal cords were seen to move normally on phonation. The impression was "carcinoma of the thyroid with pulmonary metastases." On the following day an aspiration biopsy of the neck mass was performed. Pathologic report was "malignant cells seen."

For four weeks the patient remained afebrile. For the next three weeks there were occasional temperature spikes of short duration between 101 and 102 F. In the last two days of the hospital stay the patient was febrile with temperature varying between 100 and 103 F.

It was decided to give the patient palliative x-ray therapy. Accordingly, daily doses of 100 r were given to each of three ports, one in the right side of the neck and two in the right posterior chest region. The patient received a total of 900 r to each of these three ports.

He began to experience extremely severe pain both in the chest and in the back, for which he required almost constant sedation and narcotics. The point was reached where frequent doses of morphine failed to give relief. He became noisy and confused, and because of this, three days prior to death, he was transferred to the psychiatric ward. Because of a temperature rise to 103 F. on May 13 the patient was placed on 300,000 units of penicillin once a day. He received this for seven days, at which time there was noted a diffuse, macular-papular skin eruption, presumably caused by penicillin sensitivity, and the drug was cut. Finally the patient expired on June 2, 1953, the forty-ninth hospital day.

Discussion

Dr. Herbert R. Zatzkin (Radiologist): To start with, on April 20, 1953, we were presented with a man who showed a round, homogeneously dense, circumscribed mass in his right lower lung field. No calcification was evident. This caused us to use the term "cannon-ball metastasis," which appears so frequently in the literature. When it does, we usually think in terms of the kidney as the offending organ. Nevertheless, this man complained of intractable pain in the right shoulder, and incidentally we took films thinking perhaps to rule out metastases to the humerus or shoulder girdle. Instead we found calcareous tendonitis, which we treated. This was incidental to the man's difficulty.

Subsequently a skeletal survey was carried out on April 29, 1953. His lumbar spine is interesting in that there is an abnormality seen at what we take to be the second and third lumbar. It would appear that there is considerable sclerosis and narrowing of the intervertebral disk space. This isn't the sort of thing one sees in metastases. For something to have existed this length of time one would expect eburnation and sclerotic changes. This appears to be something old and longstanding, and we assume that this change was on the basis of old trauma. He might even have had a herniated disk at that level at one time. In this film there is nothing that characteristically looks like metastatic disease. True, the anterior end of this body appears to be a little lighter than the other, but there is gas which you can see thinning out in this region. There is a lot of hyperostotic productive overgrowth and no definite evidence of metastases at this base. If you look rather high (tenth or eleventh dorsal), however, this body appears to have lost some height; it's barely included on the film. So the possibility of a metastatic disease up high is suggested at this date. Changes in the lumbar spine we can't be certain of in so far as metastatic disease goes, but certainly there is evidence of old degenerative arthritis.

We have a pyelogram taken April 23, 1953, which we reported as negative, but there are changes in the film that in retrospect should have warranted a retrograde study for further evaluation.

We have subsequent skeletal studies in this case (May 29, 1953). You will notice that the body here, what we take to be the eleventh dorsal, is narrow in this plane. Additional study shows that the cervical spine has lost a little of its lordotic curvature, although there is nothing definite to suggest metastasis. At this time there is anterior wedging and collapse of this segment (eleventh dorsal). Certainly, this is not a degenerative change, and if he didn't incur trauma in the interval, this must be considered due to pathologic involvement of the vertebra, I mean by that, metastasis. In this plane you will notice some soft tissue density in the upper lumbar paraspinus region. This suggests some paraspinus infiltration, possibly associated with metastatic disease.

To sum up the situation, then, you are confronted with a man who has a mass in his chest; who has findings in his bones which we feel represent metastases; who also has a node in his neck. We are dealing then with a primary tumor somewhere which has metastasized to the neck and bone. The lung lesion may very well represent the primary tumor. We have seen primary lung tumors present as a circumscribed peripheral mass. It would be somewhat unusual, it is true, to have it attain this size before doing all the damage it has done, but you cannot exclude this as representing the primary neoplasm. We must consider other tumors which would go to bone. I am not convinced that we have not excluded kidney from this case. Certainly this has not been adequately resolved. The thyroid may be the seat of tumor which will very frequently metastasize to bone. It might also give you a large mass in the lung. Another more remote possibility is the pancreas. It might very well go to bone and to lung.

Dr. Theodore J. Curphey: Dr. Zatzkin, I understand that the mass in the neck was not lymph node enlargement but was an intrathyroid mass.

Dr. Zatzkin: Well, we might have a primary thyroid neoplasm. I am not qualified to speak on the incidence of metastases to the thyroid gland, although I wouldn't imagine it to be the most common thing in the world. I would consider it a very remote possibility that you would have such a metastasis. On the other hand, just for speculation, I shall consider that this was all metastatic in which case, just to complete the picture, such a thing as a melanoma should be considered. Lymphoma is not likely; myeloma is not likely. I would say on a statistical basis we would have to consider as first choice a primary lung cancer, second choice a primary growth in the kidney, and third choice a primary growth in the thyroid.

Dr. Curphey: You have heard the x-ray discussion. May we have some discussion from the floor now.

Dr. Thomas P. Connolly: Looking over the protocol, I get much the same impression as that of Dr. Zatzkin. In addition to the primary site mentioned, you would have to consider the prostate as well as the stomach. Going over the patient's complaints, chest pain could easily be related to the large mass in the right lung field. A laboratory finding which would tend to limit my diagnosis was the acid phosphatase of 2.4 mg. per cent. The alkaline phosphatase was 16.4 mg. per cent. The former would tend to rule out prostatic cancer if taken in the light of the bone metastases. That, along with the fact that there was no mention of a nodular or indurated prostate, would tend to rule that site out as the primary. The patient changed his white blood cell picture toward the end which would tend to indicate the breakdown of a tumor process with local sepsis. The confusion and disorientation could easily be explained by cerebral metastasis. I don't think a spinal tap was done. I would take as my first choice a kidney tumor, a hypernephroma, with widespread carcinomatosis.

Dr. Gilbert Graham: Is it likely for a primary carcinoma of the thyroid to metastasize distantly without showing any of the so-called lateral aberrant thyroid nodules?

Dr. Curphey: From the material I have seen, that is reasonably true. But you can negate that statement by the fact that in the field of oncology you often get bizarre changes in the individual case. That would not be sufficiently safe to be used as a differential diagnostic point either to establish or rule out a primary in the thyroid.

Dr. Earl R. Kiernan: If I remember correctly, in a perinephric abscess isn't there scoliosis to the side of the abscess?

Dr. Zatzkin: No, it's usually away.

Dr. Kiernan: What I had in mind was to associate the minimal x-ray evidence of kidney lesion, the process in the vertebral column, the few red cells in the urine, and the minimal amount of blood in the stools. I would suggest a tumor of kidney with extension to the pancreas, colon, and vertebral column.

Dr. Graham: For the sake of completeness I would like to mention that there may be branchial cleft remnants and that these can become malignant.

Dr. Curphey: From the record I believe it is stated quite clearly that the lesion is in the thyroid itself, or is there some question of that in your mind?

Dr. Graham: It says "apparently attached to the thyroid."

Dr. Curphey: Let's take it from the other angle then. How frequently do you find malignant disease involving branchial clefts in contrast to embryonal defects associated with inclusion cysts?

Dr. Graham: Practically, it would be something you could throw out and feel no compunction about neglecting. However, this is a CPC. (*Laughter*)

Dr. Curphey: You wouldn't though, I take it, place your first bet with all the evidence you have on the possibility of a malignant process (it is usually a carcinoma) arising in a branchial cleft.

Dr. Graham: No.

Dr. Oscar Devera: I think we're dealing with a case of widespread metastatic malignancy. It is just a question of finding out where the primary is. And, as Dr. Graham says, this is a CPC so we have to be thinking of the unusual. I think you would have to say, first, although it doesn't look like the usual tumor of the lung, that the diagnosis is "carcinoma of the lung." Then, a second diagnosis, probably, although we don't have the proof of this, would be "renal malignancy." The third diagnosis would be that made on the ward of "carcinoma of the thyroid with pulmonary metastasis." Then, there is always the possibility of melanoma.

Dr. Curphey: It is stated in the record that the man had a nevus.

Dr. Devera: Personally, I believe the diagnosis is renal carcinoma with metastases.

Dr. Geraldine Levitt: We cannot overlook the mass in the thyroid. I believe the primary malignancy was in the thyroid.

Dr. Albert N. Meyerstein: I agree with Dr. Zatzkin's mention of the possibilities, and I am glad that he mentioned myeloma, but I would like to call attention to several of the findings. One was the blood count; second, the period of fever, and third, the skin rash that he had.

The red blood count came down very slowly. It was an anemia that was not very outspoken. Usually in a carcinoma, and especially in a melanoma, a faster fall in the blood count is to be expected. He also had a leukocytosis with a relative lymphocytopenia. There was a period of irregular fever which has not been discussed very thoroughly. Although the fever may be accounted for by necrosis or pulmonary inflammation surrounding the lung mass and although the x-rays do not show conclusive evidence of hilar adenopathy, I feel that Hodgkin's disease cannot be completely ruled out.

Dr. Bertram Fuchs (Discussant): Just briefly to go over some of the salient points in the protocol. This was a male of sixty-four. He did not smoke. There was rather extensive weight loss. Another point is that his brother died of carcinoma of the stomach. The symptoms began six weeks before he was first seen and were undoubtedly related to the circular density in the right lower lung field which stayed about the same size throughout the four months that he was followed. Barium swallow revealed a normal esophagus. Unfortunately they did not see what happened in the stomach. The tenderness in the shoulder, I think, is clear and is not contributory so far as the final diagnosis is concerned. The mass in the neck he noted about March 17 which was a month before admission which makes it some three months after he probably had something in his lung. Again I call attention to the fact that an occasional flat nevus was noted. Nothing else was said about these, and in themselves they mean nothing except, as everyone has hinted, they might represent a possible point for degeneration into malignant melanoma. The hard nodule we must assume was in the thyroid. If we can believe the protocol, it was in the thyroid, and there were malignant cells in the thyroid. The blood pressure was 120/80 which was normal. The pulse pressure was normal. The pulse was not elevated. I think that is important. The prostate was not remarkably enlarged. It was soft.

In the laboratory data we have repeated urines, but they were all taken the first four days, and there were none for a long time after that. The urine was not too unusual, although it is true there should be no red blood cells in male urine. These were not seen in all specimens and, when seen, numbered only one or two, presumably on spun-down specimens. The initial blood count was not unusual. He had a mild anemia and a normal white count. It was only near the end that he developed a leukocytosis. The alkaline phosphatase was moderately elevated, although the acid phosphatase was not. I think we can rule out the possibility of prostatic carcinoma since with extensive metastases to the bone, as this man had, he would certainly have an acid phosphatase above 2.4. The blood urea nitrogen was elevated. There was no blood in the stool. The basal metabolic rate was plus 45, which I'll say something about later. The intravenous pyelogram was reported negative. There were changes in the vertebrae, as Dr. Zatzkin pointed out. The one atypical point in these bone x-rays is the apparent involvement of the disk space. Again, whenever we see involvement of the disk space, we think of tuberculosis. Certainly, there is nothing else in this entire case to point to any tubercular lesion. Finally, the feeling on the ward that there was carcinoma of the thyroid with pulmonary metastases has to be considered strongly. The final fever I will say more about later.

Now, the problem here is probably simpler than in most CPC's. We all know that the patient had a cancer and that he died as a result of it. Neoplastic changes were noted to occur in three different sites, namely, the lung, the thyroid, and the vertebral column. Although he could have more than one tumor, it is more likely that there was just one primary tumor with metastases to the other sites mentioned. Assuming that he had a primary with metastases, it would be a mistake to conclude necessarily that the lung, thyroid, or bone was the primary site and the other two structures the site of metastases. A hidden primary growth which remained either very small or at any rate clinically quiescent may metastasize widely, and these metastases may be the only clinical evidence of tumor.

Chronologically in this case, presenting symptoms and x-ray findings of a circumscribed density in the right lower lung field raise the question of bronchogenic carcinoma as a first and perhaps primary site. In favor of a primary pulmonary neoplasm: (1) the evidence that the initial findings were in the lung; (2) probably the most frequent tumor responsible for metastatic growth in the thyroid is carcinoma of the lung, especially in the male; (3) terminally the patient did become psychotic which may have been the result of cerebral metastases, a common finding in lung cancer. Against a primary pulmonary neoplasm are (1) the patient never smoked, and we know that among those in whom lung cancer is found there is a very high percentage of heavy smokers:

(2) widespread bone metastases are rather uncommon in lung cancer; (3) bronchoscopy was negative, and the lung fields surrounding the mass were well aerated, suggesting parenchymal rather than bronchial involvement. I feel that the evidence is against primary bronchogenic carcinoma.

A primary malignant bone tumor could not present this clinical picture so it can be ruled out.

A primary carcinoma of the thyroid would fit the picture in many respects. Carcinoma of the thyroid produces skeletal metastases in a disproportionately large number of cases, the skeleton being easily the most frequent systemic site of metastasis. This was proved by Willis.

Likewise, metastasis to the lungs occurs in approximately 65 per cent of cases of thyroid cancer. An important question to answer is whether the patient had hyperthyroidism. On April 27 his basal metabolic rate was plus 45. He had a 40-pound weight loss. On the other hand, he also had had a poor appetite, his pulse was only 80, and there was no increased pulse pressure, tremor, or any other stigmata.

On rare occasions thyroid toxic symptoms have resulted from metastatic tumors in the thyroid gland. Therefore, if hyperthyroidism were present, it would fit better with a primary thyroid cancer rather than a metastasis to the thyroid gland. Now, the incidence of thyroid cancer in endemic goiterous regions is from 2.5 to 4 per cent. But in goiter-free areas the incidence is less than one-half of 1 per cent. In most series the ratio of females to males is about three to one. In over one half of all cases of primary thyroid cancer the cancer arises in a pre-existing adenoma. This cannot be used as a point of differentiation because pre-existing abnormalities of the gland were found also in the majority of cases with metastatic growth to the thyroid gland. Metastatic growths are more frequently multiple than single, and the diameter of individual nodules varies between 2 and 3 cm. Now, in spite of the elevated basal metabolic rate, I do not think the patient had hyperthyroidism. A single abnormal basal metabolism is of little significance, especially when the clinical picture is not that of hyperthyroidism. Although primary carcinoma of the thyroid is a real possibility, its small incidence, especially in the male, makes me doubt that this is the correct diagnosis.

Having eliminated the known sites of the primary, I must turn to one of the clinically hidden primaries which characteristically metastasize lung, bone, and thyroid. Renal carcinomas are very unpredictable in their behavior. Some grow for long periods to a huge size without metastases. Others remain small and symptomless and yet produce extensive remote metastases, usually by way of the bloodstream. The lung contains metastases in about three fourths of fatal cases of renal cancer. The skeleton is also a favorite site of metastases, which are present in about half of autopsied cases.

Of a composite series of 126 cases of metastatic carcinoma to the thyroid, 13 per cent were from renal carcinoma. It is true that the intravenous pyelogram was negative as far as the protocol went, and the urine examination showed few abnormalities. Unfortunately, no urine examinations were done during the last six weeks of life. So a small parenchymal focus could easily give a negative intravenous pyelogram and normal urine. Spiking fever noted during his final two weeks could go with a renal carcinoma.

Carcinoma of the stomach should also be considered as a hidden primary for several reasons: (1) there is a familial history of carcinoma of the stomach since his brother died from this, and (2) it is a very common cancer, accounting for about 40 per cent of cancer deaths in this country. The lungs show secondary growth in about one fourth of the fatal cases, and bone metastases ranged from between 5 and 10 per cent. Thyroid metastasis from the stomach is uncommon but by no means rare. The barium swallow did not include examination of the stomach and, therefore, carcinoma of the stomach cannot be ruled out.

Finally, a melanoma arising from a pigmented nevus, the eye, or a juxtacutaneous mucous membrane may give rise to widespread metastases, including the lung, bone, and thyroid. In the same series of 126 cases of thyroid metastases mentioned above, 18 per cent were melanotic growths. The incidence of melanoma is less than 1 per cent of all autopsies, however. Therefore, my first choice is carcinoma of the kidney; second, carcinoma of the stomach; and, third, a malignant melanoma.

Dr. Curphey: We will now have the autopsy findings.

Pathologic Report

Dr. Basil Moumgis (Resident): The patient showed considerable emaciation, and there was a large mass in the right side of his neck which on external examination was about 3 cm. in diameter and appeared to be in the thyroid. The trachea was in the midline. There was no evidence of any nodes palpable at the time of autopsy on external examination. On opening the body it was noted that the pleural cavities were free of adhesions and of fluid, except in the right base where the lung was firmly adherent to the diaphragm. The heart weighed 450 Gm. and seemed essentially normal.

The lungs were both rather heavy. One weighed 581 Gm. and one 570 Gm., the right being heavier. The left lung showed good aeration of the apices and absence of congestion. The right lung showed adherence to the diaphragm. The tracheobronchial tree was opened and contained some mucoid purulent material. In the bronchi there was noted a primary tumor involving the right lower lobe bronchus together with a large space-occupying tumor mass in that lobe which was firm and showed areas of degeneration. The tumor was described as being yellowish-white in appearance, and there were focal areas of necrosis. The bronchus was extensively infiltrated. The hilum showed metastatic lymph nodes which were enlarged by what seemed to be metastatic tumor. The tumor in the right lower lung measured approximately 8 cm. in diameter. The right lobe of the thyroid was enlarged to twice the size of the left. On cut section the entire right lobe, except for $^1/_4$ inch in the perimeter, showed replacement of the gland by firm, whitish tumor tissue. The nodule was about 6 cm. in diameter. Another metastatic nodule in the left lobe measured 2.5 cm. in diameter.

The phrenic fat pad on the right side showed evidence of enlarged lymph nodes replaced by tumor tissue. Further, there were described a metastasis present in the spleen, a single nodule about 3 cm. in diameter beneath the capsule. There were also noted other multiple metastatic lesions. There were nodules found in both kidneys up to 4 cm. in diameter, with one of these encroaching on the pelvis but apparently not ulcerating through the membrane of the pelvis. Also, there were nodular metastases present in both adrenal glands. Tumor was described as being present in the first to fifth lumbar vertebrae. The lower dorsal vertebrae were apparently free of tumor, but the sixth dorsal showed some replacement by tumor tissue. Incidentally, the gastrointestinal tract was entirely negative throughout. The brain was not examined.

The final pathologic diagnosis was then primary carcinoma of the lung with metastases to the thyroid, the scalene lymph nodes, the spleen, the kidney, the adrenals, and the vertebral column.

ANNOUNCEMENT

SCIENTIFIC EXHIBITS

1955 ANNUAL CONVENTION MEDICAL SOCIETY OF THE STATE OF NEW YORK

Applications for space for the scientific exhibits should be made directly to the Chairman of the Subcommittee on Scientific Exhibits of the Convention Committee:

William L. Watson, M.D.
340 East 72nd Street
New York 21, New York

The Annual Convention will be held May 9 to 13, 1955, at the Hotel Statler, Buffalo. *No applications can be considered after January 1, 1955.*

There will be two groups of awards:

Group I: Awards in Group I are made for exhibits of individual investigation, which are judged on the basis of originality and excellence of presentation.

Group II: Awards in Group II are made for exhibits which do not exemplify purely experimental studies and which are judged on the basis of presentation and correlation of facts.

W. P. Anderton, M.D., *Secretary*
Medical Society of the State of New York

CASE REPORTS

Spontaneous Unilateral Diaphragmatic Paresis

A. LIEBERMAN, M.D., NORTHPORT, NEW YORK

(From the Northport Veterans Administration Hospital)

DIAPHRAGMATIC paralysis artificially induced to produce a surgical splinting of the lung has been well known for the last forty years. "Spontaneous" paralysis is much less common but has been frequently seen, especially in connection with tuberculous infection and following acute diphtheria. The American literature appears to be singularly barren of references to diaphragmatic paresis. Schwaderer[1] in a very exhaustive article gives some 49 references, not one of which is American. In none of the articles read was there seen a case where the patient had been examined *before* the appearance of the paralysis. We had the opportunity to make such an examination and deem it sufficiently interesting to report.

Case Report

O. C., born in 1911, served in the Army from 1942 to 1945. He was employed as a hospital attendant at the Veterans Administration Hospital, Northport, in 1951. Complete physical examinations, including x-rays, were done repeatedly, the last time in October, 1952. On December 13, 1952, he had what he thought was a "cold." The hospital doctor reported an injected pharynx. The patient spent a few days in bed with slight fever, aches and pains, and severe general malaise.

In March, 1953, a routine chest film showed a high right diaphragm. He was admitted to the infirmary ward for further study. Physical examination was completely unrevealing. A careful neurologic examination showed no abnormalities whatever. All muscles had good tone and, as nearly as could be determined, were normal. Chest x-rays for tuberculosis were negative. Mantoux test had been positive at original employment in 1951. Sedimentation rate was only 5. Spinal fluid, blood studies, liver profile, circulation studies, etc., were unrevealing.

The entire pathology centered on the fluoroscopic study of chest which was reported as follows: "Fluoroscopic examination of the chest revealed right hemidiaphragm to move normally on slow deep inspiration and expiration. However, on *rapid* inspiration the diaphragm started to move down and then suddenly moved up . . . assuming the high position seen on previous chest film . . . A weakness of the *muscle* resulted in paradoxic movement of the diaphragm when the intra-abdominal pressure was increased suddenly by forceful inspiration. This finding may be due to localized muscular weakness involving right leaf of the diaphragm."

It is hard to escape the conclusion that the illness of December, 1952, with the sore throat followed by profound prostration was quite likely viral in nature. Was it an attack of poliomyelitis involving paralysis of the right phrenic nerve alone? This makes an interesting speculation which, by the very nature of the case, cannot be either proved or denied. The patient has been well for the past year. The paresis has persisted unchanged.

Summary and Conclusion

A case of paresis of the right diaphragm is presented. In October, 1952, the chest was entirely normal. On December, 13, 1952, the patient had a sore throat which was seen in the infirmary and for which he was sent home. He was quite prostrated for several days. In March, 1953, the paradoxic movement of right diaphragm was discovered. It is believed that the diaphragmatic paresis was the direct result of the December, 1952, illness. That illness led to an acute infectious neuritis selectively involving the phrenic nerve on the right side. Very probably, the infection was viral in nature. Whether or not it was anterior poliomeylitis cannot be proved or disproved at this time. The persistence of the paresis for over a year makes this diagnosis very likely. As far as can be determined from search of literature, this is the first such case where the previously normal condition of the diaphragm could be proved.

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Boeck's Sarcoid in a Postoperative Abdominal Scar

EDGAR LEON DITTLER, M.D., NEW YORK CITY

(*From the New York Medical College and Flower and Fifth Avenue Hospitals*)

THE patient, a fifty-three-year-old white housewife, was examined on May 4, 1953, because of the presence of a painful and tender lump which had appeared several weeks previously on the right side of the abdominal wall.

On physical examination, deep in the subcutaneous tissue at the upper angle of a twenty-five-year-old right rectus appendectomy scar, a firm, somewhat tender nodule, 3 cm. in diameter, was found. It was adherent to the underlying fascia and muscle. No hernia was present. No other abnormal findings were revealed.

She was admitted to Flower and Fifth Avenue Hospitals where x-ray of the chest, gastrointestinal series, barium enema, complete blood count, and urinalysis were all found to be normal.

On May 27 the patient was operated on by Dr. John Herrlin. The previous scar was excised, and the tumor was found in the subcutaneous tissues, extending down into the fascia and rectus abdominis muscle. It was widely removed, and the patient made an uneventful recovery. The wound quickly healed. There was no palpable evidence of tumor locally. Pathologic report done by Dr. Francis Speer revealed the tumor to be Boeck's sarcoid (Figs. 1, 2, and 3).

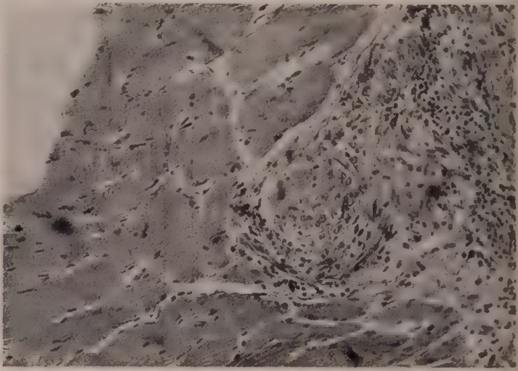

FIG. 1. Rectus muscle showing the sarcoid granulomas and moderate lymphocytic infiltration (low power magnification).

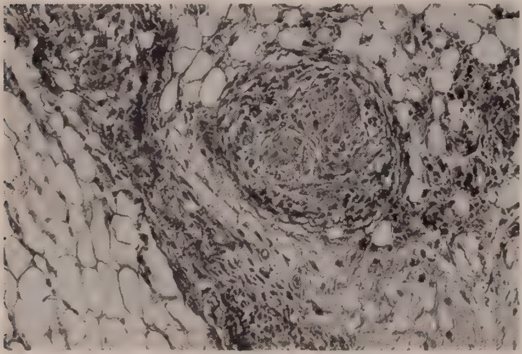

FIG. 2. Adipose tissues of abdominal wall showing multiple sarcoid granulomas and focal fibrosis (low power magnification).

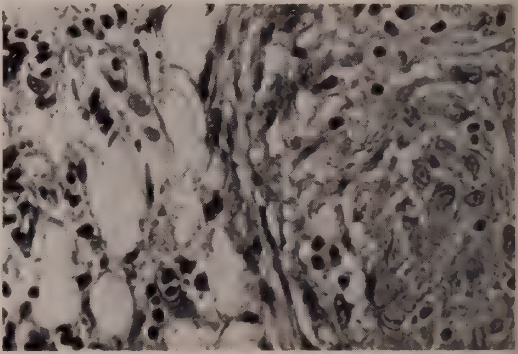

FIG. 3. Edge of sarcoid granulomas showing well-developed epithelioid cells, absence of caseation, and early fibrosis (high power magnification).

The patient was started on Cortone on the fourth postoperative day. She left the hospital ten days following the operation, and Cortone was continued for an additional two weeks. She has been examined on several occasions since then, and there is no evidence of Boeck's sarcoid, either locally or systemically.

Summary

A case of Boeck's sarcoid is reported which showed only one isolated nodule in the abdominal wall.

We all have need of the prayer of the British mariner: Save us, O God. Thine ocean is so large and our little boat is so small.—CANON FARRAR

Low-Dosage Irradiation of Ovaries in Treatment of Functional Menstrual Disorders

KALEVI KETTUNEN, M.D.,* AND ELMI HARLAHTI, M.D., HELSINKI, FINLAND

LOW-DOSAGE irradiation may be beneficial in management of hypofunctional menstrual disorders. In 1915 van de Velde[1] first reported the return of normal ovarian function after small doses of roentgen rays had been applied over the ovaries. Since then several reports have appeared substantiating these results.[2-9] Series of cases have been reported in which secondary amenorrhea was relieved by irradiation of the ovaries, but only five successfully treated cases of primary amenorrhea have been reported in the literature.[2,3] The present writers have treated a case of primary amenorrhea with success.

Case Report

A. L. L., a single girl of nineteen years, originally was admitted to the hospital because of mental disorders. Family history revealed that mother was designated as an "infantile personality." Two of the stepsisters were hospitalized for mental illness. Past history revealed that the early development of the patient was retarded; she learned to speak at the age of nine. There was no history of any major illness. Because of active symptoms of a psychosis she was referred to the hospital. According to the history given by the mother the patient never had menstruated.

Physical examination disclosed an asthenic, poorly nourished girl, 175 cm. long, weighing 52.7 Kg. Thyroid gland was of normal size. The teeth were carious in the majority. A roentgen study of the chest showed a normal heart shadow and clear lung fields. Pulse was 82, blood pressure 115/70, and temperature 36.6 C. Routine laboratory examinations showed hemoglobin 85 per cent and Wassermann and Kahn tests negative. Blood sedimentation rate was 6 mm. in one hour (Westergren). Urine findings were within normal limits. Abdominal examination revealed no unusual findings, and the genitalia were normal.

Neurologic examinations were essentially normal. On psychiatric examination the girl appeared pleasant and friendly, manifesting infantilism. The intelligence tests revealed that she was far below the average in intelligence. She showed immaturity in her interpersonal relationships, disturbances in mental controls, and deviation in thinking. Schizoid traits were elicited.

She received electroconvulsive therapy with only slight transient improvement. Periods of temporary improvement were never long enough to permit her to leave hospital.

Having stayed in hospital for almost four years, she evidently never menstruated. In spite of complete absence of menstruation the demonstration of cyclically recurrent excitement suggested the presence of some ovarian activity. Low-dosage roentgen therapy was suggested to her on the theory that the source of her mental disorder could be due to the disturbed endocrine balance and that this form of treatment might benefit her.

The factors employed were 170 kilovolts and 4 milliamperes with a filtration of 0.5 mm. copper. The focal skin distance for each field was 30 cm. The ovaries were treated by right and left anterior fields, using applicators of 10 by 15 sq. cm. Treatment was given at weekly intervals for four weeks. The spacing of the dosage was as follows: first week left anterior pelvic field 300 r, second week right anterior pelvic field 300 r, third week left anterior pelvic field 200 r, and fourth week right anterior pelvic field 200 r. The dosage was measured on the skin.

After irradiation scanty bleeding occurred three weeks after the withdrawal of the radiation therapy. Since then she has shown irregular cyclic flow. No improvement of the abnormal mental state was observed.

Comment

The work of Muller and others[10] has demonstrated that gene mutations may be induced by irradiation of the ovaries. Therefore, the application of radiation to the ovaries may be unjustifiable during the childbearing age in cases in which pregnancy may subsequently occur.

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Pancreatic Cyst in Pregnancy

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(From the Department of Gynecology, Yonkers Professional Hospital)

OCCASIONALLY when performing gynecologic surgery, the gynecologist is confronted with a problem which takes him entirely out of the field of his specialty's surgery.

Case Report

This thirty-four-year-old patient was delivered on December 28, 1953, after having had an uneventful pregnancy. During the course of labor, which lasted three hours, it was noticed that the uterus was pushed to one side with each contraction, but tumor formation was not diagnosed at that time.

After the infant was delivered, it was immediately apparent that there was a large tumor mass which almost filled the abdomen. The diagnosis was ovarian cyst. The next day an x-ray was reported as follows: "An ill-defined mass of soft tissue is noted in the lesser pelvis with the superior border at the level of the first sacral segment." Patient had a normal recovery from the confinement and was discharged after seven days with the advice to return after about two months for the necessary surgery.

During this two-month interval patient reported no discomfort whatsoever. She was seen in the office on February 10, six weeks after confinement. She felt fine, although her appearance was that of a woman at the end of pregnancy. She stated that except for the knowledge that she had a tumor, she had no complaint. The findings were the same as on the day when she was discharged from the hospital. All diagnostic signs pointed in the direction of a typical ovarian cyst.

Patient was admitted for surgery on March 9. After the abdomen was opened, the tumor presented itself looking like an ovarian tumor. While trying to lift the tumor in its entirety out through the incision, it was noticed that there was a broad attachment somewhere near the upper pole. Examination of the lower pelvic cavity revealed a normal uterus with normal ovaries. It was then realized that we were attempting the removal of a tumor which belonged in the field of upper abdominal surgery. Fortunately, one of our attending surgeons (Dr. Greenfield) was present, and together we removed the tumor which was about 7 inches in diameter. We found the pedicle attached to the pancreas. The upper part of the neoplasm was covered by transverse colon. The peritoneum was separated from the tumor, following lines of cleavage to pedicle. Multiple bands of adhesions were cut, tied, and the tumor removed. There was typical pancreas tissue in the pedicle.

Patient had a normal recovery. Blood sugar the day after operation was 202. Urine was negative. Three days later blood sugar was 153; five weeks after it was 115.

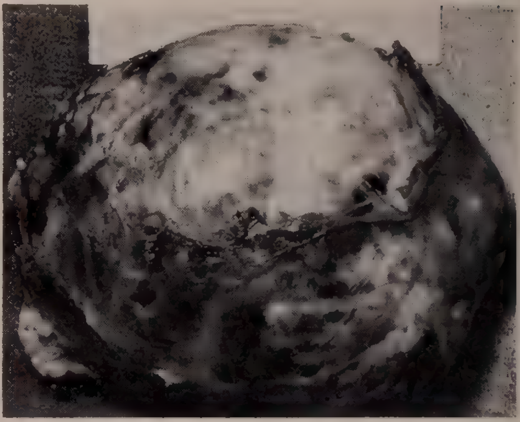

FIG. 1. Large pancreatic cyst with appearance of ovarian cyst.

PATHOLOGY REPORT.—The specimen consisted of a large pancreatic cyst, about 25 cm. at its greatest dimension and well encapsulated by a thick, drumlike membrane which was translucent, purplish-gray, and quite smooth. Its appearance at first sight was that of an ovarian cyst (Fig. 1). The cyst was filled with a clear, pale yellow fluid which quickly digested starch in a test tube, indicating the presence of a great deal of amylase. There was a small bud of pancreas, about 2 cm. in size, attached to it.

Section of the cyst disclosed the lining to consist of a tall, columnar epithelium, probably arising from pancreatic ductal epithelium. Another section disclosed pancreas that was slightly fibrotic and adjacent cyst.

Diagnosis was large pancreatic cyst probably arising from a pancreatic duct.

Comment

Only three pancreatic cysts were found in 6,708 autopsies examined at Guy's Hospital (1884 to 1897).[1] From 1920 to 1937 only five cases of pancreatic cyst were reported at Massachusetts General Hospital.[1] Mayo reported 88 cases up to 1931.[2] Cysts of the pancreas are without question uncommon lesions, but it is doubtful if they are as rare as we have been wont to believe.

Grossly recognizable cysts comprise only a small minority of the several varieties of cysts that are found in association with the pancreas. On the other hand, congenital fibrocystic disease in which the cysts are of microscopic size is becoming increasingly recognized as a cause of pancreatic insufficiency. Even when they are macroscopic, however, congenital pancreatic cysts seldom reach a large size.

Histologically there is usually an exaggerated development of the ducts, and it is from segmented portions of these that the cysts appear to arise. The islets of Langerhans seem to be little affected. Proliferative cysts resemble the cystadenoma of the thyroid or ovary. The fluid content is usually brown, probably from blood, but occasionally clear. It is viscid and may contain mucin, cholesterol, epithelial cells, fat, blood, and necrotic tissue. Early symptoms are vague and extend over many years. Occasional fullness or discomfort in abdomen may be present.

Complete excision is the ideal treatment, although this is quite difficult as a rule. It often happens that pancreas tumors are surrounded by a dense fibrous capsule, which on occasion may be shelled out of the pancreas without serious damage to the parenchyma. A line of cleavage between tumor and pancreas is often difficult to ascertain. In such cases there is danger of hemorrhage and setting up of acute pancreatitis. For these reasons attempts at extirpation must often be abandoned, and simple drainage and marsupialization will have to be done.

In the etiology the factor of trauma has been accorded a leading role in the pathogenesis of the cysts of the pancreas. There is a history of injury in about 30 per cent of cases of pancreatic cysts. The injury is considered to act directly through production of a chronic interstitial pancreatitis. How far the pregnancy in this case could have been the reason for injury is a matter of conjecture.

11 LIVINGSTON AVENUE

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Paroxysmal Supraventricular Tachycardia Treated with Methoxamine

MARDOQUEO I. SALOMON, M.D., A.F.A.C.C., BRONX, NEW YORK

BOTH subspecies of paroxysmal supraventricular tachycardia, the atrial and the nodal, are frequently so dramatic in their onset and in their subjective appearance to the patient that their prompt relief is essential. Even benign paroxysms occurring and recurring in otherwise healthy, but apprehensive or neurotic people can contribute to the development of an "iatrogenic cardiopathy" with all its dire consequences.[1] Obviously, the occurrence of severe or unduly prolonged paroxysms in a miopragic myocardium, e.g, in coronary disease or in mitral disease, even in young people, can easily "release the trigger" and lead to cardiac failure.[2,3] What's more, occasionally even in healthy hearts such spells can lead to decompensation.

In this paper we shall neither discuss the still rather elusive etiology of this disorder nor describe in detail the multiple therapeutic procedures suggested by different authors for the malady under discussion. We shall limit this paper's scope to the description of a case that we treated with methoxamine and to a brief comment on this subject.

Case Report

The case concerns a forty-seven-year-old white woman, brought to the office in a state of semicollapse apparently due to a paroxysm of atrial tachycardia, which started seven hours previously "suddenly, out of a clear sky."

The family history was trivial and noncontributory. So too was her previous personal history except for the fact that she had experienced similar "spells" since she was thirty years old. At that age the first paroxysm appeared, and then an analogous "attack" recurred every few months until she was thirty-six—in other words, until eleven years ago. She had had no further attacks until five months ago. At that time she was brought to the office with a severe paroxysm of atrial tachycardia that yielded only after several hours duration. Carotid sinus massage, calcium bromide, acetylcholine, quinidine, and magnesium sulfate were of no avail. Finally, full digitalization seems to have been the victor in the struggle.

Thus, her most recent attack was separated by a span of eleven years from the last of the "old spells" and by about five months from the first attack seen by the author. The severity of the recent paroxysm was out of proportion to the heart rate (170 per minute). In fact, it was such that the patient was in semicollapse, as stated above. Her skin was cold and moist, the blood pressure was 90/60, and she looked acutely ill. The remainder of the general physical examination disclosed no abnormalities; a roentgenographic survey of the thoracic cavity showed a cardiovascular silhouette of normal size and shape and no abnormalities in the lung fields. The electrocardiogram revealed a semihorizontal heart with the mean QRS axis at around plus 60 degrees. The ST segment was depressed, mainly in lead II, most likely on account of the supraventricu-

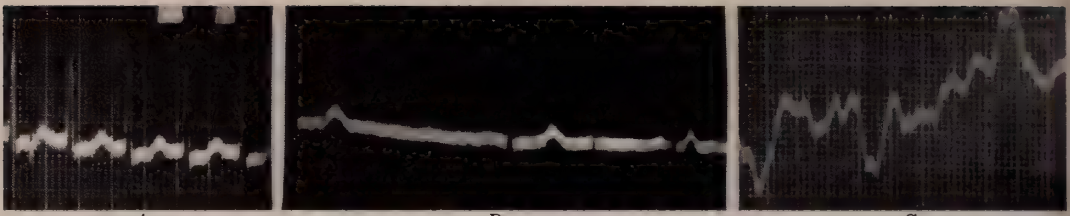

FIG. 1. (*A*) Electrocardiogram taken during attack of paroxysmal supraventricular tachycardia. (*B*) Electrocardiogram taken following administration of methoxamine. (*C*) Dock ballistocardiogram timed with phonocardiogram.

lar tachycardia, which was of the auricular type, with a rate of about 170 (Fig. 1).

In view of the seriousness of the situation it was decided to inject intravenously 20 mg. of Vasoxyl (methoxamine). In a matter of about half a minute, a dramatic change took place in the whole picture of the patient: Gone was the collapsed state. The pulse rate, *pari passu* with the heart rate, dropped abruptly. After a brief period of bradycardia (43 per minute) and a few atrial premature contractions, it went up to and remained at 50 per minute (Fig. 2). The blood pressure climbed to 140/80. Curiously enough, the ballistocardiogram (Dock) remained, as always in this patient, unchanged, i.e., grade III (Fig. 3). Incidentally, there is no plausible explanation for this fact.

The side-effects of the injection were rather marked: intense headache, general nervousness, and a "strange feeling" in the lower abdomen, accompanied by rectal and vesical tenesmus. All these phenomena lasted for more than an hour. They are visibly manifestations of an autonomous nervous system discharge caused by the potent drug. They faded gradually. On the other hand, the tachycardia itself reappeared two and one-half hours after the injection and then yielded only to repeated doses of quinidine.*

Comment

In this paper we do not endeavor to discuss the certainly complicated pharmacodynamic action of methoxamine, for this subject has been covered in a very interesting paper by Nathanson and Miller.[4] The mechanism of action of a similar drug (phenylephrine, Neo-Synephrine) was also the subject of a very instructive paper.[5] Incidentally, both of these drugs have been used with success in other cardiac emergencies also.[6-9] Nevertheless, the rather simplified explanation given by most authors concerning the modus operandi of methoxamine appears unconvincing. While its seems pretty certain that the drug stimulates the aortic and carotid sinus pressure receptors, thus stimulating the vagus (as efferent pathway of a well-known cardiodeceleratory reflex), it is probable that this is only one of the many aspects of its actions. Indeed, Hamilton's article[10] on the cardiac output would point toward a more complicated mechanism. On the other hand, the inconstant effect of carotid sinus massage upon the paroxysm of tachycardia is not a sufficient argument against the theory of direct "cardiotropic" action of these drugs upon the heart's pacemaker or pacemakers.

Be that as it may, the fact remains that the usefulness of methoxamine seems to be established in cardiac therapy, albeit as that of a palliative agent in certain emergencies. A recent article[11] confirms this view. Two recent reports[12,13] seem to corroborate the idea that the inotropic effect of the drugs under discussion is negligible or nil, which would obviously enhance their usefulness to a large degree, especially in miopragic hearts. If further reports substantiate its apparently innocuous influence upon the cardiac muscle and especially if some way is devised to diminish its side-effects, its place in our armamentarium would appear to be assured.

1450 BRYANT AVENUE

The author wishes to express his thanks to Dr. S. T. Bloomfield, Medical Department, Burroughs Wellcome and Company, for his kind assistance in securing some of the bibliographic material related to the use of methoxamine.

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* It seems quite probable that the 20-mg. dose used in this patient was unnecessarily large, most likely even excessive. A smaller amount, for instance 10 mg., would probably suffice and, what's more, would cause few or no side-effects. As a matter of fact, when the paroxysm reappeared, the patient refused "further injections," and this was the reason the drug could not be readministered.

SPECIAL ARTICLE

Chairman's Address to Section on General Practice

FLOYD C. BRATT, M.D., ROCHESTER, NEW YORK

This section is again proud to present an outstanding group of speakers for general physicians as a contribution to the scientific excellence of the program of the 148th Annual Meeting of the Medical Society of the State of New York. And after learning of the large number of general physicians who serve this annual meeting as delegates or on various committees, it is very evident that they are endeavoring to cooperate in every way possible to help solve the problems of organized medicine at a county, district, and State level.

During the past year the Subcommittee on General Practice of the Council Committee on Public Health and Education of the Medical Society of the State of New York has conducted a survey of the status of the general practitioner in New York State hospitals. Dr. Seymour Fiske, a member of the subcommittee, after conducting this survey concluded that the general practitioner is increasingly subject to the following limitations:

1. In his hospital contacts generally, especially in the urban centers.
2. In his own clinical hospital educational opportunities in furthering his own medical skills and technical efficiencies.
3. In his capacity to give his patients a continuing high quality of general medical care.

I recommend that every general physician thoughtfully read this report.

The Subcommittee on General Practice has also prepared a Health Examination Form to facilitate rapid but complete physical examinations and to make available the information thus obtained in an easily accessible and comprehensive document. It is suggested that county medical societies might assume responsibility for printing and supplying further forms at the request of individual physicians.

The subcommittee recognizes that the general physician is increasingly taking his educational welfare into serious consideration. He is assuming more interest and responsibility in the affairs of his local hospital and in his county and State Medical Society. Training for general practice and preceptorships are recognized as part of a general practitioner's responsibility. Finally, his assumed position as an ethical leader in community service goes far in promoting favorable medical public relations throughout the State.

There has been a special tripartite committee of the Medical Society of the State of New York to study the present and future needs of the general practitioner. Samuel A. Garlan, M.D., represents the New York State Academy of General Practice, Franklyn B. Amos, M.D., the New York State Department of Health, and Arthur M. Master, M.D., who represents the Medical Society of the State of New York, is chairman. Much has been accomplished in this cooperative study of the problems and needs of the general physician. Recently this special committee recommended that a full-time postgraduate medical education unit should be established in New York State under the direction of a full-time qualified physician. This unit would function to coordinate all postgraduate medical activities throughout the State and would constantly reevaluate the needs for continued study and the necessary provisions for satisfying these needs.

Richard A. Bellaire, M.D., has been an active member of the Rural Health Subcommittee of the Medical Society of the State of New York. No doubt you have noticed the emphasis placed on the work of the general physician in the annual report of this committee. Dr. Bellaire also serves as the chairman of the Commission on Education of the New York State Academy of General Practice. He is ready to serve all organizations planning continued educational courses by designating the number of formal or informal credit hours merited in relationship to educational value of these courses to the general physician.

Of the 31,000 physicians in New York State, it is estimated that 18,000 are general practitioners, and that about 20 per cent of these are members of the New York State Academy of General Practice. Membership in the Academy designates a general practitioner as one who is constantly continuing his formal postgraduate education and gives him an opportunity to work with a stable, well-organized group of fellow physicians to solve medical problems.

The *General Practice News*, edited by Dr. Garlan, has become an official voice for organized general practice and serves general physicians of this State as an outstanding publication in their behalf.

Finally, in every neighborhood general physicians must strive to assume positions of leadership and re-

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on General Practice, May 13, 1954.

sponsibility. They must earn their hospital privileges by proving that the family doctor endorses only the highest quality of medical practice and that he supports organized medicine in bringing the best available medical care to the citizens of his community.

I wish to acknowledge the valuable services of Vice-Chairman of this Section, Seymour Fiske, M.D., and of Secretary Garra L. Lester, M.D., who mostly is responsible for our program today.

Thank you for the privilege of serving you as Chairman of the Section on General Practice.

Plan Now To Attend!

CONVENTION

New York State Academy

of

General Practice

October 11, 12, and 13, 1954

SYRACUSE, NEW YORK

Department of

MEDICAL CARE INSURANCE

Conducted by GEORGE P. FARRELL, *Director*

Benefits paid for doctors' services during the six-month period ending June 30, 1954, in the New York State Blue Shield Plans, amounted to $17,469,130, covering 450,810 claims, as compared to $14,768,475 for the same period in 1953 for 363,070 claims, an increase in benefits of $2,700,655 and 87,740 claims.

During the same period membership increased by 279,196, making a total membership at June 30, 1954, of 4,590,660. Statistical tables follow.

TABLE I.—Total Membership and Comparative Increases for Quarters Ending June 30, 1954, and 1953

By Types of Contracts	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown	Totals
Surgical								
Total Membership								
June 30, 1954	1,412,843	323,513	320,501	5,274	55,950	...	15,728	2,133,809
March 31, 1954	1,417,175	333,963	315,020	5,348	56,710	...	14,791	2,143,007
Comparative Increase								
June 30, 1954	−4,332	−10,450	5,481	−74	−760	...	937	−9,198
June 30, 1953	9,502	2,689	7,017	−114	−2,209	...	3,704	20,589
Surgical, In-Hospital Medical								
Total Membership								
June 30, 1954	1,745,842	140,647	...	76,520*	121,288	206,191	...	2,290,488
March 31, 1954	1,627,068	127,713	...	65,446*	119,063	203,181	...	2,142,471
Comparative Increase								
June 30, 1954	118,774	12,934	...	11,074	2,225	3,010	...	148,017
June 30, 1953	96,871	16,458	...	5,739	3,375	20,571	...	143,014
Surgical-Medical (Home, Office, Hospital)								
Total Membership								
June 30, 1954	127,604	...	...	38,759	...	...	...	166,363
March 31, 1954	120,874	...	...	40,172	...	...	...	161,046
Comparative Increase								
June 30, 1954	6,730	...	...	−1,413	...	...	...	5,317
June 30, 1953	4,231	...	...	1,867	...	...	...	6,098
Grand Totals								
Total Membership								
June 30, 1954	3,286,289	464,160	320,501	120,553	177,238	206,191	15,728	4,590,660
March 31, 1954	3,165,117	461,676	315,020	110,966	175,773	203,181	14,791	4,446,524
Comparative Increase								
June 30, 1954	121,172	2,484	5,481	9,587	1,465	3,010	937	144,136
June 30, 1953	110,604	19,147	7,017	7,492	1,166	20,571	3,704	169,701

* Indicates accumulated members with service type contracts; others in Syracuse Plan on an indemnity basis.

TABLE II.—Comparison of Membership Increases for Six Months Ending June 30, 1954, and 1953

By Types of Contracts	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown	Totals
Surgical								
June 30, 1954	−43,618	−20,439	11,337	−63	−1,564	...	1,883	−52,464
June 30, 1953	5,389	406	19,029	−4,408	−6,719	...	4,784	18,481
Surgical, In-Hospital Medical								
June 30, 1954	260,348	33,647	...	19,397	2,032	5,774	...	321,198
June 30, 1953	181,185	29,715	...	42,263	7,033	30,849	...	291,045
Surgical-Medical (Home, Office, Hospital)								
June 30, 1954	11,760	...	...	−1,298	...	...	...	10,462
June 30, 1953	11,697	...	...	−22,960	...	...	...	−11,263
Grand Totals								
June 30, 1954	228,490	13,208	11,337	18,036	468	5,774	1,883	279,196
June 30, 1953	198,271	30,121	19,029	14,895	314	30,849	4,784	298,263

TABLE III.—Income, Gain and Loss for Six Months Ending June 30, 1954

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown
Earned Premium Income	$16,872,479	$2,335,770	$1,999,175	$668,766	$727,971	$1,064,984	$84,081
Claims and Expenses Incurred	15,210,833	2,037,174	1,796,772	631,952	690,688	993,281	75,255
Gain from Underwriting	$ 1,661,646	$ 298,596	$ 202,403	$ 36,814	$ 37,283	$ 71,703	$ 8,826
Underwriting Adjustments							
Deferred Maternity Benefits	-$ 175,000	-$ 25,000	-$ 36,988	...	...	-$ 1,000	-$ 3,504
Provision for Special Contingent Surplus	- 688,017	- 94,464	- 80,430	-$ 26,751	-$ 29,119	- 42,588	- 3,473
Profit and Loss Items	- 74,394	1,673	679	...	2,706	- 7,287	30
Total	-$ 937,411	-$ 117,791	-$ 116,739	-$ 26,751	-$ 26,413	-$ 50,875	-$ 6,947
Adjusted Gain from Underwriting	$ 724,235	$ 180,805	$ 85,664	$ 10,063	$ 10,870	$ 20,828	$ 1,879
Gain from Investments	237,483*	18,780	21,485	4,030	10,757	9,200	368
Gain from Underwriting and Investments	$ 961,718	$ 199,585	$ 107,149	$ 14,093	$ 21,627	$ 30,028	$ 2,247
Surplus Adjustments							
Provision for Epidemics and Other Contingencies	$ 332,783	...	...	...	...	...	...
Organization Deposit Repayments Cancelled	...	$ 660	...	...	...	...	...
Increase in Unassigned Surplus	$ 628,935	$ 200,245	$ 107,149	$ 14,093	$ 21,627	$ 30,028	$ 2,247

* $60,259 provision for addition to Special Security Valuation Reserve not included in investment gain.

TABLE IV.—Surplus Accounts, June 30, 1954

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown
Surplus, December 31, 1953							
Unassigned	$ 6,134,375	$ 523,691	$ 714,435	$182,848	$328,201	$259,079	$14,980
Special Contingent	4,742,623	663,472	393,274	140,366	353,594	249,257	5,305
Epidemics and Other Contingencies	1,170,369	...	...	...	...	...	...
Security Valuation Reserve	...	...	...	...	24,000	...	...
Total Surplus	$12,047,367	$1,187,163	$1,107,709	$323,214	$705,795	$508,336	$20,285
Credits							
Net Gain from Underwriting	$ 724,235	$ 180,805	$ 85,664	$ 10,063	$ 10,870	$20,828	$ 1,879
Net Gain from Investments	237,483	18,780	21,485	4,030	10,757	9,200	368
Provision for Special Contingent Surplus	688,016	94,464	80,430	26,751	29,119	42,588	3,473
Organization Deposit Repayments Cancelled	...	660	...	...	...	...	...
Total Credits	$ 1,649,734	$ 294,709	$ 187,579	$ 40,844	$ 50,746	$ 72,616	$ 5,720
Segregated from Unassigned Surplus for Epidemics and Other Contingencies	$ 332,783*	...	...	...	...	...	...
Total Surplus, June 30, 1954							
Unassigned	$ 6,763,310	$ 723,937	$ 821,584	$196,941	$349,828	$289,107	$17,227
Special Contingent	5,430,639	757,936	473,704	167,117	382,713	291,845	8,778
Epidemics and Other Contingencies	1,503,152	...	...	...	...	...	...
Security Valuation Reserve	...	...	...	...	24,000	...	...
Total Surplus	$13,697,101	$1,481,873	$1,295,288	$364,058	$756,541	$580,952	$26,005

* Included in Net Gain from Underwriting.

TABLE V.—Distribution of Earned Premium Income and Amounts Available for Unassigned Surplus for Six Months Ending June 30, 1954

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Jamestown
Earned Premium Income	$16,872,479 100.00%	$2,335,770 100.00%	$1,999,175 100.00%	$668,766 100.00%	$727,971 100.00%	$1,064,984 100.00%	$ 84,081 100.00%
Incurred Claim Expense	$12,523,773 74.23%	$1,778,941 76.16%	$1,604,212 80.24%	$541,862 81.02%	$556,600 76.46%	$ 871,698 81.85%	$63,095 75.04%
Administrative Expense	$ 2,687,060 15.92%	$ 258,233 11.06%	$ 192,560 9.63%	$ 90,090 13.47%	$134,088 18.42%	$ 121,583 11.42%	$ 12,160 14.46%
Provision for Future Maternity Benefits	$ 175,000 1.04%	$ 25,000 1.07%	$ 36,988 1.85%	... ...	... ...	$ 1,000 0.09%	$ 3,504 4.17%
Provision for Special Contingent Surplus	$ 688,017 4.08%	$ 94,464 4.04%	$ 80,430 4.02%	$ 26,751 4.00%	$ 29,119 4.00%	$ 42,588 4.00%	$ 3,473 4.13%
Profit and Loss Items	$ 74,394 0.44%	−$ 1,673 − 0.07%	−$ 679 − 0.03%	... ...	−$ 2,706 − 0.37%	$ 7,287 0.68%	−$ 30 − 0.03%
Available for Unassigned Surplus	$ 724,235 4.29%	$ 180,805 7.74%	$ 85,664 4.29%	$ 10,063 1.51%	$ 10,870 1.49%	$ 20,828 1.96%	$ 1,879 2.23%

·TABLE VI.—Claim Data (Paid Basis)—Year to June 30, 1954, and Comparison of Claim Incidence, June 30, 1954, and 1953

Plan Location and Type of Contract	Earned Premium Income	Claim Cost	Per Cent of Claim Cost to Earned Premium	Number of Claims	Average Cost per Claim	Claim Incidence per 1,000 Members per Annum	
						1954	1953
New York							
Surgical	$ 6,396,985	$ 4,757,103	74.36	78,568	$60.55	109.3	105.7
Surgical, In-Hospital Medical	8,891,128	6,241,530	70.20	110,836	56.31	139.2	133.6
General Medical	1,584,366	1,219,992	77.00	93,781	13.01	1,558.9	1,447.7
Total	$16,872,479	$12,218,625	72.42	283,185	$43.15	...	...
Buffalo							
Surgical	$ 1,470,299	$ 1,165,778	79.29	46,895	$24.86	280.6	261.9
Surgical, In-Hospital Medical	865,471	568,162	65.65	20,222	28.10	321.5	294.2
Total	$ 2,335,770	$ 1,733,940	74.23	67,117	$25.83	...	...
Rochester							
Surgical	$ 1,999,175	$ 1,485,467	74.30	33,801	$43.95	214.1	178.4
Syracuse							
Surgical	$ 25,235	$ 26,722	105.89	832	$32.12	312.8	288.3
Surgical, In-Hospital Medical	376,644	312,275	82.91	9,957	31.36	300.1	231.8
Surgical-Medical	266,887	198,121	74.23	10,504	18.86	529.7	507.8
Total	$ 668,766	$ 537,118	80.31	21,293	$25.22	...	...
Utica							
Surgical	$ 180,552	$ 165,685	91.76	7,051	$23.50	248.6	245.4
Surgical, In-Hospital Medical	547,419	426,388	77.89	17,612	24.21	216.4	292.0
Total	$ 727,971	$ 592,073	81.33	24,663	$24.01	...	...
Albany							
Surgical, In-Hospital Medical	$ 1,064,984	$ 845,847	79.42	19,492	$43.39	190.2	164.2
Jamestown							
Surgical	$ 84,081	$ 56,060	66.67	1,259	$44.53	170.3	123.2
Grand Totals	$23,753,226	$17,469,130	...	450,810	...	..	...

Note: The variation of claim incidence per 1,000 members per annum in plans offering the same type of contract is generally due to additional benefits such as x-ray and anesthesia.

CORRESPONDENCE

Changes in the Obstetric Unit at North Country Community Hospital

To the Editor:

This communication is designed to supplement or bring up to date the remarks stated in the February 1, 1952, New York State Journal of Medicine in an article[1] pertaining to the planning of a new obstetric pavilion at the North Country Community Hospital.

Any building today of this nature usually has changes of a sort made before it is actually completed, and such has been our experience in spite of a survey of some 20 of the best hospitals, both large and small, in several different cities and meticulous going over of a scale model that contained not only the floor and wall plans but actual furniture and equipment. The principal changes that were necessitated, minor as they might be, have afforded a marked improvement in the care of patients. These were initiated through the nursing shortage that is paramount throughout the country. The original idea was to have the workroom for preparing and sterilizing packs in the labor-delivery suite so that the nurses' time would not be wasted during the slack spells that occur in a delivery room where work cannot be scheduled as well as in an operating room. This room was set up adjacent to one of the delivery rooms but at the same time just far enough away from the others so that a nurse could not be in it instead of staying with her patients in the labor and delivery rooms. We have found that with the patients who do not seem to be terribly active the nurses tend to wander from them into the workroom to get their work done. Furthermore, there is a tendency, instead of writing up the charts at the patient's bedside, to go to a desk to do it.

The principal change was thought of after reading the description of the new Kaiser Foundation Hospital in Los Angeles where the scrubroom between the delivery rooms is also utilized as a workroom. Therefore, not needing the four sinks that are in the scrubroom between two delivery rooms, we covered two of these with an easily made plywood type of cover so as to make a nurses' desk there where the nurse can be right in this area looking into one delivery room, and by placing a mirror on the wall above her and a mirror across the hall in the other scrub area, she can with a second's glance peer into all three rooms. We have removed the large sterilizer for packs and also placed it in this area. In addition, we installed a small icebox for milk, cream, cold drinks, etc., and a small electrical outfit for making coffee so that even the time off to get a cup of coffee will be taken in the area where the patients in active labor can be watched constantly.

The utilization of the delivery rooms for active labor, delivery, and postpartum or recovery phase, until the patient is completely awake and bathed, has been a tremendous help in adjusting the work in the department so that the floor nurses in the postpartum area are not concerned with the possibility of postpartum hemorrhage, etc. Then when the mothers are replaced in their rooms, they are sufficiently awake so as to enjoy seeing the baby. However, occasionally with a rapid influx of active patients and more deliveries some of the patients are held back in the labor-delivery area because the nurses in the labor-delivery suite also act as recovery or immediate postpartum nurses, and thus the patients are delayed in getting out to see their husbands, etc. We have, therefore, changed the old workroom previously described above into a sort of secondary recovery room. The patients will stay in the delivery room until good evidence has been obtained that no postpartum hemorrhage of the immediate type is going to occur. Then the patients are transferred to this room, and from this area, if necessary, they can be transferred to an additional recovery room on the way to their postpartum rooms. This room, while next to a delivery room, is far enough up the hall so that new doors could be placed in the corridor separating this room, labor rooms, doctors' rest and dressing rooms from the actual delivery rooms. Thus it is possible to bring in the husband to see his wife if she is detained in this area.

While the original plans called for all the cesarean sections to be done in the section room, the nursing shortage that occurs frequently and acutely on occasions when many patients are in labor has caused us to set up a modified plan so that if the suite is too busy to allow nursing care to cover the section, it is done in the operating room upstairs.

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[1] Millen, R. S.: New York State J. Med. 52: 340 (Feb. 1) 1952.

However, in most instances the cesarean is done in the section room with the actual scrub nurse coming down from the operating room. This has not only speeded up the actual time necessary to get a cesarean under way but has aided tremendously in raising the morale of the nursing staff in the delivery room area for they no longer feel that a cesarean is something above their ability that is done in another portion of the hospital. However, with this compromise arrangement they are not so overburdened as to be afraid of a cesarean.

Robert S. Millen, M.D.

Westbury, Long Island
New York

Possible Cascade Effects of X-rays in Fluoroscopy

To the Editor:

In the April 15, 1954, issue the Journal published an article by Dr. Michael Fry on "The Biologic Effects of Cosmic Rays." I was interested to know whether x-rays also cascaded and so perhaps might be responsible for the alleged preponderance of leukemia in physicians who fluoroscoped their patients. The following letter from Dr. Fry is the answer:

> Dear Dr. Kaunitz:
>
> We have now had an opportunity of investigating the question you posed in your letter, regarding the possible cascade effect of x-rays in passing through the fluoroscopy protection screen.
>
> The screen appears to afford adequate protection from direct radiation, in so far as the gamma-quanta from the roentgen source are not strong enough to knock electrons out of the screen by a cascade effect.
>
> However, a certain number of stray electronic particles may get around the screen or, even, occasionally bounce off the apparatus or other objects in the room. These may well penetrate the operator's body, and if we accept the possible carcinogenic effect of cell mutations, changes may be produced that are irreversible.
>
> The physicist in our "gang," who is a natural cynic, asked me to state that "the only reliable protection against radiation is to stay a hell of a long way from it." Poor consolation for roentgenologists, I agree.
>
> Cordially yours,
> Michael Fry, D.Sc.

Bringing this to the attention of Journal readers might be of value as a caution against the careless handling of the fluoroscope and against its too frequent use.

Julius Kaunitz, M.D.

300 Central Park West
New York 24, New York

Causes of Death

The 1953 death rate among policyholders of U.S. life insurance companies remained at the same low figure of 6.4 per 1,000 that was reported the two previous years. This was only slightly above the record low of 6.3 reported in 1949 and 1950. In 1943, the rate was 715 per 1,000.

This means that there were many thousands fewer deaths among policyholders in 1953 than there would have been had the death rate of 1943 still applied. Part of this saving in lives has been due to the continued progress made in the curbing of infectious diseases. In 1953, the three major infectious diseases, pneumonia, influenza, and tuberculosis combined, accounted for fewer than 5 per cent of policyholder deaths; ten years ago, they caused about 10 per cent of all deaths. Tuberculosis, which alone accounted for nearly 5 per cent of policyholder deaths in 1943, caused slightly over 1 per cent of deaths in 1953. The cancer death rate was about the same in 1953 as in 1952, accounting for about one sixth of the deaths.

Heart diseases continued to be the number one killer in 1953, the entire range of cardiovascular-renal diseases again accounting for well over half of all policyholder deaths in the year. To help in the research for the causes and treatment of diseases of the heart and arteries, the life insurance companies had contributed by the end of 1953 a total of $5.5 million through the Life Insurance Medical Research Fund to support 205 research programs and 238 research fellowships.—*1954 Life Insurance Fact Book*

FILM REVIEWS

The films reviewed below can be obtained by writing to the Film Library Supervisor, Office of Public Health Education, New York State Department of Health, 18 Dove Street, Albany 6, New York. A catalog of all films available will be sent upon request to those interested.

This Film Library is a joint project of the Medical Society of the State of New York and the New York State Department of Health. The Subcommittee on Medical Film Reviews of the Medical Society consists of Dr. John L. Norris, Rochester, chairman; Dr. James J. Quinlivan, Albany; and Dr. Kenneth B. Olson, Albany.

Radical Operation for Cancer of the Cervix. Classification: Surgery; Gynecology; Oncology. Color, silent, 31 minutes. Written by Joe Vincent Meigs, M.D., Boston, Massachusetts, 1947. Produced by Davis & Geck, Inc., New York City.

This is a film record of a radical type of operation for cancer of the cervix, demonstrating careful dissection of the lymph nodes of the pelvis with total hysterectomy including the upper fourth of the vagina. Although the operation is controversial, it is here competently performed and clearly presented.

Audience: Residents in surgery and gynecology, surgeons, and gynecologists.

Plague Control (Navy Code No. MN-4049.) Classification: Bacteriology; Public Health. Color, sound, approximately 24 minutes. Produced by United States Navy in collaboration with Pathescope Company of America, Inc., 1944–1945.

An arresting film on the clinical manifestations, epidemiology, distribution, technics for control of epidemic plague, and therapy. Presented in verbally well-organized but visually uneven form, the problems presented are slanted to a military audience facing potential contact with native populations in endemic areas, but the principles taught will find application wherever plague is a potential or active public health problem.

Audience: Medical students; public health workers, including sanitarians and engineers; medical practitioners (in event of an epidemic); students of medical entomology and advanced bacteriology.

Substitution Transfusion in the Treatment of Erythroblastosis Fetalis. Classification: Pediatrics; Hematology; Obstetrics. Color, silent, 30 minutes. Written and produced by Harry Wallerstein, M.D., New York City, 1947.

The film depicts the author's technics for removing the recipient blood and substituting the donor blood in cases of erythroblastosis fetalis. The film is useful for presenting these procedures in detail but suffers in places from lack of explanation and inadequacies of production.

Audience: Pediatricians, residents in pediatrics, and medical students.

Cervical Diverticulectomy (One-Stage Operation). Classification: Surgery. Color, silent, 22 minutes. Written and produced by Philip Thorek, M.D., Chicago, 1947. Photographed by Jerome J. Moses, M.D.

This is a film record of the performance of a one-stage diverticulectomy for a large diverticulum of the cervical esophagus. The surgical technic is good on the whole, and the method of locating the diverticulum base by means of a Levin tube is excellent, as well as its use in guiding the closure. The presentation is clear, except the dissection of the neck of the diverticulum. The attempt to point out anatomic structures is overdone.

Audience: Residents in surgery and surgeons.

We Speak Again—The Rehabilitation of Laryngectomized Patients. Color, sound, 16 minutes. Produced by Sturgis-Grant Productions, Inc., 1949. Directed by Warren Sturgis. Sponsored by Massachusetts Eye and Ear Infirmary, in cooperation with American Cancer Society. Scientific adviser: LeRoy A. Schall, M.D.

A valuable film giving an explanation of the methods used to facilitate speech of the laryngectomized patient. It does much to stimulate discussion. The time element involved is not emphasized. This film can be used to instruct patients as well as physicians in the rehabilitation possibilities available for these patients.

Audience: Professional, clinical and preclinical, medical students, lay groups.

Clinical Malaria. Classification: Pathology; Preventive Medicine; Tropical Medicine. Black and white, sound, 28 minutes. Produced by Audio

Productions, Inc., for the Bureau of Medicine and Surgery, U.S. Navy, 1944.

This is a good instructional film on the clinical aspects of malaria, dealing with epidemiology; relationship of the parasite in the bloodstream to the symptoms in vivax, quartan, and falciparum malarias; differential diagnosis; treatment and prevention. The emphasis is on the military practice under war time conditions, acute malaria, and atabrine.
Audience: Mainly for medical students and nurses.

Supravaginal Hysterectomy for Diffuse Adenomyoses of the Uterus. Classification: Gynecology; Surgery. Color, silent, 18 minutes. Written by Arthur C. Curtis, M.D., Chicago. Produced by Davis & Geck, Inc., New York City, 1940.

This is a step-by-step record of the author's method of supravaginal hysterectomy for extensive adenomyosis uteri. The film does not bring out any new steps in this technic; in fact, in the present-day thought this operation might be considered outdated.
Audience: It would be difficult to consider the type of audience which would get much out of this film. It might be used to demonstrate the author's technic to residents, surgeons, and gynecologists.

Skin Antiseptics. Classification: Bacteriology; Surgery. Black and white, sound, 28 minutes. Produced by Audio Productions, Inc., New York City, 1948. Sponsored by Iodine Educational Bureau.

A well-produced and useful film on the criteria for determining the effectiveness of disinfectants, including the phenol coefficient, a comparison of bactericidal versus bacteriostatic action, the effect of organic materials, and skin irritant tests. The film is slanted toward iodine and has many errors of omission, but otherwise it is useful and valuable if followed by competent discussion.
Audience: Medical students, surgeons, and bacteriologists.

Scabies. Classification: Dermatology; Parasitology; Public Health. Black and white, sound, 38 minutes. Produced by Ministry of Information for Ministry of Health, London, England, 1943 (revised 1946). Script and direction by Robin Carruthers; camera by H. N. Edwell; cinemicography by Frank A. Goodliffe.

An excellent instructional film dealing with the life cycle of Sarcoptes scabei; the clinical manifestations of scabies, with particular reference to body distribution and secondary infection; the treatment with sulphur and benzyl benzoate; and the epidemiology of the disease.
Audience: Medical students, nurses, general practitioners, dermatologists, parasitologists, and public health workers.

Precancer Diagnosis of Cervix by Cytology. Classification: Clinical Pathology; Gynecology; Cytology; Oncology. Color, sound, 16 mm., 1,300 feet, 36 minutes. Written and produced by J. Ernest Ayre, M.D., Director, Gyne-Cytology Laboratory, Royal Victoria Hospital, McGill University, Montreal, Canada, 1947. Photographed by James Telper; cinemicrography by G. G. Grand; photomicrography by Peter Hayden and Harold Colletta.

A film on the early detection of uterine cancer by means of cytologic analysis, covering the morphology of normal and abnormal cell types, the technic of securing and mailing specimens, and correlated clinical, histologic, and cytologic findings from a number of cases. The author's views and methods are placed in the foreground, especially with regard to the disputed concept of "precancer." The film is coherent in structure, generally clear in presentation, although rather overdone in its verbal and visual emphasis.
Audience: Specialists; if used under expert guidance, suitable for medical students (third and fourth years), interns, general practitioners, and laboratory technicians.

Surgical Treatment for Carcinoma of the Lower End of the Esophagus. Classification: Oncology; Surgery. Color, silent, 38 minutes. Written and produced by Philip Thorek, M.D., Chicago, 1947. Photographed by Jerome J. Moses, M.D.

This is a record film of the transdiaphragmatic removal of a carcinoma of the lower third of the esophagus. The performance of this difficult operation is shown with clarity and in great detail.
Audience: Residents in surgery and surgeons.

Vagotomy and Gastroduodenostomy for Duodenal Ulcers with Partial Gastric Resection. Classification: Surgery (Abdominal Surgery). Written by Lawrence S. Fallis, M.D., Henry Ford Hospital, Detroit, Michigan. Produced by Davis and Geck, Inc., New York City, 1948.

This is a film record of an accepted surgical treatment for a chronic duodenal ulcer which has caused complete obstruction. Two thirds of the stomach are removed proximal to the ulcer, and the gastric stump is anastamosed to the second part of the duodenum; both vagus nerves are divided. Although the surgical technic is good, the film suffers in places from lack of visual detail, omissions, and insufficient anatomic orientation.
Audience: Residents in surgery and surgeons.

Alcoholism. Classification: Public Health; Psychiatry. Black and white, sound, 22 minutes. Produced by Encyclopedia Britannica Film, Inc., 1952.

The background of this film on "Alcoholism" is made up of the interviews of a physician with an alcoholic. These interviews portray the alcoholic's progress, development, and recovery. The patient is an upper middle class, typical suburbanite with a simple, classic problem that can be treated in the "outpatient" department or in the office. It is, of course, an oversimplification of an extremely complex problem, even though this one case is portrayed very well. It is most useful as a presentation by a qualified physician to lay groups although, in the present state of our knowledge, it would be acceptable for medical students, nurses, and general medical audiences.

Audience: Professional, clinical, and graduate.

Surgical Treatment for Splenic Flexure Carcinoma with Solitary Liver Metastases. Classification: Oncology; Surgery. Color, silent, 45 minutes. Written and produced by Philip Thorek, M.D., Chicago, 1947. Photographed by Jerome J. Moses, M.D.

An interesting record film of a case of carcinoma of the splenic flexure of the colon resected in three stages, with resection of the left lobe of the liver for a large solitary metastasis. The surgical rationale is controversial, but the film is adequately produced.

Audience: Residents in surgery and surgeons.

Surgery in Chest Diseases. Classification: Oncology; Rehabilitation; Surgery (Thoracic Surgery). Black and white, sound, 40 minutes. Produced by Gaumont-British Instructional, Ltd., for the British Council, 1943. Technical advisers: Medical Research Council Committee of Thoracic Surgeons, Medical Advisory Committee of the Ministry of Health, London.

The film portrays the services of a large British hospital for chest diseases. A patient suffering from lung cancer is followed through all stages of diagnosis and treatment until his return to a suitable occupation. This case as well as others—bronchiolectasis, chronic empyema, tuberculous cavity, and thoracoplasty—provides an opportunity for studying diagnostic, operative, and rehabilitation technics; the principles of some of these are also clarified by animation. The film not only surveys effectively the technics proper but is also valuable as an account of the medical and social management of patients within the framework of one institution. This film is over ten years old, and some of the technics shown in anesthesia and surgery are no longer in use. It is valuable as a record of the development of thoracic surgery and of the practice of this specialty in Great Britain in the past. No mention of antibiotics is made.

Audience: Medical students, nurses, general practitioners, thoracic surgeons, chest physicians, physical medicine specialists, physiotherapists, and hospital administrators.

Use of Digitalis in Heart Failure. Classification: Cardiology; Internal Medicine; Pharmacology. Color, sound, 31 minutes. Produced by Transfilm, Inc., New York City, 1947. Sponsored by Wyeth, Inc. Technical Adviser: Department of Pharmacology, Cornell University Medical College, New York City.

An adequately produced, illustrated lecture film on the nature of digitalis action, the criteria of effectiveness of digitalis preparations, and the superiority of the glycoside digitoxin. The film's content is somewhat controversial, but the presentation will be stimulating if presented with competent discussion.

Audience: Medical students and general practitioners.

Transthoracic Esophageal Diverticulectomy. Classification: Surgery. Color, silent, 24 minutes. Written and produced by Philip Thorek, M.D., Chicago, 1948. Photographed by Jerome J. Moses, M.D.

A record of the transthoracic removal of a diverticulum of the lower third of the esophagus, done by an accepted approach with good technic which is dated in certain minor respects. The operative procedure is on the whole clearly presented, and anatomic orientation by pointing to structures is occasionally provided.

Audience: Residents in surgery and general surgeons.

Moles and Melanoma. Classification: dermatology, tumors, public health, surgery. Color, sound, 8 minutes. Produced by Bureau of Medicine and Surgery, U.S. Navy, 1944.

This film is elementary, incomplete, and inaccurate from the pathologic and surgical points of view. It includes some impressive views of the course of a case of secondary malignant melanoma. It is valuable for showing several interesting cases of melanoma. The surgery pictured is not the proper treatment of melanoma. The excision is not wide enough. This qualification should be mentioned when the film is shown.

Audience: Medical students and nurses with proper interpretation, general practitioners.

The Feeling of Rejection. Type of film and classification: information; medicine—psychiatry, health, pediatrics. Black and white, sound, 21 minutes. Produced by National Film Board of Canada, 1947. Distribution: Purchasable from National Film Board (Chicago and New York City), $50; procurable on loan from National Film Board (Chicago and New York City) and many mental libraries.

An excellent and provocative information film is based on the hypothetic case of Margaret, a neurotic young woman whose underlying feeling of parental rejection creates the adult personal and social problems which the psychiatrist analyzes and treats. Accompanying psychiatric discussion is essential.

Audience: Psychiatric patients in the care of a psychiatrist, intelligent lay groups, the medical profession.

NECROLOGY

Herman D. Andrews, M.D., of Glen Cove, formerly of East Aurora, died on July 23 at the age of seventy-five. Dr. Andrews graduated from the University of Buffalo School of Medicine in 1905 and interned at the Buffalo General Hospital. For forty-one years he served on the staff of the Ellicott Clinic and Hospital (formerly the Charity Eye, Ear, Nose and Throat Hospital of Erie County) and was chief ophthalmologic surgeon from 1931 to 1937.

Dr. Andrews was a member of the American Academy of Ophthalmology and Otolaryngology, the Buffalo Academy of Medicine, the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Samuel Joachim Bernfeld, M.D., of New York City, died on April 20 at the age of seventy-five. Dr. Bernfeld graduated from Cornell University Medical College in 1904.

William Johnston Books, M.D., of New York City, died at his summer home in Duanesburg of a heart attack on August 16 at the age of sixty-six. Dr. Books received his medical degree from Hahnemann Medical College of Philadelphia in 1912. He was the first health director of the Schenectady public schools, from 1914 to 1917, and subsequently became head of rehabilitation of veterans in New York City. Dr. Books was assistant attending physician at the Flower and Fifth Avenue Hospitals. He belonged to the New York County Medical Society and the Medical Society of the State of New York.

Herbert R. Brown, Sr., M.D., of Rochester, died of a heart ailment on August 17 at the age of seventy-six. Dr. Brown graduated from Harvard University School of Medicine in 1914. He was a Diplomate of the American Board of Pathology and a Member of the American College of Pathologists. Dr. Brown was a member of the Rochester Academy of Medicine, the New York State Pathological Society, the American Society of Clinical Pathologists, and the Rochester Pathological Society. He was consulting pathologist at the Park Avenue Hospital and attending pathologist at the Dansville Memorial Hospital.

Dr. Brown belonged also to the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John Meade Callender, M.D., of Brooklyn, died on May 7 at the age of eighty-eight. Dr. Callender received his medical degree from the University of Virginia College of Medicine in 1896.

Ralph Diamond, M.D., of Cortland, died in St. Thomas General Hospital in St. Thomas, Ontario, while vacationing, on August 3 at the age of forty-five. Dr. Thomas received his medical degree from the University of Western Ontario in 1940. He belonged to the Cortland County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Theodore Roosevelt Gathings, M.D., of the Bronx, died suddenly on August 13 at his home in Montrose at the age of forty-seven. Dr. Gathings received his medical degree from Meharry Medical School in 1935. He was chief attending physician in internal medicine at the Bronx Hospital Outpatient Department.

Dr. Gathings belonged to the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

George Leonard Glatzer, M.D., of Brooklyn, died on April 6 at the age of forty-three. Dr. Glatzer received his medical degree from Baylor University in 1938 and interned at the Israel-Zion Hospital. He was assistant attending physician at the Kings County Hospital and assistant attending physician in peripheral vascular disease at the Jewish Hospital and Sanitarium for Chronic Diseases.

Crawford Richmond Green, M.D., of Troy, died in Samaritan Hospital on August 16 at the age of seventy-five. Dr. Green graduated from New York Homeopathic Medical College in 1906. He was a Diplomate of the American Board of Internal Medicine and a Fellow of the American College of Physicians. Dr. Green had been consulting physician at the Samaritan Hospital before his retirement.

Joseph Joel Heyman, M.D., of Flushing, died on May 3 at the age of fifty-eight. Dr. Heyman received his medical degree from the University of Vermont in 1923. He was a member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Frank Benjamin Hoefle, M.D., of Brooklyn, died on August 18 at the age of seventy-nine. Dr. Hoefle graduated from Long Island College Hospital School of Medicine in 1896. In 1946 the American Medical Association and the Medical Society of the State of New York presented him with a scroll, "in recognition of his fifty years of service."

Dr. Hoefle belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

James Louis Joughin, M.D., of New York City, died on August 17 at the age of seventy-one. Dr. Joughin received his medical degree from McGill University in 1906 and later studied in Paris and Berlin. He was a member of the New York Neurological Society and was consulting neurologist at Presbyterian Hospital and Vanderbilt Clinic. Before his retirement, Dr. Joughin was professor and department chairman at the New York Post-Graduate Medical School and Hospital.

Dr. Joughin belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

David Kirschenbaum, M.D., of Woodside, died on April 2 at the age of forty-nine. Dr. Kirschenbaum graduated from New York University and Bellevue Hospital Medical School in 1927 and interned at the Hillside Hospital and the Jewish Hospital and Sanitarium for Chronic Diseases. He was a member of the Association for the Advancement of Psychotherapy, the American Psychiatric Association, the Association for Research in Nervous and Mental Diseases, the American Board of Legal Medicine, the New York Society for Clinical Psychiatry, and the Society of Medical Jurisprudence of New York City. Dr. Kirschenbaum was associate attending neuropsychiatrist at Fordham Hospital, assistant attending neuropsychiatrist at the Jewish Hospital and Sanitarium for Chronic Diseases, attending psychiatrist at the Mental Hygiene Clinic of Lebanon Hospital Outpatient Department, and consulting psychiatrist to the New York City Department of Welfare.

At the time of his death, Dr. Kirschenbaum was serving as a Lieutenant Colonel in the United States Army Medical Corps and was chief of the Psychiatry and Neurology Service at Camp Crowder, Missouri.

He belonged to the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Henry Joseph Margotta, M.D., of New Rochelle, died on August 18 at New Rochelle Hospital at the age of fifty-three. Dr. Margotta graduated from the Long Island College Hospital School of Medicine in 1926. He was consulting physician at the New Rochelle Hospital and city physician to the city of New Rochelle.

Dr. Margotta belonged to the Westchester County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Simon Moore, M.D., of Brooklyn, died on August 25 after a long illness, at the age of fifty-five. Dr. Moore received his medical degree from Tulane University in 1924. He was a member of the American Psychiatric Association and was senior supervisory psychiatrist at the Brooklyn State Hospital. Dr. Moore also belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Floyd Richardson, M.D., of East Aurora, died on April 20 at the age of seventy-two. Dr. Richardson graduated from the University of Buffalo School of Medicine in 1904. He belonged to the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Joel Francis Smith, M.D., of Brooklyn, died on July 29 at the age of forty-four in Warwick General Hospital. Dr. Smith graduated from Long Island College Hospital School of Medicine in 1937. He was awarded the Silver Star for heroic action in supervising the evacuation of wounded soldiers during the invasion of Sicily in 1943.

Dr. Smith was clinical assistant attending physician at Kings County Hospital. He belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Irving S. Startz, M.D., of Elmhurst, died on August 21 at his home at the age of sixty-one. Dr. Startz graduated from the Long Island College Hospital School of Medicine in 1917. He was a Diplomate of the American Board of Radiology and a Fellow of the American College of Radiologists. Dr. Startz belonged to the Radiological Society of North America, Inc. and the New York Roentgen Society. He was consulting roentgenologist at the Queens General, Triboro, and Jamaica Hospitals.

Dr. Startz was a member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Herbert Edward Stein, M.D., of New York City, died on August 22 at the age of seventy. Dr. Stein graduated from Cornell University Medical College in 1905 and interned at the Polyclinic Hospital. He was a Fellow of the American College of Surgeons and a member of the New York Academy of Medicine.

Dr. Stein was responsible for the surgical technic bearing his name designed to reduce postoperative hernia recurrences. He was on the faculty of the Polyclinic Hospital for many years, and was a frequent contributor to professional journals.

Dr. Stein belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Henry Albert Wade, M.D., of Brooklyn, died on August 9 at the Wade Hospital. He was seventy-nine years old. Dr. Wade graduated from New York University School of Medicine in 1894. He was a Fellow of the American College of Surgeons and a member of the Brooklyn Gynecological Society. Dr. Wade founded the Wade Hospital in 1918.

He belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Dominick Francis Zetena, M.D., of New York City, died on August 26 at the age of fifty-seven. Dr. Zetena graduated from the New York University and Bellevue Hospital School of Medicine in 1924 and interned at St. Vincent's Hospital. He was a Fellow of the American College of Surgeons and a member of the New York Academy of Medicine. Dr. Zetena was associate attending surgeon at the Harlem Hospital and senior attending surgeon at the Parkway Hospital.

He belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

MEDICAL NEWS

Hildebrand To Address State GP Convention

Dr. William B. Hildebrand, president of the American Academy of General Practice, and Professor Edward F. Barrett, of the University of Notre Dame Law School, will be the featured speakers at the convention banquet of the New York State Academy of General Practice on October 12, at the Hotel Syracuse.

Dr. Hildebrand, of Menasha, Wisconsin, is a graduate of Washington University and did postgraduate work at the University of Minnesota Hospital. A flight surgeon in the Marine Corps in World War II, Dr. Hildebrand is a former chairman of the board of directors of the American Academy of General Practice and is nationally known for his active efforts on behalf of that body.

Professor Barrett, who will speak on Americanism, comes highly recommended by Clarence Manion, former dean of the University of Notre Dame Law School and ex-chairman of President Eisenhower's Committee for the Preservation of States' Rights. Dr. Barrett is a graduate of Canisius College and the University of Buffalo Law School, and obtained his doctorate at the New York University Law School. He is a former professor of law at Fordham University Law School and a member of the Bar of the State of New York and the American Bar Association.

In addition to the speakers of the evening, the banquet will feature favors for all ladies, and entertainment will be supplied by the Geraldine Arnold Singers and the Verne-Henry Orchestra. Advance paid banquet reservations are now being accepted by Dr. John A. Fatcheric, chairman, 147 North Lowell Avenue, Syracuse, New York.

An interesting round of social events has been planned for the ladies attending the convention. On Monday, October 11, from 4:00 P.M. to 6:00 P.M., a social and cocktail hour will be held in the Cavalier Room of the Hotel Syracuse. At 6:30 P.M. a testimonial dinner in honor of Mrs. William B. Hildebrand, wife of the president of the American Academy of General Practice, will be given by the wives of the delegates, in the famous Syracuse Corinthian Club for Women.

On Tuesday, October 12, a luncheon and fashion show for all wives will be held in the Persian Terrace of the Hotel Syracuse. Reservations for this are limited and will be handled in order of their receipt.

On Wednesday, October 13, the Syracuse Ladies Entertainment Committee, headed by Mrs. Marcus S. Richards and Mrs. Neil Paul, has arranged for a tour of the city.

The New York State Academy of General Practice expects, at this sixth annual convention, October 11, 12, and 13, to have the largest attendance in its history. There are 79 technical exhibits and over 30 scientific exhibits, plus an imposing array of scientific speakers (See Scientific Program, NEW YORK STATE JOURNAL OF MEDICINE, September 15, page 2623).

Hill-Burton Construction—The status of all Hill-Burton hospital construction in the State of New York ending July 31 indicates that no new projects have been approved for grants. Completed and in operation are 68 projects at a total cost of $63,069,781, including Federal contribution of $19,064,076 and supplying 3,727 additional beds. Under construction are 12 projects at a total cost of $44,677,093, including Federal contribution of $6,016,124, and designed to supply 1,089 additional beds. Approved but not yet under construction are two projects at a total cost of $6,162,893, including Federal contribution of $1,063,450 and designed to supply 367 additional beds.

Van Meter Prize Award—The American Goiter Association again offers the Van Meter Prize Award of $300 and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The award will be made at the annual meeting of the Association which will be held in Oklahoma City, Oklahoma, April 28, 29, and 30, 1955, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations, should not exceed 3,000 words in length, must be presented in English, and a typewritten double space copy in duplicate sent to the secretary, Dr. John C. McClintock, 149$^1/_2$ Washington Avenue, Albany, New York, not later than January 15, 1955. The committee, who will review the manuscripts, is composed of men well qualified to judge the merits of the competing essays.

A place will be reserved on the program of the annual meeting for the presentation of the prize award essay by the author, if it is possible for him to attend. The essay will be published in the annual proceedings of the Association.

Eli Lilly and Company—Eli Lilly and Company have awarded research grants to the following New York State institutions: Cornell University, a clinical grant for one year for the study of neurohumoral mechanisms in intestinal motility, under the direction of Dr. Thomas P. Almy, Department of Medicine; a clinical grant for one year under the direction of Dr. Henry Doubilet, associate professor of surgery, New York University College of Medicine, for the study on the effect of "Paveril Phosphate and Related Substances in Relaxing the Sphincter of Oddi" and a second clinical grant for a one-year study of "Ilotycin" to be conducted by Dr. Charles F. Wilkinson, Jr., professor and chairman, Department of Medicine, Post-Graduate Medical School; and to St. Luke's Hospital, clinical grant for studies of glucagon-induced hyperglycemia as an index of liver function, and glucagon in the peripheral uptake of glucose, under Dr. Theodore B. Van Itallie, Department of Medicine.

American Diabetes Association, Inc.—Diabetes Detection Week will be held November 14 to 20, 1954. Clinitest and Galatest reagents will be available again without charge for authorized programs, and all orders for these reagents must be received at the national office by October 22.

For the first time, St. Louis Dreypak, a device for collecting and testing dried specimens of urine, will be available to all authorized programs, and the national committee on detection and education has agreed to offer up to 1,500 Dreypaks without cost to chairmen as a means of acquainting them with this new technic for testing for urine sugar.

Lecture Series on Rehabilitation of Elderly—A series of six monthly meetings on the important factors in the rehabilitation of the elderly will be held under the sponsorship of the New York County Medical Society, beginning in November. The general topic of the series is "Medical Service in Aging and De-Aging," and subjects to be discussed include nutrition, hormones, physical factors, mental, emotional, and spiritual factors, infections, and implementing a comprehensive, practical program.

The programs are being planned under the supervision of the Subcommittee on Geriatrics of the County Society's Committee on Public Health. Dr. C. Ward Crampton is chairman.

Meetings—Past

Wayne County Medical Society

The annual summer meeting of the Wayne County Medical Society was held on August 12 at the Sodus Bay Heights Golf Club. Dr. Jacob Sirkin was the chairman of golf for the men, and Dr. Myron Carmer, chairman of golf for the women. Dinner was served at 6:30 P.M. and Dr. Joseph Justino, dentist, entertained during dinner with his accordion.

Livingston County Medical Society

"The Management of Anemias" was discussed by Dr. Lawrence E. Young, associate professor of medicine, University of Rochester School of Medicine, at the meeting of the Livingston County Medical Society, September 16, at Craig Colony, Sonyea.

The program was postgraduate education presented by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

Geneva Academy of Medicine

Dr. Adrian Ostfelt, research fellow in medicine at the Cornell University Medical College and assistant physician, Department of Medicine, New York Hospital, spoke on "Varieties of Headaches and Their Mechanism" at a meeting of the Geneva Academy of Medicine, held September 20 in Geneva. The program was postgraduate instruction arranged by the State Society's Council Committee on Public Health and Education with the cooperation of the New York State Department of Health.

Regional Teaching Day

A regional teaching day on gastrointestinal disorders was held on September 23 in McCauley Hall Auditorium, Mercy Hospital, Watertown, under the auspices of the Northern New York Academy of General Practice, the Jefferson County Medical Society, the Medical Society of the State of New York, and the New York State Department of Health. Dr. J. A. Mishkin, Watertown, was chairman of the meeting.

Dr. Stockton Kimball, dean, University of Buffalo School of Medicine, gave the introduction on "The Role of the General Practitioner in Modern Medicine," and Dr. Emmanuel Deutsch, instructor of medicine, Tufts College Medical School, Boston, Massachusetts, discussed "Gastric Ulcer—Gastric Cancer Problems." Dr. Albert M. Yunich, assistant professor of medicine, Albany Medical College, discussed "Regional Ileitis," and Dr. Sidney M. Fierst, clinical professor of medicine, State University of New York College of Medicine at New York City, discussed "Natural History and Treatment of Ulcerative Colitis."

Dr. A. H. Aaron, clinical professor of medicine, University of Buffalo School of Medicine, moderated the panel discussion.

Meetings—Future

United Cerebral Palsy

A series of eight program institutes during the months of September and October have been scheduled by the national office of United Cerebral Palsy and its local affiliates. Each institute will start Thursday noon and extend through Friday evening, immediately preceding regional conventions in each area.

The program institutes and regional conventions for October are: Eastern region—September 30 through October 3, Benjamin Franklin Hotel, Philadelphia, Pennsylvania; Southeast Region—October 7 through October 10, Heidelberg Hotel, Jackson, Mississippi; Southwest Region—October 14 through October 17, Roosevelt Hotel, New Orleans, Louisiana; Southern Region—October 21 through October 24, John Marshall Hotel, Richmond, Virginia.

The annual convention of United Cerebral Palsy will be held November 19 to 21 in the Mayflower Hotel, Washington, D.C.

American Public Health Association

The eighty-second annual meeting of the American Public Health Association and 38 related organizations will be held in Buffalo, New York, October 11 to 15. A progress report on lung cancer, latest results in immunization against poliomyelitis and other diseases, and reports on research in such widely varying phases of public health as air pollution, childhood accident prevention, and food sanitation will be some of the many important public health aspects covered.

Dr. Berwyn F. Mattison, Buffalo, health commissioner of Erie County, is chairman of a committee making local arrangements.

Rensselaer County Medical Society

Dr. Alan R. Cantwell, associate professor of orthopedic surgery, New York Medical College, will speak at the meeting of the Rensselaer County Medical Society on October 12, which will be held in Troy at 8:30 P.M.

The program is postgraduate education presented by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

New York Diabetes Association, Inc.

The etiology, pathology, and prevention of vascular disease in the diabetic, and the management of the diabetic with vascular disease will be subjects discussed at the New York Diabetes Association's second annual symposium day on diabetes on October 14. The meeting will be held at the Memorial Center for Cancer and Allied Diseases, 444 East 68th Street, New York City.

Among the doctors taking part will be Dr. Margaret Bevans, assistant professor of pathology, Columbia University College of Physicians and Surgeons, and pathologist, Research Service, First Division, Goldwater Memorial Hospital; Dr. James Berkman, chief, Department of Laboratories, Long Island Jewish Hospital; Forrest E. Kendall, Ph.D., associate professor of biochemistry, Columbia University College of Physicians and Surgeons; Dr. George V. Mann, assistant professor of nutrition, Harvard School of Public Health, associate in medicine, Peter Bent Brigham Hospital, Boston; Dr. Louis Leiter, chief, medical division, Montefiore Hospital, and clinical professor of medicine, College of Physicians and Surgeons of Columbia University; Dr. Isadore Givner, director, ophthalmology, New York City Hospital, and associate clinical professor of ophthalmology, New York University; Dr. Alexander Marble, clinical associate in medicine, Harvard Medical School, and member, Joslin Clinic; Dr. Laurance W. Kinsell, Institute for Metabolic Research, Highland Alameda County Hospital, Oakland, California; Dr. Henry B. Mulholland, president, American Diabetes Association, and professor of internal medicine and assistant dean, University of Virginia School of Medicine, and Dr. Herbert Pollack, president, New York Diabetes Association, Inc.

A dinner program will be held at the New York Academy of Sciences, 2 East 63rd Street, New York City, and Ancel Keys, Ph.D., director, Laboratory of Physiological Hygiene, University of Minnesota, will speak.

New York Academy of Medicine

The twenty-seventh annual graduate fortnight of the New York Academy of Medicine will be held October 18 to 29. The program, which is arranged by the committee on medical education, will be on "Infections and their Management." The program will consist of six morning panels, 11 hospital clinics, ten evening sessions, plus scientific exhibits.

Registration cards will be furnished to the Fellows of the New York Academy of Medicine without application and will be sent to others upon receipt of check payable to the New York Academy of Medicine. Medical officers of the Armed Services in uniform will be admitted without charge. Interns and residents will be admitted without charge provided they present letters from their chiefs of service. They will be seated as facilities permit, after Fellows of the Academy and other registrants have been accommodated.

Eastern Section, American Trudeau Society

More than 300 doctors from the eastern section of the United States are expected to attend the Eastern Section meeting of the American Trudeau Society, October 22 and 23 at the Sheraton Park Hotel in Washington, D.C. Recent advances in chemotherapy, surgical procedures, and results of investigations of recent medical research will be presented. Serving on the program committee is Dr. Edgar Davis, Ray Brook. Secretary-treasurer of the Section is Dr. Frederick Beck, also of Ray Brook.

Gastroenterological Convention

The nineteenth annual convention of the National Gastroenterological Association and the first annual convention of the American College of Gastroenterology will be held at the Shoreham, Washington, D.C., October 25 through 27. At the meeting there will be a panel discussion, a symposium, and several individual papers.

Dr. Owen H. Wangensteen, Minneapolis, Minnesota, and Dr. I. Snapper, Brooklyn, New York, will direct the sixth annual course in postgraduate gastroenterology, at the Shoreham and Walter Reed Army Hospital October 28 through 30.

This will be the last convention of the National Gastroenterological Association whose Fellowship have voted to become the American College of Gastroenterology. Copies of the program and further information concerning the postgraduate course may be obtained by writing to the National Gastroenterological Association, 33 West 60th Street, New York 23, New York.

Personalities

Honored

Dr. Louis Grycz, by the staff of the Flower and Fifth Avenue Hospitals, in recognition of his thirty years of practice at the hospital. . .Dr. George T. Pack, New York City, as honorary director of a graduate course on "Diagnosis and Treatment of Cancer" given in August by an invited foreign faculty under the auspices of the University of Buenos Aires, Argentina; also decorated by the president of Paraguay with the National Order of Merit.

Awarded

Dr. Howard A. Rusk, the National Medal of the Republic of Korea, at a dinner held at the Hotel Waldorf-Astoria by the American-Korean Foundation in honor of Dr. Syngman Rhee, in August.

Elected

Dr. Alan J. Maged, Suffern, as a director of the Lafayette Bank and Trust Company, Suffern. . .Dr. Stuart A. Porter, New Hyde Park, as president of the Nassau County Medical Society.

Appointed

Dr. Irwin Alper, colonel in the Army Reserve Corps, as chief medical officer for the Utica Civil Defense organization, to replace Dr. David E. Bigwood, Jr., who has assumed a similar position in Syracuse. . .Dr. John A. Atchley, New Canaan, Connecticut, as director of the Salisbury Health Center, to succeed Dr. Harvey Spencer. . .Dr. Chao Jen Chen, Latham, as medical director and physician in charge of Marshall Sanitarium, Troy. . .Dr. Joseph Chibnik, formerly of Watertown and now a Lieutenant Commander in the Navy, in charge of the medical staff of the Navy recruiting station and office of Naval Officer Procurement in New York City. . . Dr. H. G. Farmer, as temporary medical director of the Jefferson County Welfare Department. . .Dr. Kurt Goldstein, neurologist, as visiting professor to the Graduate Faculty of Political and Social Science of the New School for Social Relations in New York City. . .Dr. Sarah H. Hardwicke, an assistant director of Strong Memorial Hospital since 1946, as assistant secretary of the Council on Professional Practice of the American Hospital Association. . . Dr. B. Marr Lanman, New York City, as head of clinical research for Schenley Laboratories, Inc. . . . Dr. Ira A. Rowlson, to succeed Dr. Cassius D. Silver, as chief of staff of the Physicians Hospital in Plattsburg.

Retired

Dr. Cassius D. Silver, chief of staff at Physicians Hospital, Plattsburg, for more than forty-three years, in July. . .Dr. Charles Trembley, Saranac Lake, in July, after fifty-six years of practice.

Speakers

Dr. Ralph S. Banay, New York City, Dr. Hilde Bruch, Department of Psychiatry and Pediatrics, Columbia University College of Physicians and Surgeons, and Dr. Iago Galdston, executive secretary, New York Academy of Medicine, New York City, at the Fifth International Congress on Mental Health in Toronto, Canada, in August. . .Dr. William R. Carson, former staff member of the Ogdensburg State Hospital, at a conference held at State University Teachers College in Potsdam, in August. . .Dr. Michael M. Dacso, New York City, at the International Geriatrics Congress in London, in July. . . Dr. Marcus Kogel, dean, Albert Einstein College of Medicine, Yeshiva University, New York City, at the ceremonies opening New Jersey's first school of medicine and dentistry at Seton Hall University in Jersey City, in August. . .Dr. Howard A. Rusk, before the national assembly of the auxiliaries of the Veterans of Foreign Wars in Philadelphia, in August. . .Dr. Nathaniel E. Reich, Brooklyn, on "New Advances in the Treatment of Heart Diseases" at a meeting of the medical staff of the Boucicaut Hospital, University of Paris Medical School, in August.

BOOKS REVIEWED

Epilepsy and the Functional Anatomy of the Human Brain. By Walter Penfield, M.D., and Herbert Jasper, M.D. Chapter 14 by Francis McNaughton, M.D. Octavo of 896 pages, illustrated. Boston, Little, Brown & Co., 1954. Cloth, $16.

This is a monumental investigation of the activity and organization of the brain. Although the starting point is the convulsive phenomenon, it has led the investigators into a far-reaching examination of brain function.

It is a pleasure to read a discussion of cerebral function based upon detailed and multiple investigations rather than upon a paucity of cases and a plethora of speculation. The work is well done and minutely recorded. The material is presented with clarity. The conclusions are carefully drawn. The scope is extensive.

This book is a necessity for one who deals with convulsive disorders. Too, it makes a unique contribution to one's understanding of the functional organization of the brain. The dominance of the diencephalon illustrated by this work is in contrast to the older notions concerning the importance of the cortex. The relation of the psychic to the physiologic, as illustrated by cortical stimulation, is almost startling.

The book is enthusiastically recommended to anyone interested in neurology.—EVERETT W. CORRADINI

Acute Pulmonary Edema. By Mark D. Altschule, M.D. Octavo of 68 pages. New York, Grune & Stratton, 1954. Cloth, $3.50. (Modern Medical Monographs No. 10.)

This new short monograph by Dr. Altschule is a readable discussion of this condition, intended for students of medicine. It is well written, and physiologic data have been emphasized. General practitioners, too, will find this book of great value. It is somewhat skimpy for the serious student of cardiology and physiology.—MILTON PLOTZ

Rh-Hr Blood Types. Applications in Clinical and Legal Medicine and Anthropology. Selected Articles in Immuno Hematology. By Alexander S. Wiener, M.D. Quarto of 763 pages, illustrated. New York, Grune & Stratton, 1954. Cloth, $11.50.

This book is essentially a compilation of selected articles by the author on immunohematology, arranged in a masterful way to provide the proper thread in the maze of information concerning a complex subject. Here and there are notes of a controversial character, first early in the development of the subject, and presently, in the current controversy regarding the Rh-Hr nomenclature as against the C-D-E classification. This brings into distinct focus two schools of thought prevalent today.

This, however, should not detract from the book, for we know that all through medical history there was controversy after controversy in all important phases of knowledge. The truth in all cases was later to be resolved by time, patience, and continued observation, which is as it should be.

It can be said that the work of the author, along with a few other assiduous contributors to the subject, constitutes a milestone on the road of immunohematology. This volume, without a doubt, makes a place for itself on the shelves of all those interested in the subject.—MAURICE MORRISON

An Rh-Hr Syllabus. The Types and Their Applications. By Alexander S. Wiener, M.D. Octavo of 82 pages, illustrated. New York, Grune & Stratton, 1954. Cloth, $3.75. (Modern Medical Monographs, #9.)

This is a necessary contribution to the field covered by *Rh-Hr Blood Types*, but also, what is particularly important, serves as a glossary for those who find it necessary to delve into the complexities of the larger volume. It is a must to the tyro, as a step to higher learning in the field of immunohematology.—MAURICE MORRISON

The Medical Clinics of North America. Chicago Number. January, 1954. Octavo. Illustrated. Philadelphia, W.B. Saunders Company, 1954. Published Bimonthly (six numbers a year). Cloth, $18 net; Paper, $15 net.

This issue of the *Medical Clinics* is largely devoted to a symposium on emergencies in general practice. The individual articles are uniformly good and the collection as a whole will be welcomed by the general practitioner. There is a bonus of two extraordinarily good papers, one by Max Trumper on the case against boric acid as an antiseptic, the other by Mahorner on the treatment of deep vein thrombosis.—MILTON PLOTZ

Stedman's Medical Dictionary. Of Words Used in Medicine with Their Derivations and Pronunciation Including Dental, Veterinary, Chemical, Botanical, Electrical, Life Insurance and Other Special Terms; Anatomical Tables of Titles in General Use, the Terms Sanctioned by the Basle Anatomical Convention; the New British Anatomical Nomenclature; Pharmaceutical Preparations Official in the U.S. and British Pharmacopoeias or Contained in the National Formulary; Biographical Sketches of

[Continued on page 2760]

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the Principal Figures in the History of Medicine. Eighteenth Revised Edition, with Etymologic and Orthographic Rules. Edited by Norman Burke Taylor, M.D., in collaboration with Lt. Col. Allen Ellsworth Taylor, M.A. Octavo of 1,561 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $11.50.

It is difficult to review critically a book in the nature of a dictionary. Having used the book at the office for a period of approximately one month reveals that it apparently has all the modern medical terms which are to be expected in a new revised edition.

The mechanical structure of the book deserves some criticism. The index tabulations do not begin with the first contextual alphabetic symbol. For instance, the thumb tab for C and D, which are together, opens at D, making it necessary to hunt for the beginning of C or to find the word by proceeding backward through the alphabet. Thus the end of B alphabet and the beginning of C are not marked. This has been found extremely inconvenient for word finding.

Another disappointing mechanical feature is that the type quality, although of apparently sufficient height and boldness, is insufficient to accomplish the same readability as is found in other standard dictionaries. A number of comparison tests with different individuals have shown that the style of type used makes this dictionary unreadable at distances where others, no larger, can be easily read. This crude test of readability shows the Stedman *Dictionary* to be only about 60 per cent as readable as current standard dictionaries. The difference is in the style of type. A more modern, clearcut, readable type would be most appreciated whether the dictionary is in constant or occasional use.—THEODORE M. FEINBLATT

The Measurement of Hearing. By Ira J. Hirsh, Ph.D. Octavo of 364 pages, illustrated. New York, McGraw-Hill Book Co., 1952. Cloth, $6.00.

The advent of the newer knowledge of electronics has brought with it many new avenues for investigation and survey of the acoustic mechanism. The author goes far afield, and very often his explanations are far beyond the understanding of the clinical otologist. As Hirsh states, "the audiologist and otologist, in order to comprehend the measurement of hearing and its discussion, must have more than the ordinary groundwork of mathematics and algebra." This volume is indeed profound, but at the same time the otologist, audiologist, and social worker will find this book very informative. The author emphasizes the fact that hearing is a psychoacoustic phenomenon. The format of the work is excellent, and the author has included specifications for audiometers and "speech materials for auditory tests." There is also a glossary and an extensive bibliography. We recommend this book very highly, for in it the otologist will find the answers to many of his problems.—SAMUEL ZWERLING

Third Annual Report on Stress. By Hans Selye, M.D., and Alexander Horava, M.D. Octavo of 637 pages, illustrated. Montreal, Acta, Inc., 1953. Cloth, $10.

This 637-page volume was conceived as a guide to the entire literature on stress. The authors thus hope to correlate all the pertinent facts related to this subject. This reviewer found that the volume had a bewildering amount of definitions, special terminology, and special abbreviations. Thus it is not a volume that can be recommended to the general medical public. However, when the intricacy of the presentation is mastered, this book is most valuable as a handy source to the voluminous literature on stress which has appeared in the past year.

There are three interesting special articles by guest authors on adrenalectomy in the treatment of advanced vascular disease in diabetics, neurophysiologic aspects of ACTH secretion, and hypertension, which should be of great value to students of these fields.—Martin Perlmutter

Planning Guide for Radiologic Installations. By the Committee on Planning of Radiologic Installations of the Commission on Public Relations of the American College of Radiology, Wendell G. Scott, M.D., Chairman. Octavo of 336 pages, illustrated. Chicago, Year Book Publishers, 1953. Cloth, $8.00.

With the rapidly expanding scope of radiology and its ever increasing importance for the practice of medicine, a guide for planning new installations and remodeling existing ones is a real need. This need is most adequately filled by the book Scott and his collaborators have produced.

Whether the one-room radiologic plant of a private practitioner or the elaborate department of a large hospital are installed or brought up to date, the persons in charge of such a project cannot afford to disregard Scott's work.

Perusal of this volume is bound to enable the reader to obviate sins of commission and omission, both costly in terms of money and human suffering. The entire field of designing installations for roentgen diagnosis and therapy and for the use of radium and radioisotopes is covered. Authoritative radiologists, physicists, hospital administrators, manufacturers, and architects have contributed, making this a complete yet concise reference book of excellent quality.—S. W. Westing

Textbook of Physiology and Biochemistry. By George H. Bell, M.D., J. Norman Davidson, M.D., and Harold Scarborough, M.B. Second edition. Octavo of 1,002 pages, illustrated. Edinburgh, E. & S. Livingstone (Baltimore, Williams & Wilkins Co.), 1953. Cloth, $10.

The book is a sturdy volume of 1,002 pages. It begins with a discussion of the chemistry of carbohydrates, proteins, and fats, followed by minerals, water, vitamins, and enzymes. The physiology of heat production is well covered, including metabolism, energy of foods, exchange energy within the

[Continued on page 2762]

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[Continued from page 2761]

body. Then there follows the physiology of hunger and the digestive functions of the entire gastrointestinal tract.

The metabolism of carbohydrates, proteins, and fats is given in detail in separate chapters. The authors might have combined some of these chapters. The circulation is well covered, including the dynamics of the heart and peripheral and vasomotor changes. The smaller circuits, such as the circulation of the liver, lungs, spleen, and brain, could also have been merged in a chapter on cardiovascular physiology. Respiration and its many-sided functions of oxidation and excretions are well covered. The special senses of vision, speech, hearing, with the discussion of nerve impulses and reflexes, are included. The endocrines and reproduction are given their due importance.

The tendency to combine the physiology and biochemistry is a tempting one. With the advances in the basic sciences, the authors tend to delegate human physiology to the sidelines, in preference to chemistry and biochemistry. It might be a good idea to teach physiology by system as related to functional changes involved, leaving the detailed biochemistry to a separate book.

The wealth of material in this book, with some additions that the authors no doubt left out, could be divided into three books, such as: (1) human physiology, (2) chemistry and biochemistry, and (3) nutrition and metabolism.

This book is recommended for the student of medicine and general practitioner.—Morris Ant

Surgery of the Pancreas. By Richard B. Cattell, M.D., and Kenneth W. Warren, M.D. Octavo of 374 pages, illustrated. Philadelphia, W. B. Saunders Co., 1953. Cloth, $10.

This monograph, consisting of 374 pages with a complete subject index and an index of authors, is well and interestingly presented. There are 100 figures and illustrations pertinent to the text.

In addition to chapters on the anatomy, physiology, and congenital malformations of the pancreas, it presents the experience of the surgeons in the Lahey Clinic, with 1,000 patients treated for surgical lesions of the pancreas. This represents an unusually large group of patients treated by a relatively few surgeons to the end that the valuable information obtained by them can be concisely and completely documented and worth-while conclusions can be drawn concerning results of surgery in many of the lesions encountered.

Informative chapters on acute pancreatitis, chronic relapsing pancreatitis, pancreatic cysts, pancreatic injuries, islet cell adenomas, and hyperinsulinism, in addition to carcinoma of the pancreas and periampullary area, and total pancreatectomy make up the text of this book. It is recommended to every surgeon to whose lot may fall the necessity of treating patients suffering from pancreatic disease.—Merrill N. Foote

Human Behavior in the Concentration Camp. By Dr. Elie A. Cohen. Translated from the Dutch by M. H. Braaksma. Octavo of 295 pages, illustrated. New York, W. W. Norton & Co., 1953. Cloth, $5.00.

Cohen attempts to present a medical treatise on life in a German concentration camp during World War II. He uses the Freudian theory in an attempt to explain both the individual and group psychology of the Nazi victims and their overseers. He finds this theory wanting in several aspects. First, both from his own personal experience as a Dutch physician-prisoner and from data he obtained from his colleague-prisoners, he was struck particularly by what he calls "*the human power of adaptation and endurance* both physically and mentally" to the torture of the Nazi overlords. Second, the super-ego, (Freud's introjection of the voices of parental or parental surrogates into the structure of the personality) is no unchangeable quantity. It was not so rigidly fixed as was once thought to be. According to the author (regarding the SS men), "it is not the German as such but the German individual malformed through his German education (authoritarian as it is), that is the determining factor in the behavior of the German people." Third, hunger and not sex per se was the essential drive for survival of these prisoners in camp. Fourth, Freud's concept of neurosis as a struggle between ego and id did not apply. The author found that whether or not a man is neurotic is conditional upon the ego and what concerns the ego at the moment. For example, confinement in a concentration camp assumed the significance of punishment for guilt feelings. Survival was uppermost and everything else became of secondary interest or of no interest whatsoever. Last, spiritual faith (religious or political beliefs) kept many of these prisoners from suicide or psychosis.

The reviewer's impression of this book is rather mixed. He had hoped that the author could have included more of his own personal experiences rather than the amount of statistical material and constant cross-references with other authors in his attempt to be as objective as possible. To those who were unacquainted with these atrocities during the war, this book is an excellent reminder of how deep human bestiality can sink in man's relationship with his fellowman. There is much the German people have to live down with this blot on their history, whether they own up to it as their responsibility or not. Further research and follow-up is sorely needed without sparing the feelings of those responsible under the alibi of scientific objectivity. —Joseph Zimmerman

Safer Smoking. What Every Smoker Should Know and Do. By Clarence William Lieb, M.D. Octavo of 106 pages. New York, Exposition Press, 1953. Cloth, $2.50.

A treatise on a method of safer smoking would be most welcome. A study of the underlying social and psychological causes of excessive smoking is most needed. This book fills none of these long felt needs for either the physician or the public. It is a sermon on willpower and is most unwelcome. The title is misleading.—Theodore M. Feinblatt

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1. Segal, M.S., et al.: Advances in the Physiology and Treatment of Bronchial Asthma, Quart. Rev. Allergy & Applied Immunology 6:399 (December) 1952.

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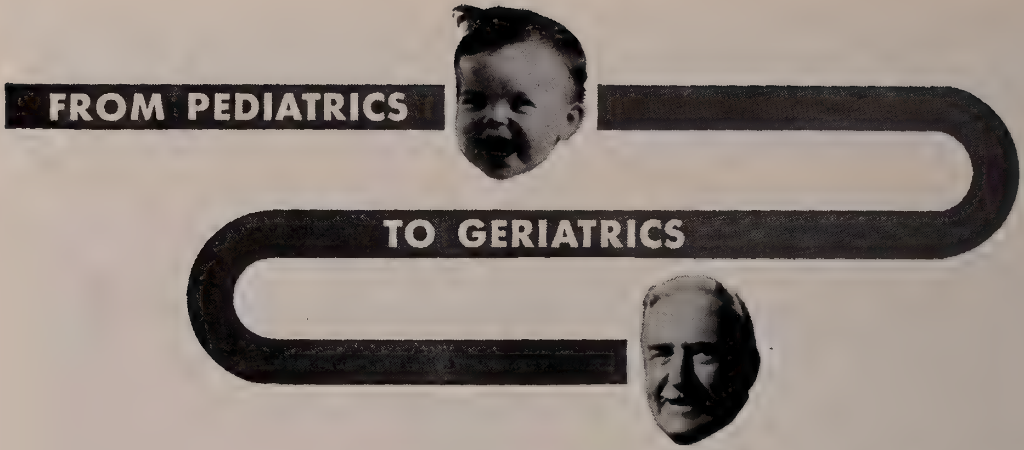

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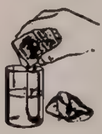

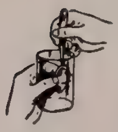

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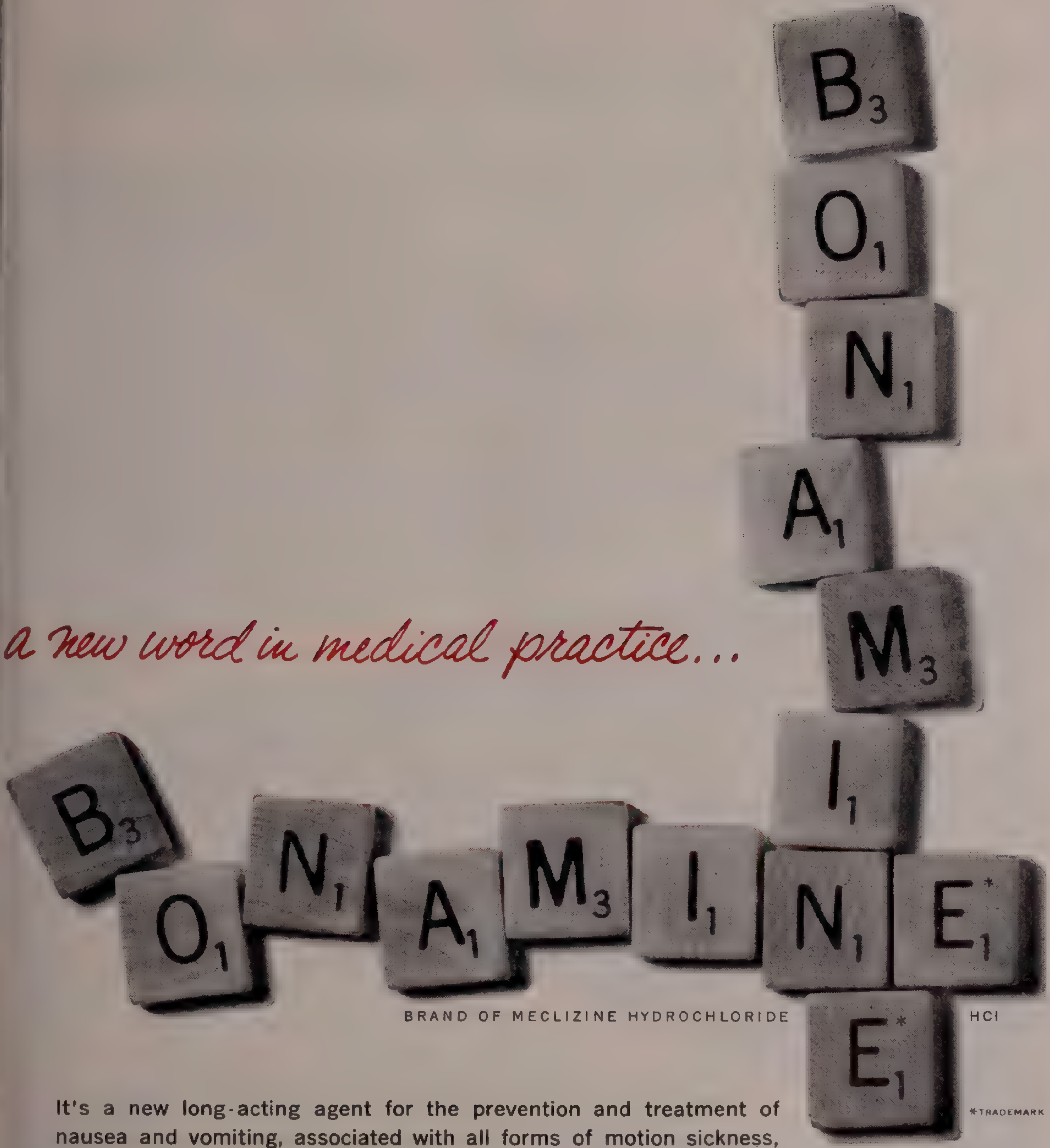
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[1] Banyai, A. L.: Management of Cough in Daily Practice. J.A.M.A., 148:501, Feb. 16, 1952.

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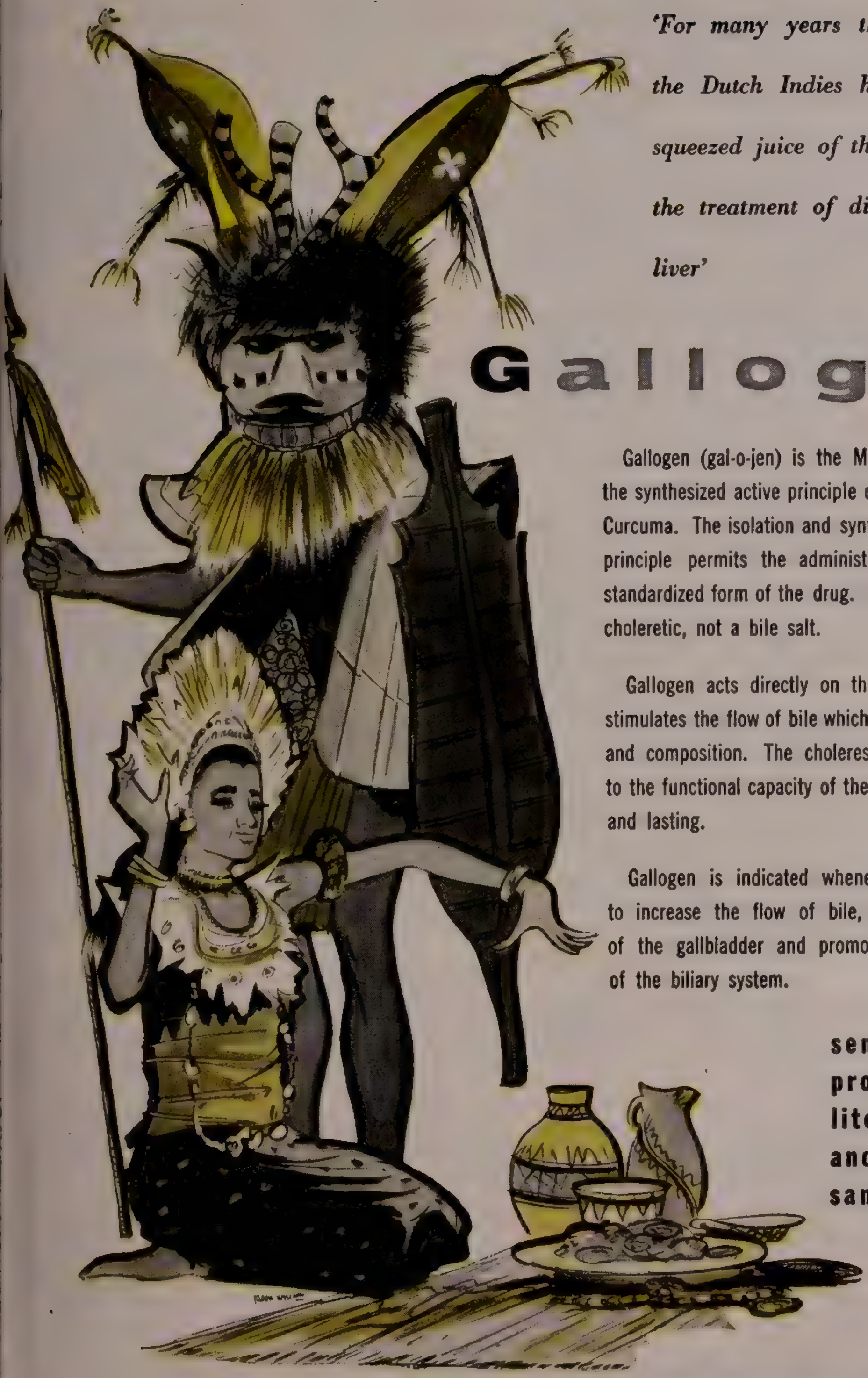

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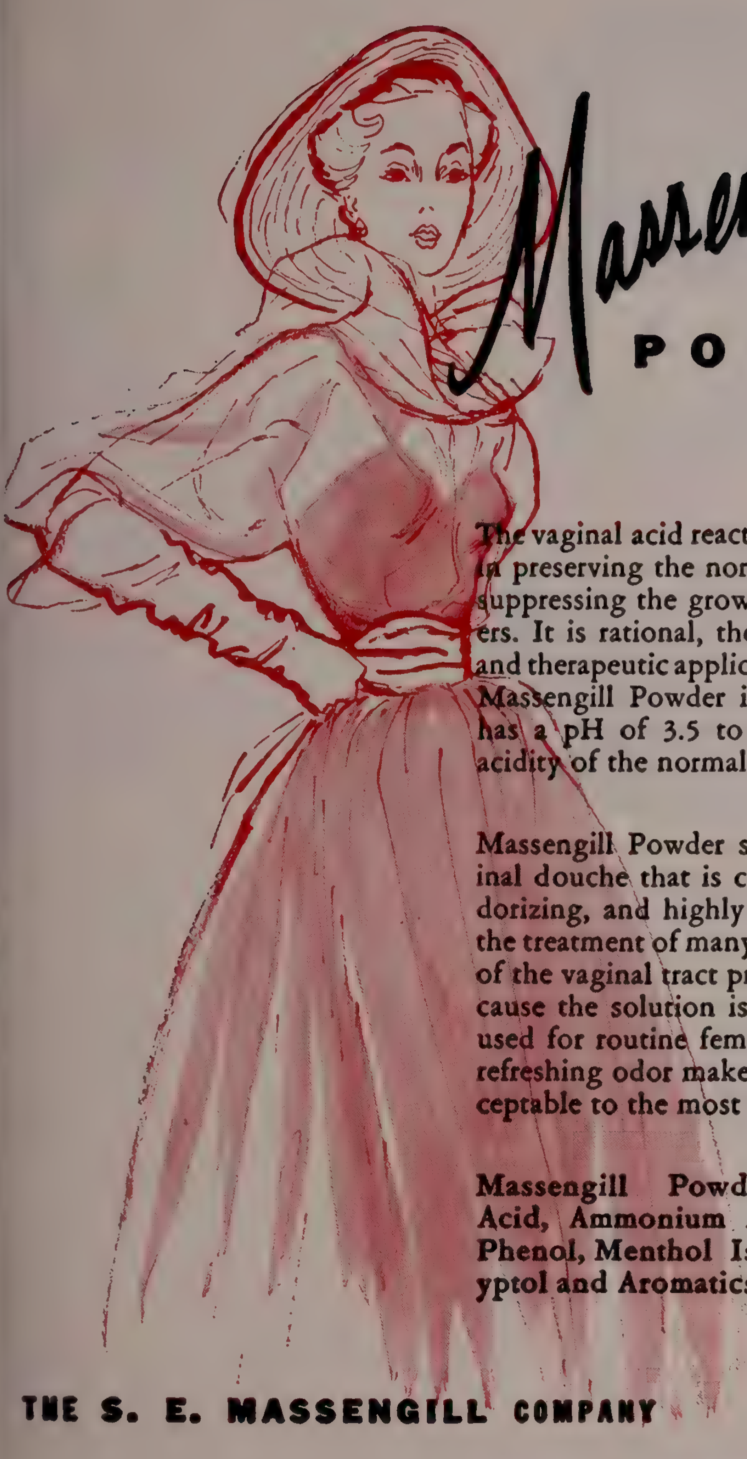

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1. Klohs, M. W.; Draper, M. D., and Keller, F.: J. Am. Chem. Soc. *76*:2843 (May 20) 1954.
2. Cronheim, G.; Brown, W.; Cawthorne, J.; Toekes, M. I., and Ungari, J.: Proc. Soc. Exper. Biol. & Med. *86*:110 (May) 1954.

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Another observation based on 425 patient years of exposure

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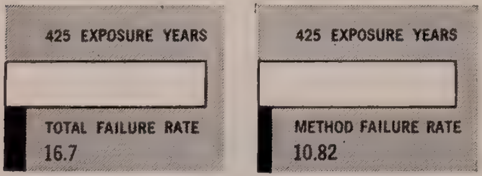

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It is apparent from this study that RAMSES VAGINAL JELLY is markedly effective in the jelly-alone technic, and that it is a "method of choice" for most nulliparous and primiparous patients.

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[1] Finkelstein, R.; Guttmacher, A., and Goldberg, R.: Am. J. Obst. & Gynec. 63:664, Mar., 1952.

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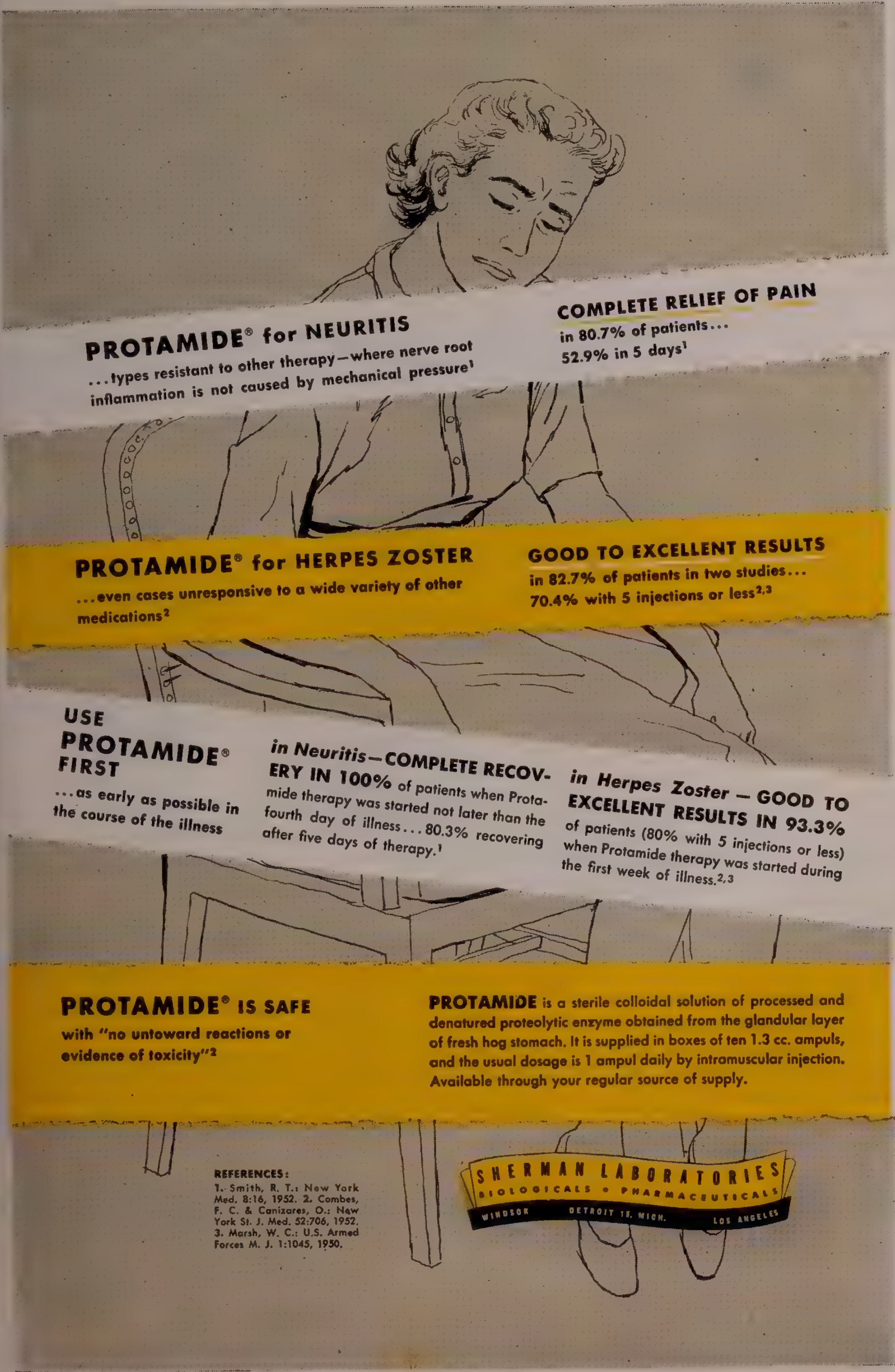

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REFERENCES:
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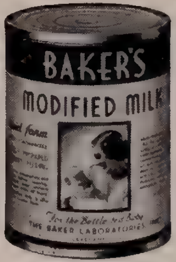

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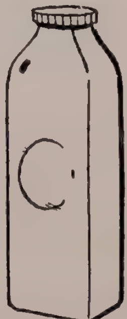

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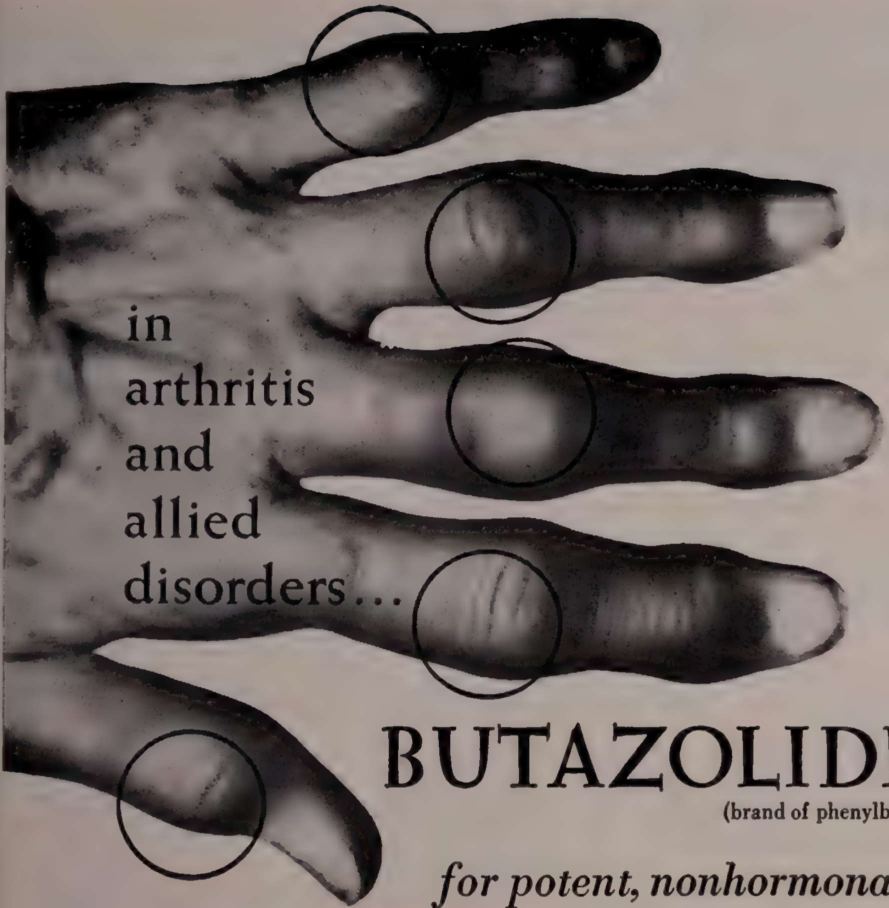

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*MacKnight, J. C.; Irby, R., and Toone, E. C., Jr.: Geriatrics 9:111 (Mar.) 1954.

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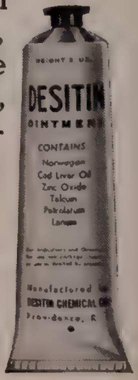

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4. Turell, R.: New York St. J. M. 50:2282, 1950.

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References

(1) Kirby, W. M. M.; Waddington, W. S., & Doornink, G. M.: Antibiotics Annual, 1953-1954, New York, Medical Encyclopedia, Inc., 1953, p. 285. (2) Finland, M., & Haight, T. H.: *Arch. Int. Med.* **91**: 143, 1953.

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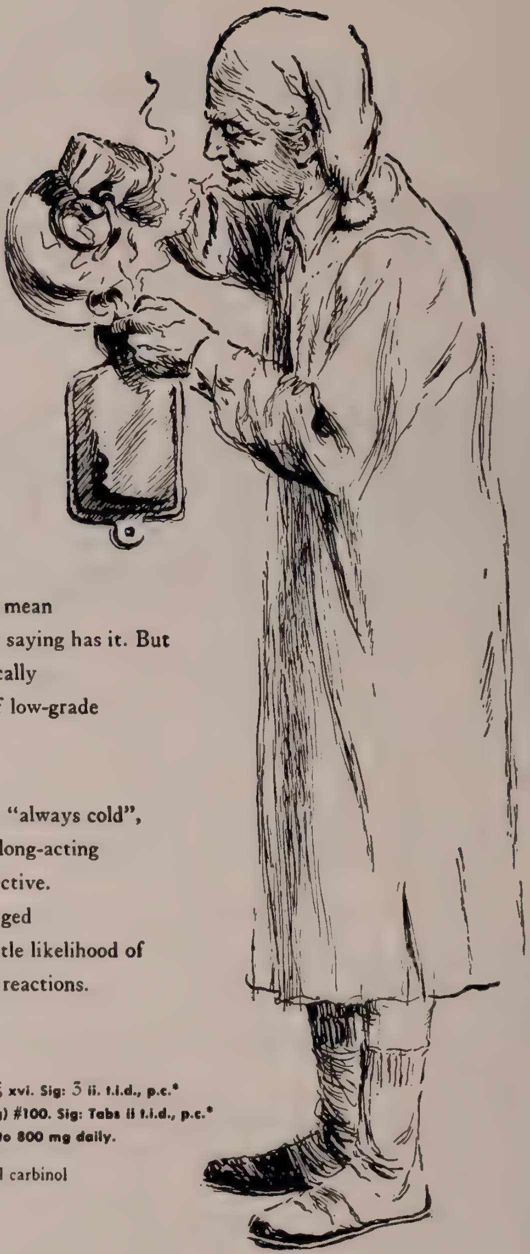

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1. J. Pharmacol. Exper Therap., 100:309, 1950.

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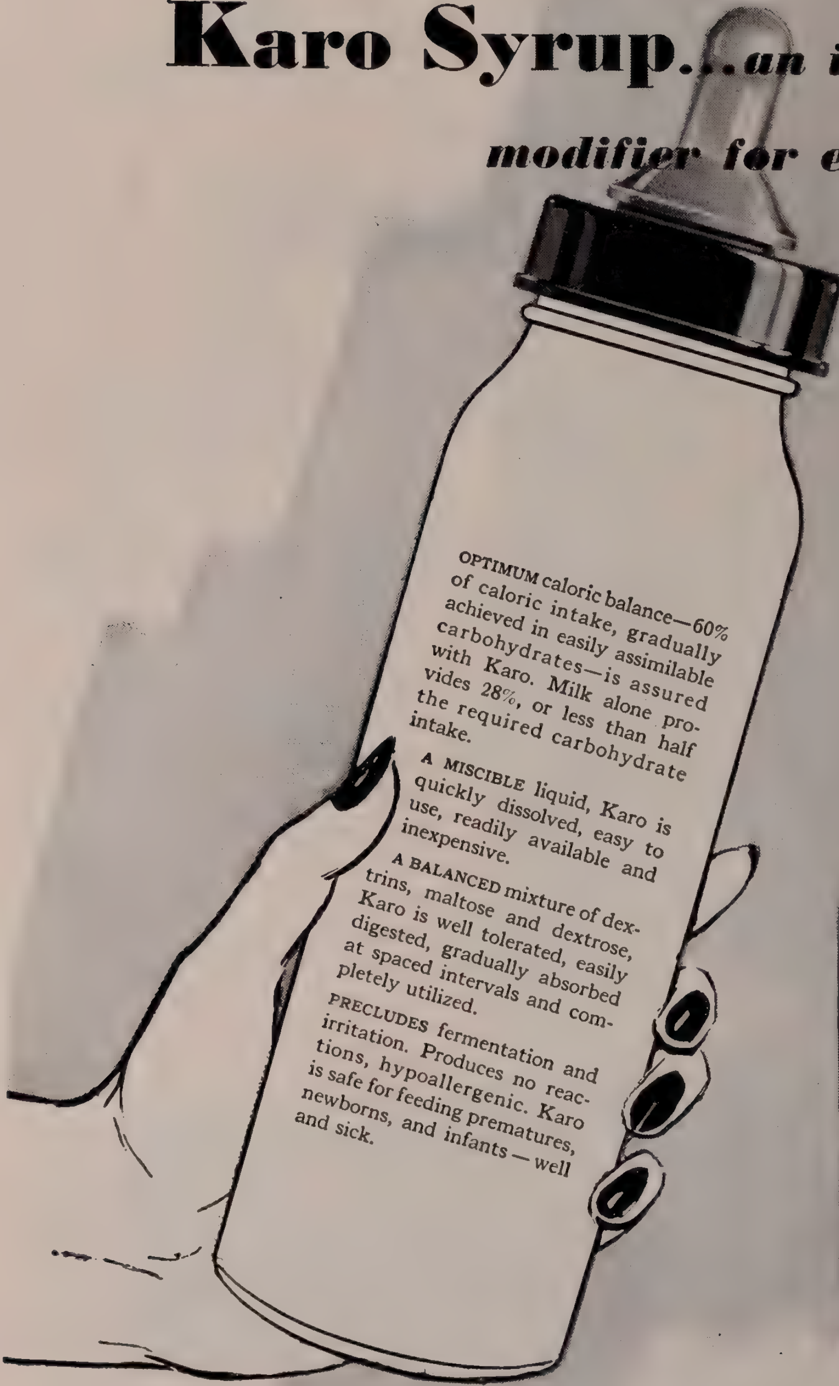

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1. The Committee on Dietetics of the Mayo Clinic: Mayo Clinic Diet Manual, ed. 2, Philadelphia, W. B. Saunders Company, 1954.
2. Sherman, H.C.: Chemistry of Food and Nutrition, ed. 8, New York, The Macmillan Co., 1952, pp. 212, 599.
3. Sherman, H.C.: The Nutritional Improvement of Life, New York, Columbia University Press, 1950, p. 133.

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EDITORIALS

Health Services in American Colleges

What is the status of student health services in American colleges and universities today? In a report recently issued by Cornell University Department of Clinical and Preventive Medicine[1] the results of a survey made in 1953 are summarized. The report covers 1,157 colleges and universities in the country, representing 61 per cent of all colleges in the country and at least 50 per cent of the colleges in each region and category.

The findings "show clearly that there is no uniform or standard health program for college students" on a nation-wide basis. Of the 1,157 colleges mentioned above, 200 do not assume responsibility for the health of students in any way. True, certain specific services are found at a majority of the 957 colleges with a health program, while other specific services and procedures are found only sporadically throughout the country, it is reported.

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[1] Health Services in American Colleges and Universities, Cornell University, Ithaca, New York, 1953.

Among the most common procedures for the protection of campus health is the requirement of a physical examination, and medical records for enrolled students are kept by a majority of the surveyed colleges. Clinical services for minor rather than for major illnesses are maintained by 80 per cent of the colleges, and infirmaries are maintained by "somewhat more than three-quarters of the colleges with a clinical program." The average bed capacity is 13 per 1,000 enrollment.

In the matter of health education, this is taught at most colleges, and credit for courses is granted by a high percentage of such institutions. Nearly eight out of ten health services have a staff physician. Full-time nurses are employed by seven out of ten health services. Health education is reportedly compulsory for students, and the health service participates in health instruction at half of the surveyed colleges. Also, sanitation standards are a health service responsibility at approximately one half of the colleges.

Full-time physicians are found at 21 per cent of health services. Various medical and nonmedical specialists are employed by not more than one out of five health services. However, regional differences in the extent of health services do not appear great. Analysis of data by size of community, it is said, shows that colleges in rural areas may provide less comprehensive services. Findings for urban colleges reveal limitations on certain services, reflecting the comparatively large number of students living at home.

The widest differences in student health services are related to the size of enrollment. The larger the college, the greater the probability that a health service exists and the more comprehensive are the services, facilities, and medical staffs available. The report demonstrates the kinds of health programs which some colleges, regardless of size and type, have been able to establish. The Special Survey Committee of the American College Health Association, founded in 1920 and established as an "organization through which educational institutions may work for the promotion of health, the prevention of disease, and the care of illness in college and university students," is to be congratulated on a careful and informative piece of research. It is hoped that such work will continue to improve the environmental health climate for American students.

Be Sure To

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Editorial Comment

Appreciation of Dr. Edward R. Cunniffe. Many are the services performed by physicians for the benefit of their profession, their fellow practitioners, and the public. Occasionally such services receive notice, but for the most part they are performed through the years in the spirit of "noblesse oblige," quietly, unobtrusively, but often with far-reaching effect upon the profession of medicine.

The Judicial Council of the American Medical Association has for many years numbered among its members a former trustee and president of the Medical Society of the State of New York who this year retired.

Dr. Walter B. Martin, president, made the following statement at the annual meeting of the House of Delegates of the A.M.A. at San Francisco, regarding the retirement of Dr. Edward R. Cunniffe as a member of the Judicial Council:

> Mr. Speaker, Members of the House of Delegates: I would like to make a statement to the house in reference to the nomination for the Judicial Council. As you all know, Dr. Cunniffe has served in the Judicial Council for many years, nineteen, I believe, to be exact. He has been a very able and devoted member of that Council and has rendered great service to this House. He requested, in a discussion I had with him yesterday, that his name not be presented to the House, so there was a vacancy in that position. I want to take this opportunity to express to you my feeling of the great service that he has rendered to you over a period of many years.

Dr. J. Stanley Kenney, New York City, made the following statement:

> In behalf of the Medical Society of the State of New York, I want to place on the record the deep appreciation on the part of the New York delegation of the services of Dr. Edward R. Cunniffe to this House of Delegates and to his State Society. It would be most fitting that we record for posterity on these minutes our deep appreciation of all he has done for organized medicine.

Dr. Dwight H. Murray, chairman, Board of Trustees, for the record, said:

> Speaking for the Board of Trustees, I would like to commend Dr. Cunniffe on the work that he has done for American medicine for many years. We on the Board, of course, have to depend very largely on the advice from our various councils, and we have surely appreciated Dr. Cunniffe's work as chairman of the Judicial Council.

1954
DISTRICT BRANCH MEETINGS
Medical Society of the State of New York

District Branch	*Date*	*Place*	*Time*
Fourth	Thursday October 21	Queensbury Hotel Glens Falls	Afternoon Dinner Evening
Fifth	Wednesday October 20	Hotel Onondaga Syracuse	Afternoon Dinner Evening
Sixth	Wednesday October 27	Statler Club Ithaca	Afternoon Dinner
Ninth	Wednesday October 6	Sleepy Hollow Country Club Scarborough	Afternoon Dinner

PRESIDENT'S PAGE

The Medical Society of the State of New York

DAN MELLEN, M.D.

From questions asked me from time to time it seems that not all of the over 23,000 physicians comprising the membership of the Medical Society of the State of New York have a clear realization of what the Society is and does. In the case of new members this is perhaps understandable; in the case of older members it is less so since, whether or not they realize it, the activities of the Society affect every facet of every doctor's professional life every day of the year.

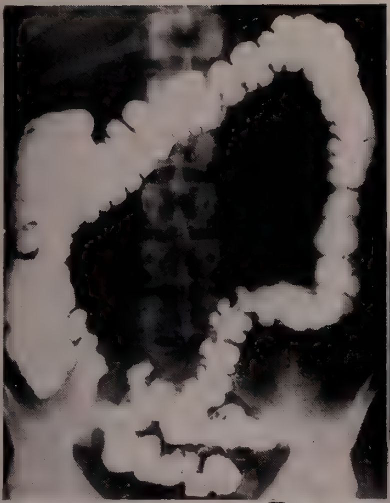
The Society is governed by the House of Delegates elected annually and meeting once a year. It is responsible for the general management, superintendence, and control of the Society. The Council meets monthly except in July and August and consists of the elected officers and 12 councillors. It exercises the functions of the House of Delegates when the House is not in session. The chairman of the Board of Trustees is a member of the Council. The Board of Trustees, consisting of seven members elected by the House of Delegates, supervises the financial affairs of the Society.

The officers of the Society are elected annually, also by the House of Delegates, and are nine in number. The Judicial Council has jurisdiction of appeal from decisions on ethics of the component county societies and also over disputes between county societies. Its rulings may be appealed to the House of Delegates. It is composed of the presidents of the nine district branches and the president and secretary of the State Society. The district branches are integral parts of the Medical Society of the State of New York. Their objective is to promote the scientific, social, cultural, economic, and other interests of the medical profession. The president of each district branch is a member of the House of Delegates. Briefly, this is the composition of the government of the Society itself.

The purposes of the Society, as stated in its Constitution, "shall be to federate into one organization the medical profession of the State of New York; to extend medical knowledge and advance the science and art of medicine; to promote the betterment of public health; and to enlighten and direct public opinion in regard to problems of medicine and health for the best interests of the people of the State." To these ends the government of the Society, now with the assistance of approximately 65 paid employes, has worked throughout the nearly one hundred and fifty years of its existence. It may well be considered that the freedom with which every physician practices and his very livelihood would be seriously jeopardized were the physicians of the State not so organized into a State-wide association.

It is my purpose from time to time in these pages to discuss with you how the Society works for the benefit of all through its publications, its teaching programs, and the activities of its permanent Council committees and special committees to accomplish in detail the purposes set forth in its Constitution.

Dan Mellen



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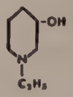

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SCIENTIFIC ARTICLES

The Prevention and Management of Prematurity

ELMER E. KRAMER, M.D., F.A.C.S., NEW YORK CITY

(From the Department of Obstetrics and Gynecology, Cornell University Medical College and the Woman's Clinic of the New York Hospital)

The problem of prematurity is not a new one but rather a long neglected one. Many do not realize the over-all nature or importance of this condition, whereas others have a complacent attitude toward its management. Some of the standard textbooks devote little space to the obstetric side of this subject, mentioning it but briefly in vague terms. Why then has this condition become one of medicine's challenges? Why have infant mortality committees devoted more time to this problem and more journals allocated space to authorities on the subject? It was only last May that Guttmacher[1] so ably covered the subject in an address to this body at Buffalo. Eastman[2,3] and Hellman[4] have also had recent discourses in the literature.

Why then is there need once again to bring this subject to your attention, particularly since there have been no unusual changes in its management? Many do not know the magnitude of this problem. During the past three years our premature births constituted about 7 per cent of all live births but accounted for 72 per cent of all neonatal deaths.[5] In this country alone prematurity entails a threat to the lives of some 150,000 babies annually.[3] Little change in the fetal survival picture can be expected until prematurity is reduced or its management meets with greater success. By the wide dissemination of existing knowledge all concerned will eventually come to a better understanding of the problem. The patient, the obstetrician, the pediatrician, nursing personnel, as well as hospital administrators, must become aware of how they can improve the over-all results. Herein I wish to re-emphasize the many factors concerned and describe the present program at the New York Lying-In Hospital.

A premature infant is one weighing between 500 and 2,499 Gm. and measuring less than 45 cm. The incidence ranges from 6 to 7 per cent in the United States as a whole. The incidence at the New York Lying-In Hospital, for the three years 1951 to 1953, was 7.2 per cent. Lull and Kimbrough[6] give an incidence of 7.5 per cent at the Pennsylvania Hospital in Philadelphia. Eastman[7] at Johns Hopkins gives an 11.7 per cent incidence, due probably to the higher Negro clinic attendance.

In meeting the challenge of prematurity the obstetrician has two approaches: (1) reduction in incidence of premature labor and (2) proper management of labor in the expected premature.

Reduction in Incidence of Premature Labor

In dealing with the first approach the obstetrician must practice preventive medicine in the true sense of the word. Since the cause of premature labor in unknown, he must delve into the associated factors and attempt to prevent or minimize them whenever possible. Patients must be informed of the great importance of registering early, and they must receive adequate care during all periods of the pregnancy. At the initial office visit a thorough history is essential on every patient (even the apparently normal patient) in order to elicit abnormalities or warning signs or symptoms. It is well known that prematurity occurs more commonly in the lower economic group and may possibly be

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Obstetrics and Gynecology, May 13, 1954.

associated with dietary deficiencies, overwork, and poor spacing of pregnancies.

The Nutrition Research Clinic at Pennsylvania Hospital[6] recently reported on the findings of an intensive five-year study of the various nutritional aspects of pregnancy. It was ascertained that individuals whose pregravid weight was markedly below standard or who failed to gain satisfactorily during pregnancy had an increased incidence of prematurity. These same patients on an adequate nutritional regimen had a 41 per cent reduction in the incidence of prematurity over an untreated control group. Tompkins, reporting for the Research Clinic, states that these patients must be seen early in order to correct deficiencies since a definite pattern becomes established early which, if persistent, cannot be altered. It was, furthermore, shown that anemia has a direct effect on the incidence of premature labor; it rises as the hemoglobin level decreases. In those patients who are both underweight and anemic the premature rate is strikingly high. By proper nutrition and supplementation (vitamins and/or protein supplements) these rates can be significantly reduced. Pertaining to race it was shown that Negroes had a premature incidence of 15.9 per cent, whereas in the white population it was 5.1 per cent, which was thought probably to result from a more severe and prolonged depletion of nutrient reserves.

A previous history of bleeding, an abortion, or previous premature labor should be noted as a serious omen. Many of the causes of abortion are essentially the same as those associated with premature labor. Furthermore, mothers who have had one premature often have another in a subsequent pregnancy. Periodic rest periods, complete avoidance of heavy work, abstinence from coitus, douching, and, possibly, supplements of vitamins C and K should be advised in these patients. Smith and Smith[8] and others have advocated the use of stilbestrol and progesterone to prevent premature labor, and at the earliest sign of contractions or bleeding the latter drug is given in large doses (up to 1,000 mg.) in linguet form. In general, we at the New York Lying-In Hospital have not administered hormones for a number of years in patients with this complication.[9]

The sterility patient who often is in an older age group, as well as the elderly primigravida, deserves special attention since complications are more likely to develop. The incidence of abortion, premature labor, and toxemia is increased and must be guarded against. The hypertensive patient with the ever-present possibility of a superimposed toxemia merits close and frequent checks. Weight control and salt restriction will tend to reduce the incidence or possibly prevent its occurrence until near term, thereby making early termination unnecessary.

The diabetic patient must receive frequent and constant checks, as has been outlined by Given *et al.*,[10] in order to reduce the incidence of acidosis, hydramnios, and toxemia. These patients are seen weekly in order to provide the optimum of good obstetric care. Considerable emphasis is placed on strict control of the patient's weight, and every attempt is made to keep them free from symptoms of diabetes and ketoacidosis. Insulin requirements are carefully regulated. Ammonium chloride by mouth and salt restriction are instituted in the first trimester. It is felt that hospitalization is urgently indicated at the earliest sign of any complication. In the uncomplicated patient routine hospitalization is effected at the thirty-fifth week for careful evaluation as to time and mode of delivery.

If a history of fraternal twins is elicited, one should note any abnormal increase in weight or an excessive increase in size of the fundus, etc. If perchance the diagnosis of twins is made, the patient should be instructed to avoid undue activity during the latter half of pregnancy since multiple pregnancies tend to go into labor some three to four weeks prior to term. According to Eastman[7] multiple pregnancies account for 11.9 per cent of premature infants.

There are a number of other unrelated causes of prematurity, such as acute infection, which must be treated vigorously from the start since hyperpyrexia tends to initiate labor. A history of a previous cervical amputation merits close observation and avoidance of undue activity. Syphilis is a known cause of prematurity. However, the universal adoption of the Wassermann test has reduced this entity to a minimum. Premature birth is preventable by early and adequate treatment of the luetic mother.

Complications and Therapeutic Interference

If perchance the above preventive measures fail and a complication occurs, what then should be our course of action? The most common complications or associated conditions with which we are concerned are premature rupture of the membranes, premature separation of the placenta, placenta previa, toxemia, and therapeutic interference. The etiology of these conditions is unknown. However, it is felt that proper antepartum care, early recognition of complications, and hospitalization with adequate care in many instances will often prevent the need for immediate intervention, thereby prolonging pregnancy, increasing the weight of the fetus, and resulting in a better survival rate.

The cause of premature rupture of the membranes is unknown. Danforth *et al.*[11] were unable to demonstrate any difference in the "bursting tension" of membranes which rupture prematurely, as compared to those which ruptured late in labor. It is a known fact that the longer from term premature rupture of the membranes occurs, the longer the latent period before labor ensues. This latent period can be lengthened by bed rest (hospitalization if necessary). Infection will not ensue if contamination from below is prevented by abstaining from coitus, douching, and tub bathing. Following the onset of labor infection may gain entrance through the amnion so that the use of chemotherapy and antibiotics is then advocated. We have not used these drugs routinely in premature rupture of the membranes as has been advocated by some. Many of these patients can be maintained often for days and at times for weeks, thereby increasing fetal size and the possibility of survival. The infant in utero at twenty-five weeks normally gains 20 Gm. per day so that one week will mean an increase of approximately 140 Gm. or $^{1}/_{4}$ pound. Gozan[12] reported a patient with this condition who was maintained for one hundred and sixteen days with eventual delivery of a 5-pound, 11-ounce infant.

Premature separation of the placenta as well as placenta previa at times are severe enough to necessitate immediate intervention. However, in the milder forms of these conditions conservatism will often permit days and weeks to go by before eventual delivery is necessary. This is particularly so in placenta previa. In the case of a small infant we pursue an expectant form of treatment. The patient is hospitalized, typed and crossmatched, and transfused if necessary. Rectal and vaginal examination are not performed. Most patients with placenta previa, if kept at rest, will stop bleeding. In a few instances we have found it necessary to give such patients iron and occasionally transfuse them during the interval while waiting for the infant to attain the necessary weight. Attempts to determine the location of the placenta are not made before the last month. Eventually, at the proper time, these patients are examined in the operating room with a cesarean section setup ready. The diagnosis is made and method of delivery decided upon.

TABLE I.—SURVIVAL RATE OF NEWBORNS AT NEW YORK LYING-IN HOSPITAL, 1951 TO 1953[5]

Weight (Gm.)	Deadborn	Live Births	Neonatal Deaths	Neonatal Death Rate per 100 Live Births
500 to 999	31	56	46	82.1
1,000 to 1,499	24	66	32	48.4
1,500 to 1,999	30	138	21	15.2
2,000 to 2,499	23	561	18	3.2
2,500 to 4,499	63	11,370	42	0.36

Because of the improvement in anesthesia and surgical technics the termination of pregnancy by cesarean section is occasionally approached too lightly. The operator is influenced by minor complications and fails to compute carefully the expected date or calculate the estimated weight with the result that occasionally a premature infant is delivered which fails to survive. It is imperative in elective cesarean sections to take all precautions to prevent this.

If toxemia should develop even after the preventive measures listed earlier, prompt detection and vigorous treatment will often hold it in abeyance for days or weeks, thereby allowing increased growth of the infant. In the small infant bed rest (hospitalization if necessary), a salt-free diet, sedation, and diuretics are instituted at the earliest sign of toxemia (a borderline systolic or diastolic pressure, edema, increase in weight gain above the normal). The so-called case of "fulminating toxemia" rarely, if ever, occurs under adequate antepartum care. Eventually, if delivery is imperative, the mode of delivery can be decided by a careful evaluation of the cervix, position and station of the presenting part, etc.

The conservative approach to the various associated factors is stressed because it allows continued growth of the fetus, thereby increasing the survival rate. This is clearly illustrated in Table I.

As can be seen, an infant between 1,000 and

1,499 Gm. has almost three times the chance of survival as compared to the 500 to 999-Gm. group. The infant weighing between 1,500 and 1,999 Gm. has an 85 per cent chance of survival, which is almost twice that of the 1,000 to 1,499-Gm. group. In other words, each pound, or portion thereof, will increase an infant's survival rate. This difference is particularly noticed between the 500 to 999-Gm. group and the 1,000 to 1,499-Gm. group. Furthermore, it should be noted that even the 2,000 to 2,499-Gm. group has a ten times higher mortality than the full-term group.

Management of Labor

In discussing the second approach, "the proper management of labor in the expected premature," one must review the causes of deaths in prematures in order to ascertain whether or not some are the result of improper management. In other words, are some of the complications preventable? We have regarded anoxia (and asphyxia), birth injuries (including intracranial hemorrhage), and congenital pneumonia and other infections as the causes of death which are possibly preventable and are to be guarded against.

Potter[13] lists atelectasis with hyaline membrane as the cause of death in 40.5 per cent of prematures weighing between 1,000 and 2,500 Gm. Although the number of infants studied was small (74), one cannot help but be impressed by the significance. Is this a new entity or an old entity which has gone undiagnosed? Could it be that previously some of the premature deaths due to this cause were ascribed to prematurity alone or to anoxia?

Potter states that in 246 premature deaths only 14 (5.6 per cent) revealed no pathologic changes at autopsy. What then is this hyaline membrane condition which occurs more commonly in premature infants and has no relation to any type of maternal complication, to the anesthesia, or to method of delivery? Its cause is unexplained as yet, although oxygen, humidity, and infection have been suggested as the probable cause at one time or another. Could it be that when the hyaline membrane entity is explained, our premature deaths will be significantly reduced? Until such a time our attention must be focused on preventing anoxia, birth injuries (including intracranial hemorrhage), congenital pneumonia, and other infections.

As a matter of practice our management is as follows:

1. The personnel of the premature nursery are notified on admission or at the onset of labor (if hospitalized previously) in order that everything will be in readiness at delivery. They are given the estimated weight, the approximate time delivery is expected, and any other pertinent information. Time is thereby allowed to ready an incubator and notify the pediatrician.
2. In order to reduce the possibility of anoxia no sedation is administered to the mother. Instead caudal, saddle block, or paravertebral block anesthesia or trilene inhalation is used to allay pain. The patient when informed of the situation and possibilities usually cooperates to the fullest.
3. Vitamin K (menadione sodium bisulfite) is administered to the mother to decrease the tendency to hemorrhage in the newborn premature. The dose usually ranges from 4 to 8 mg. given intramuscularly or intravenously depending on the expected length of labor.
4. Penicillin is administered to decrease infection in the infant. The dosage in the usual case is 400,000 units. The additional routine administration of streptomycin, aureomycin, or Terramycin is advocated by some in order to inhibit growth of a wider range of organisms.
5. Labor is allowed to proceed normally without interference. Membranes which are unruptured are left intact so that the forewaters offer protection to the fragile premature skull.
6. Eventually when the patient reaches 8 cm. dilatation (sooner in the multiparous patient), she is moved to the delivery room in order that all preparations can be made without haste. The pediatrician is notified so as to be present and to advise or assist in resuscitation or other conditions which may arise. We attribute a large measure of our success to the close cooperation afforded by our pediatric department.
7. No general anesthesia is given at delivery. The patient is given 100 per cent oxygen by face mask during the second stage, while the regional anesthesia (begun in labor) is continued and/or a pudendal block is administered.
8. A wide episiotomy is performed as the head descends but prior to crowning so as to prevent a sudden release of pressure on the infant's skull.
9. Spontaneous delivery is permitted whenever possible. Forceps are resorted to only if the second stage fails to terminate in a reasonable

time. Gentleness in manipulation is mandatory. This is particularly so in a breech presentation when the small buttocks pass through the incompletely dilated cervix which grips the aftercoming head. If arrested, it becomes necessary to insert Dührssen's incisions to effect delivery.

10. The cord is clamped long and cut only after pulsations cease. Some obstetricians lower the infant below the level of the delivery table so as to increase the return of blood, whereas gentle stripping[14] is preferred by others.

11. The infant is placed in the bassinet with the head lowered. Body warmth is maintained. The posterior pharynx is suctioned of all foreign material. If the infant is cyanotic or in poor condition, 100 per cent oxygen is given by the infant face mask attached to the Flagg apparatus. As soon as the infant is in good condition, it is properly tagged and silver nitrate instilled in the eyes. It is transferred to the premature nursery in a portable incubator unit.

12. If the infant appears limp or does not respond quickly, the posterior pharynx and larynx are visualized with the infant laryngoscope, suctioned of all foreign material, and 100 per cent oxygen given under low pressure directly into the posterior pharynx. Intubation is performed if necessary and oxygen administered directly into the bronchial tree.

Transfer to the premature nursery is performed only when the infant is in reasonably good condition. In the severely depressed infant the Bloxsom[15] positive pressure oxygen airlock has been used with equivocal results. More recently the Millen-Davies Rocker has been used in these infants, but as yet no definite opinion has been formed.

13. Very little in the way of stimulants is given, caffeine sodium benzoate in a dosage of 25 mg. being the usual. Old methods of tubbing, etc., have been discarded. Violent methods of resuscitation are to be condemned.

14. The use of Nalline (N-allylnormorphine)[16] has been advocated when neonatal depression occurs due to maternal sedation with morphine or its derivatives. We have as yet had no experience with this drug, although it is available on the delivery floor.

15. In the case of an elective induction or an elective cesarean section because of a maternal complication, where the infant is estimated to be premature, the above-mentioned routine is followed whenever possible.

Summary

In order to reduce prematurity one must get the patient into optimum condition, correcting nutritional defects and anemia, factors which are known to increase the incidence of prematurity. The early and prompt management of medical complications is important. The conservative management of the woman with premature rupture of the membranes and antepartum bleeding is stressed, as well as the early, vigorous treatment of toxemia.

In some of our complications (premature separation of the placenta, toxemia, diabetes), we are forced to intervene and actually increase prematurity; however, this is in the interest of both mother and infant.

The routine outline for the management of labor in the expected premature will result in more active infants with a stronger cry and better color. We know that although there is a direct relationship between the size of the infant and its chances of survival, the condition at birth is of great importance. In other words, the better the condition at birth, the better the chance of survival.

530 East 70th Street

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Discussion

William M. Jackson, M.D., *Rochester.*—For some time great attention and interest have been shown at the University of Rochester concerning the problem of prematurity, its management, and treatment. The fact, as pointed out, that 72 per cent of neonatal deaths are due to prematurity is evidence of the problem with which we are confronted. I should like to comment on some of the important aspects of Dr. Kramer's paper.

It is important that the patient register early for prenatal care. When studied in Rochester, it was found that prematurity with its attendant problems was more prevalent in the clinic patient who registered late in pregnancy. There is no doubt that diet plays an important part in this condition. The role of hormonal treatment with bleeding in pregnancy is still controversial. Evidence from other sources indicates that a given number of patients studied do just as well without hormonal therapy as they do with it. In relation to premature rupture of the membranes and potential infection, Lund at Charity Hospital in Louisiana showed with a small series of cases that the rate of infection with and without the use of prophylactic penicillin was just about equal if the patient was treated while not in actual labor. It seems evident that if an antibiotic is to be used, it is better to employ one of the broad-spectrum type so that the more resistant organisms may be handled efficiently. It has been noted in Rochester that the incidence of pneumonia in the fetus is more prevalent when potential antepartum or intrapartum infection is present without prophylactic antibiotic treatment.

The problem of intrapartum bleeding is always with us. The role of cesarean section as a means of treatment is in a state of flux. With a small series of cases it was found at Strong Memorial that fetal and maternal morbidity and mortality were not reduced by cesarean section in private patients when compared to a similar group of staff patients treated conservatively, i.e., by watchful waiting, amniotomy, and wise use of the Vorhees bag. No routine method of treatment here is wise. The patient and the condition causing bleeding must be evaluated carefully and then the proper procedure employed.

Diabetics are always a poor risk obstetrically, as has been mentioned. Elective cesarean section may be the best method of delivery at approximately thirty-eight weeks gestation. Since most diabetics at term have excessive-sized fetuses, one must be very careful in estimating fetal size since the term fetus, by weight criterion, may be immature physiologically.

More harm may be done by improper neonatal management of the baby than has been gained by good prenatal care. The regimen outlined by Dr. Kramer is excellent and is essentially that which is used at Rochester. Establishment of a good airway, warmth, etc., are of prime importance. The problem of hyaline membrane has been considerably reduced by the use of such detergents as Alevaire. In the breech delivery arrest of the aftercoming head may be solved by a little used procedure, Dührssen's incision, as has been mentioned by Dr. Kramer. Recently we have had occasion to use paracervical block to aid in attaining complete cervical dilation.

One of the recent controversial issues in the use of 100 per cent oxygen for the fetus has been the observation that the resulting oxygen poisoning may be a factor in the development of retrolental fibroplasia. Studies done by Gerschman, Nadig, Snell, and Nye on newborn mice exposed to high oxygen concentrations reveal that there is a hypertrophy of the retrolental blood vessels and a concomitant atrophy of the retinal vessels. It is hypothesized that the immature retina is very sensitive to oxygen poisoning. It appears, therefore, that possibly the optimum oxygen concentration in incubators, etc., should be just sufficient to prevent cyanosis, usually about 40 per cent.

We have some experience with Nalline as an antagonist for Demerol and morphine over medication causing respiratory distress. It appears to aid a great deal with this problem.

For Service Above and Beyond

The multicolored ribbons that adorn the receding chests of admirals and generals, as well as those of veteran chiefs and master sergeants, must at times give rise to envy in civilians, doomed to sartorial drabness. A recent personal observation opened up new vistas of possible peacetime applications of the military idea. . . . . . . As my car pulled up for a light, I glanced to my left, and there, standing on the curb close by, was a young woman, obviously in her eighth month or even more advanced. What caught my eye was a bit of color, for on her left chest was proudly displayed the maroon-and-white ribbon of the Good Conduct Medal!—*Mercurius, New York Medicine, July 20, 1954*

The Treatment of Uremia

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THE term, uremia, is a historical misnomer derived from the concept that the elevated blood urea consequent to renal failure is responsible for the toxicity and death. Presently, it is well appreciated that uremia is actually a complex of numerous physiologic disturbances and that the accumulated urea is one of the least toxic of all the retained substances. It is obvious that no one word could descriptively encompass the multiplicity of events occurring in the body during renal insufficiency, among which are severe imbalance of body fluids, electrolyte disturbances, retention of protein metabolites, circulatory alterations, and, often, anemia and infection. One needs only to reflect upon the extraordinary work accomplished by the kidneys to appreciate what havoc occurs when their function fails.

The kidneys, having two million glomeruli, receive 1,200 cc. of blood every minute, thereby processing 450 gallons (1,700 L.) of blood every twenty-four hours. They extract and filtrate 47 or more gallons (187 L.) of fluid from the plasma each day from which they must reabsorb $2^{1}/_{2}$ pounds (1,100 Gm.) of sodium chloride, 1 pound of sodium bicarbonate (425 Gm.), and 150 Gm. of glucose, together with calcium, potassium, magnesium, phosphate, sulfate, fructose, hormones, and many other substances to produce 1.5 L. of urine within twenty-four hours (Fig. 1). All this elaborate mechanism is exquisitely controlled by the kidneys according to the body requirements, thereby establishing a precisely balanced internal environment for the maintenance of normal health.[1] Thus, cessation of renal function results not merely in a failure to remove the waste products but precipitates a violent upheaval of orderly processes producing a disorganized internal state known as uremia. Such a syndrome may include convulsions, edema, uremic pericarditis, hypertension, cardiac failure, and encephalopathy.

It is not within the scope of this discussion to consider in detail the many causes of renal insufficiency. The correct treatment of anuria, however, is dependent upon the knowledge of the probable cause, for an estimate of the prognosis will determine what efforts and measures should be undertaken to combat uremia. The following general classification, although incomplete, is helpful in such an orientation to a therapeutic plan.

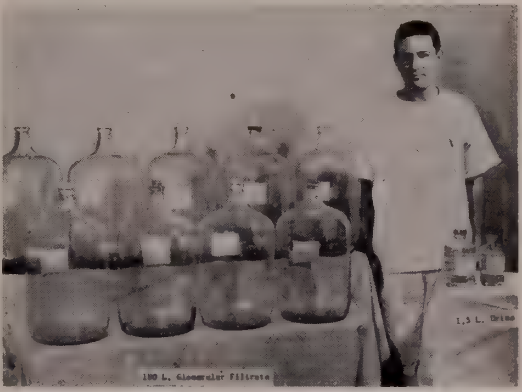

FIG. 1. Forty-five gallons of filtrate (180 L.) are represented on the subject's right. All save $1^{1}/_{2}$ quarts (1.5 L.) is reabsorbed as indicated by the containers on the left.

CAUSES OF RENAL INSUFFICIENCY

1. Prerenal
   - (*a*) Diminished fluid intake
   - (*b*) Reduced blood constituents (hemorrhage, cardiac decompensation, etc.)
   - (*c*) Shock and adrenal insufficiency
   - (*d*) Infarction of the renal arteries
2. Renal
   - (*a*) Acute renal failure: poisoning, nephritis, lower nephron nephroses, incompatible blood transfusion, toxemia of pregnancy
   - (*b*) Nephritis, chronic pyelonephritis, polycystic renal disease, extensive destruction of kidney such as may be caused by tuberculosis
   - (*c*) Obstructive lesions: calculi, calcifications in pelves and/or parenchyma
3. Postrenal lesions (obstruction)
   - (*a*) Ligation of/or calculi in ureters
   - (*b*) Prostatic obstruction
   - (*c*) Urethral stricture

It may be inferred from the above that three

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fundamental conditions may confront the examiner, and the course of action will be selected accordingly:

1. The anuria may be a terminal state from which there is no reasonable hope that the kidney will regain sufficient function to maintain life. Such may be illustrated by the terminal stages of chronic glomerulonephritis. The treatment is expectant.

2. Anuria may be due to occlusion of the renal arteries or to obstructions within the urinary tract, such as bilateral ligation of the ureters. The choice of treatment is obviously dependent upon an accurate diagnosis. Surgical procedures supplemented by appropriate management of the uremia are indicated.

3. Renal failure may be due to a condition from which recovery may take place, providing life can be maintained over a period of time necessary for such renal repair, as exemplified by anuria following a transfusion with incompatible blood.

The objectives of therapy are to contain the humeral, metabolic, and electrolytic disorders to minimal proportions, thereby buying time for the kidneys to repair the effects of the injury and to resume function.[2-4]

The treatment of uremia includes certain therapeutic methods which are now universally accepted as useful, as well as other proposals about which there is less uniformity of opinion. For purposes of discussion it may be well to list these under two headings; those which are accepted, and, second, those which are of possible or doubtful value.

ACCEPTED PROCEDURES

1. Cystoscopy and catheterization of ureters when indicated.
2. An indwelling urethral catheter to collect the urine.
3. An accurate measurement of intake and output.
4. Strict supervision of fluid intake.
5. A caloric consumption sufficient to minimize the endogenous catabolism of protein.
6. The regulation of the electrolyte balances to as near normal as possible.
7. A counteraction of the acidosis by administration of base.
8. The use of antibiotics.
9. The support of circulation when required.

PROCEDURES OF POSSIBLE OR DOUBTFUL VALUE

1. Pyelography.
2. Testosterone propionate.
3. Adrenal cortical hormones.
4. Spinal anesthesia.
5. Renal decapsulation.
6. Extracorporeal dialysis.
7. Intracorporeal irrigation by way of peritoneal lavage, intestinal or stomach irrigations.
8. Cation exchange resins.
9. Glucose-insulin solutions.

Limitations of time and space will not permit a full discussion of the merits and the objections to all of these methods, but it is proper to state that there is universal agreement that conservative treatment should first be employed for marked oliguria and anuria.[5] Other methods are utilized according to the convictions of the physician and as determined by the progress or the deterioration of the patient.[6-13]

Diagnosis

Clues to the diagnosis are often available in the history, but attention must be given to the possibility that asymptomatic and unsuspected renal disease may have existed prior to the onset of the uremia. A plain x-ray of the abdomen is most desirable to ascertain whether calculi are present. Excretory pyelograms are contraindicated in advanced uremia or with complete anuria. The kidney will usually not extract the contrast media in sufficient amounts to produce pyelograms if the blood urea is elevated above 35 mg. per cent. Furthermore the iodides which are thereupon added to the blood plasma, which is already burdened with toxic agents, imposes another foreign substance which can be eliminated only by the renal route. Cystoscopy and insertion of the catheters to each kidney is mandatory if the abdominal x-rays reveal probable ureteral calculi or if ureteral injury is suspected. Precipitated sulfonomide crystals in the kidneys and ureters may account for bilateral obstruction. These are radiolucent and are best detected by cystoscopy and ureteral instrumentation.

Conservative Treatment

The rationale of all treatment is formulated upon four mutually correlated principles derived from knowledge of renal physiology.

HYDRATION.—Water is excreted by (1) imperceptible loss from lungs and skin, (2) by sweat, (3) by stool, and (4) by urine. An afebrile, anuric patient who is not sweating and has no diarrhea or fever requires approximately 700 to 800 cc. of water per day to replace the insensible loss. Overhydration will dilute body fluids, pro-

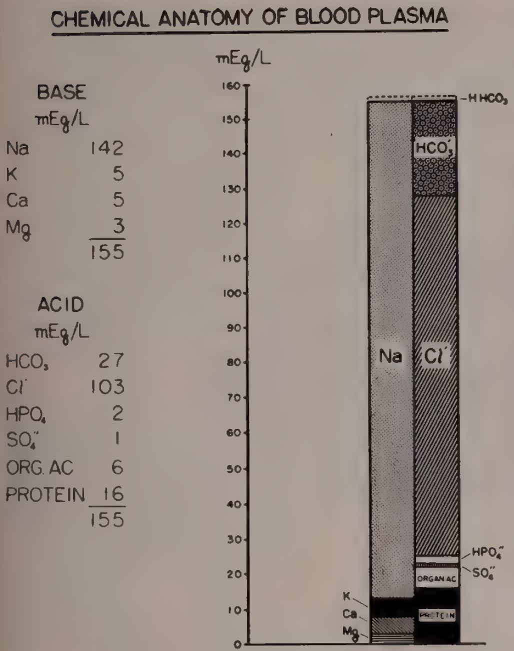

Fig. 2. Chemical anatomy of blood plasma.

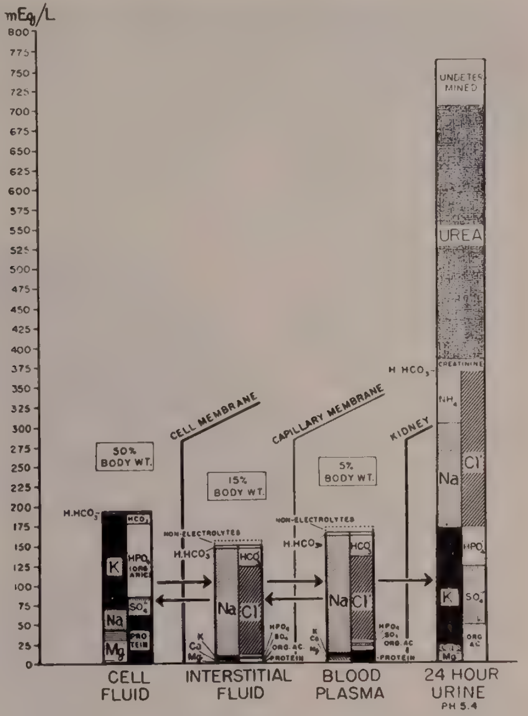

Fig. 3. Chemical anatomy of the three compartments and urine.

duce low electrolyte concentration in the serum and cells, and cause water intoxication leading to generalized and pulmonary edema, cardiac embarrassment, and possible death. An objective of therapy is to maintain not only a normal total water content of body, but also to balance the electrolytes so that water will be as nearly normally distributed as possible in the three nominal compartments: the plasma and the interstitial and intracellular spaces. The movement of water between these compartments is dependent upon osmotic forces, largely influenced by sodium in the extracellular space and to a lesser degree by potassium in the intracellular compartment.

Electrolytes.—The electrolytic composition of the plasma is finely regulated by renal control. An ionic balance in the plasma is normally maintained by the combination of anions and cations (Fig. 2). It is to be emphasized that the hospital laboratory report concerns itself only with the concentration of electrolytes in the plasma and does not depict the ionic status of the fluids in the contiguous two compartments.

Thus, sodium, chloride, and bicarbonate are the main constituents of the plasma and extracellular fluid, whereas within the cell potassium is concentrated twenty times above plasma levels (115 mEq.) and sodium in one-fourth the amount of that in the plasma (37 mEq.).[14] This physicochemical organization of acid and base balance has the dual merits of remarkable rigidity of pattern yet is possessed of a resiliency to meet changing events. The speed with which adjustments are made is variable for sodium requires about sixty minutes to attain equilibrium moving across the cell boundary, whereas potassium adjusts in fifteen hours.

Another important difference in the metabolism of these two ions is that water follows sodium and does not follow potassium to a comparable extent. The capillary membrane is not highly selective to electrolyte interchange, and the blood plasma and interstitial fluid are, therefore, almost identical. The barrier of the cell wall contains the highly dissimilar character of the intracellular fluid and, of equal importance, is influential in the regulations of total volume of fluid in intracellular space.[15]

Figure 3 describes the chemical anatomy of the internal aqueous environment of the body. The two middle diagrams are almost identical except for the small amount of nondiffusible protein in the interstitial fluid. The nonelectrolytes across the top of the diagrams represent glucose, amino

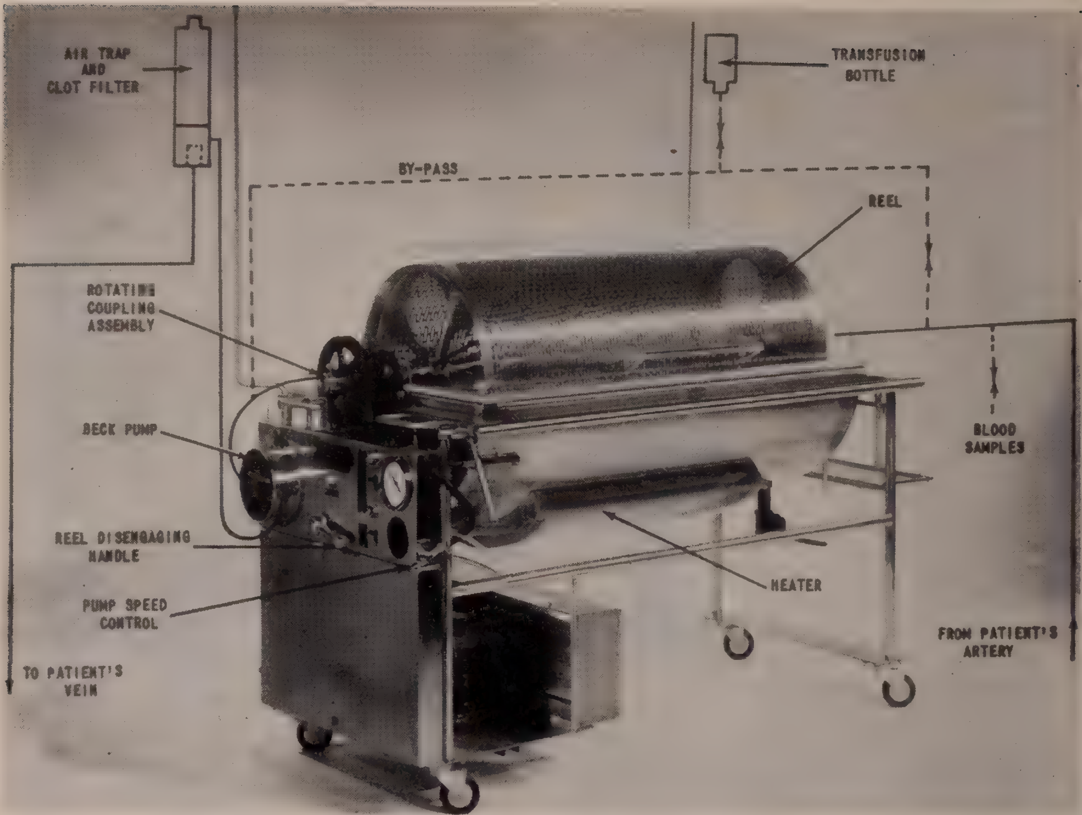

Fig. 4. The artificial kidney (Kolff type).

acids, and waste products of protein metabolism. These substances occupy a relatively small amount of space and are only transported; they are serviceable neither in the acid-base nor in the osmotic mechanisms.

The diagram representing a twenty-four-hour specimen of urine obtained from a subject on a usual diet illustrates the great range of renal control by the large quantities in the urine of substances which are relatively small components of plasma structure. Furthermore, the wide differences of quantities of electrolytes in the urine as compared to plasma demonstrates the efficiency of the kidney in defending the chemical pattern of the plasma. Three components of the plasma are not found in the urine in health. The glucose is completely reabsorbed, protein does not enter the glomerular filtrate, and bicarbonate is absent in an acid urine. Conversely the urine contains ammonium which is probably not present in plasma.

Protein Metabolism.—A fasting man quickly exhausts carbohydrate stores and must supply caloric needs by burning 80 Gm. of protein and 200 Gm. of fat daily. The products of fat and protein degradation result in the liberation of ketones and potassium into the extracellular spaces. If the normal amount of the plasma potassium is doubled, cardiac arrest is an imminent possibility.

Accordingly, conservative therapy concerns itself with attempts to keep nitrogen, potassium, and other solutes to a minimum by reducing endogenous catabolism. Bull[16] and others have advocated 2,500-calorie feedings a day by nasal tube. Stock,[5] however, believes that 100 Gm. of carbohydrates daily are sufficient to meet the caloric requirements.

Base.—With the advent of anuria, sulfuric and phosphoric acids are not secreted by the kidneys. Ammonium formation by the distal segment of the nephron is reduced, and other metabolites accumulate in direct proportion to protein catabolism, thereby producing an acidosis. Repair solutions by oral and intravenous routes will modify the loss of base.

TABLE I.—Summary of Results of Dialysis in Individual Patients

Case	Sex	Age	Diagnosis and Complications	Symptoms	Results	Living 1 Month Later
1*	M	21	Acute renal failure due to diethylene glycol poisoning	Nausea and vomiting; peripheral edema; orthopnea; disoriented; oliguria 10 days	Alert and hungry at the end of dialysis. Renal decapsulation 2 days later	
				Reappearance of severe uremic symptoms and persistence of oliguria	Immediate clinical improvement. Diuresis 4 days later, but downhill course renewed. Died 26 days after poisoning	No
2*	F	20	Acute renal failure due to transfusion reaction	Comatose; edematous; oliguria 7 days	Aroused from stupor. Diuresis 4 days later. Full recovery	Yes
3*	F	45	Acute renal failure after extensive surgical procedure	Comatose; ankle edema; generalized muscular twitchings; oliguria 8 days	Became conscious. Striking clinical improvement. Full recovery	Yes
4	M	40	Chronic glomerulonephritis	Nausea and vomiting; anorexia; edema of legs; apathetic; oliguria 5 days	Improved sense of well-being. Stabilized for 4 months	Yes
5	M	60	Bladder cancer obstructing ureters	Nausea and vomiting; severe dehydration; semiconscious.	No change. Died 3 hours later	No
6*	M	43	Chronic glomerulonephritis	Semiconscious; convulsions; severe diarrhea; nausea and vomiting; oliguria 10 days	Good immediate response. Patient became lucid. Died 2 days later	No
7	M	44	Chronic glomerulonephritis	Nausea and vomiting; hypertension headaches; anorexia	Relief of symptoms for 3 weeks	Yes
8*	F	34	Chronic glomerulonephritis	Coma; Vomiting; Peripheral edema; oliguria 9 days	Conscious after dialysis. Became alert and hungry	
				Lapsed back to coma	Woke up on second hour of dialysis. Died 6 hours after procedure	No
9*	M	65	Acute renal failure due to unknown cause	Lethargic; disoriented; anuria 10 days	No change. Anuria persisted. Died 7 days later	No
10*	M	75	Bladder cancer with ureteral obstruction	Apathetic; confused; anuria 9 days.	Immediate clinical improvement of short duration	
				Downhill course resumed	Poor objective improvement	
				Progressive deterioration	Became moderately alert. Ureterostomy done the next day. Died 3 days later	No
11*	M	48	Chronic glomerulonephritis	Nausea and vomiting; disoriented	Little clinical improvement. Died 12 hours later	No
12*	F	62	Acute renal failure after abdominoperineal resection of rectum	Coma; hypotension; anuria 6 days	Patient died during dialysis	No
13*	M	50	Acute renal failure due to unknown cause	Stuporous; anuria 8 days	Moderate immediate clinical improvement. Died 20 hours later	No
14*	M	48	Acute renal failure due to carbon tetrachloride poisoning	Semiconscious; edematous	Dialysis terminated due to shock. No response. Died 5 hours later	No
15*	M	48	Adenocarcinoma of rectum with metastases. Bilateral ureteral obstruction	Anorexia; nausea and vomiting; anuria 3 days	Convulsions and stupor developed immediately after dialysis. Diuresis the next day with steady clinical improvement. Nephrostomy 9 days later. Discharged improved	Yes

* Terminally ill.

Therapy

The management of uremia is predicated upon these physiologic alterations. If possible, the patient's weight is secured to afford information on water balance as judged by gain or loss. A catheter is inserted to collect and measure all urine. A careful estimate of vomitus, diarrhea, sweating, and salivation loss is made, and water requirements are determined according to the degree of hydration and body temperatures. A caloric intake of at least 100 Gm. of glucose is mandatory to minimize protein combustion. Our practice is to supply 2,000 calories in the form of glucose, fat, and water (Lipomul or Ediol)

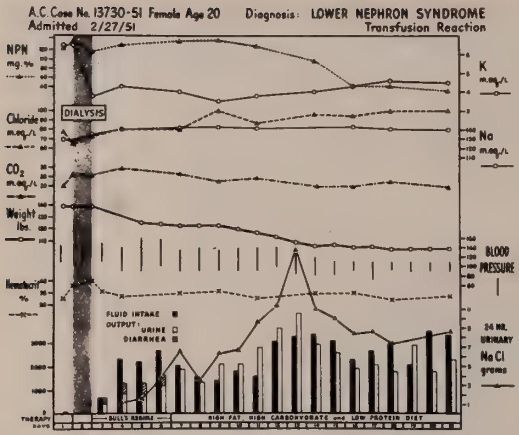

FIG. 5. Changes in chemical constituents of the blood before and after dialysis in a patient with acute renal failure following an incompatible blood transfusion.

through a polyethylene nasal tube passed into the stomach. This is given slowly to avoid excessive diarrhea. Daily sodium, chloride, and potassium blood serum analyses are obtained as guides to progress and substitution therapy. Carbon dioxide combining power of blood serum is secured, and sodium bicarbonate is given accordingly by the nasal tube or in form of 5 per cent sodium bicarbonate by vein. Base may also be supplied by intravenous solutions of sixth-molar lactate or in the form of blood transfusions. Twenty-five milligrams of testosterone are administered intramuscularly daily to assist the conservation of protein. Antibiotics are given if infection is present or anticipated. About 80 per cent of patients suffering from acute urinary suppression can be maintained and will survive with this regimen. However, some patients deteriorate despite this care, have convulsions, and become apathetic and irrational, even though no peripheral edema is seen and despite the fact that the electrolytes and base are within satisfactory proportions in the blood serum. The potassium may rise, or electrocardiographic changes may indicate potassium intoxication despite the use of ion exchange resins or glucose-insulin solution. Extracorporeal dialysis with the artificial kidney is then performed.[17–28]

The Kolff apparatus is the type used by the Fourth Urological Division of Bellevue Hospital (Fig. 4). The patient's blood is passed through 150 feet of cellophane tubing which is wound about a revolving reel immersed in a 100-L. bath of dialyzing fluid maintained at a temperature of 101 F. The chemical composition of the bath is modified for selective removal of electrolytes and metabolites during a three- to six-hour treatment.

A recent analysis of 15 consecutive patients so treated is compiled in Table I. Twelve patients were in extremis when the artificial kidney was first employed. Only five patients were living one month after dialysis, but we are of the opinion that dialysis was a lifesaving procedure, particularly in the case of two of the survivors. Varying degrees of clinical improvement were observed in 11 patients following therapy, whereas four exhibited no change (Fig. 5). Eight patients who were in coma were aroused from stupor and became alert and cooperative after the hemodialysis. The response permitted resumption of the conservative regime without disruption by convulsions and delirium. A lowering of the nonprotein nitrogen levels of the blood was accomplished in every case, and elevation of the potassium content was always corrected by dialysis (Table II).

The disadvantages of the artificial kidney are several. One death occurred during dialysis, but this patient was so extremely ill that a fatal outcome was to be anticipated at any moment. The procedure is highly specialized, and many personnel hours are expended in preparation and performance of the operation. Mechanical difficulties are not infrequent, usually consisting of leaks in the tubing, freezing of the couplings, and clotting in the tubing and filters. The flow of blood into and from the machine must be constantly supervised to prevent sudden shifts in blood pressure. The team consisting of three members of the resident staff, one nurse, and one technician are in constant attendance, being alert for the hazards of overhydration or excessive dehydration. Dialysis was performed with misgivings upon four patients who had undergone recent surgical operations. Despite the heparinization necessary for hemodialysis, there was no recurrence of hemorrhage from the recent wounds.[29]

Our experience with this form of therapy has left an impression that perhaps many unknown toxic substances are removed by extracorporeal dialysis which account for the uremic syndrome. Prior to treatment of some patients, the only measurable abnormality in the blood serum was an elevated nonprotein nitrogen, for conservative therapy had been effective in restoring electrolyte

TABLE II.—Changes in Blood Nonprotein Nitrogen and Serum Potassium Following Dialysis

Case	Duration of Dialysis (Hours)	Blood Nonprotein Nitrogen (Mg. Per Cent) Initial	Blood Nonprotein Nitrogen (Mg. Per Cent) Final	Serum Potassium (mEq. per L.) Initial	Serum Potassium (mEq. per L.) Final
1	4	255	177	8.6	4.9
	4	216	181	8.3	5.0
2	3	139	115	6.5	3.75
3	3	265	202	5.0	5.1
4	3	200	160	7.6	3.8
5	3	224	178	6.75	5.1
6	4	284	186	6.1	4.8
7	4	169	130	5.7	5.4
8	3	141	121	4.8	4.2
	3	171	132	3.4	3.3
9	2	171	137	6.2	5.0
10	3	198	129	6.5	6.0
	3	117	99	6.9	5.8
	3	108	82	7.0	6.25
11	3	200	150	6.5	5.4
12	1*	...	...	...	..
13	3	240	195	7.1	6.1
14	2	230	200	6.3	5.8
15	3	166	127	5.8	4.9

* Inadequate dialysis.

and water balance to nearly normal. Nevertheless, general deterioration had progressed to deep coma. The dramatic, immediate improvement supported the assumption that perhaps guanidine, creatine, phenol derivatives, or correction of cerebral edema could account for beneficial effects.[30-33]

Summary

The syndrome known as uremia is a complex derangement of the internal environment of the body incident to collapse of the regulatory effects of the kidney on electrolyte and water distribution. The accumulation of degradation products of metabolism together with the other alterations accounts for the manifestations of the uremic syndrome. A systematic, definitive plan to counteract these disorders until renal function resumes will defend the patient against death in the majority of those having reversible kidney damage capable of some repair within fourteen to twenty-one days. Artificial hemodialysis is an adjunctive therapy for certain patients who fail to respond to a conservative regime. Extracorporeal dialysis has, in our opinion, been a lifesaving measure in a few desperately ill patients and has prepared others with chronic uremia for the stress of required surgery.

65 East 66th Street

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The Effect of Life Problems and Cerebral Pathology on the Mental Health of Aging Persons

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THE traditional concept that all psychopathologic symptomatology is a direct expression or representation of encephalopathy where such is either demonstrated or postulated is more and more open to question as our knowledge of the dynamics of human motivation and adaptation expands. There is mounting clinical experience pointing to the need to re-evaluate the significance of psychopathology in the aged in reference to the interplay of encephalopathy, the life pattern of adaptational strivings, and the exigencies of the environment.

All too frequently psychotic disturbance in the aged is written off as chronic brain syndrome with cerebral arteriosclerosis or with senile brain changes without any consideration whatever of the prebreakdown personality structure and current emotionally traumatizing changes in the environment. Attributing a psychotic reaction in an aged person solely to cerebral pathology carries with it a philosophy of therapeutic nihilism.

It is our aim in this communication to explore the impact of traumatic environmental experiences upon aged persons with some degree of cerebral infirmity with particular reference to how these external stresses operate to paralyze or distort established adaptive psychologic mechanisms and produce a psychotic state. We believe that clearer understanding of the psychodynamics of psychotic states in elderly persons will open up therapeutic vistas for the many mentally ill persons in the older age group.

In reporting on this exploratory study of mental illnesses in 50 English-speaking male patients with ages ranging from sixty to eighty-seven, we will point out, in common with others who have been working on this problem, that whereas cerebral histopathology plays a significant role in psychotic reactions of the aged, it is by no means the major factor except in those cases in which the symptom picture of organic deterioration is as marked as that found in Pick's or Alzheimer's disease.

All of the patients we studied had been admitted to the Psychiatric Service of the Kings County Hospital. All had living relatives. None had any major debilitating somatic illness, and in each the intellectual faculties were sufficiently preserved so that none was completely out of contact with reality. The age distribution was as follows:

Age	Number
60 to 64 years	5
65 to 69 years	14
70 to 74 years	10
75 to 79 years	9
80 to 84 years	9
85 years and over	3

We approached the study of this group of patients with the postulate that their psychotic symptomatology or sensorium deficits represented a deterioration or decompensation of ego function. Ego function represents the capacity to organize and control thinking and behaving and to perceive, test, anticipate, and interpret reality. The capacity to cope with and relate to reality, especially when reality fails to meet personal needs or tends to offend highly personal value systems, is diminished when ego functions are already relatively fragile due to some form of gerentologic encephalopathy.

The individual value systems and personal needs of these patients and the habitual adaptational devices by which those values and needs were wrested from the environment and life experiences were elucidated by a careful exploration of the biographic histories of our patients as obtained, in part, from the patients and, in part, from the patient's close relatives or friends.

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In a few patients, eight to be exact, there was evidence of severe longstanding psychopathology in the past history; that is, there was already a poorly functioning ego. In five of these there was evidence of a chronic schizophrenic process and in the other three symptoms pointing to a well-defined obsessive-compulsive neurosis. Common in most life histories were indications that our group of patients were either passive, dependent individuals or were overly aggressive, demanding persons who used and controlled those around them and showed no understanding of feelings of others. Most of them had but few interests in people or things which were outside the boundaries of their usual life routines. In other words, the premorbid personality structure was usually that of a highly self-centered individual with rather poor object relationships to the world around him.

Most of our patients had a satisfactory work record, and most were married and had families. They seemed to have been able to gratify their narcissistic needs and adjusted rather well to the limited life routines they had made for themselves. With advancing age, however, associated with physiologic changes, their capacity for adaptation became fragile and brittle. Concurrently, as they aged, many were faced with what were to them cataclysmic shifts or changes in their personal world that set up in their minds many doubts and worries about their personal worth and economic security. They lost their jobs, had nothing to do; many found themselves on the fringe of the family circle grudgingly supported by the younger generation or having to live a lonely life due to the death of a marital partner and be supported by public assistance. The shift from being the central figure in the family constellation to a subordinate one and the threat of becoming almost a nonentity in an urbanized, industrialized community were more than they could adapt to. For them a hostile paranoid, delusional interpretation of the current bleak life situation or a depressed nihilistic, self-blaming psychopathologic frame of mind or a retreat to reminiscenses about the "good old days" and a disinterest in the current harsh and denying life situation to the extent of "not knowing" was psychologically less painful than to continue to cope at a realistic level with a harsh and forbidding environment.

The early signs of ego decompensation, as described by the relatives of our patients, ran a fairly typical course. There was first an increase of irritability and restlessness frequently associated with pavor nocturnus, sometimes accompanied by startle and rage reactions upon awakening. Following this there was described an increased concern about the self and the appearance of various hypochondriac complaints, usually accompanied by a loss of interest in the surroundings and in personal hygiene and appearance. The duration of these prodromal symptoms varied from a few weeks to a year before the signs of advanced ego decompensation, that is, the overt psychosis, became evident to the family.

The overt psychotic reactions in our patients fell into two categories. One group, which we call the "chronic type," was characterized by a slow process of withdrawal of external interests and deterioration of intellectual functioning signalized by moderate to marked impairment of orientation and memory and the ability to make new or correct associations and to fix attention. There were 17 patients of this type.

In the other group, which we call the "acute type," after a varying period of prodromal symptoms as described above, there was a rather dramatic and sudden appearance of either persecutory delusions, hallucinatory phenomena, depression, or major behavior disorders with but a minimum impairment of intellectual functions. There were 33 patients of this type.

Most of those patients with the chronic type reactions had been passive dependent individuals, while those patients with the acute type reaction were the more aggressive, demanding, and controlling individuals. The passive group seemed to have no readily available defenses against the organic and environmental changes associated with their advancing age except denial by forgetting and withdrawing. The aggressive group, however, seemed to defend themselves by developing delusions, hallucinations, depressions, or behavior disorders in order to maintain some semblance of control and personal individuality.

Case Reports

An abstract of the pertinent material from two typical case histories will illustrate both types described above in the light of their past history.

An example of an "acute type" is as follows:

Case 1.—Mr. Y, a sixty-eight-year-old white male, was brought to the hospital by his daughter who related that for the past week her father had been talking about the family plotting against him and that someone was going to rob and kill him.

The patient appeared agitated and looked frightened. His affect vascillated in a wide range and was frequently inappropriate to thought content. His psychomotor activity was increased. He spoke rapidly and at times would resort to whispering as if he were afraid that someone was listening in on the interview. He stated that there was someone out to rob and kill him and that the family was in on this plot. When questioned as to why anyone, especially his family, would want to hurt him, he stated that his wife wanted a younger and more virile man since she was a nymphomaniac and that the only way this could be done was to get rid of him. He also stated that his son, who was in debt, wanted to inherit his money. Patient said men came into his room at night and prevented him from sleeping. His memory for recent and remote events was good. He formed new and correct associations. He abstracted well, and when reassured, he exhibited normal span of attention. His insight and judgment were poor.

The patient was born in New York City, the eldest of six children. His mother died when he was eleven years old. His father was a chronic alcoholic, irresponsible, immature, and at no time made any effort to provide for the children. After the mother died, the patient left home, boarded out with various families in the neighborhood, and supported himself by taking odd jobs. At the age of sixteen he was employed to drive a team of horses, and he worked at this job until the horse-drawn carts were replaced by automobiles. At that time he secured a job as a bank guard and in a few years became chief guard. He was retired on pension three years ago at the age of sixty-five. One month after retirement he found that he could not be idle and secured a job as a night watchman. He married at the age of twenty-eight a twenty-year-old girl whom he met at a dance. They had two children, a daughter now thirty-seven and a son now thirty-four. The daughter stated that her father had little interest in the children other than being a very strict disciplinarian. She stated that until recently he always had been extremely stubborn and opinionated and insisted on having his own way.

The relationship between him and his wife has always been a poor one. He never took her out and never could spend an evening at home. In the early part of their marriage he ran around with other women, was caught by his wife, and they were separated for a short period of time. They resumed their marital status because of the birth of their first child. Since that time his wife had always distrusted him and apparently was quite hostile towards him. He demanded a great deal from her. He insisted at all times that his wife stay at home and not be a "tramp" like other women. He would time his wife when she went to the store and reprimand her if she stayed out too long. The daughter related that the father would provide only for the barest necessities and spent the rest of his earnings on himself. He apparently had many male friends in spite of the fact that he displayed the same personality pattern with them. His chief interests were in eating good foods, going to movies, and fishing.

About six months prior to this admission the patient had been complaining that he could not see well out of his right eye. Two months later this condition, which became progressively worse, necessitated his quitting his job. At that time he showed signs of increased irritability, began losing sleep, stayed around the house more than usual, and became extremely passive. One month ago he was taken to an ophthalmologist and was told that he had a cataract which had to be removed. After leaving the doctor's office, he talked about the probability of going blind after such an operation. This type of talk persisted for a few days and was accompanied by increase in irritability, nightmares, and frequent crying spells. One week prior to admission he started to talk about people taking advantage of him, of his wife losing interest in him and becoming interested in younger and more virile men, about his son wanting to rob him of his possessions, and that all of this would lead to his death.

The following is an example of a "chronic type":

Case 2.—Mr. X, a seventy-five-year-old white male, was reluctantly brought to the hospital by his daughter and son at the advice of the family physician who felt it was impossible for them to manage their father at home. The informants related that for the past year the patient had deteriorated to the point where he could not be left alone and that he required as much care as an infant.

The patient appeared withdrawn, was quiet, and passively cooperative. He was disoriented as to place and time, showed a marked impairment of memory for recent events, could not form new and correct associations, abstracted poorly, and had a short span of attention. His affect had a somewhat narrow range. His psychomotor activity seemed diminished. No delusional or hallucinatory material could be elicited. He exhibited poor insight and judgment.

The past history revealed that this patient was born in Ireland in 1879 and was the youngest of 13 children. He apparently was always markedly overindulged in and was always considered the pet of the family, being constantly directed and helped by his older siblings even in his adult years. He came to this country at the age of twenty-five with his older sister who took over the maternal role after the mother died. This sister set him up in a small grocery business and also introduced him to his future wife who was the sister of a friend of hers and was five years his senior. She was an aggressive, dominant woman on whom the patient depended for all important decisions concerning home and business.

Mr. X spent ten to fourteen hours a day in his store, had one close friend, no hobbies, and no interests other than reading the papers and listening to soap operas on the radio. On occasion he and his wife would go to a movie if the wife suggested it. He had little to do with his children's upbringing, seldom playing with them or talking to them. On Sunday, when the store was closed, he would go to church with the family, have lunch, take a nap, and listen to the radio until dinner. In the evening he would spend time with his friends or take a short walk with his wife and retire early. As far back as he and his children could remember, he never took more than a two-day vacation and on these occasions wouldn't know what to do with himself.

He was regarded at all times as a nice, quiet, kindly man by the neighbors and his customers and apparently allowed himself to be taken advantage of. He would constantly make excuses for people who didn't pay their bills and was always considered a "soft touch."

The present illness had its onset three years ago when his wife died rather suddenly from coronary occlusion. Following her death he began to have somatic complaints and made frequent visits to the family doctor whose reassurances would last but a short time before he was back. He complained chiefly of dyspnea and chest pain and feared he too was going to die from heart disease. He began to be irritable, lost interest in the store, and began having difficulty sleeping, sometimes awakening with violent screams that he was going to die. Because of his inability to manage his business, the grocery had to be sold a year later. Shortly thereafter his complaints became more frequent, and he became increasingly phobic and insisted his daughter stay home with him. As time went on he began to show memory loss and frequently appeared confused. Eight months ago his son and daughter decided that the family move to a new neighborhood. Following this they noted rapid deterioration to the status of his present condition.

Comment

A psychotic reaction often represents a regression to a level of some degree of infantile magic control and thus serves as a defense against overwhelming cataclysmic anxiety. In this aged group of patients cerebral frailty and inimical life situations act together to upset psychologic homeostasis through setting up intolerable anxiety and by restricting the capacity to control anxiety within the framework of reality. What is unique and unfortunate about psychotic reactions in the aged is the fact that not only do these changes cause the patient to deny reality in order to avoid the anxiety it produces, but also realistically the patient's ties to reality are attenuated, thus separating him from the life in which he has invested all his mental energies. This is clearly seen in our case material where the principal changes to which our patients reacted were (1) cessation of work, voluntary or involuntary, (2) loss of spouse, close relatives, and friends, (3) changes in the physical environment, such as enforced removal to an unfamiliar abode, (4) changes in the relationships to family and other close persons, (5) diminished perceptual acuity, (6) diminished sexual potency, and (7) mild physical infirmities including encephalopathy.

Restricting the capacity to adapt to these stresses, one must of course consider organic pathology. Although the neurologic examination showed no gross abnormalities in any of our patients, it is reasonable to assume that with senescence some organic brain changes have taken place as have organic changes in other physiologic systems which aid in adaptation to stress and aid in discharge of increased anxiety arising therefrom. These changes to which our patients reacted with the reflex-like response of uncontrolled anxiety, which causes ego decompensation and denial or distortion of reality as a regressive type of defense, were in the final analysis traumatic events which reactivated latent fears and anxieties concerned with separation, loss of familiar objects, loss of self-esteem, and loss of control. The personal disorganization is hastened by that feeling of futility or panic which comes from some appreciation that one is slipping, is losing his grip, and is no longer a useful, effective member of society.

Cessation of work meant to our patients a loss of personal usefulness and importance in life. Dynamically, it also meant a loss of an opportunity to gratify, in a socially acceptable manner, many instinctual needs. Loss of relatives and friends meant separation from those who mattered and those who cared, and it brought with it fears concerning death. Dynamically, it also meant a loss of targets for discharge of latent hostility.

Changes in the physical environment meant a loss of familiar objects which served as guides and reminders of the past and present. Dynamically, it also meant a loss of familiar objects which were taken on as appendages of the body image. Changes in the relationships with children usually meant an awareness of the unconscious hostility of the children who encourage regression by insisting that the patient not do anything but vegetate and await his death. Diminished perceptual acuity, diminished sexual potency, and physical disease were all reminders of somatic decline and again of approaching death. Dynamically, it also meant a loss of self-esteem by virtue of the patient's becoming increasingly dependent on what is to him a hostile environment.

Conclusion

In conclusion, it is our conviction, despite the current need for additional supporting clinical data, that if we bring to the problem of mental decline in the aged a dynamic comprehension of the emotional, physiologic, and realistic life situations of aging people, new horizons of treatment and prevention of mental invalidism in elderly people will be unfolded to physicians and social agencies alike.

ANNOUNCEMENT

SCIENTIFIC EXHIBITS

1955 ANNUAL CONVENTION
MEDICAL SOCIETY OF THE STATE OF NEW YORK

Applications for space for the scientific exhibits should be made directly to the Chairman of the Subcommittee on Scientific Exhibits of the Convention Committee:

William L. Watson, M.D.
340 East 72nd Street
New York 21, New York

The Annual Convention will be held May 9 to 13, 1955, at the Hotel Statler, Buffalo. *No applications can be considered after January 1, 1955.*

There will be two groups of awards:

Group I: Awards in Group I are made for exhibits of individual investigation, which are judged on the basis of originality and excellence of presentation

Group II: Awards in Group II are made for exhibits which do not exemplify purely experimental studies and which are judged on the basis of presentation and correlation of facts.

W. P. Anderton, M.D., *Secretary*
Medical Society of the State of New York

Prophylaxis and Treatment of Measles, Diphtheria, and Poliomyelitis

SAMUEL KARELITZ, M.D., NEW YORK CITY

(*From the Willard Parker Hospital of New York*)

Measles

The seroprophylaxis of measles has become rather difficult since convalescent serum has fallen into disfavor and gamma globulin has been withdrawn from the market. Gamma globulin is now used almost exclusively for the prevention of poliomyelitis. The small amount delegated to the prevention of measles and infectious hepatitis in New York City is distributed almost invariably in the case of measles to susceptible family contacts under five years of age. Gamma globulin is denied to all who are exposed under different conditions as well as to those over five years who are exposed at home. Specifically this means that infants exposed outside of their homes and older children exposed in schools, buses, play groups, parties, etc., regardless of age cannot get gamma globulin. One exception to these rules is the sick child of any age for whom gamma globulin is usually made available after special consideration. Each such case is a special situation which has to be discussed with the health authority who must be satisfied that the child is in urgent need of the gamma globulin before it is granted. Another exception is the hospital ward or nursery where measles is discovered, when gamma globulin is usually granted for all susceptible contacts.*

In view of the fact that there are approximately 1,000,000 cases of measles in the United States per year and many more contacts and because of the severity of the unmodified disease, especially in infants and young children, the problem of prophylaxis is one of great importance and concern. Because gamma globulin is not available at the corner drug store, it is quite possible that many children who need prophylaxis will not get it. The recent experience with gamma globulin in the prophylaxis of poliomyelitis has generated a widespread feeling that gamma globulin should be returned to the open market, but there is little hope that this will be effected in the immediate future.

In view of what has been said, I thought it worthwhile to consider the possibility of reintroducing some of the prophylactic agents previously employed and to explore the usefulness of antibiotics in prevention and treatment of the bacterial complications of measles.

Convalescent serum,[1,2] used prior to the advent of gamma globulin, is a very effective prophylactic agent in the prevention of complications of measles. Immune adult serum is also effective. These products have been replaced by gamma globulin,[3,4] largely because of the danger of transmission of serum jaundice and because gamma globulin is so much easier to use. The danger of serum hepatitis would be minimal if the serum were prepared from the blood of an individual who never has had hepatitis and who has never been in contact with a known case of hepatitis or from the blood of a known blood donor whose blood had been used successfully on several occasions in the recent past.

It is unlikely that serum centers will prepare convalescent serum, but immune adult blood plasma could easily be prepared in any office, hospital, or blood bank. If individual donors were selected as indicated, enough immune adult serum or plasma could easily be made available to fulfill the needs. A total of 10 to 15 cc. of immune adult serum or plasma is enough for modification of measles, and 20, 30, or 40 cc. are necessary for protection if injected subcutaneously or intramuscularly within the first six days after exposure. The plasma could be packaged in the quantities mentioned in liquid or lyophilized state.

Another agent which is known to be effective in measles prophylaxis and which is easier to prepare than is gamma globulin is the entire globulin fraction[5] of immune blood plasma which can be salted out with 50 per cent ammonium sulfate from discarded bank blood. The dosage of such a

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* In the past month gamma globulin distribution has been made more liberal. It is now available for other measle contacts.

preparation is based on the quantity of plasma from which it is made. For example, if the globulins are extracted from 300 cc. of plasma, the yield would be sufficient for 20 modifying doses, each of 15 cc., or ten protective doses, each of 30 cc.

We have been investigating the prevention and treatment of bacterial complications of measles with various antibiotics for several years. It was first demonstrated that aureomycin,[6] 50 mg. per Kg. per day given for four days, and four daily doses of 300,000 units of aqueous procaine penicillin G injected intramuscularly to children at the Willard Parker Hospital in the pre-eruptive or early eruptive period of measles avoided pneumonia, otitis media, etc., and cured these diseases in patients who already had these complications on admission to the hospital. Subsequently it was shown that a single dose[7] of 600,000 units of Bicillin for a child less than five years and 1,200,000 units for a child five years of age or older, if injected intramuscularly upon admission to the hospital, was effective in preventing or curing bacterial complications in 59 out of 61 patients. Since Bicillin was rather painful to the patient and two complications were either not prevented or cured, we decided to try 600,000 units of aqueous procaine penicillin G on alternate days. In some 67 patients the plan was successful, both in preventing and in curing complications. The incidence of bacterial complications in the control groups was 27 per cent. It is clinically significant, therefore, that in the event that we are not able to modify or prevent measles with human blood or blood products, we can avoid such complications by the use of the antibiotics. These observations suggest the possibility of treating measles in outpatient departments of hospitals with the aid of a visiting doctor or nurse and further reduce the already diminished need for the treatment of measles in communicable disease hospitals.

Some may question the advisability of modifying measles if the complications can be treated effectively, and others say that modified measles does not lead to permanent immunity. In answer to those who hold this point of view I would indicate, first, that measles encephalopathy is very rare in modified measles, and as yet there is no evidence to show that antibiotics prevent this complication. Second, there is ample evidence[8] that modified measles results in lasting immunity in most individuals.

In summary, I would suggest the return to a more liberal distribution of gamma globulin. Until this occurs, immune serum obtained from selected donors or a preparation of total blood globulins might be used in measles prophylaxis. Where none of these products is available, antibiotics might be used for prophylaxis against and treatment of bacterial complications of measles, especially in children less than three years of age.

Diphtheria

It has been known for some time that as a result of the lower incidence of diphtheria, the total number of carriers is smaller. The direct result of this lower carrier rate is that, of the nonvaccinated individuals, a higher percentage of adults are not immune and are Schick-positive. This is important for it also means that the newborn infant is less likely to have passively transferred antibodies from the mother than was true when diphtheria was more common. About ten years ago it was found that of a group of military personnel in an Army hospital the incidence of Schick-positive reactors was 35 per cent.[9] In one subgroup it was as high as 45 per cent. These and other observations indicate that the previous impression that approximately 85 to 90 per cent of the newborns were immune to diphtheria had to be revised to a figure approximating 65 per cent.

It has been shown repeatedly[10-14] that the newborn and young infant are able to respond to stimulation with diphtheria toxoid by the production of antitoxin, even though the child may possess some antitoxin passively acquired from the mother. It has also been established that the immunity response may not be so intensive and the immunity may not last quite so long in the infant who is injected with diphtheria toxoid when he still possesses passive immunity as compared to the child who is immunized with toxoid after the antitoxin content has dwindled.

Because of the lower incidence of passive immunity in the newborn and because the infant does respond to toxoid injections by producing ample antibodies, we recommend that infants be immunized against diphtheria after the first month of life. In practice I start at three months of age and give one injection at three, one at four, and one at five months of age. Since the immunity is not maintained at a high level for very long when immunization is started so early, a booster dose is given at one year of age and subsequently at two-year intervals until the child starts school. Thereafter the toxoid is given only as needed after exposure to diphtheria.

Another development in the prophylaxis and treatment of diphtheria has been the demonstration that antibiotics are effective in eradicating Corynebacterium diphtheriae from the nasopharynx of carriers and patients with acute faucial diphtheria. This has been adequately demonstrated for penicillin.[15-19] In about 75 per cent of the cases of acute faucial diphtheria the C. diphtheriae can be eradicated with penicillin given intramuscularly in daily doses of 300,000 to as much as 2,000,000 units. There are some strains of C. diphtheriae[20] which are quite resistant to penicillin, and, therefore, one may have to resort to other antibiotics. Aureomycin[21] and Terramycin[22] have also been found to be effective in doses between 25 and 50 mg. per Kg. per day. As the result of recorded observations originating in many parts of the world, it is now known that erythromycin,[23] Chloromycetin,[24] and streptomycin[25] are also effective agents against C. diphtheriae. It would seem that penicillin should be tried first in dosage of 600,000 to 1,200,000 units of aqueous procaine penicillin daily and that this should be continued until at least three negative nose and throat cultures are obtained on successive days. There should be additional negative cultures after the antibiotics are discontinued before the patient can be considered free of C. diphtheriae. This procedure is equally true in the case of the carrier. If penicillin has failed to eradicate the diphtheria bacillus, Terramycin, aureomycin 25 to 50 mg. per Kg. per day, erythromycin, Chloromycetin, and streptomycin might be used in the order given.

Oral penicillin, troches, or nose drops are of limited effect.[16] They do not render the throat free of C. diphtheriae quite so readily nor so regularly as does the intramuscular penicillin. Nevertheless, the oral or nasal penicillin is effective to some degree, and perhaps the combination of local application as well as intramuscular injections of penicillin is most effective. The effect of other antibiotics in troche form has not been investigated adequately.

I believe that there is considerable advantage in eradicating C. diphtheriae from the fauces of patients with acute diphtheria. The length of hospitalization is reduced, especially in the case of the carriers, and at the same time these drugs have definite beneficial effect on the secondary bacterial infections which often accompany diphtheria, for example, cervical adenitis, sinus infections, otitis media, pneumonia, etc.

The antibiotics have another role to play in diphtheria prevention, namely, the treatment of the exposed individual. If a child is exposed to diphtheria and has been immunized and is known to have had recently a negative Schick reaction, a booster of toxoid ought to be sufficient to protect this child. If a positive culture is obtained, penicillin ought to be given as for treatment of a carrier. If it is not known whether the child is immune to diphtheria, a Schick test and control should be done and a throat culture made, and the child should be given penicillin daily until the reaction to the Schick test is determined and for a total period of five days, the incubation period of diphtheria. If the throat culture is positive, penicillin should be given as for a carrier. If the child develops a sore throat or some other suggestion of diphtheria, antitoxin should be administered promptly.

Through the use of antibiotics in the prevention of diphtheria, sensitization to horse serum is avoided in all who would otherwise have received diphtheria antitoxin prophylactically.

In summary, it is suggested that only about 65 per cent of the newborn infants have passive immunity to diphtheria and that infants do respond to stimulation with toxoid by producing ample antitoxin. These facts indicate early immunization, any time after one month of age. Antibiotics are effective in cutting short the convalescent and chronic carrier period and can be used to avoid sensitization with horse serum in many individuals exposed to diphtheria.

Poliomyelitis

I had hoped to tell you of the successful study of the use of gamma globulin in polio prophylaxis. Unfortunately the work up to date has established that home contacts are not ideal subjects for such a survey.[26] Our discussant has had intimate association with this study and is well equipped to tell you, as he has publicly, of the disappointing results. There are some who still believe that the mass immunizations in several areas done in 1951 and 1952 did indicate that those who were injected with gamma globulin fared better than did the controls.[27] This type of study is to be continued this year with the hope that this question can be brought to a definite conclusion.

Much more exciting is the reported work of attempted vaccination with killed polio virus. The vaccine prepared by Salk *et al.*[28] seems to offer the greatest promise and is now being tested widely in many sections of the United States, including New York State. Salk has demonstrated significant antibody response in human volunteers who received three injections of aqueous vaccine. The booster effect observed in individuals who had some immunity to one or more polio viruses and in some who had been vaccinated months before was striking. It will take at least one and possibly several years before satisfactory evaluation of the effects of this vaccine can be made. But the results to date are encouraging, and the general feeling of many is high, although not without reservation, that polio is about to be conquered.

Good hygiene, and all that this term implies, is still the only known effective prophylaxis of polio we now recognize, but vaccination is being tested, as is gamma globulin.

As for treatment of polio I shall first discuss home care.[29] In the case of nonparalytic or in the spinal paralytic type of polio, care at home is preferable, provided certain conditions are met. These are as follows:

1. The mother, or a mother substitute, can devote herself entirely to the patient.
2. There is a room with bathroom and toilet facilities which can be reserved for the patient.
3. The patient can be separated completely from other members of the household.
4. The doctor in charge can and is willing to visit the patient as often as seems necessary throughout the day and night.
5. The patient is promptly moved to a hospital if breathing or swallowing become a problem, if there is evidence of a rapidly ascending type of paralysis or of bulbar or encephalitic type of involvement, if the blood pressure becomes elevated, or if the patient looks very sick or is very anxious.

Under home conditions the patient is more content; he is spared the disturbance of being moved about, examined repeatedly, and being generally upset. He is less likely to observe polio morbidity, his care is much less costly at home, and valuable room in a hospital is reserved for those who are in greater need of such care. Whenever a child with polio is treated at home, the physician should be prepared to transfer the patient to a nearby hospital, and he should make this transfer as soon as doubt arises of the adequacy of the care he is getting. Children living in rural areas who acquire poliomyelitis are best treated in hospitals.

Finally, I would like to stress the need for pyschotherapy from the very onset of the disease. If the child is old enough to understand what is said, every step in the course of the disease, its progress, its management, his removal from home to a hospital, the need for a respirator and the impending tracheostomy, the loss of ability to speak, the removal from the respirator, or the introduction of a rocking bed ought to be anticipated whenever possible and the procedure, its indication, and effects explained in a manner which he can understand. The fact that some of these procedures are temporary expediencies should be stressed, as should the likelihood of recovery. He must be encouraged; every return of function must be built up into an important event and as evidence that recovery is still in progress. His courage should never be permitted to falter. A great deal can be accomplished if the will to recover and to be helped is a prominent part of the patient's attitude. This often requires the aid of a trained psychiatrist or someone adequately oriented psychiatrically, in addition to a well-meaning house or attending staff who may lack both the training and time to administer adequate guidance and treatment. Psychotherapy is now part of the program of rehabilitation, but it should also be part of the treatment of all patients with acute polio.

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Discussion

Morris Greenberg, M.D., *New York City.*—MEASLES: In the prophylaxis of measles, gamma globulin has been of outstanding importance. Measles can be prevented or modified by its use with almost quantitative regularity. It is, therefore, pleasant to report that, after conversations with the State Department of Health, we are able to release gamma globulin for the use of susceptible contacts of any age, whether the contact was in the household or outside of it. There is, therefore, no need for going back to the use of convalescent serum with its hazards or of using the entire globulin fraction, which is much cruder. Gamma globulin has the disadvantage that it is a passive prophylactic agent and protects for a period of about a month only. There is still need for an active prophylactic agent in measles as in poliomyelitis.

There is no specific treatment for measles. The antibiotics take adequate care of bacterial complications. Whether the antibiotics should be given in advance of complications, as suggested by Dr. Karelitz, or the complications treated as they occur is a matter to be determined by the individual physician. For my own part, I do not feel that a disease in which the mortality is about 0.3 of 1 per cent, even in epidemic years, requires treatment for complications unless the complications arise.

DIPHTHERIA: Dr. Karelitz has outlined the reasons why active immunization against diphtheria should be started early. There is another compelling reason; nowadays a polyantigen mixture is used in immunizing children, and this contains not only diphtheria toxoid but also pertussis vaccine. It is important to immunize infants early in life to protect them against whooping cough, which takes its greatest toll in the first year of life. Our schedule is similar to the one proposed by Dr. Karelitz: immunization with the polyantigen mixture at three, four, and five months of age and a booster dose at one year of age. Incidentally, if the polyantigen mixture is used, 0.2 cc. is as good a booster dose as 0.5 cc. and causes less reaction.

The use of penicillin in carriers of diphtheria is justified, although one must remember that occasionally cultures are negative while the penicillin is used and become positive again after penicillin is discontinued. The use of penicillin in contacts who develop a positive culture for diphtheria appears to me to be unnecessary. The vast majority of such contacts lose the diphtheria organisms in their throats fairly rapidly. What is necessary is to make sure that they are immune. If the contact has been previously immunized, we recommend a booster dose; if not, an injection of 500 to 1,000 units of diphtheria antitoxin is given.

The routine treatment of cases of diphtheria with penicillin as well as with antitoxin, as recommended by Dr. Karelitz, has its adherents. Since most cases seen today are rather mild and clear rapidly under antitoxin, penicillin is withheld by some clinicians in all but severe cases.

POLIOMYELITIS: The use of gamma globulin for the passive prophylaxis of paralytic poliomyelitis in household contacts appears to be of no value. The National Advisory Committee for the Evaluation of Gamma Globulin concluded from a careful study of the data of multiple household infections that gamma globulin had no significant influence on the prevention or severity of paralysis in subsequent cases who received gamma globulin before onset. This may be due to the fact that gamma globulin is administered too late. It usually takes up to five days after onset to diagnose a case of poliomyelitis. By that time 60 per cent of subsequent cases have already been infected, and 30 per cent more are infected within another week. During 1954, therefore, gamma globulin will not be distributed for the use of household contacts to poliomyelitis.

The use of gamma globulin for group prophylaxis was clearly established by Hammon in 1951 and 1952. He was fortunately able to pick his communities so that he administered it at the very beginning of an epidemic and in communities with high incidence. Those conditions are not readily duplicated. The results of the 1953 evaluation program indicated that gamma globulin was often used for mass prophylaxis after the peak of the epidemic had been reached and sometimes when no epidemic developed. Its value could not, therefore, be demonstrated. From a practical point of view it appears that the value that might result from mass use is slight compared with the results obtained and hardly justified by the expense and by its value in a wider application in measles and infectious hepatitis prophylaxis. Dr. Hammon pointed out the limitations of its wide use in his original publications.

The use of a vaccine is a different matter. We are now in the midst of a trial of a killed poliomyelitis vaccine developed by Dr. Jonas Salk. Its safety has been questioned in some quarters, but we have assurance of its safety from the Committee on Active Immunization of the National Foundation for Infantile Paralysis, from the Laboratory of Biologics Control of the National Institutes of Health, and from Dr. Salk. As you are aware, in this State half the children are receiving vaccine and half a placebo. The results of its value should be available next year.

In the meantime it should be noted that the final word has not been said about vaccines. Sabin is working on a vaccine containing attenuated living virus, to be given by injection; Koprowski and Cox have fed an attenuated living vaccine of type 2 poliomyelitis virus to more than 60 persons and have obtained significant titers of antibody to type 2 in these individuals.

There is still much work to be done before an ideal vaccine is developed.

Finally, a word about specific treatment. Although none is available at present, experiments by Francis and his colleagues with a mold filtrate, M-8450, have indicated antiviral action in monkeys inoculated with a virulent type 1 strain. The morbidity was reduced and the incubation period prolonged. It certainly appears that further study with antibiotics is merited.

ANNOUNCEMENT

PRIZE ESSAYS

The Lucien Howe Prize and the Merrit H. Cash Prize will be open for competition at the next Annual Convention of the Medical Society of the State of New York, May 9 to 13, 1955, in Buffalo.

The *Lucien Howe Prize* of $100 will be presented for the best original contribution on some branch of surgery, preferably ophthalmology. The author need not be a member of the Medical Society of the State of New York.

The *Merrit H. Cash Prize* of $100 will be given to the author of the best original essay on some medical or surgical subject. Competition is limited to the members of the Medical Society of the State of New York who at the time of the competition are residents of New York State.

The following conditions must be observed:

> *Essays shall be typewritten or printed with the name of the prize for which the essay is submitted, and the only means of identification of the author shall be a motto or other device. The essay shall be accompanied by a sealed envelope having on the outside the same motto or device and containing the name and address of the writer.*

If the committee considers that no essay or contribution is worthy of a prize, it will not be awarded.

Any essay that may win a prize automatically becomes the property of the Medical Society of the State of New York, "to be published as it may direct."

All essays must be presented not later than *February 1, 1955*, and sent to the Chairman of the Committee on Prize Essays of the Medical Society of the State of New York, 386 Fourth Avenue, New York 16, New York.

R. Townley Paton, M.D., *Chairman*
Committee on Prize Essays

Rhabdomyosarcoma of the Bladder

EDGAR A. SLOTKIN, M.D., AND ROBERT D. DAVIS, M.D., BUFFALO, NEW YORK

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RHABDOMYOSARCOMA is a rare bladder tumor. In the December, 1953, issue of the *Journal of Urology*, a report on 151 cases of bladder sarcoma collected in the literature by Ramey, Ashburn. Grabstald, and Haines[1] included 31 cases of rhabdomyosarcoma. In the same issue Morse and Jarman[2] added two cases which they classified among the botryoides group. In September, 1953, Riddell and Kudish[3] reported in the *Journal of Urology* one case which grossly would fall into the botryoides classification.

We are presenting two cases, one of which falls into the botryoides group. These are the thirty-fifth and thirty-sixth cases of rhabdomyosarcoma of all types.

Case Reports

CASE 1.—A ten-year-old girl was admitted to the Buffalo Children's Hospital on June 24, 1951. Her chief complaints were a suprapubic mass and frequency and urgency of urination of one month duration. There had been no dysuria or hematuria. She had also developed constipation with the onset of frequency, but there was no evidence of blood in the stools. There was no abdominal pain at any time. A 2-pound weight loss in the past month was noted.

Examination showed a pale, poorly nourished, ten-year-old female. Palpation of the abdomen showed no areas of tenderness. The liver, kidneys, and spleen were not palpable. Suprapubically, a hard, nontender mass about the size of a tennis ball could be felt. It was not attached to the skin and was freely movable. Rectally, a large, firm, nontender mass could be felt anteriorly, encroaching on the rectum and reducing its capacity considerably. Bimanual examination proved this to be part of the suprapubic mass. On admission, temperature was normal, hemoglobin 12.3 Gm., red blood cells 4,400,000, white blood cells 21,000, and blood urea nitrogen 9.6. The other laboratory work was not significant.

Intravenous pyelograms were made on June 21, 1951. These showed the left kidney to be nonfunctioning (a four-hour delayed film still showed no function). The right kidney showed prompt function and good concentration of the dye but was hydronephrotic (Fig. 1). There was a large filling defect in the bladder which appeared to be tumor. On June 27, 1951, retrograde cystograms were done, and a large bladder tumor was readily outlined (Fig. 2). Cystoscopy was unsatisfactory because of the size of the tumor mass which obstructed the vesical neck. An exploratory operation was recommended, and this was performed by Dr. Edgar Slotkin on July 22, 1951. The bladder was opened, and a large tumor was seen protruding through the bladder incision. The base of this tumor was located on the left lateral wall of the bladder and was $7^1/_2$ cm. in diameter. An attempt to shell out this tumor was made, but it soon became evident that in order to remove the tumor in its entirety a cystectomy would be necessary. A large portion of the tumor was then removed for pathologic study. Bleeding was controlled, and the wound was closed

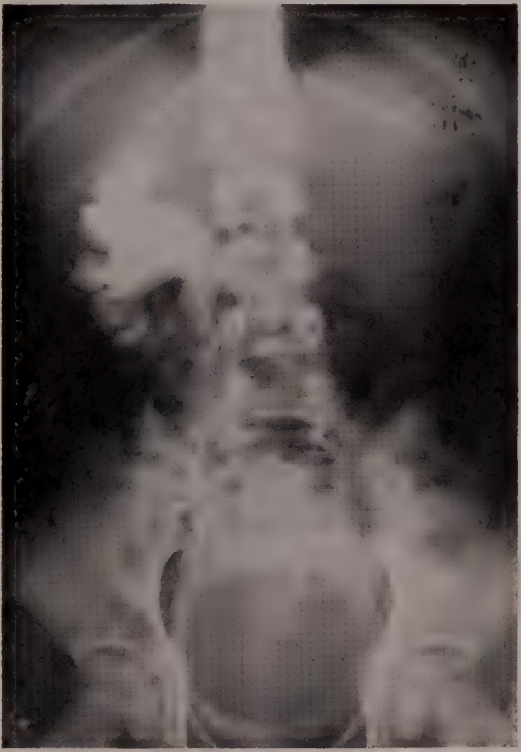

FIG. 1. Delayed function intravenous pyelogram (three hours) showing no function from left kidney and good function but hydronephrosis from right kidney.

Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Urology, May 13, 1954.

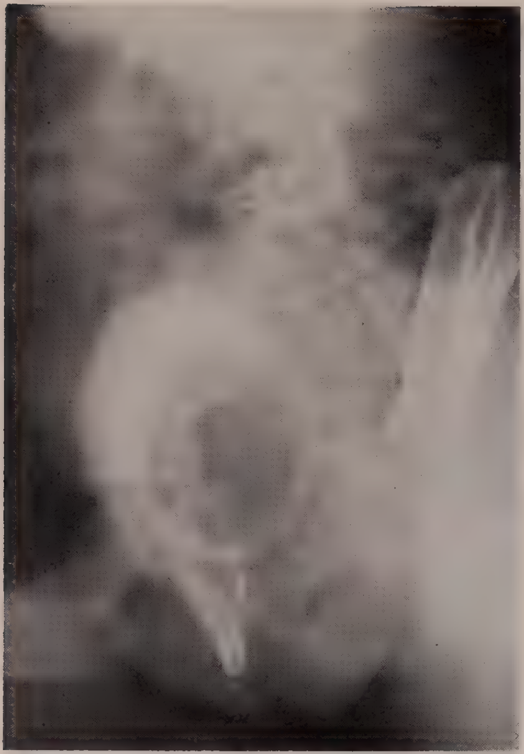

FIG. 2. Oblique cystogram showing large defect caused by bladder tumor.

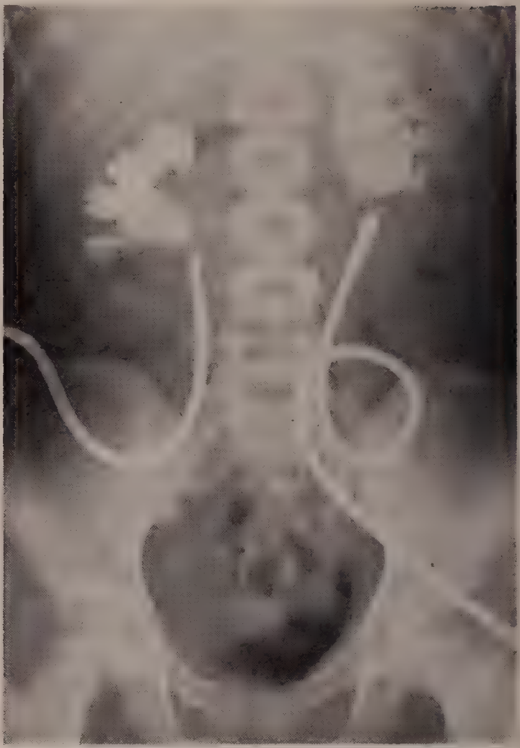

FIG. 3. Pyelograms six months after operation showing return of function of left kidney.

in the usual manner with a suprapubic tube in place. Dr. Kornel Terplan, chief of the Department of Pathology, reported that this tumor was embryonal rhabdomyosarcoma. On July 16, 1951, a total cystectomy and subtotal hysterectomy were performed (E.S.) with bilateral cutaneous ureterostomies. The bladder did not appear to be fixed by the tumor. The iliac nodes grossly showed no metastases, but a node dissection was not carried out.

Since the operation this patient has been followed at regular intervals. The catheters have been irrigated three times daily, at first with normal saline and for the past four months with Solution G. In November, 1951, and November, 1952, and also in April and August, 1953, she had episodes of right pyelonephritis. These were controlled by antibiotics. The attacks have decreased the function of the right kidney somewhat and have increased the dilatation as compared to that when first seen. At the present time indigo carmine appears on the right side in nine minutes with good concentration in fifteen minutes. The function of the left kidney returned after a six-month interval. The latest indigo carmine test showed good function in six minutes with good concentration of the dye. There has been no increase in dilatation of the left collecting system (Fig. 3).

This child is now thirteen years of age, has a good appetite, and has been gaining weight. She attends school daily, is able to roller skate and ride a bicycle, and is well adjusted. She has no difficulty in wearing the catheters, but we are planning to fit her with Singer cups to eliminate the catheters if possible (Fig. 4).

CASE 2.—A four-year-old white male was admitted to the Buffalo Children's Hospital on June 3, 1950, with abdominal pain, frequency, and nocturia. These symptoms began three days prior to admission following a fall from his bicycle. At that time he sustained a slight injury to his abdomen. The symptoms persisted. The day before admission, diarrhea developed, but on examination there was no blood or mucus in the stool. There was no associated nausea or emesis.

On admission temperature was 101 F. rectal, pulse 112, respirations 22, hemoglobin 12.9 Gm., white blood cells 12,400, blood urea nitrogen 8.6. Examination showed a suprapubic tangerine-sized mass which did not reduce upon catheterization of the bladder. Intravenous urograms showed a large pelvic mass compressing both ureters and causing a mild hydronephrosis bilaterally.

On January 8, 1950, laparotomy was performed by Dr. T. Jacobs, and a grapefruit-sized mass, polypoid

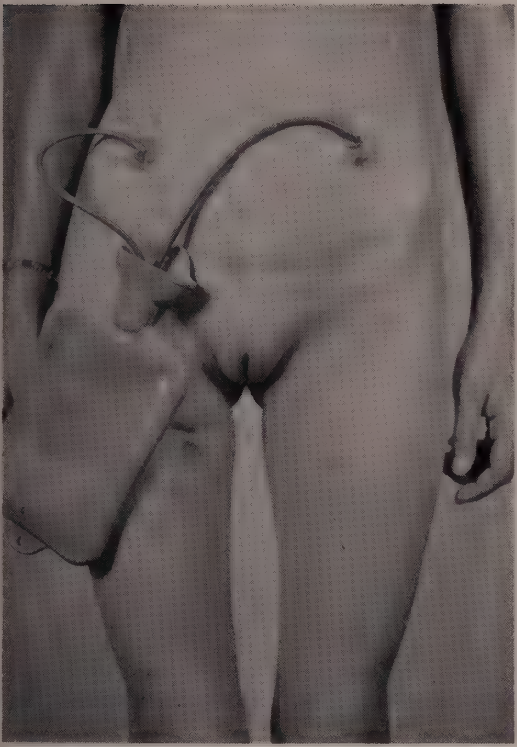

Fig. 4. Patient with catheters in place.

in appearance, was seen arising from the dome of the bladder near the urachus on a stalk 3 cm. in length. It was irregular and partially encapsulated. It was also adherent to the small bowel, sigmoid, omentum, and anterior abdominal wall. The adhesions were severed, and the mass and stalk were excised, leaving numerous small areas of tumor tissue which were impossible to remove. Pathologic report was rhabdomyosarcoma of the bladder.

The patient recovered from the operative procedure and was discharged on June 21, 1950. He was readmitted on July 25, 1950, because of a mass beneath the abdominal incision and dysuria. He was given deep x-ray, 200 r through three portals for eight treatments. After the first four treatments intravenous nitrogen mustard was started, 1.7 mg. daily for four days. The abdominal mass seemed to decrease slightly in size.

On October 23, 1950, he was readmitted with complaints of abdominal pain and frequency. Exploration of the abdomen showed generalized metastases. Patient was discharged to his home where he died on November 29, 1950.

Comment

Review of the literature shows that the initial symptoms are disturbances of urination such as frequency, retention, dysuria, hematuria, and a suprapubic mass which fails to disappear following catheterization of the bladder.[4-18] Death is usually due to local recurrences, cachexia, uremia, hydronephrosis, and pyelonephritis.

Cystoscopic examination should show the presence of a bladder tumor, but in several cases, including one of ours, the cystoscope could not be passed due to the size of the tumor which blocked the vesical orifice.

Grossly, the majority of the tumors present a polypoid appearance (classic description, sarcoma botryoides). Our first case showed a tumor smooth in appearance and solid to palpation with no ulceration to overlying mucosa and with a wide base. The other case showed a typical sarcoma botryoides.

The majority of cases do not show metastasis, but we are reporting one without metastasis and one with extensive metastasis.

Dr. Terplan, pathologist, reports histologically in Case 1 the sections showed findings of an embryonal sarcoma (so-called mesenchymoma) with typical reticular arrangement of embryonal cells, largely with single nuclei, but here and there multinucleated. The arrangement was that of typical primitive mesenchyme producing primitive fibroblasts, causing an appearance as seen in some myosarcomas. There were a few findings, however, in some of the larger cells suggestive of striated granular substances in the cytoplasm, which pointed definitely in the direction of an embryonal myosarcoma. The tumor as a whole would fit the diagnosis of a so-called mesenchymoma, largely of the embryonal rhabdomyosarcoma type.

Case 2, grossly, was of the botryoides group, and sections through the soft and also through the more fibrillar portion of the tumor showed a mesenchymal tumor—in some areas of strictly embryonal mesenchymal pattern, in others with mature, more regular arrangement of the cells and fibers, somewhat resembling smooth musculature. In a few areas, however, a very faint striation of the cytoplasm could be noticed. There were also numerous atypical giant cells with an abundance of agglomerate nuclei and very numerous mitotic figures. The diagnosis was embryonal sarcoma with some tendency to rhabdomyosarcoma differentiation.

Summary

We are reporting the thirty-fifth and thirty-sixth cases of rhabdomyosarcoma of the bladder. One case has lived three years following operation. We have found no reports in the literature of survival for this length of time. By personal communication Dr. Rubin Flocks has informed us that he has a similar case, upon whom he performed total cystectomy and ureterointestinal anastomosis, who is still living about eight years after surgery. Dr. Victor Marshall also has informed us that he performed a total cystectomy, cutaneous ureterostomy, and a radical lymph node dissection upon a patient who has survived over four years. Therefore, it would seem that if rhabdomyosarcoma of the bladder is diagnosed early, total cystectomy offers hope for possible cures.

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Discussion

Gerald C. Walker, M.D., *Utica.*—The fact that any lesion is rare is of little help to the clinician facing any particular case, and I thank Dr. Slotkin and Dr. Davis for drawing our attention to these rare sarcomas. I have never had one exactly like these in my practice, but I did have a case which I am sure is very closely related. The patient was a boy twenty-one months old. Three weeks before admission, the parents noticed a lump in the lower abdomen. At operation it proved to be a polypoid tumor of the bladder, 6 cm. in diameter, with a typical botryoides configuration, that is, with many grapelike cysts in the distal and outer parts and a center which, although solid, was very soft. This tumor was further unusual in that it was present in a large diverticulum of the bladder. The baby died the day of operation.

Microscopically, the bulk of the tumor was composed of spindle cells with abundant cytoplasm. I am convinced that these cells were primitive or anaplastic muscle cells, but since I was not able to demonstrate cross striation, I could not prove my point. In addition, there was a definite myxomatous element.

The question of the histogenesis of these tumors is not clear, but there is one working hypothesis which helps understand them. It was presented by Dr. Arthur Purdy Stout at a seminar on tumors of soft tissue. If we exclude tumors of epithelium, lymphoid, and blood-forming tissues and also tumors of derivatives of the neural crest, then all soft tissue tumors are derived from the mesenchyme. They may be benign or malignant, and because of the multipotential nature of the mesenchyme, they may be unicellular or of a mixed cell type, the so-called mixed mesodermal tumor.

Mothers Who Lose Babies May Be "Easy Bleeders"

A tendency to bleed too easily, whether manifested by nosebleeds, bleeding gums, or skin that bruises readily, often means a vitamin C deficiency. Easy bleeding was common among 2,000 women who had lost one or more babies, Dr. Carl T. Javert, Cornell University Medical College, reports. One role of vitamin C is to provide the binding material that reinforces the walls of the small blood vessels or capillaries. "A distinct correlation was found between vitamin C deficiency and decidual hemorrhage," says Dr. Javert. In this condition, there is bleeding of the vessels in the lining of the uterus during pregnancy. Treatment, as outlined by Dr. Javert, includes a diet rich in citrus fruits.—*Conference on Research in Medicine and Nutrition, Lakeland, Florida, March 11, 1954*

Trichomycosis Axillaris

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(From the Department of Dermatology and Syphilology, University of Buffalo School of Medicine)

TRICHOMYCOSIS axillaris is a cosmetic disease. It occupies a unique position among the minor illnesses of man in that it comes within the daily experience of those who wash clothes or spend any time in a locker room. It is indeed one of the commonest of all diseases and yet goes unnoticed in the clinic by even the most meticulous physicians.

This disease of the hairs of the axillae and sometimes of the pubic area is characterized by the appearance along the hair shafts of firmly attached translucent concretions which give the hairs a frosty appearance. The skin in the areas is unaffected. Three color varieties have been described, yellow, black, and red. In the commonest form the nodules are distinctly yellowish, and in many cases the sweat in the involved area takes on the color of the concretion which leads in turn to the annoying yellowish stains in shirts, dresses, and underclothes with which everyone is familiar. This phenomenon may be called pseudochromidrosis to distinguish it from the much rarer, and usually blue, true chromidrosis, the cause of which lies primarily in certain abnormal apocrine gland secretions.

At least in the northeastern United States, trichomycosis axillaris is a widespread disease.[1] In 1950, for example, we were able to find 28 cases in 100 consecutive clinic patients; it was the presenting complaint in none of them. In warmer climates it is undoubtedly even more common.

Microscopic examination of the concretions along the hair shaft shows a profusion of coccobacillary forms imbedded in the clear matrix (Fig. 1). The cortex of the hair is actually invaded, which accounts for the difficulty experienced in removing the concretions. Until recently these coccobacillary forms were thought to be species of Nocardia, and the observation of hyphal type branching with occasional culture confirmation was noted, particularly in the tropics. But a great many other organisms have been isolated in different parts of the world. One of us (J.C.) with Rebell and Laskas[1] was able to culture a group of diphtheroids from 28 cases of the disease and similar dipththeroids from only three of 72 controls. We named this organism Corynebacterium tenuis to distinguish it from Nocardia tenuis (Castellani) which had been considered the causative agent previously. C. tenuis differed from the usual skin diphtheroid in its fermentation reactions, its ability to grow best in more alkaline media (pH 8 to 9), and in not being stimulated in its growth by the addition of glycerin and lipids to the medium.

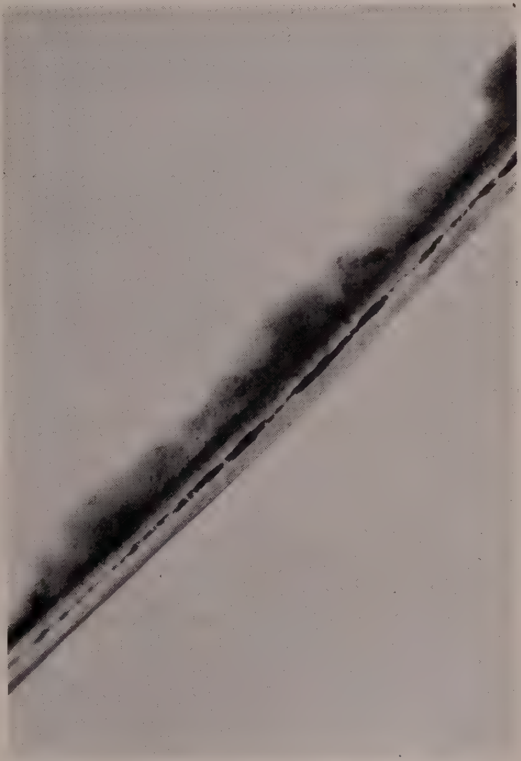

FIG. 1. Concretions along the hair shaft in Case 1.

While the yellow variety is extremely common in the temperate zone, the red and black varieties are seldom seen outside the tropics. There has, in fact, been only one case of the red variety re-

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* By invitation.

Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Dermatology and Syphilology, May 14, 1954.

ported in this country.[2] To this may be added three additional cases seen in Buffalo in the past two years.

Case Reports

CASE 1.—C. P., a fifty-two-year-old derelict, was admitted on November 15, 1952, to the psychiatric observation ward as an alcoholic. In both axillae there were numerous hairs, the shafts of which were encircled and studded with concretions of a deep wine color. These concretions were removed from the hairs only with difficulty. The patient stated that the condition had been present for about a year and that it caused him no trouble other than staining his shirts a red-orange color at the points of contact. His usual residence was in Salvation Army establishments in the Northeast. In the past three years he had been in California a number of times but never far south and never out of the United States. There was no pubic involvement. The patient disappeared before treatment could be evaluated.

CASE 2.—H. S., a twenty-four-year-old dermatology resident, turned up with the disease after being told of its existence. There were numerous hairs in both axillae identical in color and consistency with Case 1. His shirts too were stained orange-red at contact sites, but the infection caused him no other inconvenience. He had traveled extensively in the eastern and southern states but had never been out of the country. During months of follow-up without treatment the extent of involvement varied greatly from time to time, and spontaneous remission occurred after clipping large amounts of material for culture studies.

CASE 3.—M. C., a twenty-seven-year-old Puerto Rican, was admitted for diverticulitis in December, 1953. He first noted the infection in 1950; it subsided spontaneously for a time and recurred again in 1953, three years after his immigration into the United States. He noted red axillary sweat with staining of his shirts at contact points. Follow-up was not possible.

Comment

Microscopic examination of hairs from all three cases revealed concretions about the hair shafts diffusely stained orange-red and containing coccal and bacillary bacterial forms. Cultures showed diphtheroids which produced an orange pigment on ordinary nutrient media.

In the red varieties studied in the tropics the color is said to arise from a pigment-producing coccus (Rhodococcus castellani) which lives symbiotically in the concretions with the Nocardia species which actually causes the disease. No such coccus was present in our cases, and the color may well have been due to the pigment produced by the diphtheroid itself.

The third case reported here is from Puerto Rico and, of course, is not a bona fide temperate zone case, although a clinical recurrence took place while he was living in the North. The fortuitous discovery of two others, without any extensive campaigning, suggests that the red variety is more common in this country than previously supposed, even in so nontropical a community as Buffalo.

The treatment of trichomycosis axillaris is not difficult, although recurrences are common. Shaving of the area is effective but not usually necessary. The use of soaps containing hexachlorophene and the application of 1:2,000 bichloride of mercury solution or 5 per cent sulfur ointment will usually suffice.

Summary

1. The clinical picture, incidence, and causative organisms of trichomycosis axillaris are reviewed.

2. Three cases of the red variety occurring in the United States are reported.

The authors thank Dr. Frank Hoak for permission to publish the third case.

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Discussion

Royal M. Montgomery, M.D., *New York City.*—This treatise by Dr. Crissey and Dr. Murray, as well as the one in the *Journal of Investigative Dermatology* of which Dr. Crissey was a coauthor, should stimulate interest in this disease.

Fortunately, since this is a cosmetic disease, it is easily cured by shaving off the hair. In their work the authors have found that a causative organism in this area is a Corynebacterium.

I have little to add except that the use of filtered ultraviolet light aids in the diagnosis. It makes the concretions more readily visible. This is not a new observation since it has been recorded by others.

The orange-red stain on the shirts seems to be the common complaint of the three cases reported. This dye, according to the authors, comes from the diphtheroids themselves, whereas in chromidrosis the dye comes from the apocrine glands and is a lipofuchsin as recently reported by Drs. Shelley and Hurley.[a]

There has been much written lately on sweat. This paper and the disease itself certainly have been produced and stimulated with a certain amount of sweat.

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[a] Shelley, W. B., and Hurley, H. J.: Arch. Dermat. & Syph. 69: 449 (Apr.) 1954.

Tackles Tough Subject Before Lay Audience

Dr. Louis A. Buie, chairman of the A.M.A. Council on Constitution and Bylaws, spoke on "Medical Ethics" before a noon luncheon meeting of the Rochester, Minnesota, Rotary Club recently. Medical ethics is a subject close to Dr. Buie's heart, yet it is one of the toughest subjects for a doctor to discuss before a lay audience. He faced the complicated issues relating to ethics squarely and honestly with the result that he did a masterful public relations job in behalf of medicine. This conclusion is gained from the fact that the *Rochester Post-Bulletin* published most of his prepared talk. "Physician Assails Slur on Profession" was the heading of the newspaper story on page one. A long runover added up to nearly two full columns on Dr. Buie's speech. Here was the newspaper's strong and positive first sentence:

"Lurid reports in some popular magazines suggesting that needless and useless surgical operations are being performed by physicians, solely for money, have no foundation in fact."

Succeeding paragraphs, taken from Dr. Buie's talk, provided evidence to support that opening statement. One couldn't help but feel, after reading the story, that when Dr. Buie first was invited to make the address, he recognized the public relations potential it held. And it's almost superfluous now to add at this time that the prominent Mayo physician made the most of the opportunity.—*A.M.A.'s Secretary's Letter, July 27, 1954*

Even Babies May Have Migraine Headaches

Babies even as young as two weeks old can suffer migraine headaches. Symptoms of infant migraine are much like those for adults, but a positive diagnosis can't be made until the child is old enough to describe his feelings, according to Dr. Jerome Glaser, Rochester, N. Y., in the July issue of the *American Journal of Diseases of Children*, published by the American Medical Association.

Migraine headaches usually occur periodically on one side of the head and are accompanied by visual disturbances and a variety of other symptoms. In children, they may be due to an allergy, particularly to such foods as chocolate, eggs, wheat, and milk. Although two weeks is the earliest age at which migraine has been reported, Dr. Glaser said the youngest child he had ever seen with migraine was a three-year-old girl. "She would act as though in pain, would pat one side of her head, and would constantly repeat the single word 'hurt.' These attacks were followed by abdominal pain, nausea and vomiting," he said.

Babies are very likely to have migraine headaches while young without being diagnosed until much later. Most migraines are found when the child is taken to the physician for some other difficulty, such as bronchial asthma or allergic reactions.

"The question . . . naturally arises as to how one can diagnose headache in infancy and early childhood," Dr. Glaser said. He explained that headache may be suggested when the child wrinkles his forehead, rubs his head, is restless, and cries. A diagnosis can only be established when he is older and complains of headache while showing the same symptoms noted in infancy. Symptoms are very similar to those of migraine in adults, except that children usually show abdominal discomfort, loss of appetite, and lack of energy before an attack, while adults usually become irritable and abnormally hungry. A child may be unusually restless the night before a headache and show a gradual temperature rise up to 104 degrees in the morning. Other symptoms are distended abdomen, dizziness, bad breath, and a very definite change of behavior to sadness, excessive gaiety, or definite irritability. Some children show cardiac signs—shortness of breath, pallor, sweating, and feelings of anxiety.

One of the commonest causes is eye trouble. Dr. Glaser said no child with recurrent headaches should be given up as hopeless from the standpoint of permanent relief until he has been completely checked by an eye specialist. However, he said many children suffer headaches because of an allergy to certain foods. Most conspicuous are chocolate, egg, wheat and milk. He said in some cases improvement was "remarkable" when the allergy producing foods were kept out of the child's diet.

Medical Services in Aging and De-aging

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(*Chairman, Subcommittee on Geriatrics, Medical Society of the County of New York*)

The number of older persons is increasing in every community, and the services of the physician to meet their needs and enrich their lives are in greater and greater demand.[1]

The situation was well stated by Louis H. Bauer. M.D., past-president of the American Medical Association, in an interview just prior to the 1953 convention: "If a single objective of medical research and practice is to be brought forward, I would say that it is to recognize the importance of keeping people fit in later and later years of adult life."

Method

To meet this challenge, we are developing our work in three areas: first, *prevention* and postponement of deterioration and chronic illness by medical research, personal examination, constructive care, and anticipatory guidance through life[2-5]; second, more effective *treatment* of disease and disability in age; third, efforts toward *de-aging* or *rehabilitation* and restoration in the aging and aged.

We shall present some selected definitions, principles, and methods which have been developed largely in the last decade.*

Definitions of Aging and Age

Individual aging begins with cell division and has three stages: (1) growth (development), (2) maturity (stability), and (3) senescence (decline). These three stages overlap and vary in speed, area, length, and character. As we have stated, the rate of aging differs in different individuals. Some men at sixty may be as young as the average at forty, and others may be as old as eighty. Organs age unevenly, yet all organs depend on each other's service and share a common fate and fortune.

There are seven kinds of "age":[1] chronologic, anatomic, physiologic, psychologic, pathologic, statistical, and hereditary.

Chronologic Age.—Age in years is of less and less significance as the importance of the following four "biologic" ages is increasingly recognized. These four ages are distinct, yet united—the targets of our scientific age control effort.

Anatomic Age.—During life, structures appear, grow and mature, and decline and atrophy. These successive anatomic stages can be seen in cells, tissues, and organs.[6]

The appearance of the first molar tooth marks an anatomic epoch. Pubescence, another anatomic epoch, is more significant in terms of weight, height and strength, emotional pattern, and social standing than three or four years of chronologic age.

Anatomic age is even more significant in senescence. When brown granules collect in the cells of the heart, when cholesterol appears in the cornea and in the coronary arteries, when calcium is deposited in cartilage and is stolen from the bones, when the thyroid and kidney shrink and the connective tissue increases and hardens, structural changes mark advances in anatomic age.

Physiologic Age.—This refers to function. It closely parallels anatomic age. The changes from maturity to senescence and to senility are conspicuously physiologic.[7,8] For example, menopause, diminution of hydrochloric acid and pepsin in the stomach and of the salivary secretion, the slowing of nerve reaction times, narrowing of the visual field and accommodation, decline of the gonads, loss of skin elasticity, decline of cardiac function, all mark physiologic aging. These and many other signs appear at different ages in the different persons and do much to make age what it is. They must be found, heeded, and used as guides to our therapy and tests of its progress and success.

Physiologic age is a fundamental principle underlying all geriatric diagnosis, prescription, and management.[7-9]

Psychologic Age.—Mental and emotional phases of life begin, mature, age, and end. In early life the appearance of mental abilities is easily measured. In later life there is an accumulation of intellectual powers and values which materially offset the decline of some of the mental and emotional capacities.

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* See Appendix at end of article for sources of further information, including textbooks, magazines, and Federal, State, and collegiate bureaus and committees.

Great work in science, art, and world affairs has been done by old men, and the trend may be onward if science and medicine continue their successes in geriatrics. Decline in motor and sensory ability begins at thirty or forty, yet automobile "good driving" improves from thirty-four to forty-three and at sixty-five is superior to the twenties.

There are excellent psychologic age tests available, but the physician is more concerned with tests in terms of daily life action, interests, and earning power. Much can be done by the physician in using the body to unburden and restore the mind.

A stagnant life may be refreshed by the correction of common nutritional deficiencies in vitamin B_1, protein, calcium, iron, etc. Attention to the prostate, feet, eyes, liver, or colon will often have an important effect on the mind.

PATHOLOGIC AGE.—A severe or prolonged illness, strain, or stagnation may age a man ten years or more through damage to the body cells and services. Our chief enemy is not age; it is damage. Chronic focal infection in teeth, sinuses, gallbladder, prostate cause aging from drain on resources and damages from toxicity. Ordinarily a man comes for medical care only when sick or disabled or driven by pain. When he gets well, he leaves medical care behind, although he may have within his body a dozen aging pathologic conditions which we seek to discover and remove.

Age Prevention and Postponement

Our efforts to delay and prevent aging must operate in these four aspects of the individual during his whole lifetime (and that of his parents). As aging proceeds, we have an opportunity to work against it. To do this, we must examine, treat, advise, correct, and guide the man throughout the years. The following are the essentials of the *Program of Medical Service in Life Management:*

1. Initial Examination—Holistic; comprehensive; basis of whole program.
2. Treatment—Cure, care, follow-up of pathologic and suboptimal physiologic and psychologic function; de-aging.
3. Prescription—Regimen and program of the day, month, year, and life.
4. Continued Counseling—Refreshment of program based on periodic reports and recheck.
5. Re-examination—Full survey at important life epochs.

The initial examination should be regarded as an event of greatest importance, a research procedure covering a period of several days or weeks of observation, test and record analysis, diagnosis, and assembling of all significant factors into a comprehensive, well-tested program. It is not an ordinary disease examination (which is included). The subject merits the fullest consideration which cannot be given in the limits of this article.* Some practical points may, however, be of service.

We have found it useful to give the examination in three visits. Previous to the first visit, the patient fills out a thorough report on his previous history, heredity, complaints, symptoms, troubles, fears, circumstances and conditions, family, environment, work, play, sleep, rest, food, and life management and outlook. It is helpful also to obtain an hour-by-hour written report of the whole day for four or five days including the week end (food, rest, occupation, incidents, medication, etc.). Special blanks are provided for the purpose (copies available on request). They may be used also later for prescription of regimen. During this period laboratory tests may be taken if they have an added value.

The first visit is the "pilot" examination. The examinee's story is heard in full with his history record. This begins a diagnostic survey covering ancestry, history, and all body parts, organs, and services—blood pressure, heart, lungs, abdomen, joints, nerves, eyes, ears, etc. There is also a search for clues of aging, and every clue is followed up. Tests, reports, and x-rays are ordered. This is the "data gathering" visit.

At the second visit the physician analyzes all items of evidence and all data, retests, rechecks, and correlates all information in terms of the whole body and the whole life.[11] Anti-aging possibilities are looked for and action prescribed. Correction and treatment to be undertaken at once are planned and initiated. A preliminary life program, remedial and constructive, is planned and given. It is to be tried out and reported on at the next visit.

At the third visit, after three to four weeks, the results of the preliminary program are checked, retests are made, and then the full health program for six months or a year is given with all the necessary prescriptions and with the main points in writing for the patient's own guidance.[12] Anti-aging procedures will be planned and arrangements made for them to be carried out as the occasion warrants.

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* See the present writer's "The Essentials of the Geriatric Examination at 50."[10] The subject is also presented in textbooks on geriatrics and gerontology noted in the Appendix.

Following the initial examination begins the lifelong service of the personal physican (the family doctor gone modern). Illnesses are palliated, cured, and prevented. All body and mind services are brought to their best as a life athlete is trained for the race of the years. This requires periodic report and treatment, the meeting of intercurrent incidents, the employment of the services of the specialist, guidance in life program in diet, exercise, sex, self and family management—the whole life,[13] the whole man being considered with the physician as "guide, counsellor and friend." This is a rapidly advancing movement. More technics are developing. The public is looking for it. The medical schools are studying the subject and slowly moving ahead. For example, the 1953 report of Robert F. Loeb, M.D., Executive Officer of the Department of Medicine, College of Physicians and Surgeons of Columbia University, sees the increasing development of "comprehensive medicine," with emphasis upon "the patient as a whole," "the care of the patient through the years" by "the well-rounded internist, i.e., a family physician." This is good.[11,13]

The whole life program of medical life guidance is based upon the continuance of medical examinations throughout the lifetime. For decades we have advocated annual health examinations. We should continue this effort, but we may profit by an endeavor to concentrate upon six highly significant life landmarks which mark the beginnings of life epochs. Each has a great importance and a great significance in the minds of people and is reflected in their thought, sentiment, and customs. At these high points of life it is easier to focus attention of men upon their own personal health and welfare. They mean much to life, to people, and to the world. Each epoch landmark marks a period of change, of ripening, of culmination, of advance, the passage of the old, the coming of the new. At this time of adjustment and pliability, advice and direction are needed, sometimes sought and welcomed, and are most fruitful in guiding the years into pathways long, wide, rich, and rewarding. We believe that this is good social and scientific strategy. We have selected six epochs as follows: (1) before and after birth, (2) preschool, (3) puberty, (4) before marriage (or twice the age of puberty), (5) menopause (or three times the age of puberty, but not later than forty-five), (6) geriatrics (four times the age of puberty, but not later than sixty-five).

Each examination should be recorded for the benefit of interim guidance and the service of the next examiner. This forms a cumulative life record, a summary of which should be in the hands of the patient, as we have previously set forth.[12]

This program requires the continued annual or periodic examination and serves every other purpose of the science and practice of medical life guidance. Of this there is much more to be said, but we shall turn to the second phase of our topic, de-aging.

De-aging

The average man of fifty or sixty is commonly from five to ten years "older" than he need be. As a man ages, his body becomes a documentary record of his past years.[14] "The old man is a walking hospital." He shows accumulated damages, defects, tissue poisoning, stagnation, and starvation with half-cured illnesses and infections. These are the results, not of time, but of the hazards that occur from accident, illness, strain, ignorance, or neglect in the passage of time. Our enemy is not age; it is damage, largely avoidable, largely correctable.*

At any age, forty, sixty, or eighty, there are accumulated burdens, defects, and deteriorations which in large part can be discovered and identified by thorough examination. The evils disclosed by examination may often be partly or wholly removed or neutralized. At the same time unutilized sources of vitality and power may be disclosed and developed to great advantage.

The de-aging procedure follows the methods of medical service in life management.[16] As described, the whole man, his environment, his whole life are considered. All resources of science, art, wisdom, and empathy are employed. The support of all medical specialists, social

*Walter C. Alvarez, M.D

* ~~Ancel Keys~~ makes an arresting statement to the effect that the American man of fifty has an expectation of dying before sixty, 17 per cent greater than the English, 24 per cent greater than the Italian, and 55 per cent greater than the Swede of corresponding age.[15]

* N.Y. St. Jour. Med. vol 55 no 5, 1955, p. 688.

workers, and the psychologists is necessary. Contrary to the unquenchable race-old hopes, there is no simple, easy way back to youth nor one remedy for aging. The four biologic ages are basic. There are certain areas of special importance that merit intensive research and therapeutic development, namely, the psyche, infections, nutrition, vitamins, stagnation, hormones, structure, antibiotics. We shall present but one, the psyche, selected because of its all-pervading importance in every phase of the program.

THE PSYCHE.—There are physical, psychiatric, social, and economic aspects in the rehabilitation of the aging. Our whole physical program supports the psyche and receives support in turn.

As we stated, we use the body in many ways to help the mind. Direct medication has proved useful. The most recent examples are as follows:

Reports from homes for the aged and mental hospitals record the value of Rauwolfia and its alkaloids. Many disturbed, antagonistic, destructive cases, screaming and fighting, troublesome and dangerous, become transformed to tranquil, cooperative patients, although not every case responds so dramatically. The side-effects are few and mild. It is slightly laxative and antipyretic. This remedy promises well. It is to be employed for long period effects with care and watchfulness.

In a State mental hospital Dr. Sol Levy gave a group of 30 male patients, sixty-one to sixty-eight years old, 3 grains of pentylene tetrazol (Metrazol) and 100 mg. nicotinic acid in an elixir three times a day. There was improvement in personality, activity, and cooperation. For example, 48 per cent attended to personal hygiene, 41 per cent improved in appearance, 38 per cent in alertness, 31 per cent in memory and general activity; all said they felt better. There was a 6-point gain in the Wechsler-Bellevue scale, and material improvement was noted by the 12-point Malamod-Sands-Worchester scale, including the items above. Each of these remedies has been favorably reported by other observers

We must prescribe for the mind. In large part it manages the life; it rules and is ruled by the body, the family, and the environment. We can aid, but we must help it to govern itself. To do this we prescribe. We create a picture of happy, successful, vigorous, serviceable, worthy life and recommend procedures that will be made alive and dynamic by this vision.

Five-Point Program for Age Postponement and Youth Prolonging

The question was asked by a national service group, "How to live to be one hundred and have fun?" Our considered answer follows:

1. *Have fun:* Every day laugh, sing, dance, play.
2. *Do work:* Keep doing real worthy work, full-time, part-time, sometime.
3. *Give service:* Add the happiness of others to your own.
4. *Be strong:* Get the best and newest vitality by getting age fighting and rehabilitation methods from your physician. Let him guide you and follow you closely, as a coach for the race of your life.
5. *Praise God:* The happiest people of all are those who enjoy working for Him.

This program gives the broadest coverage and will stand analysis from the medical, psychiatric, social, practical, and spiritual standpoint. For example, laughter (three times a day, before meals at least) has physical, circulatory, respiratory, digestive, mental, and social values. Recreation centers for the aged have been developed in New York City, California, and elsewhere. They keep men out of clinics and hospitals and make them happy. "To do work" is normal; to retire to idleness is dangerous (average length of life of a group of 12 retired oil executives in 1951 was nine months, in another observed group two years). "To give service" is to enlarge oneself, for the Ego may shrink with age. "To be strong" is our health theme at its best. "To praise God" gives happiness and content in the spiritual life which integrates everything. It suggests a new word, "serenescence."

In practice, the psychologist, social worker, nurse, recreation specialist, housekeeper, and the cook aid us in diagnosis and treatment. The physician is the one to assemble and guide their services into one harmonious life enrichment program.

Summary

We have made a broad but not exhaustive survey of what the medical profession can do in aging and de-aging, touching briefly on certain principles and giving some practical methods which have proved effective over the years. We have many more people to make happy. They need us. We are opening a new era.

Its rewards are already great. Many men and women who have had this medical service look, act, and feel a decade or more younger than their chronologic contemporaries. This is confirmed by scientific tests in the four biologic age areas. The worlds of research, science, social affairs, government, business management, and labor are moving forward. But it is the physician who must lead, guide, and give personal service to the man himself.

1035 PARK AVENUE

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National Committee on Aging of National Social Welfare Assembly, New York City, G. Warfield Hobbs, Chairman.

All religion, all life, all art, all expression come down to this, to the effort of the human soul to break through its barrier of loneliness, of intolerable loneliness, and make some contact with another seeking soul, or with what all souls seek, which is (by any name) God.—DON MARQUIS

Congenital Varicella

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Congenital varicella rarely occurs, only eight authentic and five probable cases having been reported up to the present time in the literature. Recently, within an eight-month period we have observed three cases of congenital varicella at the Kingston Avenue Hospital, Brooklyn. In two of these cases the rash was present at birth, and in the third case it appeared ten hours after delivery. This is the first time that three instances of congenital varicella have been observed in one institution.

The extremes of the incubation period for varicella, as accepted by most authorities, are ten and twenty-one days. Thus, cases in which the eruption appeared within ten days after birth are authentic congenital cases, while eruptions appearing after the tenth day and before the twenty-first day might be regarded as probable congenital infections.

Varicella evolved within the first forty-eight hours of life in eight infants, and these are, therefore, indisputable congenital cases. The first case reported was that by Hubbard[1] in England in 1878. The seven cases reported subsequently were by Pridham[2] in England in 1913; Mitchell and Fletcher[3] in the United States in 1927; Cosgrave and Samuel[4] in a Chinese infant in Malaya in 1934; Shuman[5] in the United States in 1939; Caravias Vera[6] in Argentina in 1948; and in twins by Middelkamp[7] in the United States in 1953. In six cases the rash was present at birth.[2–4,6,7] In the seventh case, Hubbard's, the rash appeared within the first twenty-four hours after birth, and in the eighth case, Shuman's, the eruption developed during the first forty-eight hours of life.

Five cases were reported in which the eruption occurred in infants who were from seven to nine days old and which are, therefore, probable instances of congenital varicella (Table I).[8–11] In the nine instances in which the eruption appeared in infants from eleven to twenty-one days old the varicella may be presumed to have been either contact or congenital because, falling within the extremes of the ten to twenty-one-day incubation period, neither the contact nor the congenital origin of the infection could be discounted.[3,5,12–16] Shuman's patient, twenty days old, was the only case observed in the first four weeks of life in 2,200 cases of varicella at Willard Parker Hospital, New York City, between 1935 and 1938.

TABLE I.—Cases of Congenital Varicella in the Literature

Author	Number of Cases	Age of Patient
Cases definitely congenital		
Hubbard[1]	1	24 hours
Pridham[2]	1	Birth
Mitchell and Fletcher[3]	1	Birth
Cosgrave and Samuel[4]	1	Birth
Shuman[5]	1	48 hours
Caravias Vera[6]	1	Birth
Middelkamp[7]	2	Birth
Cases probably congenital		
Oppenheimer[8]	1	7 days
Baron[9]	1	8 days
Henderson[10]	1	8 days
Lucchesi, LaBoccetta, and Peale[11]	2	8, 9 days
Cases possibly congenital		
Senator[12]	1	11 days
Campbell[13]	1	12 days
Mössmer[14]	1	13 days
Lereboullet and Moricand[15]	1	14 days
Apert[16]	3	14, 16, 17 days
Mitchell and Fletcher[3]	1	Third week of life
Shuman[5]	1	20 days

It is interesting to note that in the first two authentic cases reported, Hubbard and Pridham, and also in Mössmer's case the mothers did not have varicella, but in all three cases the disease was present in other siblings. In Hubbard's and Mössmer's cases several members of the family had the eruption in the various stages of its development at the time of delivery, but in Pridham's case the last outbreak of the eruption had occurred in a member of the family fourteen days prior to delivery.

The three cases we are presenting in this report are indisputable examples of congenital varicella.

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Case Reports

CASE 1.—An eighteen-year-old white housewife, pregnant at full term, was admitted to Kingston Avenue Hospital on April 14, 1952, because of vesicles on the abdomen of one day duration. She had never had chickenpox before.

Physical examination disclosed many macules, papules, and superficial vesicles on the face, trunk, and upper extremities. The uterus was enlarged to that of a full-term pregnancy. The rest of the examination was unremarkable. A diagnosis of varicella and pregnancy at full term was made.

The patient had an uneventful hospital course. Seven days after admission she went into labor. By that time all the lesions were crusted or healed, and, therefore, she was transferred to the obstetric service of a general hospital for delivery. Two hours after the onset of labor the patient delivered a full-term male infant. At birth the infant exhibited pustules over the scalp, face, trunk, and extremities. These were treated topically with Chloromycetin ointment. The infant remained in the regular newborn nursery for four days, after which time he was transferred to the communicable disease service of Kingston Avenue Hospital where it was observed that macules, papules, and vesicles, some in the crusting stage, were generally distributed over the skin and scalp, and that a few vesicles were present on the soft palate. The pharynx was moderately injected. The rest of the physical examination was negative. The white blood cell count was 9,400 per cu. mm. with a differential of 38 per cent neutrophils, 50 per cent lymphocytes, and 12 per cent monocytes. The infant remained afebrile throughout the course of the illness. He was kept on an evaporated milk formula on which he thrived and gained weight. All lesions crusted by the seventh day and disappeared by the ninth day, the day of discharge.

CASE 2.—A twenty-one-year-old Puerto Rican housewife in labor for four hours after a full-term pregnancy was admitted to Kingston Avenue Hospital on June 9, 1952, because of ten-day history of chickenpox. The patient had never previously had chickenpox. Physical examination revealed healed and crusted varicelliform lesions over the entire body, as well as a few vesicles on the extremities. Fifteen hours after admission the patient gave birth to a full-term female infant. All of the patient's varicelliform lesions were healed by the second day after admission, and she was discharged four days later after an uneventful postpartum course.

At birth the 6-pound, $^1/_2$-ounce infant was normal in all respects. Its skin and mucous membranes were clear. Ten hours after birth one fairly large vesicle on an erythematous base was noted on the left thigh. No other lesions were seen at this time. When the infant was two and one-half days old, a crop of vesicular lesions was noted on the left cheek, shoulders, right knee, and left thigh. Some macules and papules were seen on the chest, forehead, and abdomen. The original lesion seen first at ten hours of age was now pustular. On the following day several new macules and papules appeared on the scalp, face, and extremities. Many of the vesicles which had been seen on the previous day subsided without going through a crusting stage; others underwent very mild, pinpoint crusting and disappeared rapidly. The original solitary vesicle on the thigh became crusted and then healed; this lesion was the only one that went through all the stages of development characteristic of typical varicella.

Shortly after birth the red cell count was found to be 5,500,000 per cu. mm., the hemoglobin was 18.5 Gm. per cent, and the white blood cell count was 13,000 with a differential of 60 per cent neutrophils, 28 per cent lymphocytes, 8 per cent monocytes, and 4 per cent eosinophils. Three days after birth the red cell count was 4,500,000 per cu. mm., the hemoglobin was 16.5 Gm. per cent, and the white blood cell count was 8,300 per cu. mm. with a differential of 24 per cent neutrophils, 64 per cent lymphocytes, 8 per cent monocytes, and 4 per cent eosinophils.

The infant remained afebrile throughout the illness and received no special therapy. She was placed on an evaporated milk formula on which she continued to gain weight during the course of the infection. She was discharged at the age of eight days, the lesions having completely healed.

CASE 3.—An eighteen-year-old housewife, pregnant at full term, was admitted to the hospital on December 1, 1952, with a three-day history of chickenpox. The patient had never had chickenpox before. The physical examination on admission disclosed a generalized skin eruption consisting of papules and vesicles on an erythematous base and a few vesicles on the soft palate. The hospital course was uneventful, and the patient was discharged on December 7 when all the lesions were crusted.

Two days after discharge the patient gave birth to a 5-pound, 12-ounce male infant at another hospital. It was noticed at birth that the infant had a few scattered papules on the face and body, and he was, therefore, promptly transferred to the Kingston Avenue Hospital.

Examination on admission revealed that the baby had scattered papules and a few early vesicles on the face, scalp, and trunk. Only rare papular lesions were noted on the extremities. The mucous membranes were clear. The remainder of the physical examination was unremarkable. The vesicles underwent crust formation within three days after birth, and no new crop of lesions appeared. The infant remained afebrile throughout the illness. The baby was maintained on an evaporated milk formula and gained weight through the course of the infection. He was signed out after a hospital stay of five days.

Comment

Isolation technic should be practiced when an infant is delivered from a mother who is ill with or convalescing from an active case of chickenpox. Three different procedures were followed in our cases. In Cases 2 and 3 isolation technic was maintained throughout the hospital stay. In Case 2 both the mother and the infant remained in our hospital after delivery; in Case 3 the mother went into labor two days after she was discharged from the hospital with all lesions crusted, was delivered at another hospital where isolation technic was maintained, and then both the infant and the mother were transferred to our hospital. In Case 1, however, even though the infant had pustules (which were not recognized as chickenpox), he was placed in a newborn nursery after delivery. Although no cross-infection occurred in this instance, cross-infection in varicella may occur in newborn nurseries.[16]

The first six authentic congenital varicella cases reported in the literature ran a benign course, remained afebrile, had no lesions of the mucous membranes, showed no systemic reactions, and recovered within one week after the onset of the rash. All our cases ran a similar course, only one of them having lesions on the oral mucosa.

On the other hand, in the five cases in which the rash had appeared in infants who were from seven to nine days of age there were three deaths, two in prematures and one in an infant who was born after eight and one-half months of gestation. It is possible in the last instance that the varicella was severe enough in the mother to precipitate premature birth with subsequent demise of the infant. In the cases of the newborn twins (length of gestation not stated)[7] the disease was fatal for one and severe and prolonged in the other.

Inasmuch as we have seen three cases of authentic congenital varicella within the relatively short period of eight months, while only eight cases were previously reported between the span of 1878 and 1953, we are led to believe that, perhaps, many of these cases are not recognized or that they are misdiagnosed as a localized type of skin eruption such as impetigo.

It may be expected that congenital varicella will continue to be encountered rarely since many women, having had varicella in childhood, are immune to this infection during their child-bearing period. Indeed, at Kingston Avenue Hospital, the hospital for contagious diseases which serves the nearly three million people of Brooklyn, varicella in adults constitutes only a very small fraction of the total varicella cases. Most infants, consequently, have conferred upon them by their immune mothers a passive immunity to varicella, lasting during the first few months of life, as a result of the transmission of the mother's antibodies through the placenta and chorion to the fetus. However, the fetus would be just as susceptible to the infection as older infants or older children if these antibodies were lacking or if, in exceptional cases, the mother's antibody titer to varicella were too low to prevent infection of her unborn child. That the unborn infant acquires the infection when the virus passes through the placental barrier is explicitly demonstrated by the 11 cases reviewed or presented in this report of authentic congenital varicella (the eruption being present at birth or appearing two days after birth), wherein the only portal of entry for the virus was through the uterus.

The onset and course of varicella for the infant and mother were not simultaneous or identical in our three cases nor in the cases given in the literature. Several reasons may be advanced to explain this:

1. The length of the incubation period of varicella may differ for both the mother and the fetus, or it may be the same; because the same virus invades the mother and the fetus, it might be expected that the incubation period would be the same for both, but because the mother and the fetus are separate hosts, they may incubate the virus for different lengths of time.

2. Another point to be considered is that the virus might not pass through the placental barrier at the same moment that it invades the mother but that there might be a lag period of hours or days between the invasion of the two hosts.

3. That we are dealing with embryonic tissue in congenital cases of varicella must be recognized, and in this respect Goodpasture[17] in his discussion on the susceptibility of the mammalian fetus to virus infection pointed out that avian embryonic tissue is much more susceptible to certain viruses than adult tissue.

4. The physical condition and nutritional

state of the mother and fetus are not equivalent; the fetus is parasitic upon the mother.

Thus, although congenital varicella will happen only infrequently, it will occur if the following factors coexist: (1) the mother never had varicella previously, or possibly having had varicella her antibody titer is too low to overcome the infection; (2) varicella is present in the mother or the mother is a varicella contact; (3) the fetus is susceptible; (4) the fetus incubates the virus for a period of ten days or less (to be considered indisputably congenital, but where the eruption appears from eleven to twenty-one days after the birth, it may be regarded as an instance of probable but not unquestionable congenital varicella); and (5) the exanthem is not mistaken for other generalized skin eruptions.

Summary and Conclusions

1. Three cases of congenital varicella occurring within eight months in one institution are reported. In two cases the rash was present at birth and in one case the rash appeared ten hours after birth. The illness of all the three infants, delivered at full term, ran a benign course. No specific therapy was indicated.

2. Where varicella in the newborn is suspected, isolation technic should be practiced.

3. A review of the literature revealed eight conclusive cases of congenital varicella in which the rash was either present at birth or erupted within the first forty-eight hours of life, five probable congenital cases in which the exanthem manifested itself between the seventh and ninth days after birth, and ten cases in which the rash appeared between the tenth and twenty-first days of life.

4. The circumstances under which congenital varicella will occur are presented and discussed.

59 Eighth Avenue

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"Parrot Fever" Can Come from Chickens

"Parrot fever," commonly believed to be a rare disease caught only from parrots and parakeets, probably is not so rare and even can come from chickens, turkeys, and ducks. Thirty-seven cases of psittacosis probably caught from chickens were found during six months in the rural area around Warren, in northwestern Illinois. The cases were reported in the July 24 *J.A.M.A.*

The first case of psittacosis appeared in 1951—in a mechanic who raised pheasants as a hobby. Five more cases were found in 1952 and 37 more in the first six months of 1953. Of this last group, 27 patients lived on farms. Nine lived in Warren or surrounding towns. One lived 40 miles away but was visiting in Warren when her case was discovered through a premarital blood test.

Investigation of possible sources of the disease showed chickens to be "the only potential reservoir commonly associated with these cases." Not all resulted from direct contact with chickens. One patient had cleaned a chicken yard two weeks before his illness; another had an apparently well parakeet; another had an apparently well canary.

Besides a severe cough—the chief complaint—the patients had chest pain, fever, headaches, muscular aches and pains, backaches, and weakness or fatigue. None died.

"It would certainly appear from our experience that in any case of virus pneumonia or chronic cough occurring in persons in rural areas, the possibility of psittacosis infection should be considered," the writers said.

Cornell Conferences on Therapy

DEPARTMENTS OF PHARMACOLOGY AND MEDICINE OF THE
CORNELL UNIVERSITY MEDICAL COLLEGE AND NEW YORK HOSPITAL

These are stenographic reports, which have been edited, of conferences by members of the Departments of Pharmacology and of Medicine of Cornell University Medical College and New York Hospital, with collaboration of other departments and institutions. The questions and discussions involve participation by members of the staff of the college and hospital, students, and visitors. A selected group of these conferences is published in an annual volume, *Cornell Conferences on Therapy*, by the Macmillan Company.

Choice of Diuretic Agent

Dr. George Reader: We will take up the choice of a diuretic agent in the conference today. A number of new compounds have become available, some that may be administered orally, and if there is any indication that they are as satisfactory as those we have been accustomed to use by parenteral injection, we may need to revise our practices. Dr. Walter Modell of the Department of Pharmacology will open the discussion.

Dr. Walter Modell: In the book entitled *Diuretic Therapy*, which has been published recently, there is a statement by Arthur Fishberg in the introduction to the effect that the mercurial diuretics constitute one of the greatest advances in modern medicine. If that is so, one may well wonder why there is any question about a choice of a diuretic. It ought to be the mercurial diuretic and nothing else, but in fact there are reasons why one may wish to use other diuretic agents. I should like merely to place before you an account of the several diuretics that are available and let the rest take care of itself in the form of questions from the audience. Choice of a diuretic agent may be directed to different classes of compounds as well as to differences within each class. The routes of administration constitute another basis for choice.

Water ought not to be neglected as a diuretic agent, and perhaps it is well to mention it first. Water is a practical diuretic and has been shown by Schemm as a highly effective agent in the treatment of congestive failure. Its utility is limited by the fact that such large quantities have to be taken.

The acid-forming diuretics constitute another large group, of which ammonium chloride is perhaps the best known. Ammonium chloride is a relatively weak diuretic agent. Doses of the order of 6 to 8 Gm. a day have to be taken for conspicuous diuresis, and these often produce gastrointestinal discomforts. The same is true of urea and urea-like compounds. They are given by mouth. The diuretic effect is relatively small, and the large quantities necessary to produce satisfactory effects cause unpleasant symptoms and gastrointestinal effects. The xanthine diuretic agents include several compounds which produce a substantial diuresis by the oral route. They all cause gastrointestinal disturbances. They may be given intravenously, in which case it is imperative to insure injection at a very slow rate in the interest of safety.

The most dependable as well as the most potent of the diuretic agents are the organic mercurials. At the present time the intramuscular route is the method of choice. This has resulted from the series of disasters which followed the intravenous injection. The intravenous route is still used by some, although most people have abandoned it. The subcutaneous route is permissible in the case of Thiomerin, which causes somewhat less local irritation than other compounds, although many patients can also tolerate Mercuhydrin by the subdermal route without appreciable discomfort. There are rectal suppositories of the mercurial diuretics, although they have never become very popular by reason of the high degree of local irritation.

Substantial diuresis can be produced by the organic mercurial diuretics taken orally. In fairly large doses and over long periods of time they cause gastrointestinal distress. The favored routes for the use of organic mercurials are the intramuscular and subcutaneous.

One ought not neglect to mention the resins, the ion exchange resins, which tend to produce a diuresis by the removal of salt from the diet. I think one can safely say that the peak of enthusiasm for these materials is past. Their tendency to cause constipation, the peculiar texture of the material which makes it unpleasant to swallow, and the fact that such very large quantities are necessary to produce results are responsible for the loss of interest in the ion exchange resins. They are not used nearly so much as they were a year or two ago.

The newest addition to the list of diuretics is the carbonic anhydrase inhibitor, Diamox (acetazoleamide). It is now available for oral and intravenous use. There is no question of the fact that it induces a very prompt diuresis when given intravenously and when given by mouth—within a matter of two hours with a dose of 0.5 Gm. In the limited experience that has been reported thus far, this dose has produced no serious toxic effects when taken regularly for periods of about six months. The mechanism of Diamox diuresis is different from that of the mercurials. The mercurials lead to an increased excretion of sodium chloride, with a concomitant loss of water. In the case of Diamox there is an increase in the amount of bicarbonate excreted in the urine. There is very little if any increased excretion of chloride. There is also an increased excretion of potassium, in consequence of which there is more chance of hypokalemia in this form of diuresis than in the case of the mercurials. How troublesome this factor may be in relation to toxic effects is not yet established. It is easy to compensate for potassium loss by introducing it into the diet. There is the advantage with Diamox that it is effective by oral administration, and thus far there seem to be few or no gastrointestinal disturbances. Time will tell what real limitations, if any, exist in the case of this drug and whether it will prove in the long run substantially better than other agents that are now available.

Dr. Reader: Thank you, Dr. Modell. Perhaps this would be a good place to stop and see if there are any questions from the audience.

Dr. Seymour H. Rinzler: Would Dr. Modell list the available oral mercurial diuretics?

Dr. Modell: The latest member of the group is a material known as Neohydrin. There is a tablet of Mercuhydrin in combination with ascorbic acid, and there have been tablets of Mercuxanthin and of Salyrgan-theophylline. It is my impression that Neohydrin is the most popular at the present time.

Dr. Reader: I wonder if Dr. Gold would make some comments on this subject at this point?

Dr. Harry Gold: I should like first to shift the points of emphasis regarding the utility of different diuretic agents. In the conventional way of telling the story of diuretics it is quite natural, and I suppose quite appropriate, to list most of the things that are being prescribed. Dr. Modell has followed that plan and has mentioned water, xanthines, ammonium chloride, and urea. I remember a recent talk on the subject in Atlantic City where someone mentioned a cup of coffee as a good diuretic. It probably is quite effective a diuretic from the standpoint of disturbing the normal person's sleep, but I am quite sure that few if any patients with cardiac failure and difficulty in breathing at night will find it much easier to breathe as the result of coffee. That is what I think can be said about most of the oral diuretics at the present time. It seems to me that at the moment the injectable organic mercurials occupy the stage almost by themselves. In the curve of efficiency the drop from the injectable mercurial diuretics to the oral materials is precipitous, and without the injectable mercurial diuretics I think that most of this great advance in the treatment of congestive failure in recent years would vanish. What do you think about that, Dr. Luckey?

Dr. E. Hugh Luckey: I agree.

Dr. Gold: Most of the oral materials in one type of experiment or another can be shown to possess considerable diuretic action. In an acute animal experiment ammonium chloride can boost the urine flow several hundred per cent. However, in an assay with ambulant patients in congestive failure, the facts appear in another light. A daily dose of 6 to 8 Gm. of ammonium chloride causes a diuretic effect which is equivalent to approximately that of 0.5 to 0.75 cc. of Mercuhydrin by intramuscular injection. That is a fair effect, but in order to get even that we used a dose which caused gastrointestinal disturbances in about half of the patients, sufficient to require the interruption of the drug. This is the way the thing looks in relation to most of the oral diuretics. There are under investigation nonmercurial oral diuretics of the aminouracil group. They also produce moderately effective diuresis, but only in doses which cause a fairly high incidence of gastrointestinal discomforts.

I should like to say a word about Neohydrin. It is an oral organic mercurial, immeasurably superior in its diuretic effects to the previous oral organic mercurials. It is possible to obtain with it diuretic responses equivalent to 1 cc. of injectable Mercuhydrin and sometimes more. The doses that are required may be fairly high—from three to six tablets a day or more. The indications are that gastrointestinal disturbances will ultimately make it impossible to continue the drug in many cases where the larger doses are necessary. However, it offers a distinct advance in diuresis by the oral route. Those patients who can tolerate large enough doses reap the benefit of a schedule of diuretic therapy which calls for few or no injections.

Dr. Solomon Garb: Is there any significant advantage in giving ammonium chloride with the mercurial diuretic?

Dr. Gold: The answer is yes and no, depending on the amount of mercurial and on the other therapeutic elements in the regimen of treatment. In a human assay experiment with ambulant patients in congestive failure we found that an intramuscular dose of 1 cc. of Mercuhydrin has the effect of about 2 cc. when the patient has been treated with ammonium chloride. That clearly shows an advantage in the use of ammonium chloride. However, when we treat patients with careful salt restriction and liberal water intake and a daily dose of 2 cc. of Mercuhydrin, we obtain diuretic effects as a rule which are not enhanced by the addition of ammonium chloride. It seems, therefore, that when a ceiling diuretic response is obtained through the rest of the regimen, it cannot be significantly boosted by the addition of ammonium chloride. For that reason we have given up the use of ammonium chloride in the routine treatment of congestive failure.

Dr. Reader: Is it necessary to prepare the patient with ammonium chloride before the mercurial is given, or may they be given at the same time?

Dr. Gold: It is said that the ammonium chloride for its best effect should precede by a few days the treatment with the mercurials. In our human assay we treated them for a few days before the dose of Mercuhydrin was given. I am not certain whether pretreatment is important and whether the results might not be just the same if the mercurial and the ammonium chloride are taken at the same time.

Dr. Reader: Dr. Gold, are there not times when you would prefer not to use so much as 2 cc. of the mercurial diuretic? Would you mention what conditions would provide a contraindication to the use of a dose as large as 2 cc., if there are such conditions?

Dr. Gold: They are very rare. There are occasional cases of allergic reaction to the mercurial in which a reduction of the dose from 2 to 1 cc. or somewhat less reduces the intensity of the reaction to the point where the drug can still be continued. This refers to the rash, febrile response, itch, muscle cramps. The vast majority of patients can tolerate 2 cc. quite well.

Dr. Luckey: Would you comment about the patient who is beginning to lose responsiveness to the mercurials? Does ammonium chloride increase the diuresis significantly from 2 cc. of the mercurial in such a patient?

Dr. Gold: I have taken advantage of many opportunities to add ammonium chloride to the treatment regimen which involved very low salt intake, liberal water intake, and a daily dose of 2 cc. of Mercuhydrin. I don't believe that I have ever seen a patient who no longer responded to this regimen develop diuresis as the result of ammonium chloride. In some of these I have increased the doses of the mercurial to 3 cc. in order to secure the maximum effect possible with doses that are still safe.

Dr. Luckey: I believe that we have seen a few cases in which ammonium chloride enhanced the diuretic response. There are of course many instances reported in the literature of hypochloremic alkalosis which is occasionally the cause for the refractory state. Responsiveness is restored with the administration of ammonium chloride. Because some degree of hypochloremic alkalosis is very common in the course of daily mercurial diuresis, we have taken the position that it is wise to give ammonium chloride to prevent the development of hypochloremic alkalosis. I do not believe that it significantly contributes to the diuretic effect in most patients.

Dr. Modell: Isn't the refractoriness to mercurial diuretics as the result of hypochloremia a special case in that not only ammonium chloride but sodium chloride will abolish the refractoriness? The synergistic action of ammonium chloride and the mercurial is a different matter.

Dr. Luckey: Yes, that is correct. In regard to the combined action of ammonium chloride and the mercurial, it is my recollection that the two together produce greater diuretic effect than is to be expected from the sum of their effects used separately, namely, potentiation.

Dr. Gold: I seem to recall it to be the reverse, less effect from the combination than from the sum of the individual effects.

Dr. Luckey: I saw a definite statement to the effect that there is potentiation in a paper of yours I just read this afternoon.

Dr. Gold: See, you know my paper better than I do. I had forgotten that point.

Dr. Reader: I wonder if Dr. Pitts would care to comment on the combined action of ammonium chloride and the mercurial diuretic?

Dr. Robert F. Pitts: I have no evidence derived from direct clinical use, but what there is points strongly to the fact that the diuretic action of the mercury is more or less specifically related to the reabsorption of the chloride ion rather than the sodium ion. In the presence of a hypochloremic alkalosis the mercurial diuretic may be somewhat less effective, inasmuch as there is less chloride in the body fluids available for excretion. The use of ammonium chloride, by elevating the chloride level to normal or above, potentiates the action of the mercurial diuretic.

Dr. Howard Eder: Several years ago Dr. Wood in our laboratory studied the question of potentiation by ammonium chloride. The ammonium chloride gives rise to an acidosis in the first few days which is then compensated for, and he found that it was not the acidosis but the chloride level which determined the potentiation. The response was equally satisfactory independent of the degree of acidosis.

Dr. McKeen Cattell: On that basis, theoretically then, sodium chloride ought to be equally effective.

Dr. Pitts: The trouble there is that you would be adding a great deal of sodium which is unfavorable in edema, whereas with ammonium chloride there is no added cation. It is merely a matter of converting the bicarbonate to chloride. I think it is more reasonable to give the ammonium chloride from the therapeutic standpoint.

Dr. Luckey: In one of the recent issues of the New York State Journal of Medicine there is described the cumulative experience of giving 3 Gm. of sodium chloride a day during the administration of mercurial diuretics, with the thought in mind of enhancing the diuretic response. It does not seem to me to be a very sound approach to the problem.

Dr. Gold: With regard to ammonium chloride, it is not an uncommon practice to try a daily dose of 3 Gm. in the endeavor to reduce the number of mercurial injections that need to be given. What I see of this practice does not speak well for it. The milder cases of congestive failure get along equally well without it, and in the more unstable cases the ammonium chloride seems not to be sufficiently effectual.

Dr. Reader: I presume you think it is not worth using because better results can be achieved by simply shortening the interval between the doses of the mercurial diuretic.

Dr. Gold: That is it. The addition of ammonium chloride complicates the regimen and seems in the end to leave us no better off.

Dr. Reader: Before we go on, could I ask Dr. Luckey about the 2-cc. dose of the mercurial? Do you agree with Dr. Gold that the 2-cc. dosage level is perfectly safe and that there are no special situations in which it should be avoided?

Dr. Luckey: I would agree with that.

Dr. Reader: I wonder if Dr. Modell would tell us something about the relative effectiveness of the intravenous and intramuscular routes for the mercurial.

Dr. Modell: There is no material difference between them as measured by the total diuresis in twenty-four hours. The injections were all given intravenously in the early days. The intramuscular injection was too irritating with the materials which were then available. Mercuhydrin was the first among the group with local irritant action sufficiently low to make the intramuscular route acceptable. This route became increasingly popular as the reports in the literature brought to light severe toxicity and deaths from the intravenous injection of organic mercurials.

Dr. Rinzler: The intramuscular route appears to be the one usually used for Mercuhydrin, and I wonder if we could have something more about the subcutaneous route. The technic is simpler, and the patient is apt to be better equipped to make his own subcutaneous injection than intramuscular injection. Is the diuretic effect the same?

Dr. Modell: Yes, the effectiveness of the subcutaneous injection is the same as the intramuscular injection. The subcutaneous route should be used in those patients in whom it is tolerated without inordinately unpleasant local irritation. It is especially important for those patients who make their own injections or who have a visiting nurse do it for them or a member of the family. The injection should be made directly under the skin and not into the subcutaneous fat. Some of these cause less discomfort than the intramuscular injection.

Thiomerin is an organic mercurial diuretic which has come into considerable prominence for subcutaneous injection. It was at first believed that it was free of local irritation, and while a great many patients can take it without local effects, long experience has fairly well established the fact that, in a great many, local irritant effects with pain, inflammation, and lumps are produced.

Dr. Reader: Which do you prefer?

Dr. Modell: I would use the material that causes the patient the least discomfort. I try Mercuhydrin first. If unpleasant local effects occur, I turn to Thiomerin. Sometimes one avoids the local irritation by changing the preparation.

Dr. Reader: I had the impression that Thiomerin was not quite so effective as Mercuhydrin and that its diuretic effects were somewhat delayed.

Dr. Modell: I am not certain that there is any important difference in these respects. I might mention that Mercuhydrin costs less and that the preparation is stable, while Thiomerin undergoes deterioration with the formation of irritant materials. Dr. Gold, do you know of any significant difference in the potency of Thiomerin and Mercuhydrin?

Dr. Gold: In bioassay in ambulant patients with congestive failure there is no important difference in their diuretic potency in terms of cubic centimeters of solution.

Dr. Reader: Have you a comment, Dr. Kramer?

Dr. Milton Kramer: I would like to ask Dr. Gold a question having a bearing on the excretion of mercury and the accumulation of mercury in the course of treatment with the mercurial diuretics. How much danger of that is there? The work of Dr. Burch with tagged radioactive mercury seems to indicate that under some circumstances, usually some impairment of renal function, the mercury may not be excreted promptly, even in the presence of a satisfactory diuresis, and the excretion of mercury may go on over a period of a week or longer after one injection. It would seem reasonable to infer from this that the repeated injection of the mercurial may lead to retention of mercury under conditions which cannot always be defined in advance. I wonder whether Dr. Gold thinks that these findings should modify or place any restrictions on the intensive routine which he has advocated.

Dr. Gold: No, I think not. The chief reason is that the intensive system of administration of the mercurials to which you refer is really a very brief course of treatment. It is rarely a long drawn-out process. It is really the misuse of this regimen that leads to a long drawn-out course of treatment. This so-called intensive system calls for a dose of the mercurial followed by a diuretic response shown by a loss of body weight within twenty-four hours. Each succeeding daily dose ought to produce an important loss in body weight. By the end of about a week as an average for large groups of patients, the therapeutic response is complete. There are a few in whom it occurs earlier and some who take longer. From that point on the interval between injections is made progressively longer in accordance with the needs of the particular individual for maintaining the "dry state." In a small group of patients there remains the necessity for taking an injection every day, sometimes for the rest of their lives. It is a very small group. I don't really know the precise answer to the question of accumulation of mercury in such situations. I have had a few that have gone on two and three years in that way without revealing any signs of mercurial toxicity. If there has been accumulation of mercury in the kidney, one would have to say that in relation to the doses that are used, it causes no harm.

Dr. Cattell: Perhaps one would not expect it to be harmful even if it accumulated because there is probably a very large margin of safety. Even if the concentration were increased by 50 per cent, the patient would not be poisoned.

Dr. Gold: The margin of safety which Dr. Cattell has mentioned is an interesting point. The concentration of the mercurial to which the renal cells are exposed during the peak of absorption of any particular dose must be many times the average concentration during the twenty-four-hour period, and this very high concentration appears not to be harmful.

Dr. Eder: I would like to ask Dr. Gold by what criteria one would judge whether the mercurial was causing injury. It may well be that in terms of frank uremia one may not detect any toxicity, but if one were to look for depression of renal clearances, one might possibly find that more often. I don't know whether any such studies have been made in patients receiving mercurials over long periods of time. It certainly would be a more sensitive method for detection of injury.

Dr. Gold: I am quite sure this is an appropriate question. I am also sure we do not have a definitive answer to it at the moment. There is an answer in a way, namely, the fact that some of these patients who appear at the beginning with a high blood urea nitrogen show decline of the nitrogen to normal values which may persist during the ensuing years of treatment. There is also the fact that some of these patients with congestive failure are also nearly moribund at the time they come under treatment. Their failure is brought under control, and by an appropriate system of maintenance they carry on for a few years in a fairly active manner. If the mercurial is doing any harm during this period when it is managing to keep them alive and in fairly good condition, we have at the moment no way of finding that out.

It seems to me that were we to discover a falling off of urea clearance in any of these patients with congestive failure during the use of the mercurial, we would probably have to continue to use it just the same since the clinical course shows that it is sustaining their lives.

Dr. Reader: Dr. Gold, would it not be desirable to discontinue the mercurial in a patient who has become refractory to it in high doses, regardless of whether or not it injures the kidney?

Dr. Gold: The answer should be self-evident, but strangely enough it is not always so. No medication should be continued if it seems not to be doing the patient any good. There is no excuse for giving an injection for two or three weeks to a patient who shows no therapeutic response. When the mercurial is effective, it shows it by a loss of body weight within the first twenty-four hours, and if no distinct response is present within two or three days, the whole regimen should be re-evaluated.

Dr. Reader: That is the point I had hoped you would bring out.

Dr. Albert Rubin: You might be interested in knowing of our results with Diamox in a series of eight or nine patients with refractory heart failure whom we studied at Bellevue Hospital. After mercurials failed, Diamox itself was of little use as a diuretic agent. It became very useful by itself and in combination with ammonium chloride in producing a hyperchloremic acidosis and setting up response to the organic mercurial to which the patient had previously ceased to respond. This result occurred without exception in these patients. Occasionally the effect of this combination was dramatic. As Dr. Modell has indicated, Diamox is an inhibitor of carbonic anhydrase which is essential for the absorption of bicarbonate by the tubule. As a result, bicarbonate is excreted in the urine and is attended by increased excretion of sodium as well as potassium. The urine becomes alkaline. The blood serum chlorides are elevated; carbon dioxide falls, also the pH. Ammonium chloride potentiates this hyperchloremic acidosis. In this experience which I cited, we found that patients whose serum chloride values are normal and who show very little diuretic response to Diamox itself regain a very satisfactory response to the organic mercurial when the serum chlorides have been elevated to supernormal values by Diamox and Diamox in combination with ammonium chloride. This is a useful treatment. The combination of Diamox and ammonium chloride is more effective in producing hyperchloremic acidosis than either drug alone.

Dr. Reader: Dr. Modell, would you take the position that the mercurial diuretics are the only ones worth considering in practical management? I am referring to those other materials which you mentioned, ion exchange resins, xanthines, ammonium chloride.

Dr. Modell: I think, just as Dr. Gold has made clear, wherever mercurials can be tolerated, they represent the simplest solution to the problem. The other materials may be considered when the problem cannot be solved by adjusting the doses of mercurial, but they all have disadvantages that justify their being left for last. The ion exchange resins should be included here. I am not sure what the ultimate position of Diamox will be. It has proved itself an effective diuretic in my own limited experience. There is still much to be learned about its toxicity and long-term utility.

VISITOR: If a patient develops a hypersensitivity reaction to one of the mercurial diuretics, what is the chance of escaping it by shifting to another member of the group?

DR. MODELL: There is no rule. Some patients are allergic to all of them, some to one and not to another of the organic mercurials. The patient who has shown an allergic response to a dose of an organic mercurial should be carefully tested for sensitivity to the others before the whole group is abandoned.

VISITOR: What do you mean by testing them carefully?

DR. MODELL: Give as an initial injection a very small dose, 0.25 cc. or 0.5 cc. The severity of the reaction depends upon the dose.

DR. READER: It might be mentioned that among the side-effects the injection of a mercurial diuretic may cause a fever. This effect has occasionally been overlooked, and such patients have continued to receive regular injections, the fever being viewed as a case of malaria.

DR. GOLD: I might amplify your point on fever, Dr. Reader. If one watches the patient closely for febrile reactions, one sometimes prevents serious trouble. Some of these patients develop no fever with the early doses and then acquire a sensitivity which shows itself by a febrile peak of 1 or 2 degrees. This early effect is very often overlooked or interpreted as being due to some intercurrent infection. If the drug is continued, the febrile reactions become more severe and may be associated with chills, erythematous eruption, pain in the muscles, and ulcerative stomatitis. A sudden spike of fever in a patient receiving an organic mercurial should always be viewed with suspicion as an allergic reaction. It is always well to interrupt the injections. If it is that, it will disappear in about twelve hours or less in the milder grades.

DR SOLOMON GARB: Potassium citrate was at one time used as a diuretic. Is it any more?

DR. MODELL: Potassium salts exert a diuretic action, but they are seldom used now.

DR. GOLD: I think the urologist makes use of potassium citrate.

DR. GARB: Do you think it is as effective as ammonium chloride?

DR. MODELL: I don't know. I don't think it has ever been assayed.

DR. READER: Dr. Luckey, aside from the use of Diamox, are there any devices that you can suggest for managing the patient who has become refractory and does not respond to the intensive regimen of Dr. Gold?

DR. LUCKEY: Let me say right off that the mercurial diuretics are so effective in the ordinary run of patients that there is nothing on the scene to take their place. In a practical way, however, we do have the problem of the patient who has become refractory to the mercurial diuretic, and that is the reason for our present enthusiasm for the Diamox story. The two drugs should not be given together for in that case there seems to be a blockage of the effects of one by the other, and the satisfactory results are only seen when their administration is staggered. These patients that we studied were refractory to all the conventional measures, including Southey tubes and ion exchange resins. Nothing that we have ever done has proved so effectual as the Diamox method of elevating the plasma chloride level. It should be emphasized, however, that the first thing to do when refractoriness appears is to reassess the whole situation for a possible cause: Are digitalis and the mercurials being used properly? Is there too much salt in the diet? Does the patient have a hyperthyroid state, an infection, or constrictive pericarditis? Useful suggestions for treatment may emerge out of these considerations.

DR. MODELL: I would like to ask Dr. Luckey whether he has ever found a patient responding to another mercurial diuretic when he ceased to respond to Mercuhydrin. This is just an example of the idea of shifting from one mercurial to another.

DR. LUCKEY: No, when they fail to respond to one, they fail to respond to the others. Nor have I ever found that changing the route of administration has any effect.

DR. MODELL: You mean it does not matter whether the material is given intramuscularly or intravenously, the refractoriness is the same.

DR. READER: I think our time is up.

Summary

DR. GOLD: The list of useful diuretic agents is contracting at one end and expanding slowly at the other. The fairly sizable group of diuretic agents that are usually listed in discussions of this subject, it was indicated, should be presented mainly for historical interest and for possibilities of diuretic effects in very special situations where the most effective agents, for one reason or another, cannot be applied. It is clear from the discussion in the conference this afternoon that the mercurial diuretics stand almost alone as diuretic agents of major importance in the control of congestive failure and in other situations requiring intensive diuretic actions. The details of the use of these agents, dosage, routes of administration, toxic effects, combination with ammonium chloride, relative potency of various preparations were elaborated. Special mention was made of Neohydrin as the most efficient of the oral diuretics of the mercurial group. The new oral nonmercurial diuretic, Diamox, appears to offer promise as the sole diuretic agent in the milder cases and as a means of restoring responsiveness to the mercurials in refractory cases. The details of this important observation and its mechanism are discussed. The point was made that ammonium chloride is unnecessary in an appropriately adjusted regimen of failure therapy including injections of an organic mercurial and that the addition of ammonium chloride only complicates the treatment. There were alternate suggestions for the place of ammonium chloride in diuretic therapy. Other items of interest include the perennial question of renal injury by the mercurials and the effect of this possibility on plans of treatment and means of detecting allergic responses before serious reactions occur.

Million Dollars Contributed for Medical Education

More than a million dollars in contributions by American physicians during 1953 have been turned over to the National Fund for Medical Education to ease the financial plight of the nation's medical schools.

Dr. Edward L. Turner, Chicago, secretary-treasurer of the American Medical Education Foundation, announced today that a check for $1,101,578.31 has been given to the national fund. This includes a $500,000 grant by the A.M.A. Board of Trustees. Doctor Turner said "the contributions sent in by doctors throughout the nation are an example of outstanding service in aiding humanity through medicine.

"The 79 great institutions of medical learning now graduate more than 6,000 doctors each year. In providing the proper instruction for these young men, our medical schools have an annual financial need of approximately $10,000,000 in addition to their normal budgets. American doctors have come to the aid of these schools with their contributions through the American Medical Education Foundation.

"Evidence of the doctors' interest in supporting the schools rather than relying on Federal subsidy is demonstrated by the marked increase in the number of contributors during the past three years. In 1951, the first year of the AMEF, 1,876 doctors contributed to the fund. In 1952, there were 7,259 contributors and the list skyrocketed to 18,159 during 1953."

Since 1951, the American Medical Education Foundation has received $3,563,883.09 as gifts from doctors to support the medical schools. The American Medical Association has made grants of $2,000,000 of this sum.

The National Fund for Medical Education is a nonprofit corporation that solicits contributions from business and industry for the benefit of medical education. The fund also acts as distributing agency for monies collected by the education foundation.

CASE REPORTS

Kartagener's Syndrome

MELVIN KATZ, M.D., BRONX, NEW YORK, E. EDWARD BENZIER, M.D., REGO PARK, NEW YORK, AND LOUIS NANGERONI, M.D., NEW YORK CITY

(*From the Kips Bay Chest Clinic, New York City Department of Health*)

KARTAGENER first reported the triad of situs inversus, bronchiectasis, and chronic sinusitis in 1933. It now bears the name of Kartagener's syndrome. The authors reported a case of Kartagener's syndrome and reviewed the literature in a previous article.[1] This paper contributes two new cases and a probable third one; two of the patients are siblings.

Case Reports

CASE 1.—A. V., a fifteen-year-old Puerto Rican female, had a routine chest x-ray in a survey which revealed a dextrocardia. She was recalled for a medical history and physical examination and provided the following pertinent facts: Since early childhood she had had frequent upper respiratory infections, a chronic postnasal discharge, and productive cough. She was born in Puerto Rico in 1939 and had come to New York eighteen months ago. A younger sister had similar complaints, but other members of the family were free of such symptoms.

Physical examination revealed a well-developed, well-nourished Puerto Rican female. The nasal and pharyngeal mucosa were hyperemic and edematous. There was deviation of the nasal septum to the left and moderate hypertrophy of the tonsils. Auscultation of the lungs disclosed rhonchi and subcrepitant rales at the left base posteriorly. The apical impulse and heart sounds were on the right side of the chest. No cardiac murmurs or thrills were present.

Fluoroscopy confirmed the clinical impression of dextrocardia. Air in the stomach was seen under the right leaf of the diaphragm. X-ray findings of the chest were similar to those found on fluoroscopy. Bilateral saccular bronchiectasis of the lower lobes was seen on bronchography (Fig. 1). X-ray of the paranasal sinuses showed a hypoplasia of the left frontal sinus (Fig. 2).

Situs inversus totalis, bilateral bronchiectasis, and hypoplasia of the left frontal sinus were demonstrated in this patient.

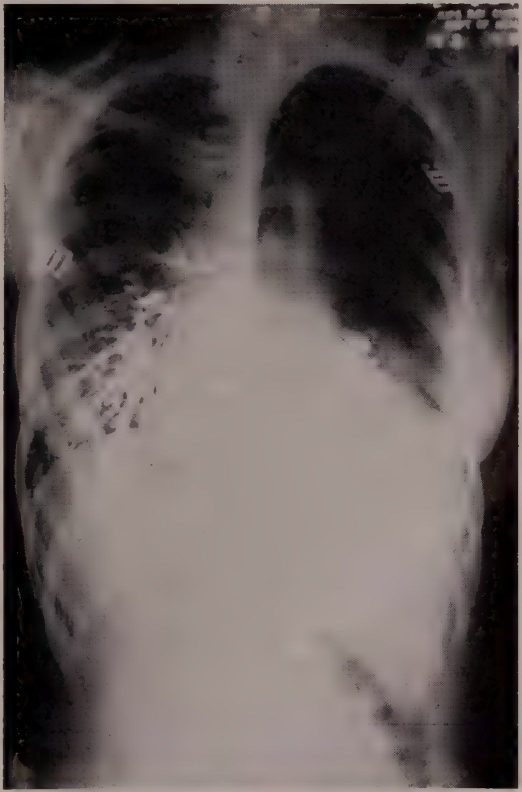

FIG. 1. Bilateral saccular bronchiectasis.

CASE 2.—L. V., a fourteen-year-old Puerto Rican female, a sister of the previous patient, had a similar history and symptoms, her cough being more persistent and productive, particularly in the mornings on arising.

Physical examination revealed a well-developed, well-nourished Puerto Rican female. There was moderate edema and hyperemia of the nasal and pharyngeal mucosa. Anterior and posterior cervical glands were palpable and slightly enlarged. The lungs were clear to percussion and auscultation. The heart was clinically in the right hemithorax, and this was confirmed by fluoroscopy with the additional finding of dextroposition of the stomach.

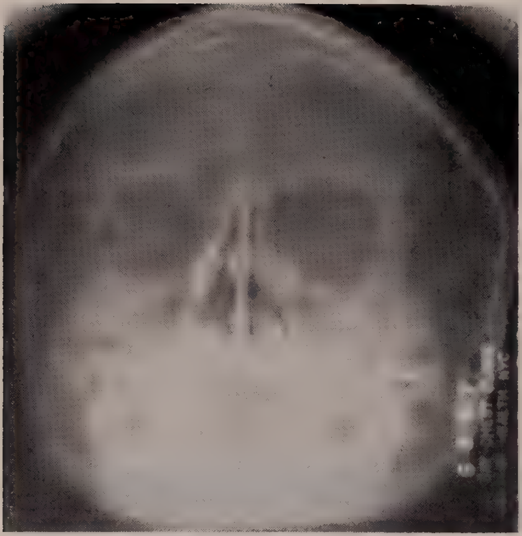

FIG. 2. Hypoplasia of frontal sinus.

X-ray of the accessory nasal sinuses showed hypoplasia of the right and agenesis of the left frontal sinus. There was clouding of the maxillary sinuses. Lipiodol instillation of the bronchial tree failed to reveal bronchiectasis. The patient refused another bronchogram, and, therefore, we were not able to study the middle and upper bronchial segments.

This patient had situs inversus totalis and abnormalities of the frontal and maxillary sinuses. Incomplete bronchographic studies failed to reveal bronchiectasis (Fig. 3). This patient's symptoms were more suggestive of bronchiectasis than her sister's, and it is felt that Lipiodol visualization of the middle and upper bronchial segments might have confirmed this clinical impression. She may have an incipient stage of bronchiectasis not detectable on bronchogram or a predisposition to bronchiectasis which will become more apparent in the future.

CASE 3.—A. R., a nineteen-year-old white female, was referred to the Kips Bay Chest Clinic by a public health nurse. An x-ray of the chest taken ten months previously by the health department of another state had revealed a "scar." A history of chronic productive cough and postnasal discharge was obtained.

The patient knew that she had complete transposition of the viscera. A "nasal operation" had been done one month previously for "chronic sinusitis."

Physical and roentgenographic examination confirmed the diagnosis of situs inversus totalis. Lipiodol instillation showed minimal bronchiectasis of the right middle lobe bronchi.

This patient presented situs inversus totalis, chronic sinusitis, and minimal bronchiectasis.

Comment

Three cases of dextrocardia were found in approximately 7,800 patients seen at the Kips Bay Chest Clinic during 1953. The three cases are reviewed above, and each is seen to have additional abnormalities. The increased incidence of bronchiectasis and sinus disorders in association with transposition of the viscera has been noted previously. Adams and Churchill[2] report five cases of bronchiectasis (21.7 per cent) in a study of 23 patients with situs inversus totalis with only a 0.03 per cent incidence in 250,000 general admissions. Olsen[3] describes 14 cases of bronchiectasis (16.5 per cent) in 85 patients with dextrocardia observed at the Mayo Clinic during a twenty-seven-year period; ten of the 14 had nasal polyposis.

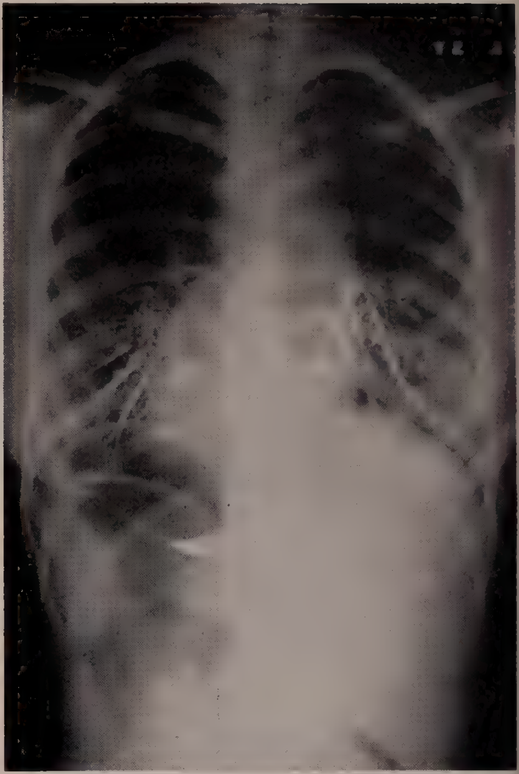

FIG. 3. Complete situs inversus and absence of any definite evidence of bronchiectasis.

Kartagener and Ulrich[4] in a survey of 86 patients with bronchiectasis observed the increased frequency of hypoplasia or agenesis of the frontal sinuses, as was seen in our cases. The pathology of the nasal and paranasal sinuses in the syndrome may be inflammatory, degenerative, or developmental in nature.

Kartagener's syndrome has a greater significance than merely being a group of interesting abnormalities. It contributes to our understanding of the pathogenesis of bronchiectasis. The increased incidence of bronchiectasis in patients with situs inversus, a congenital anomaly, speaks for a congenital factor in its pathogenesis. This view is further strengthened by the finding of Kartagener's syndrome in twins and siblings.

It is necessary for physicians to determine whether patients with dextrocardia have bronchiectasis, and bronchography is essential in its diagnosis. Bronchiectasis is the pathologic entity which will provide the greatest morbidity and disability in Kartagener's syndrome. Periodic supervision for bronchiectasis is recommended for patients with transposition of the viscera and sinus abnormalities as well as prophylactic therapy when indicated. For those patients with a diagnosis of bronchiectasis established by bronchography the modality of therapy is dependent upon the stage and extent of the pathology.

Summary

1. Two cases of Kartagener's syndrome and a probable third case are presented.

2. The significance of the syndrome relative to the pathogenesis of bronchiectasis is noted.

3. The diagnostic and therapeutic implications are discussed.

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Milia of Newborn Infants

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It is not unusual to see a few milia on the face, particularly in the region of the nose, of newborn infants. The case reported herein is unusual in that this baby had hundreds of milia scattered over the face and trunk.

Milia are usually retention cysts of sebaceous glands or hair follicles. They are small, dense, sharply circumscribed, noninflammatory elevations due to retention beneath the epidermis of material from occluded normal or rudimentary sebaceous glands.[1] They are seen most commonly on the face and also on the penis.

As a rule, there may be only one or, in some instances, a few lesions in this disease. In infants the cysts usually disappear spontaneously.[2] Robinson[3] (1884) distinguished a type separate from sebaceous gland tissues and apparently due to malformation of a lanugo hair. Rarely, milium may be congenital as reported in the cases of Crocker,[4] Wilson,[5] and Unna.[6]

MacLeod and Muende[7] believe that milium of newborn infants has nothing in common with true milium, except its outward appearance, for the lesions are due to a temporary blocking of the pilosebaceous follicles.

Case Report

N. B., white female infant, aged four weeks, presented an eruption since birth. Scattered over the face, head, trunk, and arms were discrete, pinpoint to pinhead, white, sharply circumscribed, elevated lesions. The epidermis overlying the milia was very thin, almost to the point of being transparent. When a lesion was punctured, a small round, white, semisolid sebaceous material was extracted. These lesions were very superficial as compared to the milia seen in older children. Physical examination of the patient did not reveal any other abnormalities. The patient was a healthy, lively, normal looking infant. There was no family history of a similar condition. The patient's parents had very fair, thin type of skin.

All the milia disappeared spontaneously at the age of four months.

Summary

A case of hundreds of milia appearing over the face, head, trunk, and arms of a newborn infant is presented, and the histopathology is discussed.

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NECROLOGY

Leon Julius Antine, M.D., of the Bronx, died on July 9 at the age of fifty-four. Dr. Antine graduated from the New York University and Bellevue Hospital Medical School in 1924 and belonged to the American Academy of Tuberculosis Physicians. He was assistant attending phthisiologist at the Sydenham Hospital.

Dr. Antine was a member of the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Arthur H. Bogart, M.D., of Brooklyn, died on September 3 at the Methodist Hospital. He was eighty-six years old. Dr. Bogart graduated from the New York University Medical College in 1893 and interned at the Methodist Hospital, where he was chairman of the medical board for thirty years until his retirement in 1933. He was consulting surgeon at the Methodist Hospital and at the Coney Island Hospital.

A former president of the Brooklyn Surgical Society, Dr. Bogart became a Fellow and founder of the American College of Surgeons in 1913. During World War II he was chairman of the Selective Service Appeals Board and was awarded the Selective Service Medal at the end of the war.

Dr. Bogart served as president of the Kings County Medical Society at one time, and also belonged to the Medical Society of the State of New York and the American Medical Association.

Birdina Crosby, M.D., of Fredonia and Westfield, died on August 12 following a heart attack suffered three weeks previously. She was sixty-seven years old. Dr. Crosby graduated from Cornell University Medical College in 1918 and interned at Bellevue Hospital.

For twenty-eight years Dr. Crosby was the full-time school physician for the Fredonia public schools.

John Henry Dingman, M.D., of Poughkeepsie, died at his home on August 9 at the age of eighty-one. Dr. Dingman graduated from Albany Medical College in 1901 and studied further at the New York City Post-Graduate Hospital and in Vienna, Austria. He was a Fellow of the American College of Surgeons. Dr. Dingman was a consulting surgeon at the Hudson River State, Vassar Brothers, and St. Francis Hospitals.

In 1951 he was honored by the Medical Society of the State of New York for completing fifty years of medical practice and the Dutchess County Medical Society gave a dinner in his honor at that time. Dr. Dingman also belonged to the American Medical Association.

Clymer Alfred Long, M.D., of Rockville Centre and Freeport, drowned on September 4 when his motorboat overturned on Lake St. Catherine, in Washington County. He was fifty years old.

Dr. Long graduated from Columbia University College of Physicians and Surgeons in 1930 and interned at St. Luke's Hospital. He was a member of the Nassau Surgical Society. Dr. Long was assistant attending surgeon and on the staff of the tumor service at the Meadowbrook Hospital, attending surgeon at the South Nassau Communities Hospital, attending surgeon at the Long Beach Memorial Hospital, and assistant attending surgeon at the Mercy Hospital. He belonged to the Nassau County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

H. Adelbert Marsh, M.D., of Syracuse, died of a heart attack on August 19 at the age of sixty-two. He graduated from Syracuse University School of Medicine in 1916 and was honorary attending obstetrician at the Crouse-Irving Hospital. Dr. Marsh was a member of the Onondaga County Medical Society and the Medical Society of the State of New York.

Stephen Mayer, M.D., of Woodside, died on August 16 at the age of fifty-eight. Dr. Mayer received his medical degree from the Royal College of Physicians and Surgeons, Glasgow, Scotland, in 1936, and did postgraduate work at the Rotunda Hospital in Dublin, Ireland. He was an attending otorhinolaryngologist at Cumberland Hospital. Dr. Mayer belonged to the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles Alphonso McKendree, M.D., of New York City, died on August 12 in Greenwich, Connecticut, after a long illness. He was sixty-seven years old. Dr. McKendree received his medical degree from Dartmouth College Medical School in 1910. He did postgraduate work at the Neurological Institute and in Paris and London.

Dr. McKendree was professor of clinical neurology at Columbia University College of Physicians and Surgeons from 1935 until his retirement in 1946.

He was a Diplomate of the American Board of Psychiatry and Neurology, a Fellow of the American College of Physicians, a member of the American Neurological Association, the American Psychiatric Association, the Association for Research in Nervous and Mental Diseases, the New York Academy of Medicine, and the New York Neurological Society.

Dr. McKendree was consulting neurologist at the Roosevelt, Goshen, Greenwich (Connecticut), North Hudson (Weehawken, New Jersey), and St. Luke's (Newburgh) Hospitals. He was emeritus neurologist at the New Jersey Orthopedic Hospital.

A former chairman of the neurology and psychiatry sections of the Medical Society of the State of New York, Dr. McKendree also belonged to the New York County Medical Society and the American Medical Association.

Edward Henry Mehl, M.D., of Buffalo, died on August 17 at the age of seventy-one. Dr. Mehl graduated from the University of Buffalo School of Medicine in 1911 and interned at the old Erie County Hospital. He was honorary otolaryngologist at the Sisters Hospital. Before his retirement five years ago he had been on the staffs of the Charity Eye, Ear, Nose and Throat and Deaconess Hospitals.

Dr. Mehl belonged to the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Herbert B. Messinger, M.D., of Napa, California, formerly of Rochester, died in San Francisco on July 29 at the age of fifty-three. Dr. Messinger received his medical degree from McGill University School of Medicine in 1931 and interned at Genesee Hospital. In 1948 he moved to California and opened a practice there

Ilya Mark Scheinker, M.D., of New York City, died on August 24 at the age of fifty-two. Dr. Scheinker received his medical degree from the University of Vienna in 1929. He was a Diplomate of the American Board of Psychiatry and Neurology (Neurology) and a member of the American Academy of Neurology, the Association for Research in Nervous and Mental Diseases, and the American Association of Neuropathologists.

Dr. Scheinker was attending neurologist at the Flower and Fifth Avenue Hospitals and the Bellevue and Montefiore Hospitals. He belonged to the New York County Medical Society and Medical Society of the State of New York.

Nathan David Wilensky, M.D., of Brooklyn, died on August 30 at the age of forty-six. Dr. Wilensky graduated from the New York Homeopathic Medical School in 1931 and interned at Kings County Hospital. He was a Diplomate of the American Board of Internal Medicine and belonged to the American Federation for Clinical Research, and the Brooklyn Society of Internal Medicine. Dr. Wilensky was attending physician and chief of the Vascular Disease Clinic at the Kings County Hospital, attending physician and chief of the Peripheral Vascular Service at the Jewish Hospital and Sanitarium for Chronic Diseases, assistant attending physician at Maimonides Hospital, assistant attending physician in peripheral vascular diseases at Maimonides Hospital Outpatient Department, and consulting physician in peripheral vascular diseases at Brooklyn Women's Hospital.

Dr. Wilensky was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Ehrlich Anniversary

On March 14, 1854, in a village near Breslau in German Silesia, Paul Ehrlich was born to the innkeepers of the Krug zum Rautenkranz. He studied medicine and specialized in bacteriology—early developing his concept of a "therapia sterilisans magna" for control of infection without harm to the host.

His first success, in 1907, was the destruction of trypanosomes in the blood of animals by injection of his newly discovered trypan red. In 1908 he was awarded the Nobel prize in medicine. His most famous discovery, in 1910, was the salvarsan (606) therapy of syphilis, now superseded by the antibiotics.

Ehrlich is the father of chemotherapy. Upon his pioneer investigations are based the continuing developments in this field—sulfonamides, antibiotics, antimetabolites, and the additional host of substances contributing to the successful surgical and chemotherapeutic management of cancer.—*CA, American Cancer Society, July, 1954*

MEDICAL NEWS

American Medical Education Foundation—Doctors from New York State who contributed to the American Medical Education Foundation in August were: *Albany*—Drs. T. S. Beecher, John B. Clancy, J. G. Converse, Kenneth E. Crounse, William F. Doney, Reuben J. Erickson, John J. Farrell, George W. Hemstead, II, George N. Hindson, Claude C. Nuckols, Jr., Thomas J. O'Donnell, Donald D. Prentice, R. Ruedemann, Jr., J. J. Russo, Francis A. Stephens, and Arthur W. Wright; *Auburn*—Drs. A. B. Chidester, B. L. Cullen, F. A. Graceffo, R. H. Joachim, F. L. Okoniewski, A. J. Oliker, C. C. B. Richards, R. J. Thomas, E. H. Wood, and R. P. Worden; *Binghamton*—Dr. W. J. Murray; *Bronx*—Drs. Nathan Bander and J. Rosenheck; *Bronxville*—Dr. Joseph E. King; *Brooklyn*—Drs. Ralph Blumberg and Harry S. Lichtman; *Buffalo*—Drs. E. D. Cook, F. P. Haft, W. F. King, J. A. Phelps, and C. J. Woeppel.

Also: *Canandaigua*—Drs. Charles E. Bathrick, George L. Gilmore, Ludwig Mayer, E. C. Merrill, Malcolm Merrill, A. W. Sainsbury, and Philip M. Standish; *Canastota*—Dr. Richard B. Cuthbert, Jr.; *Cato*—Dr. M. L. Fox; *Cazenovia*—Dr. Edward R. Cannon; *Cooperstown*—Dr. James Bordley, III; *Cuba*—Dr. Hazen G. Chamberlin; *Ellenburgh Depot*—Dr. W. P. McKenna; *Endicott*—Dr. Karl D. Rundell; *Fair Haven*—Dr. G. B. Hanford; *Great Neck*—Dr. Walter M. Glass; *Helmuth*—Dr. William J. Allexsaht; *Ilion*—Dr. Donald R. Davidson, II; *Keeseville*—Dr. G. E. Temple; *Little Falls*—Dr. Robert C. Ashley; *Locke*—Dr. Manes Kesten; *Moravia*—Dr. C. T. Yarington; *Mount Vernon*—Dr. Harry Wallerstein; *Nassau*—Dr. Velta Klasons; *Newburgh*—Dr. Arnold Bockar; *New York City*—Drs. R. Conklin, Joseph E. Corr, Mark Daniel, Horace Leigh, T. R. Miller, Kermit E. Osserman, B. F. Payne, Malvin Proctor, D. J. Richardson, Beverly C. Smith, Mario E. Stella, and Felix Widder.

Also: *Oakfield*—Dr. Raymond L. Warn; *Oneida*—Drs. Ernest Freshman and William L. Lanyon; *Oswego*—Dr. Olin J. Mowry; *Plattsburg*—Drs. N. V. Delbel, G. H. Gonyea, E. S. McDowell, E. R. Raymaley, Jr., L. F. Schiff, H. L. Schlesinger, R. P. Smith, and D. A. Weeks; *Poughkeepsie*—Drs. Charles DeBold, Jr., Lloyd H. Kest, Jerome Lehner, Paul M. Schwartz, and William R. Updegraff; *Rensselaer*—Dr. Lothar Wirth; *Rochester*—Drs. E. J. Avery, L. Pulsifer, and Albert C. Snell, Jr.; *Saratoga Springs*—Dr. F. J. Resseguie; *Scarsdale*—Dr. M. L. Woodhull; *Schenectady*—Dr. Isaac Shapiro; *Skaneateles*—Dr. Herman G. Weiskotten; *Staten Island*—Drs. Milton M. Kardon and David O. Shepard; *South Worcester*—Dr. Beekman J. Delatour; *Syracuse*—Drs. David L. Poushter and F. W. Rosenberger.

Also: *Troy*—Dr. John J. Squadrito; *Weedsport*—Dr. C. E. Goodwin; *Wellsville*—Dr. Roger W. Blaisdell; *White Plains*—Dr. A. G. Silberstein; *Whitestone*—Dr. William F. Sharkey; *Woodside* Dr. Louis L. Dolinsky, and *Voorheesville*—Dr. D. G. Sutherland.

Medical TV Shows on Film—As an aid to medical societies and as a service to the public, the American Medical Association offers filmed television programs for presentation over local TV stations. Each program deals with a medical subject of popular appeal.

The shows are available for the exclusive use of state and county medical societies and will not be shown on any national television network. When these shows are aired over local stations, they will increase public understanding of timely medical subjects and serve as effective public relations devices for your society.

Prints of the new filmed TV shows can be secured by writing to: TV Film Library, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois. Films available are: "Operation Herbert," "A Life To Save," "What To Do," and "Your Doctor."

New Examinations Announced for Medical Officer—Announcements of examinations for filling medical officer and medical officer (specialist) positions in various Federal agencies in Washington, D.C., and throughout the United States, and medical officer positions in the Panama Canal Zone have been announced by the United States Civil Service Commission. No written test is required for these positions and full details concerning the requirements to be met are given in announcements number 415, issued August 10, 1954; number 414 (B), issued August 3, 1954, and examining circular EC-27, issued August 17, 1954.

Copies of the announcements for these examinations, for which there is no closing date, may be obtained by writing to the United States Civil Service Commission, Bureau of Departmental Operations, Washington 25, D.C., and from most post offices.

Medical TV Shows Dates Changed—"The Doctor" to be presented on the "Calvacade of America" program over 75 stations of the ABC-TV network originally in December has been changed to November 9.

"March of Medicine" series will first be telecast on October 31 instead of October 24 at 5:30 P.M., eastern standard time, on the NBC-TV network.

International Academy of Proctology—The International Academy of Proctology announces the renewal of the postgraduate teaching fund to provide gift subscriptions to the *American Journal of Proctology* to 900 of the largest hospital libraries in this country and abroad.

The *American Journal of Proctology*, as the only official proctologic journal in the world, will thus provide a continuing postgraduate course for interns, residents, and hospital attending staffs in major hospitals and medical school libraries.

Beginning with the first issue of 1955, the *Journal* will become a bimonthly publication, publishing six issues annually in place of the present four issues.

Meetings—Past

Connecticut Clinical Congress

The twenty-ninth annual clinical congress of the Connecticut State Medical Society and the Yale University School of Medicine was held September 15 and 16 in New Haven.

Among the New York State doctors taking part in the congress were Dr. Willet F. Whitmore, Jr., associate professor clinical surgery (urology), Cornell University Medical College, and attending surgeon (urology), Memorial Center; Dr. William L. Bradford, professor of pediatrics, University of Rochester School of Medicine and pediatrician-in-chief, Strong Memorial Hospital, Rochester; Dr. Richard H. Freyberg, associate professor of clinical medicine, Cornell University Medical College and director, Department of Internal Medicine, Hospital for Special Surgery; Dr. Samuel Alcott Thompson, associate professor of surgery, New York Medical College, and attending surgeon, Flower and Fifth Avenue Hospitals; Dr. Sidney C. Werner, associate professor of clinical medicine, Columbia University College of Physicians and Surgeons, and associate attending physician, Presbyterian Hospital; Dr. Thomas W. Stevenson, professor of clinical surgery, Columbia University College of Physicians and Surgeons, and attending surgeon, Presbyterian Hospital.

Dr. H. Houston Merritt, professor of neurology, Columbia University College of Physicians and Surgeons, and director of service, neurology, Neurological Institute, Presbyterian Hospital, and Dr. Adrian M. Osterfeld, research fellow in medicine, Cornell University Medical College, and provisional assistant physician, New York Hospital.

Columbia Pharmacy Bicentennial Conference

The bicentennial conference of the Columbia University College of Pharmacy was held at McMillin Academic Theater on October 14 and 15. Speakers at the celebration of the two hundredth anniversary of the University and the one hundred and twenty-fifth of the College of Pharmacy were:

Dr. Henry Welch, director of the Antibiotics Division, U.S. Department of Health, Education, and Welfare; Dr. Cornelius P. Rhoads, director of Memorial Hospital and Sloan-Kettering Institute for Cancer Research, New York City; Dr. William H. Sebrell, Jr., director of the National Institutes of Health, Bethesda, Maryland; Dr. Nathan S. Kline, Rockland State Hospital, Orangeburg; Dr. Wilbur W. Swingle, Conklin Professor of Biology, Princeton University; Dr. John C. Krantz, Jr., professor of pharmacology, University of Maryland College of Medicine; Dr. Louis I. Dublin, consultant on health and welfare; Dr. Lloyd C. Miller, chairman of the Revision Committee, United States Pharmacopeia; Dr. George D. Beal, associate director, Mellon Institute, Pittsburgh; Newell Stewart, executive vice-president, National Pharmaceutical Council, and Dr. W. Paul Briggs, executive director, American Foundation for Pharmaceutical Education.

Meetings—Future

Geneva Academy of Medicine

"Differential Diagnosis of Cough" will be discussed by Dr. Gervais W. McAuliffe, associate professor of otolaryngology, Cornell University Medical College, at a meeting of the Geneva Academy of Medicine on Monday, October 18. The meeting will be held at The Belhurst in Geneva and will start at 8:30 P.M.

This program is postgraduate education presented by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

American Cancer Society

"Cancer of the Uterus: A Critical Appraisal of the Problem" will be the subject of the scientific session of the 1954 annual meeting of the American Cancer Society. The meeting will be held at the Hotel Biltmore, New York, on Monday, October 18 and Tuesday, October 19. The following program has been arranged:

October 18, 1954: Morning Session (9:30 A.M.–12:45 P.M.), chairman, Harold L. Stewart, National Cancer Institute, Bethesda. "Epidemiologic Aspects"—(*A*) Incidence and mortality of uterine cancer, Herbert F. Lombard, Massachusetts State Department of Health, Boston; (*B*) The familial frequencies of uterine and breast cancer; two studies of 821 probands and 9,473 of their female relatives: Douglas Murphy, University of Pennsylvania School of Medicine, Philadelphia, with discussion by Harold Dorn, National Institutes of Health, Bethesda; (*C*) Etiologic significance of racial studies in uterine cancer: (1) The New York City Study, Ernest Wynder, Memorial Cancer Center, New York;

(2) Current studies in South Africa, John Higginson, South African Institute for Medical Research, Johannesburg; (*D*) Marital state and pregnancy in the causation of cancer of the uterine cervex, F. Gagnon, Laval University, Quebec City.

"Laboratory Studies"—(*A*) Endocrine relationships, endocrinologic background of patients with endometrial hyperplasia or cancer of the fundus, Roy Hertz, National Cancer Institute, Bethesda; (*B*) Enzyme relationships, ongoing studies on the relationship between vaginal beta glucinonidase and pre-invasive cancer of the uterine cervix, Freddy Homburger, Tufts College Medical School, Boston; (*C*) Anatomic relationships, certain spatial anatomic considerations in pelvic cancer, Gray H. Twombly, New York University-Bellevue Medical Center; (*D*) Experimental production of uterine cancer in laboratory animals: Cervix cancer—mice, Edwin D. Murphy, Jackson Memorial Laboratory, Bar Harbor.

Afternoon Session (2:00 P.M.–5:00 P.M.), chairman, Howard C. Taylor, Jr., Sloane Hospital for Women, Columbia-Presbyterian Medical Center. "Prophylaxis," Prevention of uterine cancer; possibilities and methods, H. Runge, Universitäts-Frauenklinik, Heidelberg.

"Detection of Early Cancer of the Uterus"—(*A*) The Papanicolaou smear: Interpretation, W. Kenneth Cuyler, Duke University School of Medicine, Durham, and discussant, George N. Papanicolaou, Cornell University Medical College; (2) Correlation between cytology and histology in atypical cervical epithelium, Robert H. Fennell, Jr., Elizabeth Steel Magee Hospital, Pittsburgh, and Ruth M. Graham, Vincent Memorial Hospital, Boston; (3) Mass population screening technics for uterine cancer: Cyrus C. Erickson, University of Tennessee School of Medicine, Memphis; Theodore Rosenthal and Abraham Oppenheim, New York City Department of Health, and Alexander Brunschwig, Memorial Cancer Center.

(*B*) The problem of carcinoma-in-situ, (1) The role of cervical biopsy in definitive diagnosis, C. Bernard Brack, Johns Hopkins University School of Medicine, and discussant, Alfred Glucksmann, Strangeways Research Laboratory, Cambridge, England; (2) Relationship between cervical leukoplakia, carcinoma-in-situ, and invasive cancer, Gilbert H. Friedell, Pondville Hospital, Walpole. (*C*) Cancer detection by quantitative cytologic methods—the cytoanalyzer, Walter E. Tolles, Airborne Instruments Laboratory, Mineola.

"Diagnosis of Cancer of the Uterine Fundus"—(*A*) A plea for wider use of endometrial aspiration and biopsy, Lewis C. Scheffey, Jefferson Medical College, Philadelphia; (*B*) Preinvasive carcinoma of the endometrium—its differentiation from actual malignancy, Arthur T. Hertig, Free Hospital for Women, Brookline.

October 19, 1954, Morning Session (9:30 A.M.–12:45 P.M.), "Treatment of Uterine Cancer."—(*A*) Symposium: The role of radiotherapy and radical surgery in the treatment of cancer of the uterus. Moderator, Charles S. Cameron, American Cancer Society, New York; participants, Alexander Brunschwig, Memorial Cancer Center; Simeon Cantril, Swedish Hospital, Seattle; Juan A. del Regato, Penrose Cancer Hospital, Colorado Springs; Manuel Garcia, Charity Hospital, New Orleans; Isadore Lampe, University of Michigan Medical School, Ann Arbor; John L. McKelvey, University of Minnesota Medical School, Minneapolis; Joe V. Meigs, Vincent Memorial Hospital, Boston, and Howard C. Taylor, Jr., Sloane Hospital for Women.

Afternoon Session (2:00 P.M.–5:30 P.M.). Chairman, Arthur T. Hertig, Free Hospital for Women, Brookline; (*B*) Symposium: Management of urinary tract complications following radical pelvic surgery: moderator, Howard Ulfelder, Vincent Memorial Hospital, Boston. Participants: Eugene Bricker, Washington University, St. Louis, Methods of reducing urinary tract complications at time of radical pelvic surgery; William McDermott, Massachusetts General Hospital, Boston, Management of urinary tract complications following radical pelvic surgery; and Willet F. Whitmore, Memorial Cancer Center, Electrolyte imbalances following radical genitourinary surgery.

"Clinical Research in Uterine Cancer"—(*A*) Biologic criteria in the selection of patients for the treatment of carcinoma of the cervix, Ruth M. Graham, Vincent Memorial Hospital, Boston, Alfred Glucksmann, Strangeways Research Laboratory, Cambridge, England; John B. Graham, Vincent Memorial Hospital, and Stanley Way, Royal Victoria Infirmary, Newcastle-upon-Tyne, England.

(*B*) Correlation between the granulosa-theca group of ovarian tumors and endometrial changes, Hazel Mansell, Free Hospital for Women, Brookline; and (*C*) Histochemic reactions in the normal glands of the uterine cervix; J. D. Wheeler, Mount Sinai Hospital, Chicago.

University of Cincinnati College of Medicine

A symposium on "Nutritional Aspects of Blood Formation" will be presented by the University of Cincinnati College of Medicine, on Friday, October 22, in the auditorium, College of Medicine, Eden and Bethesda Avenues, Cincinnati, Ohio. The symposium has been made possible by a grant from the National Vitamin Foundation, and the proceedings will be published and available through the National Vitamin Foundation, Incorporated, 15 East 58th Street, New York 22, New York.

American Society of Plastic and Reconstructive Surgery, Inc.

The American Society of Plastic and Reconstructive Surgery will meet in Hollywood, Florida on Tuesday, October 26. At this time, the prize winners in the 1954 scholarship contest of the Foundation will be presented.

Speakers taking part in the program will be Dr. Bengt Johanson, Stockholm, Sweden, and Dr. Robert M. McCormack, Rochester, New York, who was a 1953 scholarship winner.

A. Walter Suiter Lecture

Six authorities on cancer will participate in the

1954 A. Walter Suiter Lecture, November 4, at the New York Academy of Medicine, in the form of a symposium entitled "Cancer: What We Know Today."

The program, which is planned particularly to give the general practitioner a well-rounded view of the present status of knowledge about cancer, has four parts. The first three topics and the speakers will be: "Changing Incidence of Cancer over the Years" Harold F. Dorn, Ph.D., Chief, Office of Biometry, National Institutes of Health, Bethesda, Maryland; "Multiple Views on the Causation of Cancer," Dr. Harold L. Stewart, chief, Laboratory of Pathology, National Cancer Institute, Bethesda, and "The Natural History and Diagnosis of Cancer," Dr. Lauren V. Ackerman, professor of surgical pathology and pathology, Washington University School of Medicine, St. Louis.

The fourth topic will be "Modern Therapeutic Measures in Cancer and Their Effectiveness," with the following speakers: *Surgery*—Dr. Owen H. Wangensteen, professor of surgery, University of Minnesota Medical School, Minneapolis; *radiology*—Dr. Richard H. Chamberlain, associate professor of radiology, University of Pennsylvania School of Medicine, Philadelphia, and *chemotherapy*—Dr. Alfred Gellhorn, director, Institute of Cancer Research, Columbia University College of Physicians and Surgeons, New York City.

Cleveland Chapter of the Arthritis and Rheumatism Foundation

On November 10 the Cleveland Chapter of the Arthritis and Rheumatism Foundation and the regional members of the American Rheumatism Association will sponsor a conference at the Hotel Carter in Cleveland, Ohio. The registration fee will be $10. Drs. T. Duckett Jones and Alexander B. Gutman of New York City will speak. Inquiries should be addressed to Dr. William S. Clark, Chairman, 2073 Abington Road, Cleveland 6, Ohio.

Conference on Cancers of the Digestive Tract

On November 12 a round table on recent and changing concepts in the diagnosis and management of cancers of the digestive tract will be held from 9:30 A.M. to 1 P.M. in the auditorium of Memorial Center for Cancer and Allied Diseases. Reservations must be made before November 5 by mail or phone. Inquiries should be addressed to: Office of the Assistant Clinical Director, Memorial Center, 444 East 68th Street, New York 21, Trafalgar 9-3000, Extension 593.

Inter-Society Cytology Council

The second annual meeting of the Inter-Society Cytology Council will be held in Boston, Massachusetts, November 12 and 13, 1954.

The scientific program will consist of four consecutive sessions with Dr. James W. Reagan presiding as chairman of the first on "Special Technics Including Cytochemistry, Ultraviolet, and Electron Microscopy, and General Cytology"; Dr. Arthur T. Hertig, chairman of the second section, on "Prognosis in the Treatment of Cancer by Cytologic and Histologic Technics"; third section—chairman, Dr. Emerson Day, "New Developments in Cytology," and section four—Dr. John R. McDonald, chairman, "Round Table Discussion of the Carcinoma In Situ Lesion."

Further information can be obtained by writing to the Secretary-Treasurer, Inter-Society Cytology Council, 634 North Grand Boulevard, St. Louis, Missouri.

Personalities

Honored

Dr. Antonio Pisani, eighty-year-old physician in lower Manhattan, by the New York County Medical Society as its general practitioner of the year, and by the members of the board of trustees of the East River Savings Bank, in recognition of his fifty years as a trustee.

Appointed

Dr. Thomas P. Almy, New York City, to succeed Dr. E. Hugh Luckey as director of the Cornell (Second) Division, Bellevue Hospital Center in September...Dr. James Bradley, Plattsburg, to replace Dr. John Watson, as chairman of the legislation committee of the Clinton County Medical Society...Dr. Roscoe P. Kandle, Deputy Health Commissioner, as chairman of the 1955 National Health Forum, at the thirty-fifth annual meeting of the National Health Council in March...Dr. Tiffany Lawyer, Jr., as chief, Division of Neuropsychiatry, Montefiore Hospital...Dr. Roman Lysisk, as resident psychiatrist, and Dr. Paul J. Campanella, as attending anesthetist, on the staff of the St. Lawrence Hospital, Ogdensburg...Dr. Joseph B. Rogoff, former assistant chief of the physical medicine and rehabilitation department of the Brooklyn Veterans Hospital, as director of the Department of Physical Medicine and Rehabilitation of the Jewish Chronic Disease Hospital, Brooklyn...Dr. Helen M. Wallace, director of the Bureau of Handicapped Children of the New York City Department of Health, as chairman of the Medical Advisory Board of the New York City Chapters of the National Foundation for Muscular Dystrophy, Inc....Dr. William M. Weshta, as director, Intern and Resident Education Program, St. John's Episcopal Hospital, Brooklyn.

New Offices

Dr. Erika Baskis, Latvia, general practice in Elmira...Dr. Jack W. Garnant, practice of pediatrics in Nyack...Dr. Robert L. Goetz, formerly of

[Continued on page 2872]

SCIENTIFIC PROGRAMS

Forty-Eighth Annual Meetings

DISTRICT BRANCHES

Medical Society of the State of New York

FIFTH DISTRICT BRANCH

Wednesday, October 20, 1954
Syracuse

Afternoon

Scientific program presented by faculty of the State University of New York, Upstate Medical Center at Syracuse.

Veterans Administration Hospital Auditorium

1:30 P.M.—Registration

2:00 P.M.—Panel Discussion: "Surgical Consideration of the Upper Gastrointestinal Hemorrhage"
Leon G. Berman, M.D., clinical professor of surgery, *moderator*
Robert O. Gregg, M.D., professor and chairman, Department of Surgery
J. Ernest Delmonico, M.D., clinical professor of surgery

State University College of Medicine Auditorium

1:30 P.M. Registration

2:00 P.M.—Panel Discussion: "Management of Obesity"
William Faloon, M.D., assistant professor of medicine
Edward Stainbrook, M.D., professor and chairman, Department of Psychiatry
Jay Tepperman, professor of experimental medicine, Department of Pharmacology
Lytt I. Gardner, associate professor of pediatrics

3:15 P.M.—Business meeting

3:45 P.M.—"Prevention of Rheumatic Heart Disease"
J. G. Fred Hiss, M.D., clinical professor of medicine
"Fetal Salvage"
Edward C. Hughes, M.D., professor and chairman, Department of Obstetrics

Evening

Hotel Onondaga

6:00 P.M.—Cocktails
6:45 P.M.—Dinner
Introduction of officers
Address: **Dan Mellen, M.D.,** Rome, president, Medical Society of the State of New York
Remarks: **Mrs. Arthur L. Bennett,** Buffalo, president, Woman's Auxiliary to the Medical Society of the State of New York
"Current Challenges to American Medicine"
Ernest B. Howard, M.D., assistant secretary, American Medical Association

Officers—Fifth District Branch

President	Richard B. Cuthbert, Jr., Canastota
First Vice-President	Donald C. Tulloch, M.D., Ogdensburg
Second Vice-President	Olin J. Mowry, M.D., Oswego
Secretary	Charles A. Gwynn, M.D., Syracuse
Treasurer	John F. Kelley, M.D., Utica

Presidents—Component County Societies

Herkimer	Arthur Leistyna, M.D., Ilion
Jefferson	Howard F. Drayer, M.D., Theresa
Lewis	John H. Brooks, M.D., Lowville
Madison	Marvin Brown, M.D., Cleveland
Oneida	John S. Fitzgerald, M.D., Utica
Onondaga	Byron S. West, M.D., Syracuse
Oswego	John J. Brennan, M.D., Oswego
St. Lawrence	Abraham J. Levine, M.D., Massena

FOURTH DISTRICT BRANCH

Thursday, October 21, 1954
Queensbury Hotel, Glens Falls

Afternoon

1:00 P.M.—Registration

1:30 P.M.—Northeastern New York Diabetes Association, business meeting
Welcome address
Lester C. Huested, M.D., president, Medical Society of the County of Warren

1:40 P.M.—"Control in Young Diabetics"
S. B. Scrafford, M.D., Ellis Hospital, Schenectady

2:00 P.M.—"Brucellosis and Diabetes"
Harold J. Harris, M.D., New York City

2:30 P.M.—"The Correlation of Historical and Physical Signs with Chemical, Water, and Electrolyte Abnormalities"
John Bland, M.D., University of Vermont, Burlington

3:00 P.M.—Intermission

3:15 P.M.—"The Isotope Laboratory of the Albany Hospital: Its Functions and Facilities Available to the Medical Profession of the Area"
Robert Wadlund, M.D., Albany Medical College, Albany

3:45 P.M.—"Rapid Intravenous Cholangiography and Cholecystography: Indications and Uses"
Richard C. Batt, M.D., Glens Falls Hospital, Glens Falls

5:00 P.M.—Business meeting—election of officers

Evening

6:15 P.M.—Social hour

7:00 P.M.—Dinner
Introduction of officers
Address: **Dan Mellen, M.D.,** Rome, President, Medical Society of the State of New York
Remarks: **Mrs. Arthur L. Bennett,** Buffalo, president, Woman's Auxiliary to the Medical Society of the State of New York
Address: **Mr. E. A. Soucy,** in charge of Federal Bureau of Investigation of Upstate New York

Officers—Fourth District Branch

President	J. Frederick Sarno, M.D., Johnstown
First Vice-President	Alfred A. Hartmann, M.D., Malone
Secretary	Leonard J. Schiff, M.D., Plattsburg
Treasurer	Roman R. Violyn, M.D., Amsterdam

Presidents—Component County Societies

Clinton	Dana A. Weeks, M.D., Plattsburg
Essex	James Monroe, M.D., Ray Brook
Franklin	Richard P. Bellaire, M.D., Saranac Lake
Fulton	William H. Raymond, M.D., Johnstown
Montgomery	Roger Conant, M.D., Amsterdam
Saratoga	Edmond A. Suss, M.D., Middle Grove
Schenectady	Arthur Q. Penta, M.D., Schenectady
Warren	Lester C. Huested, M.D., Glens Falls
Washington	Milton Greenberg, M.D., Hudson Falls

SIXTH DISTRICT BRANCH

Wednesday, October 27, 1954
Statler Club, Cornell University, Ithaca

Afternoon

2:30 P.M.—Registration

3:00 P.M.—Motion picture: "Mitral Commissurotomy"
John L. Madden, M.D., New York City

3:30 P.M.—Panel discussion: "Antibiotics"
Paul A. Bunn, M.D., associate professor of medicine, State University of New York Upstate Medical Center at Syracuse, *moderator*
"Common Urinary Tract Problems"
Francis O. Harbach, M.D., professor of urology, State University of New York Upstate Medical Center at Syracuse
"The Role of the General Practitioner

in the Home Management of the Tuberculous Patient"

Stanley Lincoln, M.D., medical director, Biggs Memorial Hospital, Ithaca

"Advances in Laboratory Aspects of Diagnosis: Deleterious Effects Caused by Antibiotics—Practical Aspects"

David Rogers, M.D., Rockefeller Institute for Medical Research, New York City

Question Period

Evening

5:00 P.M.—Business meeting

5:15 P.M.—Cocktails, courtesy of Medical Society of the County of Tompkins

6:00 P.M.—Dinner

Introduction of officers

Address: **Dan Mellen, M.D.,** Rome, president, Medical Society of the State of New York

Remarks: **Mrs. Arthur L. Bennett,** Buffalo, president, Woman's Auxiliary to the Medical Society of the State of New York

Officers—Sixth District Branch

President	Gilbert M. Palen, M.D., Margaretville
First Vice-President	James Greenough, M.D., Oneonta
Second Vice-President	W. Tilden Boland, M.D., Elmira
Secretary	James L. Palmer, M.D., Binghamton
Treasurer	C. Stewart Wallace, M.D., Ithaca

Presidents—Component County Societies

Broome	Mark H. Williams, M.D., Binghamton
Chemung	Laurence L. Hobler, M.D., Elmira
Chenango	Ben L. Dodge, M.D., Bainbridge
Cortland	George F. Nevin, M.D., Cortland
Delaware	Ernst Burian, M.D., Sidney
Otsego	Olaf J. Severud, M.D., Cooperstown
Schuyler	Fritz Landsberg, M.D., Watkins Glen
Tioga	Ivan N. Peterson, M.D., Owego
Tompkins	George G. McCauley, M.D., Ithaca

Members who have any problems or questions regarding antibiotics, please mail written questions to Dr. Paul A. Bunn, Department of Medicine, University Hospital of the Good Shepherd, 150 Marshall Street, Syracuse 10, New York, before the October 27 meeting.

MEDICAL NEWS

[Continued from page 2869]

York, Pennsylvania, general practice with Drs. Stephen V. Collins and Wayne C. Templer in Corning...Dr. Ludwig C. Kalnin, practice of internal medicine in Tompkinsville...Dr. Gurney E. Kelley, formerly of Middleville, practice of general surgery in Utica...Dr. James F. Martin, general practice in Tupper Lake...Dr. Murray L. Nusbaum, practice of gynecology and obstetrics in Utica...Dr. Donald B. Polan, general practice in Seneca Falls...Dr. Alfred R. Ross, general practice in Belfast...Dr. Edwin P. Russell, practice of medicine and surgery with his father in Rome... Dr. Robert F. Schramm, general practice in Cazenovia...Dr. Kenneth F. Thomson, general practice in Penfield...Dr. John P. Timpane, formerly of Troy, practice of gynecology and obstetrics in association with Dr. James L. McGrane in Schenectady.

Dr. Edwin J. Boerschlein, Rochester, general practice in Gates. . .Dr. Harry M. DePan, practice of general surgery in Glens Falls. . .Dr. Francis J. Facciolo, Elmsford, practice of obstetrics and gynecology in Tarrytown. . .Dr. Anthony James Flood, Jr., practice of general surgery in Watertown. . .Dr. Robert B. Franklin, general practice in South Buffalo. . .Dr. Robert B. Goodman, Forest Hills practice of internal medicine in Glen Cove. . .Dr. Gerald Gorman, practice of general and chest surgery in Plattsburg, and Dr. Lorraine Gorman, pathologist at the Champlain Valley Hospital. . .Dr. Louis B. Kramer, practice of internal medicine in Niagara Falls. . .Dr. Thomas E. Perdue, Dinuba, California, general practice with Dr. George W. Sandiford, in Massena. . .Dr. Pierre de Reeder, Jr., general practice with Dr. David Molinoff in Smithtown. . .Dr. Laurence G. Roth, practice of obstetrics and gynecology in Batavia. . .Dr. Kenneth Thomson, general practice in Penfield. . .Dr. Jean White, general practice in Greece.

Closed Office

Dr. David O. Clement, Colton, to report for a two-year active duty assignment with the Navy. . .Dr. Harold C. Livingston, Dexter, to study general surgery at the Clifton Springs Sanitarium.

Retired

Dr. Guy McMaster, Parkhurst, after practicing medicine in Bath for thirty-three years, as of September 1, 1954.

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Older Age Patient
is
Out of Harmony with Life

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Enjoyment in Living

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Woman's Auxiliary
to the MEDICAL SOCIETY OF THE STATE OF NEW YORK

Auxiliaries Organized in 46 Counties

In the first nineteen years of its existence, the Woman's Auxiliary to the Medical Society of the State of New York has completed the organization of local groups in 46 counties in the State. At present the Auxiliary is devoting its efforts to organizing the remaining counties, with the goal of a local auxiliary in every county having a county medical society. Since the strength of an organization is a reflection of its growth, the Auxiliary is pleased to report a total membership of 4,420 in the 46 organized counties, an increase of 359 members during the past year.

Administratively, the Auxiliary is patterned after the State and county medical society organization. Each county auxiliary, although an autonomous unit in itself, is an integral part of the State Auxiliary.

Purpose of the Auxiliary is to extend the aims of the medical profession in its program for the advancement of medicine and public health, to encourage friendly relations and promote mutual understanding among the physicians' families, and to do such work as requested or approved by the medical societies.

County medical society officers and members who are instrumental in establishing an auxiliary can look forward to help in the following fields: voluntary health plans, promotion of health legislation, organization of Citizens' Health Education Committee to educate the public in regard to the dangers of chiropractic and other cults, active participation in the work of voluntary health organizations in the fields of tuberculosis, cancer, cerebral palsy, mental health, diabetes, and others.

Auxiliary-sponsored programs will include participation in the annual State-wide Health Poster Contest for school children, nursing scholarship fund and nurse recruitment programs, and the establishment of "Future Nurses Clubs" in high schools, plus participation in and guidance of many other local philanthropies and special projects. Promotion of these programs locally provides an excellent foundation upon which the county medical society can extend and strengthen its own public relations program, particularly among women's groups.

At present, there are 15 counties in the State which do not have organized auxiliaries. These included the following:

First District—New York, Bronx
Third District—Sullivan
Fourth District—Washington, Essex, Franklin, Montgomery
Fifth District—Lewis
Sixth District—Otsego, Chemung, Tioga, Chenango, Delaware
Ninth District—Putnam, Rockland

All the counties in the Second, Seventh, and Eighth Districts are completely organized.

The Auxiliary would like to direct a special message to the county medical society presidents in the 15 unorganized counties where there is not yet an auxiliary. We would be glad to assist you in organizing *your* local county auxiliary. It would be a great honor to welcome the women of your county to our organization.

Your permission to organize will be *our* command for action.

Mrs. Walter T. Heldmann, *Chairman*
Auxiliary Organization Committee

182 Nixon Avenue
Staten Island 4, New York

Sometimes give your service for nothing, calling to mind a previous benefaction or present satisfaction. . . . For where there is love of man, there is also love of the art. For some patients, though conscious that their condition is perilous, recover their health simply through their contentment with the goodness of the physician.—HIPPOCRATES

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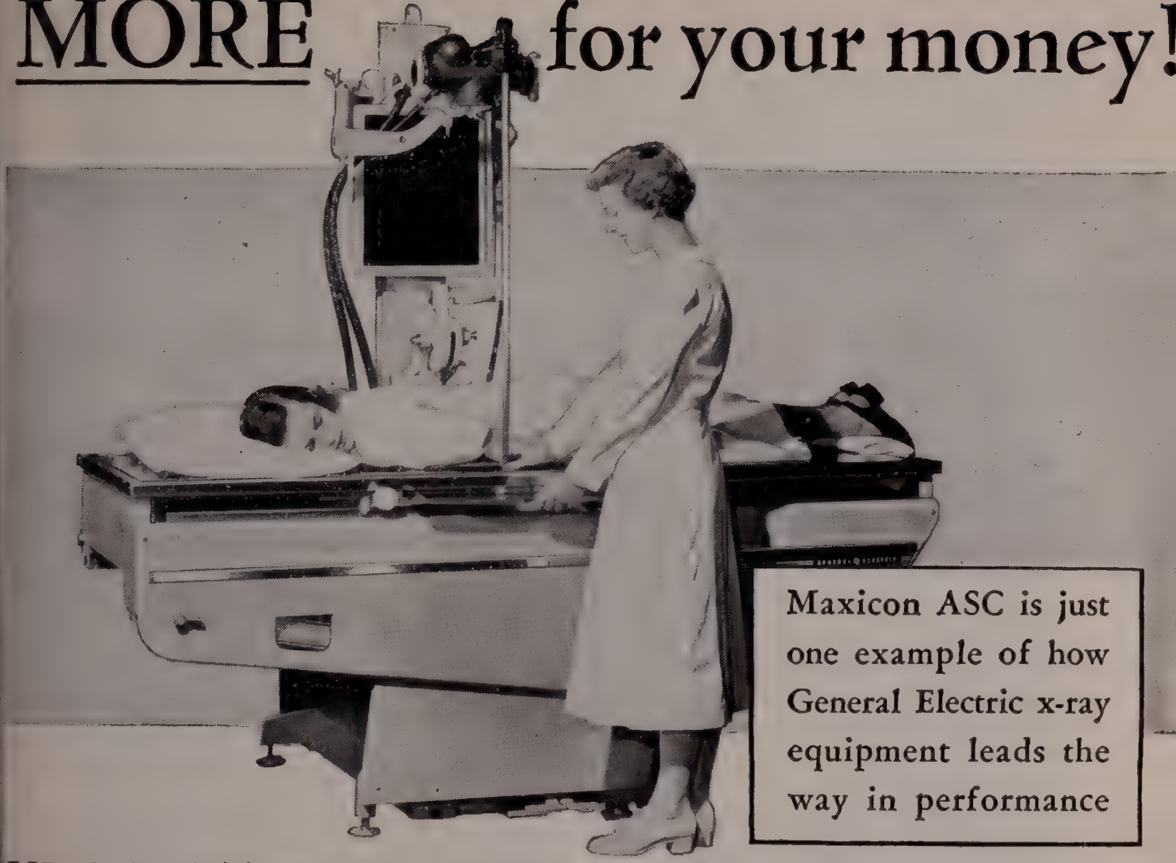

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Variable speed table angulation	YES	NO	NO	NO
Radiation-protective table panels	YES	NO	NO	NO
18-in. focal-spot to table-top distance for fluoroscopy	YES	NO	NO	YES
Counterbalanced tube stand, providing adjustable focal-film distances up to 40 in.	YES	NO	NO	NO
Signal-light centering system for Bucky radiography	YES	NO	NO	NO
Provision for cross-table radiography	YES	NO	NO	NO
12-step line-voltage compensator	YES	NO	NO	NO
Automatic selection of large or small focal spot	YES	YES	NO	NO
45 x 78-in. or less space requirement	YES	NO	NO	NO

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MINUTES OF THE COUNCIL

The following is a summary of the minutes of the June, 1954, meeting of the Council of the Medical Society of the State of New York.

The Council met June 10, 1954, from 9:15 A.M. to 12:30 P.M. at the Manhattan Club, Madison Square, New York City. Dr. Dan Mellen, president, presided.

Secretary's Report

Executive Committee

Communications.—Dr. Anderton reported:

1. A letter of May 4, 1954, from Dr. James Poulton, secretary of the Richmond County Medical Society, requesting that the 1954 State and American Medical Association dues paid by Dr. Cyril J. Julian prior to his death on April 17, 1954, be refunded to Mrs. Julian. His letter contained a statement to the effect that Mrs. Julian was not eft in very affluent circumstances. The Executive Committee recommended that this request be granted.

It was so *voted.*

2. A letter of May 18, 1954, from Mr. Wanvig, stating that the Malpractice Insurance and Defense Board approved a reply by its secretary to a letter from the deputy superintendent of insurance and directing him to submit copies of this correspondence to the Council with the request that a suitable statement be published in the State JOURNAL. Mr. Wanvig sent a draft of such a statement, of which the Executive Committee approved.

Confirmation *was voted.*

3. The award of merit presented by the American Medical Education Foundation to this Society was inspected by those present.

4. A letter from Dr. Charles F. McCarty, of the Medical Society of the County of Kings, presenting a request from the comitia minora of that society that the Council ask all of the county medical societies in the State to oppose House of Representatives Bills No. 7700 and No. 8356 and that the Council also inform the senators and representatives in Congress from the State of New York of this action. It was proposed that this matter be referred to the Economics Committee.

It was so *voted.*

5. A letter of June 4, 1954, from Dr. Herbert Berger of Staten Island asking that the resolution on narcotic distribution by clinics, which was referred from the 1954 House of Delegates to the Council for study and action, be presented by the New York delegation to the House of Delegates of the American Medical Association. In referring this matter to the Council, the following is in your agenda: "The House of Delegates referred to the Council the following matter (House of Delegates Minutes, *Section 165*):

> The resolution of Dr. Herbert Berger which was referred to the Reference Committee from the Supplementary Report from the Council Committee on Public Health and Education was considered. It was noted that the cause of crime in addiction resides in the illegal acquisition through the underworld. Further, addicts are patients with mental disturbance and should be treated by physicians, presenting a medical problem with very often the legal and criminal problem appearing secondarily. There was good reason to have existing mental health clinics or established narcotic clinics handle such patients with every prospect of a cure rate superior to what now is recorded. An equivalent resolution has been adopted in the states of California, Michigan, and Illinois.
>
> It was the considered opinion of your Reference Committee that there is distinct merit in the purpose, objectives, and recommendations included in the resolution and that this matter be referred to the Council for the establishment of a committee to make special recommendations for its formal endorsement and implementation."

It has not been referred as yet by the Council. It has not been studied, but Dr. Berger wants a similar resolution introduced in the American Medical Association.

It *was voted* that this be referred to our delegates to the American Medical Association for their consideration and to the Committee on Public Health and Education.

6. A letter of June 1, 1954, from Dr. Theodore J. Curphey regarding expenses and honorarium paid to Dr. John W. Raker of Boston by the Onondaga County Medical Society, before whom Dr. Raker delivered a postgraduate lecture on March 4, 1952. It was the feeling of the Executive Committee that this should be referred to the Board of Trustees with a recommendation that the amount be refunded to the Onondaga Medical Society.

It was so *voted.*

Dues Remissions.—The Council voted to remit 1954 annual State dues of four members because of illness, of 11 members because of military service, and of one member because of financial hardship; to request remission of American Medical Association dues of 11 members for 1954 and of one member

[Continued on page 2878]

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[Continued from page 2876]

for 1955; and to request that the American Medical Association exempt two members from the further payment of national dues because of age. It was also voted that 1954 annual State dues paid by Dr. Harry Gans and Dr. Russell L. Cecil of New York County be refunded because of the fact they were elected to retired membership on May 12, 1954.

General.—Dr. Anderton reported: "Since your last meeting the secretary's office has been busy carrying out your directions and implementing actions of the House of Delegates.

"Greetings were sent from the House to six former presidents. Resolutions for introduction into the American Medical Association House of Delegates have been prepared.

"Among important actions in the House of Delegates were a change in the bylaws, making our fiscal year from July 1 to June 30, and voting that the editor of the NEW YORK STATE JOURNAL OF MEDICINE should be employed full time.

"It is respectfully suggested that you delegate to President Mellen the selection of officers for the new Allergy Section."

The recommendation *was adopted.*

"It is also recommended that you vote to request the American Medical Association to remit dues henceforth for the gentlemen who became retired members on May 12, 1954.

"On account of the time element, Dr. Mellen has appointed Dr. John J. Masterson to represent our society at the American Medical Association National Emergency Medical Service meeting in San Francisco, California, June 20. It is suggested that you vote approval.

"Mr. John Crane, chairman of Governor Dewey's Employ the Handicapped Committee, has nominated Dr. George G. Deaver for the annual citation by President Eisenhower's Committee on National Employ the Physically Handicapped Week.

"Your secretary's activities have been varied. On May 13 he attended a luncheon followed by the annual meeting of the Blood Banks Association of New York, Inc., also a meeting of its board of directors. That evening he attended a cocktail party given by Dr. Frederick Lee Liebolt at 1085 Park Avenue, in honor of Dr. Harold Boyd, Associate Professor of Orthopedic Surgery, University of Tennessee, and later he attended the annual dinner and meeting of the College of Chest Physicians. On May 16 and 17, with Dr. Eggston and Dr. James R. Reuling, your secretary attended the annual meeting of the New Jersey State Medical Society at Atlantic City, New Jersey. May 18 your secretary attended a memorable meeting of the Medical Society of the County of Kings, when a portrait of Dr. John J. Masterson was unveiled. The following afternoon I attended the formal opening exercises at the New York Infirmary. May 20 was occupied by a flight to Glens Falls and return. This was to attend a meeting of the Executive Committee of the Fourth District Branch. Most of May 21 and 22 were spent representing the American Medical Association at the All-America Conference to Combat Communism at the Hotel Commodore, New York City; also on May 22 I attended a meeting of the board of directors of the Blood Banks Association. May 25 I went to the formal opening of the new home of the Visiting Nurse Service at 107 East 70 Street, New York City.

"My schedule also calls for a meeting of the Nurse Advisory Council of the New York State Education Department in New York City, June 3. On June 9 I plan to attend meetings of the Office Management and Policies, the Publication, and the Executive Committees."

Matters Referred from House of Delegates

Dr. Anderton presented the following matters referred to the Council by the House of Delegates.

Advertising for Blood Donors (*Section 163*).—The supplementary report of the Blood Banks Commission, Dr. Dan Mellen, chairman, contained the following: "At its last meeting the Commission considered two resolutions referred to it by the Council. These resolutions refer to the use of professional blood donors. The resolution, submitted in the 1953 House of Delegates, declaring that newspaper advertising be declared necessary and ethical and approved, was accepted."

The reference committee recommended that the last sentence in the above paragraph be replaced by the words: "It is felt that, under current conditions, newspaper advertising for blood bank donors may be necessary, and there is no intent to declare unethical, licensed physicians who are connected with organizations so advertising for donors."

After debate, this was neither passed nor defeated, but referred to the Council.

It *was voted* that this be referred to the Blood Banks Commission.

Standards for Inhalation Therapy (*Section 96*).—The following resolution was also referred to the Council by the House of Delegates:

> "WHEREAS, well-trained technicians in inhalation therapy, not to include administration of anesthetic agents, have demonstrated their tremendous usefulness in the care of patients; and
>
> "WHEREAS, by their knowledge of equipment and the basic problems of inhalation therapy they have become important adjuncts to the physician, as are those in the nursing profession to the physician; and
>
> "WHEREAS, the registration of these technicians would serve as an incentive to well-qualified people to continue the progress in inhalation therapy and to attract additional men of high caliber; therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York appoint a committee to work jointly with a committee from the New York State Society of Anesthesiologists (1) to determine minimum standards of therapy, (2) to establish the essentials of acceptable schools of inhalation therapy (not to include administration of anesthetic agents), and (3) to formulate a basis for the certification of technicians."

[Continued on page 2880]

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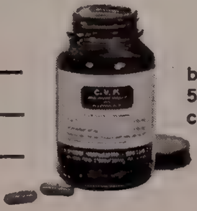

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[Continued from page 2878]

It *was voted* to refer this to the Committee on Public Health and Education.

Investigation of Effect on the New York State License of Changes in Modern Medical Practice (Section 149).—Resolution "that the Medical Society of the State of New York institute a comprehensive investigation of the entire effect of changes in modern medical practice on the license to practice medicine in New York State."

The Council voted that this be *referred* to the Committee on Legislation, to be considered by them with the assistance of the Committee on Hospital and Professional Relations.

Economics

Malpractice Insurance for Residents and Interns (Section 152).—In adopting report of Reference Committee on Report of Council, Part VI—Economics, the House of Delegates resolved "that the Medical Society of the State of New York strongly urge that hospitals provide adequate prepaid malpractice insurance for their residents and interns and that the Society confer with such hospitals to effectuate the intent of the resolution."

It was voted that this be *referred* to the Committee on Hospital and Professional Relations for discussion or action as they see fit.

Hospital Practice of Medicine (Section 153).—A resolution introduced by Dr. Aaron Kottler of Kings advocated that the State Society institute legal action challenging the right of a hospital to practice medicine. The reference committee recommended disapproval pending completion of the work of the Special Committee on Hospital and Professional Relations (Dr. Louis H. Bauer, chairman). However, the House voted to refer this matter to the Council.

It *was voted* to refer this to the Special Committee on Hospital and Professional Relations.

Voluntary Health Insurance Coverage During Periods of Unemployment (Section 103).—Also referred for "further study" was the following resolution:

"Whereas, voluntary health insurance is the chief bulwark against socialized medicine; and

"Whereas, such voluntary health insurance would lapse as soon as the individual became unemployed; and

"Whereas, there is certainly no time when the insured would need his health insurance more than when he was unemployed; and

"Whereas, in keeping this insurance in force, the insurance company would receive premiums for insurance that would otherwise lapse; and

"Whereas, such a plan would provide payment to the physician for his services when the insured was unemployed; and

"Whereas, the insured would not incur heavy medical debts during periods of unemployment; and

"Whereas, medicine as a body is being criticized as being reactionary and not attempting to solve the financial problems involved in providing medical care for the lower income groups; now therefore be it

"*Resolved,* that the Medical Society of the State of New York appoint a committee to study a means of prepayment whereby such insurance could be continued in the event the insured became unemployed."

The Council voted to *refer* this to the Committee on Economics.

The treasurer's report was approved.

Reports of Committees

Blood Banks Commission.—Dr. J. Stanley Kenney, president of the Blood Banks Association of New York State, Inc., stated: "I wish to report briefly, not so much for the Commission as for the Association, because the Commission has not met since the House of Delegates. The pilot project in Genesee County will be completed on June 18. Some 1,100 certificates under the Blood Assurance Program have been delivered, and when the program terminates, we expect to have over 1,500.

"The bleeding figures will interest you. Over 1,100 units of blood have been collected as of June 10, and we have, through our clearinghouse, disposed of all of that blood on an exchange or on a depository basis. The clearinghouse went into operation on April 19 and at present has a membership of 25 blood banks.

"Some are actively participating in the program. During the short period we have been in operation the clearinghouse has exchanged 985$^1/_2$ units between 23 banks, including 832 units from the Genesee County pilot project. There are many difficulties in the situation, and we have much thinking to do in planning our future. I feel that during the past year it has been largely a promotional venture, and we have had to do a lot of things without previous experience. We have spent more money than we anticipated. However, we hope to correct that situation."

Economics.—Dr. Renato J. Azzari, chairman, presented the following report from Mr. George P. Farrell for the Bureau of Medical Care Insurance:

"Your director attended the 1954 Annual Conference of Blue Shield Plans April 4 to 8, 1954, at the Waldorf-Astoria Hotel, New York. One of the highlights was a decision regarding the administration's reinsurance bills (H.R. 8356 and S. 3114).

"The Conference endorsed the basic objectives of the President's message to Congress on health insurance matters and also believes in the encouragement of experimentation and expansion in the field of voluntary health insurance.

"With these premises, the Blue Shield Plans gave careful consideration to the Administration's reinsurance proposal and arrived at the conclusion that it may be unnecessary, particularly with respect to Blue Shield Plans, for the following reasons:

"1. An outstanding characteristic of Blue Shield Plans is that they have experimented and pioneered in a totally new concept of medical protection and have demonstrated their ability to stand financially.

"2. Since their inception Blue Shield Plans have

[Continued on page 2882]

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[Continued from page 2880]

been underwritten and hence, in fact, reinsured by the physicians who sponsor them. Customarily there is either a written or implied agreement that sponsoring physicians will accept a pro rata reduction in fees paid by a Plan should the necessity arise. Several of the most successful Blue Shield Plans in operation today were subsidized by their sponsoring physicians during early days of experimentation in an unexplored field.

"3. In a few years Blue Shield Plans have made remarkable progress in both extension of enrollment and of benefits. At present Blue Shield Plans have over 29 million people. Having come through the early critical period, there is no reason to expect they will now need to rely upon anything other than their own resources.

"Your director attended the 148th Annual Meeting of the State Society at the Statler Hotel, New York. The Bureau displayed charts showing progress of New York State Blue Shield Plans over a period of ten years. Descriptive literature on the plans was distributed, as well as the Bureau's eighth annual report. The exhibit was demonstrated by a representative, and interest was shown by many doctors and laymen.

"May 21, 1954—Your director conferred with executives of the Northeastern New York Medical Service in Albany.

"May 27, 1954—Mr. Farrell conferred with Dr. Granville W. Larimore, Deputy Commissioner, State Department of Health; Dr. Morton L. Levin, Assistant Commissioner for Medical Service, State Department of Health; Mr. John Cummings, Assistant to Dr. E. B. Wilson, Medical Consultant, Division of Vocational Rehabilitation; and with Miss Marion Rickert, Assistant to Dr. I. Jay Brightman, Assistant Commissioner for Welfare Medical Service, State Department of Social Welfare. Miss Rickert provided your Director with 'Book 5, State Welfare Medical Care Plan (Revised May 1, 1954).'

"The purpose of these meetings was to obtain information regarding schedules of allowances used by the departments of health and welfare. Each department showed keen interest in cooperating with the State Society.

"The eighth annual report on the seven Blue Shield Plans in New York State has been mailed to secretaries of component county medical societies, executive directors of the plans, Council members, and a selected list of interested parties. It appeared in the June 1, 1954, issue of the NEW YORK STATE JOURNAL OF MEDICINE."

After discussion it was voted to *approve* the report.

Hospital and Professional Relations.—Dr. Harold F. Brown, chairman, stated he had no report but hoped that the Special Committee to Study Hospital and Professional Relations, headed by Dr. Louis H. Bauer, would be continued. He was assured by President Mellen that it would.

Legislation.—*Executive Officer*: Dr. Harold B. Smith, Executive Officer, stated: "I received a communication from Mr. Hunt, Assistant Commissioner of Mental Hygiene, asking that I transmit to the Society working drafts of the proposed regulations for administration of the community mental health services, and that appropriate persons in the Society contact him with respect to any suggestions on these regulations. Dr. Anderton suggested that the matter be referred to the Subcommittee on Mental Hygiene."

It *was voted* that this be done.

Malpractice Insurance and Defense Board.—Dr. Anderton stated that on June 9 the Malpractice Insurance and Defense Board voted approval of the request of The Nettleship Company of Los Angeles, California, insurance agents, for permission to use material contained in the report of a study of malpractice claims made by this society in 1953. The request was referred to the Malpractice Insurance and Defense Board by the Council at its May meeting. Dr. Anderton moved approval by the Council of the Board's recommendation.

Approval *was voted.*

Office Administration and Policies.—Dr. John J. Masterson, chairman, stated: "A meeting of the Committee on Office Administration and Policies was held June 9, 1954.

"There was general discussion of the present procedure of reimbursing county societies, on a quarterly basis, for their shares of monies received from the American Medical Association for collecting American Medical Association dues. It was noted that, in many instances, checks of $1.00 or less had been transmitted to the county societies. It was the sense of the meeting that we notify the county societies that in the future we will reimburse once a year unless the society specially requests quarterly reimbursement."

Approval of the report *was voted.*

Publication.—Dr. Masterson, chairman, reported: "A meeting of the Publication Committee was held June 9, 1954.

"It was decided to recommend to the Council that the Convention Committee be requested to have all State Society exhibits from different departments grouped together at future conventions.

"Dr. Redway reported that he had received requests from certain speakers at scientific sessions of the last annual meeting for return of their papers. It was decided that Dr. Redway be granted authority to release any such papers.

"Dr. Redway was authorized to attend the meeting of the Scientific Program Subcommittee of the Convention Committee.

"It was decided to request the trustees to make an appropriation for a filing cabinet at $100 and a typewriter at approximately $200.

"It was decided to grant the request of the *Journal of the Indian Medical Profession* to abstract from the JOURNAL for one year, with the proviso that reconsideration be held in June, 1955.

"It was reported that the Reference Committee on Miscellaneous Business B of the 1954 House of Delegates approved a request that the admission policies of the Physicians' Home be clarified by the

[Continued on page 2884]

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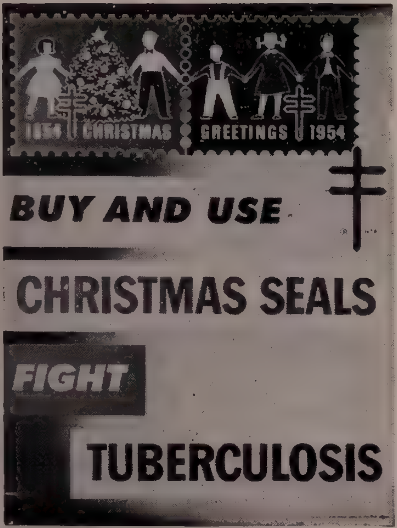
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[Continued from page 2882]

directors of the Home and that a review of policies and financial status of the Home appear in the JOURNAL.

"It was decided to grant requests of various physicians asking to have certain special medical degrees published in the *Directory*. It was noted that the college from which the degree was received will appear in parentheses.

"It was noted in the business manager's report that there was an increase of scheduled advertising of more than $18,000 for the calendar year.

"It was decided to approve the request of the advertising department for the purchase of 2,500 reprints of the article, 'Medical Society of the State of New York,' which appeared in the April 3, 1954, *Journal of the American Medical Association*, at a cost not to exceed $50."

After discussion the report *was approved* except that advertisements for alcoholic beverages and tobacco are to be discontinued when present contracts expire.

Planning Committee.—Dr. Peter J. Di Natale, chairman, stated: "We have two broad projects. One, the integration of county, State, and American Medical Association membership and the other is a study of the Council committee setup. This latter cannot possibly be completed by September. When we were given that project, the belief was expressed that such a study would take at least a year. We will work on it in the summer, but I doubt whether we can have that study completed by September."

Public Health and Education.—Dr. Theodore J. Curphey, chairman, presented the following: "June 8 and 9—Chairman's attendance at the Fiftieth Annual Health Conference, at Lake Placid.

"I also expect to attend the annual meeting of the New York State Citizens' Health Council at Hobart College, Geneva, June 17 to 19.

"Postgraduate Education—The following meetings have been arranged since our report to the Council at its April meeting: Suffolk County, March 31; Herkimer County, April 13; Oneida County Academy of General Practice and tricounty group, teaching day, April 15; Geneva Academy, April 19 and May 17 (symposium); Tompkins County, April 19; Chenango County (Syracuse program), April 28 and May 26; Jefferson County (Syracuse), May 16; Livingston County, May 6; Broome County, May 11; City of Kingston Laboratory 25th anniversary, May 19; Richmond County, May 19; Utica Academy and tricounty group, cancer teaching day, May 20; Cortland County, May 24; Mohawk Valley Gynecologic and Obstetric Society, May 25; Franklin County, May 26; Ontario County, June 8.

"It is our intention to get the various committees of the State Society that are concerned with medical fee schedule problems to meet jointly with the State Education Department, the State Department of Social Welfare, and the State Health Department to see whether we can establish an equitable and uniform schedule. As many who practice upstate know, there is a great deal of confusion. A man does an operation, we will say, on a child, and it depends on which department is paying for it, just how much he gets.

"I would like to report the resignation of Dr. Wood of Region 6 of the Subcommittee on Maternal and Child Welfare. Dr. Wood has asked to be relieved. I recommend that Dr. Singer of Plattsburg be appointed in his stead. I so move, Mr. President."

It was so *voted*.

"In connection with Region 10, I request that Dr. Bradford be appointed Chairman for Pediatrics. He is connected with the School of Medicine of the University of Rochester."

It was so *voted*.

"We have a letter from Dr. Dodds, chairman of the Mental Hygiene Subcommittee. He appreciates the honor but is not willing to accept the task as chairman. I move that his resignation be accepted and that someone else be appointed. I have no recommendation."

It was so *voted*.

It *was voted* that the president be empowered to make appointments, in conjunction with the chairmen of committees, when vacancies occur, without bringing them before the Council.

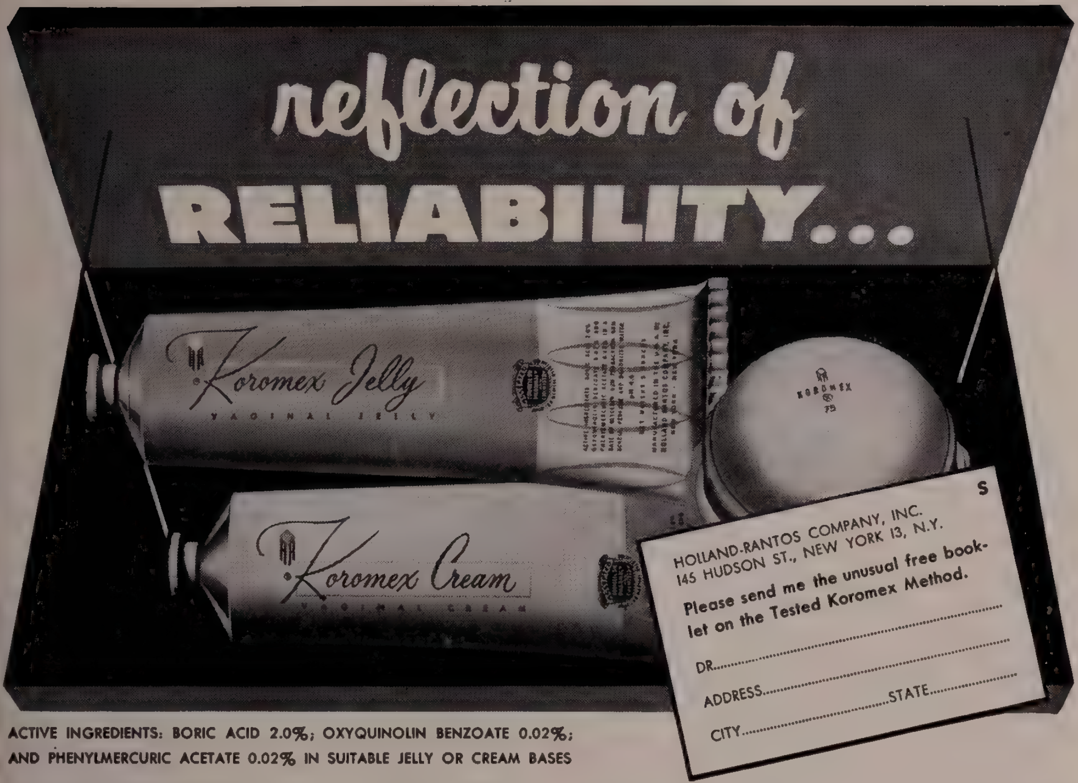
Dr. Curphey next presented the request of Dr. Arthur W. Schappell of Beekman-Downtown Hospital for a statement from the Society regarding the hospital plan to open a mental hygiene clinic using the services of psychiatrically trained psychologists and social workers for purposes of individual psychotherapy under the direction of a medical psychiatrist. He reported that opinions regarding this request had been obtained from Dr. Bernard Wortis and Dr. I. H. MacKinnon. Dr. Wortis felt that "under such circumstances . . . the public would be safeguarded." Dr. MacKinnon's opinion was that since this plan is now followed in some clinics it cannot be condemned in another, but he stated that psychiatric therapy does not belong in the field of psychology or social work, that among the 1,200 to 1,500 psychiatrists in New York City enough could probably be found to staff a psychiatric clinic in a hospital, that proposed changes in the Medical Practice Act may make the practice illegal, that efforts should be made to "give psychiatry a sound scientific approach," and that this procedure would tend to defeat such efforts.

Dr. Curphey stated: "I present this to the Council for discussion and decision in the light of the mental hygiene problem in the State as a whole. The Committee would recommend that Dr. Schappell's request be granted. We are fully aware of the gravity of the problem, and I think the matter should be discussed by the Council as to whether we are officially to approve this request."

After discussion it *was voted* that no action be taken at this time and that the Mental Hygiene Subcommittee obtain more facts about this clinic.

Dr. Curphey continued: "The next item deals with a request from the Academy of General Practice, who are holding their annual meeting in October

[Continued on page 2886]



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[Continued from page 2884]

in Syracuse. They ask us to underwrite the cost of addressing and mailing their program. They inform me that the printing of the program will be done by the State Health Department, and possibly the addressing might also be done by the State Health Department, but the mailing itself will not."

After discussion it *was voted* that the Academy of General Practice be permitted to use our facilities for addressing the envelopes for their programs and that the State Society be reimbursed by them for all expenses.

Dr. Curphey continued: "The next matter is in much the same vein, the question of expense for addressing and mailing the health examination form that has been approved by the Subcommittee on General Practice. It is aimed at offering assistance to the physician in running through the routine physical health examination, comparable to the detection center idea. The subcommittee feels it will serve a useful purpose if samples of these forms are put into the hands of every general practitioner in the State.

"It was also felt that this might help to further the education program of the American Cancer Society, which has the slogan, 'Every Doctor's Office a Cancer Detection Clinic.'

"We are holding this until we hear from the Cancer Society to what extent they might contribute. I will not ask for action at this time."

It *was voted* to adopt the report as amended.

Public Relations.—Dr. Floyd S. Winslow, chairman, presented the following report: "Much of the work of your committee and the Public and Professional Relations Bureau has been concerned with the annual convention.

"Prior to the meeting many newspaper releases and notices to various groups were sent out. Following the custom of previous years, digests, in the form of newspaper releases, were made of 18 scientific papers. These were written by Mr. Tracey and Mr. Walsh. They were reviewed by Dr. Henry I. Fineberg, a member of your committee. Newsmen expressed appreciation.

"During the convention a pressroom was maintained. This year 59 individuals used its facilities. These, believed to be the largest number ever to cover an annual meeting of our society, included reporters representing the Associated Press, the New York Times, the Herald Tribune, and others.

"Representatives of the Bureau attended sessions of the House of Delegates to make available to the press resolutions suitable for publication. As a result of providing these services, the annual convention received extensive press coverage, not only in New York City, but in other parts of the State.

"From comments heard after the meeting, the public relations session, attended by approximately 70 visitors, was considered most successful. The Bureau is now in the process of transcribing the minutes of this session, which were recorded by Dr. Laurance D. Redway, to whom your committee wishes to express sincere thanks.

"An exhibit entitled, 'Promoting Better Relations Between the Doctors and the Public,' was designed by the Bureau and displayed. The keynote was 'A Six Point Public Relations Program for You, the Doctor' and stressed emergency call systems, mediation committees, and other public services. This exhibit has been adapted for the Saratoga Spa Hall of Springs. The theme of this display is 'A Six Point Public Service Program for You, the People.' The 'Guide for Cooperation' between the medical profession, hospitals, and media of public information, such as the press, radio, and television, as approved by the House of Delegates, is scheduled to be available soon in pamphlet form. We plan for distribution of a copy to each member of the State Society.

"Immediately after adjournment, the Bureau began working on a digest of the principal activities of the House. This was mailed to members of the House of Delegates, county medical society secretaries, and executive secretaries.

"The June issue of the *Newsletter* was devoted almost exclusively to the convention, featuring a front-page story and picture of the House and photographs of our president and president-elect.

"Numerous expressions of appreciation, addressed to Dr. Eggston, were received by the Bureau as a result of sending out more than 100 certificates to doctors in practice fifty years.

"The Bureau assisted the Woman's Auxiliary officers and chairmen in the preparation of reports and arrangements for its 18th annual convention and in conducting the second annual Health Poster Contest. Assistance was also given to the editor of the *Distaff*, the chairmen of the State Fair Exhibit Committee, press and publicity committee, and public relations committee. The latest issue of the *Distaff* was distributed, and several mimeographed letters were sent out for the president and State chairmen.

"On May 20 Mr. Miebach attended a press conference conducted by the Coordinating Council of the Five County Medical Societies in New York City at the Hotel Statler. The purpose of this conference was to clarify the position of the medical profession on the principles of professional conduct pertaining to advertising, contract practice, and other subjects. Your chairman and Mr. Miebach were present at the 50th Annual Health Conference, sponsored by the State Health Department, at Lake Placid, June 7 to 10.

"Although distribution of the new series of 12 pamphlets on medical economic subjects to county medical societies has been completed, the project is still attracting much attention. Requests for copies are coming not only from local physicians but from persons and groups in other parts of the nation. In addition, there has been much favorable publicity. An article in the May issue of *Medical Economics* describing the series stated that it will not be the fault of New York doctors if laymen cannot answer certain medical economic questions. The reason given was that these doctors 'as part of their public education program' have 'issued a series of twelve 4-page leaflets, colorfully giving

[Continued on page 2888]

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[Continued from page 2886]

medicine's point of view on a variety of subjects.' "

Dr. Winslow stated: "In this report there are 3 points I might bring to the attention of the Board:

"1. In 1953 the House of Delegates authorized the compilation by the Bureau of Public Relations of a guide for cooperation between public information media and our State Society, that is, press, radio, and television. Such a subcommittee was appointed. They worked on the matter during the past year and reported to the House of Delegates in 1954. In their report was this paragraph: 'It is urged that the Public and Professional Relations Bureau be instructed to supply all branches of the media of public information with the names of designated spokesmen from the State Society who will be available for consultation with representatives from such media.'

"That means, when they need information, such representatives want somebody to whom they can go. This principle was approved by the Reference Committee and adopted by the House. It is the thought of the Public and Professional Relations Bureau that the men to act as such spokesmen are the chairmen of the various committees of the State Society. I move that the Council authorize the Public and Professional Relations Bureau to designate the chairmen of the committees of the State Society as spokesmen for the distribution of this information."

It was so *voted.*

"2. It is probably known to the Council that each year the Medical Society sends to each member who has practiced for fifty years a certificate, expressing our congratulations and our appreciation of his work. As a result, we have this folder full of replies which came in appreciation of the certificates.

"I present this not for the credit of the Public Relations Bureau but so this Council will appreciate the warmth and sincerity of those who receive our certificates in the State.

"3. A subcommittee for the purpose of communicating with the media of information has been appointed by President Mellen and needs the approval of the Council: Dr. John C. McClintock, Albany, chairman; Dr. Henry I. Fineberg, Queens; Dr. John D. Naples, Erie. I move the approval of those appointments."

Approval *was voted.*

It *was voted* to approve the report as a whole.

Veterans Administration.—Dr. Herbert H. Bauckus, chairman, stated: "I would like to report that the board of directors of Veterans Medical Care Plan, Inc., voted to approve renewal of the contract, upon the same terms as before, with the United States Veterans Administration. That is the contract we have had in force since 1946. At the direction of the board I signed this contract.

"The Board of Directors instructed me to secure financial data and statistics that would tell of the operation of the plan since 1946. I have compiled a few items, and I won't try to read them all to you, but I have one or two I think you would be interested in. We will have all of this data by fall, and I have an idea that the board of directors have in mind to institute a better feeling on the part of the veterans' organizations to request this kind of care. We have four Veterans Administration branches throughout New York State. In the metropolitan area in 1948 there was $217,000 authorized for care; under the plan in 1949, $222,000; in 1950, $134,000; in 1951, $146,000; and in 1952, $139,000. The physicians did not receive that amount of money. For example, in 1951, of $146,000 authorized, $118,000 in claims was paid to physicians.

"As long as we have been talking about neuropsychiatry, I would like to mention this: We have, especially in the metropolitan area, a very large amount of Veterans Administration contract clinic work. Originally we objected to so much of this work going to contract, and, in view of what has been said about free choice and the ethics of physicians who have to do with obstruction to free choice, I wondered whether or not this might not permit some attention. In 1951, when the Veterans Administration was paying the plan on authorization, $118,000, contract neuropsychiatry received authorization for $551,000. We have nothing to do with the contract clinic except we know of the work that they do. This is a separate contract made by the Veterans Administration with groups of physicians, in some cases with single physicians. However, you see we still, even in this metropolitan area, do a certain amount of work. In the Syracuse area it amounted to $400,000 in 1948; in 1949, $251,000; 1950, $209,000; 1951, $167,000; 1952, $194,000; 1953, $183,000; and we estimate for 1954 about $161,000. I should add that the number of physicians participating in the Syracuse area last year was 995, so there are quite a few doctors in that area taking care of a very small number of cases."

Workmen's Compensation.—Dr. Gerald D. Dorman, presented the following report of the Workmen's Compensation Bureau:

"Activities of the Workmen's Compensation Bureau during April and May, 1954, were:

1. Arbitrations: Your director participated in arbitration proceedings in Suffolk County, May 17; Richmond County, May 19; and Westchester County, May 24. A novel issue was raised by the State Insurance Fund when they objected to paying an assistant's fee for operation in a hospital where it was proved that no resident or intern was available. Owing to the shortage of interns throughout the State, this is becoming a factor of increasing importance. The State Insurance Fund raised the point that they pay a per diem fee of $14 to all hospitals of over 49 beds, and this fee is supposed to include the services of an intern or resident. They feel that where the hospital does not provide an intern or resident, they should not be required to pay an assistant's fee. In all instances where this question was raised the arbitrators awarded the regular fee of $15 to the assistant.

"A physician should not be required to provide at his own expense an assistant in cases where interns are not available. The matter of fees for hospitalization of claimants, including the assistance of interns or residents, is one of arrangement between insurance carriers and hospitals. We have, however, brought the matter to the attention of the Chairman of the Workmen's Compensation Board.

"2. New Procedures: We were requested by the chairman of the Workmen's Compensation Board to send invitations to the president, secretary, and chairman of the Workmen's Compensation Committee of each county medical society throughout the State, calling attention to meetings arranged by Miss Donlon to acquaint all parties of interest with the new hearing procedures which were adopted as a result of recommendations made recently by the Moreland Act Commissioner.

"Such meetings were held in Rochester on May 6; Binghamton, May 10; Syracuse, May 12; and Albany, May 14. An all day meeting was held at the Engineering Building in New York City, on May 20, which was attended by your chairman and your director.

"The meeting was participated in by Miss Donlon and members of her executive and administrative staff, by representatives of insurance companies, self-insurers, and others interested in the administration of the Workmen's Compensation Law. The new rules and regulations were fully discussed and illustrated by mock hearings attended by referees and representatives of insurance carriers and attorneys. Your chairman was called upon to make a few remarks by Miss Donlon and bespoke the cooperation of the medical profession.

"The meeting on May 20 was participated in by nearly 1,000 persons, all of whom received a package of material consisting of the new regulations, the new forms, and other matters concerning the new setup. In brief, the new procedure is an attempt to simplify and hasten claim adjudication. The full cooperation of the medical profession is a prime requisite. We shall ask for this cooperation, not only in so far as attendance at hearings is concerned but also with respect to prompt and detailed reporting.

"3. Payment of Specialists Fees: Shortly after the amendment to the workmen's compensation fee schedule was promulgated in 1948, a question was raised by an insurance carrier representative in Albany concerning the payment of a specialist fee in any case where the services could have been rendered by a general practitioner. At that time the Medical Society took the position that a specialist was entitled to a specialist fee according to the schedule in any case where the condition fell within his specialty regardless of the extent of the injury. In the event that the specialist treated a case not within his specialty, we agreed he was entitled only to the general practitioner's fee. This resulted in Item 9a of the fee schedule supplement of May 1, 1949, which we quote: 'Fees for office, home, and hospital visits, in general, are those for medical services usually deemed to be performed in general practice. Physicians holding "S" ratings and rendering services outside their fields of specialization may charge only general practitioner fees.'

[Continued on page 2890]

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[Continued from page 2889]

"When the supplement of May, 1949, was promulgated, the Medical Society no longer had representatives on the Fee Schedule Advisory Committee, but Mr. Henry Sayer, who was a member of that committee and represented the insurance carriers answered, at our request, the insurance company representative who raised the issue by giving it as his opinion that a specialist is entitled to a specialist fee regardless of the extent of the injury so long as the condition treated falls within his specialty.

"Recently it was brought to our attention that the chairman of the Workmen's Compensation Board in a reply to an inquiry of a firm of attorneys concerning specialist fees included the following statement in her reply: 'There is no doubt that the issue as to whether or not a case requires specialist care is one of professional opinion and discretion, but that is not solely the professional opinion or discretion of the doctor who performs this service and renders his bill. The Workmen's Compensation Law set up safeguards around that situation. Any carrier has a right to object to a bill and *if, in the particular case, it is the decision of the arbitrators that specialist care was not indicated, the fee will be in accordance with Item 9a above quoted. If, however, the opinion of the arbitrators is that specialist service was indicated, then the charge may be at regular specialist rates.*'

"This raised a new question, viz: the burden of an arbitration committee to decide whether in a given case specialist care was indicated, indeed a novel and important question, but one which we believe is already answered by the free choice principle under the Workmen's Compensation Law.

"We immediately took issue with the statement of Miss Donlon holding that to raise any doubt as to the right of a patient to employ a specialist, and for the specialist to be paid a specialist fee, regardless of the extent of the injury, was to open up the arbitration procedures to countless disputes over medical care and medical bills. It was our opinion, which we stated in our communication to Miss Donlon, that every patient was entitled to call upon a specialist, and a specialist was entitled to a specialist fee in accordance with the terms in the fee schedule so long as the condition he treated fell within his specialty. We interpreted Item 9a to mean this and this alone.

"At almost the same time we received a communication from the Bronx County Medical Society drawing attention to the fact that a specialist with a specialist rating, had been denied a specialist fee by the State Insurance Fund on the ground that the condition he treated was a minor one and could have been treated by a general practitioner. We immediately took up this issue with the State Insurance Fund and enclosed copy of our argument in a memorandum to the director of the State Insurance Fund. We are pleased to state that as of May 27, 1954, Mr. W. B. Folger, executive director of the State Insurance Fund, indicated that their objection to the doctor's bill arose from incomplete information. The doctor's bill for specialist care has been paid in full. According to Mr. Folger this 'leaves no unresolved issue.' Thus far, we have had no indication of the position to be taken by Miss Donlon although we have pressed her for an early meeting to discuss this matter. We believe it to be of the utmost importance and will leave no stone unturned to obtain a solution in accordance with the position long held by the Bureau and this Society.

"4. Moreland Commission: Your director attended a number of meetings in connection with the drawing up of a statement by the county medical societes concerning the participation of hospitals and physicians and their respective roles in the treatment of compensation claimants in municipal and voluntary hospitals. Your director suggested that there be a uniform pronouncement on the part of the county medical societies which should be approved in advance by Mr. Archie O. Dawson, Moreland Act Commissioner, and by Miss Donlon, chairman of the Workmen's Compensation Board. Such a statement was drawn up and has been submitted to these individuals. Mr. Dawson has approved the statement in every respect. We have not yet learned fully of Miss Donlon's position. We believe she will approve the statement with a few modifications. The submission of the position of the medical societies in advance to these parties should make for uniformity of procedures so that any violations on the part of hospitals or physicians can be properly dealt with under the provisions of the Workmen's Compensation Law. Thus we believe we have fulfilled the promise made to Commissioner Dawson at the meeting held on Monday, April 26, that this matter would be acted upon and clarified before he leaves the Moreland Commission to take up his duties as a Federal Judge on June 1.

"Your chairman and director wish to state that Mr. Dawson and his staff have been most sympathetic and cooperative in their attitude towards our organization and the medical profession and have been accessible at all times in connection with all issues that have arisen since the Moreland Commission began its activities. We understand that Governor Dewey will shortly appoint a successor to Mr. Dawson.

"5. A. W. Bailey, D.O., has been a member of the Medical Appeals Unit of the Industrial Council since its inception in 1935. The Medical Appeals Unit has now become a part of the Workmen's Compensation Board instead of the Industrial Council. We have endorsed Dr. Bailey for reappointment to the Medical Appeals Unit and have so indicated to the Governor and to the Osteopathic Society which nominated him. The Council gave approval to this action at its meeting in May."

It *was voted* to adopt the report.

Unfinished Business

Landess Case.—Dr. Anderton stated: "Mr. Martin has handed me today a letter from the firm of Cahill, Gordon, Reindel & Ohl, to the effect that one Dr. Landess is appealing from the findings of the House of Delegates to the Judicial Council of the American Medical Association."

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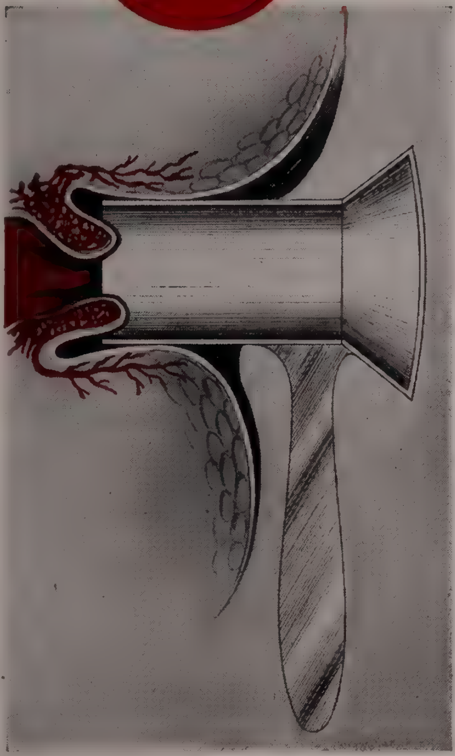

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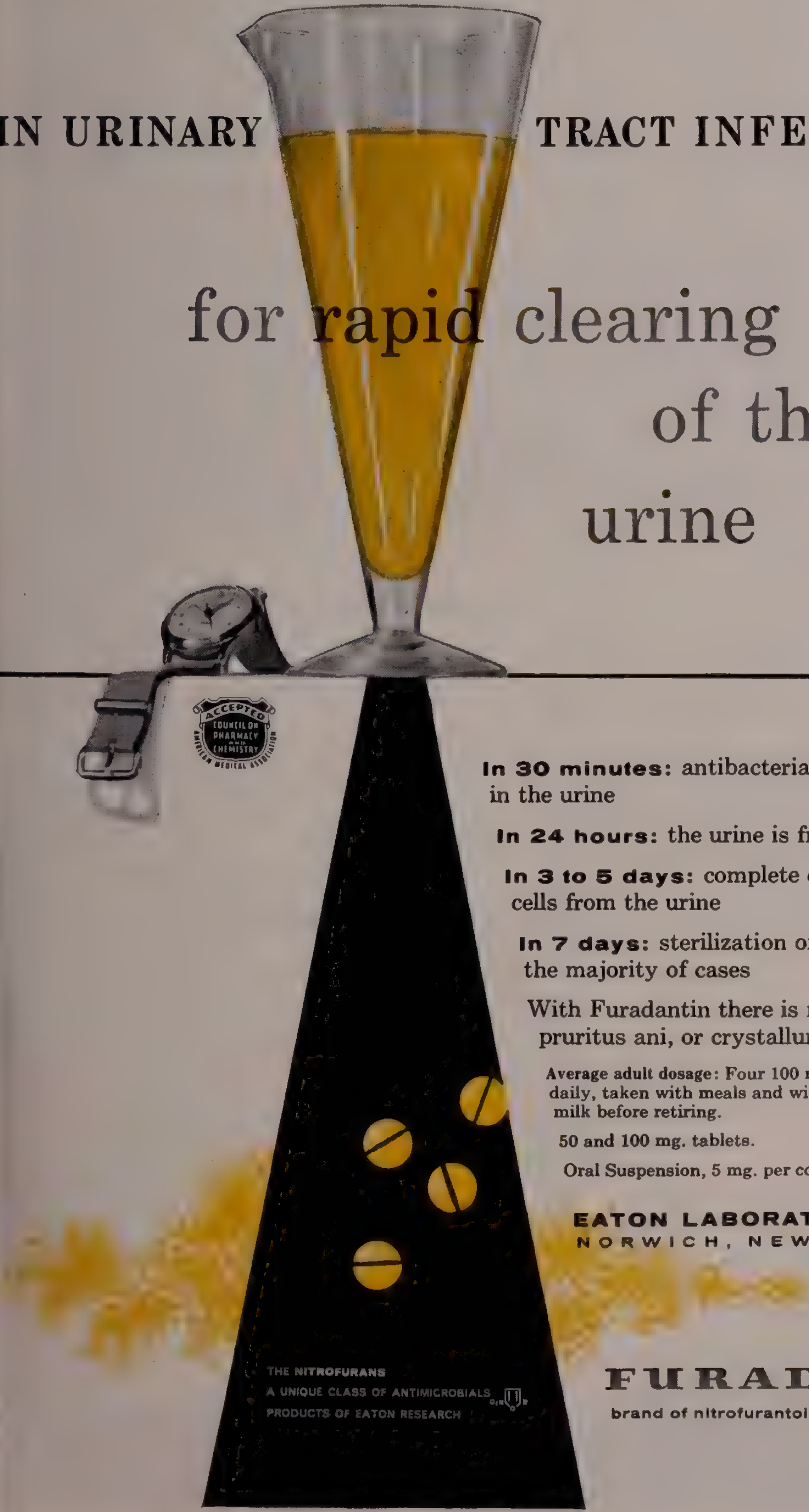
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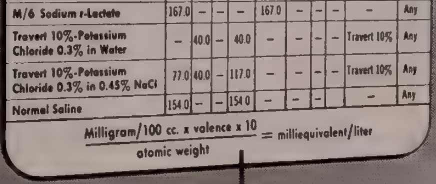

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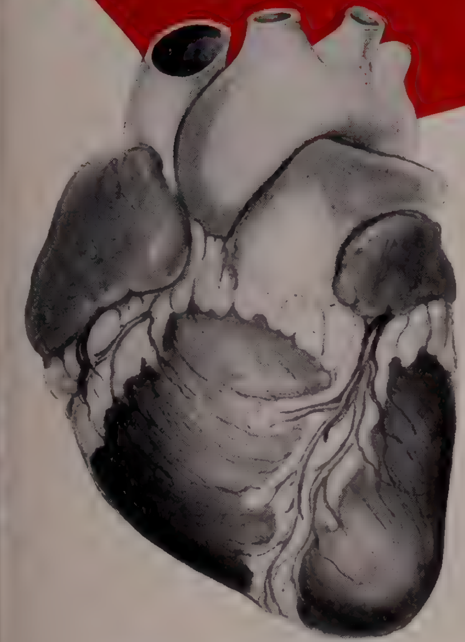

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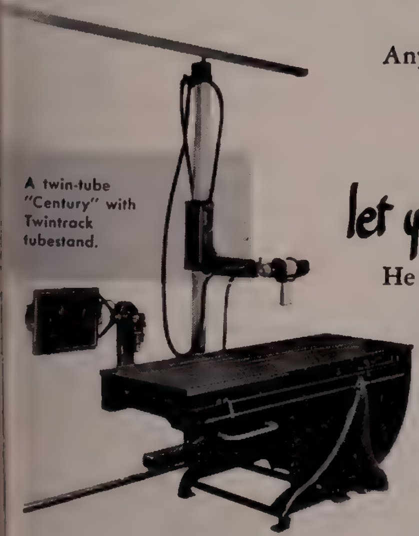

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*Lucia, S. P.: Wine as Food and Medicine, New York, The Blakiston Company, Inc., 1954.

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1. Rath, C. E.: M. Clin. North America 34: 1779, 1950.

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(1) Lawrence, E. D., W. J. Surg., Ob. & Gyn., 58, 236-7, 1950.

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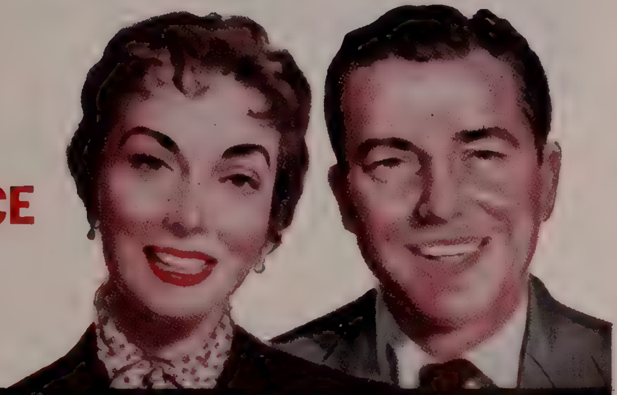

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ERYTHROMYCIN
the antibiotic of choice
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TRIPLE SULFONAMIDES
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Each tablet contains:

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Sulfamethazine	0.083 Gm.

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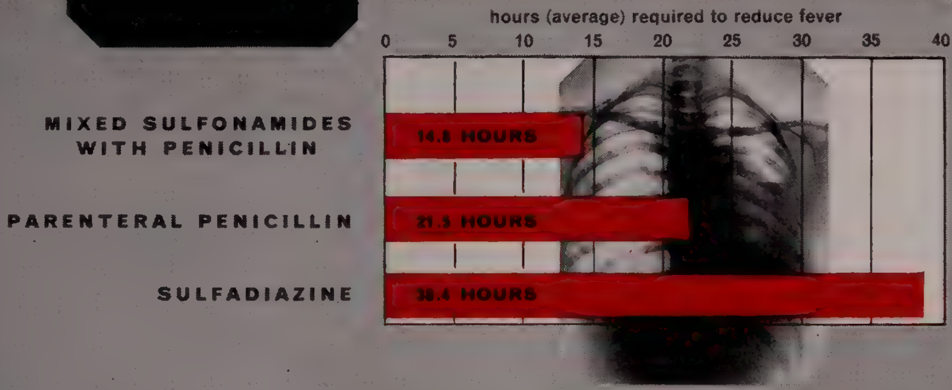

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combines 4 of the most useful sulfonamides with penicillin for—

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0.056 Gm.	sulfamethazine	0.056 Gm.
0.111 Gm.	sulfacetamide	0.111 Gm.
—	penicillin G	250,000 Units

Deltamide

Tablets: Bottles of 100 and 1000.

Suspension: Bottles of 4 and 16 oz.

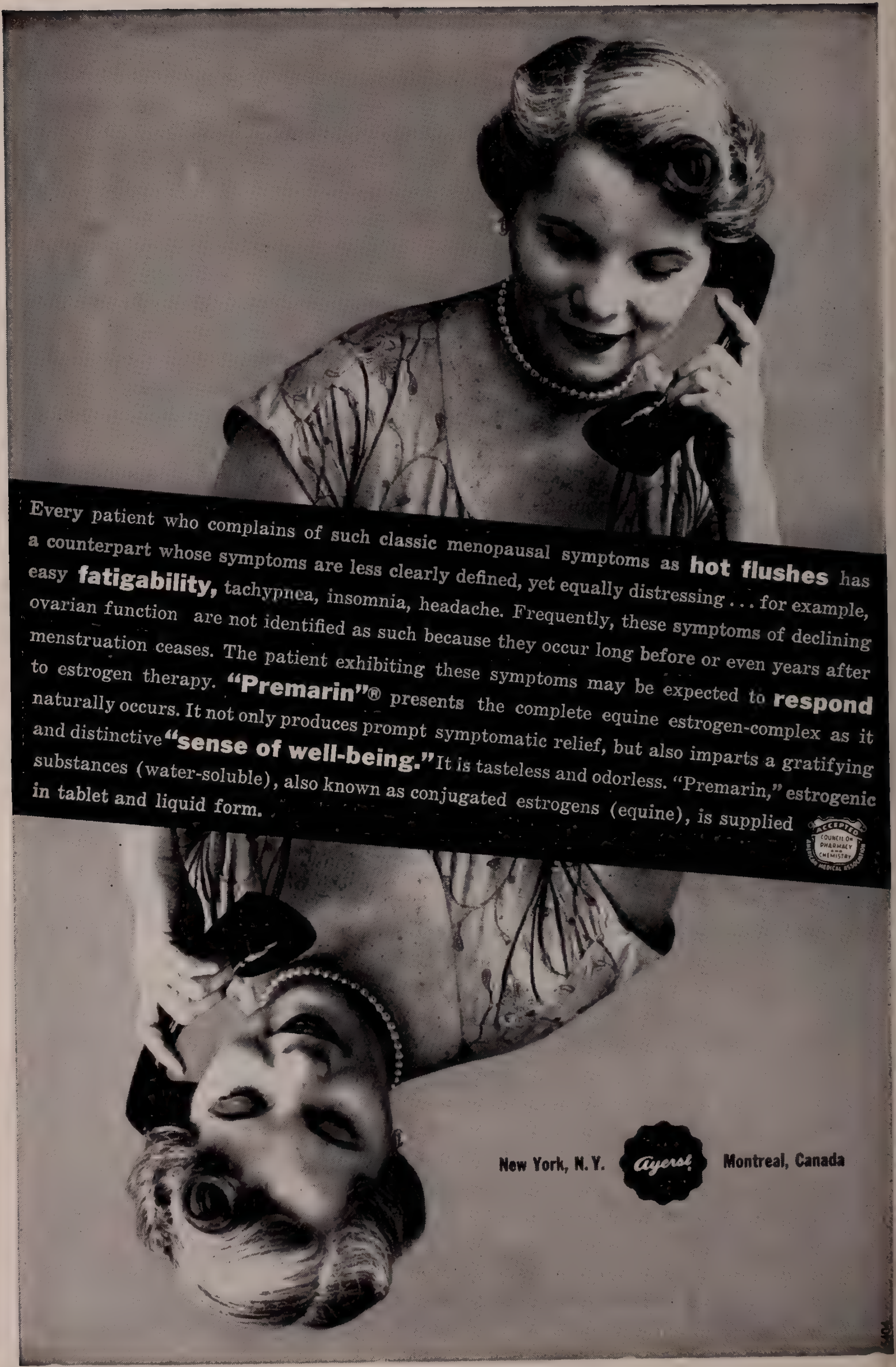
Deltamide *w*/penicillin

Tablets: Bottles of 36 and 100.

Powder for Suspension: 60 cc. bottles to provide 2 oz. of suspension by the addition of 40 cc. of water.

also available **DELTAMIDE**

THE ARMOUR LABORATORIES
A DIVISION OF ARMOUR AND COMPANY • CHICAGO 11, ILLINOIS



Every patient who complains of such classic menopausal symptoms as **hot flushes** has a counterpart whose symptoms are less clearly defined, yet equally distressing . . . for example, easy **fatigability,** tachypnea, insomnia, headache. Frequently, these symptoms of declining ovarian function are not identified as such because they occur long before or even years after menstruation ceases. The patient exhibiting these symptoms may be expected to **respond** to estrogen therapy. **"Premarin"®** presents the complete equine estrogen-complex as it naturally occurs. It not only produces prompt symptomatic relief, but also imparts a gratifying and distinctive **"sense of well-being."** It is tasteless and odorless. "Premarin," estrogenic substances (water-soluble), also known as conjugated estrogens (equine), is supplied in tablet and liquid form.

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AMERICAN MEDICAL ASSOCIATION

New York, N. Y. **Ayerst** Montreal, Canada

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• WHAT YOU "FEEL,"—YOU KNOW . . . and when patients "feel" the benefits of deep, comforting heat, they come back for more good diathermy treatments—and they tell others. That's why the L-F Model SW-660 Diathermy has satisfied so many patients, pleased so many doctors and won such outstanding recognition.

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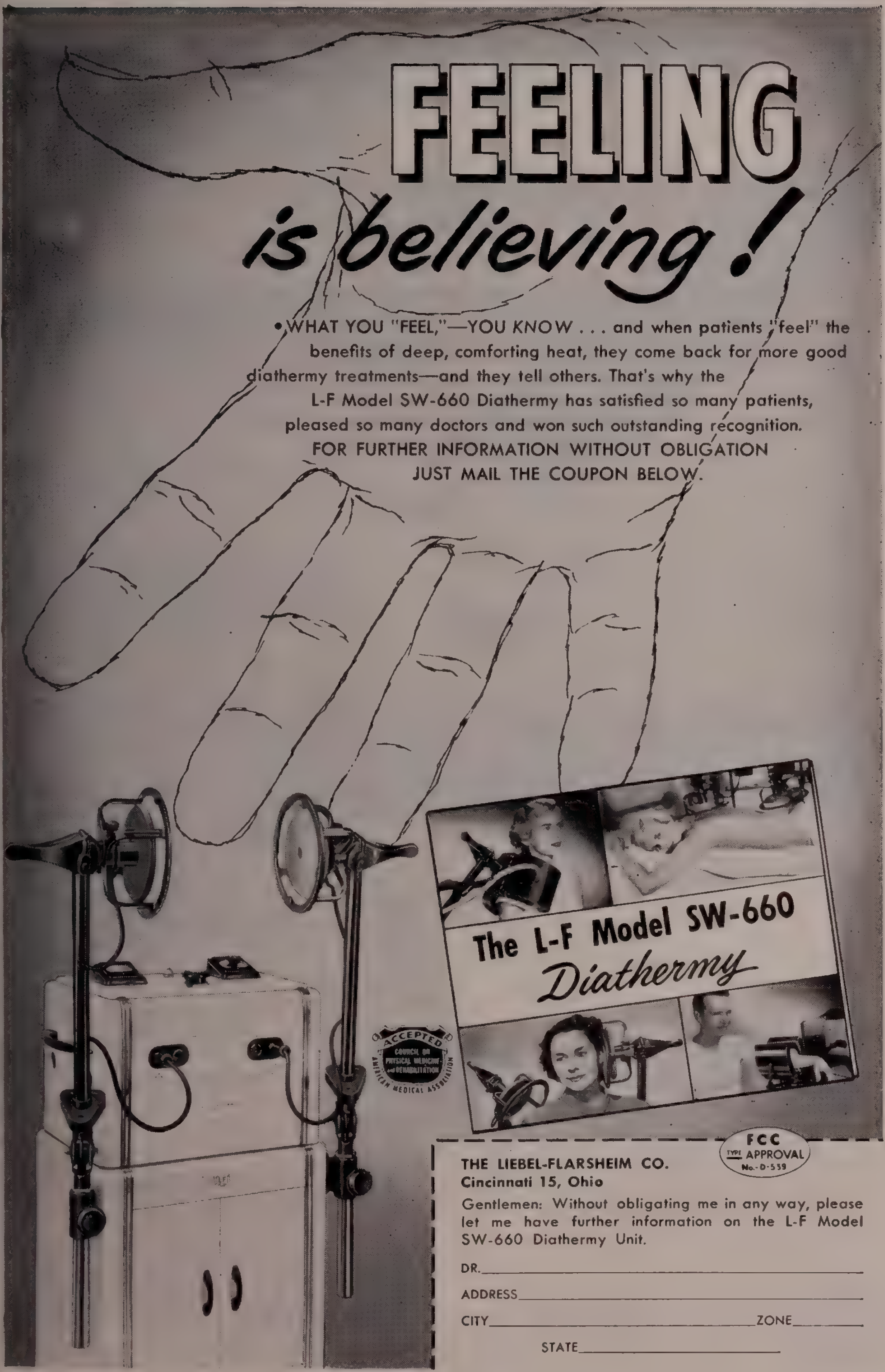
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Diathermy
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TYPE APPROVAL
No.-D-539

THE LIEBEL-FLARSHEIM CO.
Cincinnati 15, Ohio

Gentlemen: Without obligating me in any way, please let me have further information on the L-F Model SW-660 Diathermy Unit.

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AMINOPHYLLINE suppositories APC

APC STANDARD OF QUALITY

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

▶ when injections are not available or desirable

▶ to supplement oral or intravenous aminophylline

Convenient, easy-to-use, effective, Aminophylline Suppositories **APC** are made with a non-greasy, water miscible base Council-Accepted, as are . . .

AMINOPHYLLINE TABLETS, APC (ENTERI COATED) non-irritant to gastric mucosa, readil disintegrated in the intestinal tract. Indicated i pulmonary or cardiorenal edema.

SUPPLIED: Suppositories, APC 7½ gr. (0.5 Gm. boxes of 12. Enteric coated tablets, 1½ g (0.1 Gm.), 3 gr. (0.2 Gm.), bottles of 100, 100 5000; uncoated tablets 1½ gr. (0.1 Gm.) an 3 gr. (0.2 Gm.), bottles of 100, 1000, and 5000.

Please specify suppositories or tablets on SAMPLE request

AMERICAN PHARMACEUTICAL COMPANY
MANUFACTURING CHEMISTS
NEW YORK 54, N.Y.
Over 37 years of service to the profession

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AMINOPHYLLINE SUPPOSITORIES

THE THYROID AND COLDS

"...the conclusion is warranted that hypothyroidism ...does reduce resistance to colds. In these patients, administration of desiccated thyroid is as essential to freedom from colds as correction of any of the other multiple influences that make people susceptible to colds."

Cheney, M. C.: GP 10: 32 (July) 1954.

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prepared exclusively from beef thyroid...provides whole gland medication at its best. Superior uniformity assured by chemical assay and biological test.

Standardized equivalent to Thyroid U.S.P. Tablets of ½, 1 and 2 grains. Bottles of 100 and 1000.

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A DIVISION OF ARMOUR AND COMPANY • CHICAGO 11, ILLINOIS

new!

for daytime tranquility

car-sed-ine

Carbromal with Scopolamine

A new, *non-barbiturate* formula for daytime use
To calm the tense and nervous patient

CAR-SED-INE fills a long-felt need for a non-hypnotic, non-narcotic sedative that can be safely prescribed for daytime sedation without dulling the senses or producing unwanted drowsiness.

CAR-SED-INE combines two drugs of established clinical efficacy and safety:

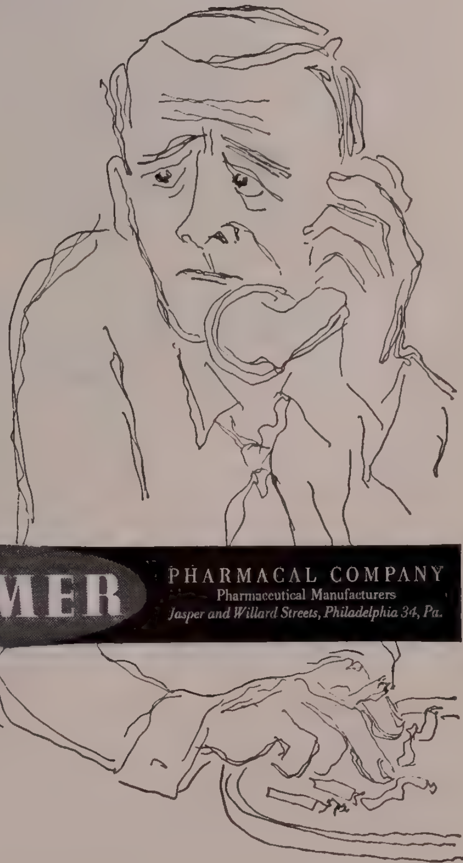
Carbromal ". . . a dependable sedative. It allays excitement and anxiety and tends to restore quietude and tranquility."[1]

Scopolamine ". . . certainly . . . is effective in relieving the patient's emotional disturbances."[2]

FORMULA: each tablet contains Carbromal, 250 mg., and Scopolamine HBr., 0.1 mg.

DOSAGE: one tablet (in rare cases, two) two to four times daily, as required.

Supplied, on prescription only, in bottles of 100 and 1,000 tablets.



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Pharmaceutical Manufacturers
Jasper and Willard Streets, Philadelphia 34, Pa.

1. Krantz, J.C. & Carr, C.J.: Pharmacological Principles of Medical Practice, Williams & Wilkins Co., Baltimore, Md., 1951.

2. Goodman, L. & Gilman, A.: The Pharmacological Basis of Therapeutics. The Macmillan Co., New York City, 1941.

Serving the medical profession for nearly a third of a century.

Because it is widely known throughout the world and has demonstrated its effectiveness in rapidly controlling the great majority of common infections, this broad-spectrum antibiotic is prescribed with certainty by physicians the world over.

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Supplied in the many convenient forms required in the practice of modern medicine: Capsules, Tablets (sugar coated), Pediatric Drops, Oral Suspension, Intravenous, Intramuscular, Ophthalmic (for solution), Ophthalmic Ointment, Ointment (topical), Vaginal Tablets, Troches, Otic, Nasal, Aerosol, Soluble Tablets and Topical Powder.

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BRAND OF OXYTETRACYCLINE

rapid absorption
wide distribution
prompt response
excellent toleration

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"...BEST METHOD AVAILABLE..."

After giving 'Teldrin' *Spansule* capsules to 30 allergic patients over a 6 month period, Rogers[1] concluded:

"It is our belief that this drug in this form provides the best method available for using antihistamine medication."

'Teldrin' *Spansule* capsules are "the best method available" because they incorporate 3 distinct advantages:

1. They contain chlorprophenpyridamine maleate, the widely prescribed, well-tolerated antihistamine.
2. They release this drug slowly, continuously, and uninterruptedly over a period of 8-10 hours, with a therapeutic effect lasting approximately 12 hours. Side effects are thus held to a minimum.
3. They provide maximum dosage convenience.

TELDRIN*

chlorprophenpyridamine maleate

SPANSULE*

brand of sustained release capsules

S.K.F.'s widely acclaimed new

ANTIHISTAMINE

preparation

made only by

Smith, Kline & French Laboratories, Philadelphia 1

the originators of sustained release oral medication

[1] Rogers, H. L.: Ann. Allergy 12:266 (May-June) 1954.

*T.M. Reg. U.S. Pat. Off.

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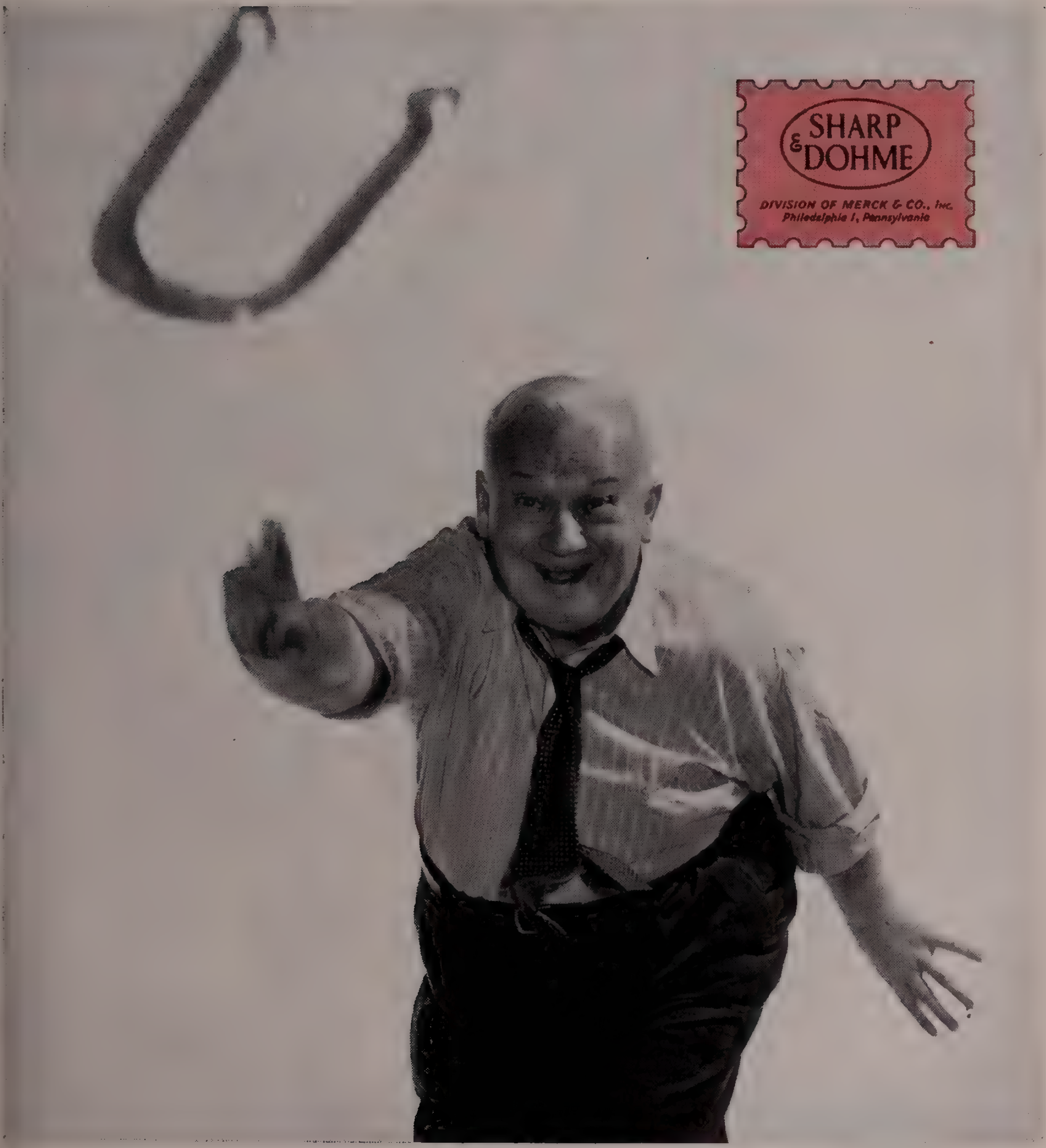


SHARP & DOHME

DIVISION OF MERCK & CO., Inc.
Philadelphia 1, Pennsylvania

PHOTOGRAPH BY CHARLES KERLEE

Gives "remarkable increase in strength, vigor"[1]...

REDISOL®

CRYSTALLINE VITAMIN B_{12}

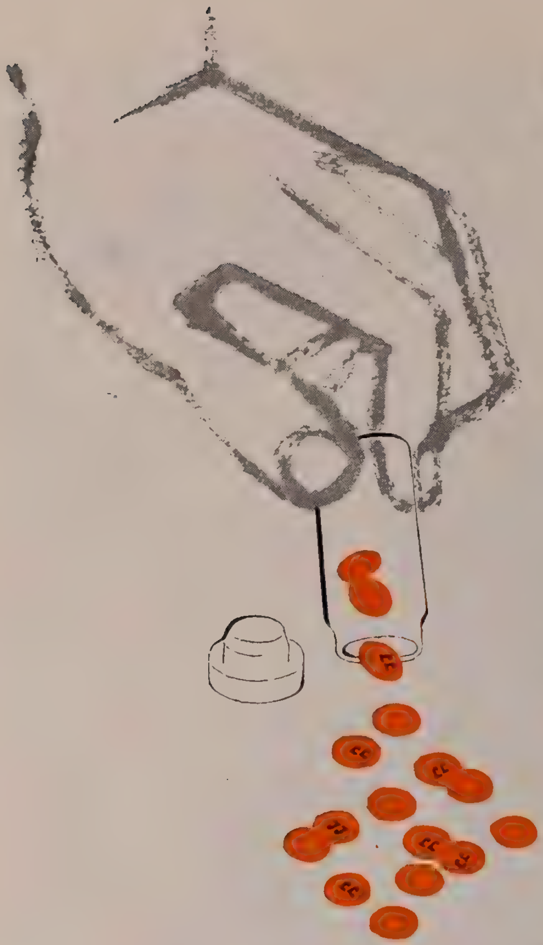
In "pernicious anemia or tropical sprue in relapse," not even blood transfusions give the "remarkable increase in strength, vigor and appetite,"[1] induced by vitamin B_{12}.

Redisol—vitamin B_{12}—has hemopoeitic activity of liver[2]; improves neurologic symptoms; no evidence of toxicity.[2] Valuable in trigeminal neuralgia to relieve pain.

Quick Information: *Tablets,* 25 and 50 *mcg.; Injectable,* 30, 100 and 1000 *mcg.* per cc.; *Elixir,* 5 *mcg.* per 5 cc.

References: 1. J.A.M.A. 153:185, 1953: 2. N.N.R. 1953, p. 486.

ACHROMYCIN
TETRACYCLINE
TABLETS



A widely prescribed form of the outstanding broad-spectrum antibiotic

Sugar-coated, easy-to-swallow ACHROMYCIN Tablets are available in three potencies: 50, 100, and 250 mg.

In each of its many forms, ACHROMYCIN exhibits notable characteristics: it diffuses rapidly in body tissues and fluids; gastrointestinal irritation is rare and mild in nature.

ACHROMYCIN has proved effective against a wide variety of infections including those caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain virus-like and protozoan organisms.

OTHER DOSAGE FORMS

CAPSULES: 50, 100, and 250 mg.

PEDIATRIC DROPS: (see opposite page)

ORAL SUSPENSION: (see opposite page)

SPERSOIDS* Dispersible Powder (Chocolate Flavor): 50 mg. per rounded teaspoonful (3 Gm.), 12 and 25 dose bottles

SOLUBLE TABLETS: 50 mg.

INTRAVENOUS: vials of 100, 250, and 500 mg.

INTRAMUSCULAR: vials of 100 mg. (for dilution with 2 cc. of sterile water or saline)

TOPICAL OINTMENT (3%): ½ and 1 oz. tubes

OPHTHALMIC OINTMENT (1%): ⅛ oz. tubes

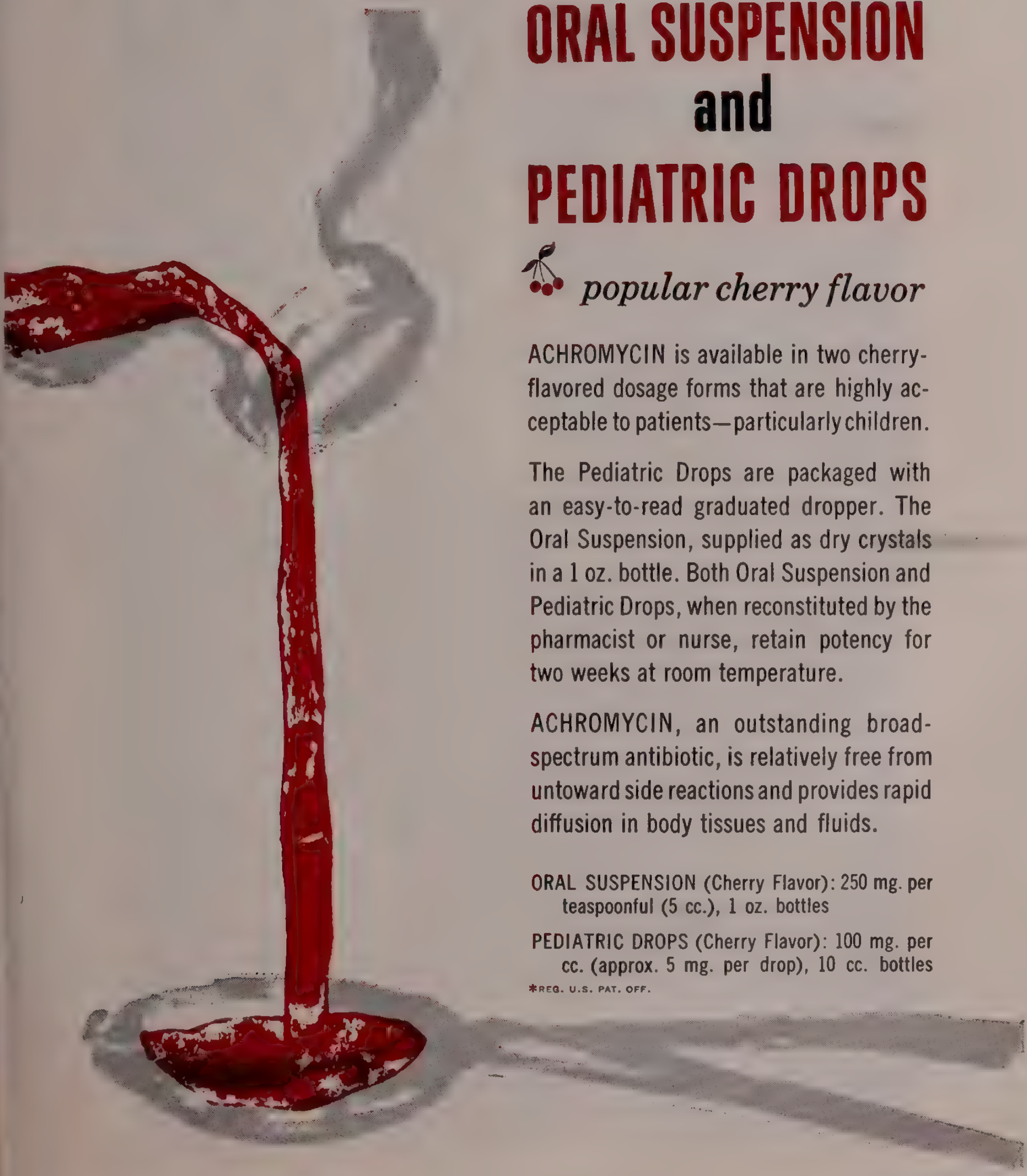
EAR SOLUTION (0.5%): 10 cc. dropper bottles

*REG. U.S. PAT. OFF.

Lederle

ACHROMYCIN*

Tetracycline Lederle



ACHROMYCIN*

Tetracycline Lederle

ORAL SUSPENSION and PEDIATRIC DROPS

popular cherry flavor

ACHROMYCIN is available in two cherry-flavored dosage forms that are highly acceptable to patients—particularly children.

The Pediatric Drops are packaged with an easy-to-read graduated dropper. The Oral Suspension, supplied as dry crystals in a 1 oz. bottle. Both Oral Suspension and Pediatric Drops, when reconstituted by the pharmacist or nurse, retain potency for two weeks at room temperature.

ACHROMYCIN, an outstanding broad-spectrum antibiotic, is relatively free from untoward side reactions and provides rapid diffusion in body tissues and fluids.

ORAL SUSPENSION (Cherry Flavor): 250 mg. per teaspoonful (5 cc.), 1 oz. bottles

PEDIATRIC DROPS (Cherry Flavor): 100 mg. per cc. (approx. 5 mg. per drop), 10 cc. bottles

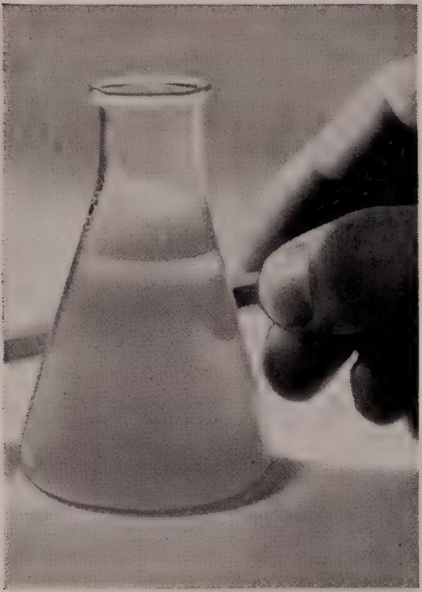
*REG. U.S. PAT. OFF.

LEDERLE LABORATORIES DIVISION

AMERICAN *Cyanamid* COMPANY PEARL RIVER, N.Y.

Lederle

REQUIRES NO ACID BUFFERS!



". . . the use of added acid buffers is not required for oral administration; . . . because of the limited solubility of benzathine penicillin G [BICILLIN] *in the stomach, it is not highly susceptible to destruction by gastric juices."*[1]

After ½ hour in artificial gastric juice (pH 1.6), BICILLIN remains relatively insoluble, and is nearly 75% active.

● Unlike other forms of penicillin, Oral BICILLIN requires no acid buffers to resist gastric destruction. This is because Oral BICILLIN is relatively insoluble. Acid tests[2] show that this insolubility persists for hours in artificial gastric juice (pH 1.6), that Oral BICILLIN retains full penicillin potency of its undissolved portion—71.7% after ½ hour, 31.1% after 3 hours, 18.1% after 6 hours.

Resistance to acid destruction is a surety factor in penicillin absorption—a safeguard for therapeutic effect.

Supplied: Oral Suspension BICILLIN: Bottles of 2 fl. oz.—300,000 units per 5-cc. teaspoonful; 150,000 units per 5-cc. teaspoonful. Tablets BICILLIN: Vials of 36—200,000 units per tablet; bottles of 100—100,000 units per tablet.

1. *American Medical Association: New and Nonofficial Remedies, 1954. J. B. Lippincott Co., Philadelphia, p. 147*
2. *Scott, R. L., and others: Antibiot. & Chemo. 4:691 (June) 1954*

ORAL BICILLIN®

Benzathine Penicillin G (Dibenzylethylenediamine Dipenicillin G)

Wyeth®
Philadelphia 2, Pa.

PENICILLIN WITH A SURETY FACTOR

Especially for stubborn night cough

Soothing
Syrup **SEDULON** 'Roche'
Non-narcotic

HOFFMANN-LA ROCHE INC • NUTLEY 10 • N. J.

SEDULON®..BRAND OF DIHYPRYLONE (3,3-DIETHYL-2,4-DIOXO-PIPERIDINE)

Meat...

in Geriatric Nutrition

Although the nutrient needs for optimal health in the aged are not known to differ significantly from those in younger adults,[1] it has been shown that the daily protein requirements in elderly patients vary from person to person. Ascertained values range from below to above allowances recommended for persons in earlier years of adulthood.[2]

According to criteria such as "physical activity, gastrointestinal structure and function, pathologic disturbances, and chemical balances," it is suggested that an optimal diet for the elderly patient should provide at least 20 per cent of its calories in the form of protein.[3]

For several reasons this high intake of protein appears desirable. Decreased activity in the aged tends to induce loss of tissue protein. Preservation of protein enzymes and of endocrinal harmony necessary for supporting anabolic processes requires adequate protein nutrition. Also, the aged person usually is able to handle the end products of protein metabolism satisfactorily.

Generous amounts of tender lean meat can go a long way in supplying the needs of the aged for top quality protein. From 25 to 30 per cent or more of cooked lean meat is protein. Other valuable contributions include the B group of vitamins and essential minerals, especially iron, phosphorus, and potassium. The easy and almost complete digestibility and the palate appeal of meat constitute physiologic values important in the nutrition of the geriatric patient.

---

1. Sebrell, W. H. Jr., and Hundley, J. M.: Malnutrition, in Stieglitz, E. J.: Geriatric Medicine, Medical Care of Later Maturity, ed. 3, Philadelphia, J. B. Lippincott Company, 1954, chap. 13.
2. Ohlson, M. A.; Roberts, P. H.; Joseph, S. A., and Nelson, P. M.: Nutrition and Dietary Habits of Aging Women, Am. J. Pub. Health *40*:1101 (Sept.) 1950.

   Albanese, A. A.; Higgons, R. A.; Vestal, B.; Stephanson, L., and Malsch, M.: Protein Requirements of Old Age, Geriatrics *7*:109 (Mar.-Apr.) 1952.

   Roberts, P. H.; Kerr, C. H., and Ohlson, M. A.; Nutritional Status of Older Women; Nitrogen, Calcium, Phosphorus Retentions of 9 Women, J. Am. Dietet. A. *24*:292 (Apr.) 1948.

   Kountz, W. B.; Hofstatter, L., and Ackermann, P.: Nitrogen Balance Studies in Elderly People, Geriatrics *2*:173 (May-June) 1947.

   Kountz, W. B.; Hofstatter, L., and Ackermann, P. G.: Nitrogen Balance Studies in 4 Elderly Men, J. Gerontol. *6*:20 (Jan.) 1951.
3. Freeman, J. T.: Clinical Correlations in Geriatric Nutrition, J. Clin. Nutrition *1*:446 (Sept.-Oct.) 1953.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

American Meat Institute
Main Office, Chicago... Members Throughout the United States

overcoming weight control obstacles

Obedrin®

and the 60-10-70 basic diet

Patients can lose weight and maintain a restricted diet, in comfort, without undesirable side effects . . .

EXCESSIVE DESIRE FOR FOOD

Obedrin offers the full anorexigenic value of Methamphetamine to curb the desire for food, while counteracting mood depression. Patient cooperation is made easier.

NERVOUS TENSION

To avoid excitation and insomnia, Pentobarbital is the ideal daytime sedative. It counteracts overstimulation by Methamphetamine, but does not diminish the anorexigenic action.

VITAMIN DEFICIENCIES

Obedrin tablets contain adequate amounts of vitamins B$_1$ and B$_2$ to supplement the 60-10-70 Basic Diet, but not enough to stimulate the appetite.

EXCESSIVE TISSUE FLUIDS

Large doses of Ascorbic Acid aid in the mobilization of fluids, so often an obstacle in obesity.

BULK NOT NECESSARY

The 60-10-70 Basic Diet provides enough roughage, so artificial bulk is unnecessary. The hazards of impaction caused by "bulk" producers is obviated.

Write For
60-10-70 Diet
Pads, Weight Charts
And Professional
Sample Of
Obedrin

S. E. MASSENGILL CO.
Bristol, Tennessee

Each tablet contains:

Semoxydrine HCl (Methamphetamine HCl)	5 mg.
Pentobarbital	20 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	0.5 mg.
Riboflavin	1 mg.
Niacin	5 mg.

Why physicians prescribe more 'Drilitol' than any other antibiotic intranasal preparation

1. 'Drilitol' contains two antibiotics.

In combination, these antibiotics—anti-grampositive gramicidin and anti-gramnegative polymyxin—are active against the wide range of bacteria commonly found in intranasal infections.

2. 'Drilitol' contains a decongestant.

Paredrine* Hydrobromide rapidly opens blocked intranasal airways, promotes ventilation and drainage, and facilitates dispersion of Drilitol's components throughout the nasal cavity.

3. 'Drilitol' contains an antihistaminic.

Thenylpyramine hydrochloride counteracts local allergic manifestations. Also, when applied topically, it produces an antipruritic and procaine-like local anesthetic effect that is soothing to inflamed mucosa.

FORMULA: Contains gramicidin, 0.005%; polymyxin B sulfate, 500 U/cc.; thenylpyramine hydrochloride, 0.2%; 'Paredrine' Hydrobromide (hydroxyamphetamine hydrobromide, S.K.F.), 1%. Preserved with thimerosal, 1:100,000.

★T.M. Reg. U.S. Pat. Off. for hydroxyamphetamine hydrobromide, S.K.F.

4. 'Drilitol' obviates fear of sensitization to—and organisms resistant to—antibiotics widely used systemically.

Because 'Drilitol' contains two antibiotics that are *not* in widespread systemic use, you avoid the danger of sensitizing the patient to–and of developing in him organisms resistant to–penicillin or the "mycins", which are so frequently used systemically in serious infections.

5. 'Drilitol' is available in two forms:

Drilitol[†] Spraypak'

convenient plastic squeeze bottle to provide superior coverage of the nasal mucosa in a fine, even mist.

Drilitol' Solution

with special "dosage-adjusted" dropper that delivers the recommended dose.

Smith, Kline & French Laboratories, Philadelphia

M. Reg. U.S. Pat. Off. 'Spraypak' Trademark

WHEN YOUR PATIENTS ASK...

What have VICEROYS got that other filter tip cigarettes haven't got?

The Answer Is

20,000 FILTERS

in Every Viceroy Tip

Viceroy's new-type filter, made of a non-mineral cellulose acetate, gives the greatest filtering action possible without impairing flavor or impeding the flow of smoke.

Smoke is also filtered through Viceroy's king-size length of rich, costly tobaccos. Thus, Viceroy smokers actually get *double the filtering action!*

WORLD'S LARGEST-SELLING FILTER TIP CIGARETTE

New King-Size

Filter Tip **VICEROY**

Only a penny or two more than cigarettes without filters

VICEROY
Filter Tip
CIGARETTES
KING-SIZE

You can lead a patient to a diet but you can't make him eat it!

There will be much less balking at diets, however, if you advise the patient to add Ac'cent to his food. Ac'cent, though not adding a flavor of its own, brings out the *natural* flavors of foods. It makes heavy seasoning unnecessary. Even in foods that are held for a long period of time, Ac'cent retains the true delicious flavors.

Ac'cent, obtained from natural food sources, is 99+% pure monosodium glutamate in crystal form. It is not a synthetic chemical, and it is nontoxic. Ac'cent contains 12.3 per cent of sodium. Include Ac'cent in your special diets when indicated . . . "finicky eaters," too, will find it makes food taste better . . . it is available at neighborhood food stores.

May we send you a brochure on **Ac'cent®**
(99+% pure monosodium glutamate)
makes good food and good cooking taste better!

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Ac'cent is not
a salt substitute,
but it will make foods
more flavorful.

AC'CENT, T. M. Reg. U. S. Pat. Off.

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AN OUTSTANDING MEMBER
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OF VITAMINS

for people past forty—prescribe this potent dietary supplement

MI-CEBRIN

(Vitamin-Mineral Supplements, Lilly)

- **complete**—each Tablet 'Mi-Cebrin' contains 11 vitamins and 10 minerals.
- **economical**—convenient and economical to take, only one Tablet 'Mi-Cebrin' daily prevents practically all vitamin-mineral deficiencies.
- **potency protected**—a special coating between the vitamins and minerals prevents potency-destroying oxidation-reduction reactions and serves as a moisture barrier for maximum stability.
- **quality controlled**—'Mi-Cebrin' is painstakingly manufactured. Every finished lot is thoroughly assayed before release.

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Supplied in bottles of 100 tablets at drug stores everywhere.

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EDITORIALS

Point of No Return

Speaking at the 48th annual meeting of the Second District Branch at Garden City, Long Island, on September 15, 1954, Dr. Renato J. Azzari, president-elect of the Medical Society of the State of New York, stressed the importance to medicine and the community of continuing activity of the Society's membership in community life and regular attendance at medical society meetings. He said in part:

> In spite of the fact that the Medical Society of the State of New York has grown to the extent of some 23,700 members and is the third largest medical society in the world, the Society will not be a force in community and professional spheres unless all of its members are active. The events of the past few years demonstrate without any doubt that the Medical Society must be a force in community life. At one time the Medical Society devoted most of its interests to the field of science. This, however, is a thing of the past. Since the great issue of socialized medicine came upon the horizon a few years ago, the medical profession of necessity has been in the limelight in economic mat-

ters. In order to preserve its freedom on all fronts, it is necessary for medicine to maintain a continuing interest in matters affecting the economic and political life of our country. . . During the recent session of Congress, medicine was ably represented in Washington by the American Medical Association. The views of the profession were voiced on numerous bills, including the reinsurance bill, the expansion of the Hill-Burton Hospital Construction Act, the new income tax law, social security extension, and other proposed laws.

What happened, however, when the American Medical Association, representing the medical profession, appeared at Congressional hearings to voice the views of the doctors of the nation? Time and time again, the representatives of the national organization were confronted by the accusation that they did not represent medicine. On one occasion, for example, a member of the House of Representatives charged that the representatives of the American Medical Association, and I quote, "assume to speak for the entire medical profession." In making this charge, he referred to the fact that many physicians take exception to the stand of the American Medical Association.

Because the American Medical Association has been making great strides in having its opinion listened to in Congress, it is only natural that opponents should try to tear down the organization by charging that it does not represent the majority of the physicians in this country. As proof of the success of the A.M.A.'s efforts we know that socialized medicine was defeated under former President Truman, and recently great credit was given to the Association for the defeat of the reinsurance bill. If the impression can be created in the minds of the Congressmen and the Senators that the A.M.A. does not represent the majority of doctors, then the power of the organization in representing the medical men of this country would be decidedly weakened.

The best way for increasing the strength of our county, our State, and our national medical societies is by improving attendance at all meetings. In the first place, better attendance will mean that whatever decisions are arrived at will represent the views of more doctors. A county medical society is a democratic organization, which reflects the views of its members. The members decide on issues that are brought before them, and they elect delegates to state societies and to the A.M.A. Therefore, the greater the attendance at county society meetings and state society meetings, the greater will be the true representation of the medical profession at all levels.

If the great majority of our members attended meetings regularly, the charge that the A.M.A. or the State Society do not adequately represent the medical profession could never be made. . . .

Attendance at medical society meetings can do much to rectify this situation. This is another reason why we should encourage greater attendance at medical society meetings. Physicians who know the facts but who nevertheless disagree with the Society's position, by their presence at society meetings will better understand the reasons for the society's attitude. Out of fairness, they may decide that even though they disagree, they should not oppose the will of the majority of their colleagues.

If a doctor disagrees with the Society's position because of lack of knowledge, his attendance at society meetings should afford him the opportunity to learn the true facts. Having obtained the true facts, it is quite possible that he will either actively endorse our position or remain silent. If such a doctor has to "get his gripe off his chest" so to speak, the most effective place for him to voice his opinion is at a county medical society meeting and not to his patients, to the press, or to members of the local clubs.

In this year of 1954, American medicine has reached the point of no return. Through our organized societies we have entered the battle to preserve the American way of life as set down by the founding fathers of this great nation. In other words, in our fight against socialized medicine and in our continuing endorsement of progressive legislative measures, we have gone far beyond the realm of science. We are now deeply engrossed in fighting against political diseases, such as socialism and communism. We cannot, therefore, turn back in this fight without losing the respect of the American people who are our patients. On the contrary, we must go forward. The only way we can go forward is by the active participation of all our members in all our plans.

We have frequently stressed in these columns that medical policy is made at the grass roots or county society level. Any physician with the courage of his convictions can make his voice heard and his vote count at his county society meetings. It is to be hoped that more and more this forum will be utilized.

Early Detection of Deafness in Children

Recent surveys seem to indicate that "more than 150,000 children in New York State suffer some degree of hearing loss."[1] This is said to vary from small losses in perception to severe losses in conduction or combinations of these types of hearing disability. In many of these children the condition can be corrected by prompt diagnosis and skillful treatment.

Writing in the same publication,[1] Dr. Edmund Prince Fowler, chairman of the Subcommittee on the Hard of Hearing and Deaf of the Council Committee on Public Health and Education of the Medical Society of the State of New York, asks:

> If the early detection of deafness is vital from the preventative standpoint, what do we mean by "early detection?" Do we mean detection early in the ear disorder; do we mean early in the child's attendance at school; do we mean still earlier in infancy, or do we mean during gestation of the child? Do we mean the discovery of deafness in siblings, in parents or earlier ancestors, or do we mean all of these?
>
> An over-all clinical approach certainly would include all of these and, therefore, a careful family history, premarital management with advice and treatment, as well as supervision of the mother's diet and health before, during, and following pregnancy. Most important, perhaps, is the family history in order to discover whether or not there is any predisposition to deafness. It is difficult to alert parents to hearing disasters when as far as they remember deafness has never occurred in their family. It is easy to alert anyone to disaster when it has previously been seen or suffered.

Granted early detection there should be immediate beginning of rehabilitation by such technics as speech learning and speech reading by lips and written symbols. Dr. Fowler says further that one of the most commonly neglected items in caring for the hard-of-hearing child is the hearing aid. In thousands of instances the early employment of a hearing aid solves the problem.

Commissioner Herman E. Hilleboe of the New York State Department of Health states:

> Up until 1954, limited services were available to hard-of-hearing children through State-aid disbursed to counties for otolaryngological operations, radiation therapy, and speech training for hard-of-hearing preschool children. This has been a part of the medical rehabilitation program of the State Health Department, worked out in cooperation with the children's court judges. In addition, the Education Department has aided in the provision of special classes for hard-of-hearing school children and of speech training in the absence of special classes.
>
> Governor Dewey authorized expansion of this program beginning in June, 1954, to include the provision of hearing aids to hard-of-hearing persons under twenty-one years of age. This significant development in our rehabilitation program also provides for diagnostic services by experts in the field so that each child will receive the proper type of aid for his or her particular hearing loss, with necessary training in its use. Without such medical advice, poorly functioning aids may be selected, which are quickly discarded by the child or replaced by other instruments sold to anxious parents who go from representatives of one company to another seeking help.
>
> It is estimated that during the ensuing year more than a quarter of a million dollars of aid will be distributed throughout the State for the purchase and servicing of hearing aids for

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[1] Health News 31: 1, 17 (July) 1954.

children. This program can bring health and happiness to hundreds of children who otherwise would be brought up in a world of silence with all its social, educational, and emotional obstacles. Many children will be able to attend special classes or transfer from special classes to regular classrooms for their education. Those who cannot be helped will be identified and advised accordingly.

Thus, early detection of deafness in children is assured of a follow-up and rehabilitation program in this State that should salvage much human material for a new opportunity for the pursuit of happiness and useful careers.

DIABETES WEEK—NOVEMBER 14–20, 1954

ANNOUNCEMENT

PRIZE ESSAYS

The Lucien Howe Prize and the Merrit H. Cash Prize will be open for competition at the next Annual Convention of the Medical Society of the State of New York, May 9 to 13, 1955, in Buffalo.

The *Lucien Howe Prize* of $100 will be presented for the best original contribution on some branch of surgery, preferably ophthalmology. The author need not be a member of the Medical Society of the State of New York.

The *Merrit H. Cash Prize* of $100 will be given to the author of the best original essay on some medical or surgical subject. Competition is limited to the members of the Medical Society of the State of New York who at the time of the competition are residents of New York State.

The following conditions must be observed:

> *Essays shall be typewritten or printed with the name of the prize for which the essay is submitted, and the only means of identification of the author shall be a motto or other device. The essay shall be accompanied by a sealed envelope having on the outside the same motto or device and containing the name and address of the writer.*

If the committee considers that no essay or contribution is worthy of a prize, it will not be awarded.

Any essay that may win a prize automatically becomes the property of the Medical Society of the State of New York, "to be published as it may direct."

All essays must be presented not later than *February 1, 1955*, and sent to the Chairman of the Committee on Prize Essays of the Medical Society of the State of New York, 386 Fourth Avenue, New York 16, New York.

R. Townley Paton, M.D., *Chairman*
Committee on Prize Essays

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*Sturnick, M. I., and Gargill, S. L.: New England J. Med. 247:829 (Nov. 27) 1952.

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References:

1. Russek, H. I.; Urbach, K. F.; Doerner, A. A., and Zohman, B. L.: J.A.M.A. *153*:207 (Sept. 19) 1953. 2. Winsor, T., and Humphreys, P.: Angiology *3*:1 (Feb.) 1952. 3. Plotz, M.: N. Y. State J. Med. *52*:2012 (Aug. 15) 1952.

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Cancer of the Nasopharynx

WALTER L. MATTICK, M.D., AND FRANK C. MARCHETTA, M.D., F.A.C.S., BUFFALO, NEW YORK

(From the Roswell Park Memorial Institute)

THERE would seem inadequate justification for a discussion of this subject were it not for the sad fact that the existence of this entity is still insufficiently appreciated by the general practitioner and sometimes overlooked by the otolaryngologist. Even pathologists are not in complete agreement on the proper classification of these tumors. With these preliminary thoughts in mind, it seemed advisable to review some of the cases of cancer in this anatomic region, especially for the years 1937 through 1949, for it was just some years prior to this period that ideas in the pathology and therapy of this condition had become sufficiently standardized for a more rational evaluation of this entity.

In fact, one of our first case histories of this disease, that of a man of fifty years of age who in 1915 first noted obstructive tubal symptoms, is in reality a short epitome of the history of earlier professional experiences in the pathology, diagnosis, and therapy of this disease. This case report is replete with the names of such early pioneers in the diagnosis and therapy of this malady as Cornelius Coakley, who even then had appreciated the necessity of biopsy for the accurate diagnosis of this condition; Harvey Cushing, who, although still surgically minded in the treatment of this condition, nevertheless recognized a feeling of insecurity without postoperative radium applications; Ewing and Goodpasture, who diagnosed these sections as "round cell epithelioma," while other pathologists were still speaking of such tumors as "endothelioma" or "lymphosarcoma"; and, last but not least, Gordon New,[1,2] a recognized pioneering advocate of the use of radiation in this field, who early called attention of the medical profession to the importance of this much overlooked condition.

"The most characteristic malignant tumor of the nasopharynx is the lymphoepithelioma," states Ewing.[3] "The process produces small flat or polypoid tumors, eventually eroded and ulcerated, but long failing to give obstructive symptoms. They escape detection by all except the experienced observers who make careful search of the nasopharynx." Regarding the characteristic transitional cell and lymphoepithelioma, he continues, "The outstanding features are the small, often silent primary tumor, the slow growth, the early and later wide metastasis, and the high radio-sensitivity. The tumors occur at all ages, but chiefly between thirty to sixty years of age. They produce small local growths which are soft and slow to ulcerate, do not bleed much, and are nearly all difficult to detect. The location may be any portion of the nasopharynx, but most frequently about the eustachian orifice, post nares or vault of the pharynx. The first symptom is often enlargement of the cervical nodes, multiple or bilateral, from which the dissemination may progressively involve wide lymphatic areas and eventually the liver and other organs. The mortality is high, in spite of the radio-sensitivity. The average duration is about three years." With this excellent summary of the usual clinical findings and course, let us now embark on a short study of the experiences here.

In a total of 82 cases seen at the Roswell Park Memorial Institute from 1937 through 1949, this lesion appeared in approximately 0.3 per cent of all cancer as compared with 0.5 per cent of all cancer as seen in the base of the tongue and 1.1 per cent of all cancer as seen in the tonsils,

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Ophthalmology and Otolaryngology, May 14, 1954.

TABLE I.—AGE DISTRIBUTION IN 82 CASES

Age (Years)	Cases	Per Cent
1 to 9	0	
10 to 19	4	4.8
20 to 29	3	3.6
30 to 39	9	10.9
40 to 49	13	15.8
50 to 59	34	41.4
60 to 69	11	13.4
70 to 79	7	8.6
80 to 89	1	1.2
Total	82	99.7

the two other component parts of the Waldyer ring. Whereas the occurrence in males was much greater in cancer of the tonsil (10:1) and base of the tongue (15:1), here the relationship of males to females is approximately 2 to 1. In this immediate series there were 55 males and 27 females. Two cases worthy of mention but not included are a supracellar cyst or craniopharyngioma and possible chordoma. The ages of the patients with this lesion varied from fourteen to eighty-two years, the greatest number of cases being recorded in the fifth decade while the most susceptible age periods seemed to be included within the fourth through to the sixth decades (Table I). Although a high rate of incidence of this tumor has been noted in the Mongolians, only one patient of this race was recorded in this series, probably because of the few Chinese in this locality.

The etiology of cancer in this location is apparently that of cancer in general since there is no unusual form of irritation beyond that incident to the general location in the lymphoid tissues of Waldyer's ring with its consequent phagocytic filtering effect on the air and food intake of the body. Syphilis might be considered but in these cases seemed of negligible importance as far as the serology would indicate. Tobacco also did not seem a factor.

Pathology

Under this heading most of our attention will be devoted to the more undifferentiated groups of epitheliomas, commonly spoken of as transitional cell and the lymphoepithelioma which have proved to be the characteristic tumors of this locality. Time will but barely suffice to mention in passing the other common epidermoid carcinomas encountered here, i.e., the pearl-forming epitheliomas which, according to some, are rare, the mucous membrane epitheliomas of all grades of differentiation, and the rarer adenocarcinomatous or gland-forming type. The mixed tumors, lymphosarcomas, Hodgkin's, plasmocytomas, and the rarer chordomas and craniopharyngiomas are not included here in order to compare better the therapy of the more common epithelial malignancies of this region.

One of the most lucid descriptions of the more undifferentiated group of epitheliomas, namely, the lymphoepithelioma and the transitional cell carcinomas, is that given by Cappell.[4] Ever since the first classic description of the lymphoepitheliomas by Regaud and Schmincke in 1921, the exact delineation of these types has been a rather confusing issue with many tissue pathologists. Cappell seems to have clarified the situation by his excellent description and infers that when the more anaplastic types of epidermoid carcinoma are separated out, the more undifferentiated types, i.e., the basiloid or transitional cell and the lymphoepithelioma, then fall into a group by themselves with three subdivisions into the transitional cell, Regaud, and Schmincke types. He admits that these groups tend to merge into each other and that absolute distinction between the various types is difficult and often a personal equation. Lacassagne[5] would include all such neoplasms under the general heading of lymphoepitheliomas, while Ewing agrees that separation is often difficult and a matter of opinion on which different observers may disagree.

Cappell describes the Regaud type of lymphoepithelioma as being composed of "strands of epithelial cells with large pale staining vesicular nuclei and poorly delimited cytoplasm embedded in a stroma more or less rich in lymphocytes." The outlines of the individual epithelial cells are very indistinct, and no intercellular bridges can be demonstrated; in many places the appearance is that of a protoplasmic syncytium. Throughout the epithelial columns are many round, deeply staining nuclei, apparently belonging to lymphocytes which have infiltrated between the epithelial groups. Individual cells may be closely packed together or may form in each mass a rather loose reticulum heavily infiltrated with lymphocytes. Where the stroma shows very massive lymphocytic infiltration, the columns of epithelial cells appear to disintegrate, liberating individual epithelial elements among darkly staining lymphocytes." Such areas, he believes, form the transition between the Regaud and the Schmincke types.

The Schmincke types, according to Cappell, are more difficult of definition, and the cell columns

TABLE II.—HISTOPATHOLOGY OF CARCINOMA OF THE NASOPHARYNX

Classification	Number of Cases	Per Cent
Grade I	8	9.7
Grade II	19	23.1
Grade III (transitional, lymphoepithelioma)	22	26.8
Grade IV	27	
Regaud type	23	28.1
Schmincke type	4	4.8
Grade V	2	2.4
Unclassified (epithelial neoplasm)	3	3.6
Diagnostic error (adamintinoma)	1	1.9
Total	82	99.8

tend to become dissociated, giving rise to a loosely packed group of round or polygonal cells: "In some parts, these elements form the bulk of the tissues but in other parts, they are separated by a dense lymphocytic infiltration." Thus stages of transition can be traced between the Regaud types with trabeculae of epithelial cells and the loosely packed "sarcomatous" cells. "It seems clear that the two classical types are not sharply separated but merge gradually into one another. The difference is quantitative rather than qualitative, and the appearance seems to depend upon the degree to which the cells remain in syncytial strands or become detached to form free elements."

The third group, the transitional cell epithelioma, is characterized by two features: (1) "In the first place, the origin from the surface epithelium is much more obvious, than in the other types," and (2) "there is usually no trace of keratinization and the cells in general are devoid of intercellular bridges which often reveals the squamous nature of the anaplastic non-keratinizing tumors" and "there is an absence of the intimate mixture of lymphocytes throughout the epithelial alveoli as in the Regaud or the Schmincke types." Cappell differs from Ewing[3] and Salinger and Pearlman[6] who find the transitional cell epithelioma more common. This has not been his experience when the obviously more anaplastic squamous cell epitheliomas were excluded.

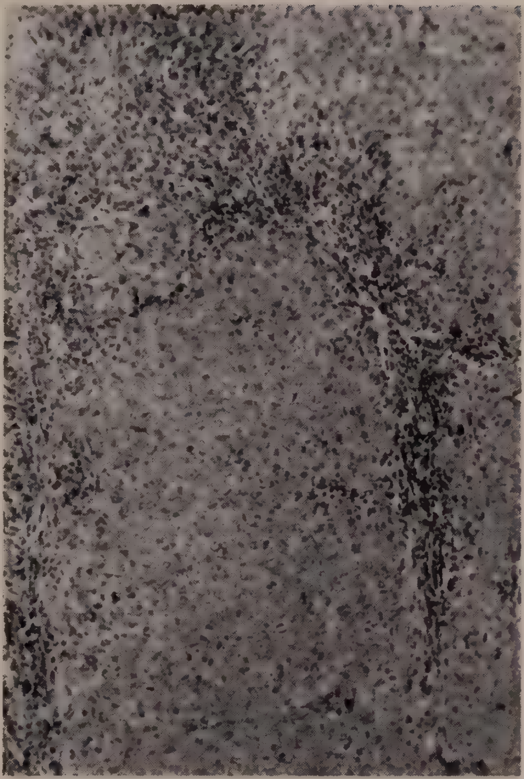

FIG. 1. Regaud type of neoplasm, showing syncytium of loosely packed, ill-defined, poorly staining epithelial cells with lymphocytic infiltrate.

Many competent pathologists prefer to view the lymphoepithelioma in point of genesis as quite similar to the "round cell" testicular carcinoma with lymphocytic stroma. Foot[7] feels that these tumors are "essentially mixed lymphosarcomas and transitional carcinoma." Digby[8] feels that the "absence of lymphoid elements in metastasis to other organs other than lymphatic suggests that the name lymphoepithelioma is a misnomer." We do not see any reason, however, for classifying these growths with the reticulum cell sarcomas as has been suggested by some.

The histopathology of these 82 cases was reviewed and classified by the pathologic department according to the above definitions and differentiation of cell type into grades as usually done for carcinoma. Thus in grade I were placed the keratinizing, most differentiated types with pearl cell formation, in grade II the less differentiated, keratinizing ones, in grade III the more anaplastic, nonkeratinizing transitional cell types, in grade IV the lymphoepitheliomas, both the Regaud and Schmincke types, and in grade V the spindle cell carcinoma as described by Martin and Stewart.[9] Table II shows the percentage distribution in the above respective grades. It will be noted that 3.6 per cent could not be definitely classified beyond an "epithelial neoplasm." Figures 1, 2, and 3 are illustrations of the Regaud, Schmincke, and transitional forms.

FIG. 2. Schmincke type showing loosely packed, polygonal shaped epithelial cells with lymphocytic infiltrate less marked. The whole picture is more "sarcomatous" in appearance.

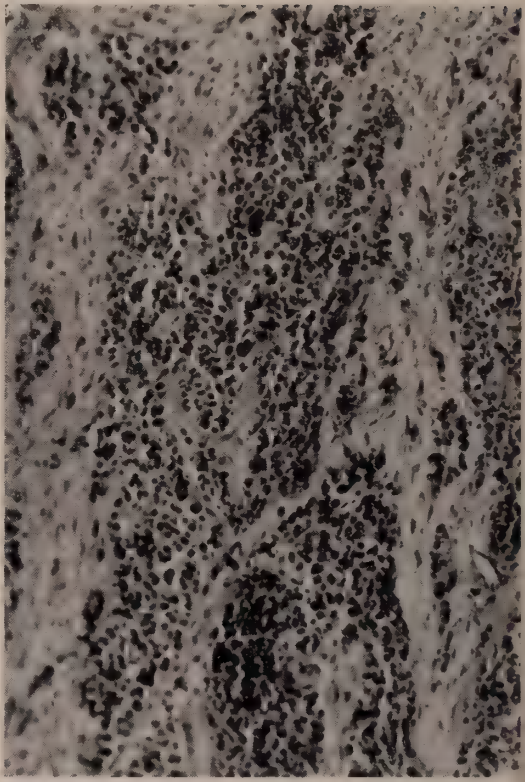

FIG. 3. Transitional cell type. Here are noted strands of epithelial cells with no trace of keratinization.

Diagnosis

A carefully taken history is often of great aid to the practitioner in arriving at a presumptive diagnosis of this condition so as to refer the patient as soon as possible to the otolaryngologist. Among the earlier symptoms often complained of are obstruction of one or both nasal passages, nosebleed, or discharge; fullness in the ear, unilateral deafness, tinnitus, or earache; enlargement of the glands of the neck, either unilateral or bilateral, often in the posterior cervical triangle; diplopia, ptosis of one upper lid, exophthalmos; unilateral headache, pain or swelling in the face; difficulty in swallowing or regurgitation of food through the nose and other symptoms due to involvement of the second, third, fourth, fifth, and sixth cranial nerves (Gordon New's syndrome[1,2]) or those passing through or near the jugular foramen as the ninth, tenth, eleventh, and twelfth nerves (Jackson's syndrome). These symptoms due to nerve involvement occur late, especially when the sphenoid, ethmoids, or the adjoining structures of the base of the skull are invaded, thus also producing in some instances Gradenigo's or Horner's syndrome.

In this present series of 82 cases of epithelioma of the nasopharynx, the most frequent and earliest complaint which aroused the patient's attention was nasal obstruction or bleeding or discharge from the nose, generally unilateral. This group of symptoms was noted in 35 per cent of the cases. Unexplained cervical adenopathy, often of the posterior triangle, was the next most common complaint and occurred in 33 per cent of the cases. These nodes were generally unilateral, but bilateral involvement was noted in many. Deafness, usually of the conductive type, fullness about the ear, earache, or discharge occurred in 18 per cent of the cases. Headache, pain, or neuralgia was noted in 10 per cent. Other symptoms less frequently encountered were sore throat, difficulty in swallowing, unilateral exophthalmos, diplopia, ptosis of the upper lid, unilateral anesthesia of the cheek and palate, tinnitus, etc.

Of the earliest signs to be noted, the presence

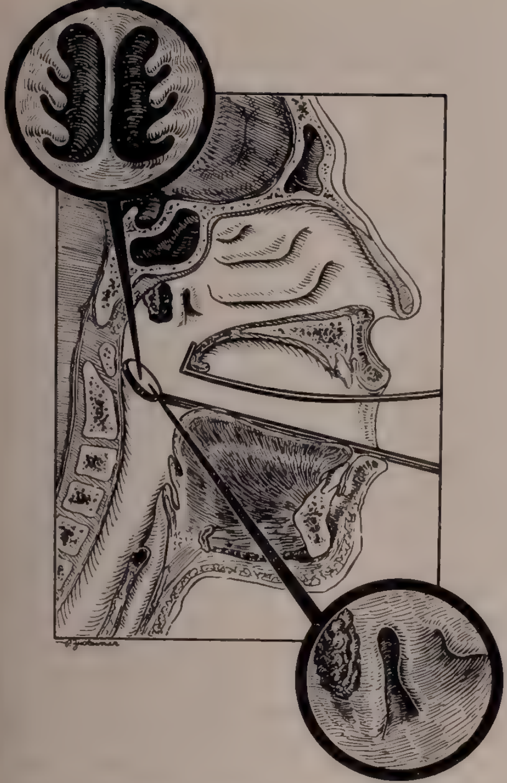

Fig. 4. Schematic drawing illustrating the use of the author's palatal retractor described herein. Upper insert depicts view obtained of normal choana, the lower one a tumor in Rosenmüller's fossa.

of ulceration or tumor in the nasopharynx should first be looked for. This may be suggested by bulging of the soft palate region, the nasal quality of the voice, or frank bleeding or discharge from the postnasal space. It should be noted that small lesions in the fossa of Rosenmüller are often very difficult of detection, especially before ulceration becomes manifest.

A crude but often efficient way to determine the presence of gross tumor in the nasopharynx is by manual palpation with the index finger. Most patients will tolerate this procedure very well, especially as the last step in the examination. This procedure furnishes the physician with one of the easiest means of confirming earlier suspicions of this disease, especially if the examiner's finger can feel a mass and there is frank bleeding. Such test is recommended as decidedly valuable for the practitioner.

Other late and suggestive signs are unilateral abducens, trochlear, trigeminal, oculomotor, or other cranial nerve paralysis in about the order recorded. Thus, every case with diplopia,drooping upper eyelid, anesthesia or pain in the cheek or temporal region should be carefully investigated with this possibility in mind. Patients with hearing or ear complaints, retracted or purplish drum, unilateral earache or discharge, especially when accompanied by other suggestive symptoms or signs enumerated above, should arouse suspicions of this lesion.

For the otolaryngologist the writers would commend the most scrutinizing and careful examination of the nasopharynx, especially Rosenmüller's fossa, with such instruments as the Holmes electric-lighted nasopharyngoscope, the simpler one devised by Yankauer, the Hasslinger self-retaining palate retractor or any form of palatal retraction, and the number 2 postrhinoscopic mirror. Hill[10] has called attention to the fact that most mistakes in diagnosis made by otolaryngologists in this region are due to failure to execute accurately the simple procedures mentioned here. The palatal retraction with indirect mirror examination not only has the advantage of simplicity but also gives a broad view of the entire nasopharynx, not possible with the other means of examination, including posterior wall, vault, fossae of Rosenmüller, pharyngeal tubal openings, and posterior choanae. For this purpose the senior writer for the past twenty-five years has been accustomed to employ a homemade type of broad spatula or palate retractor which can be held in the left hand, while manipulating the postrhinoscopic mirror in the right. The reverse end of such a spatula retractor can also be used as a tongue blade in visualizing the extreme base of the tongue or tip of the epiglottis. This instrument is valuable where patient has lost upper incisor teeth and where the self-retaining retractor cannot be used (Fig. 4).

At times patients with nasopharyngeal cancer will consult the ophthalmologist on account of symptoms referable to eyes. In not a few such cases keen oculists have suggested the correct diagnosis.

Radiography may be an aid in detecting such growths in lateral projections of the skull and neck region but most especially in demonstrating invasion of the sphenoids, ethmoids, petrous apex, and base of the skull.

Two notable earlier cases involving the eustachian tube were seen here. In one the lesion occurred about the pharyngeal orifice and was self-evident. The results of therapy in this case were

TABLE III.—PRESENCE OF NODES ON ADMISSION

Series	Per Cent
Salinger and Pearlman[6]	80
Furstenberg[11]	60
Kasabach (Presbyterian)[12]	77
Martin and Blady (Memorial)[13]	77
Present	70

very gratifying, there being complete disappearance of the lesion for about two years. In the other, an earlier case with no adenopathy, the patient complained only of vague temporal discomfort and pain for about two years before the correct diagnosis became evident. Here the growth, a grade I keratinizing epithelioma, was concealed within the right eustachian tube and never manifested itself in the nasopharynx until six months before death. Autopsy in this case showed the growth apparently had begun in the tubal mucosa and invaded the surrounding petrous bone.

Biopsy is of course the ultimate and convincing means of diagnosis of any suspected ulceration or tumor in this region. This can be done either by means of a biting forceps introduced into the nasopharynx through the oral cavity with the finger as a guide, as in the case of large tumors, or through the nares in the case of tumors high up in the vault. The tissues so obtained should be immediately preserved in 10 per cent formalin and submitted to a competent pathologist for diagnosis.

Since better prognosis in this group of tumors is intimately bound up with earlier diagnosis, it is very essential that painstaking scrutiny of this region be made in every case where the least suspicion of this condition presents. Early biopsy should be resorted to and repeated several times if necessary in suspicious cases. We have never seen a carefully performed biopsy do any harm.

The finding of hard, suspicious nodes in the upper posterior triangle or mid-neck region in addition to the local lesion in the nasopharynx generally carries a poorer prognosis. Table III shows the relative proportion of these cases as observed in other clinics besides our own. The finding of 70 per cent of these cases in this series seems, therefore, quite usual.

Therapy

Treatment of this condition is generally stated to be unsatisfactory. This is undoubtedly true where the disease is seen in the late stages and where spread to the base of the skull or other distant metastasis can be demonstrated. In fact, it is difficult to expect more than palliation when the regional nodes are involved. It has, therefore, been our custom for many years to group these cases clinically into three groups depending on whether or not there was regional cervical adenopathy:

Group I—Local lesion in nasopharynx; no apparent neck nodes.

Group II—Local lesion in nasopharynx with apparent metastatic neck nodes.

Group III—Those with lesion as in group I or group II who had prior therapy elsewhere before admission.

Thus in group I were placed those patients without nodes or other evidence of extensive basal involvement or distant metastasis, whereas in group II were placed all cases with significant cervical adenopathy and extensive basal or distant spread. In group III were placed all those who had prior treatment before being referred here. Since these tumors are recorded as being radiosensitive, we should expect rapid regression under treatment in most cases, frequent tendencies to recurrence with ultimate distant metastasis, or local spread of the disease by continuity to the adjoining structures of the base of the skull.

Only the most heroic will suggest or attempt surgical extirpation beyond the removal of tissue for biopsy or the removal of sufficient mass of large tumors to permit the proper application of radium. Electrocoagulation may be of aid in securing shrinkage preliminary to installing radium tubes. For the past thirty years it has been customary to apply a radium tube locally to the nasopharynx to be supplemented, either before or after such radium application, by external irradiation with teleradium pack or high voltage x-ray over opposite lateral temporal fields. Radon seeds have been suggested by some for implantation into the tumor, but we have generally found such therapy much inferior to the use of intercavitary tube. In some cases we have been able to apply successfully intraoral x-ray directed over the soft palate region toward the nasopharynx, combined with opposite lateral temporal fields of external irradiation. In one of these cases the growth has disappeared following such intraoral and external irradiation, making further application of radium tubes into the nasopharynx so far unnecessary.

Radium tube therapy to the nasopharynx is most simply applied by means of the usual 100-mg. radium element tube with a 1-mm. platinum filter. Such tube should have a stout, twisted cotton thread attached at each end, should be swaddled in cotton moistened with lubricant jelly, and gently pulled into the nasopharynx through the oral cavity by a catheter previously placed through the less obstructed side of the nose. Such tube is then held in place by tautly fastening the string which protrudes from the anterior nares to the forehead by means of adhesive tape. Probably a more accurate way of maintaining the position of the tube is by means of special applicators such as that used at the Memorial Hospital by Blady.[14] Such intracavitary radium therapy can be given in dosages of 200 mg.-hours repeated every other day for three periods without hospitalizing the patient. Supplemental external radiation should follow, preferably ten days to two weeks after the radium therapy, and generally consists of 0.9 mm. copper or higher half value layer equivalent x-ray given bilaterally to both subtemporal areas. Here 400-kilovolt or even 1,000-kilovolt x-ray could prove of value on account of the enhanced depth-dosage and shorter treatment time than the radium pack. The dosage should be carried to skin and mucosal tolerance, should be given daily with increments of 200 to 300 r tissue measured, and should be given to alternate head and neck fields of approximately 10 by 10 cm. to a total of 6,000 to 7,000 r per field depending on the wavelength of the therapy employed. The fields should be large enough to cover the nasopharynx and upper portion of the neck. Separate and lower neck fields may be necessary to cover some or all of the metastatic nodes. Supplemental radon gold seed implantation may follow in persistent nodes as suggested by Hayes Martin[15] and others.

Present Series

This survey brings out quite clearly two points: (1) the great tendency of this lesion to recur either at the primary site or in the neck nodes, even after some years of clinical healing, and (2) the poorer prognosis in cases where neck node metastases are found. Thus it seems expedient to speak of five-year survivals, that is, those patients who have lived five or more years after therapy, at times clinically free of disease or much palliated, and those cases that have remained continuously clinically free of disease five or more years, herein designated as "no evidence of disease." On such survival basis eight of 24 cases (33 per cent) in group I with local lesions in the nasopharynx of various extent and no neck nodes, regardless of pathologic type, survived five years or more. Of those in group II with local lesions in the nasopharynx and palpably suspicious neck nodes, ten of 53 patients, or 18.9 per cent, survived five years or more. Those patients who had been treated elsewhere before admission here yielded no survivals for five years but often were markedly palliated over long periods. Thus, of 82 patients in all groups in this series 18 or 21.9 per cent were clinically free of disease or were alive and palliated over five years following therapy.

TABLE IV.—LYMPHOEPITHELIOMA IN 29 CASES*

Classification	Number of Cases	Survivors	Per Cent
Group I	8	4	50.0
Group II	19	5	26.3
Unilateral	5	1	20.0
Bilateral	14	4	28.0
Group III	2	0	0
Total	29	14	...
Survived 5 or more years	9	...	31.0

* Sex distribution of 29 cases: males 17 cases, females 12 cases.

When this series is further broken down into the lymphoepitheliomatous types and the epidermoid carcinoma, it appears that the former group presented a better prognosis. Thus of the lymphoepitheliomas there was 50 per cent survival in group I and 26.3 per cent survival for five years or more in group II with a total of five-year survival rate for all groups of 31 per cent (Table IV). When considered on a clinical cure or no evidence of disease basis for five years or more, it will be noted that 24 per cent of lymphoepitheliomatous lesions of all clinical groups remained healed five years or more (Table V).

When the epidermoid types of carcinoma of the region are considered, the five-year results do not shape up so well. This group, with transitional or basaloid type included, showed a five-year survival rate of 18.7 per cent in group I without neck nodes and 17.6 per cent in group II with neck nodes, with an over-all survival in all clinical groups of 17.0 per cent (Table VI). Only 13.2 per cent of those in this pathologic type remained free of disease from the time of initial therapy for five or more years (Table V).

Table VII gives the over-all survival and cure rate for all the 82 cases. It will be noted that the survival rate was 21.9 per cent, whereas the cure rate with no evidence of disease for five years or

TABLE V.—FIVE-YEAR SURVIVALS* IN 82 CASES OF CARCINOMA OF THE NASOPHARYNX

Case	Time Since Admission	Time Since Onset of Symptoms	Clinical Group	Pathology	Results
		Lymphoepitheliomas (9 of 29 Cases, 31%)			
1	15 years 6 months	17 years	I	...	No evidence of disease
2	9 years 3 months	10 years 1 months	I	...	No evidence of disease
3	9 years 7 months	10 years 7 months	I	...	No evidence of disease
4	8 years 5 months	9 years 5 months	II B	...	No evidence of disease
5	8 years 5 months	9 years 5 months	II B	...	No evidence of disease
6	6 years 6 months	6 years 11 months	I	...	No evidence of disease
7	6 years 10 months	7 years 2 months	II B	...	Died of disease
8	6 years 7 months	7 years 4 months	II B	...	Died of disease
9	6 years 10 months	6 years 8 months	II	...	No evidence of disease
		Carcinoma Other than Lymphoepithelioma (9 of 53 Cases, 17%)			
1	15 years 10 months	21 years	I	II	No evidence of disease
2	15 years	19 years	II	III	No evidence of disease
3	14 years 6 months	15 years	II B	III	No evidence of disease
4	10 years	....	I	III	No evidence of disease
5	8 years 3 months	8 years 6 months	II B	III	No evidence of disease†
6	6 years 2 months	6 years 8 months	II	III	Died of disease
7	5 years 6 months	6 years 8 months	II	II	No evidence of disease**
8	5 years 4 months	5 years 5 months	II	II	No evidence of disease†
9	5 years 3 months	5 years 5 months	I	III	No evidence of disease

* Five-year survivals with no evidence of disease numbered 7 of 29 cases (24.1%) of lymphoepithelioma and 7 of 53 cases (13.2%) of carcinoma other than lymphoepithelioma.

† No evidence of disease for five or more years, then died of other causes.

** No evidence of disease for five years, then developed carcinoma in the ethmoids.

TABLE VI.—EPIDERMOID CARCINOMA EXCLUDING LYMPHOEPITHELIOMA*

Classification	Number of Cases	Survivors	Per Cent
Group I	16	3	18.7
Group II	34	6	17.6
Unilateral	26	4	15.6
Bilateral	8	2	25.0
Group III	3	0	0
	—	–	
Total	53	9	17.0

* One case died of other causes at 28 months, leaving 53 to be studied. Sex distribution of 53 cases: males 38 cases, females 15 cases.

TABLE VII.—OVER-ALL SURVIVAL AND CURE RATES IN 82 CASES

	Total Surviving 5 or More Years	With No Evidence of Disease 5 or More Years
Epidermoid type including pathologic groups I, II, III, and V	9	8
Lymphoepitheliomatous type, pathologic group IV, Regaud and Schmincke types	9	7
Total	18	15
Per cent	21.9	18.2

TABLE VIII.—COMPARISON OF FIVE-YEAR SURVIVALS IN VARIOUS SERIES OF CANCER OF THE NASOPHARYNX

Series	Number of Cases	Per Cent 5-Year Survivals
Simmons 1949[16]	150	9.8
Nielsen[17]	37	24.0
Martin 1948 (Memorial)[15]	87	20.0
Godfriedsen[18]	266	22.0
New and Stevenson (Mayo)[19]	271	13.0
Kasabach[12]	42	16.6
Lenz 1942[20]	44	27.6
Miller (Massachusetts General)[21]	102	13.3
Present Series	82	21.9
Total	918	...
Average survival result	...	18.7

more was 18.2 per cent. This indicates quite clearly that the tendency to recurrence of this lesion is great, even after many years of apparent freedom from recurrence. A comparison of five-year survival rates as recorded by several tumor clinics is shown in Table VIII and would indicate that the average results of this clinic as compared with those of others are not unusual.

Summary

1. Eighty-two cases of cancer of the nasopharynx of epithelial origin, exclusive of mixed tumors, craniopharyngioma, etc., seen here over the years 1937 through 1949 are reviewed.

2. Histopathology is discussed and the lesions divided into epidermoid and lymphoepitheliomatous types.

3. A relatively simple and satisfactory method for examining the nasopharynx and an instrument devised and in use here for the past twenty-five years are described.

4. The therapy used and results according to histopathologic types and clinical grouping as a whole are recorded.

5. Of the 82 cases 21.9 per cent survived five years or more, and 18.2 per cent of this same number were apparently free of disease five years or more after initial therapy.

6. Prognosis is better in the lymphoepitheliomas (31 per cent) as compared with the epidermoid type (17 per cent). It is better in the cases without neck nodes (33 per cent) than in those with neck nodes on admission (18.9 per cent).

7. Recurrence in either type is not unusual, even after many years freedom from disease following therapy, and requires periodic re-examination for its exclusion.

8. Earlier diagnosis and therapy should improve the results in these cases.

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Discussion

Theodore J. Kantor, M.D., *Utica.*—It is especially gratifying to hear the authors report a five-year survival rate of 22 per cent since cancer of the nasopharynx has been reputed to result in a very high mortality.

This is certainly not an uncommon illness. In the Utica area where we have almost no Chinese we see about three or four cases a year. This is probably a larger number than has been seen in years gone by, due perhaps to the increasing number of older people and due to better means of diagnosing this disease.

It is interesting to note the large number of patients who present themselves with enlarged cervical lymph nodes as the first sign of this disease. This is a very discouraging factor, but even more discouraging is the fact that cases occur where cervical lymph node biopsy gives the diagnosis of cancer such as lymphoepithelioma and examination of the nasopharynx reveals absolutely no sign of any primary lesion. However, unless cure occurs, one must be constantly on the lookout for the primary site since it most certainly will appear. On the other hand, those tumors discovered in the search for etiology of such conditions as fullness in the ear, fluid in the ear, tinnitus, or otalgia frequently are in the earlier stages without metastases and present a more favorable prognosis. Certainly one realizes, therefore, how important it is to be sure of ruling out lesions in the nasopharynx when looking for the etiology of many signs and symptoms pertaining to the ear.

During an average working day we frequently come across patients who cannot easily be examined with the postrhinoscopic mirror due to their inability to control their reflexes in spite of local topical anesthesia. In such cases where a tumor is not strongly suspected but has not been ruled out, a good view may be obtained of the area in the nasopharynx by means of an electrically lighted nasopharyngoscope introduced through the opposite naris as well as the near naris.

The treatment is almost exclusively by means of radiation combining external irradiation with nasopharyngeal application of radium. It is necessary to stress the point made by the authors that the x-ray fields should be large enough to cover the nasopharynx and the upper cervical node-bearing area when no nodes are palpable since the tumor metastasizes so early. Unfortunately recurrences are very resistant to irradiation.

In the cases where cervical lymph nodes persist after heavy external radiation, radon seed implantation may be used. There is no mention in this paper of radical neck dissection since for the most part the cancer is of such a highly anaplastic nature that surgery is not indicated. Nevertheless, there are some cases where the tumor is of a less anaplastic nature, and, therefore, it is orderly metastasizing, slowly developing, and more radioresistant. Unilateral cervical metastases from such a tumor, where the primary appears cured from combining external irradiation and radium pack and where the tumor has not apparently crossed the midline, may be amenable to radical neck dissection.

Surgical exposure of the neck in our modern way offers a method of removing the nodes that lie deeply under a thick layer of subcutaneous fat and muscle where the accurate placement of radon seeds through skin punctures is not possible by palpation.

Anesthetic Problems in Mitral Commissurotomy

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In recent years the rapid development of cardiac surgery has increased the problems which face the anesthesiologist. The most frequently performed cardiac surgical procedure today is mitral commissurotomy. The anesthesiologist must have a thorough understanding of the circulatory dynamics in mitral stenosis in order to prevent further derangement of cardiac and respiratory functions. A questionnaire which we sent a year ago to anesthesiologists in 12 leading institutions showed that a variety of technics and agents are used for the anesthetic management of mitral commissurotomy. Although no data are available to show the results in each institution, their replies give the impression that the results were about the same despite differences in the anesthetic methods employed.

In this presentation no claim is made that the ideal anesthetic management has been found for patients with mitral stenosis; the purpose is to present the problems encountered in 88 well-documented cases brought to the operating room for mitral finger fracture valvuloplasty at Montefiore Hospital between June, 1951, and March, 1954. Their ages ranged from nineteen to fifty-five with an average of thirty-nine years. There were 71 females and 17 males. Forty-three patients had a history of embolization in addition to the findings of pulmonary hypertension. Auricular fibrillation was present in 50 cases.

Preoperative Role of the Anesthesiologist

At Montefiore Hospital all candidates for mitral surgery are presented to the Cardiovascular Surgical Review Board.[1] This consists of internists, surgeons, anesthesiologists, radiologists, and pathologists. The combined effort in selecting suitable cases for surgery and the teamwork of these men specialized in the various fields of medicine are two of the most important factors in caring for these patients. The prime indications for mitral surgery have been pulmonary hypertension manifested by dyspnea, orthopnea, and hemoptysis and cardiac decompensation with or without previous embolization. Preoperatively, congestive failure is corrected by bed rest, digitalis, and salt-free diet. Electrolyte and blood volume deficits are adequately treated. Preoperative sedation is adjusted to the individual patient by the anesthesiologist, as is the dose of digitalis by the cardiologist. The depth of sedation should be determined by the needs of the individual patient. A barbiturate sedative is given the night before surgery, and morphine, 8 to 10 mg. sixty to ninety minutes preoperatively, is ordered. All patients are visited in their room before they are taken to the operating room, and if any signs of apprehension are present, an additional dose of intravenous secobarbital (50 to 200 mg.) is administered. The stretcher on which these patients are transported is equipped with a portable oxygen tank and equipment to establish a clear airway if needed.

In the first 26 cases atropine or scopolamine was also used preoperatively. This was later omitted, as suggested by Pender,[2] because of the increased pulse rate which these drugs may produce. Atropine and scopolamine may actually have little influence on the pulse rate in the dosage of 0.4 mg. used clinically. But tachycardia is one of the most frequent complications in mitral surgery, and omission of these drugs removes one factor which may play a role in this complication.

The Role of Position in Mitral Surgery

It is a well-known fact that orthopneic cardiac patients do not tolerate lying flat. In spite of this clinical observation, supported experimentally by various investigators, patients with two to three-pillow orthopnea lie flat on the stretcher while being taken to the operating room; anesthesia is induced in the recumbent position, and they are operated on in the lateral position, with the upper part of the body level with the lower

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extremities. Recumbency in heart disease decreases the vital capacity, as shown by the work of Hamilton and Morgan.[3] In their explanation of the physiologic mechanism they conclude that the lungs serve as a storage place for an increased venous return when the veins of the lower extremities are level with the upper part of the torso. The total volume of air and the functional residual air are decreased,[4] and arterial blood oxygen saturation drops[5] in the supine position. More recently Donald and coworkers[6] have examined by cardiac catheterization the effect of posture on pressures in the right heart and pulmonary artery. They found that a marked fall in pulmonary artery pressure occurred on sitting up in all cases of mitral stenosis. Their findings indicate that the work of the right ventricle in these patients is considerably increased in the supine position. The following case report shows that this pathologic situation imposed upon an advanced case of mitral stenosis may lead to disaster.

Case 1.—A forty-five-year-old repair man was accepted for mitral valvuloplasty in July, 1952. The past history revealed shortness of breath of four years duration with hemoptysis on two occasions. In spite of a strict medical regime his orthopnea had increased until he was sleeping in a semirecumbent position with frequent attacks of paroxysmal nocturnal dyspnea. Physical examination revealed a well-developed adult male. Blood pressure was 112/64, pulse 90 and irregular. A mid-diastolic crescendo-like murmur was heard in the apical area. Fluoroscopy revealed marked dilatation of the pulmonary arteries and a greatly enlarged left auricle. Electrocardiogram showed auricular fibrillation with multifocal premature ventricular beats. On the day of surgery premedication consisted of morphine 10 mg., scopolamine 0.4 mg., followed by Seconal 150 mg. intravenously in the patient's room. On arrival in the operating room his pulse was 85, blood pressure 110/70. After induction with nitrous oxide and oxygen-ether sequence, an endotracheal tube was passed with ease in the second plane, stage 3.

During this time the pulse rate gradually rose, reaching 136, and the blood pressure fell steadily. Ten minutes later, with only a skin incision performed, the operation was deferred. The blood pressure had continued to fall, and there was a deepening cyanosis which was not relieved by oxygen. The monitoring electrocardiogram during this period showed increasing anoxemic changes, such as depression of the S-T segment and widening of the QRS complexes. This was soon followed by ventricular tachycardia. Procaine, Pronestyl, and quinidine sulfate were administered without benefit. The patient died two and a half hours after the start of the anesthesia and about three hours after he had assumed the recumbent position.

After a thorough analysis of all contributing factors which may have led to this patient's death, it was felt that other factors contributed in addition to the tachycardia produced by the induction and intubation (as will be discussed later). Careful study of the patient's history revealed a marked orthopnea. We must assume that the recumbent position in this patient would aggravate his pathologic cardiovascular status even more under the stress of anesthesia. To prove the importance of the position of these orthopneic cases, we would need pressure measurements in the pulmonary circulation under anesthesia. This would support our empiric observation and the work of Donald and coworkers[6] who found a decrease in the pulmonary artery mean pressure in the sitting posture in all patients with pulmonary hypertension. The next orthopneic case supports our assumption.

Case 2.—In this forty-five-year-old patient with mitral stenosis and orthopnea, preoperative medication consisted of morphine 10 mg. followed by Seconal 150 mg. intravenously in the patient's room. On arrival in the operating suite the blood pressure was 100/50, pulse 80. Induction with nitrous oxide, oxygen, and ether was uneventful; however, the pulse rate rose to 120 after the patient was turned to the right lateral recumbent position. The table was tilted 30 degrees head up, and the pulse rate returned to previous readings. During the course of the operation the table was once more returned to the horizontal position for pressure measurements in the pulmonary artery and left auricle. Again, a striking change in the pulse rate occurred, from 85 to 105, with a blood pressure drop from 90/60 to 70/55 which returned to previous readings when the patient was restored to the head-up position.

From these experiences we have adopted the policy of never forcing orthopneic patients into the recumbent position at any time during the preoperative, operative, or postoperative periods. The head is lowered only once for a few seconds during laryngoscopy and intubation.

Induction and Intubation

Cardiovascular and respiratory disturbances during this critical phase of anesthesia have been described by several authors, and the detrimental effects of intubation on the heart have been reported.[7-11] These are increased vagal tone, stimulation of the cardioaccelerator fibers, elevation of blood pressure with tachycardia, hypoxia,

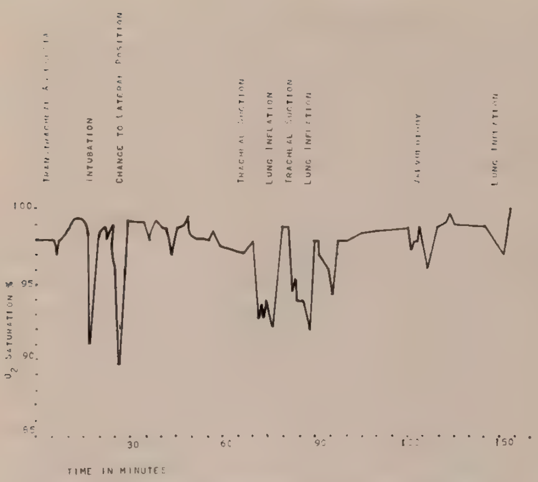

Fig. 1. Oxygen saturation in a typical case.

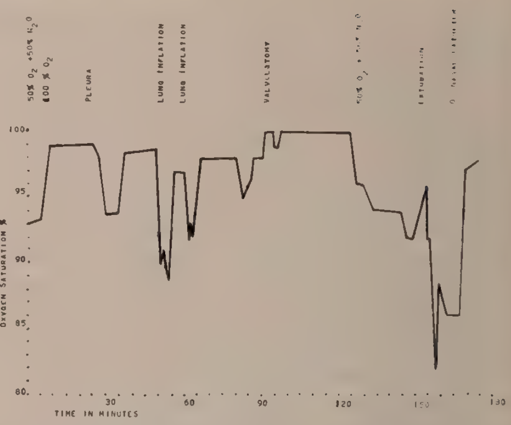

Fig. 2. Oxygen saturation in a typical case.

and respiratory acidosis. The search for a technic free from these disturbances has by no means ended. Although the adverse effects of intubation are for the most part transitory and not dangerous to the normal myocardium, they may have disastrous consequences in the patient with advanced cardiac disease. Of the two deaths attributed to anesthesia in this series, the second patient was an advanced case of mitral stenosis, Harken Class IV.[12] A stormy induction and intubation was followed by ventricular tachycardia and fibrillation which did not respond to resuscitative measures.

This case, together with experience gained in the first 30 cases which were intubated either in the second plane of ether or cyclopropane or in the first plane with the aid of a muscle relaxant, led us to infer that topical anesthesia would obviate some of these serious cardiovascular consequences of laryngoscopy and tracheal intubation. The application of topical analgesics with spray, applicators, and visualization of the cords imposes a strain and arouses excitement in most patients. Therefore, the transtracheal technic, which requires no effort on the part of the patient, was chosen as the method for achieving adequate topical analgesia. With small doses of barbiturates such as Pentothal or Seconal intravenously, patients are put into a hypnotic state. Oxygen is administered. Then 2 cc. of 5 or 10 per cent cocaine are injected transtracheally by the Labat technic. In addition, the pharynx and larynx are adequately sprayed with cocaine. After two to three minutes patients are ready for intubation, utilizing this amnesic state. Questioning them postoperatively revealed that none remembered this procedure. A study comparing the results of these two different technics demonstrated the decided advantages of transtracheal topical analgesia,[13] and the findings seem most encouraging. The pulse rates in each of these groups showed that more severe and more persistent tachycardias occurred in the group without topical analgesia. Oximetric determinations were suggestive of the superiority of arterial saturation in the group treated with adequate topical analgesia. In addition, the time consumed from the beginning of anesthesia to the end of intubation was cut in half.

Maintenance

There are two cardinal rules on which all anesthesiologists who have experience in heart surgery agree, whatever agent they choose: minimal amounts of agents for a very light plane of anesthesia, even with the patient occasionally moving, and adequate respiratory exchange. We use nitrous oxide and oxygen with small amounts of ether. Respiration is assisted manually or controlled with the Rand-Wolfe respirator. Both methods appear equally good.

Coordinated teamwork and provision for almost any emergency is the keynote in the operating room. A cardiologist monitors the electrocardiogram on all patients. A member of the house staff carefully measures blood loss and is equipped to transfuse large amounts of blood under pressure, should the need arise. All patients are awake by the time the dressing is applied.

Oxygen Saturation and the Electrocardiogram

Thirty-five cases have been followed with the ear oximeter. The Waters-Conley absolute

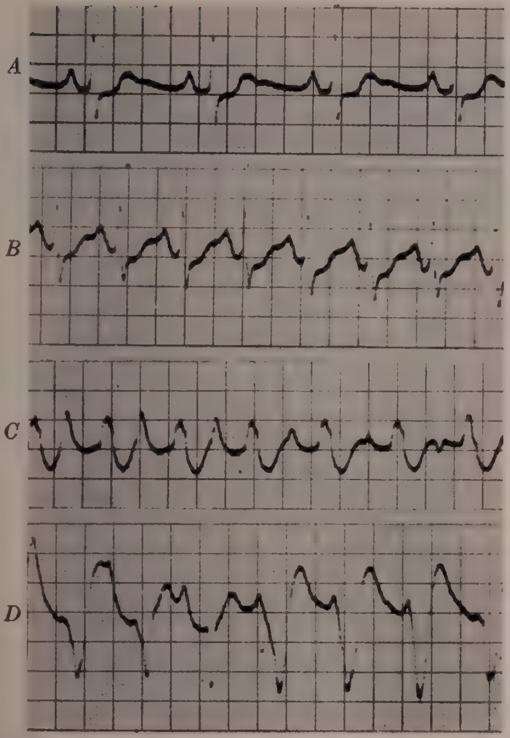

FIG. 3. (*A*) Regular sinus rhythm, blood pressure 90/60. (*B*) Blood pressure 65/30, rate 150. (*C and D*) Overdose of norepinephrine raises blood pressure to 150/130; irregular ventricular tachycardia.

reading oximeter was utilized. Oxygenation seems to be no special problem in mitral surgery. Typical changes are shown in Figs. 1 and 2. Figure 1 shows falls in oxygen saturation of 1 per cent during the transtracheal analgesia. During laryngoscopy and intubation the oxygen saturation falls to 91 per cent. While the patient is being turned to the lateral position and inhales room air, the saturation falls to 89 per cent. Tracheal suction always produces a slight drop in oxygenation; inflation of the partially collapsed left lung brings it back to normal. During the finger fracture valvulotomy, the changes are minimal, 1 to 2 per cent. Figure 2 shows the oxygen saturation with 50 per cent nitrous oxide and 50 per cent oxygen to be 93 per cent; this increases to 99 per cent on 100 per cent oxygen inhalation. A slight drop is seen when the thorax is first entered and again when the left lung is allowed to remain partially collapsed for any length of time. Extubation causes a marked drop to 82 per cent, which oxygen by nasal catheter corrects.

Whether the myocardium is always adequately oxygenated is questionable. S-T depressions, seen frequently on the electrocardiogram, lead one to suspect that the coronary circulation at times is inadequate. Although oxygen saturation is normal during these electrocardiographic changes, the blood pressure in the majority of cases is low. Blood pressure drops, therefore, should not be ignored for any length of time. We have used norepinephrine, 2 mg. per 1,000 cc. of 5 per cent glucose in water solution, as a continuous drip to maintain the blood pressure at preoperative levels. We have also learned that during the time this powerful pressor amine is being administered, the blood pressure has to be measured constantly. An overdose resulting in hypertension causes severe myocardial irritability which might lead to ventricular tachycardia and ventricular fibrillation (Fig. 3).

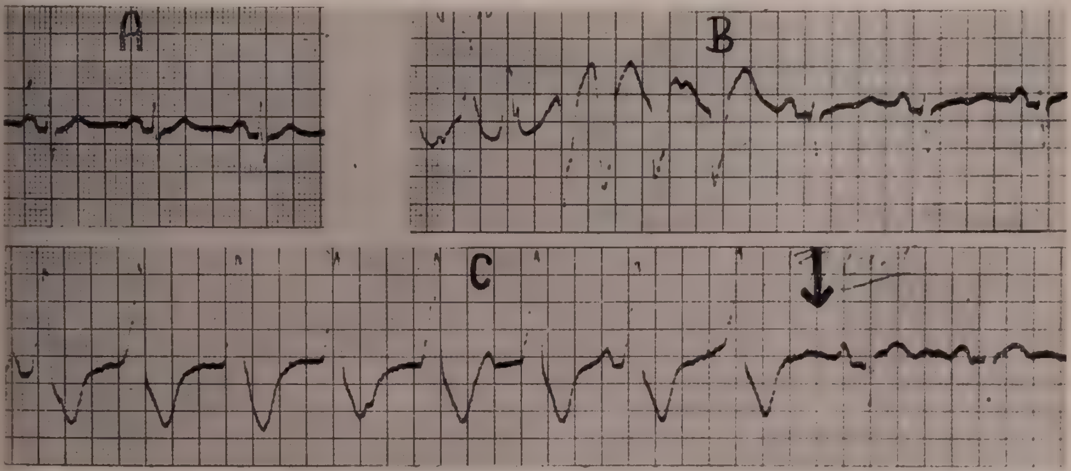

FIG. 4. (*A*) Preoperative tracing, regular sinus rhythm. (*B*) The pericardium incision causes runs of premature ventricular beats. (*C*) Ventricular tachycardia during finger fracture valvulotomy. At arrow finger is removed and regular sinus rhythm returns.

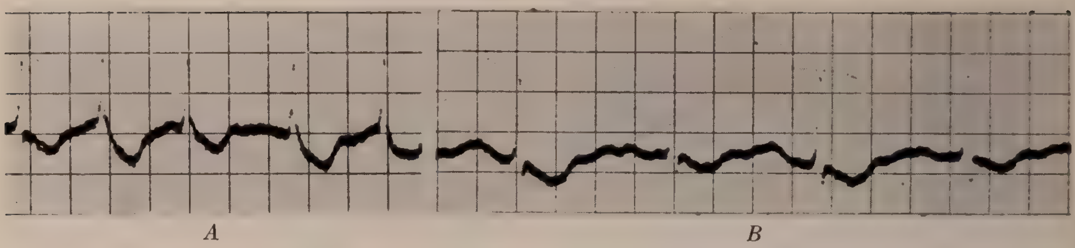

FIG. 5. (A) Preoperative tracing, auricular fibrillation. (B) After induction with nitrous oxide and oxygen ether, regular sinus rhythm.

TABLE I.—MORTALITY DATA IN THE OPERATING ROOM

Harken Groups	Number of Cases	Death in the Operating Room Anes- thesia	Sur- gery
Group I—Asymptomatic, benign	0	0	0
Group II—Handicapped, nonprogressive	20	0	0
Group III—Hazardous, progressive	51	0	1
Group IV—Terminal	17	2	3

TABLE II.—POSTOPERATIVE COMPLICATIONS IN 88 CASES OF MITRAL VALVULOTOMY

Complication	Number of Cases
Cardiac irregularities	12
Pneumonia and pneumonitis	9
Pleural effusions	8
Thrombophlebitis	2
Atelectasis	2
Transient hypotension	2
Heart failure, irreversible shock	2*
Aortic embolization	2
Rheumatic fever	1
Tension pneumothorax	1
Wound abscess	1
Ileus with pulmonary infection	1*
Skin necrosis from Levophed	1

* These patients died 36 and 48 hours and 6 days after surgery.

There are many bizarre changes in the electrocardiographic tracings taken in this series. The significance of most of these tracings is difficult to evaluate. Premature ventricular beats and runs of ventricular tachycardia are noted as a rule during the surgical maneuvers on the pericardium, auricular appendage, and during the valvulotomy (Fig. 4). These changes disappear as soon as the surgical stimulus from these areas is removed. Alteration of the ventricular rate is more important. Heart rate cannot be measured by palpation of the pulse in patients with auricular fibrillation and pulse deficit. It should be emphasized once more that 50 out of 88 cases in this series were fibrillating. The accurate knowledge of the ventricular rate from these tracings is, therefore, of special value to the anesthesiologist. Tachycardia is a warning signal and usually precedes blood pressure falls. On a few occasions there have been multifocal premature ventricular contractions and pulsus bigeminus early in the course of anesthesia. This is also considered a warning signal. The treatment of these irregularities with procaine amide and quinidine has been disappointing. The blood pressure usually dropped after the administration of these drugs, while the irritability of the conducting system was little influenced. Incidentally, anesthesia can also have a beneficial effect on the electrocardiogram, as shown by a patient who was in auricular fibrillation before surgery. After the induction with nitrous oxide, oxygen, and ether, a regular sinus rhythm was noted which was maintained for forty-eight hours postoperatively (Fig. 5).

Mortality Data in the Operating Room

Harken's[12] classification for surgical risk is utilized in Table I. No patient was operated on in group I. Twenty cases of group II were taken to surgery without mortality. Auricular tears and uncontrollable hemorrhage were responsible for one death in group III and three deaths in group IV. Anesthesia contributed to two deaths in group IV.

Postoperative Care

All patients are transferred to the postoperative recovery room where they stay for two to three days under the care of specially trained nurses. Oxygen by tent or nasal catheter is administered for eight to twelve hours. Patients are encouraged to cough, and tracheobronchial toilet is carried out when necessary. For pain small doses of Demerol are ordered. Penicillin is given prophylactically. The postoperative complications are summarized in Table II. Cardiac instability was the most frequent complication postoperatively with the development of auricular fibrillation on the second or third postoperative day. All these patients responded to digitalis and quinidine, except two listed under heart failure and irreversible shock. Both these hemiplegic patients had advanced mitral stenosis in the terminal stage and died thirty-six to forty-eight hours after surgery. Pneumonitis responded to antibiotics and atelectasis to tracheal suction. One hemiplegic patient required bronchoscopy. Two patients developed a saddle embolus at the aortic bifurcation on the day of surgery; they were taken to the operating room and the emboli successfully removed.[14] One case developed a skin necrosis at the level of the knee after Levophed infusion which needed skin grafting two months later.[15] Most patients, however, were ready for discharge on the tenth to fourteenth postoperative day.

Summary

1. Clinical observations on 88 patients taken to the operating room for mitral valve surgery have been reported.
2. Teamwork and individualization in the preoperative preparation of patients with mitral stenosis have been emphasized.
3. The danger of recumbency in orthopneic patients has been demonstrated.
4. Minimal physiologic alteration with transtracheal topical analgesia during intubation and the lightest plane of maintenance during anesthesia have been stressed.
5. Observations on oxygenation and electrocardiographic tracings have been shown.
6. The results with case reports and postoperative complications have been analyzed.

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Discussion

E. Dean Babbage, M.D., *Buffalo.*—Dr. Kepes is presenting a paper on a subject that involves one of the last, if not the last, organs of the human body to be invaded by the surgeon. And here the word invaded is used literally. A patient is selected who has about reached the end of the road as far as cardiac reserve is concerned. Then we, as anesthesiologists, are asked to put that patient to sleep so the surgeon can open one chest cavity, further putting that patient in jeopardy. Following this, the surgeon inserts a finger into that already most badly compromised heart. Respiratory and cardiac reflexes, some understood and some not understood, are disturbed. Irregularities of all descriptions are set up in some cases by this manipulation.

Dr. Kepes has stressed several points that to me seem important. She does not feel that any one agent or method is supreme; rather the anesthesiologist should select that method and those agents with which he or she is most familiar. I cannot quite agree with her that the use of atropine or scopolamine is debatable. It comes down to simple mechanics. The auricle is attempting to force blood through a narrowed aperture. It takes time to do this, and if a tachycardia is present, not as much blood can enter the ventricle during one cycle. These drugs do produce tachycardia. In our department we insist on their omission.

Stressing the position of the patient on his trip to the operating room and also his ultimate position on the operating table is important. Preliminary medication may remove the patient's objection to a flat position. If he uses three pillows in bed, give him three pillows while being moved or operated upon.

The use of intravenous procaine before anesthesia and its use during cardiac surgery are likewise debatable problems. In our department this subject comes up for a great deal of argument. I use it myself, but the other four anesthesiologists do not. The Philadelphia group, who undoubtedly have the largest series of such cases, still use intravenous procaine or were using it up until a year ago.

Of course, every one scrubbed for this operation wants to get into the act, but our experience has been that never more than two members of the surgical team should feel the valve with the exploring finger. If the heart is acting up with bizarre irregularities, only the surgeon should participate in the palpation. To be allowed to feel a tight mitral valve is an experience every cardiologist should have once in his career; this should only be allowed on a relatively good risk patient.

Stress Studies in Orthopedic Surgery

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(*From the Hospital for Special Surgery*)

In the last decade there has been wide investigation of the alarm reaction and its relation to operation and the convalescence.[1,2] Very few of these studies, however, have been performed in patients undergoing operations upon the bones and joints.[3]

Such operations are of major severity and are performed often in the aged. They are followed by a long period of convalescence because of the special requirements for bone healing as compared with soft tissue healing. Finally, a large part of bone is composed of substances which are directly affected by the alarm reaction, such as sodium, potassium, calcium, protein, and water.

Accordingly, at the Hospital for Special Surgery since 1950 almost 200 patients have been studied in an effort to learn more of the relation of stress to injury of the bones and joints and convalescence. These studies have progressed into complex biochemical research since it was evident that there was a need for other methods for the study of stress. Such methods essentially are a study of the total eosinophil count, neutral urinary 17-ketosteroid excretion, electrolyte excretion, and nitrogen balance.[4] The effective detection of various degrees of stress may clarify the problem of just how large a part the endocrine glands, especially the pituitary and adrenal glands, play in the production of certain characteristic metabolic effects of injury and illness. The degree of endocrine participation at the present time is not clear, although it is generally agreed that an intact pituitary-adrenal system at least must be present to permit the typical stress response from injury to occur.

Injury and Stress

Following injury a host of changes occur which comprise the biologic response to injury. The response represents the sum total of effects operating concurrently at many levels of the body. For example, the amount of injury and the location of the tissue damaged is important. The explanation for this is poorly understood. It may be that the degree of painful nerve stimulation, of fluid extravasation, of local anoxia, and necrosis and the secondary processes of inflammation and repair extending over a considerable length of time exert profound effects upon other systems.

There is, concurrently, marked endocrine stimulation with the pituitary-hypothalamic and adrenal systems playing a major part. At the same time whether the patient is to survive will depend upon how the respiratory, cardiac, and renal systems are able to meet the additional load imposed during the injury. The liver, too, is most important in this respect and in the convalescence which follows. Finally, among other changes produced by injury is a sudden loss of caloric and fluid intake, often accompanied by vomiting, all of which adds still another load to the organism.

The response varies from patient to patient and depends upon the duration and intensity of the injury, the age of the patient, and the reserve and integrity of the various participating systems. Convalescence may be smooth or hectic but to some extent requires effective homeostatic mechanisms. The metabolic alterations which are induced by injury are thought to be regulated in some way by the adrenal cortex. If such participation is a close-knit one, as Selye[5] has postulated, it follows that by prolonged adrenal-cortical stimulation prolonged stress induces changes which may affect the convalescence of these patients. At the present time it is not known just how important the pituitary-adrenal role is in convalescence, although the immense catabolic process following massive injury is quite clearly demonstrated.[6] The poorly tolerated resistance to stress in adrenal insufficiency is evidence for the importance of an intact pituitary-adrenal system. In some cases a marked catabolic response has been thought to be due to an excessive pituitary-adrenal response following

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* By invitation.

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injury.[7] Such cases exhibit excessive nitrogen excretion, prolonged eosinopenia, and marked changes in fluid and electrolyte balance. These changes materially delay convalescence.

There are, therefore, many reasons for the orthopedic surgeon to be interested in the particular subject of stress. The multiple serial operations of scoliosis, the ununited fracture, the long poliomyelitis elective plans of treatment, all invoke copious amounts of stress. We must, therefore, learn more of the relation of prolonged stress to the problems of our peculiar specialty.

Material

This particular report presents the data from a study of nine patients undergoing orthopedic surgery. We are also presenting the results from two patients, each undergoing two identical procedures but operated on one year apart. The data on the nine patients being presented includes twenty-four-hour urinary nitrogen excretion and neutral 17-ketosteroid excretion. We are also presenting studies of another fraction in the steroid analysis, which we term the "acid" fraction, for comparison with the neutral fraction which is the conventional 17-ketosteroid test.

In the two patients who underwent repeated operations, we shall present studies of each operation and compare them to each other.

CASE 1.—B. E., age twenty-eight, female, suffering from bilateral ankylosing arthritis of both hips, was operated upon in 1952 on the left hip and in 1953 on the right hip. Each operation was a vitallium femoral head replacement. The metabolic response to each operation is compared. This patient received cortisone, 100 mg. daily from the tenth to the thirty-second postoperative day following the first operation.

CASE 2.—M. W., age thirty, Negro male, with severe rheumatoid arthritis producing a deformed poker spine, stiff hips, and knee flexion contractures, underwent bilateral femoral head replacements in 1952 and in 1953 an osteotomy of the lumbar spine with plaster immobilization postoperatively. This patient received 100 mg. cortisone from the forty-fifth to the sixtieth postoperative day following the first operation.

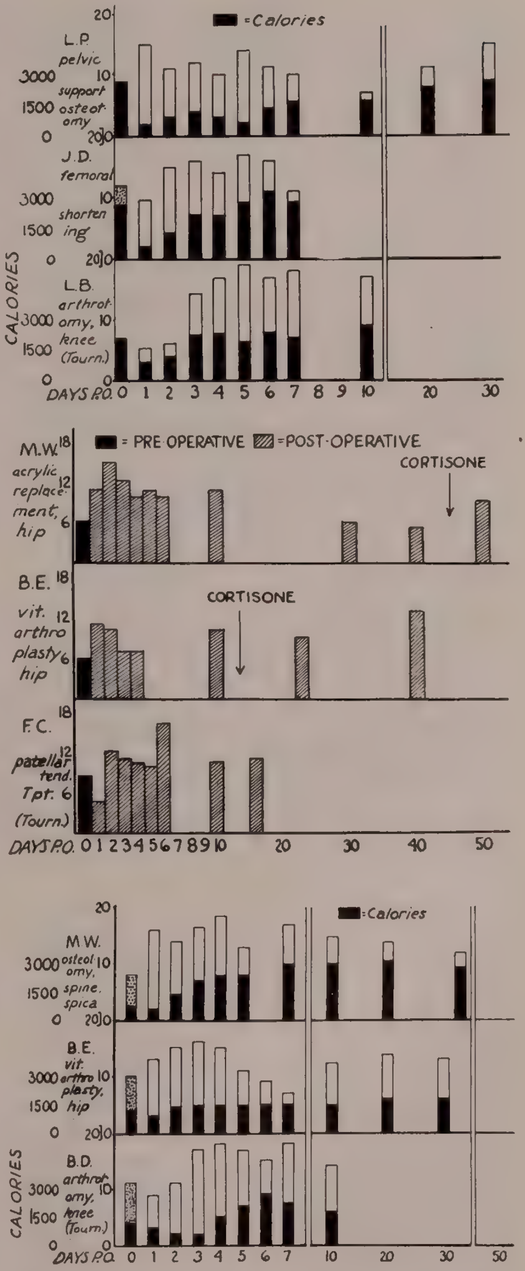

FIG. 1. Twenty-four-hour urinary nitrogen excretion (in Gm. per twenty-four hours) in operations upon bones and joints. Notice that there is a high degree of urinary nitrogen excretion immediately after surgery, although caloric intake is reduced.

Both cases were carefully studied prior to and during surgery. Throughout their hospitalization on both admissions, caloric intake, urinary output, temperature, and clinical signs were accurately recorded. Serial eosinophil counts, plasma electrolyte levels, and urinary sodium and potassium twenty-four-hour excretions were recorded. Urinary nitrogen and neutral 17-ketosteroid twenty-four-hour excretions were also performed. The patients were fed regular house diets in which

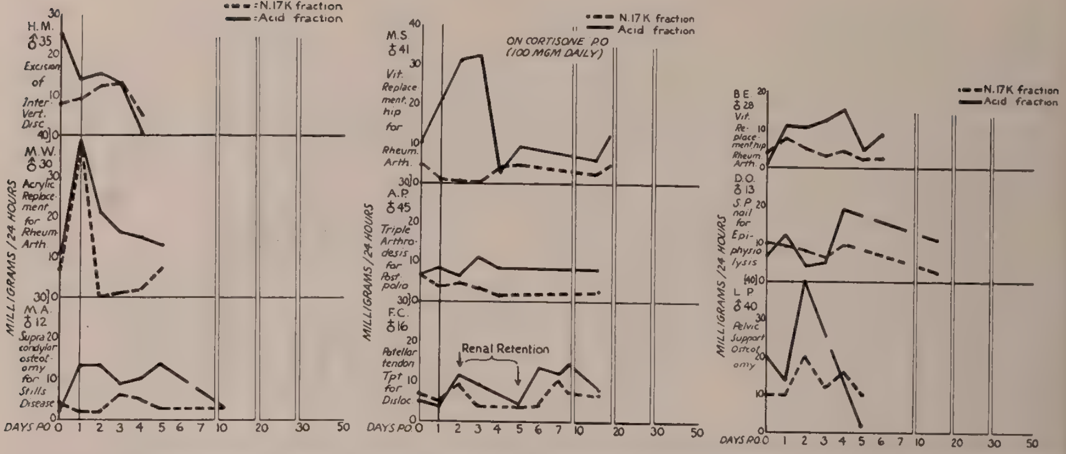

FIG. 2. Comparison of urinary neutral 17-ketosteroid and acid steroid excretion in operations upon bones and joints. Urinary neutral 17-ketosteroid excretion in some cases fails to rise postoperatively. The acid "steroid" fraction shows a higher degree and greater frequency of postoperative rise than the neutral fraction.

the caloric intake and the amount of carbohydrate, fat, and protein were recorded. It was felt that the peculiarities of response from patient to patient have been eliminated in these two cases by using the previous identical type of surgery *in the same patient* as a control when studying the effects of subsequent surgery. After the first operation each of these two patients was on cortisone, 100 mg., at some time in his convalescence.

Results

URINARY NITROGEN EXCRETION.—Figure 1 depicts the characteristic heightened urinary nitrogen excretion which follows surgery upon the bones and joints. This occurs despite diminished caloric intake. This particular response seems to be fairly constant here and was of particular interest in the three cases where a tourniquet was used since there was a rather prominent excretion of nitrogen despite lesser degrees of surgery. Whether this represents quadriceps muscle wasting or an effect on a kidney itself is not known. In one case a minor "crush syndrome-like" picture developed. This particular patient had a patellar transplant and developed elevated nonprotein nitrogen and oliguria for three days before returning to normal.

URINARY 17-KETOSTEROID EXCRETION.—It is noted that the response to surgery of this particular fraction in our operations was not one which could lend itself to interpretations (Fig. 2). In three cases no rise occurred following surgery. In only one case was there a sharp transient rise postoperatively. In the five other cases the changes which followed surgery were very slight. It was interesting to note that in the patient who received 100 mg. of cortisone postoperatively the neutral 17-ketosteroid excretion did not rise at any time.

URINARY ACID STEROID FRACTION.—This particular fraction has been obtained under the method discussed below.* It has been shown above that neutral excretion could not be consistently used, on the basis of the evidence that we have obtained, as an index of adrenal-cortical stimulation following surgery. However, the acid "steroid" fraction showed a more consistent pattern of elevation following surgery than the neutral fraction. Thus, in the nine cases shown in Fig. 2, in only one case was there a failure to obtain heightened acid fraction elevation, as compared with three cases of neutral 17-ketosteroid fractions which failed to rise. Moreover, while only one of the nine cases showed a sharp

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* METHOD FOR OBTAINING THE ACID STEROID FRACTION.—The neutral 17-ketosteroids were determined by the method of Holtorff and Koch[8] with the modifications recommended by Nathanson and Wilson.[9] In the ether extraction procedure for isolating the ketosteroids from the hydrolyzed urine sample, the ether is first washed with saturated sodium bicarbonate and then with 10 per cent sodium hydroxide. The carbonate wash is discarded, and the hydroxide solution is reserved only if urinary estrogens are to be determined. The acid steroid fraction was obtained by acidifying the normally discarded bicarbonate solution, extracting with ether, and evaporation of the ether as in the isolation of the conventional neutral 17-ketosteroid fraction. The residues were treated by the same technic as described for the neutral fraction. The principle involved in the separation has been discussed in describing methods for the identification of toxic organic compounds isolated from tissues and fluids.[10]

All analyses were performed in duplicate and determinations repeated when the deviations were greater than the optimum variations reported by Nathanson and Wilson.[9]

Case 1

Case 2

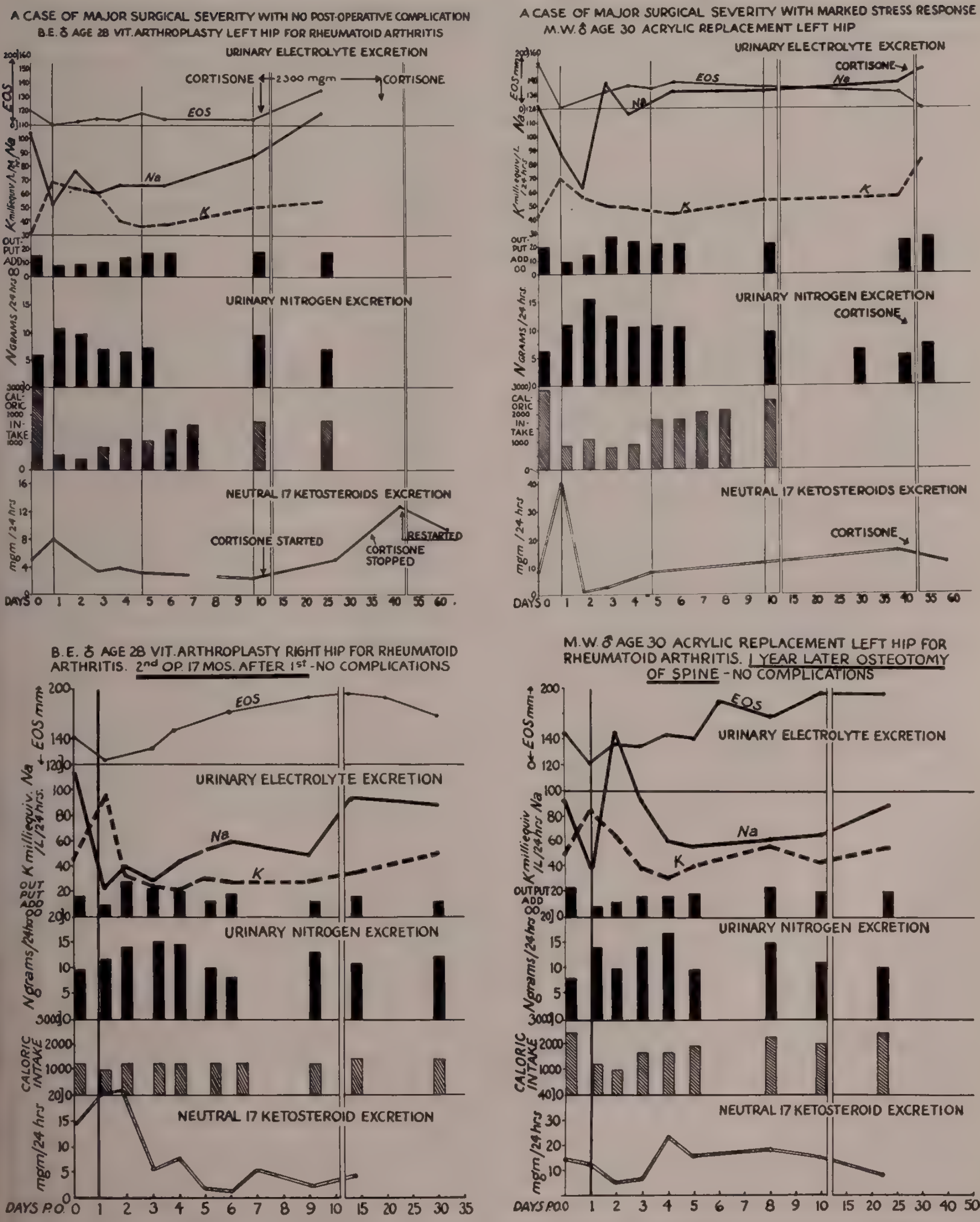

FIG. 3. Comparison in Cases 1 and 2. Notice that with the exception of neutral 17-ketosteroid excretion the findings are essentially the same in both operations.

rise in the neutral fraction at any time in the postoperative state, seven of the nine cases showed a peak rise in the acid fraction. Finally, in the patient who had been given cortisone postoperatively, a direct rise in the acid fraction during the fall in the neutral fraction was noted. This inverse relationship was present in five of the nine cases.

The exact significance of these particular findings is not clear. The findings suggest that the acid fraction may be a better mirror of stress than the neutral fraction because it tends to parallel to some degree some of the other changes that we see in the usual metabolic response.

Comparison of Cases 1 and 2.—It can be seen in the cases of the two patients who underwent similar serial staged surgery at intervals of one year apart that the metabolic response in each case is remarkably similar (Fig. 3). Postoperative eosinopenia, the sodium retention, increased potassium excretion, and increased protein excretion were exhibited during the period of diminished urinary output and diminished caloric intake. Nitrogen excretion in both cases was elevated during this period and into the first postoperative week. The neutral 17-ketosteroid excretion in these cases did not mirror the other changes noted in the postoperative state. Thus, in Case 1 the neutral 17-ketosteroid excretion in both operations rose, but in the second operation the rise was greater and for a longer period of time. In Case 2, on the other hand, a sharp peak rise followed the first operation, but no such pattern occurred in the second operation where the level of neutral 17-ketosteroid excretion did not rise at all.

Cortisone given to each of these patients in convalescence produced increased potassium excretion, but otherwise the changes were not marked.

Urinary "Steroid" Acid and Neutral Fractions Subjected to Ultraviolet Spectrophotometric Study.—They revealed the presence of new compounds which have characteristic ultraviolet absorption patterns and will be the subject of a later report. It is felt that these compounds in some way are related to the postoperative phase of stress since they appear consistently in the postoperative urinary extracts.

Comment

The changes which have been presented are very similar to those which have been presented by other observers. The results are a combination of endocrine forces acting on the kidney with water and electrolyte shifts which then occur. Extrarenal losses, starvation, and immobilization add to these changes. None of our patients had postoperative vomiting, and intake began shortly after operation so that extrarenal losses were minimal. Recovery occurred clinically at a time when the eosinophil level was on the rise and when the disrupted chemistry seemed to stabilize at close to preoperative levels. During this time increasing vigor and increasing fluid and caloric intake occurs, while kidney function returns to normal.

The homeostatic mechanisms are much too complex to discuss, but certainly the endocrine forces which are part of this mechanism act more or less through the kidney. Exactly what produces the increased nitrogen excretion is also not known. It may be a result of increased tissue destruction, bone matrix loss, renal tubular failure, or some other mechanism. The increased potassium excretion is due to cell breakdown and also diffusion of the potassium out of some cells. The sodium retention may in part be related to a labile sodium which can migrate in and out of bone, as well as the extracellular compartment.

Much of the metabolic response to surgery has been reproduced by Moore[7] utilizing a sham operation along with administration of ACTH, indicating that the pituitary-adrenal effects are of great importance in such a response.

Urinary neutral 17-ketosteroid output has been widely used as evidence of adrenal stimulation, although other observers have shown that 17-hydroxy corticoid excretion is much better suited to reflect increased adrenal function than the neutral 17-ketosteroid pattern.[11] It is for this reason that we have been interested in the study of other fractions in urinary steroid excretion which might change following increased adrenal stimulation. Evidence that such a pattern exists is shown by the changes in the acid "steroid" fraction in the cases that we have depicted. Further suggestive evidence has been obtained in the ultraviolet spectrophotometric curves of this fraction. The acid fraction which has been depicted herein shows a much higher percentage of extractable compounds giving a positive steroid reaction than the conventional neutral 17-ketosteroid fraction. The findings indicate, therefore, that the acid fraction shows the greatest promise of yielding information which can be utilized in the study of stress. The conclusions on adrenal function utilizing neutral 17-ketosteroid excretion as such an index are apparently incomplete.

The practical application of such studies is to bring out the need for the orthopedic surgeon to understand how complex is the response of his patient to injury and how much a good convalescence depends upon an understanding of the metabolic effects which are both a product of the disease and the surgical operation performed for such disease. By such an understanding the fluid and electrolyte imbalances which occasionally arise are better understood and treated. Ultimately some lead may be found for relating the cases of poor convalescence to an aberration in the stress response.

Conclusions

1. Urinary nitrogen excretion during the period of diminished caloric intake in the nine patients undergoing surgical procedure upon the bones and joints is markedly elevated over the preoperative excretion.
2. Postoperative urinary neutral 17-ketosteroid excretion in nine patients undergoing surgery is inconsistent.
3. The acid fraction obtained in the steroid analysis showed greater consistency of postoperative rise than the neutral fraction.
4. The same patient undergoing the same surgical procedure when in good health prior to surgery exhibits a remarkably similar metabolic response to surgery. The only dissimilar finding was in the neutral 17-ketosteroid response.

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ANNOUNCEMENT

SCIENTIFIC EXHIBITS

1955 ANNUAL CONVENTION
MEDICAL SOCIETY OF THE STATE OF NEW YORK

Applications for space for the scientific exhibits should be made directly to the Chairman of the Subcommittee on Scientific Exhibits of the Convention Committee:

William L. Watson, M.D.
340 East 72nd Street
New York 21, New York

The Annual Convention will be held May 9 to 13, 1955, at the Hotel Statler, Buffalo.

No applications can be considered after January 1, 1955.

There will be two groups of awards:

Group I: Awards in Group I are made for exhibits of individual investigation, which are judged on the basis of originality and excellence of presentation.

Group II: Awards in Group II are made for exhibits which do not exemplify purely experimental studies and which are judged on the basis of presentation and correlation of facts.

W. P. Anderton, M.D., *Secretary*
Medical Society of the State of New York

Lowered Resistance to Infection Resulting from Cortisone and Corticotropin

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THE literature indicates that cortisone and corticotropin exert a profound influence on bodily defense and reaction to infection. Selye[1] reported that a heavy overdosage with cortisone or ACTH caused pulmonary abscesses and eventually septicemia with widespread abscesses in rats due to normally present, usually nonpathogenic organisms. A deleterious effect on animals infected with Streptococcus, Brucella, Trichophyton, Staphylococcus, Treponema pallidum, and the virus causing poliomyelitis has also been noted. In humans dormant foci of tuberculosis have been reactivated, and in some cases of pneumonia the causative organism has been found to spread from the lungs into the general circulation.[2]

Various mechanisms have been suggested as the basis for this influence without conclusive proof of their etiologic significance. It has been thought that increased blood glucose incidental to therapy with corticotropins may be partly responsible for a lowered resistance to microorganisms. The delay in diapedesis of leukocytes as reported by Glaser *et al.*[3] must have a profound effect on lowering normal resistance of the host. The marked drop in local lymphocytic mobilization after antigen exposure in corticotropin-treated subjects, as reported by Rebuck *et al.*,[4] might well affect antigen-antibody relationship. It is interesting that in cortisone-treated mice, sulfhydryl counteracts the inhibition of spread of hyaluronidase.[5] The metabolism of sulfhydryl may be altered in generalized exfoliative dermatitis with a possibly increased hyaluronidase spread.

The well-known masking of clinical signs of infection, antipyretic effect, and reduction in granuloma formation all point to the possibility of an undetected spread of infection. Coste *et al.*[6] stated that inhibition of the diapedesis of leukocytes, of phagocytosis, the reduction of vascular permeability, and increase of tissue permeability may play a part in promotion of infection by these two preparations. Dubois-Ferriere[7] reported infection following prolonged ACTH and cortisone therapy in a case of advanced Hodgkin's disease. There was remission of symptoms of the disease with these preparations coincidentally on reduction of dosage. A rise in temperature occurred with positive blood culture for Staph. aureus.

Case Reports

Six cases of generalized exfoliative dermatitis complicated by bacteremia have been observed and are here reported. Each had received cortisone or corticotropin (ACTH) or both prior to the onset of the reactions. This number of cases of bacteremia is disproportionately high in comparison with similar instances in which the steroids were not administered.

CASE 1.—A forty-three-year-old white housewife developed a generalized exudative eruption after administration of cortisone over a period of three weeks which had been given for a widespread autoeczematization. She was hospitalized. The findings were "shaking chills, swollen neck glands, and a white blood count of 25,000." A blood culture was negative. The patient received chloramphenicol, Terramycin, and ACTH, 30 mg. intramuscularly every six hours. The skin improved, and the chills disappeared.

The patient was transferred to the New York Hospital where a widespread exudative dermatitis, a temperature of 103 F., and white blood count of 31,000 were recorded. Blood cultures on six occasions showed hemolytic Staph. aureus with as many as 22 colonies per agar plate. Sensitivity tests showed this organism to be immune to all known antibiotics except for a moderate sensitivity to bacitracin.

Intensive antibiotic therapy locally and internally was instituted. The temperature remained near 103 F., and the patient expired on the twenty-sixth

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Dermatology and Syphilology, May 14, 1954.

hospital day. Autopsy showed bronchopneumonia due to hemolytic Staph. aureus, multiple scattered abscesses, and acute glomerulonephritis.

Case 2.—A forty-four-year-old white woman had had psoriasis for thirty years. According to her history she received cortisone and ACTH treatment of the psoriasis, and after withdrawal of the hormones a generalized exudative and exfoliative dermatitis with loss of hair and nails developed. The patient maintained a temperature varying from 100 to 102 F. and a white blood count of 12,000 to 18,000. Repeated blood cultures revealed Staph. aureus. The organism proved to be moderately sensitive to dihydrostreptomycin and penicillin. Six weeks of antibiotic therapy were required to render the blood cultures negative, and the patient's dermatitis made a slow recovery thereafter.

Case 3.—A thirty-one-year-old white man with history of psoriasis for eight years had been given cortisone continuously from September, 1951, to March, 1952. When the dosage was reduced, the condition exacerbated. The drug was continued until June, 1952. He developed generalized malaise and headache. Physical examination was negative except for reddening of the pharynx. A chest roentgenogram was negative. However, a blood culture revealed gram-positive cocci. The patient was started on intensive antibiotic therapy utilizing penicillin and streptomycin. The blood cultures remained positive for hemolytic Staph. albus. The white blood count rose to 18,200 with 89 per cent polymorphonuclears, 8 per cent lymphocytes, and 3 per cent mononuclears. Sensitivity studies indicated that the organism was sensitive to bacitracin and Chloromycetin and slightly sensitive to streptomycin. However, when Chloromycetin and streptomycin were administered, no improvement occurred. One month after septicemia was first diagnosed, bacitracin by the intramuscular route was begun. One week later, clinical improvement was noted. Blood cultures became negative twelve days later. After twenty-three days the patient was afebrile and has remained so. The skin disorder assumed a chronic, dry, scaly appearance.

Case 4.—A thirty-nine-year-old white man with history of psoriasis since 1943 was started on cortisone therapy in January, 1951, because of severe arthritis and generalized erythroderma. When this therapy was discontinued in September, 1951, his skin flared with exudation and crusting so the same treatment was reinstituted. In November, 1951, the white blood count rose to 27,000 with 84 per cent polymorphonuclears. There was a daily spiking of temperature to 101 to 103 F. Blood culture revealed hemolytic Staph. aureus. Studies revealed the organism to be sensitive to aureomycin, Terramycin, and Chloromycetin. Aureomycin by the intravenous route was given because of nausea when taken orally. Moniliasis of the groin and axillae responded to local therapy upon discontinuation of aureomycin. After six weeks the blood cultures were negative. Exudation stopped, and scaling of skin diminished.

Case 5.—A sixty-seven-year-old white man developed a generalized exfoliative dermatitis following administration of medication for hypertrophy of the prostate. He received conventional therapy for the skin disorder but to no avail. Cortisone was started in March, 1951, and pruritus promptly diminished. However, the patient developed an abscess of the left buttock and furunculosis. These pyogenic lesions responded to penicillin administered intramuscularly.

A sternal marrow biopsy was performed for diagnostic purposes. Cortisone was stopped the following day. The temperature rose to 102 F. with shaking chills, and a tender soft mass appeared over the sternum. The patient was given successively penicillin, aureomycin, Chloromycetin, and streptomycin. Roentgenograms of the chest revealed a destructive process involving the articulation between the manubrium and the body of the sternum indicative of osteomyelitis and infectious arthritis. After three weeks the skin in widespread areas again started to exfoliate, and there was intense pruritus. ACTH was again administered. Five days later a fluctuant tender mass arose over the sternum. The ACTH was discontinued. Chloromycetin and penicillin therapy was instituted, and the mass subsided.

The patient again became acutely uncomfortable due to pruritus, and treatment with cortisone was again instituted. Within three weeks he developed frequency and nocturia due to hypertrophy of the prostate. A suprapubic prostatectomy was planned. The cortisone was stopped prior to operation, and the prostatic symptoms subsided. No operation was performed.

The skin became erythematous and lichenified with fissuring of the palms, soles, and fingers.

Generalized pruritus recurred in February, 1952. The skin again improved under ACTH, but the drug was discontinued when he developed marked edema of the legs with dyspnea unresponsive to Thiomerin. The patient then developed pneumonia which responded to penicillin, however.

In May, 1952, the skin was markedly exudative and crusted. The patient developed a shaking chill with temperature of 103 F. The blood culture was positive for hemolytic Staph. aureus. He received aureomycin intravenously, and blood cultures were negative within one month.

Case 6.—A thirty-nine-year-old white man had recurrent psoriasis since 1942. Because of generalization of the psoriasis, ACTH therapy was started, then changed to oral cortisone. One month later the temperature rose to 104 F., and a white blood count of 52,000 was found. Joint pains were severe. Cortisone dosage was increased with relief of symptoms. When the dosage was decreased, the patient's daily temperature varied between 102 and 104 F. No improvement was noted with increased dosage of cortisone. The patient was then transferred to the Bronx Veterans Administration Hospital.

On admission a diagnosis was made of bilateral bronchopneumonia. Examination of the sputum revealed hemolytic Staph. aureus and Proteus vulgaris. The white blood count was 24,000. Cortisone therapy was stopped. The white blood count rose to 40,000. The patient received penicillin, Chloromycetin, streptomycin, intravenous fluids, and oxygen.

The temperature fluctuated between 99 and 100 F. Monilia albicans and hemolytic Staph. albus were found in the sputum. Then the temperature again began to rise and fluctuated between 101 and 104 F. daily. Blood culture revealed Staph. aureus, later found to be sensitive to bacitracin. After five days of therapy with bacitracin the temperature dropped to 100 F. There was gradual clearing of pneumonia after this therapy was instituted.

When last observed, patient was ambulatory. The skin was intact, slightly erythematous, and scaly.

Comment

It is not sufficiently appreciated that ACTH and cortisone are potentially dangerous preparations that should be used only in selected cases and for limited periods. When maintenance of life is the consideration and the drugs are able to achieve this result, as in pemphigus, they unquestionably should be used. In illnesses that are acute, including intensely pruritic dermatoses, the adrenocortical hormones may sometimes be used effectively in small doses for a short time to reduce the morbidity and give symptomatic relief. However, in chronic skin disorders such as psoriasis the use of these preparations invites disaster. O'Leary[8] reports generalization of psoriasis following ACTH or cortisone therapy. As reported in the above cases, the use of ACTH and cortisone may lower resistance to infection with a resultant bacteremia or septicemia during the course of therapy. There is also the danger that when these drugs are discontinued, the skin will regress to pretreatment status or worse. An exudative dermatitis allows many avenues for entrance of bacteria which can cause septicemia or bacteremia because of lowered resistance due to ACTH or cortisone therapy. The diagnosis of a general infection in the course of treatment with ACTH or cortisone is difficult because hormone therapy masks the common symptoms of septicemia, which may run its course for a long period of time without causing a rise in temperature. The presence of bacterial colonies may only become apparent when treatment with ACTH and cortisone is stopped. The adrenocortical atrophy resulting from prolonged administration of cortisone makes the organism less resistant to infections when the hormone is stopped.

When, as in Case 5, prolonged cortisone therapy is considered necessary despite the episodes of bacteria and septicemia, careful watch should be made for any signs of infection. Antibiotic therapy should be instituted concomitantly. Sensitivity studies should be performed so that the most effective drugs are made available to the patient.

The bacterial sensitivities to antibiotics vary from patient to patient, and in fact the sensitivities vary from time to time in the same individual.

The type of infection that may arise can be as simple as a furuncle or abscess and as serious or complicated as a septicemia with miliary abscesses, pneumonia, etc.

Summary

Six cases are reported of dissemination of an exudative dermatitis complicated by staphylococcus bacteremia following the administration of cortisone or corticotropin. There was one death. The adrenocorticotropic hormones were administered as treatment of eczema (one case), exfoliating dermatitis (one case), and psoriasis (four cases). Some physiochemical effects of the adrenocortical hormones are discussed. The conclusion seems unmistakable that the hazard of lowered resistance to infection from administration of the corticosteroids far outweighs any temporary advantage in the clinical course so far as chronic eczema, psoriasis, and other nonfatal skin diseases are concerned.

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Discussion

Maurice J. Costello, M.D., *New York City.*—Physicians who have had experience in the treatment of disease with the steroid hormones have known from the beginning that the administration of these hormones lowers the resistance of patients to bacterial infection. This effect, as we know, was anticipated by Selye and the early workers with these hormones. We have seen the reactivation of pulmonary tuberculosis, the precipitation of pneumonia, the prolongation of infections, and the subsequent generalization of infections with bacteremia and septicemia.[a]

The authors have listed briefly the mechanisms which have been advanced to explain the lowering of the resistance of the patient to infection with the steroid hormones. The theory that appeals to me is the retardation of lymphocytic mobilization on exposure to antigen in patients treated with cortisone, hydrocortisone, and ACTH. There is reason to believe that there is altered antigen-antibody relationship permitting bacterial invasion.

The authors have well stated that the effect of cortisone and ACTH is not only to suppress the undesirable symptoms of the dermatosis being treated but to mask the warning signs of the complications that may occur as the result of hormone therapy. Even the signs of infection, such as fever, leukocytosis, and local inflammatory reaction, may be greatly suppressed at the beginning.

The authors have reported six cases of exfoliative dermatitis complicated by septicemia, which was allegedly precipitated by cortisone or corticotropin administered immediately before the onset of infection. I agree with them that the number of cases of bacteremia occurring in their patients with generalized exfoliative dermatitis who had been treated with the steroids is high. Landy and I in 1945 reported 50 cases of dermatitis exfoliativa following arsphenamine therapy with a fatal outcome in two patients from bronchopneumonia but not septicemia.[b] The necessity of taking regular blood counts on patients under steroid therapy for a generalized chronic exudative eruption is obvious.

If the antibiotics are as successful as they have been in the treatment of five out of six cases of septicemia reported by the authors, certainly they should be even more effective in the prevention of such infections. I believe that in the course of the treatment of these dermatoses the deleterious effects should be buffered by antibiotic therapy. Since the most frequent intruding organisms causing infection and septicemia are the Staph. aureus and the Staph. albus, one of the antibiotics having a specific effect on these organisms should be chosen. The authors have found that Chloromycetin with or without streptomycin was the best drug in the treatment of the septicemia which these patients developed. It might be well in the treatment of severe infections to administer several of the antibiotics to widen the spectrum of effective therapy. It is understood that when gastrointestinal or other complications supervene from the oral administration of antibiotics, these should be given by the intramuscular or intravenous routes to assure the highest possible blood concentration. I believe that Drs. Dougherty, Reisch, and Lewis are to be congratulated on the fact that five of the six patients treated in this manner recovered.

It is to be noted, however, that in the cases reported here generalization of the eruption occurred as a result of discontinuation of cortisone and ACTH, the so-called "rebound phenomenon." It is also to be recalled that patients who have a generalized exfoliative dermatitis may die from causes other than bacterial infection. Therefore, the physician has to choose between a lethal outcome from the disease itself or a possible lethal outcome which may be attributed to hormone therapy.

It seems possible to me that the infections which occurred in the reported cases were due not to the steroid treatment of the original condition but to the generalization of the eruption following the too rapid or abrupt discontinuance of the hormones.

It is an established fact that when cortisone and ACTH are withdrawn abruptly, a worsening of the eruption ensues with the return of pruritus and the opening of avenues of infection on the skin due to scratching.

The authors state that the administration of cortisone and ACTH should be mainly in patients who are suffering from serious diseases, such as pemphigus vulgaris, when it may be lifesaving and where one may ordinarily expect a fatal outcome if hormone therapy is withheld. I believe that dermatitis exfoliativa also has a serious prognosis, and, therefore, steroid therapy may be indicated for short periods of time in the treatment of this and similar diseases.

It is difficult to explain why a generalized blistering disease, such as pemphigus vulgaris, should not have a greater incidence of septicemia when that condition is treated with the steroids. Two reasons can be advanced: (1) the pathologic process in pemphigus is located superficially in the epidermis, and (2) the eruption is nonpruritic as a rule.

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Pathology of Experimental Frostbite

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(From the Department of Pathology, City Hospital)

Little information could be obtained on the progressive histopathologic changes that occur in the tissues in experimental frostbite.[1,2] It was the purpose of this investigation, therefore, to subject white albino (Wistar) rats to cold injury according to a method described by Blaustein.[3] The animals were sacrificed after periods varying from immediately after inducing cold injury to ten days later, and sections were made of the frostbitten limb tissues. Sections were studied by using specific staining procedures as well as the routine hematoxylin-eosin.

Material and Method

Thirty-three white albino (Wistar strain) rats weighing from 100 to 125 Gm. were anesthetized lightly with ether to permit shaving of both hind limbs. Each animal was accurately weighed, tagged, and given 50,000 units of penicillin. The animal was used the following day in the freezing experiment. It was placed in a wire mesh cage in a deep freeze at −18 to −22 C. for a period of forty-five to sixty minutes, depending on weight of animal. (Rats weighing more than 150 Gm. may take sixty minutes in the deep freeze before a cold injury is obtained.) The animals were then sacrificed according to the following schedule:

	Number Sacrificed	Time After Freezing (Hours)
	4	0
	4	1
	2	2
	2	4
	2	8
	2	16
	2	20
	2	24
	3	46
	2	72
	4	120
Controls	4	

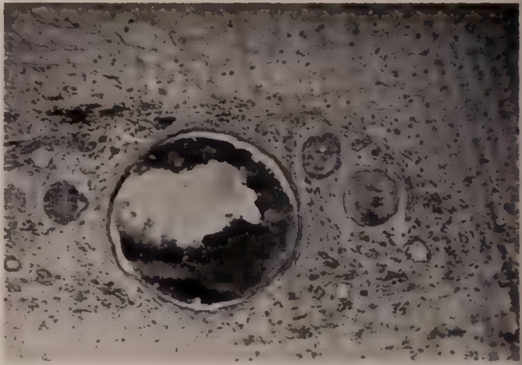

FIG. 1. Note (1) the mixed thrombus in the large vein, (2) hemorrhage into peripheral sensory nerve, (3) edema, (4) dilatation of capillaries and lymphatics, (5) leukocytic infiltrate.

Preservation of Vessels.—When the animal was etherized lightly, two ligatures were placed about the limb. The portion in between the ligatures was cut and immediately placed in 10 per cent formalin. This helped to preserve the state of the small vessels.

All tissues were placed in 10 per cent formalin for forty-eight hours, and in those specimens where the soft tissues were to be studied the bony portions were discarded. The decalcification process was felt to induce too many artifacts. Sections of the limbs were stained by hematoxylin-eosin and Mallory's aniline blue collagen as well as Gomori's Trichrome.

Observations

Animals Sacrificed Immediately After Freezing.—Sections through the tarsum showed mild edema in the subcutaneous tissues. There was some hemorrhage between the dermis and the tendons. Significant numbers of large eosinophils containing coarse, deeply acidophilic granules were seen in the subcutaneous connective tissue, particularly in a perivascular position about small capillaries and venules. The endothelium of the capillaries was swollen and margination of leukocytes seen. The lymphatic channels were clear. There were no agglutinative red cell thrombi present. The osseous tissue and marrow showed no histologic changes.

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* By invitation.

Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Pathology and Clinical Pathology, May 13, 1954.

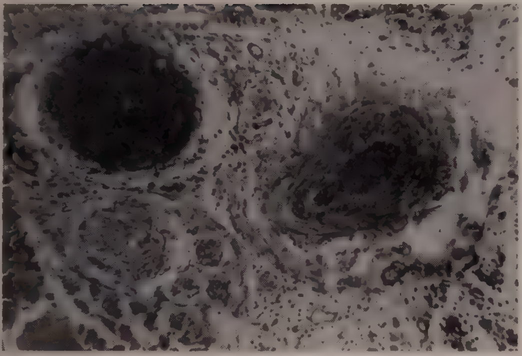

FIG. 2. Agglutinative thrombi.

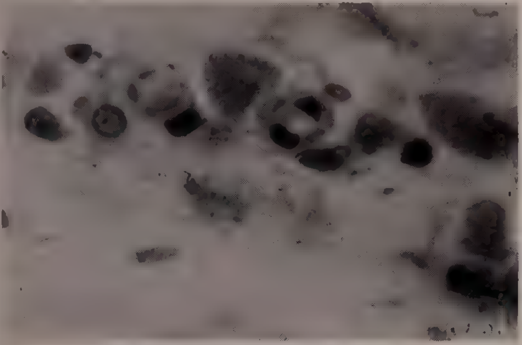

FIG. 3. Animal sacrificed immediately after freezing. Note the pericapillary eosinophilia.

ONE HOUR AFTER FREEZING.—There was marked increase in edema in the subcutaneous tissue and interfibrillar swelling in the muscle bundles (Fig. 1). Veins and venules showed mixed thrombi with mural platelet deposition. The lymphatic channels were dilated but clear. The capillaries showed endothelial swelling, and many contained clumps of red cells (agglutinative thrombi) (Fig. 2). There was marked pericapillary eosinophilia, and many of the eosinophils were seen in direct contact with the vessel walls (Figs. 3 and 4). Fibrin strands were noted in the interstitial tissues near the capillaries that contained agglutinative thrombi (Fig. 5).

TWO HOURS AFTER FREEZING.—The lymphatics were dilated. There was a yellow amorphous deposition within the endothelium. In some of the small arterioles there appeared to be dissolution of the endothelium. The agglutinative thrombi were still found in the capillaries and arterioles, as were the mixed thrombi in the veins. There was marked edema and dense lymphocyte, monocyte, and eosinophil infiltration of the edematous connective tissue stroma. The muscle bundles separated by edema showed polymorphonuclear leukocytic infiltration. The capillaries of the neutral sheathes were injected. In some of the animals there were subperiosteal and multiple perivascular hemorrhages noted (Fig. 6). In some veins there was retroendothelial hemorrhage, and the retroendothelial space was widened with narrowing of the lumina of the veins (Fig. 7).

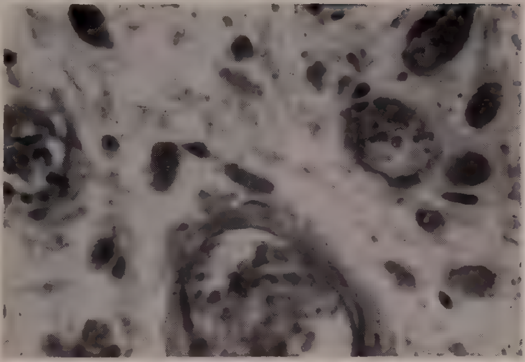

FIG. 4. Animal sacrificed one hour after freezing. Note the perivascular eosinophilia, dilated vessels, and agglutinative thrombi.

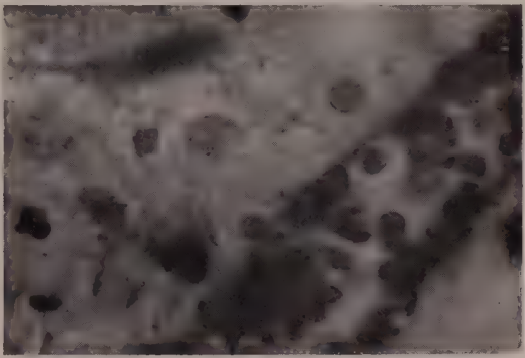

FIG. 5. Note rupture of vessel wall with surrounding hemorrhage into edematous tissue heavily laden with fibrin strands.

FOUR HOURS AFTER FREEZING.—The venous, capillary, and arteriolar occlusions were still present and the endothelium lining the capillaries still swollen and edematous. The muscle fibers no longer took the acidophilic dye and appeared to have undergone avascular necrosis. Neutrophilic infiltration and phagocytosis were seen. The perivasular eosinophilia was less well defined. Many of the eosinophils appeared to be disintegrating. There was intraepidermal bleb formation.

TWENTY HOURS AFTER FREEZING.—There was diffuse hemorrhage into all subcutaneous tissues. Marked subperiosteal hemorrhage with

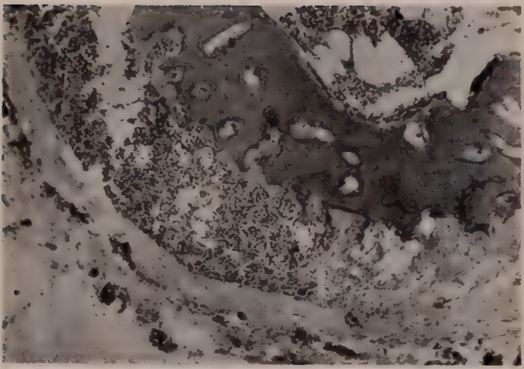

FIG. 6. Subperiosteal hemorrhage twenty-four hours after cold injury.

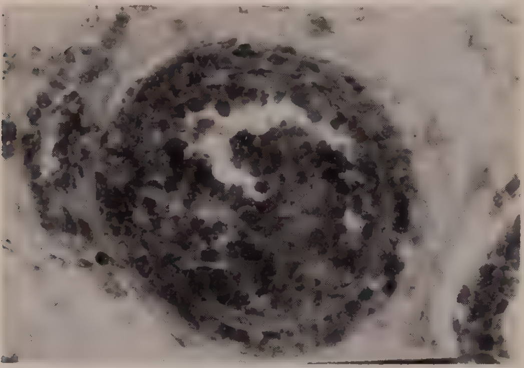

FIG. 7. Subendothelial hemorrhage with almost complete obliteration of the vessel. Note clearly how the endothelium is intact but separated from the media by hemorrhage.

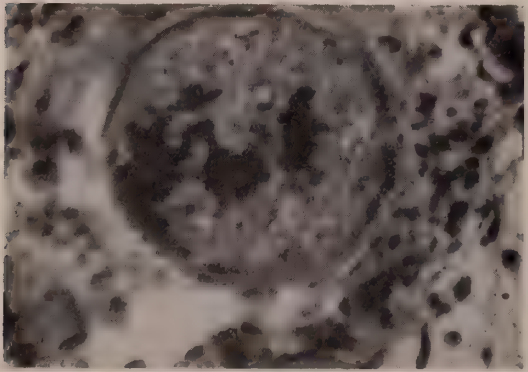

FIG. 8. Animal sacrificed seventy-two hours after cold injury. Hemorrhage into a large peripheral sensory nerve trunk. Rupture of small vessel supplying the nerve sheaths. This type of reaction could conceivably cause the temporary loss of reaction in the limbs.

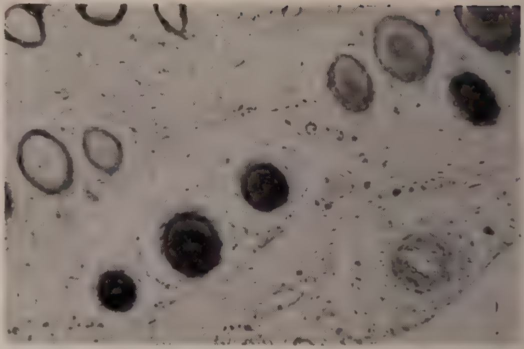

FIG. 9. Edema of dermis with pressure on appendages.

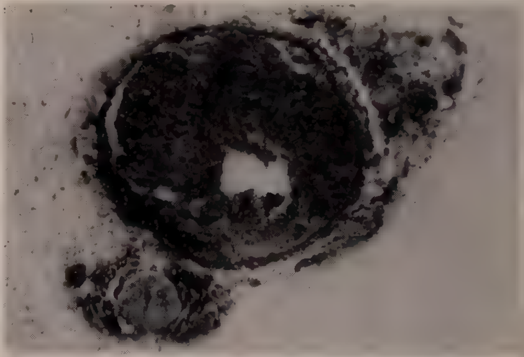

FIG. 10. Mixed thrombi in large veins: platelet, red cell and white cell, fibrin.

early necrosis of bony tissue was seen. There was marked myeloid hyperplasia in the marrow. The subcutaneous and intracutaneous edema and leukocytic infiltration were marked. Atrophy of the dermal appendages was seen. Many of the capillaries and venules were now patent and did not contain clumps of red cells. Occasional capillaries showed red cell conglomerates in which the cells appeared fused as one mass.

TWENTY-FOUR HOURS AFTER FREEZING.—There was hemorrhage beneath the perineural sheath with compression of the nerve fibers (Fig. 8). The muscles showed atrophic changes and replacement by dense fibrous connective tissue. The surviving muscle bundles appeared normal. The leukocytic infiltration of the subcutaneous tissue was more marked. The dermal appendages were atrophic (Fig. 9). More vessels appeared to be patent and free of thrombi. The veins that did contain thrombi showed a distinct fibrin framework containing the formed cellular elements with platelets predominating (Fig. 10). The lymphatic channel appeared to be largely plugged with fibrin strands. The perivascular eosinophilia was less distinct.

FORTY-SIX HOURS AFTER FREEZING.—The cutaneous and subcutaneous edema and necrosis were more pronounced. The muscular tissue and neural elements were unchanged. The periosteum was appreciably thickened by dense fibrous connective tissue. The capillaries, venules, and arterioles appeared in the main to be patent. The marrow was still hyperplastic.

Seventy-Two Hours After Freezing.—The additional observations were beginning organization with marked intradermal and subcutaneous fibrosis. The periosteal thickening was pronounced.

One Hundred and Twenty Hours After Freezing.—Grossly there was loss of parts due to gangrene. Microscopically in the area where there had been loss of a part of a limb there was dense collagenous scar tissue with fewer dermal elements seen. The muscular tissue remaining was normal, and the vessels seen were patent and free of thrombi.

Comment

One of the earliest observations seen was the pericapillary cuffing of eosinophils. The capillaries were dilated and the endothelium edematous. One wonders whether the eosinophilia was not a reaction to histamine release, the latter causing or contributing to the vasodilatation with the consequent slowing of the circulation and the formation of sludge. A second interesting observation was the presence of mixed thrombi in the venules, veins, and arterioles. In some the platelet element predominated, while in others the fibrin element predominated. A third observation was the distribution of the hemorrhage. The hemorrhage into the sensory nerves of the limbs could account for the temporary loss of sensation that people with frostbitten limbs often complain of for a ten-day to two-week period. The vessels that were diffusely involved were the capillaries plugged with agglutinative red cell thrombi that did not appear to contain any fibrin stroma at all. It is more readily understood that oral anticoagulants would not be effective in preventing the formation of this type of thrombus.

It is interesting to note that twenty-four hours after the injury the capillary occlusion seemed to decrease, and in the seventy-two-hour specimen hardly any capillary thrombi were seen. The mechanism of the complete recanalization of these capillaries is difficult to explain.

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Functional Restoration of the Shoulder by Deep X-ray Therapy in Bursitis

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Deep x-ray therapy has given successful functional results in treating bursitis, even though the cases were treated after other forms of medical care and treatment had failed to restore function and to eradicate pain. This paper is a report of the 435 cases treated from 1945 to 1953, inclusive. During the same period 1,265 cases of radiculitis arising from arthritis were treated. These cases have been reported elsewhere.[1]

If the patient has no pain or disability, it is a mistake to make the diagnosis of acute bursitis solely because roentgenograms show calcareous deposits in the region of the greater tuberosity of the humerus. Those deposits may be old and

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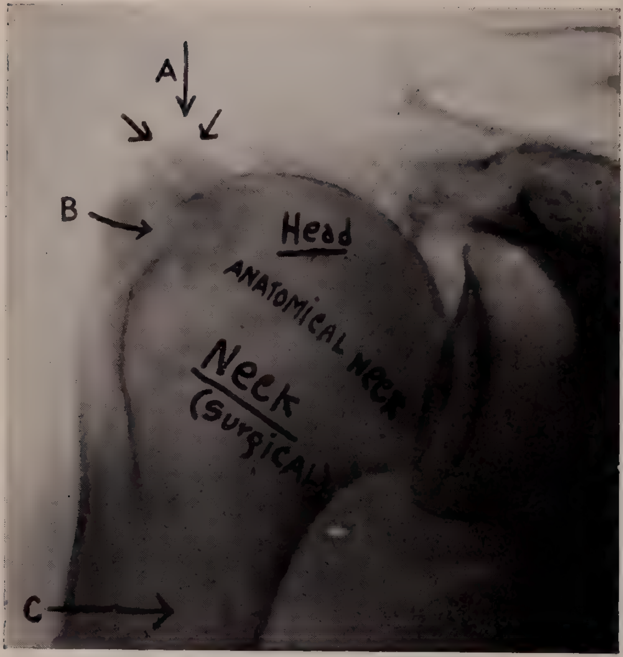

Fig. 1. A case of acute subdeltoid bursitis with extremely severe pain and no motion possible; (*A*) subacromial bursa, (*B*) greater tuberosity, (*C*) humerus. Eight deep therapy treatments were given to restore joint motion and eliminate pain.

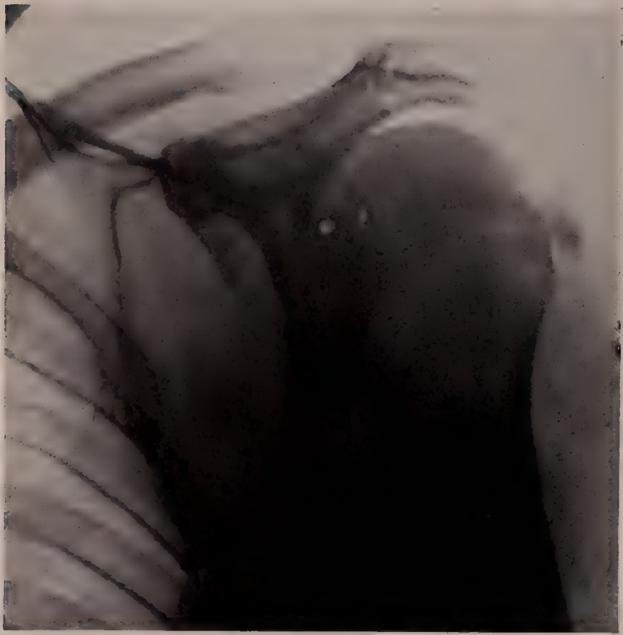

Fig. 2. This x-ray was taken before nine deep x-ray therapy treatments were given in February, 1953. The calcifications at the tendon insertions of the supraspinatus muscle completely disappeared after therapy. Mobility was restored. There was no tenderness whatsoever.

chronic. Limitations of motion together with pain over the tuberosity should be the guiding factors and criteria in roentgen diagnosis and therapy.

A patient with bursitis should never be discharged if pain and limited mobility exist. In these patients one must conclude that the bursitis is incompletely treated or that a lurking arthritis exists within the shoulder joint. Arthritis is definitely a complication of bursitis; when there is arthritis, the joint must be treated by deep therapy to obtain maximum results in motion. Bursitis is included in a general class of so-called nonarticular fibrositis. Within this category are included tenosynovitis, tendonitis, and fibrositis.

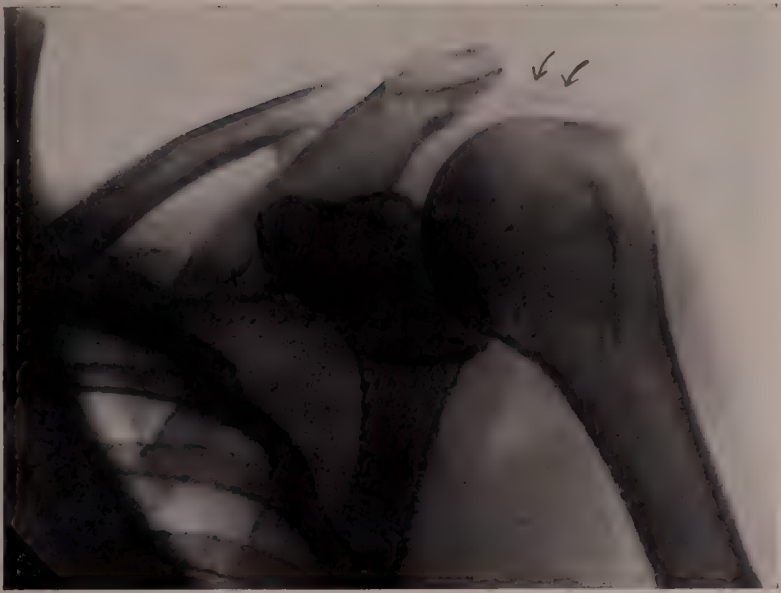

FIG. 3. Subdeltoid bursitis. Motion completely restored after eight deep therapy treatments. No tenderness remained about the shoulder.

Etiology and Symptoms of Bursitis

Trauma is considered as a most important causative factor of bursitis. Infections, however, are an important cause. Although the subacromial bursa is commonly affected, other bursa, such as the olecranon, ischial, prepatellar, and achilles, may be involved (Fig. 1).

Pain is extremely severe in acute subacromial bursitis. Tenderness may be localized to the subacromial region or may be somewhat diffuse. Movements of the shoulder increase pain. Calcifications in the tendon of the supraspinatus muscle may rupture into the bursa where they act as a foreign body and thus increase pain and disability (Fig. 2). Longstanding cases result in adhesions, periarthritis, stiffness, and, finally, where no therapy has been used, a frozen shoulder. In a frozen shoulder the capsule of the shoulder joint thickens and adheres to the bone surface.

Roentgen Diagnosis

X-ray films may at times be completely negative in acute bursitis if calcifications are not present. In these cases one must not overlook eburnation with a squaring off of the greater tuberosity. However, palpation will reveal tenderness in the subdeltoid region, as well as limited motion of the shoulder (Fig. 3). This limitation of motion is important since we always make the diagnosis from the clinical history and physical examination wherever possible, together with radiologic data. Not only may arthritis complicate the bursal picture, there may also be extrinsic factors which secondarily affect the shoulder joint, as, for instance, brachial neuralgia or cervicobrachial radiculitis. Radiologists must properly evaluate disabilities around the shoulder joint.

We appreciate the fact that as far as radiologic interpretations go, we are limited and duty-bound to make roentgen diagnosis on proper films of the shoulder joint. One cannot be expected to make a roentgen interpretation of cervicobrachial radiculitis on films of the shoulder joint or even the cervical spine. A thorough examination of the shoulder joint of the patient should be done by the radiologist.

Our object in presenting this paper is to alert radiologists to be on the lookout for complications when patients with bursitis are referred to the x-ray therapist. In so far as the x-ray therapist is the master in control, it behooves him to recognize complications in order to treat disabilities around the shoulder joint properly. When routine deep therapy to the shoulder fails to clear up bursitis, one must look for and report complications to the referring physician. If a cervicobrachial radicular syndrome should complicate the bursitis, the referring doctor certainly would authorize further deep therapy treatments to the cervical spine to clear up this complica-

TABLE I.—RESULTS IN 9 CASES OF SUBDELTOID AND SUBACROMIAL BURSITIS (435 CASES TREATED)

Name	Age	Sex	Duration	Areas Irradiated	Roentgen Dosage	Results
B. A.	22	M	3 weeks	Right shoulder	700 r	Pains in shoulder gone. Mobility restored.
A. R.	20	F	6 months	Left shoulder	900 r	Mobility good. Pains gone.
R. B.	68	F	2 years	Left shoulder	1,100 r	Mobility restored. Pains gone.
D. L.	41	M	9 months	Right shoulder	800 r	Mobility restored. Pains gone.
N. F.	32	M	6 months	Left shoulder	800 r	Mobility increased. Pains over bursa gone.
G. M.	34	M	8 months	Right shoulder	900 r	Mobility increased. Pains over bursal area gone.
C. G.	31	M	7 months	Right shoulder	700 r	Severe pains gone. Mobility increased.
R. C.	59	M	1 year	Left shoulder	1,200 r	Mobility restored. Pains gone.
B. S.	65	F	3 years	Left shoulder	1,600 r	Mobility restored.

tion if the matter were discussed with him. The x-ray therapist, we believe, too often overlooks this complication when presented with bursitis, which, when left untreated, discredits the most valuable form of therapy. Furthermore, we wish to emphasize the importance of never discharging a patient with bursitis as improved unless there is 90 to 100 per cent motion and no tenderness whatsoever over the greater humeral tuberosity. Many of our patients have had as much as 1,500 r over various parts of the joint before the desired result was attained.

Treatment and Results

The usual treatments given these shoulder conditions consist of roentgen therapy, heat, hydrotherapy, and in a small percentage of patients manipulation under an anesthetic.

Our technic of x-ray therapy in bursitis has been described in previous articles.[2,3] Deep x-ray therapy is given until complete mobility has been restored and all tenderness gone. These are usually accomplished in about eight to ten treatments of 200 r each in air, 50 cm. distance with a filtration factor of 0.5 mm. Cu, 1 mm. Al, using 200 peak kilovolts. A total of 600 r are applied anteriorly, 300 posteriorly and 200 to 300 laterally. However, when arthritis complicates the picture, deep therapy should be applied directly over the affected joint to restore mobility.

Acute and subacute cases respond very quickly. There is alleviation of pain and increased mobility after 600 r are given. The patient is given daily doses of 200 r each, and treatments are spaced four times a week until a total of 1,000 to 1,200 r has been given. As a rule, pain is relieved after the second or third treatment. The marked limitation of motion is also mitigated. Furthermore, if there are no complications, symptoms completely vanish, and the deposits diminish or even disappear. The presence of deposits, however, has no significance whatsoever. In chronic cases a higher total dosage, 1,200 to 1,500 r, may have to be given because much more damage has occurred to the bursa. The improvement here is usually slow but steady.

O'Brien[4] states that the roentgen therapy of calcification of the supraspinatus tendon or so-called subacromial bursitis should always be tried before operative procedures. The relief from pain and freedom of motion obtained are often dramatic. It is not uncommon for a patient, sleepless because of pain and with his arm in a sling, to take roentgen therapy and the next day to report no pain and a good night's sleep. The diagnosis should, of course, be established by roentgen and clinical examinations before irradiation is begun.

Table I lists a few of the 435 cases of bursitis having no complications whatsoever. When complications such as cervicobrachial radiculitis, arthritis, or frozen shoulder exist, further deep x-ray therapy treatments to the cervical spine or frozen shoulder involved are indicated.

The nine cases of bursitis summarized in Table I have responded very well to deep x-ray therapy with marked relief or entire disappearance of shoulder pain and with increased mobility about the shoulder girdle.

Irradiated skin needs special care. Any reactions due to hypersensitive or allergic skins may spell failure in bursitis patients. After trying many nonmetallic protective salves for skins, we have found Rayderm Ointment (containing antihistamine)* satisfactory over these past several years. With our malpractice insurance rates soaring, a bit of skin caution in deep therapy should be very timely.

Summary

In a study of more than eight years duration 435 cases of bursitis were treated with deep x-ray therapy. The most characteristic symptom was pain and limited mobility. Treatment consisted of deep x-ray therapy over the bursal region until there was complete restoration of function.

Successful therapy depends first on thorough treatment of the bursitis and second on treating such complications as frozen shoulder, arthritis, and cervicobrachial radiculitis if present.

It is essential to continue to treat all patients with bursitis with deep therapy until motion is 100 per cent restored and no tenderness whatsoever exists about the shoulder joint. There are recurrences if patients are dismissed too early.

Preservation of skin tone with Rayderm Ointment proved very satisfactory during x-ray therapy.

390 Merrick Road

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Discussion

James MacFarland, M.D., *Hornell.*—I agree with Dr. Gelber very thoroughly that when the patient walks into the office, the clinical findings are often more important to us than the x-ray examination, although we have tried to use an x-ray examination that would give us some index of the amount of limitation of motion which is actually present. In checking over our records in the last four years we find that we have seen approximately 600 cases which are about equally divided between acute and chronic. In spite of the severe symptoms we feel this is a benign condition. We treat these cases with 150 r in air given every other day for three treatments, and if there is dramatic relief of symptoms, we tell them to report back to us in two weeks time. In about two thirds of the acute cases and one third of the chronic cases we find that they have made an almost complete recovery in this two weeks. It seems to me that if we followed Dr. Gelber's regime, we would be giving these patients a good deal more x-ray, and I am wondering if it is necessary.

The other one third of the acute cases and two thirds of the chronic cases make up the group in which most of our headaches occur. These are the people who either have developed or are going to develop a frozen shoulder. We continue to treat them and at times have given almost as much therapy as Dr. Gelber, although spread out over a much longer period of time. Some of our results are not gratifying, and perhaps Dr. Gelber's regime of giving the therapy more rapidly is the answer to the problem in these cases. Pathologists and surgeons who have studied these shoulders have talked about our results being accomplished by reversal of the inflammatory process, mobilization of the circulation in the clogged blood supply, and even a revascularization of some of these structures. It is even suggested that this process can result in a dissolution of the adhesions about the shoulder joint. We also know that the end result of large doses of x-ray is fibrosis within the tissues which is the opposite condition to what we would like to accomplish in the shoulder. I feel that Dr. Gelber may be pushing his therapy to the point where fibrosis might be found, and I would like to ask him if he has seen any cases which developed late fibrosis in the structure around the shoulder as the result of his treatments.

I would like to stress one other point which Dr. Gelber has brought up. When the shoulders are not responding well, it is also wise to look for some other cause for the continued pain and limitation of motion. We find very frequently in our nonresponsive cases that the patient has a cervical arthritis which, when treated, responds well. Or there may be an underlying arthritic process in the shoulder joint itself. However, it is also our feeling that an arthritic process in the shoulder will respond to small doses of x-ray, and it is not necessary to push the therapy to such high limits as Dr. Gelber suggests.

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* Rayderm Ointment (containing antihistamine), Velvet Products Co., New York City.

Every major question in history is a religious question. . . . It has more effect in molding life than nationalism or a common language.—Hilaire Belloc

Nocturnal Cramps of the Legs

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NOCTURNAL cramps are involuntary tetanic contractions of skeletal muscle which occur abruptly at rest, mostly at night. They may be precipitated by stretching of the leg. The calves are most frequently involved. The attacks may awaken the patient from sleep and may produce severe pain; they are ended when the involved muscle is passively stretched.[1,2] Night cramps are prone to occur in fatigued muscles.[3]

Night cramps are not related to the nocturnal pain which often arises in patients with radiculopathy or neuritis of the lower extremities and which is unaccompanied by involuntary muscular contraction. "Writer's cramp" is an occupational neurosis of complex etiology and unrelated to nocturnal cramps proper.[4] "Swimmer's muscle cramps,"[5] "salt depletion cramps,"[6] or "heat cramps"[7] resemble nocturnal cramps.

The general incidence of night cramps is high. It has been reported to be 50 per cent in the English population.[6] An inquiry conducted by us among several hundred ambulatory unselected patients revealed that almost 40 per cent had experienced nocturnal cramps at one time or another. Night cramps constitute a minor ailment common in the experience of many individuals.[8]

A review of the literature and our own experience indicate that the occurrence of nocturnal cramps in patients with occlusive arterial disease is coincidental. The coexistence of night cramps and pregnancy,[9] varicose veins and deep venous stasis,[3] Moenckeberg's sclerosis,[10] osteoarthritis,[11,12] and static foot troubles,[13] however, may be significant. Night cramps are said to be frequent in diabetics,[14] but we have found the incidence to be as great in nondiabetics.

The nature of night cramps is not understood. Among the hypotheses advanced to explain their mechanism are abnormal irritability of skeletal muscle fibers or the neuromuscular junction,[2,12] calcium deficiency,[9] alkalosis,[15] or just "disequilibrium" of muscle electrolytes.[16]

Oral quinine salts[2,12,13,17–20] and diphenhydramine[21] have been widely used in recent years to prevent these cramps. Oral calcium salts[22] or diluted hydrochloric acid[23] had been used previously but now are considered ineffective and without rationale by many.[12,13,24] In our hands a variety of agents has been effective in controlling nocturnal cramps. Among these were oral calcium lactate, dihydrotachysterol, diluted hydrochloric acid, quinine salts, diphenhydramine, intravenous calcium gluconate, and supportive bandaging. Of these the least toxic, most consistently efficacious, and cheapest has been oral calcium lactate.

Material and Methods

This is a report on 179 cases with nocturnal cramps, observed over variable periods for the past six years. This series includes 52 patients from the peripheral vascular clinic of the Mount Sinai Hospital and 127 private patients.* These cases do not represent an unselected sample of the population since all patients were referred with a presumptive diagnosis of occlusive arterial disease.

A general examination which included study of the peripheral circulation (history of intermittent claudication, presence of the pedal, popliteal, and femoral pulses bilaterally, and oscillometric readings at ankle and calf level) was performed on all patients. The urinary calcium content was grossly estimated on random specimens in some patients (Sulkowitch reagent). There was no correlation between urinary calcium contents in random specimens and the incidence of night cramps in our cases.

Most patients received several drugs or placebos over a period of many months. They were kept uninformed as to the nature of the drug.

Therapeutic evaluation was based on the patients' written records as to the frequency of night cramps. Most patients were followed at monthly intervals. Only statements that had been recorded by the patients biweekly or more often were subjected to statistical analysis (in 40 of 179 patients). In the remaining cases a remedy was

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* We are indebted to Dr. S. Silbert for his permission to include 59 case reports from his private files

TABLE I.—Clinical Diagnoses in 179 Cases

	Occlusive Arterial Disease	No Occlusive Arterial Disease
Diabetes mellitus	18	4
Varicose veins	30	34
Deep venous stasis	15	16
Static foot disturbances	5	15
Osteoarthritis, rheumatoid arthritis	7	14
Moenckeberg's sclerosis	. .	3
No organic disease found	. .	18
Total	75	104

TABLE II.—40 Cases of Night Cramps Treated with Oral Calcium Lactate

	Mean Frequency (Per Week)	Standard Deviation of Mean
Untreated (2 weeks)	3.9	±0.31
Oral calcium lactate (0 to 2 weeks)	1.3	±0.22
Oral calcium lactate (2 to 4 weeks)	0.9	±0.21
Placebo only (0 to 4 weeks)	2.8	±0.32

termed "good" when the night cramps subsided, "fair" when the frequency of the cramps diminished by one half or more, and "poor" when the frequency of the cramps diminished by less than one half. The intensity and site of night pain was disregarded.

The clinical diagnoses in the cases of this series are summarized in Table I.

Results

Twenty-one patients were followed without treatment over four two-week periods, eight weeks in all, to determine the spontaneous variations in frequency of night cramps. In this group an average of 3.5 cramps per week, with a standard deviation of ± 1.87, was observed.

Forty patients were followed according to the following schedule: (1) an initial period of two weeks without treatment; (2) a period of zero to two weeks on oral calcium lactate, 10 grains three times a day; (3) a period of two to four weeks on oral calcium lactate; (4) a period of zero to four weeks after discontinuation of calcium lactate on a placebo.

The results are summarized in Table II. The mean frequencies and the standard deviations of the mean suggest that in this group calcium lactate controlled night cramps. The results obtained during the last observation period, compared to the previous three periods, render it likely that the effect of calcium lactate on night cramps persisted for an average of ten days after discontinuation.

TABLE III.—Therapeutic Results in 179 Patients with Nocturnal Cramps

	Good	Fair	Poor	Total
Calcium lactate (10 grains three times a day)	93	19	7	119*
Quinine sulfate (5 grains three times a day)	70	21	10	101
Diphenylamine (25 mg. twice or three times a day)	26	18	9	53
Dihydrotachysterol (1.6 mg. twice a day or less)	10	1	8	19
Diluted hydrochloric acid (20 drops three times a day)	12	10	10	32
Elastic support	9	5	9	23

* Including the cases summarized in Table II.

A descriptive evaluation of the efficacy of several methods of treatment in nocturnal cramps is given in Table III. It is seen from Table III that more than one method of treatment (an average of 1.9 per case) was employed at different times in almost every case.

Comment

There is no objective method of determining the character or intensity of nocturnal cramps. Data concerning the frequency of night cramps may be obtained from cooperative patients and may be evaluated statistically. In our series untreated night cramps varied in frequency to some extent. By comparing treated cases with these controls, it followed that fair to good therapeutic results could be obtained by each one of the six methods of treatment employed. Some other allegedly effective night cramp remedies (vitamin D, aluminum hydroxide,[9] ammonium nitrate[1]) were not tested by us. We found salicylates, lactose, phenacetin, Priscoline, and caffeine to be without effect upon the incidence of night cramps.

It is apparent from our experience that no single night cramp remedy can be called specific. In the variety of effective therapeutic agents it is difficult to find a common denominator that might shed some light upon the origin of nocturnal cramps. The prevailing theories as to the mechanism of this ailment do not simplify the problem. Some of these hypotheses follow:

A stagnant venous circulation is said to cause the accumulation of metabolites in the tissues of the calf, producing increased muscle irritability.[3] Experimental stretching of a limb may produce ischemia of the nerve.[25] Whether a similar mechanism plays a role in night cramps requires further study. Normally, active stretching of a muscle is known to inhibit proprioreceptive stimuli from organs located in tendons and muscle.[26,15] It is not known whether this mechanism is disturbed in night cramps. Inflammatory and other irritative foci adjacent to or within the calf muscles are believed to cause cramps by a reflex mechanism.[12]

The widely held opinion that quinine salts taken orally reduce the severity and incidence of night cramps is supported by our results. Quinine is known to lower the conduction in the muscle end-plate following tetanic stimulation and to augment the muscular refractory period.[27] This action makes quinine a rational drug in the treatment of night cramps[24] but hardly the only one.

Calcium together with other cations is concentrated in the anisotropic ("A") bands of resting striated muscle.[28] Excess of calcium ion increases the amplitude of muscular contraction.[29] Calcium ion activates adenosine-triphosphatases,[30] enzymes considered essential in the process of muscle relaxation.[31] Experimentally produced lack of calcium ion is associated with an increase in excitability of somatic nerve, while an excess of calcium ion decreases the responsiveness to electrical stimulation of nerve fiber, the sympathetic ganglion, and the muscle end-plate.[32] Electromyograms taken from cramping muscle in man[16] reveal volleys of electric discharge of a rate comparable to those obtained from calcium deficient nerve.[32] The precise role of calcium in the production of night cramps, however, is not defined. No data as to the distribution and concentration of ionized calcium in cramping as compared to noncramping muscle are available.

While the local inhibitory effect of calcium ion on neuromuscular irritability is established, it is not easy to understand why the daily ingestion of 0.5 Gm. of calcium (as lactate salt in our group) should modify the tissue level of ionized calcium in a patient who takes perhaps twice this amount of total calcium in his daily diet. The utilization of dietary calcium, however, depends on several unstable factors. If calcium is taken as acid phosphate salt, it is not well absorbed.[9] The presence of fats,[33] oxalic acid,[34] or some other substances[35] in the diet may reduce the absorption of calcium, while vitamin D is known to enhance it. Many "regular" mixed diets in American and European countries, especially in large populated areas, are actually deficient in calcium.[36] The true incidence of calcium deficiency in the population is not known.[37] However, most observers agree that it is often found in people with an active calcium metabolism, e.g., during pregnancy and lactation. The incidence of night cramps in pregnant women is known to be high.[9] It remains to be seen whether a correlation exists between calcium deficiency and the incidence of night cramps in other healthy people. The balance and tissue distribution of ionized calcium will have to be studied in people on various "regular" diets before the therapeutic effect of small amounts of oral calcium lactate in night cramps can be understood. It stands to reason that the usefulness of diluted hydrochloric acid in nocturnal cramps is due to increased intestinal absorption of ionized calcium.

Summary

1. One hundred seventy-nine patients with night cramps were followed over a total period of six years. The frequency of night cramps was studied under the influence of several drugs and evaluated statistically in 40 patients.

2. Oral calcium lactate, dihydrotachysterol, quinine salts, diphenhydramine, diluted hydrochloric acid, and elastic bandaging were effective in controlling night cramps in our group. Calcium lactate was preferable because of its reliability, lack of toxicity, and low cost.

3. The rationale of the use of calcium salts in nocturnal cramps is discussed.

We wish to thank Dr. A. Aaron Yalow for his advice as to statistical evaluation of our results and Dr. S Silbert for his constant interest.

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The Control of Malignant Effusions with Radioactive Gold

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THE palliation of the discomfort of the patient suffering from a rapidly recurring effusion due to metastatic neoplasm is one of the most difficult tasks any physician has to face. Until 1947 external x-ray therapy and repeated paracentesis were the chief means of therapy. The results of radiation treatment were frequently disappointing.

In 1947 Muller[1] in Switzerland first used an artificially prepared isotope, Zn^{72}, as a means of controlling fluid formation by injecting it into the peritoneal cavity. The results were promising; the drug, however, was very expensive. In 1949 radioactive gold, Au^{198}, was first introduced to the medical profession, and since that time it has become the drug of choice in the control of malignant effusion. This report summarizes our experience with this drug over a period of about two years.

Physical Properties of Au^{198}

Radioactive gold has a short half-life of 2.4 days. This means that at the end of eleven days 95 per cent of all the radiation has been emitted. Giving off both gamma and beta radiation, the gold decays to stable mercury ${}_{80}Hg^{198}$. Ninety-five per cent of the energy is emitted in the form of beta rays which have a maximum energy of 0.98 million electron volts. They have a maximum range in tissue of 3.8 mm., and 50 per cent travel only 0.38 mm. The gamma radiation has an energy of 0.2 and 0.4 million electron volts. Because of its short range all beta radiation is absorbed within the body. The gamma radiation can easily be detected outside of the body and can be used to monitor the distribution of the gold.

The material itself is introduced into the peritoneal or pleural cavity in a colloidal form with a particle size of 30 to 70 μ. Since the strength of the commercially available solution is 3 to 4 mc. per mg. of gold, we introduce 15 to 25 mg. of gold in the average application.

Technic of Application

A pleural or peritoneal tap is performed in the usual manner. In patients who form fluid rapidly nearly all the fluid is removed. In others a partial emptying of the serous cavity is all that is necessary. After the required amount of fluid has been removed, the needle is left in place, and the gold solution is introduced through the same needle, together with 150 to 200 ml. of normal saline. Following the introduction of the radioactive gold the wound is sealed with collodion, and the patient is placed in an oscillating bed for an hour in order to assure homogeneous distribution of the gold. He is also instructed to turn frequently. In order to reduce the amount of ionizing radiation received by the operator to a safe level, we use an injection unit designed along the lines suggested by Tabern.[2]

Dosage

To judge from the literature[2-5] doses ranging from 100 to 200 mc. in the peritoneal cavity have produced essentially the same therapeutic result. We have selected as initial dose 125 mc. to the peritoneal cavity and 75 mc. to the pleural cavity. The amount of radiation actually delivered to the peritoneum is very difficult to ascertain. Using estimates of the total surface area of peritoneum in the average human male and assuming instantaneous and equal deposition on all peritoneal surfaces, Chamberlain[6] has figured out a maximum dosage of 3,000 equivalent r per 100 mc. of Au^{198}. Walter,[5] who uses the quantity of precipitated gold at postmortem examination as a guide, gives values ranging between 3,000 and 20,000 equivalent r per 100 mc. Au^{198} over different areas of the peritoneum.

Side-reactions

Mild nausea and diarrhea have occasionally been observed after the intraperitoneal injection of radioactive gold. These have always been quite transient and have been well relieved by vitamin B_6 and paregoric. Symptoms of mild ileus are occasionally present for a few hours. One author[7] has noted transient bone marrow changes after the administration of intraperitoneal colloidal gold, as well as after the direct injection of the same material into tumor tissue. He has shown the presence of gold particles within macrophages in the bone marrow seventy-two hours after the introduction of colloidal gold into the peritoneal cavity in one patient. We have not followed our patients with bone marrow aspirations and, therefore, cannot comment on this finding. However, in none of our cases and in none of the cases so far reported has there been a clinically significant depression of the circulating elements in the peripheral blood after these injections.

Clinical Response

In this institution we first started to use Au^{198} in 1951 and, since that time until September, 1953, have given it to a total of 42 patients. Two patients received gold directly into tumor tissue, and five others received gold as a prophylactic measure after removal of ovarian carcinomas. In the remaining 35 patients gold was used to control effusions.

We have noted that occasionally, after the administration of gold, fluid formation continues for two to three weeks, sometimes being even slightly accelerated, and then decreases rapidly. We feel, therefore, that a period of six weeks is the minimum length of time necessary in order to evaluate properly the result of treatment. In some patients who form fluid slowly a two-month follow-up is preferable, and this is the minimum period of follow-up which we have used in this study. In all cases classified as having had a good response, there was either complete cessation or definite decrease in fluid production, as evidenced by a marked reduction in the number of taps necessary.

When we first started to use radioactive gold, we administered this drug to any patient suffering from effusion due to malignancy and paid little attention to his general clinical condition. It is, therefore, not surprising that 14 out of the first 35 patients died before our minimum follow-up period of sixty days had elapsed. In three others we were unable to get an adequate follow-up report. This leaves 18 patients in this study group, by chance evenly divided between those receiving therapy in the abdomen and in the chest (Table I).

While the greater number of patients with metastatic breast carcinoma and pleural effusion did not respond well to this therapy, those who

TABLE I.—RESULTS WITH Au^{198} IN CONTROL OF MALIGNANT EFFUSIONS

	Number of Cases	Results	
		Good	Poor
Pleural	9	4	5
Carcinoma of lung	1	1	0
Carcinoma of breast	7	2	5
Metastatic carcinoma to pleura, primary (?)	1	1	0
Peritoneal	9	7	2
Carcinoma of lung	1	1	0
Carcinoma of breast	1	1	0
Carcinoma of overy	6	4	2
Carcinomatosis, primary unknown	1	1	0

did respond had unusually long periods of palliation. The history of one of the cases will illustrate this point.

CASE 1.—A sixty-four-year-old white female was admitted to this hospital approximately five years after left radical mastectomy for a duct carcinoma of the breast. Her chief complaints were dyspnea and right chest pain. The former had been present for approximately two months, and for relief weekly thoracenteses, each yielding 800 to 1,000 cc. of cloudy fluid, were necessary. A total of 60 mc. of Au^{198} was introduced into the right pleural space on August 21, 1952. Following this there was decrease in dyspnea, and no tap was required until October, 1952. The patient remained dry from then on until February, 1953, when she again developed fluid, and another 74 mc. of Au^{198} were instilled into her right pleural cavity on March 20, 1953. She has not required any further thoracenteses since that time.

None of the patients who received gold into their peritoneal cavities did quite so well as the above-mentioned patient. The following case history is an example of one of our better results after peritoneal gold infusion.

CASE 2.—The patient, a fifty-seven-year-old white male, had undergone a laparotomy approximately six months prior to his admission to this hospital. At that time the diagnosis of abdominal carcinomatosis with peritoneal implants was established. Approximately two months later he noted swelling of his abdomen, and from then on until admission he needed multiple paracenteses, each yielding 800 to 1,000 cc. of fluid. On June 19, 1952, he received 90 mc. of Au^{198}. During July he required two paracenteses, each yielding 2,000 cc. From then on he was completely dry until May, 1953, a period of ten months. Because of reaccumulation of fluid a second administration was performed on May 22, 1953. He again needed several paracenteses following the gold administration, after which his fluid production decreased. Unfortunately, at around that time he started to lose ground rapidly, and he expired a short while later.

CASE 3.—The most spectacular result after administration of radioactive gold was seen in a middle-aged white woman suffering from persistent right pleural effusion. An exploratory thoractomy established the diagnosis of multiple pleural implants. On microscopic examination they had the characteristics of an adenocarcinoma. The primary origin of this tumor was never found.

Prior to administration of Au^{198} the patient was so dyspneic that she had to be hospitalized and had to receive oxygen. Since the injection about nine months ago she has been essentially asymptomatic, at home, and able to do light work. She has required only one pleural tap, a short period after the gold injection.

Comment

Our results compare favorably with those quoted in the literature. Most authors[2-5] feel that 40 to 70 per cent of their patients definitely benefited by the administration of radioactive gold. In our series about two thirds of those patients who could be adequately followed had definite slowing down of fluid production. Several times we have noted that the first application of gold will slow the production of fluid but not stop it completely. A second application will frequently give the desired result. This is well illustrated in the first case report.

The total number of cases in our series, and in most others reported, is too small to draw any definite conclusion as to the sensitivity of any particular tumor species. It is our clinical impression that the condition of the patient and the size and distribution of the tumor masses are more important in deciding the response of the patient than the primary origin of the tumor. Patients in a terminal stage and those showing symptoms of partial intestinal obstruction are very poor candidates for gold therapy and may actually be harmed by this drug. The mild radiation sickness and the temporary ileus seen occasionally after intraperitoneal administration of radioactive gold may be sufficient trauma in this group of debilitated patients to cause a major clinical setback.

Little is known about the actual mode of action of radioactive gold in stopping fluid production. The prevailing theories are that (1) it acts by sterilizing multiple small tumor implants, thereby lessening irritation on the peritoneum, and (2) it acts by producing an increase in fibrous tissue, thereby sclerosing and plugging multiple lymph channels in the peritoneum.

Walter[5] in a recent publication has described a marked fibrous response of the peritoneum in a patient approximately three months after gold was administered. We also have seen this reaction in one patient with ovarian carcinoma coming to postmortem examination approximately one month after intraperitoneal colloidal gold. There was marked thickening of all peritoneal surfaces with thick, fibrous bands binding the different loops of the intestine. In another case where intrapleural colloidal gold was used successfully to control a malignant pleural effusion, a fibrinous pericarditis was present on the side where gold was administered. This fibrinous reaction was only present to a very small degree in a series of dogs injected intraperitoneally with radioactive gold. In these animals the drug was not successful in controlling the ascites produced by partial clamping of the inferior vena cava.

The selection of patients to receive radioactive gold should be given careful consideration by the referring physician. In patients with malignant effusion the radioactive gold will only affect the fluid formation and will not change any other symptoms due to the tumor itself and not to the fluid. While occasionally there is a very prompt response to gold administration, the majority of patients do not show significant slowing of fluid formation for from four to six weeks. Therefore, a patient to be a candidate for radioactive gold therapy should fulfill the following three criteria: (1) His major symptoms are due to the effusion; (2) his general condition is such that his life expectancy in the absence of effusion is three to four months or more; (3) there is definite evidence of tumor implant in the pleural or peritoneal cavity such as bloody fluid, malignant cells in the fluid demonstrated by histologic or cytologic methods, or both of these indications.

Conclusion

1. Radioactive gold is a valuable therapeutic tool for the control of serous effusion due to malignant implants.

2. It should be reserved for patients in reasonably good clinical condition whose chief difficulty is a rapidly forming malignant effusion.

3. If the first application of gold produces a clinical response which is incomplete, the second dose may stop fluid production completely.

4. The immediate side-effects following gold administration are slight and easily controlled.

5. In most patients gold will produce a fibrous response of the serous surfaces, and there is some evidence that this fibrous response is at least partially responsible for its therapeutic effect.

6. A tentative set of criteria is given for the selection of patients to receive radioactive gold.

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. . .Our Founding Fathers did not invent the priceless boon of individual freedom and respect for the dignity of men. That great gift to mankind sprang from the Creator and not from governments.

The Founding Fathers, with superb genius, welded together the safeguards of these freedoms. They were mostly concerned with the dangers of political tyranny. With the coming of the industrial age our people welded in new safeguards. We could no more have economic tyranny than political tyranny.

And with these safeguards our people were at one time closer to the goals of human welfare than any other civilization in all history. . . .—HERBERT HOOVER

Intravenous Cholangiography

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SINCE the introduction of cholecystography in 1924 by Graham and Cole[1] the oral method of administration of the contrast agent has proved eminently satisfactory over the course of the past thirty years. However, despite the high degree of diagnostic accuracy achieved by oral cholecystography, there are occasions wherein the oral mode of administration is ineffectual, inefficient, or impossible. The recent introduction, therefore, of an intravenously administered gallbladder agent has closed one of the few remaining gaps in the pre- and postoperative diagnosis of diseases of the biliary duct system. This new compound, first synthesized in Germany by Langecker, Horwart, and Junkmann,[2] was called Biligrafin and has been the subject of a number of clinical reports in the European literature.[3-6] In this country it has been made available through E. R. Squibb and Sons under the name Cholografin, and preliminary reports of its clinical applications have been made by Berk[7] and Orloff[8] and their associates. Our own initial experience with Cholografin has been previously reported in some detail.[9] This report concerns only those patients who have been examined because of persistent or recurring symptoms following cholecystectomy.

Cholografin is a 20 per cent solution of the disodium salt of N, N^1-adipyl bis (3 amino-2:4:6 Triodobenzoic acid) and contains approximately 64 per cent firmly bound iodine. It is distributed in ampules of 20 cc. with each of which is packaged a 1-cc. vial used in testing for hypersensitivity. The drug should not be given to individuals with hyperthyroidism or known iodine idiosyncracy. There is a risk, at least in theory, in giving it to patients with chronic progressive liver disease. To our knowledge there have been no published reports of any harmful effects on the human liver, nor have we observed any evidence of its hepatotoxic properties in our patients.

Preparation and Administration

Our routine procedure has been as follows:

A light, fat-free meal is given the night before examination. If there is a history of constipation, the patient is given $^1/_2$ ounce of castor oil.

TABLE I.—TOXICITY OF CHOLOGRAFIN IN 135 PATIENTS

	Number
Total patients	135
Total injections	150
Toxicity	
Strongly positive skin test (drug withheld)	1
Severe reactions (nausea, vomiting, abdominal pain)	3 (2.2%)
Mild reaction	42 (30%)
Nausea	27
Flushing	13
Vomiting	15
Pruritis	2
Pain at injection site	5
Salivation	2
Urticaria	2

Breakfast is withheld, and the patient is sent to the x-ray department for injection of the drug as early in the morning as possible.

The patient is questioned about allergic and drug sensitivities, and if there are no contraindications, 2 minims of Cholografin are injected subcutaneously. The normal response consists of a small, pink wheal, without pseudopods disappearing in about ten minutes. In only one of our subjects, a four-month-old child, was there a marked skin reaction, and the drug was withheld.

If the subcutaneous test is normal after ten to fifteen minutes, the remainder of the small ampule is injected intravenously, and if there are no ensuing signs of hypersensitivity (nausea, salivation, flushing, or abdominal pain), 40 cc. of the drug are injected. A single dose (20 cc.) will often suffice to demonstrate the biliary ducts of a thin patient, but in our experience a double dose (40 cc.) does not produce any more side-effects and gives radiographs of better diagnostic quality.

Toxic reactions are kept to a minimum if the agent is injected slowly, over a clocked interval of five to ten minutes. The injection is temporarily interrupted if there is any complaint of nausea or abdominal pain. These symptoms are usually relieved by deep breathing, after which the injection may be cautiously resumed.

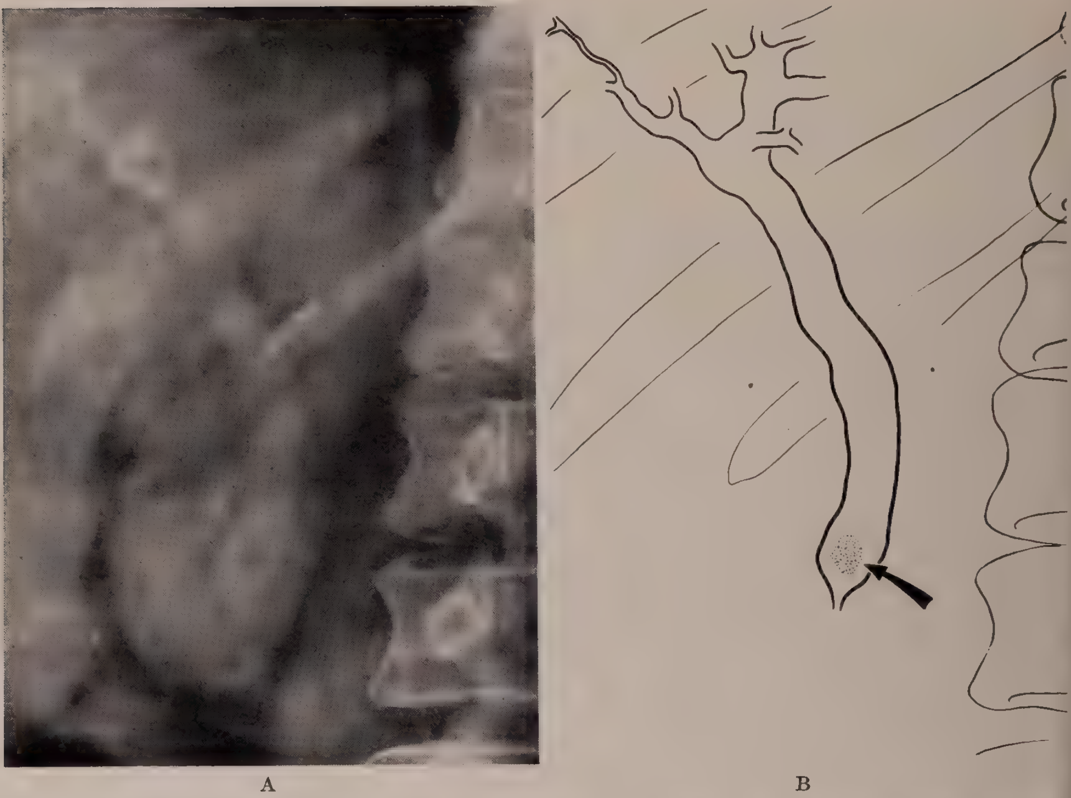

FIG. 1. Choledocholithiasis. Roentgenogram (*A*) and tracing (*B*) showing stone (arrow) in distal portion of common duct.

TABLE II.—VISUALIZATION IN 57 POSTCHOLECYSTECTOMY PATIENTS

	Number
Total postcholecystectomy cases	57
Common bile duct visualized	47 (82.5%)
Common bile ~~duct not visualized~~	10 (17.5%)
Causes of nonvisualization	
Jaundice	8
Received less than recommended dose	2
Total patients without jaundice or evidence of liver damage	49
Number of common bile ducts visualized in patients without liver damage	47 (96%)

Reaction

To date we have used this new intravenous gallbladder agent in 135 patients for a total of 150 injections. Evidences of toxicity are listed in Table I. We have seen no instances of respiratory and circulatory collapse, but in three individuals fairly severe reactions occurred, characterized by vomiting, dyspnea, and boring epigastric pain lasting approximately thirty minutes and subsiding spontaneously. Milder reactions have been observed in 42 patients who complained chiefly of nausea and flushing beginning when about half the dose had been given and gradually relieved by deep breathing and slowing of the injection rate. We have observed no instances of local reaction or thrombosis at the site of injection.

Radiographic Technic

With the patient prone and the right side elevated about 30 degrees from the table top, radiographs are made in the posteroanterior projection. For conventional films we have found the following factors satisfactory for the average patient: 65 KVP, 300 milliamperes, one-fifth second exposure at 40-inch target film distance, Potter Bucky diaphragm. For body section radiographs we have used for the average patient 65 KVP, 120 milliamperes, two seconds exposure at 30-inch target film distance.

The first radiograph is usually exposed fifteen minutes after the injection is finished followed by another, five minutes later. Both films are developed and subsequent conventional or body section radiographs ordered as indicated. The

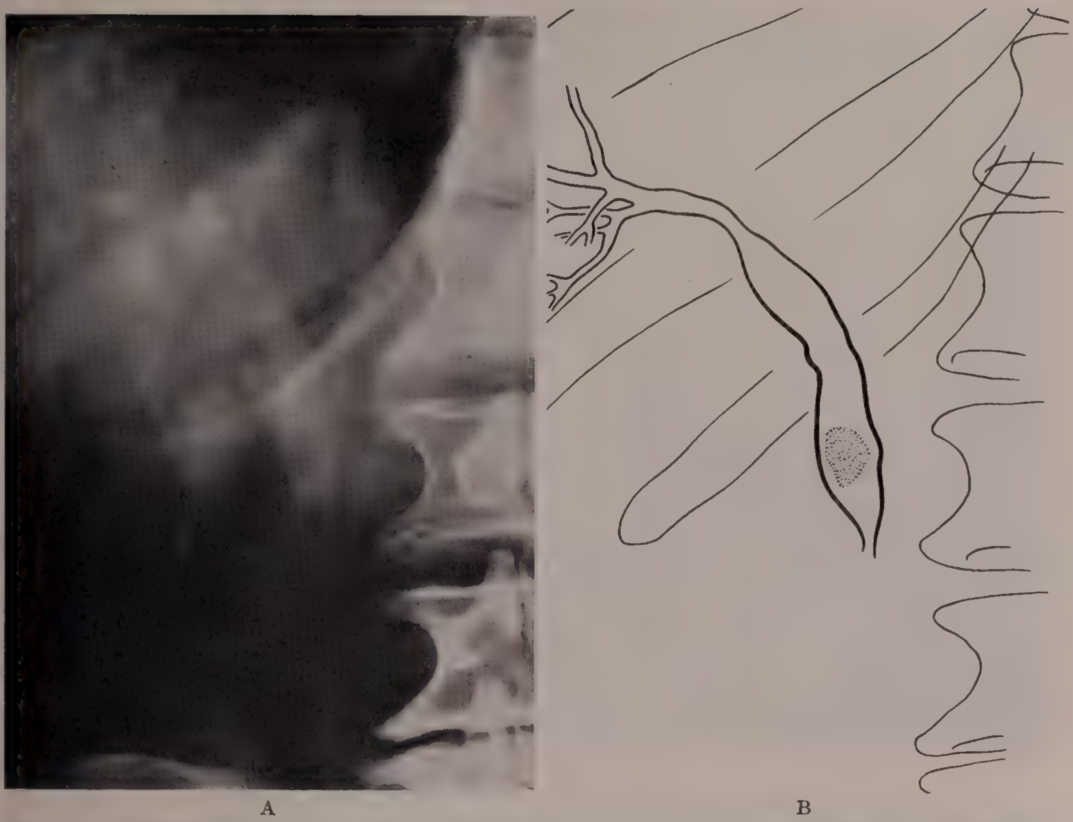

FIG. 2. (*A*) Conventional film thirty minutes after injection of contrast agent, demonstrating large, faceted stone (arrow) in common duct. (*B*) Tracing showing position of calculus.

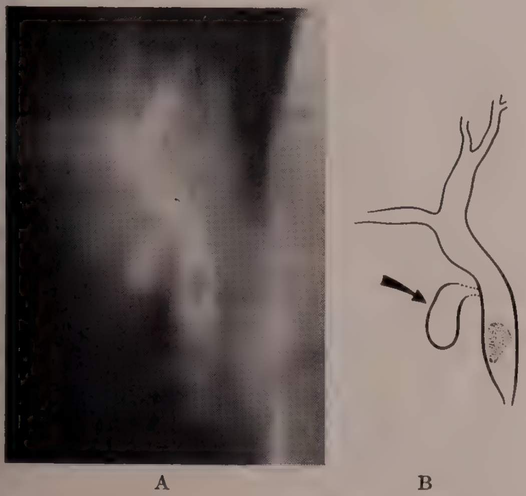

FIG. 3. (*A*) Tomogram of opacified common duct showing calculus and large cystic duct stump. (*B*) Tracing of cystic duct stump (arrow).

common bile duct is usually visible ten to sixty minutes after injection. The length of time the biliary tract may be visualized is prolonged to some extent by inducing spasm of the sphincter of Oddi with morphine or paregoric before injecting the contrast agent.

Results

Of the 135 patients so far studied, 57 were examined because of postcholecystectomy symptoms. There was adequate demonstration of the common bile duct in 47 (82.5 per cent) and nonvisualization in 10 (17.5 per cent). The reasons for nonvisualization are listed in Table II. It can be seen that jaundice was the responsible factor in eight of the ten nonvisualizations. It has been our experience that the contrast agent is ineffective in the presence of jaundice or severe liver damage. In the 49 cases without jaundice or evidence of liver damage, the common bile duct was satisfactorily demonstrated in 47 (96 per cent). There were seven cases in which common duct stones were demonstrated (Figs. 1 and 2). In some cases conventional

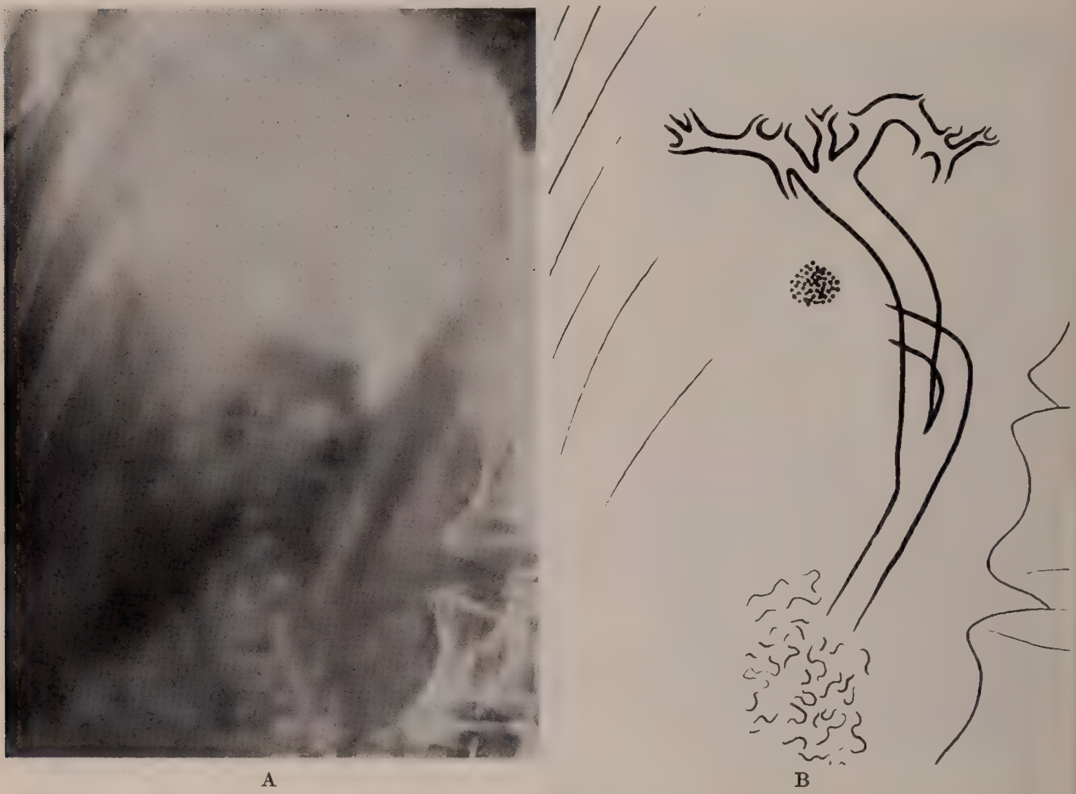

Fig. 4. Patient was a seventy-two-year-old female, who had had a cholecystectomy twenty years previously, with recurrent right upper quadrant symptoms. (*A*) Conventional film sixty minutes after intravenous injection of 40 cc. Cholografin, demonstrating good opacification of a normal common duct. There is a long cystic duct stump with an opaque stone impacted in its neck. (*B*) Tracing of (*A*) showing relation of cystic and common bile duct and impacted stone.

film examination was supplemented with tomography, a procedure we have found to be a very helpful adjunct in more clearly defining the common duct when it is obscured by intestinal contents (Fig. 3). It has been our observation that morphine or paregoric increases the length of time that the common duct remains visible, permitting fluoroscopy and spot films as well as conventional views. A barium meal may be given and the relationship of the duodenum and common duct established when there is reason to suspect a lesion in or near the ampulla of Vater. Intravenous cholangiography has also been of considerable value in demonstrating a residual cystic duct stump (Fig. 4).

Summary

For routine cholecystography Cholografin is not necessary and has no advantages over the oral media. It should, in our opinion, be reserved for special indications, one of which has been the subject of this report.

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CASE REPORTS

Fever of Seven Months Duration Due to Subacute Miliary Tuberculosis

Clinical Arrest with Antituberculous Drugs

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This case is reported because of the unusually prolonged period of fever during which no definite diagnosis could be established despite intensive study. Proof of suspected miliary tuberculosis was finally obtained by biopsy at operation. Following the institution of specific therapy the fever abated, and a remarkable improvement in the patient's condition occurred. After two months of treatment an individual almost moribund was restored to apparent health. This therapeutic response, however, was not obtained until all three antituberculous agents, streptomycin, isonicotinic acid hydrazide, and para-aminosalicylic acid, were administered simultaneously. At the present time there is a growing tendency to give these three drugs together to prevent, as far as possible, the emergence of resistant strains of tubercle bacilli.

Case Report

L. G., white male, aged seventy years, suddenly became ill with severe chills, nausea, and generalized muscular aches on January 2, 1952. An irregular spiking temperature up to 105 F. soon appeared, associated with a slight dry cough. During the following two weeks, patient received courses of therapy with penicillin, Gantrisin, Chloromycetin, and Terramycin without improvement.

The past history revealed that for the past five years, patient had noticed a minimal morning penile discharge, brownish in color, which had diminished after prostatic massages. Two years ago he suffered a minor anterior wall myocardial infarction which was treated by bed rest for two weeks with apparent complete recovery.

On January 15 the patient was admitted to the Brooklyn Jewish Hospital. The positive findings on physical examination were a slight cyanosis of the lips, bilateral basal crepitant rales, a soft apical systolic murmur, a liver that was somewhat irregular and hard and felt two fingerbreadths below the costal margin, a spleen palpable one fingerbreadth below the costal margin, and some soft, irregular enlargement of the prostate. The blood pressure was 140/80.

During his first period of hospitalization for five weeks, a septic temperature up to 103 F. persisted until his discharge. The further administration of penicillin, streptomycin, and the broad-spectrum antibiotics did not influence his course. Patient was drowsy when the temperature was elevated and complained of an occasional headache and a slight cough with a clear mucoid expectoration. However, he managed to eat and maintained his nutritional balance fairly well. The rales disappeared from the left base but persisted at the right base, together with some dullness and diminution of the breath sounds.

Numerous blood counts disclosed a slight polycythemia, the hemoglobin ranging from 114 to 94 per cent with a red blood cell count of 5,090,000 to 4,530,000. The white blood cell count was persistently low despite his fever and varied from 6,500 to 4,700 with an average differential of 53 per cent polymorphonuclear cells, 40 per cent lymphocytes, 6 per cent monocytes, and 1 per cent eosinophils. The blood sedimentation rate was low, 8 to 4 mm. per hour. A bone marrow study was within normal limits. The urine was normal except for an occasional leukocyte. Blood chemistry determinations of urea, sugar, icterus index, cholesterol, albumin, globulin, and acid phosphatase were all normal. The blood Mazzini test was negative. The heterophil and cold agglutinins were of normal titer. Agglutination tests for typhoid, paratyphoid, Brucella, rickettsialpox, Salmonella, and typhus were negative. The cerebrospinal fluid was within normal limits. Six blood cultures and three urine cultures were sterile. A concentrated stool specimen was negative for ova or parasites. Eight sputum examinations did not reveal any tubercle bacilli. Slight liver dysfunction was indicated by an alkaline phosphatase of 8.7 units and a thymol turbidity of 6.0. The cephalin flocculation test was negative.

An intravenous pyelogram revealed a small cyst at the lower pole of the left kidney and a slight

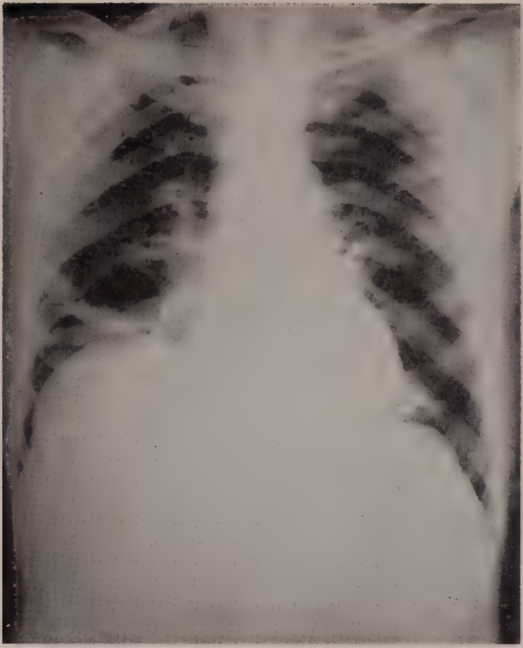

FIG. 1. Roentgenogram of the chest taken February 6, 1952. The right diaphragm is considerably arched and elevated. Patchy infiltration is seen, particularly in the right lower lung field.

encroachment of the prostate gland upon the bladder. Successive chest x-rays demonstrated a gradual rise of the right leaf of the diaphragm with patchy infiltration in the right lower lung field (Fig. 1). Some of the chest plates showed some suspicious miliary seeding in the lung fields, but the subsequent films did not disclose any further increase in these deposits.

Bronchoscopy did not reveal any abnormalities. The Papanicolaou smear of aspirated sputum was negative for malignant cells, and a bronchogram of the right lower and middle lobe exhibited a normal bronchial tree.

The favored admission diagnosis was primary atypical virus pneumonia based on the findings in the lungs. However, when the fever persisted, clinical impressions included miliary tuberculosis, histoplasmosis, or an underlying metastatic carcinoma The or lymphoma. diagnosis of miliary tuberculosis was supported by the findings of slight polycythemia (which occurs in splenic involvement), the relative leukopenia, and the suspicious pulmonary miliary seeding. Although still febrile, the patient insisted on returning to his home after five weeks in the hospital.

At home the spiking temperature up to 103 F. continued with headache, slight cough, chills, and sweats. The patient became depressed about his condition and was given small doses of cortisone by mouth. This drug made the patient feel somewhat euphoric and lowered the febrile peaks to 100 F. However, on withdrawing the steroid his fever promptly returned.

On April 30, after five months of illness, the right scrotum became painful and swollen. Examination revealed redness of the overlying skin. On palpation, the testis and epididymis were tender and considerably enlarged and matted together. Penicillin and Terramycin were administered without response, and the patient was again referred to the hospital.

Inspection of the patient on the second admission on May 25 revealed him to be fairly comfortable. Examination of the lungs still elicited dullness and diminished breath sounds at the right base posteriorly with a few moist rales. The liver was palpable three fingerbreadths below the costal margin and was slightly irregular and tender. The spleen was felt one fingerbreadth below the left costal arch. The right testis was considerably enlarged, irregular in contour, and moderately tender. On rectal examination a tender doughy mass was now felt on the right side anteriorly above the prostate gland. It was interpreted as an inflammatory lesion of the right seminal vesicle. There was also some swelling of the left leg due to thrombophlebitis which had appeared three days before this admission.

Blood counts still revealed slight polycythemia and relative leukopenia. The hematocrit was 51 per cent. Blood chemistry studies were again essentially within normal limits except for some evidence of liver damage. The icterus index was 11.0, thymol turbidity 8.1, and cephalin flocculation tests 0 to 3 plus. The bromsulfalein dye test showed 22 per cent retention in forty-five minutes. There was a reversal of the albumin-globulin ratio to 0.75 with an albumin of 2.7 per cent and a globulin of 3.6 per cent. The prothrombin time was 16.1 seconds, while the control was 13.5 seconds.

Urine cultures yielded Staphylococcus aureus on only one occasion, and all blood cultures were sterile. The sputum was persistently negative for tubercle bacilli, but a tuberculin test was positive in a 1:1,000 dilution. A liver biopsy with a Vim-Silverman needle showed merely some cloudy swelling of the liver cords. An Aschheim-Zondek test for possible metastatic testicular sarcoma was negative.

Roentgenograms of the chest now demonstrated a higher arched right diaphragm with a fairly dense, mottled opacity over the right lower lung field. Miliary seeding was not clearly evident. A complete gastrointestinal x-ray series was found to be normal.

Ascites gradually developed, while the mass above the prostate became larger and more tender.

On June 2 the patient was operated upon by Dr. Bernard Pines. On abdominal exploration a moderate amount of clear fluid was found in the peritoneal cavity. The liver was enlarged and its surface studded with tiny whitish nodules. A specimen was removed for biopsy. The spleen was felt to be enlarged and granular in consistency. An indurated plastic mass was felt deep in the pelvis just above the prostate gland, but it could not safely be biopsied. The surgeon then made a right inguinal incision, through which the right scrotal contents were removed. The testis was found to

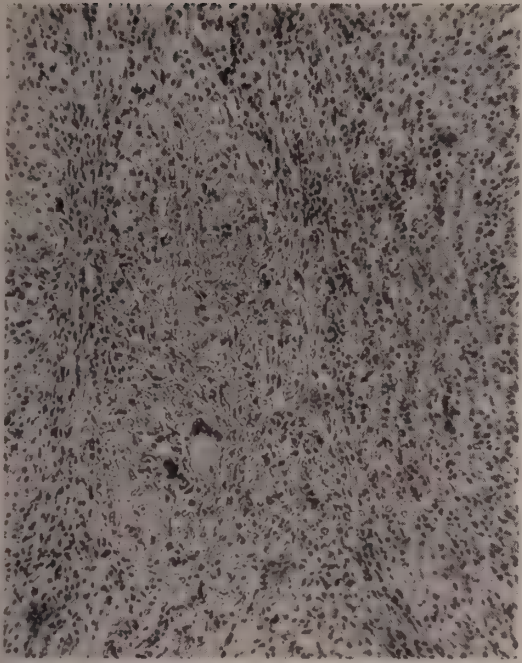

FIG. 2. Microscopic section from the right testis showing an epithelioid tubercle with a multinucleated giant cell and round cell infiltration.

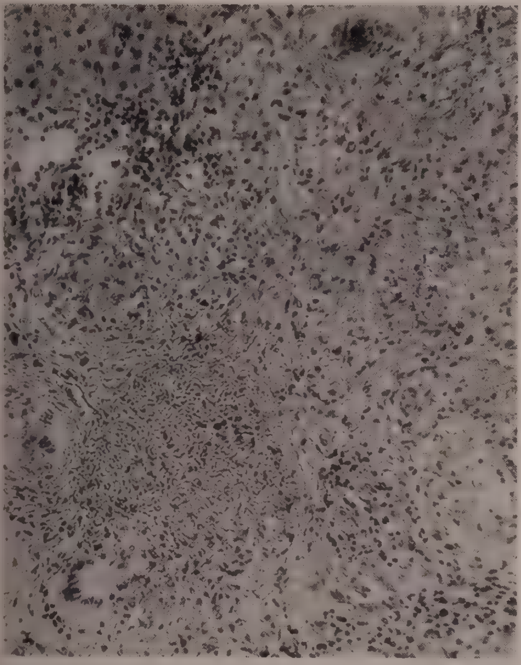

FIG. 3. Microscopic section from the liver showing giant cells and epithelioid tubercles.

measure 9 by 5 cm. On cut section a large part of its mass was occupied by a cavity 4 by 2 cm., filled with a thick greenish-white fluid and lined with necrotic tissue. Microscopic examination showed extensive areas of caseous necrosis with dense infiltrations of small and large mononuclear cells, plasma cells, and polymorphonuclear leukocytes. In other sections of the testis epithelioid tubercles with multinucleated giant cells of the Langhan's type were seen (Fig. 2). Microscopic sections of the liver specimen revealed cloudy swelling of the cords (Fig. 3). In some areas epithelioid tubercles with Langhan's giant cells and some necrosis were seen. The pathologic diagnosis was tuberculosis of the right testis and liver.

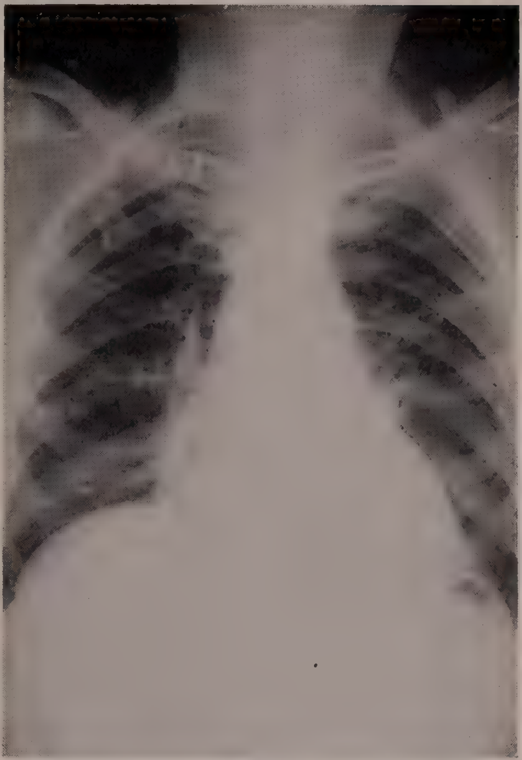

FIG. 4. Roentgenogram of the chest taken September 20, 1953. The right diaphragm is now only slightly elevated, and linear strands of fibrosis have replaced the previous patchy infiltration in the right lower lung field.

As soon as the diagnosis of disseminated tuberculosis was confirmed, a daily dose of 4 mg. per Kg. of isonicotinic acid hydrazide was administered orally, and 1 Gm. of streptomycin was given intramuscularly. He was discharged on June 27, feeling definitely improved, although still exhibiting a temperature to 101 F. with some increase in the ascites.

At home one abdominal paracentesis was required to relieve the pressure of the ascitic fluid. He maintained his low-grade temperature until 12 Gm. of para-aminosalicylic acid daily were added to the regime of streptomycin and isonicotinic acid hydrazide. At the end of seven months the temperature finally fell to normal levels and has since remained so. This drug therapy was maintained for one year, until June, 1953, and was then discontinued.

The patient has gained about 20 pounds in weight, and the cough and abnormal pulmonary findings have gradually disappeared. The enlarged liver has receded so that only its edge is now felt, the spleen is no longer palpable, and the ascites has disappeared. The pelvic mass, felt above the prostate gland, is no longer evident. A recent roentgenogram of the chest shows only a slight elevation of the right diaphragm with considerable clearing of the previous infiltration (Fig. 4). Patient is now back at work and feels well.

Comment

The etiology of this patient's fever was a most perplexing problem. At first he was thought to be suffering from a primary atypical virus pneumonia, as was suggested by the presence of bilateral moist rales with some dullness. When the fever continued after two weeks, a more diffuse process appeared more likely, especially since the liver and spleen became enlarged. A diagnosis of miliary tuberculosis was then favored and was supported by the slight polycythemia, which occurs with splenic involvement,[2] the relative leukopenia, and the suspicious miliary seeding in some x-rays of the chest. Subsequent films, however, did not confirm the last observation. Another possible diagnosis was metastatic carcinoma from a primary bronchogenic focus in the right lower or middle lobe, but this was eliminated by bronchoscopy. Histoplasmosis or lymphoma could not be excluded. Unfortunately, the liver biopsy obtained with the Vim-Silverman needle did not contribute any clue to the underlying pathology.

When the inflammation of the right testicle appeared, a tuberculous infection appeared even more likely. Finally, by operation this diagnosis was established, and specific therapy then brought about an arrest of the disseminated infection.

This case is believed, therefore, to be one of subacute hematogenous miliary tuberculosis with involvement of the lungs, liver, spleen, prostate, seminal vesicles, right testis and epididymis, and peritoneum. The prostate gland was most probably the primary focus since the patient had evidence of chronic infection in that organ for five years before the onset of the present illness.

Summary

A case is presented of prolonged septic temperature for seven months. Despite intensive study the diagnosis of miliary tuberculosis could not be established until operation was performed with biopsy of the liver and the right testis. With the simultaneous administration of streptomycin, isonicotinic acid hydrazide, and para-aminosalicylic acid, a remarkable remission occurred with clinical arrest of the infection.

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Communism Is the Religion of Failures

Don't think the danger of communism in this country is past.

Men and women who are failures will always try to tear you down to their level, and communism promises them the chance. They label themselves; here's who they are:

—politicians who promote government ownership of the means of production—the never-failing opening wedge of the communist state.

—those who urge us not to "antagonize" Russia and her satellites, supporters and friends, but to "get along with" them (which means giving in to them).

—the greedy who say "the state" should educate and feed them, guarantee them security without obligation.

The price of these noble-sounding ideas is loss of liberty bit by bit. And that is how communism always enters.

America rewards with self-respect those who work.

Communism rewards with petty power the failures who destroy. Watch for them.—*U.S. News & World Report*

Treatment of Malignant Exophthalmos with ACTH and Cortisone

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(From the Medical Division and Ophthalmological Service of Montefiore Hospital)

In May, 1953, Kinsell, Partridge, and Foreman[1] reported excellent results in the treatment of malignant exophthalmos with corticotropin and cortisone. Since the treatment of malignant exophthalmos previously had been so disappointing, we treated a patient with these steroids. The results in this case confirmed the findings of Kinsell, Partridge, and Foreman.

Case Report

The patient was a thirty-year-old Negro female, who entered Montefiore Hospital on June 19, 1953, with chief complaint of pain in the eyes and swelling of the eyeballs and eyelids of three months duration. Five months prior to admission she went to a physician who gave her pills (known to contain thyroid) for weight reduction. She took the pills for two weeks when she developed fever, generalized aches and pains, and a severe sore throat. She received penicillin and a sulfonamide and improved in one week. The medication containing thyroid was discontinued.

Three months prior to admission to the hospital there was a sudden swelling of the right upper eyelid. Four days later, the left upper eyelid became swollen. Two weeks later, the lower lids were involved. The swelling was worse on arising and would decrease during the day. Two months prior to admission she noted marked prominence of both eyes associated with blurring of vision, severe retrobulbar pain, and throbbing headaches. The pain and headaches occurred intermittently until admission.

Seven years ago, following the birth of her only child, the patient was overweight; a basal metabolic rate at that time was minus 19. On diet and medication she lost 30 pounds. Three years ago, after regaining the weight, a basal metabolic rate was again minus 19; with diet and medication she lost 15 pounds. Her past history was otherwise noncontributory.

Physical examination on admission revealed a well-developed, slightly obese, Negro female not appearing ill. Examination of the eyes revealed marked limitation of ocular motility, marked resistance of ocular globes to retropulsion, chemosis, and exophthalmos. The Hertel exophthalmometer readings were 27 mm. left eye and 26 mm. right eye on a baseline of 108. There was papilledema in both eyes with markedly enlarged blind spots (OD $8^1/_2$ by 12 degrees and OS $6^3/_4$ by 9 degrees) to a visual angle of 5/2,000 white (Table I). The thyroid gland was not enlarged. The heart was not enlarged; there were no thrills or murmurs. The blood pressure was 130/80 mm. of Hg; the ventricular rate equaled the pulse rate and was 92 beats per minute. The chest was clear to percussion and auscultation. There were no abdominal masses. There was no tremor of the fingers, and the skin was dry.

TABLE I.—Summary of Patient's Exophthalmic Status

Date (1953)	Blind Spots to 5/2,000 White	Visual Acuity	Exophthalmometer Readings (Baseline 108)
June 19	OD $8^1/_2$ by 12	OD 20/20	OD 27
	OS $6^3/_4$ by 9	OS 20/20	OS 26
23	Corticotropin and cortisone therapy started.		
26	OD 6 by $7^1/_2$	OD 20/20	OD 23
	OS 7 by $9^1/_2$	OS 20/20	OS 23
July 3	OD 6 by $7^1/_2$	OD 20/20	OD $21^1/_2$
	OS $6^1/_2$ by 8	OS 20/20	OS $21^1/_2$
24	OD 6 by 8	OD 20/20	OD 22
	OS 6 by $8^1/_2$	OS 20/20	OS 22
August 30	OD 6 by 8	OD 20/20	OD 22
	OS 6 by 8	OS 20/20	OS 22
October 26	OD 6 by 8	OD 20/20	OD 21
	OS 6 by 8	OS 20/20	OS 21
December 3	OD 6 by 8	OD 20/20	OD 21
	OS 6 by 8	OS 20/20	OS 21

Laboratory data revealed a hemoglobin of 10 Gm. per 100 cc.; the red blood count was 3,850,000 per cu. mm. The white blood count was 7,400 per cu. mm. with a normal differential. The total eosinophil count was 88 per cu. mm. The urine disclosed no sugar or albumin. The urea nitrogen was 7 mg. per 100 cc., and the glucose was 97 mg. per 100 cc. A basal metabolism was 0. Radioactive iodine uptake was 15 per cent in five hours and 28 per cent in twenty-three hours. Radiographs of the skull revealed mildly prominent convolutional markings in the calvarium with no accompanying or visible abnormalities.

Four days after admission, there was no change in the status of her eyes except for increasing chemosis of the left eye. On the fourth day after admission, June 23, 1953, the patient was given corticotropin, 40 mg. intravenously in 1,000 cc. of dextrose in water over a ten-hour period, and cortisone, 50 mg. orally every six hours. This therapy was given daily for four days. Within eight hours after starting the medication, she noted marked subjective improvement. The next day there was less resistance to retropulsion in both eyes. Papilledema persisted. Two days after starting therapy there was increased motility of both eyes, less edema, and less injection of the conjunctivae. The patient felt subjectively better with less tearing and discomfort.

Three days after the onset of therapy there was a striking remission of the exophthalmos. With a recession of 4 mm. of the right and 3 mm. of the left ocular globe the Hertel exophthalmometer measurements were reduced to 23 mm. in each eye. There was almost full restitution of motility and reduced resistance to retropulsion. There was lessening of papilledema fundoscopically, and the blind spots were considerably smaller (OD 6 by $7^1/_2$ degrees and OS 7 by $9^1/_2$ degrees) to the visual angle of 5/2,000 white. The patient no longer had ocular discomfort.

Four days after the beginning of therapy, the corticotropin dosage was gradually reduced and was discontinued after one week. Cortisone, 25 mg. every six hours, was continued. There were no adverse effects of steroid therapy. The improvement in the eyes continued despite the cessation of ACTH, ocular motility became normal, and chemosis and papilledema disappeared. The patient was discharged from the hospital on July 3, 1953, two weeks after admission, on the same dosage of cortisone.

On August 17, 1953, the cortisone dose was reduced to 75 mg. a day. Two weeks later the patient complained of transient discomfort of the eyes. However, she again became asymptomatic without change of dosage.

On August 30, 1953, the exophthalmometry showed no increase in the exophthalmos; the readings were OD 21 mm. and OS 22 mm. On September 21 cortisone dosage was further reduced to 25 mg. three times a day. On October 26 the exophthalmometry was further reduced to 21 mm. On November 2 cortisone dosage was reduced to 12.5 mg. three times a day. From August 30 to December 3, 1953, there were no subjective complaints, and ocular examination was altogether negative.

Comment

According to McGavack[2] malignant exophthalmos is an eye disease secondary to excess circulating thyrotropic hormone in an active form, characterized pathologically by an increase in retrobulbar pressure due to an excess of fat and enlargement of extraocular muscles with fibrosis and edema and degenerative changes. Normally the thyrotropic hormone of the pituitary is inactivated by the thyroid gland by oxidation. Either an excess of thyrotropic hormone or a decreased ability of the thyroid to inactivate it leads to increased circulating thyrotropic hormone. This thyrotropic hormone has been shown experimentally[3] to produce the pathologic changes found in malignant exophthalmos.

Therapy prior to adrenal steroids was not very successful. Although spontaneous remissions have occurred, the prognosis in any case must be guarded. Destruction of the eyes occurs in severe cases. One of the mainstays of treatment has been thyroid hormone, which is considered to inhibit the anterior pituitary output of thyrotropic hormone and to favor water depletion. Estrogens also have been used because they are believed to suppress the thyrotropic function of the pituitary. Irradiation of the pituitary has been administered in the hope of suppressing the secretion of thyrotropic hormone Radiation to the orbit has been attempted. Surgical procedures to protect the eye also have been utilized; in desperate cases orbital decompression operations have been attempted.[4]

Kinsell, Partridge, and Foreman[1] reported a significant decrease in exophthalmos in seven patients under therapy with corticotropin and cortisone; the improvement was maintained by continuous therapy. They based their work on the hope that corticotropin and cortisone would have an inhibiting effect upon the thyrotropic hormone and also lead to reversal of the pathologic tissue changes in the orbit. Their patients without exception responded to therapy within forty-eight hours.

Chandler and Hartfall[5] treated five patients with corticotropin and cortisone and observed notable improvement in three and some improvement in one. The authors incline to believe that the success of therapy is due to inhibition of thyrotropin.

Dayton[6] reports on a patient in whom ACTH, 80 mg. per day for six days, failed to affect the thyrotropic exophthalmos; however, the day after the discontinuance of corticotropin, the patient's ocular status suddenly became so critical that a Naffziger orbital decompression operation had to be performed.

In our patient there was subjective improvement within eight hours. Striking decreases in exophthalmos occurred within forty-eight hours. The measured exophthalmos decreased 4 mm. in OD and 3 mm. in OS within three days after therapy. Since improvement occurred within hours, the effect of ACTH and cortisone would appear to be due to local retrobulbar tissue changes and not to inhibition of thyrotropic output.

The improvement was maintained and even furthered over the next six months despite the cessation of corticotropin and reduction of dosage of cortisone.

Summary

A patient with malignant exophthalmos was treated with both corticotropin (ACTH) and cortisone. A striking remission occurred within forty-eight hours and has been maintained with continued therapy.

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Giant Prostate Palpable Suprapubically

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The occurrence of massive benign enlargement of the prostate is relatively rare. To be able to palpate the adenoma suprapubically is even more rare, according to reported cases.

Separate investigations by McMurrich,[1] Wallace,[2] Piersol,[3] Teem,[4] and Thumann[5] have demonstrated the weight of the normal gland to be 20 to 25 Gm. with maximum limits for grade 4 hypertrophies at 130 to 139 Gm. Beyond these arbitrary boundaries enlargements may be classified as "giant," 1,300 Gm. being the largest known.

In a review of the literature encompassing the past fifty years, 16 cases have been recorded wherein the edematous gland weighed over 130 Gm. Of all the "giant" cases described six were definitely palpable suprapubically, and three have been classified as probable. The accompanying table presents a summary of the literature[4,6–20] with emphasis upon glandular weight, palpability in the abdomen, operative procedure, and result (Table I).

The anatomic variations of benign prostatic hyperplasia are too well known to enter within the province of this paper. Suffice it to say that enormous lateral and median lobe hypertrophy intravesically in an anterosuperior direction should result in a mass palpable above the symphysis.

The surgical problem presented is due wholly to the size of the prostate. Both the necessity for repeated sittings and technical difficulties encountered weigh heavily against a transurethral approach. The retropubic and perineal procedures could not be performed in acceptable fashion because of the tremendous intravesical intrusion. With or without systemic complicating factors it is the author's opinion that a two-stage suprapubic operation is the procedure of choice in these instances.

The following is the seventeenth recorded case and only the seventh in which the prostate was palpable abdominally.

Case Report

J. W., a seventy-two-year-old white male, was first examined in June, 1953, because of marked urinary hesitancy, dribbling, and frequency.

The patient was a slender, elderly male with an alert appearance. Blood pressure was 140/82, and the heart sounds were of fair quality. Lung

TABLE I.—SUMMARY OF RECORDED CASES

Author	Year	Weight (Gm.)	Pathology	Palpable Suprapubically	Procedure	Result
Freyer[6]	1904	527.5	Benign	No	One-stage suprapubic enucleation	Improved
Freyer[7]	1905	248	Benign	Yes	One-stage suprapubic enucleation	Improved
Peterkin[8]	1910	288	Benign	No	One-stage suprapubic enucleation	Improved
Douglas[9]	1927	673	Benign	Yes	Suprapubic cystostomy	Died following cystostomy
Alcock[10]	1935	290	Benign	No	Two-stage suprapubic prostatectomy	Improved
White and Gaines[11]	1936	397	Benign	Not mentioned but probable	Two-stage suprapubic prostatectomy	Improved
Teem[4]	1936	139	Benign	No	None	Died of unassociated disease
Middleton[12]	1937	557	Benign	Yes	Two-stage suprapubic prostatectomy	Improved
Wadstein[13]	1938	705	Benign	Yes	One-stage suprapubic prostatectomy	Improved
Gilbert[14]	1939	713	Benign	No	One-stage suprapubic prostatectomy	Improved
Nelson[15]	1940	720	Benign	Yes	Two-stage suprapubic prostatectomy	Died
Creevy[16]	1940	140	Benign	No	Four transurethral resections	Improved
Nesbit[17]	1945	190	Benign	No	Two transurethral resections	Improved
Ockerblad[18]	1946	820	Benign	Not mentioned but probable	One-stage suprapubic prostatectomy	Died
McCrea[19]	1946	1,300	Benign	Yes	None	Died
Wilson-Pepper[20]	1952	570	Benign	Not mentioned but probable	One-stage suprapubic prostatectomy	Improved

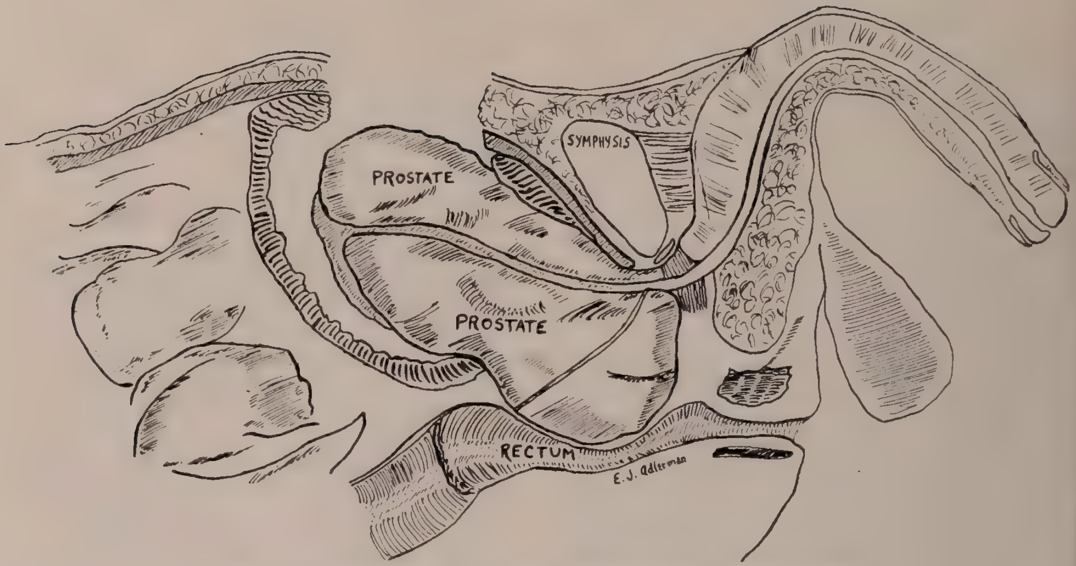

FIG. 1. Sagittal view of condition presenting at operation.

fields were clear to percussion and auscultation. At this time examination of the abdomen revealed no palpable masses or areas of tenderness. Small bilateral, direct, reducible inguinal hernias were present. The genitalia were those of a normal male, and on rectal examination the prostate was grade $3^{1}/_{2}$ to 4 in size and soft and movable. The bulging anterior rectal wall met the examining finger so that palpation of the upper prostatic borders was not possible. Attempts to pass a number 14 French latex olivary tipped catheter were not successful due to the patient's sensitivity. The gross voided urine was clear, and microscopic examination of the centrifuged sediment revealed 4 to 6 white cells per high power field.

The blood urea nitrogen level was reported as 10.6 mg. per cent in July, 1953, serum acid phosphatase 1.5 Gutman and Gutman units, and serum alkaline phosphatase 3.7 King-Armstrong units. Excretion urography demonstrated good renal thrust with excellent bilateral dye appearance on the five-minute film. The pelvicalyceal complexes were normal in contour and position. The superior aspect of the vesical outline appeared on the thirty-minute film only as a thin crescentic-shaped area whose convexity pointed superiorly. This was interpreted as being due to marked prostatic intravesical intrusion.

A small latex 14 French urethral catheter was passed with difficulty in August, 1953, and 2 ounces of residual urine were obtained. Urine culture was reported as "no growth" of organisms at this time. In view of the prostatic size no cystoscopic procedure was contemplated since a complete vesical inspection could be performed at the time of surgery. A medical survey revealed compensated arteriosclerotic heart disease with a left bundle branch block demonstrable on electrocardiography. The patient was considered a fair surgical risk, and a two-stage suprapubic procedure was recommended, but the patient wished to wait. He was followed at regular intervals with palliative prostatic massage and diathermy; however, no alleviation of symptoms occurred.

In January, 1954, severe urgency, dribbling, constant day and night frequency, and dysuria occurred. A mass, palpable three fingerbreadths above the symphysis, was noted, and the patient was finally persuaded to enter the hospital.

On admission it was deemed feasible to decompress the bladder, and an 18 French Foley catheter with 5 cc. balloon was passed. Only 2 ounces of urine were obtained, and the suprapubic mass remained palpable. It was now thought that this was prostatic in origin.

On January 19, 1954, a suprapubic cystostomy and bilateral vasectomy were performed under general anesthesia. Intravesical inspection revealed a grade 4 plus trilobar intravesical prostatic intrusion occupying fully three fourths of the bladder. The ureteral orifices were not involved, the prostatic mass projecting above them, with the urethral channel markedly elevated above the vesical base (Fig. 1). Convalescence was uneventful with the blood urea nitrogen remaining at normal levels and electrolyte balance adequately maintained.

A second-stage enucleation was performed on February 2, 1954, with moderate bleeding well controlled by use of a 60 cc. Solusponge prostatic cone and a 22 French Foley urethral catheter with 100-cc. balloon. A right angle suprapubic tube was inserted, and the patient left the operating room in good condition, a 500-cc. whole blood transfusion having been administered during the procedure.

The pathologic report (Dr. R. M. Paltauf) was as follows: "The specimen consists of a prostate received in several pieces, weighing together 217 Gm. The largest piece measures 7 by 5 by 4.6 cm. All segments are partly encapsulated and on section present many bulging nodules which are soft, grayish yellow in color, and exude much milky fluid. Microscopic examination shows the glandular elements of the prostate to be considerably increased in number. They are represented by vari-sized, often enlarged, and cystically dilated lumina which are not infrequently grouped into well-circumscribed nodules. The lumina are lined by tall columnar epithelium which frequently forms infoldings and contain secretory material mingled with corpora amylacea. The supporting fibromuscular stroma shows a moderate chronic inflammatory cellular infiltration."

The postoperative course subsequent to the second stage was stormy. One week following enucleation, a severe hemorrhage from the prostatic bed occurred, necessitating suprapubic evacuation of the clots under anesthesia, packing with two 9-foot gauze rolls, and administration of 1,000 cc. of whole blood by transfusion. Severe vesical spasms resulting from the packing required heavy sedation. Packing was removed on February 12 and 13, 1954, under Surital intravenous anesthesia, leaving a large suprapubic sinus. Closure of the sinus was almost complete by March 2, 1954, and voiding per urethram was vigorous and adequate by March 7, 1954, the date of discharge. Both penicillin and streptomycin in large dosages throughout the hospital course obviated any severe febrile reaction.

When last seen on April 8, 1954, the patient had gained 10 pounds in weight, had no diurnal frequency, and appeared in excellent health. The urine on microscopic examination contained 10 to 15 white blood cells per high power field, and mandelamine (three $3^3/_4$-grain tablets three times daily) was prescribed.

Summary

1. The literature, incidence, and surgical approach in massive benign prostatic enlargement are discussed.

2. The seventeenth recorded case, only the seventh in which the gland was suprapubically palpable, is presented.

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Cine Clinic

A plaque has been designed for surgeons who have presented films on the Cine Clinic program of the annual clinical congress of the American College of Surgeons. The film program was first presented at the clinical congress of the College in Boston in 1950.

The program and surgeons are selected by the advisory committee on programs of the College and correlated by the committee on medical motion pictures. About 15 to 20 films are produced each year for the program.

The editing, processing, recording, etc., are done entirely or partly by Davis & Geck, Inc., a unit of the American Cyanamid Company, but the surgeon prepares his own art work, charts, diagrams, and other materials for his film. Sometimes, when a photographic department is available, the surgeon may do a part or all of the surgical photography himself.

The Cine Clinic presentations are teaching films including frequently the history of the surgical procedure, prevalence of the condition, etiology, pathology, differential diagnosis, indications for surgery, prognosis, and the surgical technic itself.

Each film is compressed to a maximum projection time of twenty-five minutes, which allows an additional five minutes for any introductory remarks the surgeons may care to make at the time of the Clinic program.

After the Clinic Program, the films are included in Davis & Geck Surgical Film Library with narration added on a sound track, a number of prints are made, and films are distributed to surgeons all over the world.

Medical Correspondence in Eighteenth Century New York State

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A SEARCH for letters on medical topics written or received by New Yorkers during the eighteenth century yielded unexpectedly little material. This may be due to such letters having been lost or possibly to their not having been written. Considering the educational and professional status of the majority of New York practitioners of the period, I incline to the latter assumption. And with few exceptions, if one may believe contemporary sources, they were a not very illustrious group. "By far the greatest part of them," said the *New York Independent Reflector*, "are mere pretenders to a profession of which they are entirely ignorant." Such men, even in a century as distinguished for the caliber of its correspondence as the eighteenth, obviously did not write or receive letters pertaining to professional topics.

The well-educated minority did, and fortunately some of their correspondence is still extant. The bulk of it centers around the names of Cadwallader Colden, John and Samuel Bard, Richard Bayley, David Hosac, and John Cochran.

According to scope and quality, the Colden correspondence is probably the most important.[1] Cadwallader Colden, who was born in Scotland in 1688, came to America when he was twenty-two. A graduate of the University of Edinburgh, he was a well-educated man with many interests who during his long life was in personal or epistolary contact with many of the prominent people of his day. His correspondence with them, especially with some of the physicians and natural scientists, affords an interesting insight into contemporary medical theory and practice.

In a letter to Peter Collinson (May, 1742) he speaks of his background and early days. His father, a minister of the Church of Scotland, had intended him for the ministry, but his "taste and Inclinations" led his thoughts "another way," and he applied himself to the study of medicine. Since his father's fortune was not sufficient to enable him to "push [his] fortune in England and Scotland," he emigrated to Pennsylvania where he had some relatives.

"When I came first into America I was very young," writes Cadwallader Colden, "and though I had some knowledge of Books I was absolutely a stranger to the World. The incouragement to a meer Schollar is very small in any part of North America and I had little sense of the Value of Money at that time when it would not have been difficult for me by trade to have rais'd my fortune as others did about the same time. I had sufficient for my present occasions and I had not then learn'd to be concern'd for the future."

His future, however, was bright. After a few years in Pennsylvania he went to New York where he combined medicine with a distinguished public career.

In his correspondence with physicians in America and Great Britain, many of the medical problems of those days again come to life. We experience the terrible impact of epidemics such as smallpox, "throat distemper," and yellow fever; we learn of the constant search for a cure for cancer; we relive many of the problems with which the eighteenth century practitioner was confronted. And, above all, there emerges from these faded manuscripts the picture of a clear-headed, sincere man, singularly devoid of vanity.

A letter written in January, 1756, the copy of which is unaddressed, was undoubtedly sent to Dr. John Fothergill in London. Colden says that when he had written it, he had "not the least imagination of its appearing in Print," and he requests that "if there be any impropriety of expression it may be corrected." "I wish," he continues, "that Authors in all medical publica-

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tions would submit their works to the Judgement of others of established reputation for their skill before the publication which ought to be determined solely by the use and publick benefite."

At this period plans were afoot for the formation of a medical society in London where "gentlemen of extended practise" would meet together, "communicating their observations mutually and assisting each other in forming their Judgements." "I congratulate the rising Generation," Colden goes on, "that such a society seems now to be formed for by such means I am firmly persuaded the Healing Art will advance farther in the age of one man than it has hitherto done in several ages. As to my own part I would value myself more on finding out a remedy for the most simple malady than for the most pompeus shew of Learning. After this introduction I'l tell you an effectual remedy for Corns in the feet."

A letter to Dr. John Bard, written two years later, shows him to be a discerning and critical physician. After describing severe reactions an invalid son of his had following smallpox inoculation he makes some general theroretic remarks:

> I was educated in the Mechanic Phylosophy, and considering the evidence on which its principles are founded, and the Mathematical method which the Professors used in explaining the Animal Oeconomy. . . it is not to be wondered at, that I intertain'd a notion of the perfection of the Science, and that I began to practise with the assurance which Young Men commonly obtain at the Universities.
>
> The Professors generally are sollicitous to establish an opinion of their great knowledge, but are not sufficiently carefull to shew their pupils how far their knowledge is deficient. . . . Many. . . casses happen in the Animal oeconomy, in which theory absolutely fails the Physician and his whole Skill depends on accurate observation of the natural course and crisis of the distemper, and of what is beneficial and what injurious. But notwithstanding of this, general Principles (acquired by knowledge of the Animal oeconomy and of Physics or natural Phylosophy) are absolutely necessary to make a proper use of these observations, in order to establish a proper method of cure (under the numerous varieties in which this, and other desseases appear) without which knowledge the observer must perpetually wander in the dark.

American medical education being what it was in those days, ambitious men thought it necessary to send their sons to Europe for completion of their training. One of them, Dr. John Bard of New York, made it possible, at considerable financial sacrifice, for his son Samuel to embark on the venture. Europe at that period was far away; the passage was often hazardous and, even when uneventful, took about two months.

In September of 1761, Samuel Bard sailed from New York accompanied by the good wishes of his friends and relatives, and with the following letter of advice from his anxious father in his pocket:

> With regard, my dear Sam, to your moral conduct, I do not flatter you, when I assure you I have the greatest confidence in your piety, prudence, and honour: still a severe test of all these is now approaching, since you are going to a part of the world where you will be surrounded with allurements. Your greatest security will lie in the first choice of your company. If, according to all your former conduct, you associate with men of sense and business, of sobriety and honour, and with ladies of character and family, your time will be most agreeably and honourably filled up between a course of business and of pure and refined pleasure. This will render all your correspondence with the world easy and delightful, and enlarge your sphere of valuable connexions and friends. On the contrary, should you suffer yourself to be captivated with the idle or the gay, so far as to give into their schemes of dissipation, you cannot tell how far the powers of your mind may become enervated, and by habit lose that manly firmness which is the principal guard to a generous, virtuous, and innocent life. Remember, my dear Sam, a maxim of Gay.
>
> "Plant virtue, and content's the fruit."

Samuel's ship was captured by the French, with whom England was at that time at war, and the young American was kept a prisoner for six months. He was finally released and arrived in London towards the end of April. The ensuing correspondence[2] between father and son, which was carried on regularly over a period of three years, has become a valuable source of information on English and Scottish medical men and medical education and on some of the plans entertained by young American physicians for the improvement of medicine in their native country.

Young Bard stayed only a few months in London where, at the suggestion of John Fothergill and one of the Hunters (probably William), he entered St. Thomas's Hospital as a "physician's pupil."

In September he went to Edinburgh, then the most distinguished British medical school. During the first winter he attended the classes of Cullen, Monro, and Ferguson. He was an ardent, industrious student enamored by the study of medicine. "If liking a profession," he wrote to his father, "be a good omen of proficiency, I can assure you I begin to be most highly delighted with mine; I daily discover so many beauties in it, that I am at a loss which first to investigate. . ."

At this time he made the acquaintance of "a Mr. Morgan, from Philadelphia, a person of distinguished merit," with whom he soon became close friends. Soon, thereafter, he wrote to his father about a plan which the elder Bard ". . . perhaps . . . may think a wild scheme . . . but at least an innocent one," the founding of a medical school in New York. On December 29, 1762, he wrote to his father:

> Honoured Sir,
>
> You no doubt have heard that Dr. Shippen has opened an anatomical class in Philadelphia; . . . You perhaps are not acquainted with the whole of that scheme; it is not to stop with anatomy, but to found, under the patronage of Dr. Fothergill, a medical college in that place. Mr. Morgan, who is to graduate next spring. . . intends to lecture upon the theory and practice of physic and is equal to the undertaking. I wish with all my heart they were at New York that I might have a share amongst them, and assisting in founding the first medical college in America.

His father, while "much" approving of his son's ". . . emulation, with respect to the establishing of a proper medical institution . . ." in New York, however felt that it "should be commenced by a public hospital," which he "had thoughts of beginning."

A year later Samuel reports to his father: "The colleges are now begun, which for seven months will employ me fully, as I shall attend five classes; Materia Medica, Theory of Physic, Chemistry, Anatomy, and the Belles Lettres." And in filial thankfulness he writes: "I do assure you, sir, I never think of the great expense you are at in my education, without sentiments of the warmest gratitude; at the same time, I feel much uneasiness, lest it should fall heavy upon you."

On February 4, 1764, Samuel, still in Edinburgh, tells his father, "there has lately a new work come out, Morgagni de Causis et Sedibus Morborum, grounded upon dissections of morbid bodies, from which the learned here have great expectations." And in the same letter he speaks of Cullen who, after lecturing for one hour at his "own house" to his second-year students, spends "another in an easy conversation upon the subject of the last evening lecture, and every one is encouraged to make his remarks or objections with the greatest freedom. I cannot help comparing him upon these occasions, to some of the ancient philosophers, surrounded by his admiring pupils. It must make him very happy, to see so many, even from the wilds of America, crowding his lectures and listening to him with the greatest attention and pleasure. . ."

In the late spring of 1765, Samuel Bard took his final examinations and received his degree. On May 15 he wrote to his father:

> The day before yesterday I received my degree, with all the form and ceremony usual upon such occasions. The two Monros, with Dr. Cullen, were all in my private examinations. My good friend Dr. Hope, publicly impugned my thesis; and to all of them I consider myself much indebted for their behaviour upon this occasion, in which, although they kept up the strictness of professors, they never lost sight of the politeness of gentlemen.

The examinations were written and oral and quite comprehensive: ". . . my exercises were not only written in Latin, but I was obliged to defend them in the same language; not even in the first, where I was ignorant of my subject, being allowed to speak a word of English."

Shortly before returning home, his father had written him, clearly with some apprehension about the effect his stay in Europe might have had on him:

> You have always had an easy temper and manner adapted to make friends. The grafting upon these, a polite, affable, and cheerful behaviour, is not difficult; although sometimes the air of a college is not so readily worn off. Where the physician and gentleman unite, you never perceive any thing of pedantry; it argues both ignorance and vanity—not ignorance perhaps of the profession, but of every thing else. A physician should never assume that, but at his patient's bed-side, and even then, avoid all formality.

And in one of the last letters sent to Samuel in Edinburgh, John Bard writes:

> . . . As the time is now not far off when I expect the happiness of seeing you, permit me to mention one thing which, perhaps, is needless. In your taste of clothes preserve a plain and manly fashion, as well as in your manners. I know many young men of learning and talents, so captivated

by this feather, as greatly to lessen that esteem they would otherwise obtain. Be extremely neat, but plain in your dress, set off by an easy, cheerful, open, candid address, and joined with such a becoming gravity as arises from the mind being engaged on subjects of importance. Consider further, my dear son, that New York is to be the place of your residence, where plainness in dress has been long the taste of men of the greatest fortune, and much respect is due to the fashion and custom of the country where you live.

References

1. "Cadwallader Colden Papers," Collections of the New York Historical Society, published by the New York Historical Society.

2. McVickar, John: The Life of Samuel Bard, M.D., LL.D., New York, 1822.

Discussion

Gertrude L. Annan, *New York City* (*By invitation*).—Medical historians of the future will surely regret that physicians of the twentieth century used other means of communication and neglected the art of letter writing. From the sixteenth to the nineteenth centuries medical men have left us personal records in their correspondence which no formal treatise can provide. This is clearly shown in the informative details Dr. Farmer selected from the letters of a few leading New York medical men. It is fortunate that even these survived, for the ephemeral nature of correspondence means a high percentage of destruction.

Carefully preserved over the years, the letterbook of Dr. John Cochran contains copies of letters he wrote in 1781 while he served as Director of Military Hospitals in the Revolutionary War. Through the kindness of Dr. C. E. Heaton, the present owners, descendants of Dr. Cochran, have deposited it in the Library of the New York Academy of Medicine for safekeeping.

Excerpts from these letters show vividly the problems, frustrations, and hardships of the medical men in the Revolutionary War. On March 25, 1781, Dr. Cochran wrote of the hospital at Albany, "I am sorry to inform you that I found that Hospital entirely destitute of all kinds of stores, except a little vinegar which was good for nothing—and frequently without Bread or Beef for many days—so that the Doctor under those circumstances was oblig'd, to permit such of the patients as could walk into town, to beg provisions among the inhabitants."

Nor were the patients the only sufferers. On April 2, he sympathized with a colleague, "I am sorry your case respecting your Finances are so similar to every Gentleman of our Department. Neither myself nor any of the Gentlemen who have served with me have received a shilling from the Public in twenty-three months. . . There is no money belonging to the Department." To another physician on March 26 he had commiserated, "I am sorry for your Distresses & wish it was in my Power to alleviate them. Were I to inform you my own situation with a Wife & Family and not a Friend to give me assistance. . . perhaps you would be brought to think that you are not altogether the only sufferer. If Congress is not in a Capacity to do something for us by the Opening of the Campaign, we are all undone." His fervent pleas for help are touching. He ended a letter to the financier, Robert Morris, "For Gods sake, help us as soon as you can."

His troubles were not all dependent on the scarcity of money. He had to deal with the Continental Congress, with those who had no conception of his problems. An order to do away with three of the hospitals complicated his already overwhelming difficulties. He complained to the Board of War on October 20:

> Before I proceed to give any Directions towards breaking up the Albany Hospital, I must consult General Heath, for. . . it seems impracticable, there being I suppose at this time not less than 3000 Troops in the Neighbourhood. . . and it is but a few Days since I applied to General Heath to permit me to send 200 sick to that Hospital, being a large spacious Building belonging to the Public, capable of accommodating in the best Manner five Hundred Patients, but was refused on account of an expected visit from the Enemy. . . Moreover where Troops are, there ought always to be a Detachment of a general Hospital, a Neglect of which having some Times taken Place in our service, has occasioned the Loss of many a good soldier. . . At this present we are much distressed for covering our sick. Barns & out Houses proper in the summer, and now rendered useless, & the sick have been accumulating these six Weeks, so that there are not less than 200 with the Army who are proper Objects for Hosp.[1] which cannot be received for want of room. . .

Throughout the letters small bits of useful information are found. A list of needed medicines indicates what were most used at the time. A note encouraging a surgeon to remain in the service explains that if he were retained after the war as a mate he would receive "720 Dollars *per Annum*, a very pretty salary." His references to his colleagues bring to light facets of their character. Of James Tilton, whose well-known work on military hospitals was published in 1813, Dr. Cochran wrote, "The obstinacy of Tilton has nothing in it surprising, considering the man." Later he added, "For all his positiveness he is a most excellent officer, and deserves much of his country for his assiduity." James Craik, friend and physician of George Washington, read this comment in a letter from Cochran, "And let the same Prayer be Continued that the troubles of our enemies may accumulate every Hour, and may their Heads never cease to Ach [*sic*] as much as yours has done after a Drunken Frolick."

Obviously, Dr. Cochran did not know that he was writing for posterity.

NECROLOGY

Frank Basile, M.D., of New York City, died on June 11 at the age of seventy. Dr. Basile graduated from the New York University and Bellevue Hospital School of Medicine in 1909.

Ralph W. Chaffee, M.D., of Syracuse, died on August 20 at the age of eighty. Dr. Chaffee received his medical degree from the Hahnemann Medical College in Philadelphia in 1896. He had practiced for fifty-seven years in the Syracuse area.

Dr. Chaffee belonged to the Onondaga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles H. Codelle, M.D., of New York City, died on August 17 at the age of forty-nine. Dr. Codelle graduated from the New York University and Bellevue Hospital School of Medicine in 1929. He was a member of the New York County Medical Society and the Medical Society of the State of New York.

Israel Finkelstein, M.D., of Brooklyn, died on June 29 at the age of fifty-one. Dr. Finkelstein graduated from the Long Island College Hospital School of Medicine in 1927. He was assistant attending pediatrician at the Maimonides Hospital and belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John B. McDermott, M.D., of Brooklyn, died of a heart attack at the home of a friend on September 18. He was fifty years old. Dr. McDermott graduated from the Long Island College Hospital School of Medicine in 1929. He was associate attending pediatrician at St. John's Long Island City Hospital and clinical assistant attending pediatrician at St. Mary's Hospital for Children.

Dr. McDermott belonged to the Brooklyn Academy of Pediatrics, the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Ralph Sumner Pettibone, M.D., of Cato and St. Petersburg, Florida, died at his Florida home on August 18 after a long illness. He was seventy-one years old. Dr. Pettibone graduated from the University of Buffalo School of Medicine in 1906. Before his retirement he had been on the staff of Letchworth Village and the Willard State Hospital.

Wilbur Ward, M.D., of New York City and Pasadena, California, died on September 20 at his home in Pasadena. He was seventy-five years old. Dr. Ward graduated from the Columbia University College of Physicians and Surgeons in 1904 and interned at St. Luke's Hospital and the Sloane Hospital for Women. He was a Diplomate of the American Board of Obstetrics and Gynecology, and a Fellow of the American College of Surgeons. A member of the New York Academy of Medicine and a past-president of the New York Obstetrical Society, Dr. Ward also belonged to the New York Pathological Society. He taught gynecology at the Columbia University College of Physicians and Surgeons from 1911 until 1920, resigning with the rank of professor, and was professor of obstetrics and gynecology at the New York Polyclinic Medical School and Hospital from 1922 to 1924.

Dr. Ward was consulting obstetrician at the City, Lawrence, Mt. Vernon, and Northern Westchester Hospitals, and at Mountainside Hospital in Montclair, New Jersey.

Before his retirement in 1939, Dr. Ward had been a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Philip Zwerdling, M.D., of Brooklyn, died on April 24 at the age of sixty-one. Dr. Zwerdling graduated from the Long Island College Hospital School of Medicine in 1915. He was attending physician in varicose veins at the Unity Hospital.

Great Spirit, help me never to judge another until I have walked two weeks in his moccasins.—SIOUX INDIAN PROVERB

MEDICAL NEWS

National Foundation for Infantile Paralysis—The National Foundation for Infantile Paralysis announces the availability of a limited number of clinical fellowships in the fields of physical medicine and rehabilitation, for physicians interested in rehabilitation as it relates to their particular specialties, for psychiatrists who are interested in the emotional problems of the physically handicapped, particularly of the poliomyelitis patient with respiratory difficulties, and postdoctoral fellowships in medicine and the related biologic sciences.

Selection of candidates will be made on a competitive basis by the National Foundation's Fellowship Committee. Applications for consideration by the committee must be received by December 1 for consideration in February, by March 1 for consideration in May, and September 1 for review in November.

Further information and application blanks can be obtained by writing to the National Foundation for Infantile Paralysis, Division of Professional Education, 120 Broadway, New York 5, New York.

Hill-Burton Hospital Construction—The status of all Hill-Burton hospital construction in New York State with the period ending August 31 is as follows: Completed and in operation, 68 projects at a total cost of $63,490,790, including Federal contribution of $19,064,076 and supplying 3,727 additional beds; under construction, 12 projects at a total cost of $44,677,093, including Federal contribution of $6,016,124 and designed to supply 1,089 additional beds; and approved but not yet under construction, 6 projects at a total cost of $10,776,851, including $2,587,019 Federal contribution and designed to supply 679 additional beds.

American Medical Writers' Association—Several partial scholarships of $500 each will be sponsored by the American Medical Writers' Association for use at the University of Illinois, Urbana, and the University of Missouri, Columbia, to be applied toward the first four-year collegiate course leading to a bachelor's degree in medical journalism being inaugurated next September at these schools.

Descriptive literature concerning the academic courses may be obtained by writing to Earl F. English, Ph.D., dean, School of Journalism, University of Missouri, Columbia, and I. W. Cole, School of Journalism and Communications, University of Illinois, Urbana.

American Journal of Medicine—The *American Journal of Medicine* has been honored as recipient of the honor award, class 2, for distinguished service in medical journalism given by the American Medical Writers' Association. Dr. Alexander B. Gutman, New York City, professor of medicine, Columbia University, and director of medicine, Mount Sinai Hospital, New York City, received the plaque at the eleventh annual meeting of the Association in Chicago on September 24.

The award is presented annually for accuracy, clarity, conciseness, and newness of information in articles, editorials, and other material as well as for excellence of design, printing, and illustrations, and for distinguished service to the medical profession, rendered by United States and Canadian medical periodicals.

Louis Livingston Seaman Fund—The New York Academy of Medicine announces the availability of the Louis Livingston Seaman Fund for the furtherance of research in bacteriology and sanitary science. Available for assignment in 1954 will be $1,900. This fund has been made possible by the terms of the will of the late Dr. Louis Livingston Seaman, and is administered by a committee of the Academy under the following conditions and regulations:

1. The committee will receive applications either from institutions or individuals up to December 1, 1954. Communications should be addressed to Dr. Wilson G. Smillie, chairman, Louis Livingston Seaman Fund Committee, 1300 York Avenue, New York 21, New York.
2. The fund will be expended only in grants-in-aid for investigation or scholarships for research in bacteriology or sanitary science. The expenditures may be made for (*a*) securing of technical help, (*b*) aid in publishing original work, and (*c*) purchase of necessary books or apparatus.

Arthritis and Rheumatism Foundation—*The Bulletin* published by the Arthritis and Rheumatism Foundation is available without charge to all physicians and medical students requesting it. Physicians desiring to receive it should write to Dr. Russell L. Cecil, medical director, Arthritis and Rheumatism Foundation, 23 West 45th Street, New York 36, New York.

The bound special volume composed of all issues of *The Bulletin* of the past four years is now available from the Arthritis Foundation for $1.00. This is the only American publication in the field of rheumatic diseases to keep doctors abreast of the more important clinical advances and changing concepts of the rheumatic diseases, and is issued nine times a year.

New York State Society of Anesthesiologists—Postgraduate training is being offered by the New

York State Society of Anesthesiologists in cooperation with the American Society of Anesthesiologists to physicians engaged in full- or part-time practice of the speciality. Instruction will be given near the applicant's own community and will be varied to suit individual needs. There is no tuition fee.

Further information can be obtained by writing to Dr. Edwin Emma, New York State Society of Anesthesiologists, 137 West 11th Street, New York 11, New York.

Meetings—Past

Jefferson County Medical Society

The September meeting of the Jefferson County Medical Society was held at the Black River Valley Club on September 21. Dr. Leon E. Sutton, clinical professor of surgery, State University of New York College of Medicine at Syracuse, spoke on "Plastic Surgery in Relation to the Practice of General Medicine."

Albany County Medical Society

Dr. John McClintock, vice-president, Albany County Medical Society, discussed "Ethics, The Press and You" at the regular meeting of the Albany County Medical Society on September 21.

Academy of General Practice, Binghamton

Dr. William Thomas Foley, assistant professor of medicine, Cornell University Medical College, and chief, Vascular Clinic, New York Hospital, discussed "Long-term Anticoagulants in Cardiovascular Disease" before the Binghamton Chapter of the Academy of General Practice on September 21.

This program was arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

Schenectady County Medical Society

The October meeting of the Schenectady County Medical Society was held at the Mohawk Golf Club on October 5. Dr. Murray M. Copeland, professor of oncology, Georgetown University Medical Center, Washington, D.C., presented a paper on "Premalignant Lesions of the Breast."

Muscular Dystrophy Associations of America, Inc.

The third medical conference of the Muscular Dystrophy Associations of America, Inc., was held in New York City at the New Yorker Hotel, October 8 and 9. New York State doctors who took part in the conference were:

Drs. D. Nachmansohn and A. Weber, Columbia University College of Physicians and Surgeons; Dr. Ade T. Milhorat, chairman, medical advisory board of the Muscular Dystrophy Associations of America, Inc., Cornell University Medical College; Dr. M. Hoberman, Columbia University College of Physicians and Surgeons; Drs. A. Fraser, M. L. Schoelly, and J. Travell, Cornell University Medical College; Dr. Herbert S. Gasser, Laboratories of the Rockefeller Institute for Medical Research; Dr. J. T. Ellis, Cornell University Medical College; Dr. Arthur S. Abramson, Veterans Administration Hospital, Bronx; Dr. T. F. Henley, Cornell University Medical College, and Dr. A. Kappas, Sloan-Kettering Institute for Research in Cancer and Allied Diseases.

International Anesthesia Research Society

The twenty-ninth congress of anesthetists of the International Anesthesia Research Society was held at the Ambassador Hotel, Los Angeles, October 11 through 14.

Fulton County Medical Society and Academy of General Practice

Postgraduate instruction arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York and the New York State Department of Health presented the following speakers and subjects at the Nathan Littauer Hospital, Gloversville, for the Fulton County Medical Society and the Fulton County Chapter, Academy of General Practice:

September 29—Dr. James J. Smith, instructor in medicine, New York University College of Medicine, and chief, Endocrinology Clinic, French Hospital, "The Pituitary and Its Relationship to Other Glands"; October 6—Dr. Alfonso A. Lombardi, assistant clinical professor of medicine, New York Medical College, "The Recognition and Management of Endocrinologic Emergencies"; October 13—Dr. Marshall Clinton, assistant professor of pharmacology, University of Buffalo School of Medicine, "The Adrenals"; October 20—Dr. Thomas H. McGavack, professor of clinical medicine, New York Medical College, "The Gonads," and October 27—Dr. Julius Chasnoff, associate clinical professor of medicine, New York Medical College, "Thyroid and Parathyroid."

Augustus B. Wadsworth Lecture

The fifth Augustus B. Wadsworth Lecture was given at the Division of Laboratories and Research, New York State Department of Health, Albany, on October 28. Dr. Fred W. Stewart, Memorial Center for Cancer and Allied Diseases, New York City, spoke on "Wadsworth and Ewing: Problems That Would Interest Them Today."

Meetings—Future

Brooklyn Urological Society

The Brooklyn Urological Society will present Dr. R. Frank Jones, professor of urology, Howard University School of Medicine, as guest speaker at their meeting on November 9. Dr. Jones will present a paper on "Transcapsular Rupture of the Kidney."

The meeting will be held at the Kings County Medical Society building, 1313 Bedford Avenue, Brooklyn.

Nassau County Academy of General Practice

The fifth annual assembly of the Nassau County Chapter of the American Academy of General Practice will be held at the Garden City Hotel, Wednesday, November 10.

The morning session will consist of talks on "Cardiac Emergencies" by Dr. Clarence E. De La Chapelle, professor of medicine, New York University Post-Graduate School of Medicine, and "Diabetes" by Dr. Henry T. Ricketts, professor of medicine, University of Chicago, Department of Medicine.

A symposium, "The Disturbances in the Normal Physical and Mental Development of Children," will be held in the afternoon with Dr. Richard L. Day, professor of pediatrics, State University of New York College of Medicine, as moderator. Dr. Lawson Wilkins, associate professor of pediatrics, Johns Hopkins, will discuss "Adreno-Genital Syndrome"; Dr. A. Wilmot Jacobsen, clinical professor of pediatrics, University of Buffalo Medical School, "Growth Problems in Children"; Dr. Charles E. Koop, surgeon-in-chief, Children's Hospital, Philadelphia, and associate professor in child surgery, School of Medicine, University of Pennsylvania, "Management of Undescended Testicles," and Dr. Gustav Bychowski, associate neuropsychiatrist, Bellevue, "Obesity in the Adolescent."

Queensboro Tuberculosis and Health Association

A symposium on "Chronic Pulmonary Disease" planned especially for general medical practitioners will take place Thursday, November 11, in the building of the Queens County Medical Society.

Sponsored by the Queens County Medical Society, the Queens County Chapter of the Academy of General Practice, and the Queensboro Tuberculosis and Health Association, the symposium will afford a comprehensive view of current concepts of the chronic pulmonary diseases, their diagnosis and treatment, and has been approved by the American Academy of General Practice for five hours of formal credit.

The afternoon session begins at 2 P.M. and the evening at 8 P.M. Complete program information can be obtained by calling or writing to Miss Miriam Tauber, director, professional education, Queensboro Tuberculosis and Health Association, 159-29 90th Avenue, Jamaica, Jamaica 6-2557.

American College of Cardiology

The third interim scientific meeting of the American College of Cardiology will be held at the Hotel Algiers, Miami Beach, Florida, November 11 through 13. The meeting will be a symposium on "Diet in Heart Disease" during the four scientific sessions, which will be in the form of panel meetings and round table conferences.

Further information pertaining to the program may be obtained from the secretary of the College, Dr. Philip Reichert, 140 West 57th Street, New York 19, New York.

New York University Post-Graduate Medical School

The fifth Sigmund Pollitzer Lecture will be given by Dr. P. B. Medawar, Monday, November 15 at 4:30 P.M. in the psychiatric amphitheater of Bellevue Hospital, 400 East 30th Street, New York City. Dr. Medawar is professor of zoology at the University of London, England. Dr. Medawar will talk on "Skin Transplantation and the Homograft Problem."

American College of Surgeons

The largest and most widely instructive meeting of surgeons in the world, the fortieth annual clinical congress of the American College of Surgeons, will be held in Atlantic City, New Jersey, November 15 to 19. More than 10,000 Fellows of the College and their guests from all over the world are expected to attend. This postgraduate education meeting will present recent surgical developments through a wide variety of programs, including panel discussions, symposia, surgical forums, motion pictures, cine clinics, color television, and exhibits. Dr. Charles deT. Shivers, Atlantic City, is chairman of the Atlantic City advisory committee on arrangements.

Dr. Frank Glenn, New York City, president, American College of Surgeons, will preside at the opening evening session, at which Dr. Alan Gregg and Dr. Robert H. Kennedy, both of New York City, will be guest speakers. On the final evening Dr. Alfred Blalock, Baltimore, will be installed as president for the coming year.

Dr. Evarts A. Graham of St. Louis is chairman of the Board of Regents and Dr. Paul R. Hawley of Chicago is the director.

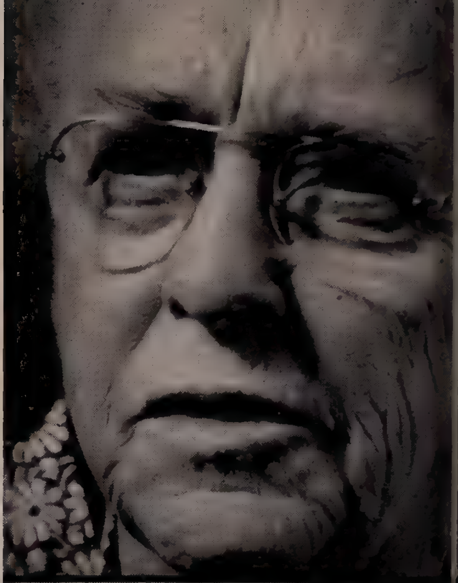
New York Society of Neurosurgery

The Charles A. Elsberg Lecture, established by the New York Society of Neurosurgery, will be delivered by Dr. Percival Bailey, professor of neurology and neurological surgery, University of Illinois, Chicago, on November 16, at 8:30 P.M. at the New York Academy of Medicine.

Dr. Bailey will discuss "Psychomotor Epilepsy—Its Relation to the Visceral Brain." Preceding the lecture, a dinner will be held in honor of Dr. Bailey in the President's Gallery.

[Continued on page 3006]

. . . a "confused" old lady



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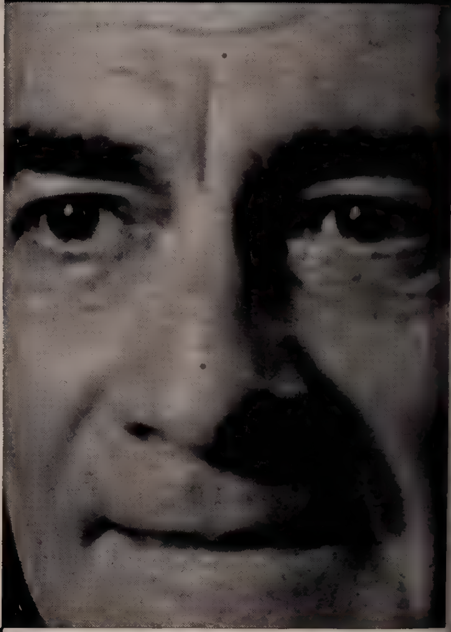

(Photographs and excerpts of case histories from the files of a general practitioner.)

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“He is now able to work and support himself, which he was unable to do for several years.”[2]

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†T.M. Reg. U.S. Pat. Off. for S.K.F.'s brand of sustained release capsules (patent applied for).

[Continued from page 3003]

American Trudeau Society

The American Trudeau Society will hold an interim scientific session at the Hotel New Yorker, New York City, November 17, from 9 A.M. to 5 P.M. The meeting will be open to physicians interested in pulmonary diseases in internal medicine, surgery, and pediatrics, and to scientists in allied laboratory disciplines. The program will consist of a series of presentations on various aspects of pulmonary diseases from the clinical and laboratory standpoints.

National Medical Public Relations Conference

The A.M.A.'s seventh PR Conference will be held in Miami on November 28. Preceding the opening of the clinical session, public relations tips "for doctors only" will be presented. Geared primarily for physicians, the program will offer suggestions on ways to improve the medical profession's public relations at the grass roots level. Members of the house of delegates, officers of state and county medical societies, executives, and PR personnel are cordially invited.

Latin American Congress of Physical Medicine

The Latin American Congress of Physical Medicine will hold its sixth congress in Lima, Peru, February 11 to 25, 1955. This meeting is combined with the Pan American Academy of General Practice and the Pan American Association of Medical Specialties. Application should be made to: Dr. Cassius Lopez de Victoria, Executive Director, Latin American Congress of Physical Medicine, 176 East 71st Street, New York 21, New York.

Personalities

Speakers

Dr. Leona Baumgartner, New York City Health Commissioner, at a luncheon meeting of the women's division of the Federation of Jewish Philanthropies of New York at the Hotel Astor in September. . .Dr. Michael M. Dasco, associate professor of clinical physical medicine and rehabilitation, New York University College of Medicine, at the convention of the American Hospital Association in Chicago in September. . .Dr. Conrad Berens, Ophthalmological Foundation, Dr. Franklin M. Foote, executive director, National Society for the Prevention of Blindness, Dr. Frank D. Carroll and Dr. Andrew de Roetth, Jr., Institute of Ophthalmology of the College of Physicians and Surgeons, Columbia University; Drs. Leo Kellerman and Adolph Posner, Manhattan Eye, Ear, and Throat Hospital, Dr. Algernon B. Reese, president-elect, American Academy of Ophthalmology and Otolaryngology, and Dr. Frederick H. Theodore, New York City, at the seventeenth International Congress of Ophthalmology at the Waldorf-Astoria, in September.

Dr. Joseph Harkavy, New York City, Drs. Aaron Kellner and Theodore Robertson, New York Hospital-Cornell Medical Center, and Dr. Curtis L. Mendelson, New York Lying-in Hospital, at the second World Congress of Cardiology, Washington, D.C., in September. . .Dr. Yale Kneeland, Jr., associate professor in medicine, Columbia University College of Physicians and Surgeons, at a luncheon conference of the Common Cold Foundation at the Hotel Commodore in New York City in September. . .Dr. James L. McCartney, Garden City, under the auspices of the World Medical Association, to the medical societies at Havana, Cuba; Yokohama and Kobe, Japan; Manila, P. I.; Colombo, Ceylon; Cochin and Bombay, India; Karachi, Pakistan; Naples and Genoa, Italy, between November 20 and March 6, 1955. . . Dr. Marie Pichel Warner, New York City, at the International Congress of Gynecology and Obstetrics, Geneva, Switzerland, in July.

Elected

Dr. William A. Klein, chief surgeon, Home and Hospital of the Daughters of Jacob, Bronx, as president of the medical board. . .Dr. Howard A. Rusk, director, Institute of Physical Medicine and Rehabilitation, Bellevue-New York University Medical Center, as president of the International Society for the Welfare of Cripples at the sixth world congress of the Society where he also spoke.

Appointed

Dr. Richard D. Dugan, New York City, as assistant resident, Mary Imogene Bassett Hospital, Cooperstown, in obstetrics and gynecology...Dr. Arthur A. Fischl, director of medicine, Queens General Hospital, as medical consultant on the supervisory staff of Group Health Insurance, Inc. . .Dr. Norton Nelson, professor of industrial medicine, New York Post-Graduate Medical School, to succeed Dr. Anthony J. Lanza as director, Institute of Industrial Medicine, New York University-Bellevue Medical Center. . .Dr. Charles D. Shields, Buffalo, as professor and chairman, Department of Physical Medicine and Rehabilitation, Georgetown University School of Medicine. . .Dr. Eugene F. Traub, professor of dermatology at New York Medical College, as medical director, Skin and Cancer Hospital, Philadelphia, Pennsylvania.

Awarded

Dr. Louis Leiter, chief, three-year grant, and Drs. James Berkman and Harold Rifkin, two-year grant, all of the Montefiore Hospital, Bronx, by the National Institutes of Health.

New Offices

Dr. Katarine L. Friedmann, White Plains, general practice, "The Village Green". . .Dr. Richard A. Loomis, a family clinic, Springville.

THE 1953 MEDICAL DIRECTORY IS NOW AVAILABLE

For complete and authoritative data on physicians, hospitals, medical society and administrative officials in New York State, the official publication of the Medical Society of the State of New York is an invaluable reference volume.

Be sure to notice these features—Functions and Services of your State Society; New York City and State Departments of Health; Group Plan, Malpractice and Defence Board; Medical Care Insurance Information; Listings of Pharmaceutical Suppliers, Equipment Suppliers, Nursing Homes, and other important data.

NOTE: All member physicians in good standing of the county medical societies will receive a complimentary copy of the 1953 Medical Directory of New York State.

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NEWS FROM THE MEDICAL SCHOOLS

Albany Medical College

Appointed—Dr. John J. Farrell, assistant professor of surgery, has been appointed professor of surgery and chairman, Department of Surgery, at the University of Miami School of Medicine. Dr. Frank M. Woolsey, Jr., chief, Medical Services, Albany Veterans Administration Hospital, and an associate professor of medicine, has been appointed associate dean and director of postgraduate medical education to suceed Dr. Curtland C. Brown, Jr., who was inducted into the Navy in July as a medical officer. Dr. Samuel R. Powers, a former resident at Columbia-Presbyterian Medical Center, New York City, has been appointed assistant professor of surgery and attending surgeon at Albany Hospital. Dr. Powers will also be chief of the peripheral vascular clinic at the Hospital.

Grant for Study of Neurology—For the second consecutive year, Albany Medical College has received a grant of $15,000 from the National Institute of Neurological Diseases and Blindness of the United States Public Health Service. Dr. Robert W. Graves, professor of neurology and chairman of the department, together with Dr. F. H. Hesser, associate professor of neurology, will administer the program which is the only three-year graduate training in neurology available in New York State outside of New York City.

Medical TV Series—"Medically Speaking" began a new series of 13 television programs on September 15 in Albany. Sponsored by the Mohawk-Hudson Council on Educational Television and coordinated by Harold E. Hammond, public relations director of the school, the programs will be produced each week with the last telecast being presented on December 8.

Subjects presented on the programs in November will be: "Fits and Facts," "Under the Microscope," "The Atom and Your Health," and "Women's Health." The December programs will concern "The Student Doctor" and "Is Medicine for Me?"

Earlier programs presented were: "It's Your Heart," "The Case of the Low Blood Count," "Advances in Surgery," "Modern Anesthesia," and "Body Structure and Chemistry."

Presides—Dr. Arthur Knudson, professor of biochemistry and chairman of the Department of Biochemistry, and consulting biochemist, Albany Hospital, presided at the afternoon symposium on "Lipids and Lipoproteins" at the annual meeting of the American Chemical Society in New York City on September 16.

New York University College of Medicine

Fellowships—Availability of fellowships for social workers in the field of pediatric rehabilitation which provide six to eleven months of specialized clinical experience in medical social work practice and pay a stipend of $250 a month have been announced by the Children's Division of the Institute of Physical Medicine and Rehabilitation. Applications may be made to Miss Florence I. Mosher, Children's Division, Institute of Physical Medicine and Rehabilitation, 400 East 34th Street, New York 16, New York.

Appointed—Dr. Milton M. Grover, Jr., Kingston, has been appointed clinical assistant in radiology at New York University-Bellevue Medical Center's College of Medicine. Dr. Grover has been director-radiologist at the Ulster County Tumor Clinic in Kingston and consultant-radiologist at the Kingston and Benedictine Hospitals.

Grant—A grant of $90,000 has been awarded to New York University-Bellevue Medical Center for the support of a program in the study of neuromuscular disease including poliomyelitis. The program will be carried out under the direction of Dr. Thomas I. Hoen, professor and chairman, Department of Neurosurgery; Dr. Walter A. L. Thompson, professor and chairman, Department of Orthopedic Surgery, New York University Post-Graduate Medical School, and Dr. Robert Ward, professor of pediatrics, New York University College of Medicine.

The new wards for the treatment of poliomyelitis will be supervised by Dr. Marvin A. Stevens and staffed by Kenny-trained therapists. The research program under Dr. Ward is concerned with problems of naturally acquired immunity to poliomyelitis, while under the total program, Dr. Hoen's staff will be concerned with research on all types of neuromuscular diseases as well as polio.

Retired—Dr. Currier McEwen, dean, has announced the retirement of Dr. William C. Von Glahn, professor and chairman, Department of Pathology, with the title of professor emeritus. Dr. Von Glahn is being replaced by Dr. Lewis Thomas, professor of pediatrics and internal medicine, and American Legion Heart research professor, of the University of Minnesota Medical school.

[Continued on page 3010]

Protection of the clinically cured patient from re-infection with

TRICHOMONAS VAGINALIS

Because of the general recognition of the male as a possible vector,[1-4] the post-treatment use of a condom during coitus is a valuable safeguard of success in the management of Trichomonas vaginitis.

The regular use of a condom by the husband of the clinically cured woman for a period of three months or more reduces the chance of recurrence of symptoms.[2] A condom also protects the male partner against possible infection from a quiescent residual focus in the woman.

The asymptomatic infection in the husband is often the basis for stubborn infection in the wife. The detection of Trichomonas vaginalis infection in the husband is a frequent by-product of the search for the source of recurrences in the woman.[3] After clinical cure of both sexual partners, the regular use of a condom during coitus for three months or longer effectively breaks the cycle of infection and re-infection.

Among admittedly promiscuous men, Trichomonas vaginalis infection often accompanies specific or nonspecific urethritis, and sometimes urethral stricture.[1,2] The usual mildness and self-limiting nature of the infection in the male makes its eradication much easier than in the female.[4] After apparent cure, the use of a condom during intercourse for 30 days prevents possible infection of the female sexual partner.

The need for the protection of a condom during coitus should be impressed upon the woman patient. The greater distress and greater severity of symptoms among women, as well as their passive role during coitus combine to enforce adherence to the use of a condom by the male sexual partner.

Occasionally patients will manifest a reluctance to use the condom because of inconvenience or dulling of sensation. These objections are readily overcome following the recommendation and initial trial of pre-moistened, convenient FOUREX® skins. As these are prepared from the cecum of sheep, they do not exert any retarding effect on sensory nerve endings. In those cases where cost is a paramount factor, the use of RAMSES,® a transparent, very thin rubber condom, or SHEIK,® a popular-priced brand, will prove eminently satisfactory.

Physicians may now obtain a complimentary package of **FOUREX** pre-moistened skins and **RAMSES** and **SHEIK** rubber condoms to enable them to confirm their value among patients as adjuncts to the successful treatment of Trichomonas vaginitis. In order to limit distribution to physicians only, kindly request this complimentary package on your prescription blank and mail to: Dept. Y3, Julius Schmid, Inc., 423 West 55th Street, New York 19, N. Y.

references:

1. Lanceley, F.: Brit. J. Ven. Dis. 29:213-217, Dec., 1953; abstracted J.A.M.A. 154:1467, Apr. 24, 1954. 2. Bernstine, J. B., and Rakoff, A. E.: Vaginal Infections, Infestations, and Discharges, New York, The Blakiston Company, Inc., 1953, pp. 256-259. 3. Kanter, A. E.: The Recognition and Treatment of Vaginal Lesions, Postgrad. Med. 12:457, Nov., 1952. 4. Meigs, J. V., and Sturgis, S. H.: Progress in Gynecology, vol. 2, New York, Grune and Stratton, Inc., 1950, p. 433.

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Advertisement

[Continued from page 3008]

State University of New York College of Medicine at New York City

Anatomy Professor Wins Annual Iodine Award—Dr. Jack Gross, associate professor of anatomy, received the 1954 Chilean Iodine Educational Bureau Award which was presented at the 101st convention of the American Pharmaceutical Association on August 26 in Boston, Massachusetts.

The award, $1,000 and a citation certificate, was given to Dr. Gross for his fundamental contributions in the field of iodine which have revised the concept of the metabolism of the thyroid hormone.

Opening of School—150 new students were admitted to the first year class at the College in September, bringing the student body up to a total of 600.

Dr. Richard L. Day, professor of pediatrics, delivered an address entitled "Theory and Practice" at the College's 94th opening convocation on September 20. Dr. Jean A. Curran, dean of the College until his appointment as associate executive dean for medical education in July, presided at the convocation and introduced Dr. Howard W. Potter, professor of psychiatry, who has been appointed acting dean.

Honors and Awards—Drs. Jean Redman Oliver and Arnold Eggerth have been named professors emeriti "in recognition of their outstanding professional endeavors and many years of loyal service to the College." Completing twenty-five and thirty-five years of service, respectively, Drs. Oliver and Eggerth, both sixty-five, retired from the College faculty on September 1. Dr. Oliver, who was appointed first Distinguished Service Professor in the State University of New York last fall, has been named Distinguished Service Professor Emeritus of Pathology and Dr. Eggerth has been named Professor Emeritus of Microbiology. Dr. Eggerth, although retired from the faculty, will continue in active association with the College, assisting Dr. Jean A. Curran in the organization of a new department of historical and cultural medicine.

1953 MEDICAL DIRECTORY
ERRATA

Corrections of erroneous biographic material in the 1953 *Medical Directory of New York State* are listed below. Changes have been made in material received prior to the closing date of March 1, 1953.

Δ★**BADIA, Vitus William,** 230 E 48 St. New York, N.Y. by appt. Tel Plaza 5-4480. Univ & Bell 1923. D-OG. SL. FACS. Ac Med; Al St Vin. Gyn & Obs St Vin.

Δ★**CANTOR, Jack Leon,** Riverhead, N.Y. 1-3, 6-8. Tel Riverhead 8-2505. Va 1932. SA. Chief Sur Cent Suf; Sur Eastern LI.

Δ★**COBB, Lucy McCrea,** 230 Genesee St. Utica, N.Y. by appt. Tel 2-4029. Also Remsen. Syracuse 1933. SI-2. Am Psych; Ac Med. Staff St Lukes Meml.

Δ★**COBB, Lucy McCrea,** Remsen, N.Y. Tel 2298. Also Utica. Syracuse 1933. SI-2. Am Psych; Utica Ac Med. Staff St Lukes Meml.

COLE, Lewis Furbeck, 41 Prospect St. Utica, N.Y. 2-4, 7-8. Tel 2-7619. Md 1916. XJ. Staff St Lukes Meml.

Δ★**COLEMAN, Joseph,** 133 E 58 St. New York, N.Y. 10-12:30, 4-5:30. Tel Plaza 9-5320. Md 1904. SF. Hon Sr Asst Sur NY E&E Inf.

Δ★**CRIMMINGS, Francis John,** 36 S Goodman St. Rochester, N.Y. Tel Monroe 4688. Tufts 1939. Asst Orth Genesee & St. Marys; Jr Orth Sur Genl; Orth Monroe Co Inf.

Δ★**FREIREICH, Abraham Walter,** Malverne, N.Y. by appt. Tel Lynbrook 9-0160. Univ & Bell 1932. D-IM. SJK. FACP. Al Bell. Asso Phys Bell; Phys & Toxicol Meadowbrook; Staff So Nassau Com; Asst Attd Phys Univ.

Δ★**FRYTH, Walter B.,** 328 W 86 St. New York, N.Y. by appt. Tel Schuyler 4-4020. Breslau 1913. XF. R Virchow Soc. Asst Phys City.

Δ★**GARVIN, William John,** 80 Ashburton Av. Yonkers, N.Y. by appt. Tel Yonkers 5-8846. Temple 1943. SE. FACS. Ac Med; Al P-G. Ophth St Johns Riverside; Dir Ophth St Johns Riverside OPD; Asst-in-Ophth Univ; Clin Asst Sur Ophth Bell.

Δ★**GLICK, Arthur Harvey,** 1192 Park Av. New York, N.Y. by appt. Tel Atwater 9-4477. Univ & Bell 1932. D-S. SAC. FACS. Milit Sur US. Sur & Asst Path Beth David; Asso Sur Monte.

Δ★**GOLD, Edwin Martin,** 41 Plaza St. Brooklyn, N.Y. 2-4 Tues Thurs Sat by appt. Tel Ulster 7-1054. LIC Med 1936. D-OG. SL. FACS. Am Ac Obs & Gyn; Am Pub Health; Bklyn Gyn; Al Jew. Asso Obs & Gyn Cumber; Asso Obs Jew.

Δ★**GREENFIELD, Henry,** 855 Ocean Av. Brooklyn, N.Y. 9-5; 9-12 Sat. Tel Ingersoll 2-6468. Mich 1924. D-R. SD. Radiol NA; Bklyn Roent Ray; Al Jew. Roent Kings Co.

[Continued on page 3012]

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★**HEIMOFF, Leonard Lincoln,** 180 E 162 St. Bronx, NY. 1-3, 6-8 except Wed; 12-2 Sat. Tel Cypress 3-5564. Md 1939. SJ. Am VD; NY Ac Med; Al Lin. Asso Phys Lin; Phys New York OPD.

Δ★**HERSH, Joseph H.,** 121 E 69 St. New York, N.Y. by appt. Tel Regent 4-1960. NY Univ 1935. D-OL. SFM-13. AFACAl. FACS. Am Ac Ophth & Otolar. Asst Attd Otorhinolar Univ; Asst Otolar Bell.

Δ★**HOROWITZ, Irving,** 186 Prospect Park W. Brooklyn, N.Y. 1-2; 6:30-8 Mon Wed; 4-6 Fri. Tel South 8-0312. Res 1404 Carroll St. NY Univ 1938. X. Am Ac GP; Al Cumber. Asst Ped Cumber.

Δ★**KAUER, Joseph Taylor,** 11 E 68 St. New York, N.Y. by appt. Tel Regent 7-2576. Cornell 1937. D-S. SAC. Al Bell. Asst Sur New York, Bell & Triboro.

Δ★**KAY, Paul,** 120 E 87 St. New York, N.Y. by appt. Tel Sacramento 2-2261. NY Med 1944. NB.

Δ★**KIMBRIG, Max,** Huntington, N.Y. by appt. Tel Huntington 4-0313. Univ & Bell 1920. D-OL. SEF. Am Ac Ophth & Otolar; NY Clin Ophth. Sur Otolar Huntington; Con Otolar Southside Bayshore.

★**KRYNSKI, Boris,** 1 W 64 St. New York, N.Y. by appt. Also Jackson Heights. Geneva 1938. XA. Asst Sur Queens Genl.

★**KRYNSKI, Boris,** 37-50 75 St. Jackson Heights, N.Y. by appt. Tel Havemeyer 6-4077. Also Manhattan. Geneva 1938. XA. Asst Sur Queens Genl.

★**KRYNSKI, Luba,** 37-50 75 St. Jackson Heights, N.Y. 1-3, 6-8. Tel Havemeyer 6-4077. Geneva 1939. XM-5.

Δ★**KUTISKER, Meyer J.,** 303 Lexington Av. New York, N.Y. 5-7 Mon Wed Fri. Tel Murray Hill 5-1245. Univ & Bell 1917. SACM-16. FACS. Ac Med. Asso Sur Univ; Sur Bell.

Δ★**LAKE, J. Douglas,** Bay Shore, N.Y. by appt. Tel Bay Shore 7-2680. West Ontario 1943.

Δ★**LEVINE, Milton I.,** 1111 Park Av. New York, N.Y. by appt. Tel Atwater 9-2420. Cornell 1927. L-P. FCCP. Am Ac Ped; Am Pub Health; NY Ped; Al Nurse & Child; Al St Marys Child. Asst Ped New York.

Δ★**LITTLE, David Lawrence,** 458 Glen St. Glens Falls, N.Y. by appt. Tel 2-1167. Zurich 1937. SH. Am Ac Derm & Syph; Ac Med. Derm Glens Falls.

Δ★**MALINIAC, Jacques W.,** 30 Central Park S. New York, N.Y. by appt. Tels Plaza 5-9879 & 5-9880. Paris 1914. D-PS. D-OL. SM-7. Am Ac Ophth & Otolar; Am Plast & Recon Sur. Plastic Sur Syden; Asso Plastic Sur Poly.

Δ★**MALITZ, Sidney,** 565 West End Av. New York, N.Y. by appt. Tel Endicott 2-7155. Chicago 1946. D-PN. QP. Al Psych Inst. Sr Res Psych Inst; Asst Psych Delafield.

Δ★**MEYER, Herbert Willy,** 170 E 78 St. New York, N.Y. 12:30-2:30. Tel Butterfield 8-4499. P&S NY 1919. D-TS. D-PS. D-S. SAC. FACS. Am Ca Res; Am Sur; Am Thor Sur; Ac Med; NY Sur; NY Thor Sur; Al Lenox Hill. Sur Lenox Hill, Univ & Bell; Asso Sur Bell OPD; Cons Sur Norwalk Conn.

★**NEUWIRTH, Eugene,** 30 Grace Av. Great Neck, N.Y. by appt. Tel Great Neck 2-6737. Budapest 1915. D-PMR. SM-1. Am Cong Phys Med; Am Rheum; NY Phys Med.

Δ★**OTTENHEIMER, Lilly,** 336 Central Park W. New York, N.Y. by appt. Tel Academy 2-2209. Wurzburg 1926. D-PN (P). QP. SI-2. Am Psych; NY Clin Psych. Asst Neuropsych Bell; Asst Attd Psych Flower & Fifth Ave.

★**PHILIP, Arthur Jay,** 414 Hempstead Av. Rockville Centre, N.Y. by appt. Tel Rockville Centre 6-0434. Also Amityville. Md 1932. SH. Am Ac Derm & Syph; LI Derm; Al Israel Zion. Asso Derm Queens Genl & Triboro; Derm Meml Long Beach & So Nassau Com.

★**PHILIP, Arthur Jay,** Amityville, N.Y. Also Rockville Centre. Md 1932. SH. Am Ac Derm & Syph; LI Derm; Al Israel Zion. Asso Derm Queens Genl & Triboro; Derm Meml Long Beach & So Nassau Com Rockville Centre.

Δ★**PRUDHON, Charles A.,** 168 Sterling St. Watertown, N.Y. by appt. Tel 2138. Syracuse 1920. D-OL. SF. Cent NYEENT. Chief ENT Mercy; Asst ENT Good Sam.

Δ★**SANBORN, Frederick Rodney,** 29-27 41 Av. Long Island City, N.Y. 9-5. Tel Stillwell 4-6986. Dartmouth 1902. SM-5-10.

Δ★**SEGENREICH, Albert,** 1001 Park Av. New York, N.Y. by appt. Tel Butterfield 8-8333. LIC Med 1931. D-IM. SJ. Asst Phys Beekman-Down.

Δ★**SELEY, Gabriel P.,** 39 E 61 St. New York, N.Y. by appt. Tel Templeton 8-6993. Univ & Bell 1934. D-S. D-TS. SAC. FACS. Am Thor Sur; Milit Sur US; Ac Med; NY Thor Sur; Al Mt Sinai. Thor Sur Beth-El & Gouver; Adj Sur Mt Sinai; Asst-in-Sur Univ.

Δ★**SHEPPERD, Lewis A.,** 785 Park Av. New York, N.Y. by appt. Tel Plaza 8-1846. 31 Sutton Pl S. by appt. Tel Plaza 8-1846. S Car 1940. XF. Al Presby. Jr Asst Otolar Roosevelt; Clin Asst Otolar Roosevelt OPD; Clin Asst Sur NY E&E Inf.

Δ★**SHIFFRIN, Leo Arthur,** 148 E 63 St. New York, N.Y. by appt. Tel Templeton 8-0088. Univ & Bell 1921. SG. Milit Sur US; NY Urol. Asso Urol Midtown; Urol Goldwater Meml & Poly OPD.

Δ★**SMITH, Herbert John,** 21 E 66 St. New York, N.Y. by appt. Tel Rhinelander 4-6433. Dublin 1940. XJ. Asst Phys & Cardiac St Lukes OPD; Asso Phys Goldwater Meml.

★**SONNENBERG, George,** 1915 Morris Av. Bronx, N.Y. 12-2, 6-8. Tel Tremont 8-4440. Siena 1937. XM-5. Asst Phys Harlem; Asso Ped Poly OPD.

★**STEDEFELD, Hugo,** 465 W 57 St. New York, N.Y. by appt. Tel Circle 5-7397. Berlin 1921.

Δ★**STERN, Max M.,** 960 Park Av. New York, N.Y. by appt. Tel Rhinelander 4-4530. Frankfurt 1928. NY Psychoan.

★**SUCHOW, Abraham L.,** 85-19 Palo Alto St. Hollis, N.Y. by appt. Tel Hollis 5-5298. Also Brooklyn. NY Hom 1926. XC.

★**SUCHOW, Abraham L.,** 2111 Albemarle Rd. Brooklyn, N.Y. 1-3 Mon Wed Fri; 6-8:30 Tues Thurs; 10-12 Sat. Tel Ulster 6-8071. Also Hollis. NY Hom 1926. XC.

Δ★**TARLOV, Isadore Max,** 1150 Fifth Av. New York, N.Y. by appt. Tel Atwater 9-8846. Johns Hopkins 1930. D-NS. SM-9. FACS. Am Neuropath; Ac Med. Neurosur Flower & Fifth Ave & Met; Cons Neurosur Norwalk Conn.

Δ★**TOUROFF, Arthur S. W.,** 994 Fifth Av. New York, N.Y. 11:30-1:30 by appt. Tel Rhinelander 4-4242. P&S NY 1925. D-S. D-TS. SACG. FACS. FCCP. Am Sur; Am Thor Sur; Am Trudeau; Milit Sur US; MCWII; Ac Med; NY Thor Sur; NY Sur; Queens Sur; Al Mt Sinai. Sur Mt Sinai; Cons Sur Harlem, Rockaway Beach, St Joseph Far Rockaway & Monmouth Meml Long Branch NJ; Cons Thor Sur Beekman-Down, Beth Israel, Flushing, Long Beach Meml & Queens Genl.

Δ★**TRAVELL, Willard,** 9 W 16 St. New York, N.Y. by appt. Tel Watkins 9-2648. Albany 1897. D-PMR. XM-1. Am Cong Phys Med; Ac Med.

Δ★**WEITZNER, I. James,** 625 Broadway, Lynbrook, N.Y. 1-2, 7-8 Thurs & Sun by appt. Tel Lynbrook 9-8680. Middlesex 1943. XM-5. Am Ac GP; Milit Sur US.

Δ★**WILLIAMS, Henry Ward,** 274 Alexander St. Rochester, N.Y. by appt. Tel Monroe 7820. Penn 1919. D-ICS. SCIM-9. FACS. FICS. Res Nerv & Ment Dis; Ac Med; Roch Path. Cons Neurosur St Marys, Genesee, Willard State & Monroe Co Inf.

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Personal communication (Apr. 12, 1950)

1951 Of 119 patients treated with Azulfidine prior to 1944, 90 patients (75%) were symptom-free or considerably improved when re-examined in 1949.

Svartz, N.: Acta. Med. Scandinav. 141:172, 1951.

1952 In a series of 52 patients with chronic ulcerative colitis 30, or 58%, showed significant improvement after treatment with Azulfidine.

Morrison, L. M.: Gastroenterology 21:133, 1952.

1953 *Morrison says:* "Azopyrine [Azulfidine] . . . has been effective in controlling the disease in approximately two-thirds of patients who had previously failed to respond to standard colitis therapy currently in use."

Morrison, L. M.: Rev. Gastroenterology 20:744 (Oct.) 1953.

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BOOKS RECEIVED

(The following books were received during the month of August, 1954)

The Digital Circulation. By Milton Mendlowitz, M.D. Octavo of 182 pages, illustrated. New York, Grune & Stratton, 1954. Cloth, $6.75.

Cancer: Race and Geography. Some Etiological, Environmental, Ethnological, Epidemiological, and Statistical Aspects in Caucasoids, Mongoloids, Negroids, and Mexicans. By Paul E. Steiner, M.D. Octavo of 363 pages, illustrated. Baltimore, Williams & Wilkins Company, 1954. Cloth, $5.00.

Of Publishing Scientific Papers. By George E. Burch, M.D. Octavo of 40 pages, illustrated. New York, Grune & Stratton, 1954. Paper, $2.75.

The Hog and I. A Fool-Proof System for Controlling Weight. By Charis Miley. Octavo of 93 pages, illustrated. New York, Neptune Company, 1954. Paper, $1.00.

Textbook of Bacteriology. By Joseph M. Dougherty, Ph.D., and Anthony J. Lamberti, M.S. Third edition. Octavo of 598 pages, with 190 illustrations. St. Louis, C. V. Mosby Company, 1954. Cloth, $8.25.

The Physician and His Practice. Edited by Joseph Garland, M.D. Octavo of 270 pages, illustrated. Boston, Little, Brown & Company, 1954. Cloth, $5.00.

Planning Florida's Health Leadership. A Summary. By Russell S. Poor, Ph.D. Octavo of 93 pages, illustrated. Gainesville, University of Florida Press, 1954. Paper, $1.50.

Heart. A Physiologic and Clinical Study of Cardiovascular Diseases. By Aldo A. Luisada, M.D. Second edition. Quarto of 680 pages, illustrated. Baltimore, Williams & Wilkins Company, 1954. Cloth, $15.

Proceedings of the Second National Cancer Conference. (In two volumes.) American Cancer Society, Inc. National Cancer Institute of the U.S. Public Health Service and American Association for Cancer Research, Netherland Plaza Hotel, Cincinnati, Ohio, March 3, 4, 5, 1952. Octavo of 1,687 pages, illustrated. New York, American Cancer Society, 1954. Cloth, $7.50 for set.

Proceedings of the Fourth International Congress of the International Society of Hematology, Mar del Plata, Argentina, September 20–27, 1952. Associate Editors, F. Jimenez de Asua, William Dameshek, M.D., and Sol Haberman, Ph.D., and five Advisory Editors and two Assistant Editors. Quarto of 473 pages, illustrated. New York, Grune & Stratton, 1954. Cloth, $10.

The Concept of Schizophrenia. By W. F. McAuley, M.D. Octavo of 145 pages. New York, Philosophical Library, 1954. Cloth, $3.75.

Practice of Allergy. By Warren T. Vaughan, M.D. Revised by J. Harvey Black, M.D. Third edition. Quarto of 1,164 pages, illustrated. St. Louis, C. V. Mosby Company, 1954. Cloth, $21.

Primer of Allergy. A Guidebook for Those Who Must Find Their Way Through the Mazes of This Strange and Tantalizing State. By Warren T. Vaughan, M.D. With illustrations by John P. Tillery. Fourth edition. Revised by J. Harvey Black, M.D. Duodecimo of 191 pages, illustrated. St. Louis, C. V. Mosby Company, 1954. Cloth, $4.25.

Textbook of Pediatrics. Edited by Waldo E. Nelson, M.D. With the Collaboration of Seventy Contributors. Sixth Edition. Quarto of 1,581 pages, illustrated. Philadelphia, W. B. Saunders Company, 1954. Cloth, $15.

Report of the Medical Research Council for the Year 1952–1953. By the Committee of Privy Council for Medical Research. Presented by the Lord President of the Council to Parliament by Command of Her Majesty, June, 1954. Octavo of 269 pages. London, Her Majesty's Stationery Office, [1954]. Paper, $1.70.

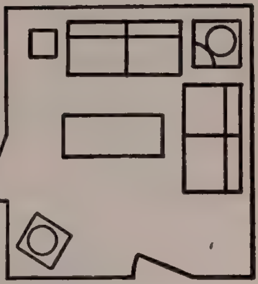
The Encyclopedia of Child Care and Guidance. Edited by Sidonie Matzner Gruenberg. Managing Editor, Frances Ullmann DeArmand. Associate Editor, Pauline Rush Evans. Octavo of 1,016 pages, illustrated. Garden City, New York, Doubleday & Company, 1954. Cloth, $7.50.

Psychomotor Aspects of Mental Disease. An Experimental Study. By H. E. King, Ph.D. Octavo of 185 pages, illustrated. Cambridge, Mass., published for The Commonwealth Fund by Harvard University Press, 1954. Cloth, $3.50.

Ciba Foundation Symposium on the Kidney. Arranged jointly with the Renal Association. Editor for the Renal Association, A. A. G. Lewis, M.D. Editor for the Ciba Foundation, G. E. W. Wolstenholme, M.B. Assisted by Joan Etherington. With 125 illustrations. Octavo of 333 pages. Boston, Little, Brown & Co., 1954. Cloth, $6.00.

Office Gynecology. By J. P. Greenhill, M.D. Sixth edition. Octavo of 517 pages, illustrated. Chicago, Year Book Publishers, 1954. Cloth, $7.75.

[Continued on page 3016]



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Metabolic Interrelations with Special Reference to Calcium. Transactions of the Fifth Conference, New York, N.Y., January 5–6, 1953. Edited by Edward C. Reifenstein, Jr., M.D. Editorial Assistants: Shirley L. Wells, M.S., and Beverly B. Turner. Octavo of 386 pages, illustrated. New York, Josiah Macy, Jr. Foundation, 1954. Cloth, $5.00.

Shock and Circulatory Homeostasis. Transactions of the Third Conference, September 14, 15, and 16, 1953, Princeton, N.J. Edited by Harold D. Green, M.D. Octavo of 230 pages, illustrated. New York, Josiah Macy, Jr. Foundation, 1954. Cloth, $3.50.

Legal Medicine. Pathology and Toxicology. By Thomas A. Gonzales, M.D., Morgan Vance, M.D., Milton Helpern, M.D., and Charles J. Umberger, Ph.D. Second edition. Octavo of 1,349 pages, illustrated. New York, Appleton-Century-Crofts, 1954. Cloth, $22.

BOOKS REVIEWED

The Medical Staff in the Hospital. By Thomas Ritchie Ponton, M.D. Second edition. Revised by Malcolm Thomas MacEachern, M.D. Octavo of 373 pages, illustrated. Chicago, Physician's Record Co., 1953. Cloth, $7.25.

MacEachern's revision of his long time friend and associate's work places in the hands of modern administrators an up-to-date guide book in the planning and administering of a modern hospital.

In this revision MacEachern adheres to the fundamentals in the original edition. Guidance in modern concepts of house staff and postgraduate education, the matching plan, standardization, the medical audit, the obligations of the governing body and the obligations of the staff are but a few of the important aspects covered in this textbook. It belongs on the compulsory reading list of every key person on the hospital staff.—I. Magelaner

Sympathetic Control of Human Blood Vessels. By H. Barcroft, M.D., and J. H. C. Swan, M.B. (Eng.). Octavo of 165 pages, illustrated. London, Edward Arnold & Co. (Baltimore, Williams & Wilkins Co.), 1953. Cloth, $3.75. (Monographs of the Physiological Society #1)

This monograph presents in condensed form the sympathetic control of blood vessels. Physiologic principles are stressed throughout. A sound basis for understanding clinical aspects of peripheral vascular disease is presented. There is no attempt at discussing treatment.

A complete discussion on the use of sympathectomy, norepinephrine, epinephrine, and adrenergic blocking agents is presented. Among the many interesting chapters are those dealing with pheochromocytoma and vasovagal syndrome.

This volume has been written by leading authorities and it is highly recommended to all physicians, medical students, and workers in the field of physiology.—FELIX TAUBMAN

The Mechanism of Inflammation. An International Symposium. Edited by G. Jasmin, M.D., and A. Robert, M.D. Octavo of 308 pages, illustrated. Montreal, Acta, Inc., 1953. Cloth, $8.50.

At the time of the nineteenth International Physiological Congress, a symposium on inflammation was organized by Hans Selye, and financed by 18 pharmaceutical firms. The prepared papers and round-table discussions have been ably edited, completely indexed, and well printed. This is enlightening for any physician interested in the last word from authorities in this field. The fundamental properties of steroids and their effects on the reaction to injury, the nature of ground-substance and enzymes which alter it, and the chemical, circulatory, and cellular phases of inflammation are thoroughly covered. Some papers are in French or German, with adequate summaries in English. The final section, on hyperergic inflammations, discusses the effects of steroids and of antihistamines on antigen-antibody reactions and is particularly fresh and stimulating.—WILLIAM DOCK

Differentialdiagnose der Lungenröntgenbilder. Besondere Berücksichtigung derjenigen Erkrankungen, die mit der Lungentuberkulose verwechselt werden können. By Dr. Rudolf Zeerleder. Third edition. Octavo of 226 pages, illustrated. Bern, Medizinischer Verlag Jans Huber, 1953. Cloth, Swiss francs, 32.80.

This is the third revision of a manual of differential diagnosis of x-ray findings in lung disease. This small volume has only 212 pages. Its presentation is concise, tabulated, and necessarily incomplete. Tomography and bronchography are not touched. The illustrations are numerous, but they are positives instead of negatives and thereby lose some of their value.

The experienced radiologist may find the manual form of presentation efficient, concise, and therefore a rapid reference source. This book is in no sense a text book of x-ray diagnosis in lung disease.—ASA B. FRIEDMANN

Clinical Genetics. Edited by Arnold Sorsby, M.D. Octavo of 580 pages, illustrated. St. Louis, C. V. Mosby Co., 1953. Cloth, $17.50.

This new volume under the editorship of Arnold Sorsby fills a gap in the medical literature. It has long been recognized that Mendelian genetics may

[Continued on page 3018]

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be applied to the study of man in health and disease, but the clinical application of this knowledge has been delayed until recently.

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Basic Bacteriology. Its Biological and Chemical Background. By Carl Lamanna, Ph.D., and M. Frank Mallette, Ph.D. Octavo of 677 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $10.

This is a textbook strictly for the advanced student. The authors have had particularly in mind the postgraduate student working for a doctorate, as well as the research worker and the teacher.

The scope of the book is restricted to the fundamental physical, chemical, and biologic problems in bacteriology. Thus there are no chapters on the streptococci, the salmonellas, or other specific organisms. There is nothing about virulence, pathogenicity, or even bacterial toxins. There is no immunology, no epidemiology, no diagnostic bacteriology.

But of fundamental biology of bacteria there is a great deal and it is very good. After a brief discussion of taxonomy, the authors go at length into the structure of the bacterial cell. A chapter is given to the physical factors affecting bacteria. Another chapter considers bacterial variation and genetics. The major portion of the book is devoted to the growth, nutrition, and metabolism or bacteria, and their enzyme systems. The final section takes up the theory of chemical disinfection and bacteriostasis, with considerable discussion of the action of the sulfonamides, penicillin, and streptomycin.—ARNOLD H. EGGERTH

Abstracts on Military and Aviation Ophthalmology and Visual Sciences. By Conrad Berens, M.D., and L. Benjamin Sheppard, M.D. Volumes I [1900–1940] and II [1941–1945] of a three volume set. Octavo 529 pages; 425 pages. Washington, Biological Sciences Foundation, 1953. Cloth, $20 each volume.

This monumental work consists of two volumes of abstracts of literature on military and aviation ophthalmology. Volume I includes all the literature through 1940. Volume II brings the student and practitioner the available literature from 1941 through 1945.

The authors have been aided by an unusually competent staff which is well equipped and has demonstrated remarkable ability to digest a mass of material in an excellent manner.

The able and well-experienced Conrad Berens has been a most fortunate choice for the task of editing the volumes. Berens has long been interested in aviation medicine and is a leading expert in this field of medicine.

All who are practicing or who are in any way connected with aviation medicine will be well served by these abstracts, which provide references to the history and all the vitally important knowledge that are so necessary for the proper understanding of the subject.

The tables of contents are very complete and provide easy access to the many subjects of ocular physiology, pathology, and related therapeutics. The authors have thoughtfully included in each volume a key to the abbreviations of names of periodicals.

The reviewer highly recommends these abstracts to the attention of all ophthalmologists and urges their use by all others who are interested in aviation medicine—MORTIMER A. LASKY

Essentials of Medical Research. By Wallace Marshall, M.D. Octavo of 176 pages. New York, Vantage Pr., 1953. Cloth, $3.00.

The author has done an excellent job of presenting in a simple fashion the basic requirements for medical research, whether it be laboratory or clinical. It is encouraging to note his belief that huge well-staffed laboratories are not absolutely essential for investigation and that a practicing physician may even fit a certain amount of research activities into his daily routine.

All aspects of the subject are briefly covered and include chapters on requisites for research, importance of the basic sciences, medicolegal aspects, patents and priority rights, relations with pharmaceutical and chemical firms, and preparation of the final data for report and publication.

A few humorous anecdotes serve to lighten the contents, including the author's struggle with the editor of a well-known journal who required that a paper be revised six times before it was finally published. The editor's answer to the author's impatience was: "Sit in the shade and cool off. Remember what Solomon once wrote: 'There is nothing new under the sun!' "—CECELIA JETT-JACKSON

The Medical Clinics of North America. Nationwide Number. March, 1954. Octavo. Illustrated. Philadelphia, W. B. Saunders Company, 1954. Published Bimonthly (six numbers a year). Cloth, $18 net; Paper, $15 net.

The Nationwide issue of the *Medical Clinics of North America* is devoted entirely to a symposium on the efficacy of new drugs. As might be expected from any collection edited by Howard F. Conn, the papers are well selected and written. In short, this is one of the most successful issues of the *Medical Clinics*.—MILTON PLOTZ

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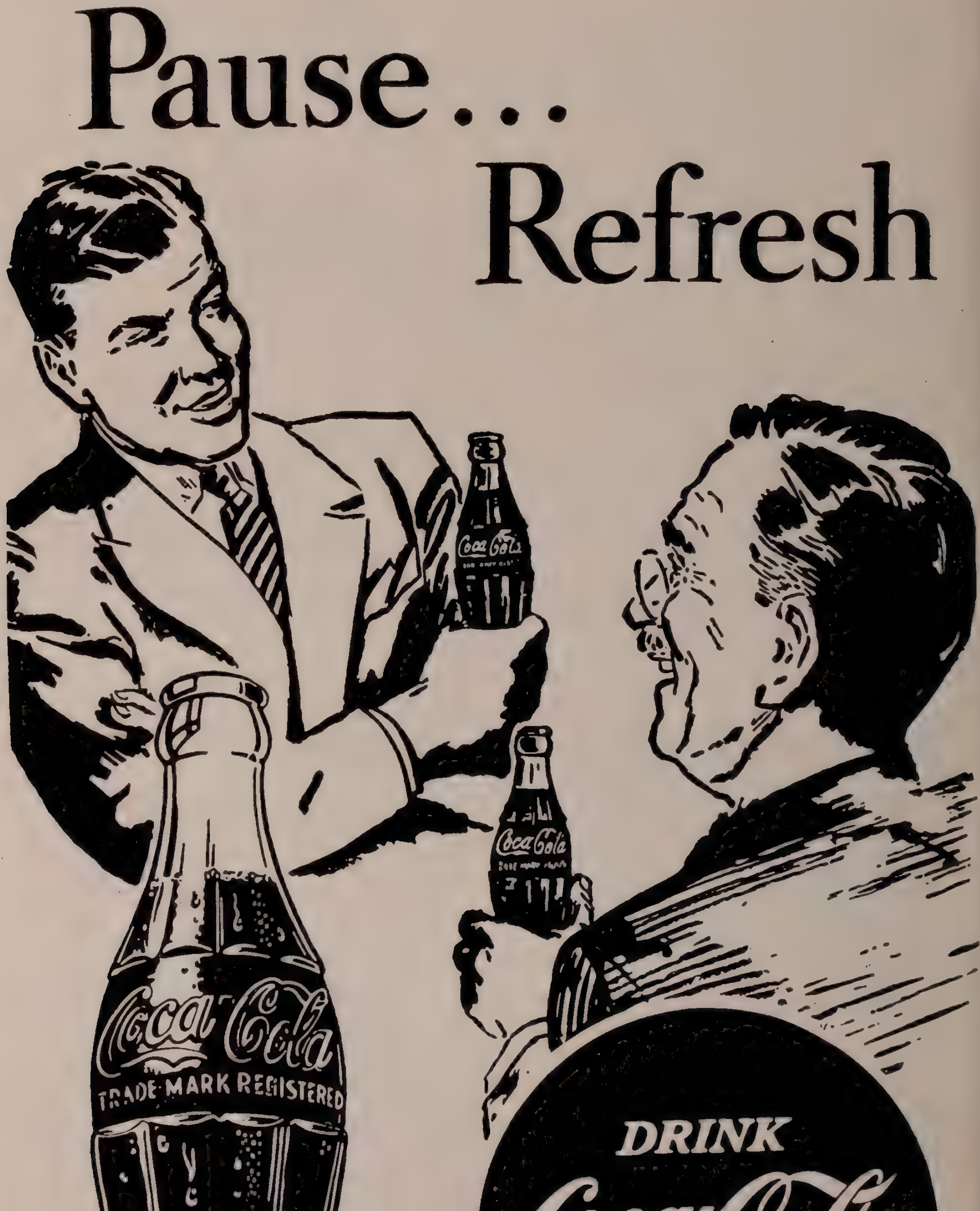
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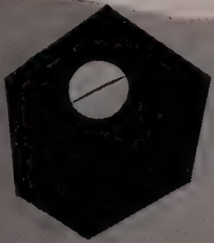

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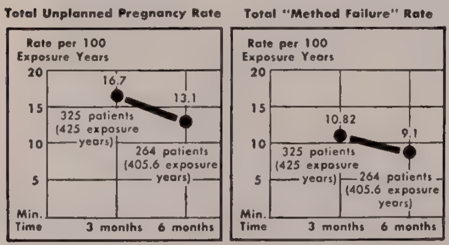

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[1] Finkelstein, R.; Guttmacher, A., and Goldberg, R.: Am. J. Obst. & Gynec. 63:664, Mar., 1952.

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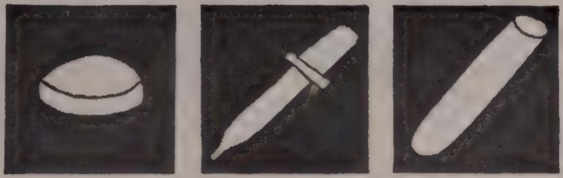

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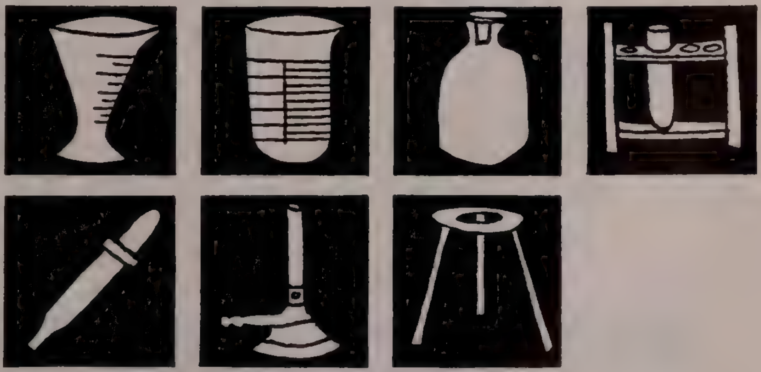

1. Cook, M. H.; Free, A. H., and Giordano, A. S.: Am. J. M. Technol. *19*:283, 1953.
2. Gray, C. H., and Millar, H. R.: Brit. M. J. *4824*:1361 (June 20) 1953.

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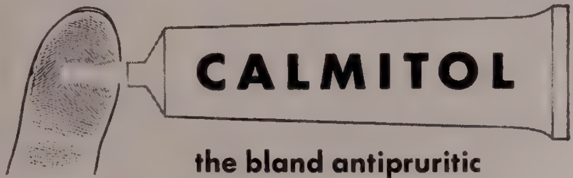

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1. Lubowe, I. I.: New York State J. Med. 50:1743, 1950.

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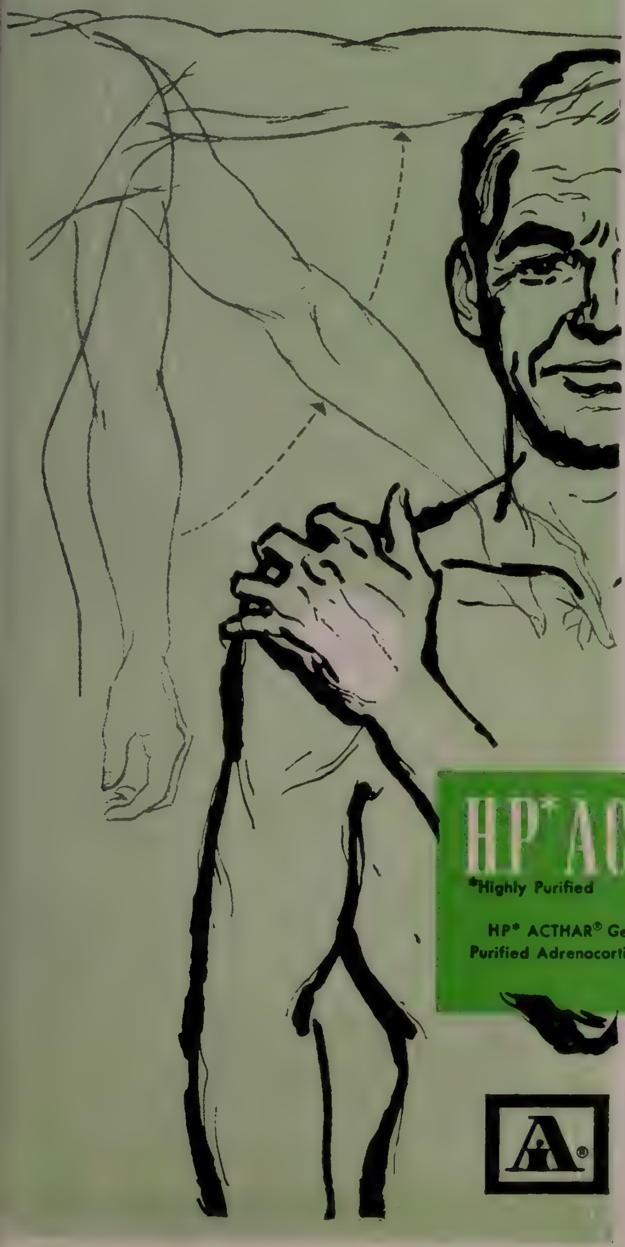

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It is another of the more than 30 organisms susceptible to

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100 mg. and 250 mg. capsules

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for the **cramps, pain** and **depression** of dysmenorrhea

Edrisal* relieves cramps

Benzedrine† Sulfate (possibly the most important component of 'Edrisal') is "in my experience . . . the most satisfactory antispasmodic for use in spastic dysmenorrhea."

Janney, J. C.: Medical Gynecology, ed. 2, Philadelphia, 1950, p. 365.

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Wells, R. L.: M. Ann. District of Columbia 20:360.

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Hindes, H. J.: Indust. Med. 15:262.

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cryptenamine

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Warning: May be habit-forming.

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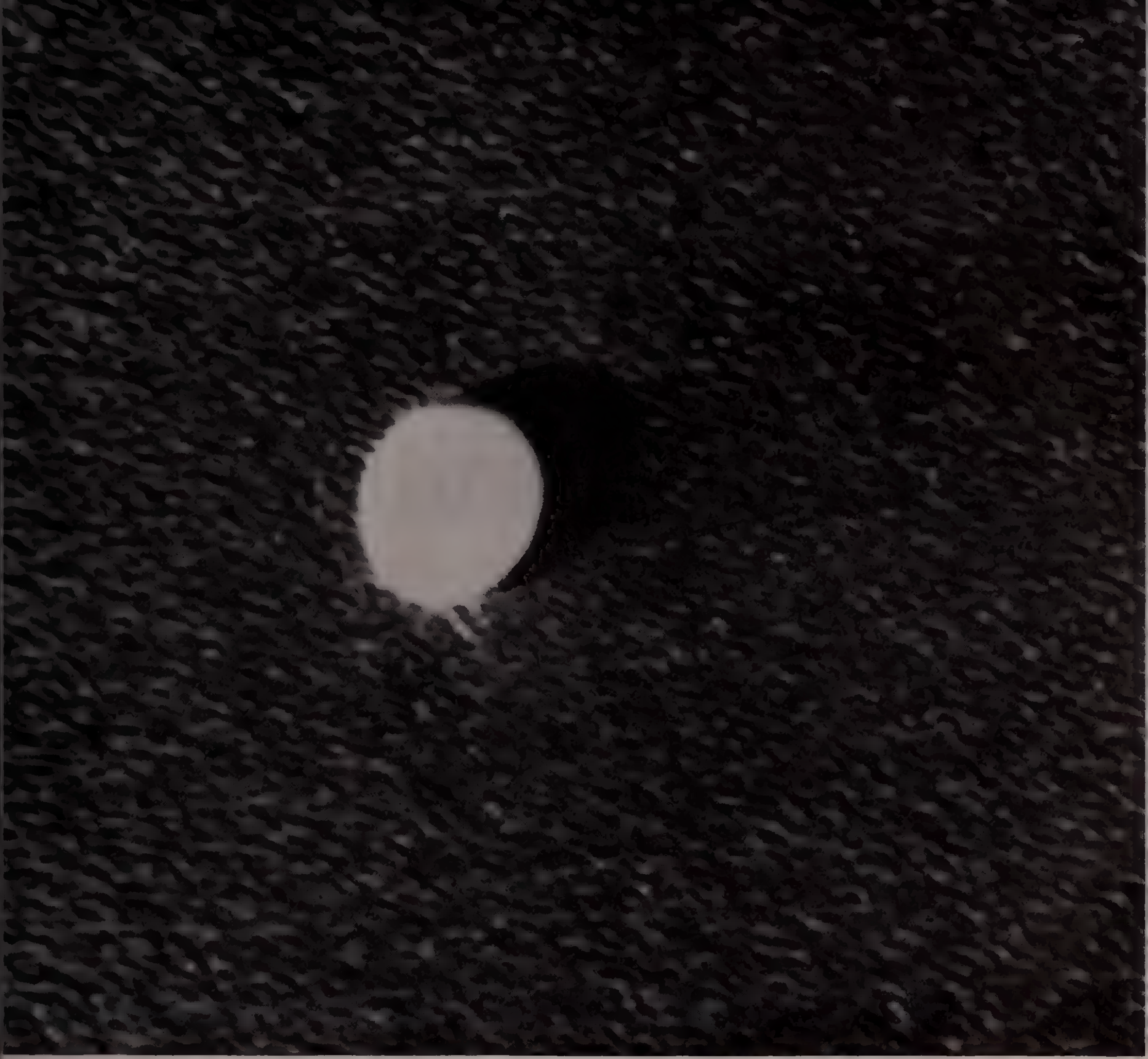

ELECTRON PHOTOMICROGRAPH

Staphylococcus aureus 35,000 X

Staphylococcus aureus (Micrococcus pyogenes var. aureus) is a Gram-positive organism commonly involved in a great variety of pathologic conditions, including

pyoderma • abscesses • empyema • otitis • sinusitis • septicemia bronchopneumonia • bronchiectasis • tracheobronchitis • and food poisoning.

It is another of the more than 30 organisms susceptible to

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TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

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Rauwiloid® + Veriloid®

in a single tablet

for *moderately severe hypertension*

Each tablet contains 1 mg. Rauwiloid and 3 mg. Veriloid. Initial dose, one tablet t.i.d., p.c.

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for *rapidly progressing, otherwise intractable hypertension*

Each tablet contains 1 mg. Rauwiloid and 250 mg. hexamethonium chloride dihydrate. Initial dose, ½ tablet q.i.d.

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Greater Efficacy—Under the synergistic influence of Rauwiloid, the potent antihypertensive agents act with greater efficacy at lower, better tolerated dosages.

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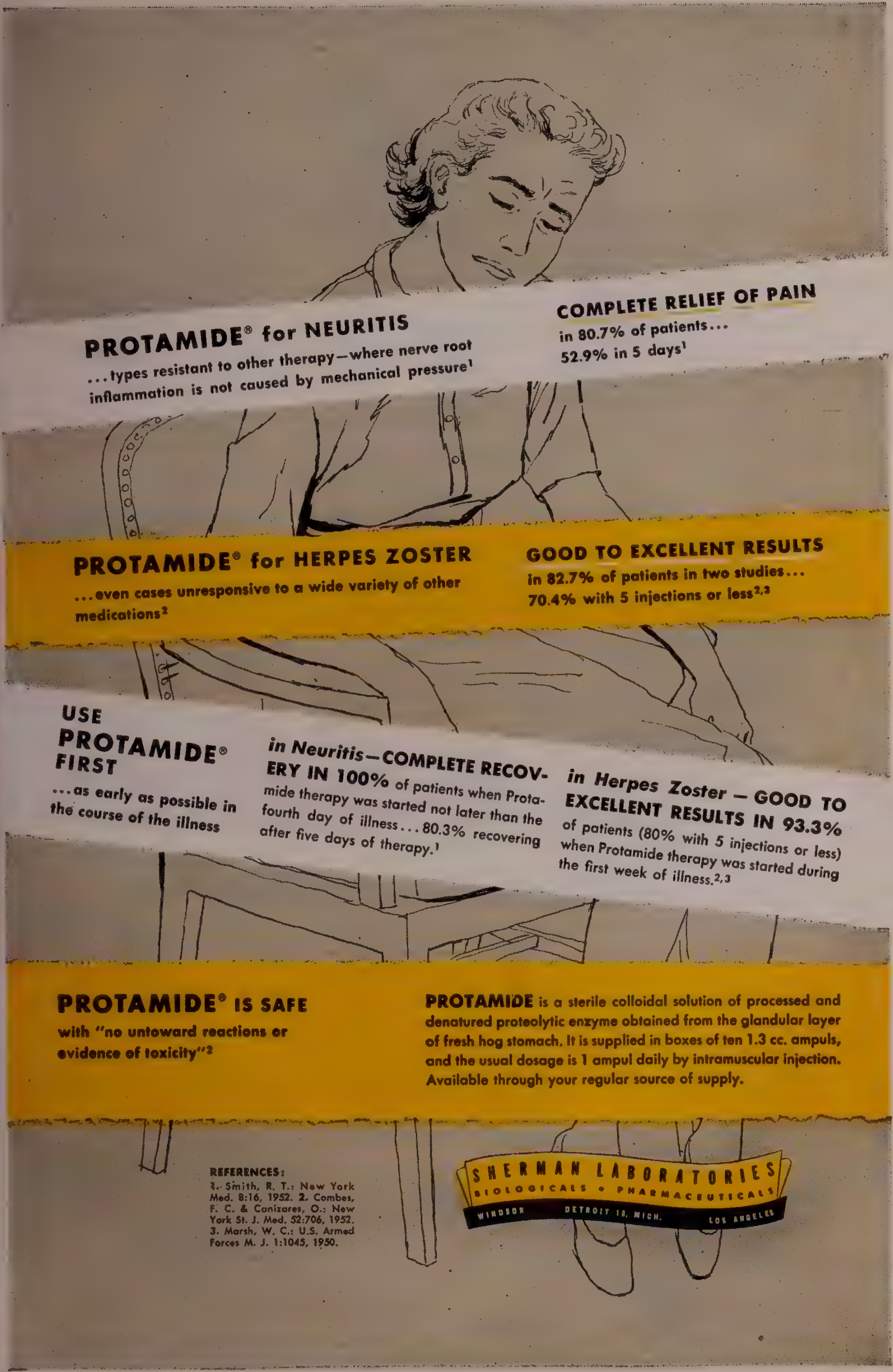

PROTAMIDE® for NEURITIS

...types resistant to other therapy—where nerve root inflammation is not caused by mechanical pressure[1]

COMPLETE RELIEF OF PAIN

in 80.7% of patients...
52.9% in 5 days[1]

PROTAMIDE® for HERPES ZOSTER

...even cases unresponsive to a wide variety of other medications[2]

GOOD TO EXCELLENT RESULTS

in 82.7% of patients in two studies...
70.4% with 5 injections or less[2,3]

USE PROTAMIDE® FIRST

...as early as possible in the course of the illness

in Neuritis—**COMPLETE RECOVERY IN 100%** of patients when Protamide therapy was started not later than the fourth day of illness...80.3% recovering after five days of therapy.[1]

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PROTAMIDE® IS SAFE

with "no untoward reactions or evidence of toxicity"[3]

PROTAMIDE is a sterile colloidal solution of processed and denatured proteolytic enzyme obtained from the glandular layer of fresh hog stomach. It is supplied in boxes of ten 1.3 cc. ampuls, and the usual dosage is 1 ampul daily by intramuscular injection. Available through your regular source of supply.

REFERENCES:
1. Smith, R. T.: New York Med. 8:16, 1952. 2. Combes, F. C. & Canizares, O.: New York St. J. Med. 52:706, 1952. 3. Marsh, W. C.: U.S. Armed Forces M. J. 1:1045, 1950.

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BIOLOGICALS • PHARMACEUTICALS
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SPERSOIDS*:
Dispersible Powder
50 mg. per teaspoonful (3.0 Gm.)

PEDIATRIC DROPS: *Cherry flavor.*
Approx. 25 mg. per 5 drops.
Graduated dropper.

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ORAL SUSPENSION:
Cherry flavor. 250 mg.
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ACHR

now available in these many convenient forms:

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CAPSULES: *250 mg., 100 mg., 50 mg.*

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INTRAVENOUS: *500 mg., 250 mg., 100 mg.*

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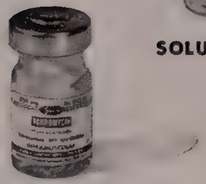

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Tetracycline Lederle

EAR SOLUTION (*0.5%*)

Achromycin, the new broad-spectrum antibiotic, is now available in a wide range of forms for oral, topical and parenteral use in children and adults. New forms are being prepared as rapidly as research permits.

Achromycin is definitely less irritating to the gastrointestinal tract. It is more rapidly diffusible in body tissues and fluids. It maintains effective potency for a full 24-hours in solution.

Achromycin has proved effective against beta hemolytic streptococcic infections, *E. coli*, meningococci, staphylococci, pneumococci and gonococci, acute bronchitis, bronchiolitis, pertussis and the atypical pneumonias, as well as virus-like and mixed infections.

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EDERLE LABORATORIES DIVISION AMERICAN Cyanamid COMPANY Pearl River, N. Y. Lederle

'For many years the natives of the Dutch Indies have used the squeezed juice of the Curcuma in the treatment of diseases of the liver'

Gallogen

Gallogen (gal-o-jen) is the Massengill name for the synthesized active principle of the ancient drug Curcuma. The isolation and synthesis of the active principle permits the administration of a pure, standardized form of the drug. Gallogen is a true choleretic, not a bile salt.

Gallogen acts directly on the hepatic cells. It stimulates the flow of bile which is whole in volume and composition. The choleresis is in proportion to the functional capacity of the liver and is prompt and lasting.

Gallogen is indicated whenever it is desirable to increase the flow of bile, encourage activity of the gallbladder and promote normal function of the biliary system.

send for professional literature and sample

Supply: in bottles of 100 and 1000 tablets containing 75 mg. of the diethanolamine salt of the mono-d-camphoric acid ester of p-tolylmethyl carbinol.

THE S. E. MASSENGILL COMPANY, Bristol, Tennessee

newest

broad-spectrum antibiotic

Tetracyn*

Brand of **tetracycline**

is now available on prescription from *Pfizer* ***Laboratories,*** Division, Chas. Pfizer & Co., Inc., world's largest producer of antibiotics, discoverers of oxytetracycline and the first to describe the structure of tetracycline, nucleus of modern broad-spectrum antibiotic therapy.

Tetracyn is supplied as Capsules, Tablets, Oral Suspension (chocolate flavored), Pediatric Drops (banana flavored), Intravenous, Intramuscular, Ophthalmic Ointment, and Ointment (topical).

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For well-tolerated therapy of such common infections as:

Pneumococcal infections, including pneumonia, with or without bacteremia; streptococcal infections, with or without bacteremia, including follicular tonsillitis, septic sore throat, scarlet fever, pharyngitis, cellulitis, urinary tract infections due to susceptible organisms, and meningitis; many staphylococcal infections, with or without bacteremia, including furunculosis, septicemia, abscesses, impetigo, acute otitis media, ophthalmic infections, susceptible urinary tract infections, bronchopulmonary infections, acute bronchitis, pharyngitis, laryngotracheitis, tracheobronchitis, sinusitis, tonsillitis, otitis media, and osteomyelitis; certain mixed bacterial infections; soft tissue infections due to susceptible organisms.

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- The Best Tasting Aspirin you can prescribe
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FLAVORED
Children's Size
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ASPIRIN
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Genuine
24 TABLETS
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PRICE 15¢

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rauwolfia in its optimal form

- ***Rauwiloid is not the crude rauwolfia root.*** Rauwiloid presents the total hypotensive activity of the pure whole Rauwolfia serpentina (Benth.) root—but it is freed from the inert dross of the whole root and its undesirable substances such as yohimbine-type alkaloids.

- ***Rauwiloid is not merely a single contained alkaloid of rauwolfia.*** Rauwiloid provides the balanced action of the several potent alkaloids in rauwolfia; reserpine—regardless of the brand name under which it is marketed—is only one of the desirable alkaloids in Rauwiloid.

- ***Rauwiloid contains, besides reserpine, other active alkaloids, such as rescinnamine,***[1, 2] reported to be more potent than reserpine.

- ***Rauwiloid is the original alseroxylon fraction of unadulterated Rauwolfia serpentina (Benth.)***—rauwolfia in its optimal form—virtually no side actions—no known contraindications. It rarely needs dosage adjustment. The dose for most patients is 2 tablets (2 mg. each) at bedtime.

If you have prescribed rauwolfia in other forms, it will not take many patients to convince you that Rauwiloid serves better. Please write for clinical samples.

---

1. Klohs, M. W.; Draper, M. D., and Keller, F.: J. Am. Chem. Soc. *76*:2843 (May 20) 1954.

2. Cronheim, G.; Brown, W.; Cawthorne, J.; Toekes, M. I., and Ungari, J.: Proc. Soc. Exper. Biol. & Med. *86*:110 (May) 1954.

IN HYPERTENSION

Rauwiloid®

Riker *LABORATORIES, INC. LOS ANGELES 48, CALIF.*

Why is it, that so much

The answer is simply this: Among today's nine brands of filter cigarettes, KENT, and KENT alone, has the *Micronite Filter* . . . made of a pure, dust-free material that is so safe, so effective it has been selected to help filter the air in hospital operating rooms.

> In continuing and repeated impartial scientific tests, KENT's Micronite Filter consistently proves that it takes out *more* nicotine and tars than *any* other filter cigarette, old or new.

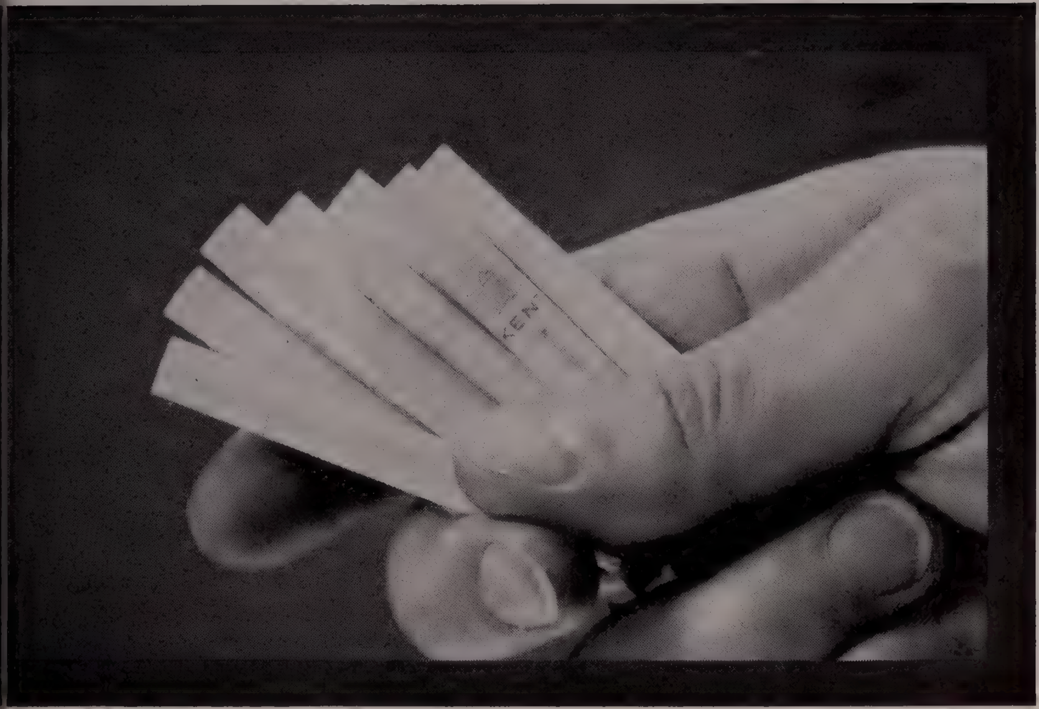
And yet, with all its superior protection, KENT's Micronite Filter lets smokers enjoy the full, satisfying flavor of fine, mellow tobaccos.

For these reasons, shouldn't KENT be the choice of those who want the minimum of nicotine and tars in their cigarette smoke?

TWENTY
KENT
CIGARETTES
WITH THE MICRONITE FILTER

. . . the only cigarette with the
MICRONITE FILTER

e filter cigarette gives
ore protection than any other?



Kent

the greatest protection in cigarette history

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TO OPEN - PRY UP AT SEVERAL PLACES AROUND
Beech-Nut
BANANAS
STRAINED
FOODS
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5 OZS.
BEECH-NUT BRAND

Now...bananas in ideal form for infant feeding

Besides Strained Bananas, a wide variety for you to recommend: Fruits, Vegetables, Meat and Vegetable Soups, Desserts, 4 Cooked Cereals.

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All Beech-Nut standards of production and advertising have been accepted by the Council on Foods and Nutrition of the American Medical Association.

Years of research were devoted to perfecting our Beech-Nut Strained Bananas for the feeding of infants.

Made from the choicest fruit, Beech-Nut Strained Bananas have the *fresh banana* flavor babies love. Scientific processing retains the flavor and natural food values to high degree.

Beech-Nut Strained Bananas are precooked, ready to serve right from the jar, or beaten into the formula. They retain flavor and color even when the reseal glass jar is stored in the refrigerator. Like other Beech-Nut Strained Foods, they can please your young patients from the very start—help them thrive nutritionally and emotionally.

BEECH-NUT FOODS FOR BABIES

ELECTRON PHOTOMICROGRAPH

Diplococcus pneumoniae 35,000 X

Diplococcus pneumoniae (Streptococcus pneumoniae) is a Gram-positive organism commonly involved in

lobar—and bronchopneumonia • chronic bronchitis • mastoiditis • sinusitis otitis media • and meningitis.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

*TRADEMARK, REG. U. S. PAT. OFF.

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“HELP ME GROW tall, husky, strong”

An increasing number of pediatricians now supplement the diet of infants and children with vitamin C and B-Complex vitamins as well as A and D, to help achieve optimal growth and health.

NUTRI-DROPS

8 - VITAMIN SUPPLEMENT

provide all essential vitamins, in agreeable, non-alcoholic, drop form. Easy to give, easy to take in milk, formula, fruit juices, cereals, etc. Well tolerated, economical.

The recommended dose of 0.6 cc. (10 minims) represents:

Vitamin A	5000 U.S.P. Units
Vitamin D	1000 U.S.P. Units
Thiamine Hydrochloride(B_1)	1 mg.
Riboflavin (B_2)	0.5 mg.
Ascorbic Acid (C)	50 mg.
Niacinamide	5 mg.
Pyridoxine Hydrochloride (B_6)	1 mg.
Panthenol	2 mg.

In 50 cc. dosage dropper bottles.

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Over 37 years of service to the profession

THIASTIGMINE

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HERPES ZOSTER
NEURALGIAS
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FORMULA

Each cc. contains:

Thiamine Hydrochloride	100 mg.
Neostigmine Methylsulfate	0.5 mg.
Atropine Sulfate	1/300 gr.

In a stabilized aqueous solution.

For Intramuscular Use

SUPPLIED

KIRK No. 339 10cc. multiple dose rubber capped vial.

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Prescribed by physicians throughout the world

Have YOU ever used **FELSOL** provides *safe* and *effective* relief in *Asthma, Hay Fever* and related bronchial affections.

FELSOL

FELSOL also relieves *pain* and *fever* in *Arthritis, Headache,* and other painful conditions.

The fast action and long duration of FELSOL gives smooth and comforting relief. After a single therapeutic dose of antipyrine, Brodie and Axelrod report, "Plasma levels declined slowly, measurable amounts of the drug persisting 24 hrs." (J. Pharm. & Exper. Ther. 98:97-104, 1950)

Each oral powder contains:

Antipyrine	0.869 gm.
Iodopyrine	0.031 gm.
Citrated Caffeine	0.100 gm.

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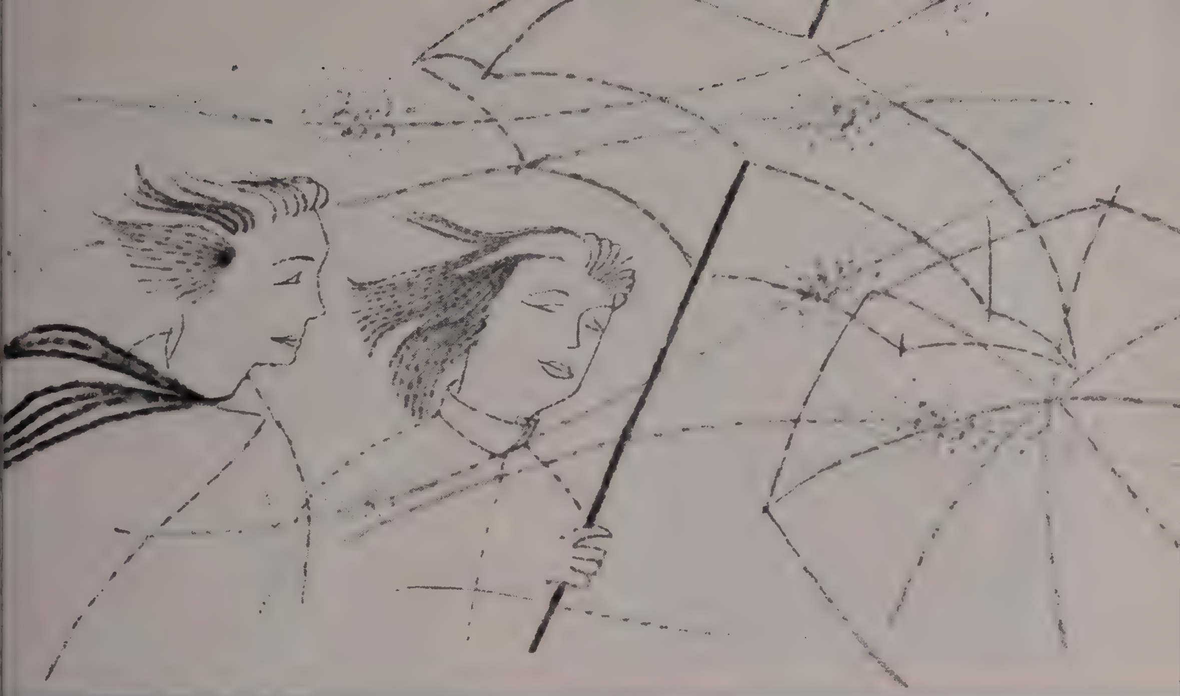

rapid relief

in coughs from colds or allergies

AMBENYL

TRADE-MARK

AMBENYL owes its special value to the action of *two* outstanding antihistaminics combined with other valuable agents. Benadryl, noted for its antihistaminic-antispasmodic action, and Ambodryl, with its high antihistaminic activity, act together to make coughing patients more comfortable. The antispasmodic, antiallergic, decongestant, and demulcent actions of pleasant-tasting AMBENYL

quiet the cough reflex
facilitate expectoration
decrease bronchospasm
relieve mucosal congestion

AMBENYL contains in each fluidounce:

Ambodryl hydrochloride (bromodiphenhydramine hydrochloride, Parke-Davis)	24 mg.
Benadryl hydrochloride (diphenhydramine hydrochloride, Parke-Davis)	56 mg.
Dihydrocodeinone bitartrate	⅙ gr.
Ammonium chloride	8 gr.
Potassium guaiacolsulfonate	8 gr.
Menthol	q.s.
Alcohol	5%

Supplied in 16-ounce and 1-gallon bottles.

dosage Every three or four hours—adults, 1 to 2 teaspoonfuls; children, ½ to 1 teaspoonful.

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Parke, Davis & Company
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19484

When the
Older Age Patient
is
Out of Harmony with Life

HYDERGINE
Sublingual TABLETS

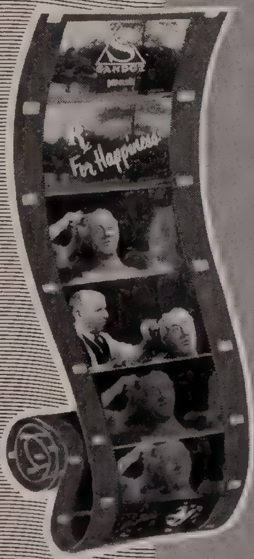
Restore Interest
and
Enjoyment in Living

Renewed interest in vocation, hobbies and family affairs; better response to personal and social demands.

Relief of subjective complaints such as headaches, dizziness, fatigue, pain in extremities, poor adaptation to cold.

Improvement in memory and concentration.

Tranquillity in cases of restlessness and excitation.



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DOSAGE RANGE:

4 to 6 tablets per day by *sublingual route.*

Hydergine is available in 0.5 mg. tablets for *sublingual* administration.

Hydergine consists of equal parts of dihydroergocornine, dihydroergocristine and dihydroergokryptine as methanesulfonates.

Also available: Ampuls, 1 cc. (0.3 mg. Hydergine).

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☐ Trial Supply

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DIVISION OF SANDOZ CHEMICAL WORKS INC.
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ELECTRON PHOTOMICROGRAPH

Diplococcus pneumoniae 35,000 X

Diplococcus pneumoniae (Streptococcus pneumoniae) is a Gram-positive organism commonly involved in

lobar—and bronchopneumonia • chronic bronchitis • mastoiditis • sinusitis otitis media • and meningitis.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

*TRADEMARK, REG. U. S. PAT. OFF.

Upjohn

24-hour control

for the majority of diabetics

10 cc.
'WELLCOME'
LOBIN INSUL
WITH ZINC
'B.W. & CO'
40 UNITS IN 1 CC
Burroughs Wellcome
MADE IN U.S.A.

GLOBIN INSULIN

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a clear solution . . . easy to measure accurately

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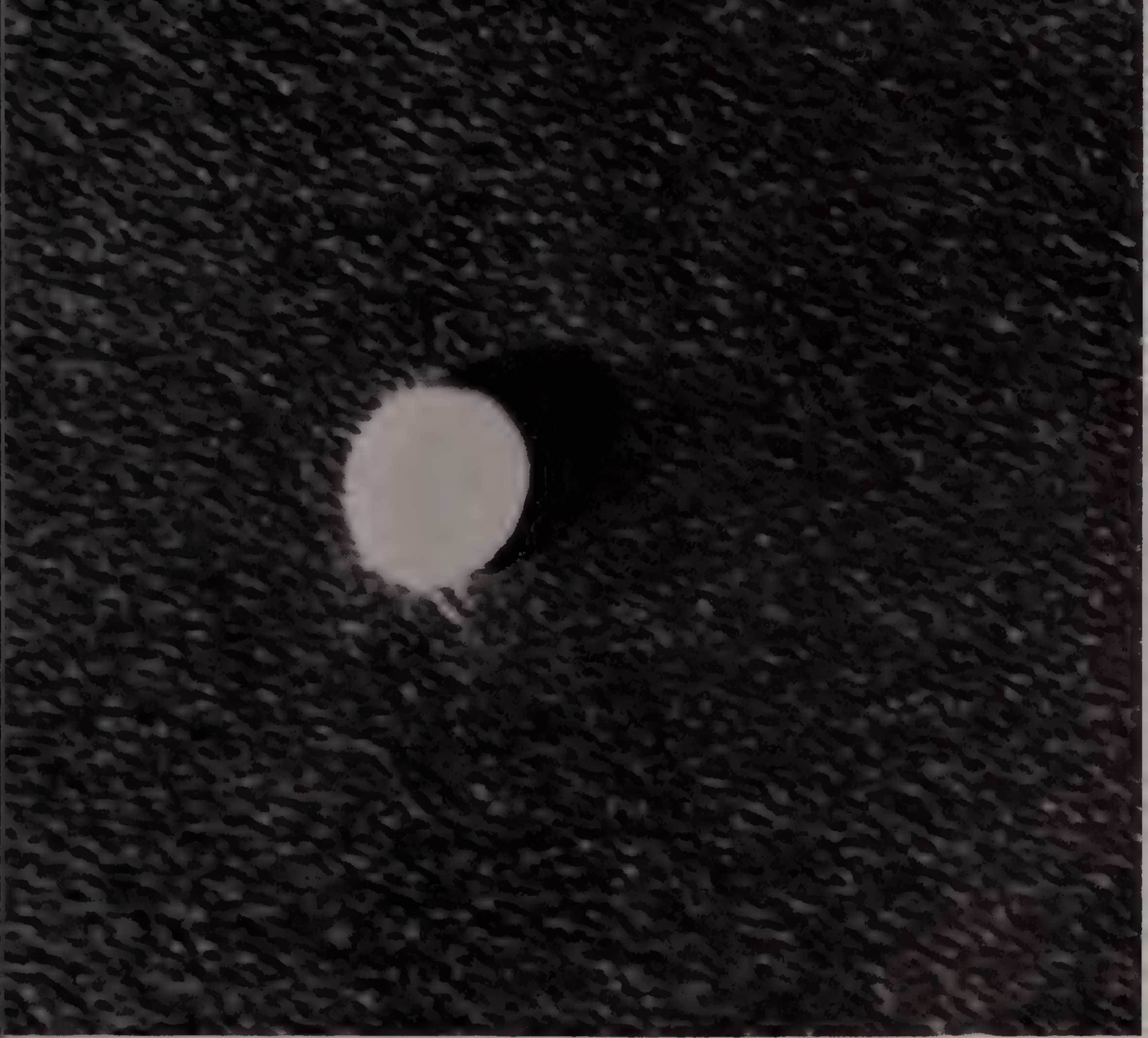

ELECTRON PHOTOMICROGRAPH

Staphylococcus aureus 35,000 X

Staphylococcus aureus (Micrococcus pyogenes var. aureus) is a Gram-positive organism commonly involved in a great variety of pathologic conditions, including

pyoderma • abscesses • empyema • otitis • sinusitis • septicemia bronchopneumonia • bronchiectasis • tracheobronchitis • and food poisoning.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

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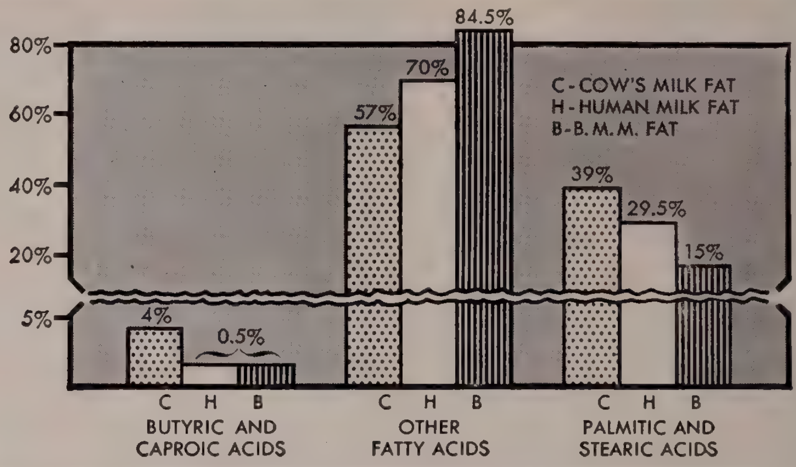
THE FATS IN...

Baker's Modified Milk

...ARE READILY TOLERATED AND DIGESTED



- Baker's Modified Milk provides approximately 85% of its fatty acid composition in the more readily tolerated and digestible range (as shown in the fat chart above). This compares with 57% for cow's milk fat and 70% for the fat of human milk.

The fat composition of Baker's is only one of many reasons why this product is used so successfully in feeding the newborn term infant, the premature infant, and the older infant who does not "handle" butterfat.

Baker's is a high-quality* milk diet complete in all known essential nutrients.

★

*Made from Grade A milk (U. S. Public Health Service Milk Code) which has been modified by replacement of the milk fat with vegetable and animal fats and by the addition of carbohydrates, vitamins, and iron.

★

BAKER'S MODIFIED MILK

THE BAKER LABORATORIES INC.

Milk Products Exclusively for the Medical Profession

Main Office: Cleveland 3, Ohio
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ACCEPTED
COUNCIL ON FOODS AND NUTRITION
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✶ MORE THAN 15 APPLES

. . . would be required to equal the 100 mg. ascorbic acid content of a single capsule of "BEMINAL" FORTE with VITAMIN C, which also provides therapeutic amounts of essential B factors as follows:

Thiamine mononitrate (B_1) .... 25.0 mg.

equivalent to more than 400 eggs

Riboflavin (B_2) .... 12.5 mg.

equivalent to at least 8 slices of liver

Nicotinamide ....100.0 mg.

equivalent to more than 10 loaves of bread

Pyridoxine HCl (B_6) .... 1.0 mg.

equivalent to about 14 servings of spinach

Calc. pantothenate .... 10.0 mg.

equivalent to almost 4 quarts of milk

Vitamin C (ascorbic acid) ....100.0 mg.

✶ equivalent to more than 15 apples

"BEMINAL"® FORTE with VITAMIN C

Ayerst

Recommended whenever high B and C levels are required and particularly pre- and postoperatively. Suggested dosage: 1 to 3 capsules daily, or more as required.

No. 817 — supplied in bottles of 100 and 1,000.

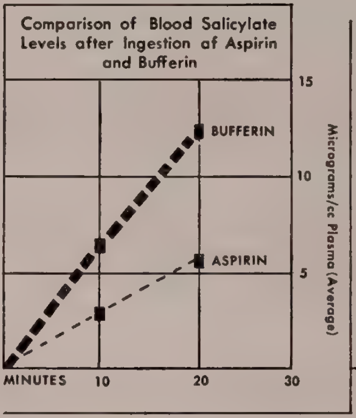
5428

AYERST LABORATORIES • NEW YORK, N. Y. • MONTREAL, CANADA

Faster Pain Relief with BUFFERIN®

1 ACTS TWICE AS FAST AS ASPIRIN

The antacids in Bufferin speed its pain-relieving ingredients through the stomach and into the blood stream. Actual chemical determinations show that within ten minutes after Bufferin is ingested blood salicylate levels are higher than those attained by aspirin in twice this time.[1]



2 DOES NOT UPSET THE STOMACH

in usual doses
In a series of 238 cases, 22 had a history of gastric distress due to aspirin but only one reported any distress after taking 2 Bufferin tablets (equivalent to 10 grains of aspirin).[1]

Bufferin's antacid ingredients protect the stomach against aspirin irritation. This has been clinically demonstrated on hundreds of patients.

in large doses
In a recent study group, 1006 patients received, over a 24 hour period, 12 Bufferin tablets (equivalent to 60 grains of aspirin). Although 72 had a history of being sensitive to aspirin, only 18 reported any gastric side-effect with Bufferin.[2]

100 TABLETS
ANTACID ANALGESIC
BUFFERIN
GOES TO WORK twice as fast AS ASPIRIN
BRISTOL-MYERS CO. NEW YORK
BUFFERIN
ANTACID ANALGESIC
12 TABLETS

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1. Effect of Buffering Agents on Absorption of Acetylsalicylic Acid. J. Am. Pharm. Assoc., Sc. Ed. 39:21, Jan. 1950
2. Gastric Tolerance for Aspirin and Buffered Aspirin. Ind. Med. 20:480, Oct. 1951

INDICATIONS: Simple headaches, neuralgias, dysmenorrhea, muscular aches and pains, discomfort of colds and minor injuries. Particularly useful when gastric hyperacidity is a complication. Useful for relieving pain in the treatment of arthritis.

EACH BUFFERIN TABLET contains 5 grains of acetylsalicylic acid, together with optimum amounts of the antacids aluminum glycinate and magnesium carbonate.

AVAILABLE in vials of 12 and 36 tablets and in bottles of 100. Tablets scored for divided dosage.

BUFFERIN is a trade-mark of the Bristol-Myers Company.

Upjohn

check night secretion in peptic ulcer:

Pamine* Bromide

BRAND OF EPOXYMETHAMINE BROMIDE

Each tablet contains:
Epoxytropine Tropate Methylbromide . . 2.5 mg.
Supplied:
Bottles of 100 and 500 tablets

Pamine* Bromide with Phenobarbital

Each tablet contains:
Epoxytropine Tropate Methylbromide . . 2.5 mg.
Phenobarbital . . . . 15.0 mg. (¼ gr.)
Supplied: Bottles of 100 tablets

*TRADEMARK, REG. U.S. PAT. OFF.
THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN

Eosinophil Count . . .

Common Denominator?

NON-TOXIC

Ray-Formosil

BUFFERED FORMIC ACID AND
COLLOIDAL SILICIC ACID INJECTION

now found to be a potent

ALARM AGENT

"Alarm Agent"

Recent clinical studies reveal that Ray-Formosil parallels ACTH and Cortisone as an "alarm agent" in its effect on circulating eosinophils. Intramuscular injections of the usual therapeutic dose of Ray-Formosil (2 cc.) produced an average drop of 67% in both normals and arthritic patients.

Hypothesis:

Eosinopenia characteristically follows administration of compounds established as effective anti-arthritic agents (including gold and salicylates, in addition to ACTH and Cortisone) Ray-Formosil also causes eosinopenia. Such action may be a common denominator of agents which affect adrenal cortex activity.

Safe, Effective:

An estimated 3½ million injections of Ray-Formosil have been given during the past 20 years without a single report of toxic reactions. An analysis of nearly 4000 recent case histories from the files of 36 clinicians revealed that 85% were effectively relieved of pain, swelling and joint inflammation.

Inexpensive:

Only 30c a treatment ampul, Ray-Formosil therapy is inexpensive—an additional and important advantage to both the physician and the patient.

Dosage:

2 cc. injected intramuscularly *in the region of the affected parts* at 2-to-5-day intervals for several weeks, then 2 cc. once weekly.

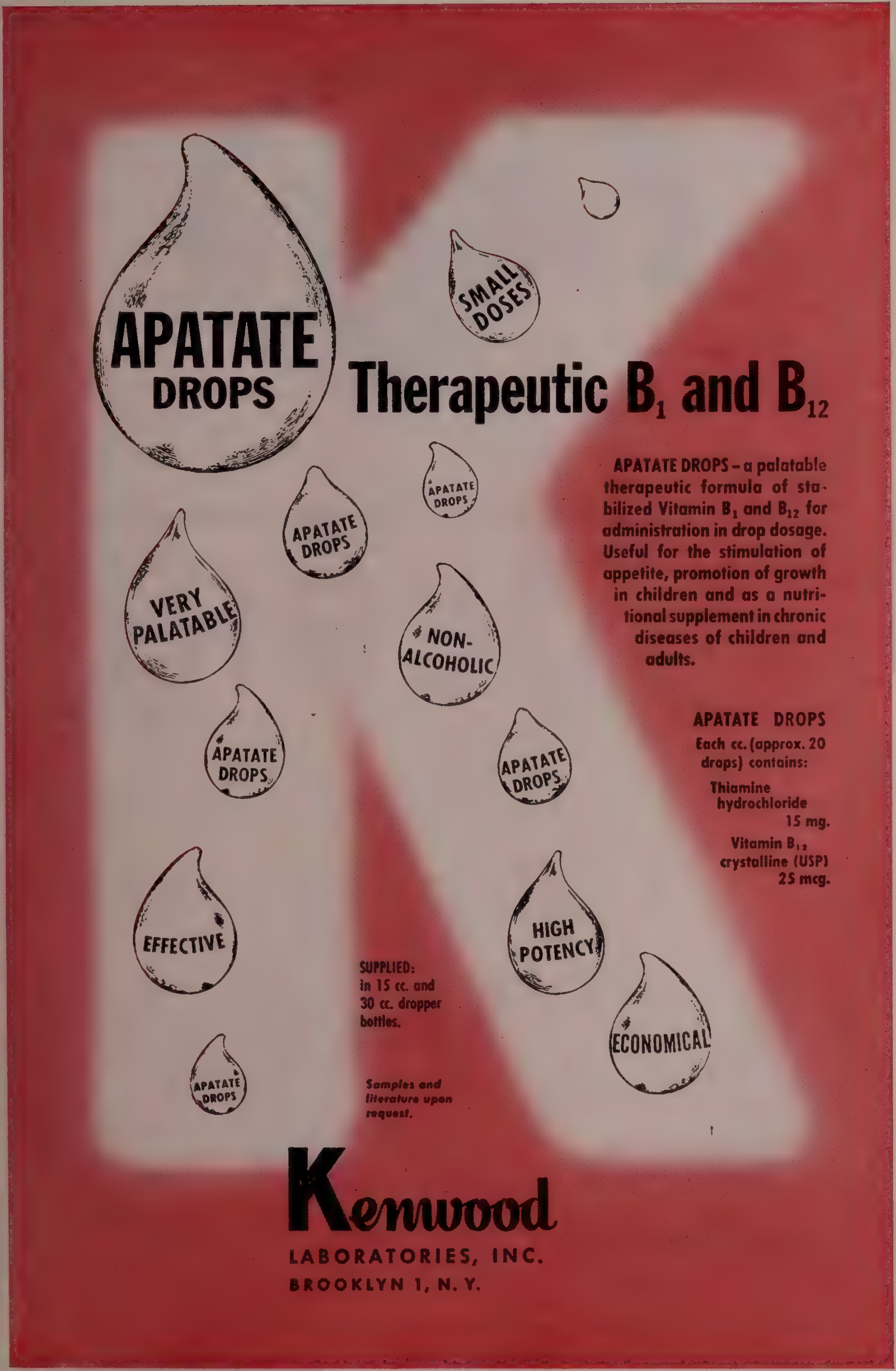
Supplied in 2-cc. ampuls in boxes of 25 ($9.00), 50 ($16.50), and 100 ($30.00).

Available through your usual source of pharmaceuticals or direct from the manufacturer.

RAYMER

PHARMACAL COMPANY
Pharmaceutical Manufacturers
Jasper and Willard Streets, Philadelphia 34, Pa.

Serving the medical profession for over a third of a century



APATATE
DROPS
SMALL DOSES
APATATE DROPS
APATATE DROPS
VERY PALATABLE
NON-ALCOHOLIC
APATATE DROPS
APATATE DROPS
EFFECTIVE
HIGH POTENCY
ECONOMICAL
APATATE DROPS

Therapeutic B_1 and B_{12}

APATATE DROPS – a palatable therapeutic formula of stabilized Vitamin B_1 and B_{12} for administration in drop dosage. Useful for the stimulation of appetite, promotion of growth in children and as a nutritional supplement in chronic diseases of children and adults.

APATATE DROPS

Each cc. (approx. 20 drops) contains:

Thiamine hydrochloride	15 mg.
Vitamin B_{12} crystalline (USP)	25 mcg.

SUPPLIED:
in 15 cc. and
30 cc. dropper
bottles.

Samples and literature upon request.

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LABORATORIES, INC.
BROOKLYN 1, N. Y.

AN OUTSTANDING MEMBER
OF THE LILLY FAMILY
OF VITAMINS

for people past forty—prescribe this potent dietary supplement

MI-CEBRIN

(Vitamin-Mineral Supplements, Lilly)

- **complete**—each Tablet 'Mi-Cebrin' contains 11 vitamins and 10 minerals.
- **economical**—convenient and economical to take, only one Tablet 'Mi-Cebrin' daily prevents practically all vitamin-mineral deficiencies.
- **potency protected**—a special coating between the vitamins and minerals prevents potency-destroying oxidation-reduction reactions and serves as a moisture barrier for maximum stability.
- **quality controlled**—'Mi-Cebrin' is painstakingly manufactured. Every finished lot is thoroughly assayed before release.

Lilly

QUALITY / RESEARCH / INTEGRITY

Supplied in bottles of 100 tablets at drug stores everywhere.

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EDITORIALS

Ratio of Doctors to Population

American medicine has been and is still subjected to some criticism from various sources on numerous grounds. Some of the criticism, if based on fact, is to be welcomed. This type can well be constructive and lead to betterment of medical service to the public. Another type, not so well informed, is harmful to the profession and misleading to the public. An example of this latter has to do with the number of physicians in relation to population in the United States. From some sources a shortage of doctors and a scarcity of teaching facilities is alleged.

The latest available annual report on medical education in this country presents statistical evidence that there is an adequate supply of physicians and teaching facilities. That report by the American Medical Association tells a heartening story of continued progress and expansion to produce an ever-increasing supply of well-trained physicians dedicated to the welfare of their patients. Among the highlights:

The number of doctors is at a record low ratio of one for every 730 persons, a proportion exceeded only by Israel, which has an abnormal number of refugee physicians.

The nation's medical schools have record total enrollments and graduating classes and the largest freshman class.

Ten new four-year medical schools are scheduled to begin operation within the next five to six years, and three more are under consideration.

The expansion bears out the opinion of many medical education experts that the big problem in the near future may be a shortage of well-qualified applicants rather than a shortage of teaching facilities.

Young people will be interested that only 21 per cent of the freshmen entering medical school last fall had "A" averages in their premedical studies, 69 per cent had "B" averages, and 10 per cent had "C" averages.

In other words, they don't have to be "grinds," bookworms, or Phi Beta Kappas to get into medical school. Most young people who have the character and a sincere desire to serve their fellow men as physicians have an excellent chance of entering medical school.

The record graduation of 6,861 doctors during 1953–1954 brings the nation's physician population to approximately 220,100.

The enrollment of 28,227 is the greatest number of students in medical education in the history of this country.

The freshman class enrollment of 7,449 also is a record.

Besides the 28,227 medical students training in the nation's 80 approved medical schools, there were 59,430 persons receiving some type of instruction from medical school faculties. These included dental, pharmacy, and nursing students, student technicians, physicians taking continuation courses or basic science courses for specialty training, physicians with fellowship appointments, interns, resident doctors, and physicians seeking advanced degrees.

In order to maintain high levels of instruction 28,435 faculty personnel were needed in the 80 medical schools during last year. And 21,328 of these faculty members volunteered to teach without pay, their duties varying from a few hours annually to large areas of responsibility.

In regard to the costs of medical education the report said that "in spite of augmented funds available to medical schools these institutions continue to face difficult and perplexing problems." In summarizing the report added: "The adequate maintenance of currently existing and newly developing medical schools, together with the constant demand for the application of new knowledge and techniques in the interest of ever better medical care for the American public, implies a continuing need for augmented financing of medical education and research."[1]

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[1] News Release, A.M.A., Sept. 10, 1954.

The Kings County Medical Library

How many doctors in New York State know they have at their disposal one of the great circulating medical libraries of this country? In these times, when new medical journals appear periodically as medical practitioners divide themselves into specialty groups, it is most difficult for the physician, whatever his special interest, to keep supplied with newer information because reports of discoveries in basic science and their clinical application are scattered so widely. Fortunately for the members of the Medical Society of the State of New York, a merger, rather than expansion of medical journals, made possible a valuable tool with which these doctors may conveniently keep up with the fast-moving medical stream of today.

Forty-eight years ago, the *Brooklyn Medical Journal* ceased publication when the Kings County Medical Society began to "help, aid, assist, and cooperate with the Medical Society of the State of New York in the successful publication and circulation of the New York State Journal of Medicine," in return for which the Medical Society of the State of New York agreed "to deliver into custody of the Medical Society of the County of Kings, each and every book, exchange publication, or other library medical pamphlet or magazine received . . . in exchange."

Again, we wonder if present-day physicians in New York State realize that, by acting as the repository for exchange publications and books, the Kings County Medical Society assumed a gigantic custodial task and further "agreed to place each and all volumes contained in its library in the Borough of Brooklyn, as a circulating library, at the disposal of the members of the Medical Society of the State of New York, wheresoever situate in the State of New York and [to] provide for and prescribe rules and regulations for the proper and satisfactory distribution of all the volumes in said library contained, or which may be hereafter purchased or received from any source whatsoever."

Over the years, both societies have kept the faith and the letter of a contract signed May 8, 1906. May the responsibilities of both parties continue to be discharged with such loyal spirit.

Education is something a doctor cannot neglect; new technics or the clinical application of basic discoveries in medical science once took an estimated fifteen years to percolate to the last member of the medical profession—not so today. Each physician learns early in his career the need of keeping abreast of his profession. After nearly a half century in which this great circulating library service has been available, could a greater tribute be paid to the wisdom of its beginning than a report of increased use of its services by New York State doctors.

ANNOUNCEMENT

PRIZE ESSAYS

The Lucien Howe Prize and the Merrit H. Cash Prize will be open for competition at the next Annual Convention of the Medical Society of the State of New York, May 9 to 13, 1955, in Buffalo.

The *Lucien Howe Prize* of $100 will be presented for the best original contribution on some branch of surgery, preferably ophthalmology. The author need not be a member of the Medical Society of the State of New York.

The *Merrit H. Cash Prize* of $100 will be given to the author of the best original essay on some medical or surgical subject. Competition is limited to the members of the Medical Society of the State of New York who at the time of the competition are residents of New York State.

The following conditions must be observed:

> *Essays shall be typewritten or printed with the name of the prize for which the essay is submitted, and the only means of identification of the author shall be a motto or other device. The essay shall be accompanied by a sealed envelope having on the outside the same motto or device and containing the name and address of the writer.*

If the committee considers that no essay or contribution is worthy of a prize, it will not be awarded.

Any essay that may win a prize automatically becomes the property of the Medical Society of the State of New York, "to be published as it may direct."

All essays must be presented not later than *February 1, 1955*, and sent to the Chairman of the Committee on Prize Essays of the Medical Society of the State of New York, 386 Fourth Avenue, New York 16, New York.

R. Townley Paton, M.D., *Chairman*
Committee on Prize Essays

PRESIDENT'S PAGE

What the Society Does—Communications

I have previously outlined what the Society is and now propose to discuss what the Society does. Communications are a most vital need of any association. Particularly is this true of a medical society concerned with the development of the art and science of medicine in a rapidly changing world into which these developments must be quickly integrated to be of service to the public. Logically then, the physicians themselves must be informed, and then the information must be passed on to the public.

To this end the government of the Society has created the Publication Committee of the Council which is charged with the issuance to all the membership of the New York State Journal of Medicine and the *Medical Directory of New York State.* In addition, the Council Committee on Public and Professional Relations was formed to operate an information and publicity service, to keep close contact with civic, labor, fraternal, business, and educational groups, to conduct a Speaker's Bureau, to furnish exhibits, and to distribute specially selected reprints and pamphlets, and to maintain close contact with the public press and the 61 component county societies, as well as with the Woman's Auxiliary of the Society.

Through these channels of communication the profession and the public are kept informed of the work of the numerous council committees whose detailed reports to the House of Delegates can be found in the April 1 issue of the Journal each year. Further, the action of the House of Delegates upon the recommendations in these annual reports may be followed in detail in the Supplement, Part II of the September 1 issue of the Journal.

Obviously, the entire activity of the Society cannot be condensed into a brief commentary. But its more permanent activities for the benefit of the public and the profession can be detailed, such as the work of the Council Committee on Public Health and Education concerned with postgraduate instruction. Its program makes available over 1,000 lectures by some 600 speakers. Instruction may be arranged as single lectures, a series of lectures, symposia, or teaching days. The Committee's *Course Outline Book* annually lists subjects and speakers and is available to any member of the Society without charge.

The Library of the Medical Society of the State of New York is located at the Medical Society of the County of Kings, 1313 Bedford Avenue, Brooklyn 16, New York. With some 175,000 volumes, the library is the fifth or sixth largest in the United States. It receives between 1,500 and 1,600 current medical periodicals and maintains a lending service available to any member of the Society.

I have here attempted to set forth in brief some of the services maintained by the Society for the benefit of members and the public under the general heading of communications and information. In a subsequent page I will discuss with you some further important activities flowing from the work of the Council.

Dan Mellen

The Problem of Nausea and Vomiting:

ITS TREATMENT WITH DRAMAMINE®

Whenever nausea, vomiting and vertigo are disturbing and complicating factors, Dramamine may be used with confidence.

Keats[1] outlines the wide list of conditions in which Dramamine (brand of dimenhydrinate) has proved valuable as follows: "It has been well established in the control of motion sickness. It has been used effectively in the prevention and treatment of seasickness, airsickness, [in the treatment of] the nausea of pregnancy, Ménière's syndrome, . . . radiation sickness . . . and postfenestration reactions. . . . The site of action is imperfectly understood, but there is indication of an action of depressing labyrinthine function or its neural pathways, a highly selective central action, or both. Few side reactions of this drug have been noted."

The usual dose for motion sickness is 50 mg. (one tablet) taken one-half hour before departure and, if necessary, before meals for the duration of the journey. Control of nausea and vomiting of other conditions and severe motion sickness is achieved, with minimal drowsiness, by a dosage of 100 mg. every four hours.

"[Dramamine] is administered orally or rectally. . . . The same doses may be administered rectally by insertion of the tablet or other suitable form. . . ."[2]

Dramamine Liquid is particularly useful for children.

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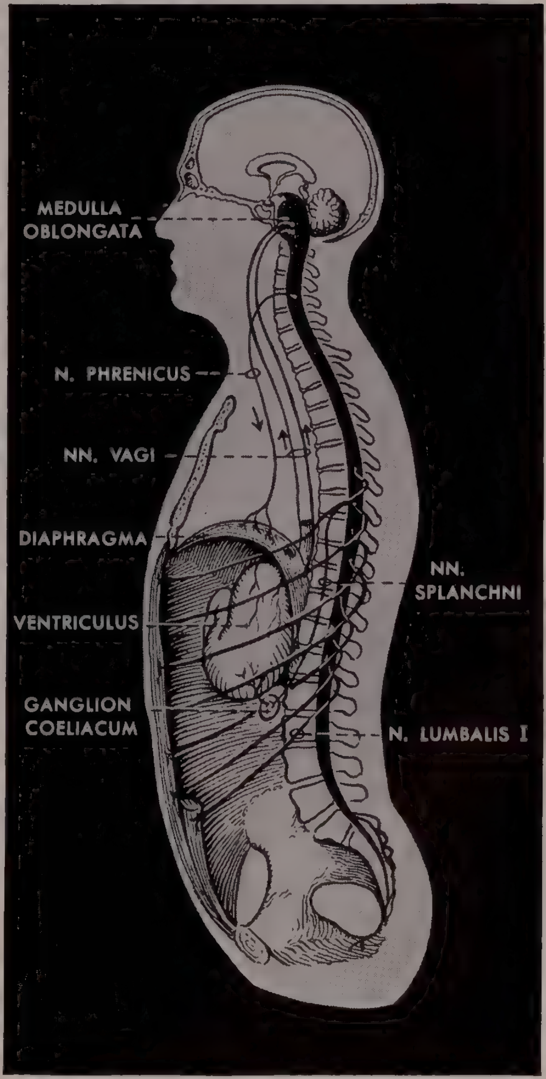

THE VOMITING REFLEX: *Vagus→nodose ganglion→solitary tract→spinal cord→cervical, thoracic and lumbar nerves to diaphragm, cardiac sphincter, stomach, abdominal and pelvic musculature. (After Krieg, W. J. S.: Functional Neuroanatomy, ed. 2, New York, The Blakiston Company, Inc., 1953, p. 104.)*

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1. Keats, S.: Ataxic Cerebral Palsy with Akinetic Seizures: Dramatic Response to Dramamine, J. M. Soc. New Jersey *50*:53 (Feb.) 1953.
2. Council on Pharmacy and Chemistry: New and Nonofficial Remedies, 1953, Philadelphia, J. B. Lippincott Company, 1953, p. 471.

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Newer Blood Factors and Their Clinical Significance

ALEXANDER S. WIENER, M.D., BROOKLYN, NEW YORK

(From the Serological Laboratory of the Office of the Chief Medical Examiner of the City of New York, and the Division of Immunohematology of the Jewish Hospital, Brooklyn)

KARL Landsteiner was early convinced that a marked individuality of human blood cells exists.[1] In 1900 he discovered the A-B-O groups, and, later, pursuing his idea further with Dr. Philip Levine at the Rockefeller Institute in New York City, he immunized rabbits with human blood cells and discovered the agglutinogens M, N, and P.[2] Studies on animal blood, using antisera prepared by cross immunization, had disclosed a marked individuality of the blood cells, particularly in studies on chickens and cattle.[3] Landsteiner, therefore, turned to the study of post-transfusion sera and, indeed, observed the occasional occurrence of isoimmunization in man.[4] During the period 1921 to 1940 a number of cases were reported where hemolytic transfusion reactions had occurred despite the transfusion of blood of the correct A-B-O group. In some of these cases it was possible to demonstrate the presence in the recipient's serum of an atypical antibody giving reactions unrelated to the A-B-O groups. Thus, the stage was set for the discovery of the Rh factor.

Pursuing a different line of investigation, the immunization of animals with blood of lower species, Landsteiner and Wiener sought to demonstrate the existence of additional blood factors in human blood, that is, they tried to discover new blood factors with the aid of heterogenetic immune sera. Previously, Schiff and Adelsberger[5] had shown that immunization of rabbits with sheep red cells stimulated the production of antibodies for human cells containing agglutinogen A. Moreover, Landsteiner and Wiener[6] had found that immunization of rabbits with rhesus monkey red cells caused the production of M antibodies. Continuing this line of investigation Landsteiner and Wiener immunized rabbits, and later guinea pigs, with rhesus monkey red cells and found that some of the antisera thus produced detected a factor in human blood cells present in 85 per cent of Caucasoids and unrelated to the A-B-O groups and the M, N, and P agglutinogens.[7,8] To the new factor they applied the symbol Rh to indicate the manner in which it had been discovered. They did not report their findings at once because they considered them mainly of theoretic interest. But when Wiener and Peters[9] found that isoimmunization to the Rh factor was responsible for three hemolytic transfusion reactions, one of them fatal, Landsteiner and Wiener reported their discovery of the Rh factor at the beginning of 1940. This report opened a new chapter in the field of blood grouping.

At about the same time Levine and Stetson[10] introduced the concept of isosensitization by pregnancy in connection with a hemolytic transfusion reaction which they had observed. Other workers soon reported additional transfusion reactions caused by sensitization to the Rh factor, and it then became clear that many of the so-called irregular agglutinins described by earlier workers, notably, Unger,[11] Zacho,[12] Culbertson and Ratcliffe,[13] and others may have been related to the Rh factor in specificity. Early in 1941, moreover, Levine and his coworkers[14,15] demonstrated that isosensitization to the Rh factor in

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Pathology and Clinical Pathology, May 13, 1954.

TABLE I.—Blood Groups in Man: Role in Blood Transfusion

System	Blood Factors	Number of Identifiable Types	Isoantibodies—Natural	Isoantibodies—Immune	Role in Causing Transfusion Hemolysis
A-B-O	**A, B, C, O,** and variants such as A_1, A_2, $A_{1,2}$, and A_3, etc.	6 major groups and subgroups—O, A_1, A_2, B, A_1B, A_2B; also rarer subgroups A_3, A_3B, etc.	Regularly present except during neonatal period	Common	Most important
M-N-S	**M,N, S, s, Hu** (Hunter), **He** (Henshaw), and variants such as M_2, N_2, etc.	6 major types using the more readily available sera anti-**M**, anti-**N**, and anti-S	Rare	Rare	Has caused hemolysis in rare cases
Rh-Hr	$\mathbf{Rh_0}$, **rh′**, **rh″**, $\mathbf{rh^W}$, **hr′**, **hr″**, **hr**, and variants such as $\mathfrak{R}\mathbf{h}_0$	28 major types, but of these only 9 have frequencies greater than 1%	A few questionable cases reported	Common	Most frequent cause of intragroup transfusion hemolysis
P	**P** and variants	2 major types	Infrequent	Very rare	No cases reported
K-k	**K** and **k**	3 types	None reported	Occasional	Rare cause of hemolysis in isosensitized patients
Lutheran	**Lu**	2 types	None reported	1 case	Very rare cause of hemolysis in isosensitized patients
Duffy (Fy)	**F** and **f**	2 major types, because anti-**f** serum is not available	None reported	Several cases	Rare cause of hemolysis
Lewis (Le)	$\mathbf{Le^a}$ and $\mathbf{Le^b}$	3 types (?)	Infrequent	None found	Plays no role in transfusion hemolysis. $\mathbf{Le^a}$ factor reciprocally related to secretor trait
Kidd (Jk)	**J** and **j**	2 major types, because anti-**j** serum is not available	None reported	Few cases	Rare cause of hemolysis
"Private" blood types*					
Rare blood factors	Levay, **Gr** (Graydon), $\mathbf{Mi^a}$ (Miltenberger), Becker, $\mathbf{Be^a}$ (Berrens), **Ca** (Cavaliere), $\mathbf{Wr^a}$	Positively reacting bloods are very rare	None reported	Very rare	Very rare cause of hemolysis
Factors with almost universal distribution†	$\mathbf{Tj^a}$ and **U**	Negatively reacting bloods are very rare	None reported	1 case anti-**U**; 8 cases anti-$\mathbf{Tj^a}$	Very rare cause of transfusion hemolysis

* In the case of the rare blood factors, other individuals possessing such factors are most easily found by testing relatives of the proband, the person in whose blood the factor was first found. Similarly, individuals lacking factors of almost universal distribution are to be found most readily among relatives of the proband. The hereditary nature of the blood factors, in general, is most noticeable in the case of very rare blood types, and Levine has, therefore, designated them as "private" blood types to indicate their restriction to certain rare families.

† Factor **k** of the K-k blood types could also be included under this classification.

pregnancy was the basis for at least 90 per cent of the cases of erythroblastosis fetalis. This discovery gave further impetus to studies on the Rh factor and to the field of blood grouping in general.

It was soon noticed that in many Rh-negative patients having hemolytic transfusion reactions, no Rh antibodies were demonstrable in their serum. Moreover, tests on the sera of Rh-negative mothers of erythroblastotic babies frequently failed to disclose the presence of Rh antibodies. It was then found[16] that Rh antibodies and, in fact, antibodies of any specificity may occur in two molecular forms: one form (so-called bivalent antibodies) demonstrable by the ordinary agglutination method and the other form (so-called univalent antibodies) capable of combining specifically with cells containing the corresponding antigen in saline media but without clumping them. Previous failure to find Rh antibodies when they were to be expected was due to the use of methods incapable of detecting univalent antibodies. For detecting univalent antibodies a variety of technics was then devised by Wiener, namely, the blocking test[16] and the conglutination test.[17] This was followed by the test using red cells treated with proteolytic enzymes, such as trypsin,[18] ficin, and papain,[19] and the antiglobulin test.[20] With the introduction of these new technics rapid developments in the field of blood grouping resulted. It was soon found, for example, that it was the univalent Rh antibody in the mother's serum that caused erythroblastosis[17,21] and not the bivalent Rh antibody as previously believed. Moreover, the use of the newer technics led to the discovery of hitherto unknown blood factors,[22] and knowledge concerning the blood groups increased at a great rate.

It was soon found that the Rh system was a complex system of blood types. Instead of the single original factor of Landsteiner and Wiener now known as **Rh$_0$**, as many as four different kinds of Rh factors have been found, and three contrasting Hr factors.[23] In addition, variants of the various Rh-Hr factors comparable to the A_1-A_2 subgroups have also been found (Table I). Moreover, blood factors independent of the A-B-O, M-N, P, and Rh-Hr systems were also found, thus leading to the discovery of new blood group systems, notably, K-k (or Kell), F (or Duffy), Lu (or Lutheran), Le (or Lewis), and J (or Kidd). In addition, factors S and **s**, related to the M-N agglutinogens have been discovered so that this system, which was first considered to consist of only three types, has proved to be far more complex. Finally, a number of other blood factors have been found,[24,25] some of which were characterized by their very low frequency, so that positively reacting bloods are extremely rare, while others have a very high frequency so that negatively reacting bloods are extremely rare (Table I).

Most of the newly described factors owe their discovery to the occurrence of a hemolytic transfusion reaction or the birth of an erythroblastotic baby, which could not be explained in the usual way on the basis of **Rh$_0$** sensitization. Application of the newer tests for univalent antibodies to the study of such cases may reveal the presence of an unusual antibody in the patient's serum. Thus, most of these newer factors are potentially important clinically. Luckily, this does not mean that every prospective mother or recipient of blood transfusion must be tested for all these blood factors. If this were so, the operation of blood banks would become impracticable, since instead of only eight types of blood, it would be necessary to have on hand at all times as many as 50,000 to 100,000 different types of blood. Observations have shown that while the majority of Rh-negative individuals injected with Rh-positive blood eventually become sensitized, this is not true for other blood factors. For example, deliberate injections of **hr′**-positive blood into **hr′**-negative individuals hardly ever stimulate the production of specific antibodies, indicating that the **hr′** factor is far less antigenic than the factor **Rh$_0$**. The same appears to be true for other blood factors such as **rh′**, **rh″**, **rh^w**, **hr″**, **F**, **K**, **S**, etc., so that instances of sensitization to such blood factors are in the nature of medical curiosities. Thus, it is adequate to type prospective recipients of blood transfusion for the A-B-O groups and **Rh$_0$** factor and rely on an adequate cross-matching test to detect incompatibilities with regard to the other human blood factors. Such incompatibilities are rare, indeed, and will only be found in individuals who have had previous transfusions or pregnancies which could have sensitized them.

Certain of the blood factors are demonstrable only by the antiglobulin technic. Therefore, it is important to include this test when investigating a blood transfusion reaction or an obscure case of erythroblastosis fetalis. In persons known to be isosensitized, compatible blood must be selected, using not only the agglutination and conglutination technics for crossmatching, but also the antiglobulin technic. Only in this way is it possible to avoid dangerous transfusion reactions. The following cases are illustrative of the types of problems which may be encountered by a blood-grouping laboratory.

CASE 1. *Severe hemolytic transfusion caused by sensitization to the Duffy factor.*—The patient was a fifty-year-old woman, who was admitted to a New York City hospital on December 1, 1950, because of acute urinary retention. Two years previously she had had a panhysterectomy for "prolapse" of uterus. Six months before admission she had developed intractable pain in the pelvis, which was attributed to metastatic malignancy and for which she received x-ray therapy. Two days before admission to the hospital she had received an injection of alcohol into the spinal canal for the relief of pain, and this was responsible for her inability to urinate.

On the second day in the hospital, as a "supportive" measure, she was given a blood transfusion of apparently compatible blood, but one hour after the infusion was started, the transfusion had to be stopped because of a severe chill. We were requested to investigate the reaction and found that the patient belonged to group O MN P Rh$_1$rh, while the donor belonged to group O MN pp Rh$_1$rh. The icterus index of the pretransfusion serum was 2 units by the acetone method, while the post-transfusion sample had an icterus index of 8 units, so that there evidently had been some hemolysis. However, tests for abnormal antibodies on the patient's serum were negative by the agglutination and conglutination method and also in tests using enzyme-treated test cells. Unfortunately, the antiglobulin test was not used at that time, and the conclusion was drawn that there was no incompatibility but that the reaction was due to some other cause, such as the use of infected or damaged bank blood.

Four days later a chordotomy was performed for relief of pain, and in connection with this operation the patient was given another blood transfusion. This was followed by a severe chill and a rise in temperature to 104 F., and associated with this the patient had marked hemoglobinemia and hemoglobinuria followed by oliguria. After the transfusion the icterus index of her serum by the acetone method was 60 units, and by the next morning this had fallen to 30 units. The patient's blood was then examined more thoroughly, and the patient was then found to be Kell negative (type kk) and Duffy negative (type ff). Moreover, with the aid of the indirect antiglobulin test it was possible to demonstrate an abnormal antibody in her serum, corresponding in specificity with anti-**F**. Titration of this abnormal antibody showed it to have a titer of more than 500 units. The direct antiglobulin test on the patient's own cells was negative, excluding the presence of autosensitization.

Inquiry then revealed that the patient had three children. Moreover, she had received two transfusions three months before admission to the hospital, and neither of these was followed by a reaction. However, one and one-half months before admission she had received a third transfusion, and this time there was a severe reaction characterized by chilliness and shock. It was now evident that this patient, who belonged to type ff, had become strongly sensitized to the **F** (Duffy) factor, and that this was responsible for the reactions she had sustained. Following the hemolytic transfusion the patient developed a severe hemoglobinuric nephrosis, from which, fortunately, she recovered. On December 15, 1950, eight days after the hemolytic reaction, type ff blood of group O was selected, and after this was proved compatible in vitro by the antiglobulin test, a biologic test[26] with 25 cc. of this blood was carried out, which resulted in no reaction. A second biologic test with 50 cc. of the blood was carried out, again with no reaction and no evidence of hemolysis. Then the balance of 425 cc. of blood was transfused and was well tolerated by the patient. On January 3, 1951, because of persistence of anemia (4.6 Gm. per cent with 1,440,000 red blood cells per cu. mm.), another transfusion of 500 cc. of compatible group O, type ff blood was given, preceded by two negative biologic tests, each with 25 cc. of the same blood. Again there was no untoward reaction, and the hemoglobin concentration rose to 6.2 Gm. per cent, and the red blood cell count to 2,350,000 per cu. mm.

Comment.—Summarizing, the error made in this case was the omission of the indirect antiglobulin test when testing for possible isosensitization. As is now known, the **F** (or Duffy) antibody is among those characterized by their failure to produce clumping by any method other than the antiglobulin technic. The reason for this may be that the number of antigenic sites on the red cell envelope for the Duffy blood system is relatively small, compared, for example, to the number of sites for the Rh-Hr and A-B-O systems.[27] The final proof of the role of **F** sensitization in this patient's hemolytic transfusion reaction was provided by two successful transfusions of **F**-negative (type ff) blood.

CASE 2. *Fatal hemolytic transfusion reaction caused by sensitization to the* **hr′** *factor.*—This patient had had a prostatectomy and postoperatively, because of bleeding, was given two blood transfusions without any reaction. He was known to be group O, Rh positive. A week later, when he was ready to go home, he felt somewhat "shaky," and a blood count showed the presence of a mild anemia. Therefore, it was decided to transfuse him before sending him home, and 250 cc. of blood were given, after which he had chills. He then began to bleed from the operative site, and he was given more blood by transfusion. He continued to bleed and was then taken to the operating room, and an attempt was made to control the bleeding site. It was then noticed that the blood coming from the operative site was fluid and exhibited no tendency to clot. The patient died while in the operating room, and even then the surgeon did not suspect that the transfusions had anything to do with the bleeding.

Examination of the postmortem blood showed the patient to be group O, type Rh_1Rh_1. This suggested that sensitization to the **hr′** factor might have something to do with the patient's death. Indeed, the icterus index of the postmortem serum proved to be 25 units, and in the serum an **hr′** antibody was found having a titer of 30 units by the antiglobulin method and 200 units for enzyme-treated cells. Obviously, the titer must have been much higher before the patient was transfused since the introduction of incompatible cells would be expected to produce some in vivo absorption. It was subsequently reported that the patient had received a blood transfusion a year before, which presumably was the basis for the isosensitization.

Comment.—This case demonstrates again that the mere fact that a patient is Rh positive does not exclude the possibility of intragroup hemolysis. It was subsequently learned that an antiglobulin crossmatch had been carried out by the technician before the transfusion, but no incompatibility was detected. Unfortunately, the antiglobulin test is a very delicate procedure and subject to error, even when done by experienced workers, so that the occurrence of false negative reactions in tests carried out under pressure before transfusions is readily understandable. It is too bad that at the present stage of knowledge so much depends on the antiglobulin test, an elaborate procedure with numerous pitfalls and too impracticable to use for routine matching tests before every transfusion.

The case also demonstrates the inadvisability of giving transfusions merely as a supportive measure since simple anemia can be treated just as effectively and more safely by iron therapy. In other similar cases where transfusions were given for their "tonic" effect, patients have developed homologous serum jaundice.

Considering the multiplicity of blood factors to which recipients of blood transfusion and pregnant women are exposed, it is surprising that clinical problems caused by isosensitization are so rare. As has already been mentioned, the infrequency of isosensitization aside from the factors **A, B,** and $\mathbf{Rh_0}$ indicates that the other blood factors are but weakly antigenic. Apparently only certain individuals have the capacity to respond to injections of blood containing such foreign blood factors by producing specific isoantibodies. Strong evidence indicating the role of a constitutional factor in isosensitization is provided by reports of instances of multiple sensitization. For example, the present author has encountered a number of instances of double sensitization to blood factors **M** and $\mathbf{Rh_0}$.[28,29] More unusual was a recent case[30] in which the mother of an erythroblastotic baby was found to be doubly sensitized to the factors **K** and $\mathbf{rh^w}$. In 1946 Callender and Race[31] reported an even more remarkable case in which a young woman of type Rh_1Rh_1 receiving multiple transfusions became sensitized to the **hr′** factor and factor **N** and then to three additional blood factors which up to that time had not been recognized, namely, $\mathbf{rh^w}$, Lutheran, and Levay. Similar instances of multiple sensitization have been reported by other investigators.[32–35] Considering the low antigenicity of the blood factors involved, the only reasonable explanation for these instances of multiple sensitization is to postulate the existence of individuals with an unusual constitutional capacity for the production of antibodies.

Unfortunately, individuals who have a remarkable capacity to form isoantibodies may also become autosensitized and produce antibodies against their own red cells, thus giving rise to a hemolytic anemia. For example, **rh″** is a very weak antigen for individuals of type Rh_1, and it has been found that when individuals of type Rh_1 have become sensitized to the **rh″** factor, their serum generally contains autoantibodies readily demonstrable by the enzyme technic.[19] Individuals with disseminated lupus erythematosus have an unusual capacity to form antibodies, and Wiener[36] has postulated that the production of autoantibodies by such individuals accounts for the vascular lesions which characterize the disease.[27] In fact, there are strong reasons to believe that acquired hemolytic anemia, thrombotic thrombocytopenic purpura, atypical verrucose endocarditis, some forms of rheumatoid arthritis, as well as typical lupus erythematosus, may all be different forms of the same disease, just as hydrops, congenital hemolytic anemia, and icterus gravis are all different clinical manifestations of erythroblastosis fetalis. In the former the common pathogenetic agent appears to be the autoantibodies. It is significant that the patient described by Callender and Race also had lupus erythematosus, and one of our own patients[37] with acquired hemolytic anemia who became sensitized to the factor **K** subsequently was proved to have lupus erythematosus. It is evident, therefore, that great care must be exercised when selecting blood for transfusions to patients with disseminated lupus erythematosus or acquired hemolytic anemia, as in the following case:

CASE 3. *Young woman with lupus erythematosus, sensitized to* **J** *(Kidd) factor, transfused with type jj blood without reaction.*—This patient was a young woman who was under psychiatric treatment. She had a history of disseminated lupus erythematosus of at least six years duration, during which time she had had such typical signs and symptoms as butterfly rash on the cheeks, joint pains, rapid sedimentation rate, an episode of hemolytic anemia, and albuminuria. During a previous hospital admission for hemolytic anemia she had been found to be sensitized to the **J** (Kidd) factor. We were requested to crossmatch blood for her for purposes of blood transfusion.

Direct grouping showed the patient to belong to group O, and there was a mixture of M-N and Rh-Hr types, evidently representing surviving transfused red cells. The direct antiglobulin test was strongly positive, the degree of coating being 22 per cent.[27] In addition, the patient's serum contained an abnormal isoantibody, which, like the **F** (Duffy) antibody, was demonstrable only by the antiglobulin technic. This antibody had a titer of approximately 16 units, and its reactions were different from those of standard anti-**F** serum but corresponded with those to be expected from anti-J. Since we had no standard anti-J serum available, compatible blood (presumably of type jj) was selected by direct matching with the patient's serum, using the antiglobulin technic. A biologic test was performed with the blood selected, and when this was negative, a full pint was transfused without any untoward reaction, followed by the expected rise in hemoglobin and red cell count. This case thus demonstrates how it is possible, in patients having unusual isoantibodies, to select compatible blood by using the antiglobulin technic.

CASE 4. *Patient with rheumatoid arthritis with an unusual antibody in her serum, for whom no compatible donor could be found.*—This patient was a woman, fifty-two years of age, whose blood was referred for study in January, 1945, by Dr. David H. Black from the University of Pennsylvania. She was known to have had rheumatoid arthritis for at least five years and had been given gold therapy and x-ray therapy. As part of her treatment on December 18, 1944, she was given a transfusion of 500 cc. of blood with no untoward reaction. Preliminary to a second transfusion one month later, crossmatching tests were carried out, and it was found that the patient's serum agglutinated 44 successive group A and 18 successive group O bloods, including the blood of the previous donor. The case was then referred to us for further study. We found the patient to belong to group A_1 N Rh_1, while the donor used for the December transfusion belonged to group A_2 MN Rh_2. At body temperature the patient's serum agglutinated the donor's saline suspended cells but not her own cells, indicating that she was isosensitized to some factor present in the donor's cells. (In 1945, when this case was studied, the antiglobulin test and the test with enzyme-treated cells were not being used.) The titer of the antibody proved to be 4 units at room and body temperature and 8 units at refrigerator temperature, so that we were dealing with a "warm" isoantibody.

Differential agglutination tests showed no trace of the donor's type MN cells in the patient's blood, although only five or six weeks had passed since the transfusion, so that evidently all the donor's cells had been eliminated from the patient's circulation. In tests at room temperature the patient's serum weakly agglutinated her own cells, so that the patient was probably autosensitized as well as isosensitized. A series of more than 100 blood specimens was tested, but all were agglutinated by the patient's serum. In an attempt to find a compatible donor it was decided to test relatives of the patient, of whom two sisters, one brother, and a son were available for examination. However, even the blood cells of these individuals were agglutinated by the patient's serum.

It was then decided to attempt a blood transfusion, using a donor whose cells gave the weakest reactions with the patient's serum. In order to avoid any serious transfusion reaction it was decided to inject the blood slowly, the actual transfusion being preceded by a biologic test. The biologic test and transfusion were carried out by Dr. Black. At the beginning of the transfusion the patient's plasma was pale straw color and the hemoglobin concentration 11 Gm. During a forty-minute period 20 cc. of the donor's blood diluted with an equal volume of saline were slowly injected. Two hours after this injection was started, the patient still showed no reaction, and the patient's plasma showed no demonstrable change in tint. Therefore, a second biologic test, this time using 50 cc. of the blood, was carried out. After this test, again, there was no reaction nor any definite change in the color of the plasma. Therefore, four hours after the first test was begun, a transfusion of 350 cc. of the same blood was started, and this was completed during the period of one hour. There was no sign of reaction until about one hour after the transfusion was completed when the patient appeared slightly tired and complained of piercing pain in the epigastric region going through her body to the back. At that time the patient's serum had a definite icteric tint, but there was no change in hemoglobin concentration. One and one-half hours after the transfusion was completed, the patient complained of pain in her chest and back, headache, vomiting, and "pains all over." Her temperature, which had previously been normal, rose to 104 F., although the patient at no time had a chill or chilly sensation. This reaction then gradually subsided.

Comment.—This case demonstrates the danger of transfusing incompatible blood, even when the titer of the isoantibody in the patient's serum appears to be low. Apparently, this particular patient had become sensitized to a blood factor which is almost universally distributed, as in another case recently studied by us.[38] Blood transfusions in cases of this nature pose an almost insoluble problem in the present state of knowledge.

Summary and Conclusions

Knowledge of the human blood groups has increased considerably during the past decade so that now more than nine independent blood group systems are known with more than 25 different blood factors. Fortunately, sensitization to these newly discovered blood factors is so infrequent as to constitute medical rarities. For blood transfusion purposes, therefore, it is adequate to type patient and donor merely for the four A-B-O groups and for the **Rh_0** factor and to rely on the direct matching test to detect any incompatibility with respect to the other blood factors. Individuals with disseminated lupus erythematosus, acquired hemolytic anemia, or related clinical syndromes have an inordinate capacity to become isosensitized so that particular care must be taken in such cases when selecting donors for blood transfusion. The cross-matching test or tests used must detect univalent as well as bivalent antibodies. While the anti-globulin test is too lengthy for routine use, it is an invaluable test since it detects antibodies not demonstrable by other methods. Therefore, this test must always be included when investigating unusual problems of isosensitization.

Four illustrative case reports are presented; a hemolytic transfusion reaction caused by sensitization to the **F** (Duffy) factor, a fatal hemolytic reaction caused by sensitization to the **hr′** factor, an example of sensitization to the **J** (Kidd) factor in a young woman with disseminated lupus erythematosus, and a problem of isosensitization against a factor with virtually universal distribution in a women with rheumatoid arthritis.

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Thank God every morning when you get up that you have something to do that day which must be done, whether you like it or not. Being forced to work, and forced to do your best, will breed in you temperance and self-control, diligence and strength of will, cheerfulness and content, and a hundred virtues which the idle never know.—CHARLES KINGSLEY

Cryptorchism

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The testis in early embryonic life, according to Felix,[1] Wells,[2] and Wyndham,[3] is an elongated body extending from the diaphragm to the external inguinal ring, lying parallel and medial to the wolffian body from which the testis acquires its duct system. The testis shortens in the embryo and is held near the abdominal ring by the attachment of the gubernaculum or ligamentum testis. According to Curling,[4] "the gubernaculum is connected above with the inferior extremity of the testicle and to the lower end of the epididymis and commencement of the vas deferens; the lower part . . . passed out of the abdomen at the abdominal ring." Abnormality of epididymal development is commonly seen in cryptorchism. In many instances we have noted attachment at the globus major only. We have observed in two cases of failure of development of the wolffian system, with congenital absence of the kidney, ureter, epididymis, vas deferens, seminal vesicle, and half of the vesical trigone, that the testis was found in the normal position of the kidney. The testis could not be drawn down into the scrotum by the cremaster nor held at the abdominal ring because there was no attachment for the gubernaculum in the absence of the epididymis.

Physiology

Hunter[5] states, "In those animals where the testicles change their situation, the cremaster muscle, which should be named musculus testis, has two very different positions in the fetus and in the adult." We have observed regularly the poor development of the cremaster in cryptorchism. We have no doubt of the correctness of Hunter's observations that the cremaster plays a role in transit of the testis in normal embryonic development in man as well as in animals with migratory testis. We have published a preliminary report on some experiments on young rats. The genitofemoral nerve was divided. The survivors remained in the state of cryptorchism. When the genitofemoral nerve was divided in adult rats, the testis remained in the abdomen or in the scrotum because it could not be retracted nor emerge from the abdomen without activation of the cremaster muscle. The cremaster, which originates in the inguinal canal from fibers closely associated with the internal oblique muscle, passes upward to the epididymis and testis surrounding the gubernaculum in animals with migratory testis, and it is found in this position in cryptorchism. By contraction of the cremaster the testis is drawn downward in certain animals at the onset of the rutting season and then retracted from the scrotum to the inguinal canal by the same muscle at the end of the season.

Pathology of Cryptorchism

Abnormal development or failure of attachment of the epididymis at the inferior pole of the testis is undoubtedly a factor in causation of cryptorchism. This anomaly obviates proper attachment of the gubernaculum or ligamentum testis. The epididymis is regularly abnormal in abdominal cryptorchism, frequently abnormal in inguinal retention, and may be normal when the testis is located below the external inguinal ring. The poor development of the cremaster in cryptorchism is considered of significance.

We have observed that in all cases of cryptorchism the processus vaginalis is patent and extends through the inguinal canal, at least to the upper limits of the scrotum. This situation is believed to be the result of cryptorchism and not a causative factor. The inguinal canal is observed to be of normal size in patients with cryptorchism, but the abdominally retained testis usually is too large for passage if the normal transit mechanism were active. Poor development of the scrotum itself does not seem to play a role in cryptorchism. The third inguinal ring of MacGregor,[6] more recently described by Surraco,[7] plays a more vital role in ectopy when the testis is diverted after normal progression through the inguinal canal to the tissues of the abdominal wall beneath Scarpa's

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fascia or into the perineum, opposite scrotum, or beneath the fascia of the penis. But the testis in cryptorchism may be situated just outside the external inguinal ring, unable to descend completely into the scrotum because of closure of the scrotal ring or because of shortening of the spermatic cord.

Pace and Cabot[8] and Rea[9] have exhaustively studied the pathology of the undescended testis in adults and children. Spermatogenesis is lacking or markedly impaired. Fibrosis and thickening of the basement membrane of the tubules is noted. Those testes retained in the inguinal canal apparently show more fibrosis, suggesting that trauma might play a role in its formation. Interstitial cells seem to be of adequate number, and the Sertoli cells are well preserved. Bouin and Ancel[10] demonstrated the well-developed condition as well as the function of the interstitial cell in cryptorchism.

Underdevelopment of the testis itself undoubtedly plays a role in cryptorchism. The fact that either antuitrin "S" or testosterone can bring about descent of the testis in rutting animals and in some patients with normal development of the gubernaculum and cremaster would indicate stimulation of the mechanism of descent by hormones.

Hormone Therapy

Wells[2] states, "It has been noted during orchiopexy that when the testes fail to descend in response to gonadotropin, anatomic factors are sufficient to explain the failure—consequently in order to avoid or minimize these anatomic complications, it would seem fundamentally unsound to await the approach of puberty before beginning therapy." The effect of administration of antuitrin "S" or testosterone is to advance puberty, which would be most undesirable in young children but tolerable in the period immediately before puberty. We agree with Thompson and Heckel[11] that by the use of hormones "we cause descent only of those testes that would descend normally at puberty." They had no results in patients with abdominal cryptorchism. Einhorn and Roundtree[12] had no results in the treatment of three patients past the age of puberty. Two of five right cryptorchids and one of five left cryptorchids had descent of the testis following hormone therapy administered at puberty. Only one of their ten patients in the prepuberty group had descent following therapy. Reiser[13] concluded: "(1) The value of glandular therapy before the age of puberty is questionable; (2) glandular therapy at the age of puberty is unnecessary; (3) by the sixteenth year, 55 to 60 per cent of retained testes will have descended spontaneously." There is no proof of fertility in patients with bilateral cryptorchism whose testes descended into the scrotum because of the advancement of puberty caused by injections of antuitrin "S," but surgery was rendered unnecessary in those patients who were brought for treatment at that age.

We would limit the use of antuitrin "S" or testosterone, therefore, to those patients who require them for normal development aside from cryptorchism and to those patients with cryptorchism who are brought for consultation at the age of puberty or immediately prior to its onset. Antuitrin "S" in the dosage of 500 units should be given hypodermically every third day for ten doses. If the testis fails to descend within one month, surgery should be considered necessary. Deming[14] feels that antuitrin "S" therapy is useful preoperatively in that the cord is apparently lengthened, the cremaster improved, and the testes better developed. He states that "surgical orchiectomy has never been necessary following adequate hormonal therapy" in cryptorchism.

Surgical Indications

The finding of a demonstrable hernia is considered an indication for surgery in the presence of cryptorchism, unilateral or bilateral, in infants under two years of age. The modification of the Torek procedure herein described is applicable. Correction of the hernia is an integral part of the operation. Orchiopexy, in the absence of demonstrable hernia in infants, may be delayed. We agree with Deming[15] and with Hamm and Harlin[16] that orchiopexy is best accomplished before the sixth year.

Abdominal retention of the testes is an indication for surgery. Hormones have been of no avail except for inguinal cryptorchism. Because patients with bilateral cryptorchism whose testes descend at puberty either with or without hormone therapy are commonly sterile, because there is no proof of fertility in patients with bilateral cryptorchism whose testes descended as a result of advancement of puberty or surgical intervention shortly before the age of puberty, and because the majority of patients with cryptorchism have a potential if not a demonstrable hernia, it would seem logical to perform surgery at an earlier age.

One might expect better results with hormone therapy in bilateral cryptorchism, and logically such treatment should be useless in unilateral maldevelopment. But our experience is that some patients with unilateral cryptorchism show favorable response to antuitrin "S" administered at or just before puberty; thus surgery is unnecessary except for the finding of demonstrable hernia. However, we would advise surgery for unilateral inguinal as well as abdominal retention if the patient is brought for consultation before the sixth year.

Obviously unilateral cryptorchism is a less serious problem than bilateral maldevelopment, but the incidence of sterility in this group is high in our experience. This might be interpreted to mean that the spermatogenic maldevelopment is independent of the accompanying cryptorchism. It is our experience that testis tumors occur in the opposite testis or in the testis surgically placed in the scrotal sac. Rusche[17] writes that among 15 patients with cryptorchism who developed tumor, four had testis tumor on the opposite side, and four had tumor of the cryptorchid testis which had been surgically placed in the scrotum.

We are frequently consulted regarding the problem of cryptorchism in adults. We have seen recently three patients who had had bilateral hernia repair at puberty, but the testes were allowed to remain above the inguinal canal because the surgeon felt that the spermatic cord was too short for orchiopexy. These three patients, one a surgeon, were worried about the possibility of tumor formation in the nondescended testes. The incidence of testis tumor in the United States Army during World War II was one per 10,000 during a five-year period, or one per 50,000 per year. If we use a commonly accepted figure on the incidence of cryptorchism in adults of 0.023 per cent, the incidence of tumor in patients with cryptorchism would be one per 500 or one per 2,500 per year, twenty times the incidence in normally descended testes. This figure is impressive. In the Walter Reed Army Hospital series we had 11 testis tumors in cryptorchids out of 250 tumors treated. Three tumors occurred in patients with unilateral abdominal cryptorchism. One patient had bilateral seminoma in bilateral abdominally retained testes. Four patients developed tumor of unilateral inguinal testes and three in testes which had been surgically placed within the scrotum. Four patients had tumor of the opposite testis in the presence of unilateral inguinal cryptorchism.

We do not hesitate to recommend surgery for bilateral abdominal cryptorchism in adults under thirty-five years of age. Certainly bilateral orchiectomy is contraindicated even when orchiopexy is impossible, but by proper technic almost all testes can be placed within the scrotum where tumor can more readily be detected if it occurs.

For young adults with unilateral abdominal or inguinal cryptorchism, orchiopexy is advised, and if the testis cannot be well placed within the scrotum, orchiectomy is advised. We do not recommend orchiopexy after thirty-five years of age because the incidence of testis tumor is reduced to a very low figure after the third decade of life.

Operative Technic

The modification of the Torek procedure[18] which we have used for twelve years is applicable to all types of inguinal or abdominal cryptorchism with or without hernia. With the patient in supine position on the table, an incision is made from the external inguinal ring upward along the direction of the fibers of the external oblique fascia to a point 2 to 3 cm. above the anterior spine of the ilium. The skin and Scarpa's fascia are divided. An external inguinal testis is thus exposed. By dividing the external oblique fascia the full length of the incision, the inguinal canal is opened, and a testis retained in the canal can be exposed. The internal oblique and transversalis muscles are then sharply divided the full length of the incision. The peritoneum with its covering of retroperitoneal fascia is pushed medially, using a sponge in forceps. The internal spermatic vessels and the vas deferens can be visualized through this fascia. The retroperitoneal fascia is incised near the internal spermatic vessels. With the vessels isolated by a tape or Penrose drain, the retroperitoneal fascia is incised upward and downward along the vessels so that they may be visibly freed from all extraneous connections. The vas deferens is likewise freed toward the tip of the seminal vesicle. By dissecting upward toward the renal vessels on the left or toward the vena cava on the right side, adequate length is usually obtained.

The small branch of the vein which passes outward into Gerota's fascia near the lower pole of the kidney may be sacrificed to obtain more length if necessary. By dissecting downward along the internal spermatic vessels, they may be freed from the hernia sac or patent processus vaginalis much easier than after the hernia sac is opened.

The hernia sac or processus vaginalis is then opened and split downward to the extreme end of the hydrocele sac. In cases of abdominal retention of the testis the processus vaginalis extends beyond the lower pole of the testis into the upper portion of the scrotum. The hernia sac is cut off very high so that the peritoneum may be closed with a running suture. The excess of tunica vaginalis is resected. The mouth of the scrotum is opened bluntly by stretching the fascial "third inguinal ring," and a good pocket is bluntly prepared within the scrotum. A generous 2- to 3-cm. incision is made at the lowermost portion of the scrotum through the skin, tunica dartos, and the external spermatic fascia. An opposing incision is made through the skin of the thigh down to the fascia. A clamp is passed through the scrotal wound upward to draw the testis into the scrotum and out through the lower scrotal wound. There is usually sufficient length of cord and vas to allow attachment of the gubernaculum and lower pole of the testis to the deep fascia of the thigh without tension. The skin of the scrotum is sutured to the skin of the thigh, anterior and posterior to the testis. The inguinal wound is then closed as for herniorrhaphy. The testis remains attached to the thigh for two to three months or longer. There is little or no interference with normal activity.

We have used the Torek principle, not to pull the testis down but to prevent retraction from scarring in the postoperative months. Although good results have been reported from other methods, we have noted too frequently after the Bevan operation that the testis is located too high in the scrotum where it can be injured. Traction by a suture passed through the lower portion of the scrotum and an intervening rubber band would seem to obviate the second stage of the Torek procedure, but we do not feel that such traction can be maintained long enough to prevent late contraction of scar with retraction of the testis to the upper scrotum. Attachment of the skin of the thigh has proved very unsatisfactory in our hands because the sutures slough out too early.

Lewis[19] has devised an operation suitable to those patients whose cord and vas are short. By passing the testicle through the musculature medial to the deep epigastric vessels, the distance to the scrotum is shortened.

It is most difficult to evaluate the results of orchiopexy. Fertility is the test, and since most patients are operated upon before puberty, it is hard to keep up with their changes of address, and a follow-up from ten to twenty years postoperatively is difficult under any circumstances. The short follow-up which is possible indicates good anatomic results from the Torek procedure and after our modification, but the crucial test of fertility so far is lacking.

Summary

The causes of cryptorchism may be listed as (1) maldevelopment of the epididymis with failure of proper attachment at the lower pole of the testis, (2) failure of proper attachment and development of the gubernaculum due to the epididymal maldevelopment, (3) poor development of the cremaster, (4) defect of the inguinal canal with hernia, (5) closure of the scrotal ring, (6) failure of development of the scrotum, and (7) lack of hormonal stimulation.

Hormone therapy by administration of antuitrin "S" or testosterone is contraindicated in infants and young children because of failures and because of the untoward effects of advancement of puberty. Hormones cause descent only of those testes which would normally descend at puberty and may be used at or just before the onset of puberty.

Indications for surgery are (1) the presence of demonstrable hernia in infants, (2) abdominal cryptorchism, and (3) failure of hormone therapy at or just before puberty in inguinal cryptorchism.

Surgery is advised at an earlier age (under six years of age) than heretofore deemed necessary in order to improve our results as far as fertility is concerned.

Because of the higher incidence of testis tumor in cryptorchism, orchiopexy is advised in men under thirty-five years of age. Orchiopexy will not lessen the incidence of malignancy, but the testis will be in a place where the diagnosis may be made earlier. In bilateral cryptorchism, when the testes cannot be placed within the scrotum, the gonads should not be removed, but in patients with unilateral disease the testis may be removed if it cannot be properly placed.

Testis tumor occurs on the opposite side in unilateral cryptorchism, in the surgically placed scrotal testis, or in the abdominally or inguinally retained organ.

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Discussion

John K. Lattimer, M.D., *New York City.*—Dr. Lewis has shown us a beautiful presentation of a technic for bringing down a testis which has a short cord. If one knows how to handle the difficult cases, the routine cases are very easy indeed.

On the Pediatric Urological Service of the Columbia-Presbyterian Medical Center we have found that cryptorchism is our most common major urologic disorder among children. We have had 242 cases (12 per cent) among the last 2,000 consecutive pediatric urologic new admissions. It is our practice to do a modified Bevan type of operation, except that we make sure the testis is located directly under the thin skin of the scrotum rather than inside the dartos and skin. We feel that treatment with gonadotropin should be given a fair trial before orchiopexy is done.

One of the most important questions to be answered in dealing with cryptorchism concerns the optimum age to begin treatment. It was advised in the past that the child should wait until puberty before treatment was started. Our researchers, Dr. Engle and Dr. Robinson, feel that this is very wrong. Biopsies of cryptorchid testes and the normal testis of the same child have revealed that the optimum age for beginning treatment is in the neighborhood of five years of age. Up until age five years both testes are relatively inactive, and tubular diameters grow at the same rate. After age five the testis which is down in the normal temperature of the scrotum continues to show growth in the diameter of the seminiferous tubules, and spermatogonia progress to the spermatocyte stage. The testis which is left up in the groin, however, does not show a similar development. Tubular diameters cease to increase, and cell development slows down, perhaps due to the heat of the body. From the psychologic viewpoint as well, it is desirable to get operations on the genitalia completed before age five rather than in later life.

For these reasons it is now our policy to recommend the institution of one course of gonadotropin therapy at age four or five with corrective operation done at age five.

Quoodle's Song

"Dogs-Man's chief defence against neurosis."—Plea at Animal Welfare Conference.

They suffer from psychoses
  The fallen sons of Eve;
But even the neuroses
  Their analyst discloses
Are not what they supposes
  But largely make-believe.

So Quoodle here discloses
  The sort of help they need
To drop their Freudian poses:
  Just make them walks in rowses.
The only rule he knows is
  They must be on a lead.

—*Punch, May 26, 1954*

Roentgen Therapy of Advanced Carcinoma of the Female Genitalia with the Use of a Grid

HIRSCH MARKS, M.D., NEW YORK CITY

(From the Radiotherapy Division, Welfare Island Dispensary)

Carcinoma of the Cervix Uteri

Roentgen-grid therapy of advanced carcinoma of the cervix must be properly evaluated on the basis of its contribution in each individual case. Where the disease is anaplastic, e.g., in portio cancer (Fig. 1A), and has extended to the vagina, irradiation through a grid alone was able to control the neoplasm in three out of 30 patients beyond the five-year survival limit. However, in the group of infiltrating, ulcerating, and widely excavated lesions (Fig. 1C), roentgen grid therapy was only instituted as a preliminary to radium insertions.

Although the palliative results in these patients were excellent, none has survived more than three years. They died of complications induced by ureteral obstruction due to metastases (Table I).

Carcinoma of the Vagina

In the advanced stage vaginal carcinoma forms a cauliflower, highly vascular, and often an ulcerated tumor. It ulcerates very early, invades muscle, and extends through the lymphatics.

Lesions in the upper segment metastasize by way of the iliopelvic chain. Those in the middle segment enter the lowest nodes of the iliopelvic and the hypogastric group. Vaginal lesions of the lower segment drain toward the inguinal nodes.

Two of the author's patients who received roentgen grid therapy belonged in the latter group and have survived, free of disease, ten and four years, respectively.

When the disease has spread to the pelvic lymph nodes and parametria, severe pain and symptoms of hydronephrosis will appear. A patient with a lesion similar to the last one described received roentgen grid therapy and has survived, free of disease, five years (Table I).

TABLE I.—RESULTS OF ROENTGEN GRID THERAPY IN 40 CASES

Site of Carcinoma	Response to Treatment 100 Per Cent	 75 Per Cent	 50 Per Cent
Cervix	3	25	2
Vagina	3	. .	. .
Ovary with metastases	1	1	3
Vulva	1 (4½ years)	. .	1

Carcinoma of the Vulva

Carcinoma of the vulva in the advanced stages varies in appearance from a prominent lobulated or warty tumor to a deep ulcer or a diffuse infiltration with infection and lymph node enlargement. One of the author's patients received roentgen grid therapy. She belonged to the last group and survived four and a half years. Lymph node involvement may be early (three and one-half months) or delayed (three years). Only one half of the invaded nodes are involved with cancer (Schwarz[1]).

The disease may extend widely to the urethra, vagina, cervix, abdominal wall, and, as in one of the author's patients, to the thigh (Table I).

Carcinoma of the Ovary

The pedunculated type of papillary cystadenocarcinoma in its advanced stages metastasizes to the peritoneum, intestinal wall, liver, and through the diaphragm to the pleura. It is usually accompanied by serous effusions. Response of these neoplasms to roentgen grid therapy is very slight. In the intraligamentary papillary cystadenocarcinoma the growth produces ascites less frequently, and while invading the ligaments, pelvic tissues, retroperitoneal and inguinal lymph nodes, it very rarely metastasizes to distant organs (Virchow[2]). Hence, it is more amenable to roentgen grid therapy. One of the patients thus treated has survived six years free of disease (Table I).

Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Radiology, May 13, 1954.

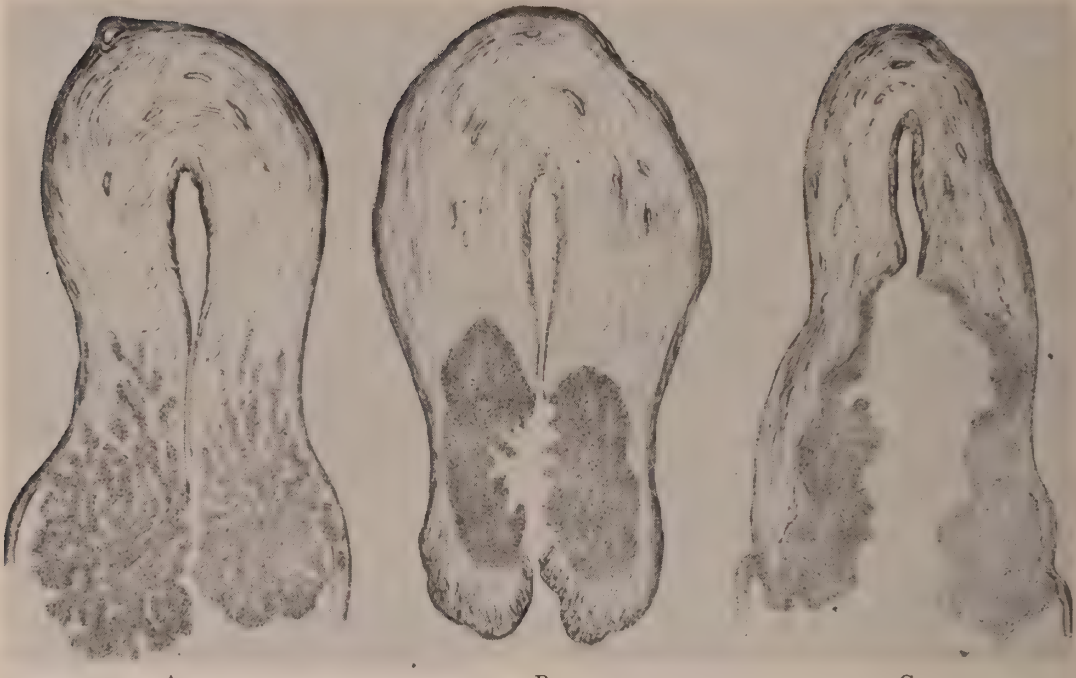

FIG. 1. Carcinoma of cervix uteri. proliferations in (A) portio, (B) cervical canal, (C) portio and cervical canal.

Pelvic Dose

The pelvic dose with roentgen grid therapy of radiation quality 1.0 mm. Cu half-value layer, 50 cm. skin target distance at cervix for 10,000 r in air, equivalent to 5,600 r average on the skin, through each of two pelvic ports, 10 by 15 cm., anterior and posterior, was as follows:

Anteroposterior Pelvic Diameter	Roentgen Dose
20 cm.	4,300
23 cm.	3,640
26 cm.	2,980

Additional fields were added wherever persistence of the disease and the clinical condition of the patient warranted further treatment.

Comment

The majority of patients in the radiotherapy department of our institution are afflicted with advanced cancer. They represent only a small fraction of chronic cancer hereabouts. The total number is approximately 75 per cent of all cancer patients extant. Their care is entrusted to the physician, and this is an imperative he will rarely dodge, for at the basis of all clinical endeavor to minister to the sick there lies a subconscious incentive to help. Without this incentive in which our entire function as healers is grounded, medical science could hardly have scaled the heights of its present pinnacle. All short cuts, therefore, advocated as expedients in advanced cancer, could only spell the end of the art of healing. This incentive places the physician in intimate relation to the arts in general, for all arts, by creative means peculiar to their nature, serve the enhancement and affirmation of life.

What the chronic cancer patients need most urgently is a warm and genuine interest in their plight. They are, for the most part, abandoned so one must assure them that their ailment can be palliated. With this brief introduction one invariably succeeds in banishing fear of impending doom. Fear potentiates existing pain due to the disease. By assuaging fear one creates an atmosphere of hope, thus rendering the task of managing the disease less onerous.

Second, and most important, from the point of view of advancing the well-being of the chronic cancer patient, is nutritional rehabilitation. Here striking results in combating anorexia and weight loss were achieved by the author through

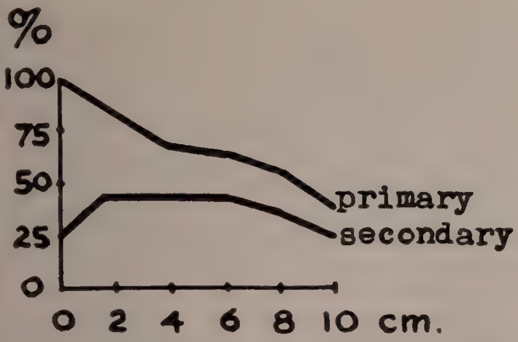

FIG. 2. Wide gap existing between primary and secondary surface densities at the surface means initial lowering of primary x-ray intensity at the surface.

the administration of large doses of Brewer's yeast, vitamins, and minerals.

In chronic cancer the malignant process has expanded considerably in volume. Surgery in these tumors was less feasible than roentgen therapy for in our experience it was less able to ferret out the cancer cell once it has become invasive. X-rays have, therefore, become the therapeutic agent of choice in these neoplasms. To enhance their effect on the tumor without impairing the normal tissues has been the primary purpose of our clinical investigations during the past twelve years.[3–5] These studies proved that advanced cancer will respond more readily when roentgen radiation is applied through a lead-rubber grid for adequate quanta can then be delivered safely across the barrier of normal tissues. Because the grid reduces the volume of tissues irradiated, this greatly limits absorption of secondary radiation in the skin and thereby raises the rate of transmission. A radical departure from conventional radiotherapy in this method is fractionation of the beam in space by a stationary, i.e., nonalternate, lead-rubber grid placed in the path of the beam. The grid is 8 mm. in thickness and does not transmit x-rays of the range of 200 kilovolts. We were led to assume, on the basis of our clinical and empiric experience, that the closely knit mesh of protected integument harbors an inherent recovery factor, and, therefore, a relatively unscathed blood supply route to the irradiated areas is kept open.

If, in order to disrupt the progression of cancer and outstrip its rate of growth, the main prerequisite is the delivery of adequate quanta into the tumor, then the grid is ideally suited for this purpose. It protects the skin bordering upon the irradiated areas and, by thus potentiating the healing process in the latter, creates a safe passage for such quanta. In addition, the carcinolytic effect is relatively enhanced with the use of a grid. The reason for this is the attainment of a more penetrating and homogeneous beam of x-rays. The grid affects penetrability because it reduces lateral scatter, thereby limiting the preponderance in the beam of the longer wavelengths. This results in a reduction of the average wavelength or, in other words, a relatively greater penetrability and homogeneity of the x-rays as they impinge upon the skin. And so the mechanism of action of the grid is double: (1) an enhanced effect due to the relatively greater penetrability and homogeneity of the x-rays and (2) the attainment of adequate quanta through greater intensity of the individual dose, for the x-ray streamers, traversing the tumor in a manner akin to radium needles, can now carry safely optimum intensities and so become centers of greater carcinolytic activity. The interstices between the x-ray streamers in deep-seated tumors are adequately covered by secondary radiation, emanating from these streamers. This is illustrated in Fig. 2 by the gradual meeting in the depth of the waning primary and the rising secondary energies. Conversely, in superficial tumors a uniform distribution of radiation can only be achieved with the aid of multiple converging beams filling the gap. The graphic demonstration of the distribution of the radiating energy in a phantom proves that all cancer from the level of the skin down to approximately 12 cm. is well within the range of the velocities of the secondaries to be adequately covered by their absorbed energies.

Summary and Conclusion

In our clinical experience the energy of 200 electronkilovolts applied through a grid proved sufficient to effect lysis of a malignant growth at whatever level it is found. This particle has the added advantage of exerting a relatively milder effect on the surrounding normal tissues in comparison with the damage it is capable of inflicting on the cancer cell. X-rays of this range are, therefore, a therapeutic agent par excellence for they can be applied over wider areas than is possible with higher energies, i.e., beyond the visible and palpable limits of a tumor to include regional metastases, without fear of injury to blood and connective tissue structures. Chiefly for this reason have x-rays of 200-kilovolt range attained a permanent place in our armamentarium to combat cancer.

As regards skin reactions, these are largely nonexudative in nature when the grid is applied through multiple ports with a consequently greater increase in depth dose as compared to skin dose.

Finally, the grid concentrates the radiating energy in the tumor proper and by delimiting its range contributes to the total absence of systemic reaction (radiation sickness) and blood changes.

The degree of resolution of the visible and palpable disease obtained in patients ordinarily not amenable to any other treatment should invite greater interest in the method of roentgen grid therapy which is relatively innocuous to the normal tissues and selectively destructive to the malignant process.

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Discussion

Sidney M. Silverstone, M.D., *New York City.*—I owe Dr. Marks double thanks, first, for the privilege of discussing his paper and, second, for his convincing demonstration of the usefulness of grid therapy over four years ago when in February, 1950, he presented his successful cases to us at the Mount Sinai Hospital. At that time an investigation into the value of grid therapy was begun under the direction of the late Dr. William Harris.

As a result of an extensive trial of grid therapy in about 300 cases, we came to an evaluation of this method and several practical conclusions. We found that grid therapy is essentially a method of increasing skin tolerance to x-rays in the 200 to 400-kilovolt range so that a greater dose can be administered to a tumor in depth than is possible by the conventional technics with radiation of this quality. Grid therapy appeared to be a simple, yet effective method of treating large single tumor masses through either one or two fields.

To take full advantage of grid therapy we found that we must preserve the grid pattern on the skin. This required that every grid opening be marked with a dye such as carbol fuchsin, and an attempt was made to replace the grid exactly at each treatment.

One would think that the grid pattern is preserved throughout the tissue irradiated at every depth. This is true only for a single treatment Even with painstaking care and precision technics, it is practically impossible to reproduce the grid pattern in depth at each successive treatment, although it can be done on the skin. This observation, however, is the "secret" of grid x-ray therapy. Preservation of the grid pattern on the skin makes possible the healing of an intense radiodermatitis by providing multiple small regularly spaced islands of epithelium which act as foci from which new skin can grow to fill in the denuded areas between them, very much like pinch grafts.

In the depth, on the other hand, the slight changes in direction of the x-ray beam and the slight changes in position of the patient result in overlap of maximum and minimum areas of dosage so that the result of multiple treatments with the grid is a blurring effect of the total dose in depth. The blurring effect is well marked even at a depth of 4 cm., sometimes less. Because of it our depth dose measurements with the grid are based upon a calculated weighted average of the open and closed field doses. Actually, the weighted average dose is equivalent to the conventional dose at the same depth on the basis of the fraction of the grid which is open. Since the grids we employ have a 40 per cent open field, the depth doses with the grid are 40 per cent of the conventional values. This important observation was made by our physicist, Dr. Robert Loevinger.

After an extensive clinical experience we now limit grid therapy to advanced cancer which cannot be treated successfully by any other method and which consists of a single tumor mass that can be encompassed by one field or cross fired by two fields. The safe maximum dose for each field depends upon the location in the body, the condition of the skin, the amount of subcutaneous adipose tissue, and the nature of the underlying normal structures. In practice the applicable areas are the neck, mediastinum, lung, posterior abdominal wall, pelvis, and proximal segments of the extremities.

In the pelvis the limiting factors are the subcutaneous tissue and the intestines. An adipose abdominal wall with folds of skin does not tolerate grid therapy well, and complications are liable to develop in the skin folds and in the fatty tissue itself. The underlying intestine, however, is the major limiting factor. While the skin may tolerate a grid dose of 15,000 r in five or six weeks, it is safer not to exceed 10,000 r because of the lower tolerance limit of the intestines. It is only in a suprapubic field in a nonadipose abdomen that a dose of 15,000 r can be well tolerated, and such doses are useful in the treatment of cancer of the bladder. The larger fields required for advanced cancer of the cervix or corpus uteri must necessarily include normal intestine in the grid beam. The safe dose is, therefore, much less and in most instances should not exceed 10,000 r. In the presence of a laparotomy scar, even 10,000 r may cause injury if there is reason to suspect that a loop of intestine is adherent to that scar. We have experienced severe intestinal complications with larger doses and large fields. There have been intestinal perforations, abscesses, peritonitis, and severe painful strictures. Consequently we are very strict in our indications for grid therapy in the pelvis.

Where grid therapy is feasible in the pelvis, we have frequently succeeded in obtaining good and sometimes excellent palliation. Advanced cases of cancer of the cervix, corpus, vagina, and bladder have been treated with good temporary results. It has also been possible to combine grid therapy with local radium therapy in many of these cases. Some of our most encouraging results have been obtained with cancer of the bladder in which both grid therapy and intravesical radium have been employed, sometimes with the addition of cervicovaginal radium. The results with ovarian cancer have been generally poor, probably because of the usual tendency of this tumor to extend widely throughout the peritoneum.

In general, if an adequate dose of radiation in a large tumor mass is biologically effective, the grid technic provides a single, efficient method of administering such a dose with radiation quality in the 200-kilovolt range. Dr. Marks deserves great credit for bringing this method to our attention so that we can add another weapon to our armamentarium against cancer.

One Doctor's Night

There was a time when we used to walk into our chemist's as bold as brass and write ourselves a prescription for sixpennyworth of barbiturate, but since the finger was laid on the barbiturates recently we slink in through the side door after looking round twice to make sure the street is clear. An even once inside our confidence is gone, and we bite our fingernails and look at our watch instead of reaching confidently for the prescription pad. We are not sure any more which barbiturate we ought to take. We made out a time-table recently to see whether we were the type that can't *get* to sleep, and needed rapid action, or whether we *wake* early and should use a longer-lasting affair. Unfortunately we really can't decide, so here it is, and perhaps someone can help us.

2300 hrs.—Finish reading improving and soporific Pelican: light out.

2305 hrs.—Wife initiates stimulating conversation re finance.

2345 hrs.—Financial position serious.

2350 hrs.—First guest leaves party two houses away: merry laughter.

0010 hrs.—Small daughter in tears: rescue expedition. Quote I want you to take my dolly out of my bed and put her on the floor unquote.

0025 hrs.—Second guest leaves party: perseverative slamming of car doors: car requires new clutchplates.

0040 hrs.—Third and final guest leaves: hosts set out for brisk walk with excited dogs.

0105 hrs.—Financial position desperate.

0135 hrs.—Starlings in chimney start prolonged fight threatening immediate descent into room.

0215 hrs.—Small son coughing hysterically in next room: rescue expedition. Quote my throat tickles unquote. Drink of water.

0235 hrs.—Coughing continues: further rescue expedition: after twenty minutes' search find small daughter's cough linctus in boot cupboard: dead wasp on cork.

0256 hrs.—Return upstairs: coughing stopped: small son asleep: what about Australian income-tax?

0320 hrs.—Six-engined bomber flies over house twenty-feet up. Quote what was that noise Daddy unquote.

0321 hrs.—Coughing begins again.

0350 hrs.—Sudden violent wind (force 7): doors slam, blind vibrates, photographs swept off dressing-table: break.

0355.—Shut windows.

0425 hrs.—Dead calm: suffocatingly hot.

0515 hrs.—Birds waken small daughter: carol service on landing.

0525 hrs.—Carols waken small son: train noises.

0630 hrs.—Children downstairs fighting: begin refreshing sleep.

0705 hrs.—Loud knocking: cries of "Post": registered sample requiring personal signature: wild screams of excitement: contents new hypnotic.

—*The Lancet, August 28, 1954*

An Evaluation of Rorschach Patterns in Patients with Headache Symptoms

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(*From the Headache Clinic, Division of Neuropsychiatry, Montefiore Hospital*)

THE relationship between somatic symptoms and disorders and personality factors continues to arouse considerable discussion. The growth, development, and refinement of technics and instruments for evaluation during the past decade, particularly the projective technics (best exemplified by the Rorschach technic as developed and modified by Beck,[1] Klopfer and Kelley,[2] and others), have made it possible to collect data which were amenable to objective, quantitative and qualitative analysis.

The basic question in the present study is concerned with the theory offered by many students of psychosomatic medicine which proposes that personality patterns or personality types exist or can be associated with specific organ dysfunction. For example, such a theory would offer the hypothesis that migraine headaches could be etiologically related to a specific personality pattern or structure or to personality traits such as ambivalence and/or repressed hostility toward parental figures.

Friedman and von Storch[3] in discussing the etiology and treatment of migraine and tension headaches state that "the importance of psychological factors in the etiology of migraine and tension headaches must be considered. In some patients external stress is enough to explain the symptoms but in the majority of cases we have to look within the individual to discover the sources of anxiety producing conflicts."

Numerous studies have been reported during the past thirty years designed to establish the presence or absence of significant relationships between psychologic, emotional, or personality factors and specific somatic syndromes. The findings in the majority of these studies have been based largely on subjective or clinical impression and observation; some reports included data obtained from psychotherapy or psychoanalysis; many were based on relatively few cases. Control of variables, objective evaluation, and quantitative analysis were usually lacking or inadequate with perhaps one or two exceptions. Bell *et al.*[4] surveyed the literature and listed some 45 studies in which various projective technics were used, including the Rorschach, to investigate relationships between somatic symptoms or disorders and test data. Among the disorders investigated in addition to migraine headaches were hypertension, arthritis, rheumatic heart dysfunction, bronchial asthma, peptic ulcer, spastic, mucous and ulcerative colitis, and neurodermatitis among many others. The authors point out that the results of such studies are so equivocal that there exists a serious need for "re-evaluation of the work done in the field to point the way toward improved experimental designs for future projects."

Method and Procedure

Psychologic test data were obtained for 100 patients of the Headache Clinic of Montefiore Hospital, of which 50 were diagnosed as patients with migraine headache and 50 as patients with tension headache. The diagnosis in each case was made by a staff physician on the basis of certain clinical criteria, as suggested by Friedman and von Storch.[3] The age range was from nineteen to fifty-eight for both groups.

For migraine headache the diagnosis was based on the following:

1. Prodromata, including gastric disturbances, scotomata, photophobia, hemianopsia, and other visual phenomena prior to onset of head pain.
2. Throbbing pain, usually unilateral on onset, followed by continuous ache.
3. Nausea, vomiting, and irritability at the height of attack.
4. History of headache in family or ancestry.
5. Relief with ergot derivatives (usually in about 85 per cent of cases treated).

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* By invitation.

Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Neurology and Psychiatry, May 14, 1954.

Tension headache was diagnosed on the basis of the following:

1. Absence of any physiologic, neurologic, or organic disorder or head injury (such as brain tumor, aneurysm, hematoma, hypertension, arteriosclerosis, etc.)
2. Absence of prodromata.
3. Head pain usually bilateral, occipital, or frontal.
4. Variable frequency and duration.
5. Presence of associated signs during headache, including generalized anxiety, nausea, and vomiting.

A Rorschach Test protocol was obtained for each patient plus one or more of the following additional tests: Thematic Apperception Test, Bender Gestalt Test, Figure Drawings, and the Wechsler-Bellevue Scale. Quantitative analysis of the test protocols included computation of means, standard deviations, and critical ratios of obtained differences between means. In addition, the following traits were evaluated qualitatively on the basis of the protocols as evaluated by the writer:* (1) rigidity of test behavior (flexibility), (2) emotional control and maturity, (3) hypersensitivity, (4) aggression, (5) hostility, (6) low self-esteem, (7) sexual immaturity or conflict, (8) need to conform to conventional pattern, (9) dependency conflict (passivity trends), (10) emphasis on somatic content, (11) anxiety trends, and (12) compulsive trends (especially achievement compulsion).

The selection of traits for evaluation was, of course, arbitrary and for the most part based on the literature. For example, Johnson[5] reporting on a study of migraine referred to the following traits or tendencies: "emotional turmoil," "overly concerned and sensitive to situations involving others than themselves." Wolff[6] described his group of headache patients as follows: "unusually ambitious; perfectionistic; poorly adjusted sexually; careful and economical; fussy, neat and systematic; cautious and circumscribed social relations; anxiety; resentment; tension; sustained state of emotional anticipation." Finally, Ross and McNaughton[7] reported the following for their group of headache patients: 'Hesitation but with persistence in face of emotional disturbance; sexual conflicts; systematic and perfectionistic; conventionality; rigidity; difficulty in emotional control."

Results and Conclusions

INTELLIGENCE TEST DATA.—Both groups of patients ranked in the high average group with respect to intelligence (I.Q. 110 to 118). The mean Wechsler-Bellevue Full Scale I.Q. for the migraine group was 118. For the tension group it was 112.

The migraine group average was, therefore, slightly above that for the tension group, but the difference was not significant statistically.

RORSCHACH TEST DATA.—Not one of the means for the quantitative elements on the Rorschach was found to be significantly different from the expected range, e.g., the mean number of responses expected for the general population is 20 to 25, for both headache groups the mean was 21; the average number of M responses expected is 3 to 4, for the headache group it was found to be 3 to 4, etc. Similarly, when the Rorschach Test means for the two groups were compared, no difference of statistical significance could be established. For example, the mean number of responses for the migraine group was 21; for the tension group it was 18. This difference was not significant when evaluated by the usual statistical procedures.

QUALITATIVE DIFFERENCES.—For patients with migraine headache the following qualitative tendencies were noted:

1. Rigidity of test behavior.
2. Excessively low self-esteem and tendency toward self-criticism and self-devaluation.
3. Hostile attitudes toward authoritative persons, especially the authoritative parent (usually the father) with evidence of a tendency toward repression and control.
4. Ambivalent attitudes toward passive and dependent figures, especially the passive parental figure (usually the mother but in some cases the father).
5. Aggressive tendencies which are controlled (in some cases with poor ability to control).
6. A need for systematized behavior, often approaching a compulsive need for generalized perfection.
7. A need to conform to conventional behavior patterns.
8. A need to control and repress emotionalized thought and behavior.

For the tension headache group similar tendencies were noted with perhaps somewhat greater variability as to degree. There was also evidence of greater tendency toward impulsive and extratensive behavior.

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* In several cases it was possible to compare findings with material obtained as the result of psychotherapy.

No evidence could be found in any of the protocols to suggest the presence of organic disease of the brain or central nervous system. As already indicated, the clinical examination in each case revealed no overt sign of cerebral or neurologic involvement.

The various traits found for both patient groups were compared with traits reported for other somatic symptoms and conditions. It was found that the most of the traits could be demonstrated in significant degree in other disorders, e.g., tendency toward conformity, generalized sensitivity, rigidity of test behavior, and tendency toward systematic and perfectionistic behavior, attitudes toward authority figures, and tendency toward persistence as reported by Ross and McNaughton,[7] Booth and Klopfer,[8] Prince,[9] and Kemple[10] in their studies of migraine headache, arthritis, rheumatic disease, hypertension, cardiovascular disease, neurocirculatory asthenia, peptic ulcer, and neurodermatitis.[11]

Comment

The present study is in essential agreement with the findings reported by most investigators as to specific patterns obtained by using objective technics for evaluation of personality patterns in patients with various types of headache. As already indicated, studies of the possible existence of specific patterns in somatic disorders based on such technics as the Rorschach[4] were essentially negative except for trends and tendencies toward certain types of behavior (e.g., the tendency to restrict and control emotional reactions). However, not one investigator was able to relate any such tendency to the somatic disorder under scrutiny. Whenever evidence of a possible relationship was found by an investigator of one disorder, the same or a similar one was reported for other disorders, e.g., Ross *et al.*[7] reported tendency toward excessive conformity for patients with migraine. This was also reported by Levy[11] for neurodermatitis patients and Mahoney and Bockus[12] for ulcerative colitis patients.

Alexander[13] has proposed a theory of specific personality types for each type of somatic reaction, e.g., he describes personality traits for the "ulcer personality." Yet many of the features included in his description are also reported by investigators of other disorders. With reference to headache patients as a group, although no generalized personality pattern could be found in the present study, certain tendencies, which are mentioned above, were found, including such traits as rigidity, conformity, sexual conflict, low self-esteem. However, many of these tendencies are included in Alexander's description of the "ulcer personality type" and his description of the "ulcerative colitis patient." In other words, the selection of specific organ or symptom, in this case head pain, cannot be accounted for apparently on the basis of personality type or structure alone.

Summary

In this investigation psychologic test data were analyzed for 100 patients with diagnoses of migraine and tension headache. The purpose was to explore the possibility that specific personality patterns and characteristics exist for headache patients in general and for the specific types of headache referred to above. The Rorschach Test protocols were utilized primarily to evaluate personality patterns. Ages ranged from nineteen to fifty-eight for both groups.

The data confirmed that headache patients as a group are above average in intellectual ability; the migraine group average was slightly higher than the tension group (but this difference was not statistically significant).

The quantitative data failed to reveal any significant differences in personality pattern between the entire group and groups studied by other investigators to determine whether any relationship existed between type of somatic disorder and personality patterns. Similarly, no significant differences could be found between two groups investigated when the Rorschach test data were compared.

On the basis of qualitative analysis of the data (including the test protocols and materials from psychotherapy) patients with migraine could be described as exhibiting tendencies toward (1) rigidity of test behavior, (2) low self-esteem, (3) controlled or repressed hostile attitudes toward persons identified as authoritative, (4) ambivalent attitudes toward persons identified as passive or dependent, (5) compulsive needs for systematized and perfectionistic behavior, (6) needs toward conformity with conventional or socially acceptable behavior, (7) a need to control feelings in general and to avoid emotional involvement with people. The tension headache group exhibited similar traits and tendencies but in lesser degree and with more variability than the migraine group. For example, some of the tension headache patients exhibited occasional ability to express hostility feelings, where the migraine patient almost invariably repressed such feelings or entertained feelings of guilt concerning them.

In view of the fact, however, that investigators of other somatic disorders have reported traits and tendencies similar to those listed above for the headache patient, it would be necessary to design a comprehensive investigation in which both quantitative and qualitative data would be obtained for headache patients and other patient groups and to evaluate the possible differences between such groups as to personality patterns. For example, as part of such a study, it would be necessary and desirable to obtain Rorschach protocols for patients suffering from other somatic disorders, such as neurodermatitis, and compare them statistically with those of headache patients. The authors hope to design and complete such a study in the near future.

The literature does contain one or two such reports, but in these cases the number of patients studied was too small to yield statistically valid data.

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Discussion

William L. Holt, Jr., M.D., *Albany.*—The authors are to be commended for their qualitative survey of 50 patients with tension headaches using Rorschach test protocols and other test data, although what use was made of the other tests aside from the Wechsler-Bellevue is unfortunately obscure. This reader would like to know how many of the four distinguishing criteria were considered a necessary minimum for establishing the diagnoses of migraine or tension headache. The fifth alleged criterion, nausea and vomiting, being present in both groups, is better disregarded.

I am also dubious as to whether the mean number of Rorschach responses was the same in the two groups or three less for the tension headache group as stated five lines later.

In their discussion the authors cite sexual conflict as a tendency in the personality pattern of headache patients. Unfortunately they give us no data on this point under their scrutiny, leaving our curiosity whetted but unappeased.

Fortunately they promise us a more extensive report in the future, in which more objectification may well be added.

Max Cooper, Ph.D., *Closing Remarks.*—The study was based on 100 (not 50) patients, 50 of whom were diagnosed migraine headache and 50 tension headache. The "other test data" referred to by Dr. Holt were, as indicated in the paper, utilized to evaluate the qualitative aspects of personality structure and to delineate, as much as possible, the tendencies reported. With reference to the mean number of Rorschach responses for the two groups, the paper reports under "Rorschach Test Data" that "the mean number of responses... for both groups was 21...when the Rorschach Test means for the two groups were compared... the mean number of responses for the migraine group was 21; for the tension group...18. This difference was not significant when evaluated by the usual statistical procedures."

With reference to the tendency toward sexual conflict, this is obtained only from the qualitative analysis of the data.

Arnold P. Friedman, M.D., *Closing Remarks.*—In both migraine and tension headache certain clinical features appear to be characteristic of each, although there are wide variations in each group, and the same individual may have both types of headache.

Migraine is essentially a clear-cut clinical entity, and the headache is characterized as paroxysmal, periodic, unilateral, and throbbing. It occurs against a background of relative well-being and is often preceded by an aura and is usually associated with vomiting and irritability. Tension headaches have no prodroma, are bilateral in nine out of ten patients, vary in their character and frequency, and have a variety of associated signs. The background of relativel well-being is seldom seen in people with tension headache. Nausea and vomiting may occur but are uncommon.

A Method of Determining Tubal Patency and Tubal Ciliary Activity

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The normal physiologic function of the fallopian tubes is dependent on peristaltic and ciliary activity, as well as on patency of the tube. Because of their importance in sterility work we are trying to establish a simple clinical method of determining not only patency of the tubes, but also the degree of ciliary activity present. It is possible ciliary activity may be too rapid, too slow, or absent, even with patent tubes. If ciliary activity is absent, it may explain the failure of some patients to become pregnant, even when all other factors are within normal limits. These patients may have some congenital defect in the tubes or an infection severe enough to damage the cilia but not to close the tubes. Again there may be enough functioning cilia to carry a fertilized ovum down the tube but so slowly that it becomes blocked and an ectopic pregnancy occurs. There may be such an entity as too rapid clearance time for the tubes, and a fertilized egg may be deposited onto a poorly prepared endometrium and be a cause of spontaneous abortion.

Renewed interest has been shown in tubal plastic surgery by gynecologists since the improved results obtained by Rock, Castallo, and others using polyethylene tubing. As new technics and other new substances are synthesized in the future, it will be important to have a method of determining which one is better able to return tubal physiology to normal.

We have begun a series of tests to see whether we can determine ciliary activity, patency of the tubes, and, possibly in the future, what is normal and abnormal ciliary activity in the tubes. In an effort to learn more about tubal physiology we have been using the following test to determine tubal patency and ciliary activity.

Material and Method

In a series of 26 patients six were tested in the office and 20 in the hospital. All these patients had normal-sized uteri which were free and anterior, and as far as could be determined, there were no adnexal or cul-de-sac abnormalities present.

The patient was instructed to take a cleansing douche after her period was over and to refrain from intercourse or the use of any oily substances in or around the vagina while the test was in progress. The test is usually performed between two and seven days following the completion of the last period.

A speculum was introduced into the vagina, lubricated by tap water only. The vagina and cervix were cleansed and painted with a suitable antiseptic solution. The anterior lip of the cervix was grasped with a tenaculum and pulled down. A screw-type cannula (Hudkin's) was introduced into the cervical canal. A 10-cc. Luer lock syringe was filled with a sterile solution of normal saline warmed to body temperature with just enough indigo-carmine added to color it. This solution does away with the hazard of gas or oil emboli.

When the injection was complete, the syringe was removed; the screw type cannula was left in place to hold the fluid in the uterus. A second tenaculum was then placed on the posterior lip of the cervix, and the anterior tenaculum was removed. After waiting for a period of about three minutes, the cervix was gently pulled down, and a 22- or 24-gauge long spinal needle was pushed through the cul-de-sac.

This puncture into the cul-de-sac is most easily made if one goes about $^3/_4$ inch below the vaginal cervical junction. The needle was then connected to a syringe and aspirated. The presence of blue-tinged fluid in the syringe establishes the fact that the tubes are patent. With the needle in place 8 to 10 cc. of sterile solution, consisting of neutral olive oil (29.5 per cent), distilled water (70 per cent), and a stabilizer, warmed to body temperature, were injected very slowly into the cul-de-sac. Then the needle was removed, and a dry cotton

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tampon was placed firmly against the puncture site. Following this, the screw cannula was removed.

The patient was instructed to remove the tampon that night. On the third or fourth day after this procedure, the patient was re-examined. A speculum lubricated with tap water was inserted in the vagina, and the cervix was exposed. The cervix and external os were thoroughly cleaned, and a pipet was then inserted well into the cervical canal.

The cervical canal accordingly was aspirated, and the secretions were placed on a glass slide and allowed to dry at room temperature. The slide was then covered with 8 to 10 drops of Sudan III solution, and after one minute the solution was washed off. Under the microscope in the positive cases the selectively stained oil droplets will have the appearance of orange-red globules. This is interpreted to mean that the fluid currents in the pelvis have directed the oil solution to the tubes and that the ciliary current in the tubes has carried the oil particles down into the uterus, a course of events which conforms to normal fertilization and transportation of the ovum.

In order to familiarize oneself with the appearance of the stained globules, some of the oil-water solution can be spread on a slide, allowed to dry, and then stained. Examination of such a sample specimen will facilitate the recognition of the globules in subsequent test specimens.

The test is very sensitive, and all the instruments used (slides, pipets, etc.) should be grease-free. To insure this, they should be passed over a flame before use. Furthermore, as it was pointed out before, the patient must be instructed not to introduce any oily substances into the vagina from the time of her last period until the test is completed.

When we initiated this series of cases, we were concerned with the possibility that the oil solution might leak out through the cul-de-sac puncture. Therefore, we put a tampon in the cul-de-sac and covered the cervix with a plastic cap. We found, however, that this puncture wound did not leak since we have not been able to obtain positive tests from the vagina or cul-de-sac but only from the cervix. At the present time we do not use a cervical cap. The tampon is placed in the fornix at the site of the needle puncture to control any bleeding that may occur.

Lately we have been using a solution of Bio-Sorb, the innocuous glove powder used in most operating rooms, which is a starch derivative. This may be tested for by staining the cervical secretion with Lugol's solution. Needless to say, in doing this test all powder should be kept from the area during the test so as to rule out any false positives.

When inserting the needle in the cul-de-sac, if the syringe is left in the needle with a few cubic centimeters of air in it, you can tell when you are in the peritoneal cavity by tapping the end of the syringe barrel. It will bounce while in tissue but slide into place once the peritoneal cavity has been entered.

We have not entered the bowel as yet but have worried about it. Our general surgeons all tell us that nothing would happen if this did occur.

We consider these only as screening tests at the present time. Failure to find colored saline in the cul-de-sac would call for further tubal patency studies.

Results

In this preliminary study one patient developed an ectopic pregnancy six weeks after the test. No oil inclusions were found in the tube at microscopic study. She later became pregnant again and is now carrying the pregnancy without difficulty.

Two others have become pregnant. To date the pregnancies of the latter have been uneventful. One patient, who had a tubal plastic procedure done six years ago, who has not become pregnant and has tubal patency of both tubes on hysterosalpingogram, submitted to the test. The oil solution was not recovered in the cervical mucus on the second, third, or fourth day after the test. All the other cases gave positive results. As I have inferred earlier, these were all hand-picked cases with no palpable pathology in the pelvis.

Comment

In conclusion, I should like to add that besides giving us some information about tubal patency and tubal ciliary activity, this procedure may also provide additional information about female infertility.

It seems to us that now we are in a position to prove whether there is any therapeutic as well as diagnostic value in tubal insufflation tests and salpingographies, procedures which require forcing substances through the fallopian tubes.

We propose to divide our cases with essentially similar physical findings into two groups. One group would be subjected to the usual insufflation tests or salpingographies to establish tubal patency, whereas the second group would have just the introduction of the test solution in the cul-de-sac. Both methods would determine whether the tubes are patent or not, but the former requires pressure during the course of the procedure, while the latter does not. Ultimately as one evaluated the pregnancies that ensued following the tests in each group, one could determine whether the incidence of pregnancy was higher in either one or whether it was the same in both groups. Furthermore, by using varying amounts of the solution with different or staggered periods of recovery, it is conceivable that ciliary activity may be tested as normal, subnormal, or abnormal.

At the present time it can be stated that plastic repair of closed or defective oviducts has not been too successful. It seems to us that the method we have described will be of value, not only in comparing the results of the various procedures used in studying tubal patency, but also as an index of the restitution of ciliary function in each case.

It is our hope that this preliminary report will merit the attention of others interested in the field of infertility and sterility in order that sufficient data will be accumulated to establish its significance.

1801 K STREET N. W.

Methods for Detecting Auditory Defects in the Young

Five-Minute "Alert"

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SINCE the more elaborate audiometric methods require special training and apparatus, I shall not discuss them here except to say that whereas they are fundamental in estimating the hearing acuity of school children, they are only supplemental in testing the infant. In infants they are not the methods easily enough available for universal use and probably never will be. Some, like the psychogalvanic variations with skin moisture response, are often so uncertain and so involved with the startle response that they are sometimes more useful as placebos to help the emotional parent than to aid the deafened child. On the other hand, most of the methods for detecting deafness in younger school children do not differ basically from those employed for detecting deafness in older children and adults. Their value is not limited to the detection of deafness; they enable us to determine the degree and pattern of deafness and aid us in diagnosis, prognosis, treatment, and management.

Merely to detect even moderately severe deafness is usually not difficult. Generally all that is necessary is to observe that on repeated trial ordinary noises or speech are not heard as well as they should be expected to be heard. In other words, in order to hear a noise or to hear and understand speech the child has to be closer to the noise or the speaker than other supposedly normal-hearing adults or children, or the child has to turn its head to hear better. To determine accurately how much hearing a child possesses monaurally and binaurally is often not so simple, especially in children below the age of five years.

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Moreover, the standards used should be different because children with no defect in hearing on the average have a 10 to 15 per cent greater hearing capacity than adults. This fact is commonly forgotten.

There are three main reasons for failing to detect early auditory defects in children:

1. Parents are usually near the child during most of the day and night, and when they are not near the child, they are less apt to expect the child to hear them unless they raise their voices.
2. Parents are apt to speak quite loudly when they wish the child to hear them, especially if they demand obedience, and even a severely deafened child can hear a loud voice.
3. Therefore, parents may not notice or may not admit that their child shows any evidence of deafness, even though they may have had evidence of it for several years.

In little children it is of more practical importance to detect deafness than to try immediately to measure it accurately. Simple qualitative tests are sufficient to detect severe and even moderate losses of hearing. Elaborate methods or apparatus are not essential; in fact, they may tend to produce very misleading measurements because the little child may be so distracted by or fearful of the methods used that severe emotional resistance is engendered. The methods employed should, therefore, be those that do not cause apprehension or emotional upsets. It follows that tests are best carried out while the child is in a familiar environment with the parent.

If a child is out of sight of the speaker and continually fails to respond to speech or to hear familiar sounds such as a passing automobile, an airplane, a distant church bell, a barking dog, the footsteps of an approaching parent, a telephone bell, the suddenly turned on moderately loud radio, and other common sounds, that child is either deafened to some extent, or he is not alert or not listening as a normal child usually does. In any case such a child should be carefully tested to determine definitely whether there is any deafness and, if so, how much.

Mothers may be loath to have elaborate hearing tests done unless some ear disorder is made apparent to them, but the intelligent mother is well fitted and is in truth usually the first one likely to discover an early auditory defect, especially if she is educated sufficiently to realize the importance of giving some attention to her child's hearing.

The subcommittee on the Hard of Hearing and Deaf of the Medical Society of the State of New York* is appealing to all doctors to alert parents to the importance of checking their child's hearing in the ways suggested during the first six months of the child's life. Testing the child's hearing can easily be made a game that the child will enjoy. It will then gradually condition the child to pay attention and to listen better whether or not his hearing is perfect. Subsequently during the first to the fifth years of life the child's hearing should be at least casually checked by parents at frequent intervals and carefully checked once every two or three months. To do this requires only a few moments, but it may uncover a hearing defect which, if not discovered early, could cause crippling deafness. It might even enable the doctor to prevent any permanent deafness. It is the only safe way to find out if the baby has a hearing defect in time for the family doctor, the pediatrician, and the otologist to be of greatest service.

When the child reaches school age, the various audiometric tests are indicated, but they are not of much use before kindergarten age. Of course, if a child is stone deaf, the deafness is irreversible, and nothing will then restore the hearing. But the doctor and the parents should make sure whether or not the deafness is total. They should be informed that the child can and should be guided and especially trained to speak and to read lips, to look and to pay attention, and to lead a happy and productive life. To this end the child should attend a nursery school for the deaf, preferably when it is two and a half years old but at latest before it is three years old.

Summary

Prekindergarten detection of ear disease and deafness and, at any age, early detection and diagnosis constitute the crux of the problem in prevention and in alleviation and rehabilitation. Let us all spread this information widely and repeatedly.

104 East 54th Street

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* Subcommittee on the Hard of Hearing and the Deaf, Council Committee on Public Health and Education, Medical Society of the State of New York: *Members*—Charles A. Anderson, M.D., Brooklyn; Greydon G. Boyd, M.D., New York City; Karl W. Gruppe, M.D., Utica; Gordon D. Hoople, M.D., Syracuse; C. Stewart Nash, M.D., Rochester. *Consultants*—Clarence O'Connor, Ph.D., Lexington School for the Deaf, New York City; Mrs. Eleanor Ronnei, New York League for the Hard of Hearing, New York City. *Chairman*—Edmund P. Fowler, Sr., M.D., New York City.

Management of Open-Angle Glaucoma

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OPEN-ANGLE glaucoma, or glaucoma simplex, is by far the most common form of adult glaucoma encountered. It is insidious in its onset and difficult to control when well established. Since the majority of eyes are first seen in the later stages of glaucoma, the problem of management is considerable and will undoubtedly remain so, human nature being what it is. In order to insure the best results, open-angle glaucoma must be treated early, and that means awareness on the part of the patient and thoroughness on the part of the ophthalmologist.

Increased intraocular pressure is the common denominator of all true glaucomas. Without it glaucoma does not exist. This automatically excludes low-tension glaucoma or pseudoglaucoma and forces one to prove any tentative diagnosis by a painstaking search over the twenty-four-hour period for that time when the patient's tension is unduly increased. Increase in tension is a relative thing; it may mean a rise over an arbitrary figure such as 30 mm. Hg, or it may mean only an increased lability such as a swing of more than 4 mm. Hg. In any event a complete tension study must reveal abnormal behavior to justify the diagnosis of primary open-angle glaucoma.

Tonography has provided another means of evaluating the glaucoma by demonstrating that the facility of aqueous outflow is always reduced in untreated cases of this type. As in all tests or measurements care must be taken when the figures lie in the borderline zone between normal and subnormal, but further study usually gives the right answer.

The facility of outflow has been found to vary from time to time in normal eyes, sometimes even increasing in effectiveness under stress such as the water-drinking test. This is interpreted to mean that it is primarily a physiologic function with a certain amount of adaptability until it is rendered less effective by disease. Even in early glaucoma it shows a certain amount of variability and responds to miotic medication by an improvement in efficiency. Later on, the improvement is less marked until, finally, medication has no appreciable effect.

If this facility of outflow is interpreted as the result of resistance in the trabecular spaces, it seems logical to assume that early variable changes which are initiated by the glaucoma or are ushered in with it are primarily physiologic. Not until later, as the glaucoma progresses, do they become organic and permanent. It is not enough, therefore, merely to keep the tension at a low level if with a change in the medical treatment the facility of outflow also can be improved. By the same token a moderately increased tension is of less concern as long as the facility of outflow remains good.

The field loss which occurs in glaucoma may justly be called the crux of the whole situation. Unless further loss can be prevented, the glaucoma cannot be considered under control, even though the tension be brought down to a low level. One need only recall those pitiful cases which continue to lose field and eventually central vision in spite of tension control to realize that there is no direct relationship between the amount of field loss and the height of the tension. This is tantamount to saying that some unknown factor is at work, some factor which causes both increased intraocular pressure and field defects.

In spite of many attempts to correlate general and ocular vascular changes with glaucomatous changes, there has been little convincing evidence, and the hope of preventing field loss by some direct method of attack remains as uncertain as ever. Fortunately, however, an indirect attack by controlling the elevated tension does appear, in the early stages at least, to have an effect upon the field changes. As pointed out before, early tension variations, including the facility of aqueous outflow, appear to be more physiologic in nature than later on, and it seems possible that if tension control can be improved physiologically by medical treatment, other functions of the eye, such as the preservation of the field of vision, might share in the improvement.

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The earliest field defect attributable to glaucoma appears to be a small indefinite scotoma between the upper pole of the blind spot and the fixation point. It is often evanescent and reversible and must be searched for with great care. If it cannot be brought out with a small white test object, it may sometimes be discovered by a blue test object on a gray screen and may even be seen to have a connection with the blind spot. It must be realized, however, that there is no typical field pattern that is pathognomonic of early glaucoma.

Later on, when the glaucomatous process, whatever it is, has passed from physiologic into organic changes, the field defects begin to assume the classic shapes that have been described so often. It is well to remember that these shapes may be modified by other factors, such as opacities in the media, especially cataract, miosis and artificial myopia induced by miotics, sensory adaptation, and the inherent difficulties of interpretation of a test which is primarily subjective in nature.

Careful, repeated field studies are, therefore, important and essential to a knowledge of the efficacy of treatment. But since the field loss is often slow in developing, other criteria must be used in the meantime. Gonioscopy can be passed over quickly. In primary open-angle glaucoma all the angle structures are easily seen and appear normal. It is only when secondary factors like inflammation and adhesions appear that the examination shows anything unusual.

Glaucomatous cupping of the nerve head also progresses too slowly to serve as a yardstick in management. It is not present in the very early cases so when it does appear, it is evidence of established glaucoma. Its appearance is often deceptive and bears no direct relationship to the height of the tension or to the amount of field loss. It must be differentiated from a physiologic cup, especially in high myopia, atrophic cup, coloboma, cavernous atrophy, and congenital pits of the optic nerve. Definite atrophy does not appear early in open-angle glaucoma; early atrophy is more suggestive of the acute congestive iris-block type.

Since the only known way of managing the glaucoma appears to be in the control of the tension and its mediator, the facility of aqueous outflow, it is obvious that the tension behavior must be understood and appropriate measures applied to each individual patient. One of the most important characteristics of the tension is its phasic variations which differ from one patient to another and may also vary in the same eye at different periods. As a rule a twenty-four-hour curve suffices to discover the hours of rising and falling tension and helps one avoid the error of missing the time of highest tension when the eye is under its greatest strain. Failure to recognize this daily cycle and to provide relief at the proper time may well account for the eyes that always have a low tension during office hours but go on relentlessly to more advanced glaucoma.

The usual custom of dividing the doses of a miotic equally throughout the waking hours is meaningless unless the instillations happen to coincide with rising tension. A study of the phasic variations will indicate the periods of greatest danger and thus show the times at which the drops are needed most.

Miotic therapy has long since passed the stage where it is used for miosis alone, but its real modus operandi is still obscure. It is sufficient in this discussion merely to state that miotics are used for their cholinergic properties, to simulate the action of intact parasympathetic function. In this group pilocarpine, carbachol, Furmethide, and Mecholyl act directly upon the effector cells. Eserine, prostigmine, Floropryl (DFP), and others act indirectly by inhibiting cholinesterase and permitting the natural acetylcholine of the eye to act without interference. Pilocarpine is the most reliable and best tolerated for long-term use, although occasional alternation with other members of the group often helps. When the strength of the medication or the number of daily instillations has to be increased materially, the eye is not responding properly. Better control is often obtained by combining the miotic, all of which are known vasodilators, with a vasoconstrictor like adrenalin or weak Neo-Synephrine.

The use of adrenergic blocking agents, such as ergotamine tartrate, priscol, and dibenamine has not proved entirely satisfactory, especially as a clinical procedure.

The only new medication in glaucoma is Diamox, a carbonic anhydrase inhibitor, that acts as a diuretic and lowers the tension remarkably in some cases. In conjunction with miotics it can lower the tension 10 mm. Hg or more in open-angle glaucoma, but it tends to be self-limiting and gradually loses its effectiveness.

Large doses of 250 mg. administered many times a day were used at first, but it is now believed that smaller doses of 125 mg. spread out over the twenty-four hours and administered as few times as necessary are more effective for a longer time. Diamox does not replace miotics, but it gives an additive effect by reducing the flow of aqueous. It may be noted in passing that it is of great value in reducing the tension during an acute attack of congestive glaucoma and in secondary glaucoma, especially following uveitis. The side-reactions are not alarming, paresthesia of the fingers and toes and occasional slight nausea. Diuresis is not uncomfortable, but since it is accompanied by anorexia and adipsia, the patient loses weight.

It must also be remembered that Diamox is a sulfa preparation and, as such, should not be used indiscriminately.

Provocative tests can play a part in the management of glaucoma as well as in making the diagnosis. In open-angle glaucoma the water-drinking test is the most reliable because it does not depend upon the phase of the tension behavior for its results but tends to give a positive rise whenever the tension is not under control. Perhaps it throws a greater burden upon the eye than would ever be encountered in ordinary living, but it serves to prove the effectiveness of treatment if it is negative with medication and positive when none is used. Equivocal results must be repeated, but in conjunction with measurements of the facility of aqueous outflow and tension the water-drinking test is a most important aid in management.

At this point it is customary to dwell upon the general health of the patient and to suggest innumerable supportive measures, but since there is nothing specific that can be recommended, the idea can be dismissed with the comment that the ophthalmologist is also a physician and should be aware of the patient as well as of his eye. One word may not be amiss. The patient and his eye will respond better if he is not placed under undue restrictions but can live and eat and drink as normally as possible.

The management of open-angle glaucoma is designed to maintain the integrity of the eye by medical means as long as possible and may be considered satisfactory as long as there is no progressive field loss, even though the tension is slightly increased. When the field loss continues and the tension remains high, medical therapy has failed, and one must resort to operation. But when the tension is low, even with continued field loss, operation will not help.

121 East 61st Street

Discussion

Everet H. Wood, M.D., *Auburn.*—I should like to discuss the presentation from two separate angles. First, I shall speak for a minute about a phase of the practice of ophthalmology, and indeed general medicine, that is commanding more and more attention in medical education—the distinction between the scientist and the pure practitioner. The scientists are likely to be concentrated in our large cities and large medical centers and have easy access to large staffs and much equipment which the smaller city practitioner cannot get to or get his patients to without great expense and inconvenience. Nevertheless, he is confronted with the same distressing conditions to treat, in smaller numbers perhaps, but still equally as important to the individual concerned.

Glaucoma of the wide angle variety is one of the most distressing and difficult conditions the small city practitioner has to manage. It becomes the arduous task of the clinician in such a circumstance to try to keep pace with the ever-expanding literature and to choose, from the multiplicity of ideas and theories presented, those which will be usable in his hands, often without the aid of assistants or house staff in the hospital. The task many times becomes confusing and often almost overwhelming because every conscientious ophthalmologist desires to be as thorough as possible. I think it is the constant fear of us all that we will fail to make the diagnosis of glaucoma as early as we should for the best chances of good results from its management. General résumés such as Dr. Knighton's are inestimable in their value toward helping the clinician make his choice.

Second, I think Dr. Knighton has passed over very lightly a most important aspect of the management of glaucoma, and that is the patient as a whole and as an individual. We, as ophthalmologists, are far too prone to get into what I like to term an ophthalmologic rut, paying far too little attention to the general condition of the patient, not only physically but mentally and socially. It is well known that unresolved anxieties are often very dangerous companions to a developing glaucoma, and some effort on the part of the ophthalmologist to uncover such states will be very rewarding in his management of the glaucoma.

Is There a Significant Relationship Between Hyperinsulinism and Multiple Sclerosis?

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In a recent communication to this Journal, Abrahamson[1] reported so consistent an association between hyperinsulinism and multiple sclerosis as to warrant the statement, "...hyperinsulinism may be a *sine qua non* for the diagnosis of multiple sclerosis..." A careful review of the periodical literature reveals no other contribution supporting this astonishing claim which, if verifiable, is both original and important.

It may, however, be relevant to direct attention to Abrahamson's other contributions relating hyperinsulinism to such diseases as rheumatoid arthritis,[2] acute rheumatic fever,[3] asthma,[4] peptic ulcer,[5] and to certain neuroses.[6] While these claims tend to qualify one's enthusiasm for the proposal which associates hyperinsulinism with multiple sclerosis, the magnitude of the multiple sclerosis problem, involving as it does an estimated 250,000 persons in the United States, makes it imperative that every published statement bearing on the problem be carefully scrutinized in order that no significant datum be inadvertently overlooked. This becomes the more necessary when so doctrinaire a statement as that quoted above is made, referring as it does to a disease so poorly understood and for the victims of which there is presently so tragically little to offer in the sense of a specific therapy.

In his communication, Abrahamson stated that by using an original, unpublished method for glucose determination, in each of 126 cases of multiple sclerosis,

> ... it has been possible to establish evidence of functional hyperinsulinism and an ancillary hypocalcemia. This was found to be not a statistical trend but what mathematicians call "a one to one correspondence."[1,*]

Abrahamson's rationale for associating hyperinsulinism with multiple sclerosis is predicated on his opinion that central nervous system metabolism is limited to glucose[7] and that in the hypoglycemic state cerebral vasospasm occurs. With specific reference to these claims, Kety[8] has commented that the central nervous system is not limited to glucose for its metabolic requirements and that evidence available since 1941 indicates that hypoglycemia does not produce vascular spasm. On the contrary, a slight increase in cerebral blood flow follows insulin induced hypoglycemia.

To support his argument Abrahamson describes fewer than 5 per cent (6 of 126) of the cases on which his claim is premised. Careful review of these case reports makes it almost impossible to credit Abrahamson's claim associating hyperinsulinism with multiple sclerosis. One of the cases (Case 1) was described on May 22, 1952,[9] as *not* having Schilder's disease but actually as an example of hyperinsulinism. On July 1, 1952, Abrahamson[10] stated that this case had frequently been diagnosed at the Veterans Administration as a case of Schilder's disease. These earlier observations are not mentioned in the report where this case is presented as an example of multiple sclerosis. Another case (Case 5) is clearly not multiple sclerosis but, on the data given, a post-traumatic monoplegia. There are no data for the period of observation for Case 2; Case 4 was followed for twenty-six days; there is no information as to the length of observation or the treatment for Case 6. This is the body of information on which this radically new theory is proposed.

Abrahamson gives information about his patients with multiple sclerosis for a total of eight patient-months. Among those who are trying to develop criteria for the assay of suggested modalities for multiple sclerosis, it is the consensus that 150 to 250 *patient-years* of careful clinical study, using placebos and double blindfold methods, are minimal for an accurate assay of any pro-

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[*] It is pertinent that in 1951 Abrahamson also wrote: ". . . all these considerations lead to the possibility that *rheumatoid arthritis* might be accompanied by hyperinsulinism. If there is any merit to this hypothesis, it must be supported, not by a statistical trend, but by complete correspondence."

TABLE I.—Blood Sugar Levels For 10 Multiple Sclerosis Patients*

Clinic Number	Fasting Blood	½-Hour Blood	1-Hour Blood	2½-Hour Blood	4-Hour Blood	6-Hour Blood
367	100	168	193	67	100	97
508	109	168	160	124	97	95
135	106	117	111	92	70	114
99	120	164	150	117	95	114
156	120	193	182	81	86	120
442	103	193	164	68	109	120
158	103	135	126	100	97	95
70	139	178	120	116	106	110
155	103	178	178	103	92	120
68	109	210	160	120	81	100

* These data were reported by Dr. W. Paxton Parker of the Multiple Sclerosis Research Clinic, Boston, Massachusetts.

All patients fasted from 10 P.M. of the night previous to the day of testing until 9 A.M. when 100 Gm. of well-dissolved glucose flavored with unsweetened lime juice was given orally. Blood sugar determinations were done at the intervals shown in the table by the Folin-Wu method using a photoelectric calorimeter. Results are expressed as mg per 100 cc. blood.

posed new treatment. It must be recalled that multiple sclerosis is a disease extremely difficult to diagnose in the first place and to disprove when, in atypical examples, the diagnosis has been ascribed to any individual. There are those, among whom may be included Marks,[11] Zimmerman,[12] and Kurland,[13] who consider that multiple sclerosis may not be a narrow clinical entity but a broad and nonspecific syndrome embracing the reaction of the central nervous system to various insults.

The careful student of this problem does not have to be reminded that multiple sclerosis is, by definition, a disease characterized by remissions and exacerbations, unpredictable for time or for magnitude of symptomatology. It is particularly pertinent that patients with multiple sclerosis, stimulated by exposure to almost any new and optimistic physician and certainly to any new regimen which is enthusiastically advocated, are prone to report subjective and often apparent objective improvement. In 1936 Brickner[14] published a comprehensive review of over 100 forms of treatment which had been described in the literature, and three years later Putnam,[15] who analyzed them statistically, found that reported improvement from such treatments corresponded almost exactly (48 per cent) with the frequency with which the initial symptom complex of multiple sclerosis spontaneously goes into remission.

Schumacher, whose review[16] of the status of multiple sclerosis is a classic, has commented:

> . . . I would not approve . . . trials of therapy unless investigator . . . can present *first* a reliable way by which the results of therapy can be determined . . . there is no satisfactory way of estimating (the) fundamental effect on the course of the disease save for very large groups of patients over very long periods of time. What can still not be determined by any short-term method is whether benefit is due to the therapy or coincidence. . .[17]

The foregoing discussion raises many questions as to the relevancy of the data submitted but admittedly does not defeat Abrahamson's claim that hyperinsulinism can always be demonstrated in patients with multiple sclerosis. The rhetorical dilemma here is that the level of hypoglycemia which Abrahamson sets as denoting hyperinsulinism is 70 mg. per cc., and he stipulates that the test must not be repeated. He thus puts into the hyperinsulinism range a very large number of persons who are ordinarily considered euglycemic* and prohibits attempts to verify such observations.

Abrahamson, therefore, makes his diagnosis, at least in part, on blood sugar levels barely lower than those ordinarily considered to be within normal limits. When shown the data which are included in Table I, in which few reports fell in the range of 70 mg. per 100 cc. or lower, Abrahamson stated that the differences probably were due to the fact that the observations were made on blood samples drawn by venipuncture, trauma which in his judgment is adequate to release liver stored sugar. This writer learned, to his great surprise, that the less traumatic method which Abrahamson employs is to inflict a single fingertip puncture sufficiently deep so that it can be bled, as required, for six hours, and that he does not feel that dilution by serum or tissue fluids is material.[19]

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* The late Arthur Hertzler once introduced an elaborate nomenclature for thyroid disease to which a certain surgeon objected, saying that he classified thyroid as hypo- or hyper-, smooth or nodular. Hertzler said that this was like the little boy who called all animals "horsies" or "doggies"; when he grew up, he would require an enlarged classification.[18]

TABLE II.—SIX-HOUR GLUCOSE TOLERANCE TEST ON FOUR MULTIPLE SCLEROSIS PATIENTS*

	Fasting	1/2 Hour	1 Hour	2 Hours	3 Hours	4 Hours	5 Hours	6 Hours
Case 1	80	120	134	122	88	86	50	50
Case 2	72	139	202	131	89	46	61	60
Case 3	78	151	252	266	160	37	53	64
Case 4	61	157	122	100	82	55	66	66

* These data are obtained from the Department of Laboratories, Jewish Chronic Disease Hospital, Dr. Bruno Volk, director.

It is difficult to imagine that any reputable clinic would rest a diagnosis of hyperinsulinism on such criteria. Opinions of several authorities were sought, and the following, typical response is from the Mayo Clinic:

> The diagnosis here is made on the basis of the precipitation of a convulsive attack during a 72-hour fast, secondly the existence of a blood sugar below 40 mg. per cent, and thirdly the prompt relief of the symptoms produced by the fast with the use of intravenous glucose. Here frequently blood sugars at 60 mg. per cent are seen in individuals late in the day without symptoms. A blood sugar of 60 mg. is not, therefore, thought to be of diagnostic significance.[20]

In August, 1952, at the request of the Medical Director of the National Multiple Sclerosis Society, the Multiple Sclerosis Research Clinic of Boston undertook to perform six-hour glucose tolerance tests on ten patients with multiple sclerosis who had been carefully evaluated by the methods proposed by Alexander.[21] These studies were supervised by Dr. W. Paxton Parker, a skilled neurologist, who has devoted considerable time to the problem of multiple sclerosis; the results are given in Table I. It will be noted that three of the ten patients, at a single determination for each, had levels of 70 mg. per 100 cc. or less. None of the glucose tolerance curves in any way suggests hyperinsulinism.

It is, on the other hand, a simple matter to secure flat responses to glucose stress in patients with multiple sclerosis, as it often is in most chronic and debilitating diseases. The ten patients studied in the Boston Clinic and reported in Table I were relatively well. For contrast, studies were done of four multiple sclerosis patients who had been chronically sick for many years. These, also carefully studied from the multiple sclerosis point of view, were in the service of Dr. A. Rabiner at the Jewish Chronic Disease Hospital. The data in Table II were supplied by Dr. Sidney S. Lazarus whose comment is cognate:

> With reference to the results of the six-hour glucose tolerance test done on four of our multiple sclerosis patients, it seems to me that in view of the low values obtained four, five, and six hours after glucose (was administered), it is possible that these patients may have a relative excess of insulin production. However it is also perfectly possible that these patients suffer from some defect in pituitary-adrenal function or that these findings are a result of a general debility associated with their neurological condition.[22]

In this connection, Dr. Leo Alexander has recalled that flat glucose curves were once observed among schizophrenic patients at the Worcester State Hospital. The nonspecificity of such findings was clearly demonstrated when, at the suggestion of Dr. Roy G. Hoskins, the patients were put on an active exercise program, and the glucose tolerance curves promptly reverted to normal levels.[23]

Summary

1. The criteria for the diagnosis of hyperinsulinism proposed by Abrahamson have been found inadequate.

2. The sample of multiple sclerosis cases reported by Abrahamson is inadequate both for number and duration of observation.

3. The data submitted by Abrahamson do not support his contention that hyperinsulinism is a *sine qua non* for the diagnosis of multiple sclerosis.

4. As in many debilitating states, relatively flat and moderately hypoglycemic levels may occasionally be seen in patients with multiple sclerosis. With reference to establishing that diagnosis, hyperinsulinism is not a *sine qua non*, but when observed in a multiple sclerotic patient, it is probably a *non sequitur*.

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(*See Correspondence, page 3126, for comment by Dr. Abrahamson.*)

The Trichomonacidal Activity of Milibis (Glycobiarsol)

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Despite the fact that Trichomonas vaginalis was discovered by Donné in 1886 and the clinical significance of vaginal infection with this flagellated protozoan parasite has long been recognized, T. vaginalis still remains a nuisance in gynecologic practice. Davis and Grand[1] recently reported that T. vaginalis was found in 7.4 to 29.5 per cent of vaginal smears examined in various laboratories in the United States. There is evidence that one in every five women are infected with this parasite, irrespective of economic status or color.[2–4] Evidence is also accumulating that trichomoniasis of the male urinary tract and of the prostate is more common than is generally suspected.[5] Trussell[6] has reviewed the extensive literature on both experimental and clinical trichomoniasis.

At present it appears to be the consensus of gynecologists that a fully satisfactory solution to the treatment of vaginal trichomoniasis has not been found. In patients with trichomonas vaginitis, suppression of the parasites may be readily attained, but prompt recurrence due to a few survivors frequently presents an annoying therapeutic problem. The mucous secretions constitute a protective habitat, and nonspecific factors which affect this menstruum have played an important role in symptomatic treatment. However, the creation of an unphysiologic hydrogen ion concentration or excessive dryness has tended to substitute other annoyances for those of the trichomoniasis. Treatment by means of systemic therapy has not been effective, and the local application of soluble trichomonacides has had only limited success.

It is the purpose of this report to record laboratory observations on the trichomonacidal activity of Milibis* (glycobiarsol). It is generally accepted that trichomonad parasites of rodents, man, and monkeys are closely related. Hegner and Eskridge[7] found that 85 per cent of the thousands of rats which they used in their studies were infected with trichomonads, and they successfully cross-infected rats with trichomonads from fowl and from man for use in testing drugs. In our own laboratory we have found the golden hamster, Cricetus auratus, to be more suitable than rats for screening drugs in vivo for activity

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* Milibis is the Winthrop-Stearns Inc. brand of glycobiarsol.

TABLE I.—IN VIVO TRICHOMONACIDAL ACTIVITY OF MILIBIS IN THE GOLDEN HAMSTER (CRICETUS AURATUS)

Dose (Mg. per Kg. per Day)*	Effect on Trichomonads in Hamster		
	Number Medicated	Number Cleared	Per Cent Cleared
50	10	0 (reduced)	0
75	10	1 (reduced)	10
100	15	5	33
150	15	12	80
200	10	8	80
300	5	5	100
400	10	10	100

* 4 days of medication in all animals.

TABLE II.—IN VITRO ACTIVITY OF MILIBIS AGAINST T. VAGINALIS*

Concentration of Milibis in KJS Medium	Number of T. vaginalis in Inoculum	Qualitative Findings	Remarks
1:1,000	500,000	All killed	Trichomonacidal
1:10,000	500,000	1+ growth	Suppressive
1:100,000	500,000	4+ growth	Ineffective
Control	500,000	4+ growth	....

* Incubation period 48 hours in all concentrations.

against Trichomonas species. Examination of 7,000 to 8,000 hamsters in our laboratory has shown that both large and small varieties of trichomonad flagellates, indistinguishable from Trichomonas muris Grassi, 1879, and T. minuta Wenrich, 1924, are invariably present in large numbers in the cecal contents of the hamster, whereas in rats trichomonads are often sparse or absent. In addition, the hamster has been shown to be a suitable test animal for amebacidal screening.[8] Hence, it is possible to screen simultaneously for trichomonacidal and amebacidal activity.

In the present study the cecal trichomonads of hamsters were used as test organisms for in vivo assay of the trichomonacidal activity of Milibis. The trichomonacidal activity of Milibis against T. vaginalis was also demonstrated in vitro.

In Vivo Trichomonacidal Activity of Milibis in the Hamster

Milibis was suspended in 10 per cent gelatin which had been partially hydrolyzed by exposure to 10 pounds pressure in the autoclave for fifteen minutes. The total daily dose was contained in 1 ml. Hamsters were medicated at three different drug levels by intragastric administration twice daily for four days by means of a syringe and metal catheter. Medicated hamsters were sacrificed on the day following the last dose and examined immediately. If at least three slides, each prepared from a different area in the cecum, were found free of trichomonads, the animal was considered as having been cleared.

The findings with Milibis are summarized in Table I. Dose levels of 50 and 75 mg. per Kg. per day of Milibis given in two divided doses caused considerable reduction in the number of cecal trichomonads. The 75 mg. per Kg. dose cleared one of ten hamsters completely of its trichomonads, and in the remaining nine the number was very markedly reduced. The 100 mg. per Kg. dose cleared five of 15 (33 per cent); 150 mg. per Kg. cleared 12 of 15 (80 per cent); 200 mg. per Kg. cleared eight of ten (80 per cent), and 300 mg. per Kg. cleared five of five hamsters of their cecal trichomonads.

In Vitro Trichomonacidal Activity of Milibis Against T. Vaginalis

The activity of Milibis against T. vaginalis was demonstrated in vitro using light and heavy inocula. The flagellate was grown on KJS[9] medium. The light inoculum consisted of 500,000 trichomonads in 0.5 ml. culture medium and was prepared by pooling forty-eight-hour cultures of T. vaginalis, determining the number of trichomonads per unit volume by counting in a Neubauer haemocytometer chamber, and diluting the pool with KJS medium to appropriate volume. A 1 per cent suspension of Milibis was prepared in sterile KJS medium. The pH of the suspension was 5.65. The concentration of the drug was varied by means of serial dilutions of the suspension using KJS medium as diluent. A ranging test was carried out to determine the lethal effect of Milibis in final concentrations of 1:1,000, 1:10,000, and 1:100,000 on 500,000 trichomonads in 5 ml. of medicated medium. Inoculated tubes were incubated at 37 C. for forty-eight hours. The activity of the drug was determined by microscopic examination of the incubated cultures for motile trichomonads.

When exposed to 1:1,000 dilution of Milibis, all trichomonads were killed within forty-eight hours. Exposure to a 1:10,000 dilution of the drug markedly reduced the number of living flagellates. The protocols of this experiment are shown in Table II.

A second experiment was carried out in which more closely graded doses of Milibis were tested against larger inocula of 4,500,000 tricho-

TABLE III.—In Vitro Activity of Milibis Against T. Vaginalis (Larger Inocula)*

Concentration of Milibis in KJS Medium	Effect	Number of Trichomonads per Ml. of Subculture at 30 Hours	Remarks
1:1,000	All killed	0	Trichomonacidal
1:2,000	All killed	0	Trichomonacidal
1:4,000	Few motile	0	Trichomonacidal
1:8,000	1+ growth	40,000	Inhibitory
1:12,000	2+ growth	390,000	Inhibitory
1:16,000	3+ growth	930,000	Inhibitory
Culture control†	....	2,530,000	4+ growth

* 4,500,000 T. vaginalis in inoculum, exposure time 17 hours throughout.

† 500,000 T. vaginalis in inoculum, exposure time 17 hours.

monads. The cultures were examined after seventeen hours of incubation, and 0.5-ml. subcultures were made into 5 ml. samples of fresh medium to determine viability. Examinations of both the original cultures and the subcultures showed that all trichomonads were killed within seventeen hours exposure to a 1:2,000 dilution of drug. At a dilution of 1:4,000 the trichomonads were markedly reduced in number and were so badly damaged that they failed to grow upon subculturing. Milibis was inhibitory in dilutions of 1:8,000, 1:12,000, and 1:16,000. Protocols of the experiment are given in Table III.

A third experiment, of a presumptive type, was carried out by placing a Milibis suppository (Winthrop-Stearns Inc.) in a sterile test tube and adding KJS medium containing 2,000,000 T. vaginalis per ml. Microscopic examination after the tube had been incubated for forty-eight hours at 37 C. showed that all trichomonads had been destroyed.

Persistence of Milibis in the Vagina and Its Effect on the Vaginal Flora

Insufflation of Milibis Powder.—Five normal women were selected for this study, none of whom was infected with T. vaginalis. Two grams of powder (containing 0.4 Gm. of Milibis and 0.05 Gm. boric acid in a partially hydrolyzed carbohydrate base) were insufflated with a Holmspray Powder Insufflator (No. 3663) into the vagina of each patient. Prior to this insufflation vaginal smears and cultures were made to study the pretreatment flora of the vagina. Swabs were taken daily after insufflation for five consecutive days to determine: (1) the presence of Milibis on the swabs by qualitative chemical analysis and (2) the effect of insufflation on the vaginal flora, particularly on Döderlein's bacilli and on yeastlike fungi.

TABLE IV.—Persistence of Milibis in the Vagina

Case Number	Milibis Found After 24 Hours	48 Hours	72 Hours	96 Hours
1	+	+	+	0
2	+	+	0	0
3	+	+	+	0
4	+	+	+	0
5	+	0	0	0

Effect of a Single Milibis Insufflation on the Bacterial Flora of the Vagina.—Insufflations were made between the ninth and twenty-fourth day of the menstrual cycle. In all five women the predominating bacterial flora of the vagina before insufflation consisted of diphtheroids; yeastlike cells were not found in pretreatment smears, and in two of five cases Döderlein's bacilli were present in small numbers. Smears taken twenty-four hours after insufflation showed a marked reduction in bacterial flora in four of five patients. Döderlein's bacilli were present in small numbers, and their number increased subsequently so that by the third day they became the predominant organisms of the vagina. In the fifth case, in addition to Döderlein's bacilli, there were numerous diphtheroids in the vaginal smears. Five consecutive daily cultures from each case on Sabouraud's medium were negative for yeastlike fungi, except in one case in which a few colonies of Candida krusei were cultured.

Milibis Vaginal Suppository.—Milibis vaginal suppositories (containing 0.25 Gm. Milibis in a gelatin vehicle) were tested with a view to determining their properties in regard to (1) disintegration in the vagina when introduced without preliminary wetting in water and (2) persistence of Milibis in the vagina after a single insertion, determined by chemical analysis of material obtained on swabs.

Eight trials indicated that when a Milibis vaginal suppository was inserted at bedtime, it had completely liquefied and disintegrated by the following morning. Swabs taken from the vagina at twelve, thirty-six, sixty, and eighty-four-hour intervals after insertion were examined chemically. Detectable amounts of Milibis were always found by chemical analysis of swabs taken from the vagina during the first sixty hours after use of suppositories; in four cases Milibis persisted for eighty-four hours.

Spermicidal Activity of Milibis

The method of testing for spermicidal activity was essentially the same as that described by the Council on Pharmacy and Chemistry of the American Medical Association.[10]

Milibis powder was suspended in 6 per cent autoclaved gelatin to give the following concentrations: 1:5, 1:25, 1:50, 1:100, and 1:500. One volume of human semen containing 200 million spermatozoa per ml. was drawn into a glass capillary tube (1.6 mm. internal diameter) to a depth of 2 cm., and an equal volume of Milibis suspension was then drawn into the tube. The two fluids were mixed on a microscope slide by rapidly forcing them out of the tube and drawing them back in about ten to fifteen times. To expel air bubbles from the mixture, the slide was tapped gently on the desk, and then a cover-slip was placed on the slide and sealed with vaseline. The preparation was then examined with a microscope having a 16-mm. objective and 10 × ocular.

The "spermicidal time" was measured as the time elapsing from mixing until the last visible motion of spermatozoa. By this technic Milibis, even in a final concentration of 1:10, failed to kill spermatozoa in six hours.

Comment

Numerous medicaments have been recommended for the treatment of vaginal trichomoniasis, but none has been found to be entirely satisfactory, and some have been contraindicated since they have caused further damage to an already inflamed vaginal mucosa. The purpose of this paper is not to add one more drug to the armamentarium but to point out that Milibis possesses properties which should make it effective in the treatment of vaginal trichomoniasis, provided that extravaginal sources of reinfection are controlled.

Milibis is a stable organic compound which contains 15.01 per cent arsenic and 41.88 per cent of bismuth. It is sparingly soluble in water and is characterized by limited absorption and low toxicity, even when administered in massive doses.[11] There are numerous reports on clinical experience with Milibis in the treatment of chronic intestinal amebiasis which show that a daily dose of 1.5 Gm. of the drug administered orally for seven to twenty days is well tolerated.

The high trichomonacidal activity of Milibis suggests that it should be effective for the local treatment of vaginal trichomoniasis; its lack of antibacterial activity favors rapid re-establishment of normal bacterial flora, and its low solubility favors persistency in situ in contrast to more soluble drugs which would be rapidly absorbed. Being particulate, residual Milibis is likely to be lethal to trichomonads upon ingestion as well as by absorption. Milibis is nonirritating to mucosal surfaces and is not spermicidal, hence will not prevent conception. It does not inhibit the growth and multiplication of Döderlein's bacilli but favors their development and multiplication so that they rapidly become the predominant flora of the vagina.

Summary

1. An in vivo screening technic for evaluating trichomonacidal activity by using the cecal trichomonads of the golden hamster, Cricetus auratus, is described.

2. Milibis (glycobiarsol) was found to be highly effective in clearing hamsters of T. muris and T. minuta. Milibis was also trichomonacidal in vitro when tested against T. vaginalis.

3. Milibis is not spermicidal and is not lethal to Döderlein's bacillus. It suppresses the growth and multiplication of competing bacteria and fungi and permits Döderlein's bacillus to become the predominant flora of the vaginal mucosa.

4. The high trichomonacidal activity of Milibis, its low toxicity, its nonirritating properties, its harmlessness to spermatozoa, and its low solubility favoring its persistence in situ for several days in the vagina should make this drug an effective chemotherapeutic agent for the treatment of vaginal trichomoniasis.

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Fundamental Aspects and Limitations of Chemotherapy of Tuberculosis[*]

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MEDICAL research is in the public limelight. Reports of important advances reach the patients prior to becoming known to the practicing physicians in the medical literature. The relationship between physician and patient becomes complicated and difficult. A painful situation may arise: The patient dictates, and the physician writes a prescription.

Isoniazid—A Wonder Drug

A typical example of a first publication by reporters in the daily press of New York and elsewhere was the announcement on February 21 and 22, 1952, of the dramatic cures of hopelessly ill patients suffering from tuberculosis of the lung by means of a new chemotherapeutic agent, isoniazid. Since the discovery of streptomycin by Waksman in 1945 and of Conteben by Domagk in 1946, the announcement of the efficacy of isoniazid led for the third time to the pronunciation of victory over tuberculosis by means of modern chemotherapeutic agents. (In an interview with the press a public health official of New York spoke of the possibility that in due time Sea View Hospital and similar institutions might be closed.)

Today, we realize that isoniazid is, indeed, an important adjunct to the armamentarium of measures available for the treatment of tuberculosis, although it is not the hoped-for wonder drug. Many of the patients first treated with this drug, whose "recovery" had been proclaimed also on the basis of x-ray examinations, are no longer alive. The hope of both patients and physicians, which has been followed by disappointment, is largely the result of the fact that with the present hurry of research the limitations of chemotherapy are not always adequately considered.

Combined Chemotherapy

The first reports on isoniazid were published without due consideration of the previous experience with streptomycin. The possibility was not adequately entertained that relapses may occur due to the emergence of isoniazid-resistant tubercle bacilli, relapses which may be prevented or delayed by the use of two or more chemotherapeutic agents. Forty years ago Paul Ehrlich strongly recommended combined chemotherapy. Before the 17th International Congress in London in 1913 Ehrlich called attention to three advantages of combined chemotherapy: (1) potentiation of the effects of the drugs, (2) the possibility of accomplishing therapeutic results with small doses without toxic side-effects, and (3) the advantage of suppressing the development of drug (arsenic) resistance of the parasite.

Eighteen months after the first report on isoniazid, the use of this chemotherapeutic agent alone is considered contraindicated. The problem of the choice of drugs to be used in conjunction with isoniazid is now in the limelight of interest of experimental and clinical research.

Many patients suffering from mild or moderately severe tuberculosis of the lung are being cured without specific chemotherapy through bed rest, climatic changes, diets. The question arises whether the known chemotherapeutic agents are capable of eliminating all tubercle bacilli in the lesions of the patient. In other words, are the modern drugs tuberculostatic or tuberculocidal?

Chemotherapy of Experimental Tuberculosis

A definitive answer to this fundamental question is obtained from therapeutic experiments on the infected mouse. Figure 1 illustrates the therapeutic efficacy of isoniazid on experimental lung tuberculosis in young mice. Infection was produced by means of an intravenous injection of virulent tubercle bacilli. The "clinical course" of the infection is reflected in the curve of the average weight of the mice, the outcome by the record of deaths. Until the middle of the second week the animals gain weight. Subsequently,

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[*] Dedicated to the memory of Dr. Fritz Meyer, physician and scientist.

[†] Former Professor of Hygiene, University of Istanbul, Turkey.

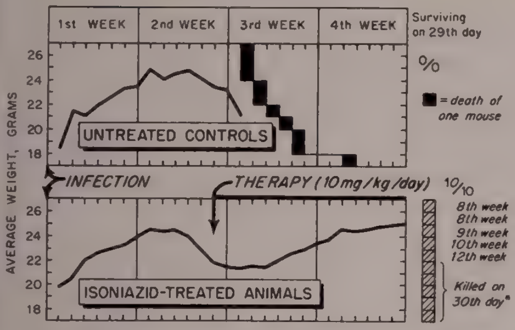

FIG. 1. Therapeutic efficacy of isoniazid in experimental tuberculosis of mice. Commencement of therapy on the thirteenth day after infection. Transfer of material from lung and spleen of "cured" mice to guinea pigs caused generalized and fatal tuberculosis.

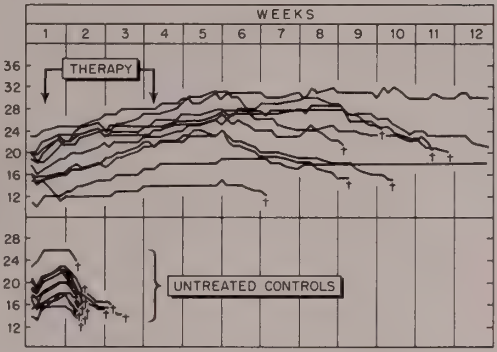

FIG. 2. Weight of young mice after infection with tubercle bacilli (strain G6). Therapy was 10 mg. isoniazid per Kg. per day per os from fourth to twenty-third day after infection.

however, marked weight loss occurs, and the animals become debilitated and dyspneic. The untreated controls, without exception, die between the sixteenth and twenty-fourth day after the infection from pulmonary tuberculosis. If from the thirteenth day after the infection the severely ill mice are treated with isoniazid in a daily dose of 10 mg. per Kg., all animals can be saved; the loss of weight no longer progresses, dyspnea disappears, the skin becomes normal. "Clinical" recovery has been accomplished by the end of the fourth week.

The question as to whether this clinical cure has been accomplished by means of a "sterilisatio magna," i.e., killing of the tubercle bacilli, can be answered from the results of the following experiment.

Films of various organs of "cured" animals contain tubercle bacilli, and pure cultures of tubercle bacilli are procured from the lungs. When suspensions of lung and spleen of these "cured" mice were injected into normal guinea pigs, generalized tuberculosis resulted from ten to twelve weeks later.

Isoniazid, therefore, did not kill the tubercle bacilli. Even when a dose of 100 mg. per Kg. was used, elimination of all tubercle bacilli was not accomplished. It may be concluded then that isoniazid, like all other antituberculous agents used clinically at the present time, is tuberculostatic in vivo rather than tuberculocidal. Since even conventional disinfectants do not readily kill tubercle bacilli in the sputum, there is little likelihood that a truly tuberculocidal agent for clinical use will be found in the foreseeable future.

Follow-up of Chemotherapeutically "Cured" Experimental Tuberculosis

The final outcome of successfully treated mice is illustrated in Fig. 2. It can be seen that young mice which have been treated with isoniazid (100 mg. per Kg. per day) by mouth from the fourth to the twenty-third day after infection began to lose weight from the fifth week and some succumbed from the seventh week on. In other experiments in which streptomycin and isoniazid were employed, animals began to die many months after the original infection, and some even were still alive one year later, and yet these animals still harbored living tubercle bacilli which, upon injection into guinea pig, proved to be virulent. Death, weeks and months after the original "recovery," almost invariably was due to tuberculosis of the lung. On histologic examination by Professor Roulet of Basle, Switzerland, two main types of lesions were found: (1) principally chronic, productive, and progressive lesions and (2) pneumonic inflammation, typical of relapse. These lesions, which developed after an apparent "recovery," cannot be explained on the basis of the emergence of isoniazid-resistant or streptomycin-resistant tubercle bacilli. Thus far, such resistant strains could not be recovered from these animals, although they can be isolated from human beings after treatment with isoniazid or streptomycin.

These animal experiments indicate that modern chemotherapy of tuberculosis does not differ qualitatively from nonspecific treatment with bed rest, diet, and other nonspecific measures. The results are the same: the transformation of an active process to a resting infection. Quan-

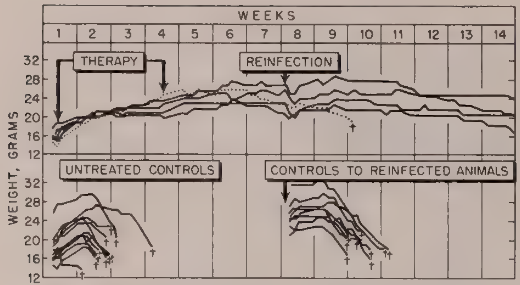

FIG. 3. Reinfection of tuberculous mice following treatment with isoniazid. Therapy was 10 mg. isoniazid per Kg. per day from third to twenty-fifth day.

titatively, however, chemotherapy represents an impressive advance. It affords the opportunity to arrest not only mild and moderately severe infection but also serious and, until recently, fatal forms of the disease such as miliary tuberculosis and tuberculous meningitis.

Resting Infection

The transformation of an active to a resting tuberculous lesion is adequately explained by the tuberculostatic properties of the chemotherapeutic agents used for treatment. The fact that such resting infections after discontinuation of therapy may remain inactive for some time, however, must have another reason. The organs of "cured" mice still contain virulent tubercle bacilli. Even the "cured" mice in due time develop reactivation of the resting lesion and eventually succumb. Accordingly, one has to postulate that the "cured" mice have developed a defense against the still virulent tubercle bacilli. In other words, after discontinuation of specific therapy reactivation of the lesion is prevented for some time by the development of immunity. This hypothesis can be verified experimentally.

Experimental Demonstration of Specific Immunity

Figure 3 illustrates the weight curve of five young tuberculous mice which had been treated with isoniazid in a daily dose of 10 mg. from the third to the twenty-fifth day following the infection. Even after discontinuation of this therapy the mice continued to gain weight. The untreated controls, with the exception of a single mouse, had died by the end of the third week. In the early part of the eighth week (three and one-half weeks after discontinuation of therapy) virulent tubercle bacilli were injected intravenously into the five "cured" mice. The same suspension was injected also into nine normal mice for control purposes; the latter were of the same age and from the same stock. As expected, these control mice died during the second or third week after infection. One of the five reinfected mice died at the same time as the control animals; this particular animal already had lost weight during the week preceding the reinfection, having passed the state of resting infection. In contrast, the other four animals failed to develop active tuberculosis following reinfection; they were still alive seven weeks later. The development of this specific immunity can be demonstrated also after treatment with streptomycin.

As soon as this immunity decreases or disappears, reactivation of the lesion takes place and eventually causes death of the mice. This may develop many months after the first infection. The question as to whether death is due to tubercle bacilli used for establishing the primary infection or due to the organisms which were used for reinfection can be answered by means of appropriate experiments; tubercle bacilli of different susceptibility to tuberculostatic agents are used for primary infection and reinfection. Mice were injected with an isoniazid-resistant strain, treated with dihydrostreptomycin, and subsequently reinfected with an isoniazid-sensitive strain. At the time of death the tubercle bacilli recovered from the lungs proved to be the isoniazid-resistant strain used for the original infection.[1]

The results of such experiments suggest that the tubercle bacilli used for reinfection do not produce progressive tuberculosis and, indeed, do not become established; the tubercle bacilli which ultimately are responsible for the fatal outcome are those used for the original infection. Continued studies of this type may eventually elucidate the problem of "superinfection." Furthermore, such experiments may clarify the question as to whether this immunity is due to the originally injected tubercle bacilli, whether it is associated with the multiplication of the organisms prior to chemotherapy, or, finally, whether it develops during the phase of specific therapy.

Recovery Until Revocation

The permanent outlook of experimentally infected mice and of tuberculous patients depends upon the duration of effective immunity. With the decrease or disappearance of this immunity the chemotherapeutically produced "cure" may be terminated. As shown by Smith[2] on the basis of follow-up studies on 100 patients with miliary tuberculosis and tuberculous meningitis, who had been treated with streptomycin, only 11 remained clinically well five years after institution of antibiotic therapy. Although the survival of any of these patients constitutes a remarkable success, it is evident that the majority do not have adequate defense to prevent recurrence of the disease. Perhaps the development of these forms of tuberculosis is the result of a weak immunobiologic system. Similar considerations apply to the most severe forms of tuberculosis of the lung; relapses are the rule rather than the exception, even after effective chemotherapy. Collard and coworkers[3] followed up 11 patients with far-advanced tuberculosis of the lung after therapy with streptomycin and isoniazid. These authors found that the majority of patients improved under this regime, as evidenced by weight gain, lowering of the blood sedimentation rate, the disappearance of tubercle bacilli from the sputum in ten out of 11 patients, and roentgenologic improvement in four patients. After discontinuation of treatment, however, relapses were noted; this reactivation was not due to the presence of antibiotic-resistant tubercle bacilli. Further observations are needed to determine the efficacy of a second course of therapy during relapse.

Unfortunately, a definitive method for the determination of the immunobiologic status of patients with tuberculosis is not available at this time. Therefore, the practice of chemotherapy of tuberculosis must be guided by the results of clinical observations. The limitations of modern chemotherapy must not prevent the physician from using these valuable agents in serious cases of tuberculosis in order to support to the utmost the body's defenses. On the other hand, these limitations of chemotherapy make it mandatory to use all other methods of treatment as well, including dietetic and climatic therapy, surgery (foci of infection and permanently damaged parts of the lung may be removed), and other measures. There is at the present time no agreement as to whether chemotherapy should be used in mild cases of tuberculosis. Clinical cure is the rule rather than the exception even without specific treatment. Chemotherapy of mild forms may eventually prevent open progressive tuberculosis; this, in turn, should result in a decrease of new infections.

Specific immunobiologic therapy of tuberculosis has remained an open field for future research, as it was in the days of the first studies with tuberculin by Robert Koch.

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Low Dosage of ACTH Found Safer, Effective

In a comparative study of patients receiving low and high dosages of ACTH the authors found that daily doses of 5 mg. or less by continuous intravenous infusion were therapeutically effective and physiologic in action. Thirteen of the series were treated with the smaller dosage and the other eight were given 6 to 20 mg. While the therapeutic results were equally good with both dosages, six of the eight on the higher schedule exhibited side reactions such as moon face, flushing, increase in body weight, rise in blood pressure, or varying combinations of such changes. The 13 patients on the lower dosage schedule showed no undesirable side-effects. The authors suggest that the low dosage schedule may be of special value in patients who need ACTH therapy but suffer from conditions which are considered in some degree contraindicative: hypertension, diabetes, heart disease, in which large doses may aggravate the condition or cause embarrassing complications.—*A. M. Cohen, M.D., and F. G. Sulman, M.D., Journal of Clinical Endocrinology and Metabolism, April, 1954*

CASE REPORTS

Annular Pancreas with Diabetes Mellitus

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ANNULAR pancreas is a comparatively rare disease, only 60 cases having been reported in the literature. Twenty of these were operated upon; 18 were summarized by Payne,[1] and Lehman and Cattell reported two additional operative cases in discussing Payne's paper. In none of these reports, however, did we find diabetes as a complicating factor. The case being reported here had moderately severe diabetes mellitus which was extremely labile and difficult to control. Because of this complication and the effect of the operation upon his condition, we believe it worth while to add this case to the literature.

Case Report

The patient, a forty-seven-year-old white male, was first seen in the office on October 16, 1950. His chief complaint was pain, coldness, and numbness in the left leg from the knee to the foot for the past three months. Associated with this was weakness and some difficulty in walking. The pain, numbness, and coldness in the left foot remained about the same until the time of operation. There was also some pain in the middle finger of the left hand and over the third, fourth, and fifth cervical vertebrae, but this was not considered particularly significant. His urine, as a rule, had been sugar free, but during the previous two months as much as 4 per cent sugar had been found on more than one occasion. During this time he also noted increasing fatigue. The past history was relatively unimportant except for several episodes simulating grand mal seizures in 1943 and 1944. Shortly thereafter, diabetes mellitus was discovered, and when this was controlled by diet, the seizures ceased and had not returned. There was no familial history of diabetes nor of other unusual pathologic states. He smoked 20 cigarets a day and took an occasional drink. A careful systemic review elicited no unusual features.

The patient was a thin, white male, aged forty-seven years. The temperature was 98.5 F., pulse 70, and respirations 18 per minute. The head, eyes including fundi, nose, and throat were normal. The neck was normal except for some tenderness and grating over the seventh cervical vertebra. There was no lymphadenopathy. The chest was symmetric; the lungs were clear, the heart normal, and the blood pressure was 130/80. The liver and spleen were normal, and there were no masses, tenderness, or rigidity. Rectal examination was normal. The neurologic examination was normal throughout save for hyperesthesia over the left calf with tenderness to deep pressure being quite marked in this region, but there was no evidence of phlebitis or thrombophlebitis.

Laboratory findings were as follows: blood sugar 245 mg. per cent; sedimentation rate 30 mm. per hour (Westergren method); urinalysis—sugar 4 plus, acetone trace, albumin negative, microscopic examination negative. Blood count was red blood cells 4,500,000, hemoglobin 14.5 Gm., white blood cells 9,600 with a normal differential.

He was given an 1,800-calorie diet with 200 Gm. of carbohydrate and started on 10 units of protamine zinc insulin before breakfast daily. From the very inception of therapy the dose of insulin was quite difficult to regulate, and on October 30 he sustained the first episode of insulin shock. In addition, he had severe headaches, and there were urticarial wheals at the site of injection. The insulin was then changed to 10 units of globin before breakfast, but the above symptoms persisted and about the end of November, 1950, he was placed on 10 units of NPH insulin daily. Because of his labile diabetic status and the frequent episodes of insulin shock no attempt was made to keep the blood sugar within normal limits, but a moderate hyperglycemia and a mild glycosuria were permitted.

Fairly frequent blood sugar determinations were performed over the next year, and these values ranged from 109 to 263 mg. per cent with an average range of 150 mg. per cent. The pain in the left foot and leg continued despite a high parenteral and oral vitamin intake. At times the patient was given regular insulin in addition to the NPH insulin. In November, 1951, for the first time he complained of a feeling of fullness and discomfort in the epigastrium occurring immediately or within a few minutes after eating. The severe headaches continued, and it was thought that they might be migraine headaches or due to an allergy from the insulin. Antihistamines, Roniacol, and Gynergen all failed to give relief. X-rays of the skull and an encephalogram were normal. The cephalin flocculation and thymol turbidity tests were normal.

The episodes of insulin shock appeared to increase in frequency and severity. They would occur at almost any time, sometimes at 2 or 3 A.M. and others at 10 and 11 A.M. or P.M. They seemed to occur more often when he was tired or under stress or strain. Some occurred when the patient was sitting at the table and when he had eaten half or almost all of his meal. The attacks seemed to be out of proportion to what one would expect if due to insulin shock alone. Sometimes he would become comatose, and this might persist for ten to sixty minutes, even though he received fairly large quantities of glucose, orange juice, etc. Sometimes, however, he would react quickly to small quantities of carbohydrates, but if they were not given frequently for a period of thirty to sixty minutes, he would lapse into shock again. The attacks did not appear to be typical of insulin shock, and the possibility of some neurologic involvement or epileptiform seizures were considered. All findings were normal, however.

Because of the persistence of the headaches and the frequent insulin shocks, he was admitted to St. Clare's Hospital on February 2, 1952, for further study. At this time he was receiving 10 units of protamine zinc insulin with 5 units of regular insulin in different syringes in the morning and 10 units of regular insulin before dinner in the evening. Shortly after admission to the hospital he exhibited a marked torpor which was followed by a sudden turning of the body to the right without loss of consciousness, then extreme exhaustion, and generalized muscular aching which was promptly relieved by an infusion of glucose. This was the first such episode since 1944. On the following day, not having received insulin since admission, the patient once again had a severe headache, which was promptly relieved by glucose intravenously. The urine was sugar-free.

General physical examination at this time was essentially as noted on the original office examination, save for the following additional findings: There was bilateral carotid sinus sensitivity as manifested by a sudden cessation of the cardiac beat when pressure was applied either to the right or left carotid sinus. This, however, in no way precipitated a picture similar to the patient's complaints. For the first time there was also slight tenderness over the pyloric end of the stomach and the first part of the duodenum on deep palpation.

Laboratory findings were as follows: red blood cells 4,900,000, hemoglobin 14.5 Gm., white blood cells 10,900 with normal differential; blood sugar 240 mg. per cent; urinalysis—specific gravity 1.024, albumin trace, sugar and acetone negative.

It was thought at this time that perhaps he had some obstruction of the duodenum with superimposed spasm producing a dumping complex or a tumor of the pancreas and that they were responsible for the extremely labile diabetes. X-ray studies were ordered. They revealed a normal esophagus and stomach, but there was an abrupt narrowing of the lumen in the distal third of the second portion of the duodenum. At this point the duodenum was sharply angulated medially, and the lumen was reduced to less than one third its normal caliber with moderate dilatation of the first and second portions of the duodenum proximal to this point. There was no evidence of any filling defect or diverticuli present. These findings were believed to be consistent with an extrinsic compression of the distal one third of the second portion of the duodenum, possibly from some soft tissue mass in the region of the head of the pancreas or a retroperitoneal soft tissue tumor.

Exploratory laparotomy on February 26 by Dr. John L. Madden revealed an annular pancreas at the midpart of the midportion of the duodenum with dilatation of the duodenum proximally. The duodenum was completely mobilized, and the annular portion of the pancreas was resected. Despite the removal of this constriction, however, the duodenal lumen remained much reduced in size, measuring only $^1/_2$ cm. in diameter, due to an apparent constriction present in the duodenal wall itself underlying the point where the pancreas was dissected free. Therefore, with a 2-layer silk technic a duodenoduodenostomy was performed. The liver was entirely normal. No pancreatic tumor was found after careful search. The remainder of the abdominal organs were normal.

The patient made an uneventful recovery and was discharged from the hospital on the twelfth postoperative day. During the immediate postoperative period he was kept under control by small doses of regular insulin, and there were no episodes of insulin shock during this period. The histologic picture of the resected specimen was that of pancreatic tissue compatible with that seen in diabetes mellitus.

A postoperative gastrointestinal series on March 8, 1952, revealed a well-functioning end-to-end anastomosis of the second portion of the duodenum with minimum residual deformity.

There had been no episodes of insulin shock, and the diabetes was controlled with 14 units of protamine zinc insulin before breakfast or a little more than one-half the preoperative dose. He no longer was troubled by headaches or postprandial epigastric fullness. The pain in the left leg responded slowly to parenteral and oral vitamins B_{12} and B_1, and at present he is comparatively symptom-free.

Comment

McNaught[2] has emphasized, and it has been fairly well accepted, that the annular pancreas is most likely a developmental anomaly involving the ventral pancreatic anlage which fails to rotate with the duodenum. Anatomically, it consists of a completely or partially encircling band of usually histologically normal pancreatic tissue which surrounds the duodenum. Except for Auberg's[3] case in 1866 in which the fourth portion of the duodenum was involved, the annular pancreas in all reported cases was located surrounding the second portion of the duodenum. Associated with this condition are occasionally found other congenital abnormalities of various types. In only two cases, those of Thatcher[4] 1893 and Chapman[5] 1943, was there evidence of an associated aberrant pancreas which is a totally different entity, and in no other case have we been able to find an associated diabetes mellitus.

It has been found in all age groups; the youngest case reported was an eight-month-old fetus,[6] and the oldest was seventy-four years of age.[7] Most cases are found incidentally, and the condition assumes clinical significance only through the presence of duodenal obstruction. In our patient the lability of the associated diabetic state, the unusual type of insulin shock, the severe headaches, etc., suggested many possibilities.

The late development of gastrointestinal symptoms despite the marked obstruction is also another interesting phenomenon. This obstruction must have been present for a long period of time, and the more or less sudden appearance of gastrointestinal symptoms cannot be explained on the basis that the obstruction had suddenly increased. Likewise, the subsequent complete relief of the labile factor of his diabetic state can be explained only on a theoretic basis. It is possible that there may have been considerable spasm develop at the site of the obstruction causing further narrowing and consequent development of the gastrointestinal symptoms. If there was marked spasm, a sudden cessation of this spasm may have produced a dumping complex, although it is difficult to believe that this could entirely account for the insulin shock episodes. Whether or not the obstruction at this level may have acted as an irritant or stimulant to the pancreas, causing a marked increase in insulin secretion at any one time, it is impossible to tell.

It was at first felt by the operator that simple resection of the annular pancreas would be sufficient and that this would give an adequate duodenal lumen. However, after the annular portion of the pancreas had been resected, there was a persistent constriction of the underlying duodenum. Payne[1] has outlined and summarized well the surgical procedure used in attacking this condition. The two general methods used involve division and/or resection of the annular ring or the use of sidetracking operations. The former procedure is attended by complications due to the duct system of the annular pancreas which makes the development of pancreatic fistula not uncommon. At present, although few authors have handled more than one case, the consensus of opinion is that a sidetracking operation is the procedure of choice.

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U. S. A. Claims O. W. Holmes

In a recent issue of the esteemed *New England Journal of Medicine* (September 17, 1953), the editor comments in traditional Bostonian manner on the new 900-page bibliography of Oliver Wendell Holmes, compiled by Thomas Franklin Currier and published by the New York University Press. "It is a source of gratification to welcome the present bigger and better bibliography of Dr. Holmes even if published by a foreign university in an alien land. It must be remembered by all borrowers, however, that the amiable autocrat belongs in the Back Bay, although born in distant Cambridge, and must be returned to his owners." . . . This paragrapher would like to remind our New England colleagues that the great spirit of Dr. Holmes has long since transcended the narrow confines of his birthplace, and today, nearly sixty years after his death, is a precious part of the intellectual heritage of every medical student and of every doctor of medicine in these broad United States.

Whatever the verdict of literature, he will always be a medical hero. Many of us outlanders have long delighted in his essays, his table talk, his novels and his poetry, and recognize with pleasure the flashes of Holmesian thinking and phrasing that from time to time illuminate the pages of the *New England Journal of Medicine.—Mercurius, New York Medicine, July 20, 1954.*

Splenic Artery Aneurysm

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(From the Peripheral Vascular and Radiology Sections of the Jewish Sanitarium and Hospital for Chronic Diseases)

ANEURYSM of the splenic artery is rare. Since the original description by Beaursier in 1770 only 206 cases have been reported in the English literature. Of these, 198 were collected by Owens and Coffey[1] who added reports of six additional cases. One case report by Berger, Forsee, and Furst[2] and one by Querna[3] completes the total. In only 16 cases was the correct diagnosis made before operation or autopsy, either by x-ray, bruit, pulsatile mass, or clinical findings.

In 1950 Evans, quoted by Owens and Coffey,[1] was the first to demonstrate a splenic artery aneurysm by translumbar aortography. This was confirmed by operation. Berger, Forsee, and Furst[2] in 1953 were the second authors to present a case where they were able to also demonstrate the aneurysm preoperatively by means of aortography.

We wish to present our case which will be the third to have the aneurysm demonstrated by translumbar aortography and the seventeenth case where a diagnosis was made preoperatively.

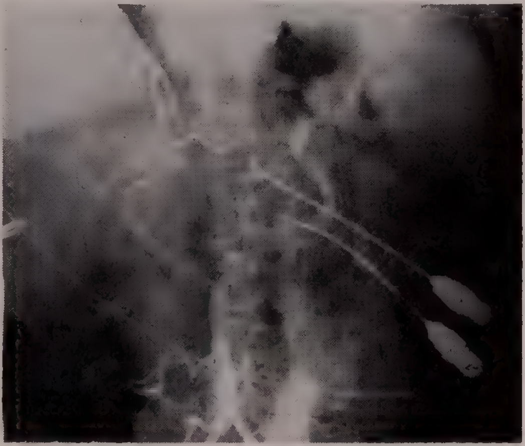

FIG. 1. Aortogram showing a cirsoid, calcified aneurysmal dilatation of the splenic artery.

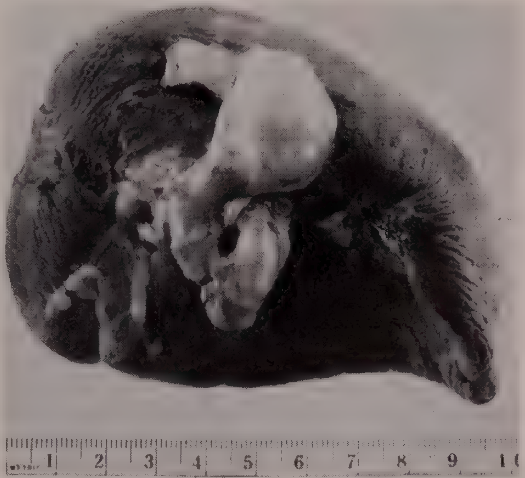

FIG. 2. Operative specimen: spleen and two aneurysmal dilatations in splenic artery.

Case Report

E. F., a sixty-seven-year-old white female, was admitted to the Jewish Sanitarium and Hospital for Chronic Diseases in 1950 for custodial care. Her past history revealed a hemiplegia of three years duration and hypertensive cardiovascular disease of eight years duration.

Her stay at the institution was uneventful until October, 1953, when she began to complain of rectal bleeding. Examination revealed large hemorrhoidal masses, and a routine barium enema was ordered. There were no abdominal complaints. X-ray of the colon was normal, but rounded calcific shadows were seen in the left upper quadrant in the course of the splenic artery. A translumbar aortogram was requested to determine whether the splenic artery could be visualized.

On November 11, 1953, a translumbar aortogram was performed. The needles were inserted $^1/_2$ inch below the costal margin. A total of 50 cc. of 70 per cent Urokon Sodium was injected within eight seconds, and a rapid x-ray exposure taken. This visualized a cirsoid, calcified aneurysmal dilatation of the splenic artery (Fig. 1).

The mortality of 100 per cent[4] associated with rupture of a splenic artery aneurysm caused us to suggest surgery to the patient, although the aneurysm was asymptomatic. The patient was operated on by one of us (M.L.) on January 22, 1954, under nitrous oxide, oxygen, ether, and Anectine. An incision was made to the left of the ensiform process and then carried across the left rectus muscle parallel to the costal margin until the flank was reached. The splenic artery was doubly ligated in the lesser sac. The spleen and

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*Dr. Wilensky died on August 30, 1954.

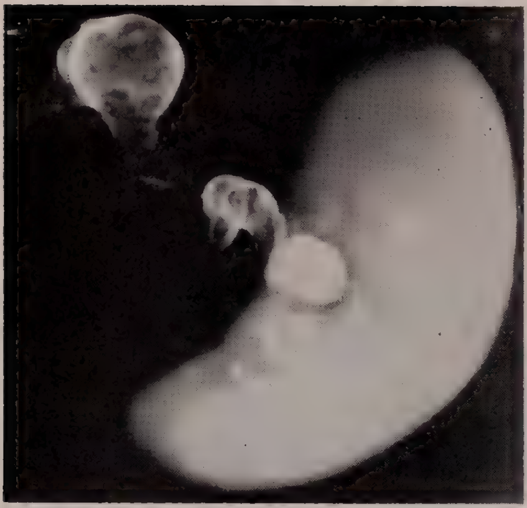

FIG. 3. X-ray of specimen for comparison with aortogram.

the two aneurysmal dilatations in the splenic artery were removed (Fig. 2). The specimen was then x-rayed to compare with the aortogram (Fig. 3). The patient made an uneventful recovery.

Summary

The two hundred and seventh case of splenic artery aneurysm is presented. This is the seventeenth case where a diagnosis was made preoperatively and the third case in which the diagnosis was made by a translumbar aortogram.

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Inadequate Gastrectomy with Five Recurrent Hemorrhages: Nineteen-Year History

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EXTENSIVE resection of the stomach for the treatment of gastric and duodenal ulcers which have not responded to medical therapy is a well-established procedure. Haberer many years ago demonstrated that to obtain permanent relief from peptic ulcers it was necessary to resect at least one half of the stomach. With pylorectomy and antrumectomy, although there was some improvement over the technic of gastroenterostomy for ulcer, it was found that an insufficient amount of stomach was removed to reduce greatly the gastric hyperacidity. Lorenz and Schur[1] showed in 1922 that a large amount of stomach must be removed in order to decrease the hyperacidity accompanying peptic ulcer.

As is well known, gastrojejunal ulcer is a serious complication following gastric surgery. Wedge-shaped resections of ulcer-bearing areas of the stomach seldom have a place in modern stomach surgery. The inadequacy of gastroenterostomy alone in the treatment of ulcer is widely recognized with our present knowledge of the high occurrence rate of jejunal ulcer following this procedure. The occurrence rate of postoperative ulcer following gastroenterostomy as given in the literature varies from 5 to 20 per cent. Any further surgery for this complication must necessarily be radical.

The rationale of extensive resection of the stomach for peptic ulcer is based on the "gastric enzyme" theory, although the exact chemical mechanism is still unknown. This theory supposes that a substance referred to as "gastrin" is produced by the antral mucosa of the stomach. In cases where the antrum is not completely removed, it is believed that gastrin continues to be secreted and is carried by the bloodstream to the remaining portion of the stomach. This enzyme activates and stimulates the hydrochloric acid-bearing cells of the gastric fundus to produce excessive amounts of hydrochloric acid. In this way the groundwork is laid for the causation of gastrojejunal ulcers. Of all known possible factors persistent postoperative

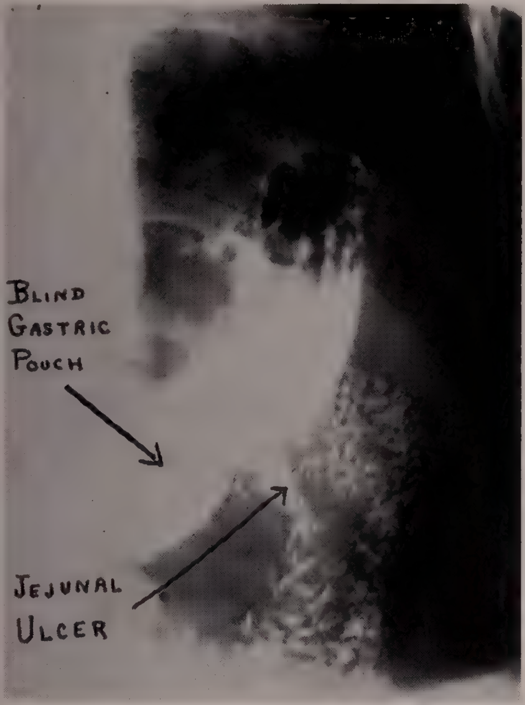

FIG. 1. Roentgenogram of stomach taken the day before the fifth and last hemorrhage showing the large blind gastric pouch left from the previous pylorectomy and the active jejunal ulcer in the gastrojejunostomy.

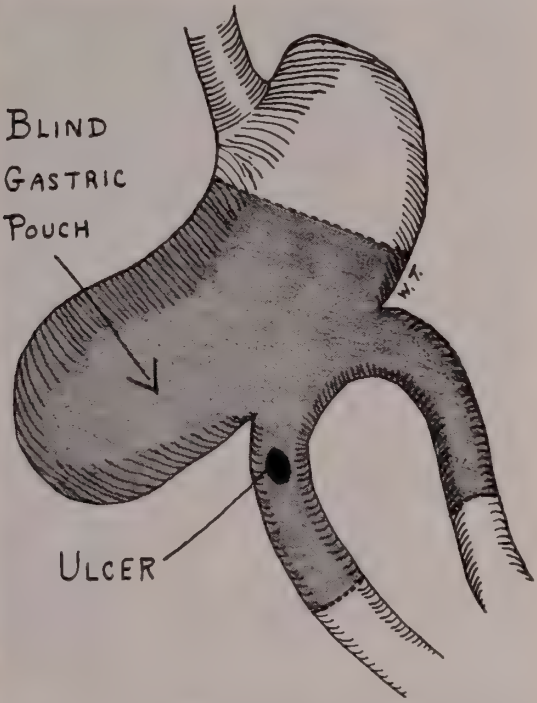

FIG. 2. The shaded area indicates diagrammatically the portion of small intestine and stomach resected to correct gastrojejunal ulcer which resulted from previous inadequate gastrectomy.

hyperacidity stands out as the most important one bearing on the etiology of postoperative jejunal ulcer. Sako and Wangensteen[2] have shown experimentally that an enzyme (referred to as gastrin) can and will produce a jejunal (stomal) ulcer. It can be concluded that hormonal secretion from an intact antral mucosa has been established experimentally in such fashion that it likewise can be thought clinically true.

In order to produce achlorhydria the entire antrum of the stomach and 75 per cent of all gastric tissue must be surgically removed. In patients operated on for gastric ulcer or for carcinoma, it is well known that postoperative ulcers do not develop, apparently because postoperative anacidity is practically constant. Decrease of acidity by means of 75 per cent removal of the stomach is helped by the dilution and neutralization of the alkaline juices from the duodenum and jejunum refluxing through the wide gastrojejunal stoma.

Nearly all postoperative gastrojejunal ulcers are located in the jejunum, and they may be at the very margin or at varying distances from the stoma. Jejunal ulcers are accompanied by severe symptoms, usually far exceeding in intensity the distress due to duodenal ulcer. They are characterized by an increased tendency to bleed, by intractability to medical management, and by a tendency to perforate into the peritoneal cavity or into the colon, thus producing a gastrojejunal colic fistula.

The mortality rate for second gastric resection done for jejunal ulceration was reported to be as high as 25 per cent[3] not so long ago but has been materially reduced so that now it is about 3 per cent. Complications arising from gastrojejunal ulcer are gastrojejunocolic fistula, acute perforation, and recurring hemorrhages, and it is because of these factors that the gastric surgeon does everything possible to avoid gastrojejunal ulcer.

The following case report illustrates the complications arising from inadequate gastric resection.

Case Report

F. R., age thirty-eight, a salesman, was first seen on January 11, 1949. The patient became faint, had a copious tarry bowel movement, felt nauseated, and suddenly vomited coffee-ground material on night of January 13, 1949. He was admitted to St. Clare's Hospital where he continued to show evidence of intestinal bleeding for several days. The lowest red blood cell count was 2,200,000 with hemoglobin of 7.5 Gm. During the entire hospital stay 6,000 cc. of blood were administered.

The patient had had stomach trouble characterized by severe gastric pain since the age of seven. In 1935 at the age of twenty-three he had a pylorectomy with gastrojejunostomy, performed in Central

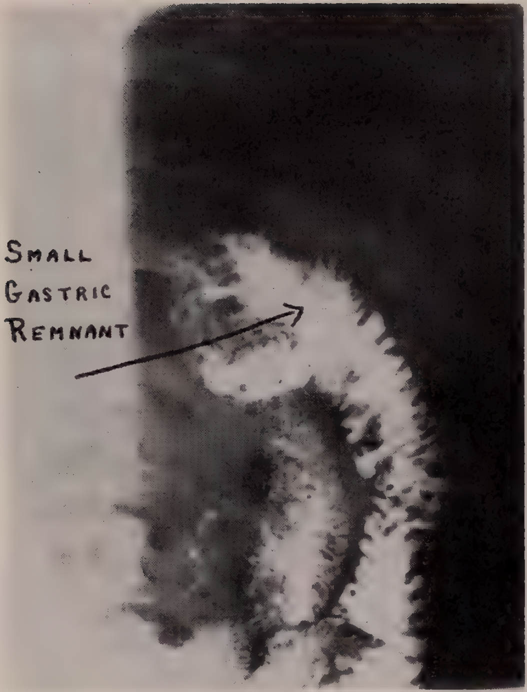

Fig. 3. Roentgenogram after adequate gastrectomy and resection of jejunal ulcer showing about one fourth of stomach remaining with gastrojejunostomy.

America, following an episode of marked gastrointestinal bleeding. In 1937 a second gastric hemorrhage occurred. A third very severe gastric hemorrhage happened in 1941, and patient was hospitalized in shock. Following roentgenologic studies at that time, the patient was told he had a jejunal ulcer, and operation was advised but refused. Between 1941 and 1949 the patient experienced two more episodes of gastrointestinal bleeding for a total of five massive hemorrhages.

A gastrointestinal series taken on January 12, 1949, or the day before the hemorrhage of the present illness, was reported as showing "a previous pylorectomy with gastroenterostomy and some puddling of barium at the lower border of the stoma which may represent an active ulcer" (Fig. 1).

On February 7, 1949, at operation the following findings were present: A previous pylorectomy with a posterior colic gastrojejunostomy had been performed. A large pouch of stomach distal to the gastrojejunostomy stoma was present as a blind loop and the roentgenogram revealed marked retention of barium in this gastric pouch. A jejunal ulcer had eroded through the jejunum, and its base was the serosa of the mesenteric border of the transverse colon adjacent to the middle colic artery (Figs. 1 and 2).

The jejunum containing the jejunal ulcer was resected after the retrocolic gastroenterostomy had been taken down. A modified Hofmeister subtotal gastrectomy with an antecolic gastroenterostomy was then performed distal to the jejunojejunostomy leaving 25 per cent of the stomach. A vagotomy was not performed because of troublesome bleeding encountered from the spleen.

The postoperative course was uneventful, the patient being afebrile from the sixth day onward, and he was discharged on the fifteenth postoperative day.

At a follow-up visit on March 11, 1949, the patient had no complaints, and the physical examination was negative (Fig. 3). The gastric analysis revealed a total acid of 27 degrees with 22 degrees free hydrochloric acid for the highest readings. He weighed the same as preoperatively, 179 pounds.

In March, 1954, the patient reported that he had been symptom-free for the five years since gastrectomy and resection of the jejunal ulcer and was feeling very well.

Summary

A plea is made for extensive resection of the stomach for gastric or duodenal ulcer by which three fourths of the stomach is removed rather than the less radical procedures. A case report is presented in which five gastrointestinal hemorrhages followed pylorectomy for duodenal ulcer. The preoperative roentgenogram revealed a stomal ulcer. The operation consisted of resection of the jejunal ulcer and jejunojejunostomy after the retrocolic gastroenterostomy had been taken down and an extensive Hofmeister subtotal gastrectomy leaving one fourth of the stomach. The five-year follow-up found the patient symptom-free and in excellent health.

118 East 64th Street

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There are two things to aim at in life: first, to get what you want; and, after that, to enjoy it. Only the wisest of mankind achieve the second.—Logan Pearsall Smith

SPECIAL ARTICLE

Medical Fee Schedules—Some Fundamental Considerations

FREDERIC E. ELLIOTT, M.D., BROOKLYN, NEW YORK

THE younger members of the profession should be reminded that, even with faults, the present listed payments for medical care represent a notable improvement over conditions of practice of only a few decades ago. At the beginning of the present century there were no schedules and no plans to help the low-income patients pay for medical care. People flocked to the free clinics, and the hospitals were increasing the number of ward beds for free care. Doctors furnished medical care as a gratuity, with little or no acknowledgment of their contributions to community welfare.

Also a considerable number of patients received care at home or a doctor's office, either as free or good will possibilities or by defaulted credit and unpaid bills. News stories reported cancellation of accumulated ledger records by one and another "old timer" of the medical clan. The doctor who collected more than 70 per cent of his accounts was considered to be doing well.

Perhaps here it should be said that some fifty years of personal experience prompts the opinion that, with but few exceptions, people who need and receive medical care wish to make fair and reasonable payment to the doctor. What constitutes "fair and reasonable value" of medical service was and remains nebulous. Even the top fees of the earlier decades were, in fact, quite moderate when compared with fantastic charges made by a few of our colleagues today.

It was not until 1935 that the habitual opposition to the listing of fees for medical care yielded to a legal necessity. It came about with the amendment of the Labor Law (Workmen's Compensation). Enactment of Article 13a required the president of the Medical Society of the State of New York to submit to the Labor Department "a schedule of minimum fees" to apply to the care of injured workmen.

Reform was born of obvious abuses. The record (Moreland Commissions) of the evils which developed in connection with the operation of the law enacted in 1912 to provide medical care for "the casualties arising out of industry" is a shameful chronicle of malfeasance on the part of doctors who accepted the domination of commercialism and yielded to the temptations of their opportunities. Never have the interests of patients been so betrayed.

The story of the negotiation between representatives of the medical profession and spokesmen for the commercial insurance carriers for the development of a "minimum fee schedule" is interesting but too long for this writing. From mid-June of 1935 to late October, item by item, a battle of arguments was waged. Two physicians represented the doctors of New York State. Some 18 spokesmen represented the larger insurance carriers, and two represented the so-called "insurance buyers," a small group of organized employers.

The resulting draft represented a long series of compromises. Taken as a whole, it was the best that could be accomplished; it was a beginning in a long neglected field. The imperfections were recognized by all who participated in the creation. A very important byproduct of this negotiated schedule was the establishment of "free choice of doctor" from among the enrolled participating physicians. This principle has become a keystone of Blue Shield success.

The Commissioner of Labor promulgated the "minimum fee schedule" without change for the metropolitan New York area and two years later extended its application to the whole State. During recent years some relatively minor revisions have been authorized. After four years of experience of the operation of the amended Labor Law and the "minimum fee schedule," a questionnaire was mailed to all physicians of New York State. Nearly one half returned replies within two weeks. To the question, "Would you participate in a plan of insurance which would provide for nonoccupational injuries and illnesses for workers and their families, on the same terms which now prevail under the Workmen's Compensation Law?," a favorable response was virtually unanimous.

Voluntary nonprofit insurance for coverage of illness and injury and applied to other than that arising "out of employment" began with amendment of the Insurance Law of New York (1939), Article IXc. Added to the many problems in the composition of acceptable contracts for this new field of insurance was the question, "What shall the payments be?"

"The "health & accident" policies issued prior to 1940 by commercial carriers were various. Some listed a limited number of items, merely sample payment, and by administration extended the benefits liberally. Others printed rather long lists for which benefits were paid and then applied rigidly "and for any injury or condition not listed, $5.00." All afforded a basis for much fair criticism by both the public and the profession. Generally, patients paid the doctor and were reimbursed, to some extent, by the insurance coverage.

During the early 1940's most voluntary nonprofit plans followed the Workmen's Compensation schedule because use seemed to have demonstrated it to be workable and acceptable to the profession. It should be recalled that the weekly wages of the time when the schedule was composed ranged mainly between 30 and 40 dollars. The amended Labor Law prohibited collection of added fees from patients, but it did provide that physicians could bill insurance companies for additional fees for patients in the upper income brackets, such as officers and foremen and supervisors. Such extra fees were the exception, not of common occurrence. The scheduled fees frankly represented a reduction below those which prevailed community-wise.

The application of the "minimum schedule" to payments for the care of voluntary nonprofit members, or amounts related thereto, marked the beginning of our present Blue Shield movement. Here also is the germ thought of the "service benefits" idea. Physicians accepted the injured workmen at the scheduled rates with no additional charge. The nonprofit plans aimed to take on the same wage earners and their families for their nonoccupational medical care needs.

The income level below which no extra charges were made started at $1,800 for a single person and $2,500 for a family member. In 1950 that level was changed to $2,500 and $4,000. The average weekly wage of 1954 prompts a further consideration of the "service benefit" level. It seems reasonable that Blue Shield should undertake payment of the doctor's bill for at least 50 per cent of the enrolled members. The next move is fraught with complications.

The doctors and their medical plan are confronted with mutual responsibilities. Payments by the plan must be ample for the maintenance of good medical care standards. And the fees for such care must not result in a price which members are unwilling or unable to pay for the insurance protection.

The doctors face the problem which they alone can solve. Soon a majority of our people will pay for their care through some plan of insurance—it can be "The Doctors' Plan." If voluntary insurance falters, it will be compulsory insurance with political controls.

Competent opinion indicates that a level of $5,000 for service benefits will relieve about 50 per cent of the enrolled membership of metropolitan New York. A level of $6,000 will relieve about 65 per cent of obligation for added fee charges. Either level will require revision of the charge for the coverage and, of course, an upward revision in the payments by Blue Shield.

Whenever there is a change in the ceiling level, many problems arise which take time to adjust, and the transition from one level to another can be done only gradually. The "escalator" idea offers only a temporary expedient and is too involved and confusing to be a permanent solution.

In an earlier paragraph the origin of the present schedule was briefly sketched. U.M.S. has been committed to a revision of that schedule. This should be done with care and wide counsel of opinion. Many inequities of the present schedule reflect the "volume of voice and length of discourse" of some one proponent of a special interest. The schedule conferees should be of sufficient number to assure a broad-view consideration based upon personal practical experience. A small group of supermen cannot meet the challenges of the problems.

It has been proposed that surgeons who operate mainly in the abdominal field can agree upon the relative values, payments, for each of the operative procedures common to their services. Likewise, in each of the other fields of practice each group should agree upon a logical relation of values for their services. A committee embracing spokesmen for each group could then agree upon the relationship of their respective schedules to a master schedule. Only by such development can inequities and controversies be eliminated.

Several factors should be weighed in the balancing of schedule values. The frequency of incidence has a material impact upon the operating costs of an insurance program. A wide variation as to required skill and the extent of needed care is an inherent part of the calculation. For example, the fee for care of a Colle's fracture is $65 (at present). In one case the parts are in good position, and a restraining dressing is all that is required. Another case goes to general anesthesia two or three times, and the operator sweats it out for the same fee. In the run of experience there is an evening-up for an average fee. What has been said about Colle's fractures goes for the other highly frequent procedures. The less frequent types of service should rate a higher relative value because each doctor lacks the opportunity of averaging within his own practice.

Schedules should not be constructed solely out of actuarial thinking. It is silly to say that "we could pay $1,000 for a rare brain lesion because it rarely occurs." Neither should occasional high fees for unusual procedures set the over-all pattern of payments of a Blue Shield plan. A given surgical procedure, even with incident complications, may be regarded by one doctor as routine. Another who has less personal experience will regard it as unusually difficult and worthy of higher fee valuation. A schedule should reflect a collective appraisal for the skill of experienced operators. A doctor who ventures upon an unaccustomed procedure accepts the implications and should not expect remuneration for the stress which it entails because of his lack of seasoned practice.

The right to be critical cannot be questioned. The critic, however, is responsible for the factual basis of his opinions. Nowhere is the truth more evident than in connection with the consideration of payments prescribed for medical care.

The interests of the public in a collective action, as presented in the development of a nonprofit voluntary medical care plan, is equal to if not, in fact, greater than that of the doctors. Payments for professional services are vital to the character of performance. This was conclusively demonstrated in the experience of the first three decades of the New York Workmen's Compensation Law.

The schedule of payments of a medical plan are merely a "rules of the game" formula by which all who participate may receive like consideration with no discriminations. Prompt complete medical reports promote undelayed payments for services with no "collection worries under Blue Shield."

It is a sound observation that medical incomes of today surpass those at the beginning of the century, and even some items alleged to be low are better than the net collection of the earlier years.

Finally, Blue Shield payments are not an indication of the true value of professional care. It was well stated by Father Alphonse Schwitalla, dean of the St. Louis University Medical School: "Whatever is paid to the doctor can be at best but a token of appreciation." The aggregate of money collected over a lifetime of practice seldom amounts to a fair reward for the time and effort necessary to the maintenance of good medical care knowledge.

The confidence is well founded that a collected and merged opinion, inclusive of the understandings of those long seasoned in medical practice, as well as the ideas of those more recently admitted to the ranks of the profession, will prove to be fully considerate and protective of the interests of both the public and the profession.

122 Seventy-Sixth Street

ANNOUNCEMENT

SCIENTIFIC EXHIBITS

1955 ANNUAL CONVENTION
MEDICAL SOCIETY OF THE STATE OF NEW YORK

Applications for space for the scientific exhibits should be made directly to the Chairman of the Subcommittee on Scientific Exhibits of the Convention Committee:

William L. Watson, M.D.
340 East 72nd Street
New York 21, New York

The Annual Convention will be held May 9 to 13, 1955, at the Hotel Statler, Buffalo.

No applications can be considered after January 1, 1955.

There will be two groups of awards:

Group I: Awards in Group I are made for exhibits of individual investigation, which are judged on the basis of originality and excellence of presentation.

Group II: Awards in Group II are made for exhibits which do not exemplify purely experimental studies and which are judged on the basis of presentation and correlation of facts.

W. P. Anderton, M.D., *Secretary*
Medical Society of the State of New York

EDITOR'S NOTE: The following paper by Dr. David M. Schneider of the New York State Department of Social Welfare is a welcome addition to the gradually mounting material for our Sesquicentennial History, which aims to record the many varied activities of physicians in promoting the health and welfare of the residents of our State. This contribution emphasizes the increasingly close relations of the practitioner, the public health officer, and the professional social worker.

Dr. Schneider is the author of *The History of Public Welfare in New York State 1609–1866* (Chicago, University of Chicago Press, 1938), and coauthor with Albert Deutsch of *The History of Public Welfare in New York State 1867–1940* (Chicago, University of Chicago Press, 1941).

Notes on the History of the New York State Department of Social Welfare

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(*Director, Bureau of Research and Statistics, New York State Department of Social Welfare*)

MEMBERS of the medical profession will be interested to know of the important role played today by the State Department of Social Welfare in protecting and promoting the health and welfare of the 15 million people of New York State.

Headed by the State Board of Social Welfare, a group of 15 citizens (including two physicians)[1] who serve without salary, the Department supervises the assistance, care, and services provided by more than 280 public and 2,185 private agencies and institutions to approximately 3,800,000 persons annually. Included in these agencies and institutions are 451 hospitals and 92 dispensaries throughout the State and 888 nursing and convalescent homes in upstate New York.[2]

Health Rather than "Welfare" Problems

The great majority of persons served by the health and welfare agencies in New York State—public and private—represent health problems rather than welfare or "relief" problems. For instance, of the estimated 3,800,000 men, women, and children served annually, more than 85 per cent, or about 3,279,000, are hospital and dispensary cases, pay, part-pay, and public-charge. Approximately 1,259,000 of the 3,800,000 persons are public charges, and of these public charges 741,000 are persons who received, not public assistance or other kinds of cash grants or "relief," but hospital or dispensary care only.

In regard to the public-charge cases physicians will be especially interested to learn that two thirds of all such public welfare cases provided for through the 66 local public welfare departments in the State are caused by health conditions, and more than 200,000 of the 255,000 adults now on the public welfare rolls are aged, disabled, blind, or otherwise handicapped men and women.

In this vast field of social welfare the Division of Medical Care of the State Department of Social Welfare has two major functions: (1) to protect the general welfare of patients in hospitals and residents in other institutions under the Department's supervision, regardless of the economic status of those under care, and (2) to provide, through local public welfare agencies, necessary medical and hospital care for recipients of public assistance and for the medically indigent.

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[1] Dr. Bettina Warburg of New York City and Dr. John B. D'Albora of Brooklyn.

[2] In New York City the municipal department of hospitals supervises nursing homes.

Causes of Dependency

This brief outline of the social welfare structure of today should help to make events of the past more meaningful as we review the historical development of the Department. In reviewing the history of social welfare in New York State, we must keep in mind the fundamental causes of dependency that have made public welfare necessary since colonial times—old age, sickness, accidents, disability, unemployment, and death of the breadwinner. "These conditions prevent people from earning a living, exhaust their savings, and otherwise make them dependent," State Commissioner of Social Welfare Raymond W. Houston pointed out recently.[3] "Since the days of the colonies more and more persons have been adversely affected by these conditions as our population has grown from a few million to 162 million and as our society has changed from a predominantly agricultural economy to a predominantly industrial one. Today most of us depend for a living on wages—not on farming or other self-employment—and wages are ended by such dependency-making factors as sickness, old age, and unemployment, which exists in good times and in bad. Consequently on any given day millions of us are dependent through no fault of our own. At different times in our history, one or another of these dependency-making conditions has been dominant. During the 1930's it was unemployment. Today it is sickness, especially the chronic illnesses that are associated with an aging population. Because we are living longer, diseases identified with extended longevity affect more people today than ever before. Thus one important aspect of our public welfare problem is concerned with medical rehabilitation and with geriatrics."

Three Centuries of Welfare

Contrary to popular belief, there have always been public welfare programs—"relief"—in the State of New York. Such public aid measures go back to 1665, when the Duke's Laws were promulgated and the State was a colony of England. As a result of those laws, we had local assistance given by towns or localities from public funds for a period beginning in 1665 and continuing until 1824 when the Legislature caused a study to be made of the assistance program. A report, the Yates' report, was issued. It revealed many abuses in the system and recommended that it be replaced by a program of county poor farms. The Legislature enacted laws calling upon the counties to establish such poorhouses or almshouses. Thus began the institutional era in public welfare in our State. These institutions became catch-alls for all people in need of all kinds of assistance or care. Whole families were put into poorhouses. There were very few facilities for the mentally ill, so they, too, were placed in poorhouses. We had a long period of such care in poorhouses in New York State.

It was during the disruption of the Revolutionary War that New York State entered the relief field with State aid because needy persons were found in counties in which they were not residents and thus were not regarded as obligations of those counties. This situation, of course, arose because persons were removed from their places of settlement due to the exigencies of the war. The counties billed the State for the costs of care of these people, who became known as "State poor."

Another category of State charges was created in the first half of the nineteenth century when great numbers of immigrants came to our shores. The localities said that they had no responsibility for immigrants so the State instituted State reimbursement to defray the cost of care of indigent immigrants who were called the "alien poor."

The State also found it necessary to provide funds to help with the erection of institutions by private societies and agencies, especially institutions for children. The State gave, quite generously, lump-sum appropriations, not only to help build institutions but to help keep them in operation. These private agencies did good work in seeing that the various groups of persons in need of care were placed in institutions best equipped to serve their special needs. For example, over the years children were taken out of the county poorhouses and put into orphanages and similar child-caring facilities. Eventually mental institutions were erected, and the mentally ill were removed from the almshouses and placed in these new institutions. Then general hospitals were built, and other, special medical institutions were constructed. State aid for the operating costs of these institutions continued to increase as more and more facilities were constructed and operated. Finally, conditions reached a point where some examination of the validity of claims for State grants had to be made.

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[3] Address before a regional meeting of the New York State Welfare Conference, Hurleyville, New York, May 26, 1954.

The Beginning of State Supervision

The first State supervisory body in the social welfare field owed its origin mainly to these public pressures for economy and for an end to abuses in unsupervised institutions. In 1867 the Legislature set up a Board of State Commissioners of Public Charities, consisting of eight members appointed by the governor. They were authorized to visit and inspect at least once a year all charitable and correctional institutions, excepting prisons, receiving aid from the State and to inquire into their financial condition and management.

While its primary purpose at first was to guide the Legislature in making appropriations to institutions, the Board began to wield a decided influence on health and welfare developments through its strategic position for shaping public opinion. Its recommendations were progressive in nature.

In 1873 its name was changed to the State Board of Charities; its power was extended to the visitation of all charitable, eleemosynary, correctional, and reformatory institutions, excepting prisons, whether or not receiving State aid and whether or not maintained by municipalities. The membership of the Board was enlarged to 11. That same year the position of a salaried State Commissioner in Lunacy, responsible to the Board and an ex-officio member thereof, was created.

In 1874 an amendment to the State Constitution was adopted which prohibited the extension of State financial aid to private agencies, excepting those caring for the blind, deaf mutes, and juvenile delinquents.

Separation of Welfare, Mental Hygiene, and Correction

A Lunacy Commission of three members was established in 1889 to supervise institutions for the mentally ill, acting independently of the State Board of Charities.

Seven years later the State Board of Charities was made a constitutional body by Article VIII of the Constitution of the State of New York adopted in 1894. Laws enacted during the following two years greatly expanded its functions and powers. It was, for example, empowered to approve or disapprove the organization or incorporation of charitable institutions or agencies, including hospitals and other medical institutions.[4]

That same year an act in relation to the poor, commonly called the "Poor Law," was passed. It directed the county superintendents and other poor law officials to make annual reports to the State Board of Charities and defined and extended the scope of the Board's powers of inquiry. Among other powers it gave the Board authority to order the correction of any improper treatment of inmates in any almshouse.

Provisions for Children

The State's concern for the health and welfare of persons in institutions focused on children's institutions at the close of the nineteenth century. A law passed in 1875, prohibiting the retention of children in poorhouses, had brought about no healthy alternative to institutionalization, such as placements in foster homes. On the contrary, it resulted in a sharp increase in large, privately managed orphanages and other child-caring institutions, the inmates of which were supported primarily through local public subsidies. In many cases it was found that such institutions were retaining their charges much longer than was necessary because of the flow of generous public grants.

Such conditions were greatly corrected by a legislative act of 1898, authorizing the State Board of Charities to grant, withhold, or revoke licenses of all persons and agencies desiring to place out dependent children; no person or agency could engage in such activity without a license. The Board was also authorized to visit any placed-out child under sixteen years of age in order to examine his environment and treatment.

The most important step in the countermovement against institutionalization was the passage of the Child Welfare Law of 1915, which provided for setting up local boards of child welfare for the purpose of administering mothers' allowances to widows with one or more children under the age of sixteen years, "in order that such children may be suitably cared for in their homes by such mothers."

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[4] It was in 1899 that the Board was empowered to license dispensaries and to make rules and regulations for their operation.

State Department of Charities

Legislative enactments in 1926 made the State Board of Charities the head of the State Department of Charities, with a chief executive officer to be known as the Director of State Charities.

Supervision of certain State institutions for the mentally defective, epileptics, and adult delinquents was transferred to the newly created Department of Mental Hygiene and to the Department of Correction.

Another important measure transferred administrative control from local boards of managers to the State Department of Charities in the operation of six State institutions: the State Agricultural and Industrial School at Industry, the State Training School for Girls at Hudson, the State Reconstruction Home at West Haverstraw, the New York State Woman's Relief Corps Home at Oxford, the State Hospital for the Treatment of Incipient Pulmonary Tuberculosis at Raybrook, and the Thomas Indian School at Iroquois.[5]

The formerly independent State Commission for the Blind, formed in 1913, became a bureau in the new State Department of Charities, which also absorbed the Bureau of Indian Affairs.

New Philosophy of Public Welfare

The passage of the Public Welfare Law in 1929, superseding the antiquated Poor Law and repealing some 140 special laws dealing with local relief, inaugurated a new era in the welfare history of the State. Until that time poor law practice had been governed largely by the philosophy of 1824, which emphasized institutional care and regarded the almshouse as the center of the public relief system. Thenceforth the almshouse was to be considered only as a last resource.

The concept of home relief as the fundamental basis of welfare methods was written into the aw: "As far as possible, families shall be kept together, and they shall not be separated for reasons of poverty alone. Whenever practicable, relief and service shall be given a poor person in his home."

Prevention of destitution was also expressly acknowledged on the statute books as a public welfare function for the first time. Public welfare officials were directed to "give such service to those liable to become destitute as may prevent the necessity of their becoming public charges." Significantly, adequate medical care for the needy sick was made mandatory.

Implicit in the all-embracing character of the statute was the recognition of State responsibility, direct and indirect, in many branches of public welfare that had hitherto been considered outside its province. The change in official terminology from "poor relief" to "public welfare" was a significant index to the deep transformation in concepts then taking place. Disappearing from official nomenclature were such stigma-bearing terms as "pauper," "lunatic," "bastard," and "asylum." It was specified in the law of 1929 that "poorhouses" should thenceforth be known as "county homes" or "city homes"; the old "overseer of the poor" was now a "public welfare official."

Soon after the passage of the Public Welfare Law, another statute was enacted substituting "social welfare" for "charities" in the names of the State Board and the State Department of Social Welfare.

Old-Age Assistance

The State's Old Age Security Act was passed in 1930 providing for allowances to needy persons seventy years old and over, and supervision of these allowances was entrusted to the State Department of Social Welfare. The steps leading up to the enactment of the old-age assistance law preceded the onset of the Great Depression and were part of a newly formulated, progressive State welfare program. But, before this new policy could get under way, the economic crisis ushered in by the crash of 1929 threatened to collapse the whole public welfare system. State help for public assistance was needed and could no longer be deferred. Under the circumstances the Legislature, responding to a special message from Governor Roosevelt, unanimously passed the "Wicks Act" in September, 1931, providing State aid to the localities for unemployment relief. Through this measure New York became the first state to participate in the financing of emergency (home) relief. A special State agency, the Temporary Emergency Relief Administration (T.E.R.A.), was created to carry out the provisions of the law.

Federal Aid

It became clear that these relief programs were but expedients and that more fundamental, substantial measures were needed. Out of this thinking came the new program which Congress enacted in 1935, the Social Security Act. Under that act the Federal government came into the public assistance picture through grants-in-aid to the States for the three categories of public assistance which have continued to this time: old-age assistance, aid to the blind, and aid to dependent children. The latter program was a continuation of the program that was started under the boards of child welfare in 1915 in New York State.

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[5] Control of the State Reconstruction Home and the State Hospital for the Treatment of Incipient Pulmonary Tuberculosis was transferred to the State Department of Health in 1931.

Permanent System of State Aid

A far-reaching reorganization of the State's public welfare administrative system took place in 1937 to meet the rapid expansion of State services and the changing relationships of the State to Federal and local welfare services. The Public Welfare Law was amended to provide for the appointment of a new State Board of Social Welfare consisting of 15 members, with power to name the Commissioner of Social Welfare. A permanent system of State aid for home relief was established, and the Temporary Emergency Relief Administration was abolished.

Through constitutional amendments approved at the polls in November, 1938, the people of the State wrote into the fundamental law several important provisions regarding social welfare. In Section 1, Article XII, of the State Constitution it is declared that "the aid, care, and support of the needy are public concerns, and shall be provided by the State and its subdivisions in such manner as the legislature may determine." Section 2 of the same article insures the continuing existence of the State Board of Social Welfare and gives to the Board broader powers of visitation and inspection. In Section 8 of Article VII constitutional authority is given to legislative provision for the relief of the needy and for the care and education of certain special categories of dependents, including among them the blind, deaf, deaf mutes, the physically handicapped, juvenile dependents and delinquents, and the needy sick. This section also sanctions protection, by insurance or otherwise, against the hazards of unemployment, sickness, and old age.

New Public Welfare System

In 1946 the State and local executive, legislative, and administrative branches of government cooperated in building a new local public welfare system and a new system of State aid for public welfare. The new system began operating on January 1, 1947. Today it consists of 66 county and city public welfare districts, as against 126 county and city agencies when the reorganization legislation went into effect.

Governor Dewey summed up the new system in his message to the Legislature on January 8, 1947: "In place of a patchwork of complexity and duplication, we shall have a simplified and coordinated system. For the first time, all of our sick and our needy will be served promptly and directly through a single, convenient local office. Investigations of all family needs, for all types of assistance and service, will be made by one agency, not several. Instead of a variety, there will be a uniform standard of assistance and care within the individual county."

The latest public assistance program to deal with a widespread health and welfare problem was authorized by the Congress in 1950 with Federal reimbursement—aid to the disabled. New York State established the program in October, 1950. Through this new program the total medical and social resources of the community are brought to bear upon the serious health problems of thousands of adults in this group in the State.

Physicians will also be interested to know that to protect and promote the health and welfare of persons cared for in proprietary nursing homes, proprietary convalescent homes, and proprietary homes for adults in New York State, the Department undertook in 1951 the task of inspecting and classifying the nursing and the convalescent homes in upstate New York, and the local public welfare departments certified, on delegation from the State Department of Social Welfare, all homes for adults with acceptable standards. These measures represent a significant and effective recognition of the importance of these homes in the total program of care of the sick and the disabled in New York State.

Another major development offering possibilities for better health and medical care was the inauguration on January 1, 1954, of a new formula of State aid to the localities for public welfare purposes. The State, for the first time in its history, began to share in the costs of all welfare programs authorized by the State Social Welfare Law. The State does this by turning over to the localities all monies received from the Federal government for public welfare purposes, and by sharing with the localities, on an equal basis, the remaining costs of all public welfare programs authorized by the State Social Welfare Law, including expenditures for salaries and other administrative costs.

Under the new formula the State pays half the costs of care of the following groups whose care previously, with a few exceptions, was a local charge: (1) children taken under care by the local welfare department or discharged to it by the courts, (2) needy persons who are cared for in public homes, (3) needy persons who are cared for in public-home infirmaries, (4) needy men and women who are cared for in municipal lodging houses and shelters, (5) hospital patients who are children in foster care, and (6) hospital patients who have been home relief recipients at least thirty days.

Probably one of the most significant events in the Department's history from the viewpoint of the medical profession was the plan put into effect recently to coordinate the facilities and resources of the State Department of Social Welfare and the State Department of Health in supervising and inspecting the preventive and corrective health and medical services provided by the 2,465 voluntary and public agencies and institutions in the State supervised by the State Department of Social Welfare.

The plan is under the direction of Dr. I. Jay Brightman, formerly Associate Director of Medical Services, State Department of Health, who was appointed Assistant Commissioner for Medical Services (Welfare) in that department and assigned to work full time in the State Department of Social Welfare.

This plan is an outgrowth of the work of the Interdepartmental Health Council, which includes all State agencies that have responsibilities for health and medical services, whose primary objective is to coordinate and integrate State facilities and resources so that they can be focused upon problems common to those agencies. In 1951 the State Commissioners of Social Welfare and Health worked out a program of using State and local health personnel in teams of physicians and social workers to conduct examinations of applicants for and recipients of aid to the disabled. Through this interdepartmental cooperation social workers, private physicians, rehabilitation specialists, public health officials, and public welfare officials have been working together in an integrated, sustained effort to restore to health and to useful roles in the community as many persons as possible among the 38,000 aid-to-disabled recipients whose impairments have reduced them to economic and social dependency.

Continuing to work with the State and local components of professional societies on the manner in which medical and allied services are to be granted to indigent persons, the two State agencies have taken steps toward the promotion of optimal health, case-finding of latent chronic disease, and for early treatment and rehabilitation of ill or handicapped among persons assisted by the public welfare programs in the State with the objective of improving medical services for them with a minimum expenditure of public funds.

Dr. Brightman and his medical staff are also responsible for developing policies and procedures for the local public welfare medical programs administered by the 66 local public welfare districts in the State; for developing the medical standards employed in the State Department of Social Welfare's supervision and inspection of hospitals, dispensaries, nursing and convalescent homes, local public homes and their infirmaries, and other agencies and institutions for adults and children supervised by the Department; for supervision of the medical care given in the Department's six institutions; for supervision of the medical activities of the State Commission for the Blind, a bureau of the Department; and for supervision of the medical care programs for Indians living on the reservations in New York State.

State-wide programs for training State, county, and city employes concerned with public welfare medical care and hospital care are also part of the plan. The plan also embraces carrying out health recommendations of the New York State Citizens' Committee of One Hundred for Children and Youth by strengthening preventive and medical care programs for approximately 42,000 children being cared for in institutions and in foster family homes and for approximately 150,000 children on the public assistance rolls.

This new arrangement between two major departments in State government is unique in the history of social welfare and public health, and it will be watched with great interest throughout the country. With the cooperation of the medical profession it will succeed and will make a major contribution to the health and welfare of all the people of New York State.

CORRESPONDENCE

The Role of Hyperinsulinism in Multiple Sclerosis: Further Comment

To the Editor:

Medical questions should not be resolved by polemics. My comments on the communication by Dr. Wainerdi on page 3099 of this issue will, therefore, be restricted to a few pertinent facts.

My "other contributions relating hyperinsulinism to such diseases as rheumatoid arthritis, acute rheumatic fever, asthma, peptic ulcer, and to certain neuroses" were largely published in the *American Journal of Digestive Diseases.* The editor, Dr. Beaumont S. Cornell, was moved to write in appraisal of the book I wrote about my researches[1] as follows:

> As one not unacquainted with many of the problems of gastro-enterology, nutrition, and carbohydrate metabolism, I find *Body, Mind and Sugar* vastly stimulating. While I have not had the opportunity of checking all the statements made, I am in perfect agreement with those which have come within my own medical experience. If only a half of the ideas prove to be true, the authors will have blazed a new and important trail through the forest of our medical ignorance.
>
> Due credit has been given to Dr. Harris and to Dr. S. Portis and others for original work on hyperinsulinism, but the present authors carry the significance of low blood sugar much further. Personally, I do not think they have carried it too far.
>
> This will be one of the books which will help to formulate a better diet for human beings.[2]

The method of analysis I used, while as yet unpublished, is really nothing new in principle. Refinements have been introduced into a standard method to render the results more precise. Many competent biochemists have been shown the method and apparatus, and it will be published only because of their urging.

"To support his argument Abrahamson describes fewer than 5 per cent (six of 126) of the cases on which his claim is premised." I see no reason for cluttering up any paper with a mass of data that can be summarized, without loss of accuracy or cogency, in a single sentence.

"Another case (Case 5) is clearly not multiple sclerosis but, on the data given, a post-traumatic monoplegia." Precisely so! That patient had been treated at an outstanding neurologic center for seventeen years and had carried the diagnosis of multiple sclerosis in his mind and heart for all that time. It was only *after* the glucose tolerance test had failed to reveal the existence of hyperinsulinism that he was referred to a consultant who was the first to elucidate the true nature of the disease. After all, *negative* evidence can also be valid.

The glucose tolerance test should *not* be repeated once the diagnosis of hyperinsulinism is established. The treatment for that condition has as its aim the prevention of sudden rises in blood sugar that would resensitize the insulin apparatus. The large dose of glucose used in a second test might undo the benefit obtained from weeks or even months of the diet.

More doctors should take postgraduate courses in the world about us. If we visit a meat market, we can see the butcher go into his icehouse many times a day with apparent impunity. Lock him in the cold room over night, and he'll freeze to death. A transient blood sugar level of 60 or even 50 does much less harm than one hovering around 65 to 70 all day long. In my work I had set 70 as the diagnostic level. As a matter of fact, all of my cases went below 65 and most of them (84) dropped below 60. A substantial number (35) dipped into the 40's, and a few (5) went even lower.

A single finger puncture is not severe enough to cause "surprise." The finger is not really amputated. Fingertip blood is so widely used in good laboratories that no biochemist could see any objection to it. Any book will bear this out.

A neurologist, no matter how "skilled," is not competent to evaluate metabolic processes and tests for they are outside the field of his special training. For example, rickets affects the bones, yet all good orthopedists agree that the treatment (except for permanent deformities) lies beyond their province—among metabolic disorders. The test cited in refutation of my work proves these statements. The analyses were performed with the Folin-Wu method. In *Standard Methods of Clinical Chemistry* (volume 1), recently published by the American Association of Clinical Chemists, only glucose has two methods given for its determination. The preferred method gives "true blood sugar." The Folin-Wu is included merely because

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[1] Abrahamson, E. M., and Pezet, A. W.: Body, Mind and Sugar, New York, Henry Holt & Co., 1951.

[2] Cornell, B. S.: Personal communication to Henry Holt & Co.

> it is one still widely used in clinical laboratories throughout the world. For this reason no apology is necessary for presenting it in a book of methods such as this, with a re-evaluation of it in the light of modern instrumentation and current medical needs.
>
> The greatest single objection to the method is the inclusion of 15–30 mg. % of non-glucose "saccharoid" when performed on the commonly used tungstic acid filtrate. This discrepancy between the "true blood glucose" obtained by fermentation procedures and approached by several copper reduction procedures and the Folin-Wu method is serious enough to discourage its use by many laboratories.[3]

Moreover, it appears that these figures (15 to 30 mg. per cent) are too conservative for Mosenthal has shown that the difference can vary between 1 and 78 mg. per cent with the errors jumping all over the lot even in a single glucose tolerance test. There was no relationship between the magnitude of the discrepancy and the blood glucose level.[4] While, perhaps, it makes little difference in handling diabetics, when we get into the range of hypoglycemia, the error, percentagewise, becomes prohibitively large.

I stated in the paper which is the subject of the foregoing criticism, "The therapeutic response to this treatment has of course been very variable. A dozen cases already show very little sign of multiple sclerosis. However, it is too early to generalize or even to attempt any prognosis. This series of cases is offered merely as a guide to further investigation."[5] I now see no reason to retreat from that position.

The scientific method of reconciling differences of opinion is to submit the issue to the only valid scientific tribunal—a competent laboratory. *Argumentum ad hominem* with semantically slanted words is not a part of scientific discipline. Having no vested interest in the disease, I should welcome a duplication of my experiments by chemists with training and experience comparable with mine.

E. M. Abrahamson, M.D.

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[3] American Association of Clinical Chemists: Standard Methods of Clinical Chemistry, New York, Academic Press, 1953, vol. 1, p. 60.

[4] Mosenthal, H. O., and Barry, E.: Proc. Am. Diabetes A. 5: 139 (1945).

[5] Abrahamson, E. M.: New York State J. Med. 54: 1603 (June 1) 1954.

Allergy Booklet

The American Foundation for Allergic Diseases has just issued a 12-page booklet *Hay Fever, and What You Can Do About It,* which includes also a list of 604 communities in the United States and adjacent vacation areas rated for prevalence of ragweed pollen.

Grass and tree pollens and molds on vegetation are among less popularly known but serious causes of hay fever dealt with in the booklet. Methods of detecting the particular pollen or mold to which the individual is sensitive and of alleviating the distressing symptoms are discussed. The method of control advocated by the Foundation as most practical is the immunization of the sufferer by injections of the pollen or mold extract. Sufferers who neglect their condition are warned that untreated hay fever can lead to asthma and serious bronchial difficulties and to chronic nasal sinus infections.

Because hay fever can develop into more serious chronic conditions and considerably reduces the working efficiency of several millions of people from two to eight months every year, it constitutes an important health problem, the Foundation asserts. Better methods of treating hay fever and other allergic diseases and more fundamental knowledge of allergy are among the objectives of the Foundation, which is a nonprofit research and educational organization of physicians and laymen.

Hay Fever and What You Can Do About It was prepared by a committee of leading allergy specialists. Priced 10 cents, it is being distributed to allergists throughout the country for use with patients, and may also be obtained by sending 10 cents in stamps or money order to the American Foundation for Allergic Diseases office, 525 Lexington Avenue, New York 17, New York.

Woman's Auxiliary
to the MEDICAL SOCIETY OF THE STATE OF NEW YORK

Public Relations

As members of the medical family, we thoroughly adhere to the axiom that "good public relations starts in the doctor's office," and we add to it, "and also in the home." As Auxiliary members, we realize the privilege of being a doctor's wife carries with it a responsibility and an obligation of service to the people in the community in which we live. The answering of the phone or doorbell, contacts with the public, and the daily lives we live all help to make for good or bad public relations. As auxiliaries, it is only proper and fitting that we be fully informed of medicine's story before we try to serve as liaison with the public.

The primary purpose of our public relations committee is to help the public understand the functions, policies, and aims of medicine on the national, State, and county issues. To promote educational and service activities relating to health and medical needs is one phase of our work. To make each Auxiliary member aware of her responsibility and also try to serve as an ambassador of good will for medicine in her daily contacts, so that collectively and individually the Auxiliary helps to mold friendly public opinion to medicine, is another.

Another important duty of the State and county auxiliaries' public relations committees is to evaluate the State and county needs for education and service in line with medicine's policies. We also carefully estimate our ability and needs on a local level in order to advise and complete the projects undertaken. We also clear all public relations programs through our medical societies before putting them in operation. We are also alert to use Auxiliary members who are members of other organizations and clubs in helping to promote medicine.

You may say this sounds all right but ask what has the Auxiliary done and what is its program for the year? I will meet this inquiry by reference to the Auxiliary's major projects last year—State Fair Exhibit; Health Poster Contest for elementary, junior, and high schools; nurse scholarship and recruitment campaign; health days; telephone squad to cooperate with the county society legislation committee; voluntary medical care plans. New chairmen appointed recently include American Medical Education Foundation, mental health, and blood banks.

Physicians who might like to acquaint themselves in greater detail with the Auxiliary's program on the national, State, and county levels are invited to study the program submitted by our national chairman, Mrs. Richard M. Reynolds; consult the public relations page of the New York State Auxiliary *Ladder to Auxiliary Success*, or arrange a meeting with your county auxiliary public relations chairman.

We are deeply grateful for this opportunity to sum up the public relations program of the Woman's Auxiliary for the readers of the New York State Journal of Medicine, and we trust that it will help the county society public relations chairmen to have a better understanding of the areas in which it is prepared to cooperate with the parent committees.

Mrs. Harry F. Pohlman, *Chairman*
Public Relations Committee

Pain Relief in Arthritis with Vitamin C

Patients with arthritis experience "a significant decrease in pain" on a high vitamin C intake, Dr. Leo J. Cass, Willem S. Frederik, and J. D. Cohen report following a five-month study at Long Island Hospital, Boston. It is reported in the August issue of *Geriatrics*.

Vitamin C, or aspirin, or the two together, appeared to increase appetite, well-being, and mobility, and to decrease pain, the investigators found. Aspirin affected pain favorably, but addition of 1.5 Gm. of vitamin C daily increased its beneficial effect. Orange juice, a rich source of vitamin C, helped decrease pain in a group of arthritics not receiving aspirin.

The study was undertaken to obtain more precise information on vitamin C requirements of old people, both the well and chronically ill. The 140 patients under observation included 39 arthritics.

NECROLOGY

Harold Hill Baker, M.D., of Rochester, died on September 2 after a year's illness. He was seventy-three years old. Dr. Baker received his medical degree at the University of Michigan in 1905. He was a Fellow of the American College of Surgeons and a consultant in orthopedics at the Genesee Hospital. Dr. Baker was also on the honorary staff of the Highland Hospital.

A pioneer in industrial medicine in his home area, serving for thirty-five years as the director of the Bausch & Lomb medical department which he established, he also was chief physician for the New York Central Railroad for many years.

Dr. Baker belonged to the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harold Aaron Cohen, M.D., of New York City, died on September 3 at the age of sixty-eight. Dr. Cohen graduated from Columbia University College of Physicians and Surgeons in 1910. He was a member of the New York County Medical Society and the Medical Society of the State of New York.

Joseph Feldman, M.D., of Brooklyn and West Palm Beach, Florida, died on October 8 in West Palm Beach at the age of sixty-two. Dr. Feldman graduated from Long Island College Hospital School of Medicine in 1918 and was a Diplomate of the American Board of Otolaryngology. He was a member of the American Academy of Ophthalmologists and Otolaryngologists.

Dr. Feldman had been associate attending otolaryngologist at the Beth Moses Hospital and assistant attending otorhinolaryngologist at the Cumberland Hospital. He had been a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Louis Theodore Fricke, M.D., of Brooklyn, died on July 24 at the age of sixty-nine. He graduated from Long Island College Hospital School of Medicine in 1907. Dr. Fricke belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Simon Friedland, M.D., of Brooklyn and Wappingers Falls, died on September 29 at the age of seventy-two. A graduate of Long Island College Hospital School of Medicine in 1913, Dr. Friedland had been a pharmacist before studying medicine. He was a member of the Kings County Medical Society and the Medical Society of the State of New York.

Roderick V. Grace, M.D., of New York City, died on September 27 in Doctors Hospital after a long illness. He was sixty-one years old. Dr. Grace graduated from Columbia University College of Physicians and Surgeons in 1911 and interned at the Presbyterian Hospital. He was a Diplomate of the American Board of Surgery and a member of the American Surgical Association, the New York Surgical Society, and the New York Academy of Medicine.

Before his retirement in 1952, Dr. Grace had been an attending surgeon at the Hospital for Special Surgery and a consulting surgeon at Bellevue Hospital. He also was consulting surgeon at the Veterans Administration Hospital in Staten Island and the Morristown Memorial Hospital in New Jersey. In 1946 he was clinical professor of surgery at the Columbia University College of Physicians and Surgeons.

Dr. Grace had belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

S. Frederick Hahn, M.D., of New York City, died on July 4 at the age of fifty-seven. Dr. Hahn received his medical degree from the University of Berlin in 1923. He was senior clinical assistant attending physician at the Mount Sinai Hospital Outpatient Department. Dr. Hahn belonged to the New York County Medical Society and the Medical Society of the State of New York.

William Clifford MacDonald, M.D., of the Bronx and Oxford, died on October 3 after a long illness. Dr. MacDonald was over eighty years old. He received his medical degree from Harvard University in 1899. During World War I he served as a major in the U.S. Army Medical Corps. For the past ten years Dr. MacDonald had been retired.

George Birmingham McAuliffe, M.D., of New York City, died on October 1 at the age of ninety. Dr. McAuliffe graduated from Columbia University College of Physicians and Surgeons in 1888. He was a Diplomate of the American Board of Otolaryngology, a Fellow of the American College of Surgeons, and a member of the American Otological Society. Until 1927 he was an assistant professor of otolaryngology at Cornell University.

Dr. McAuliffe belonged to the New York Academy of Medicine, the New York Celtic Medical Society, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Philip Stanislaus McCormick, M.D., of Yonkers, died on September 30 at his home. He was seventy-four years old. Dr. McCormick graduated from New York University and Bellevue Hospital School of Medicine in 1904 and interned at St. Joseph's Hospital. He was official surgeon of the Yonkers Police Department from 1922 to 1944 and was one of the organizers of the National Association of Police and Fire Department Surgeons. Dr. McCormick was consulting physician at the Yonkers General Hospital.

He belonged to the Westchester County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Benjamin Nocilla, M.D., of the Bronx, died on October 4 at the age of sixty-six following a heart attack. Dr. Nocilla graduated from New York University and Bellevue Hospital School of Medicine in 1913 and interned at the Lincoln Hospital. He was an attending physician at the St. Francis Hospital. Dr. Nocilla belonged to the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Joseph George Patiky, M.D., of Huntington Station, died on September 12 after a heart attack at the age of sixty. Dr. Patiky graduated from New York University and Bellevue Hospital School of Medicine in 1916. A former Suffolk County coroner, he was chief of staff and attending surgeon at the Huntington Hospital and associate attending physician at the Long Island College Hospital.

Dr. Patiky belonged to the Suffolk County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles Winfield Perkins, M.D., of Norwalk, Connecticut, formerly of Harrison, died on October 8 at the age of seventy-six. Dr. Perkins received his medical degree from Hahnemann Medical College and Hospital, Philadelphia, in 1901 and interned at Metropolitan Hospital. He was a Diplomate of the American Board of Radiology (Roentgenology) and a Member of the American College of Radiology. He also belonged to the American Roentgen Ray Society and the New York Academy of Medicine. Dr. Perkins was consulting roentgenologist at the Norwalk General Hospital in Connecticut. In 1915 he had been instructor at New York Post-Graduate Medical School and professor of roentgenology at New York Ophthalmic College and Hospital.

Ignaz Spielberg, M.D., of Sunmount, died suddenly while driving his car in Virginia on September 12. He was fifty-three years old. Dr. Spielberg received his medical degree from the University of Vienna in 1925 and came to this country in 1938. He was employed by the New York City Hospital system from 1943 to 1944. After two years in the Army Medical Corps, Dr. Spielberg was appointed to the staff of the Sunmount Veterans Administration Hospital, where he became chief of physical medicine and rehabilitation. At the time of his death he was driving to the Kennedy Veterans Administration Hospital to prepare for medical board examinations in physical medicine.

James Brown Thompson, M.D., of Farmington, Michigan, and formerly of Amsterdam, died August 15 at the age of seventy-six. Dr. Thompson received his medical degree from the Long Island College Hospital School of Medicine in 1901. Dr. Thompson was the physician on the contract for the New York Reservoir-Ashokan Dam project at the time he lived in New York State. In 1920 he moved to Detroit where he practiced medicine for thirty-two years.

Walter H. Whiton, M.D., of South Branch, New Jersey, and formerly of Brooklyn, died on September 1 at the age of seventy-three. Dr. Whiton graduated from Columbia University College of Physicians and Surgeons in 1904 and interned at the Kings County Hospital. He moved to New Jersey in 1915.

Rules for Rx's

The August, 1954 issue of *Medical Economics* reminds readers that the Harrison Act and the Uniform Narcotic Drug Act require physicians to follow these two rules:

1. Every prescription written must give the doctor's name, address, and registry number, plus the patient's name and full address. No prescription may be written in pencil.
2. If an office is moved (even across the street) the district director of the Internal Revenue Service must be notified of the new address within thirty days. Otherwise, the dollar-a-year tax stamp authorizing narcotic prescription becomes invalid and the doctor loses all legal right to prescribe.

In addition, some state laws require that a record of each prescription containing opiates or coca leaf drugs be kept for two years. This record must include the quantity and dose of the drug, the diagnosis, and the patient's name and address.

MEDICAL NEWS

American Medical Education Foundation—The following New York State doctors have contributed to the American Medical Education Foundation: *Yonkers*—Dr. Charles W. Aitcheson; *Walden*—Dr. G. Kersten; *Utica*—Dr. Quentin McA. Jones; *Tupper Lake*—Dr. Earl C. Wagner; *Troy*—Dr. John J. Squadrito; *Syracuse*—Dr. Robert D. Fairchild; *Schenectady*—Drs. D. H. Lester, James L. McGrane, and Edward B. O'Keefe; *Saranac Lake*—Drs. R. P. Bellaire, John N. Hayes, and Edward S. Welles; *Rome*—Dr. Henry N. Reid; *Rockaway Beach*—Dr. Abraham W. Victor; *Port Jervis*—Dr. J. C. Keniston; *Port Chester*—Dr. Arthur H. Diedrick; *Phoenix*—Dr. Emerson J. Dillon; *Pelham*—Dr. Eliza H. Caldwell; *Northville*—Dr. K. A. Durand; *New York City*—Drs. C. Howe, Mary R. H. Markham, and F. J. Wertz.

Also: *Newburgh*—Dr. E. H. Douglass, Jr.; *Mount Vernon*—Drs. Walter A. Bell and William A. Kelly; *Mexico*—Dr. John R. Anderson; *Malone*—Drs. Alfred A. Hartmann, Monroe M. Kissane, and Carl P. Sherwin, Jr.; *Lake George*—Dr. Bernard H. Lunine; *Kingston*—Dr. T. R. Smalldon; *Hastings*—Dr. Evarts F. Sands; *Gowanda*—Dr. Rene L. Tschopp; *Gloversville*—Drs. Edward S. Holcomb, N. Everett, and Robert C. Warner; *Glens Falls*—Dr. James B. Shields; *Glendale*—Dr. Herbert R. Woodel; *Flushing*—Drs. Leslie W. Maillard and Harry Weiss; *East Meadow*—Dr. De Witt C. Rulon; *Buffalo*—Dr. Joseph T. Andrews; *Brushton*—Dr. Philip E. Stamatiades; *Bronxville*—Dr. J. M. Jones; *Bronx*—Drs. Alex Charlton, Samuel Lieberman, D. G. Petix, E. Szanto, and Jacob Taub; *Brooklyn*—Dr. Ralph Blumberg; *Binghamton*—Dr. M. H. Paushter, and *Addison*—Dr. Stuart H. Bean.

Planned Parenthood—The National Medical Advisory Council of the Planned Parenthood Federation of America has been reactivated. The following New York State doctors have been elected to this Council: Dr. Haven Emerson, professor emeritus of public health at Columbia University, head; Dr. Donald Armstrong, former vice-president, Metropolitan Life Insurance Company, and director, Health and Welfare Division; Dr. R. Gordon Douglas, chief obstetrician and gynecologist, New York Hospital; Dr. Currier McEwen, dean, New York University College of Medicine; Dr. Wilson Smillie, professor of preventive medicine, Cornell University Medical College; Dr. William Studdiford, director, Department of Obstetrics and Gynecology, New York University-Bellevue Medical Center, and Dr. Howard C. Taylor, Jr., director, Obstetrical and Gynecological Services, Presbyterian Hospital, Columbia-Presbyterian Medical Center.

The Council will advise the Federation on matters of broad policy.

Roswell Park Memorial Institute—A new wing at the Roswell Park Memorial Institute was opened October 14. Later, new laboratories for basic research in the fields of biochemistry and biology will be added to make the Institute a balanced investigative center.

The new and enlarged facilities and an expanded staff of authorities in the field of cancer will afford the Institute a unique opportunity for New York State to develop an integrated attack on the problem of cancer by bringing together basic research, clinical laboratory research, clinical investigation, and patient treatment. The Institute will not be used as a terminal care facility but for the active treatment and investigation of patients with all types of malignancies or with premalignant lesions. The Institute will be able to provide modalities of treatment not available in smaller communities with 2-million volt x-ray machines and a linear accelerator.

Residents of New York State suspected of having or known to have a malignant or premalignant lesion and referred for treatment by a physician licensed in New York State are eligible for admission.

In addition to its expanded research and clinical program, the Institute will undertake additional educational responsibilities at the undergraduate, graduate, and postgraduate levels, and is expected to develop into a graduate medical center for malignancy which will be second to none.

Second District Branch—The new officers of the Second District Branch who will take office immediately following the 1955 annual meeting of the Medical Society of the State of New York in Buffalo in May are: Dr. Leo T. Flood, Hempstead, president; Dr. Arthur Corwith, Bridgehampton, first vice-president; Dr. John N. Shell, Freeport, second vice-president; Dr. Albert M. Biglan, Central Islip, secretary, and Dr. George C. Erickson, Hempstead, treasurer.

Third District Branch—The officers of the Third District Branch for the next two years who were elected on September 16 are: Dr. Everett A. Jacobs, Hudson, president; Dr. Edwin G. Mulbury, Windham, first vice-president; Dr. Clement J. Handron, Troy, second vice-president; Dr. Henry J. Noerling, Valatie, secretary, and Dr. William M. Rapp, Catskill, treasurer.

Ninth District Branch—The following officers of the Ninth District Branch have been elected to take office following the meeting of the House of Delegates in May, 1955: Dr. Harold S. Heller, Spring Valley, president; Dr. Earl C. Waterbury, Newburgh, first vice-president; Dr. Reid R. Heffner, New Rochelle, second vice-president; Dr. William P. Kelly, Jr., Carmel, secretary, and Dr. Maxwell Gosse, Poughkeepsie, treasurer.

New York University Hall of Fame—Dr. Harry Most, professor and chairman, Department of Medicine, New York University-Bellevue Medical Center's College of Medicine; Dr. Harold Brandaleone, president, Alumni Association of the College of Medicine; Dr. William Hubbard, Jr., associate dean, College of Medicine, and Dr. Claude Heaton, historian, Alumni Association, took part in the one hundredth anniversary of the birth of Dr. William Crawford Gorgas. Dr. Gorgas received his degree in 1879 from the College then called Bellevue Hospital Medical College. In 1909 he was elected president of the American Medical Association and in 1914, Dr. Gorgas was appointed surgeon general of the United States.

Also in recognition of the anniversary is the announcement of a Rockefeller Foundation gift of $5,000, the income of which is to be used for the purchase of books and periodicals in the fields of public health, sanitation, and tropical diseases for the library of the Medical Center.

Hill-Burton Grants—The status of all Hill-Burton grants in the State of New York for the period ending September 30, 1954, is as follows: Completed and in operation, 69 projects at a total cost of $63,830,573, including Federal contribution of $19,167,642 and supplying 3,727 additional beds; under construction—11 projects at a total cost of $44,366,395, including Federal contribution of $5,912,558 and designed to supply 1,089 additional beds, and approved but not yet under construction—six projects at a total cost of $10,776,851, including $2,587,019 Federal contribution and designed to supply 679 additional beds.

American Board of Physical Medicine and Rehabilitation—The next examinations for the American Board of Physical Medicine and Rehabilitation will be held in Philadelphia, June 5 and 6, 1955. The final date for filing applications is March 1, 1955, and applications for eligibility to the examinations should be mailed to the Secretary, Dr. Earl C. Elkins, 30 North Michigan Avenue, Chicago 2, Illinois.

Meetings—Past

University of Buffalo School of Medicine

Dr. Herwig Hamperl, professor of pathology, University of Bonn, delivered the Harrington Lecture at the University of Buffalo School of Medicine on September 24. Dr. Hamperl discussed "Changes of Disease Patterns Under the Impact of Historic Catastrophes," which concerned the effect of starvation in Russia and Central Europe following the two world wars.

Veterans Administration Hospital

Dr. Emil A. Gutheil, editor, *American Journal of Psychotherapy*, and president, Association for the Advancement of Psychotherapy, was guest speaker at a meeting of the staff of the Veterans Administration Hospital, Northport, Long Island, in September. Dr. Gutheil discussed "Psychopathology and Therapy of Sleep Disorders."

On October 4, Dr. Harold Kelman, president, American Institute for Psychoanalysis, spoke on "Prognosis in Psychosis," and on October 8 "Recent Progress in Psychiatric Genetics" was the subject of the talk given by Dr. Franz J. Kallmann, assistant clinical professor of psychiatry, New York Psychiatric Institute.

Onondaga County Medical Society

"How to Liquidate Your Poor Relations" was discussed by Mr. William A. Richardson, editor, *Medical Economics*, at a meeting of the Onondaga County Medical Society on October 5. The program was arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

Columbia-Presbyterian Medical Center

During the month of October, a series of clinical cancer conferences was held at the Columbia-Presbyterian Medical Center, at the Francis Delafield Hospital. The following subjects and their speakers were presented: "Recent Advances in Anesthesia," by Dr. Jean Henley; "Clinical-Pathological Conference" with Dr. Herbert Maier as discussant and Dr. Edith Sproul as pathologist; "The Functional Significance of Various Levels of the Small Intestine," by Dr. Arnold J. Kremen; "The Juvenile Fibromatoses," by Dr. A. P. Stout, and "Studies on Grades of Malignancy in Papillary Adenocarcinoma of the Ovary," with Drs. Harold Taylor and S. Lieberman.

Nassau Pediatric Society

A scientific meeting of the Nassau Pediatric Society was held in Westbury on October 11. Dr. Emanuel Applebaum, associate professor of clinical medicine, New York University Post-Graduate Medical School, chief, Division of Acute Infections of Central Nervous System, New York City Health Department, spoke on "Postinfection and Postimmunization Encephalitis."

Society of Medical Jurisprudence

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[Continued from page 3132]

on causes and problems of juvenile delinquency and crime was held at a meeting of the Society of Medical Jurisprudence on October 11. At this time, Dr. Chas. Y. Glock, director, Bureau of Social Research, Columbia University, spoke on "Juvenile Delinquency and the Entertainment Media" and presided as moderator during the question period.

Columbia University College of Pharmacy

Dr. Cornelius P. Rhoads, scientific director, Memorial Center for Cancer and Allied Diseases, and director, Sloan-Kettering Institute for Cancer Research, and Dr. Harry Gold, professor of clinical pharmacology, Cornell University Medical College, were among the speakers at the bicentennial celebration of Columbia University College of Pharmacy on October 14.

Dr. Rhoads discussed "Pharmacy's Challenge in the Problem of Cancer," and Dr. Gold talked on "Cardiac Drugs and the Aging Problem."

Albany Medical College Surgical Teaching Day

The first fall teaching day at Albany Medical College was held on October 14 as part of the program of postgraduate education. The lecturers, specialists on the faculty of the Medical College, who participated in the program were: Drs. Pelham Glasier, Allan Stranahan, C. Stuart Welch, David J. Locke, William B. Garlick, Arthur Hengerer, Eldridge Campbell, Ralph Reynolds, Samuel Powers G. Rehmi Denton, John C. O'Keeffe, Kenneth B. Olson, and Paul M. Clark.

The Division of Postgraduate Education is beginning to put into effect plans which will greatly increase the amount of instruction which will be offered to the practicing physician within the Albany area comprising some 19 counties and including a region in which there are approximately 2,000 practicing physicians. The program not only includes "teaching days" but offers special courses for the general practitioner and the specialist.

Postgraduate Center for Psychotherapy, Inc.

A seminar on "Psychosomatic Medicine" began on October 14 at the Postgraduate Center of Psychotherapy, Inc., 218 East 70th Street, New York 21. The sessions are held on Thursdays from 1:30 to 3 P.M. and are a systematic review of the contribution of psychologic factors to organic illnesses and the relationships between particular illnesses and the personality structure of the patient. There will be a correlation between the anatomic, physiologic, pathologic, and therapeutic aspects of the various psychosomatic diseases as viewed by the internist, with the psychodynamic and psychotherapeutic aspects of these entities as studied by the psychotherapist. It is requested that registration be made in advance.

Geneva Academy of Medicine

"Natural History and Treatment of Ulcerative Colitis" was presented by Dr. Sidney M. Fierst, clinical assistant professor of medicine, State University of New York College of Medicine at New York City, at a meeting of the Geneva Academy of Medicine on October 18. This program was arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

International Academy of Proctology

The first stated meeting of the New York Chapter of the International Academy of Proctology was held on October 18 at the Plaza Hotel, New York City. A paper on "Carcinoma of the Rectum" was presented by Dr. Earl J. Halligan, chief surgeon, Jersey City Medical Center. Following Dr. Halligan's paper a colored moving picture was shown.

Jefferson County Medical Society

The October meeting of the Jefferson County Medical Society was held at the Black River Valley Club on October 19. Dr. J. Ernest Delmonico, Jr., clinical professor of surgery, State University of New York College of Medicine at Syracuse, spoke on "Recent Advances in Surgical Treatment for Heart Disease."

Bronx Society of Neurology and Psychiatry

The regular meeting of the Bronx Society of Neurology and Psychiatry was held on October 21 at the Morrisania City Hospital. Dr. Franz Joseph Hallmann, principal research scientist, New York State Psychiatric Institute, spoke on "Recent Advances in Psychiatric Genetics."

Orange County Medical Society

A dinner meeting of the Orange County Medical Society was held on October 21 at the Cornwall Hospital. Dr. Jere W. Lord, Jr., associate professor of clinical surgery, New York University Post-Graduate Medical School, and Dr. Milton Mendlowitz, research fellow, Columbia University College of Physicians and Surgeons Division, Goldwater Memorial Hospital, Welfare Island, and lecturer, clinical medicine, Columbia University College of Physicians and Surgeons, took part in a symposium on hypertension.

This meeting was part of the postgraduate instruction arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

University of Buffalo School of Medicine

A postgraduate course in x-ray interpretation was held at the University of Buffalo School of Medicine, October 27 and 28. The course was designed to assist physicians to interpret x-ray films and utilize x-ray services more effectively in diagnosis and treatment. Roentgenology of the gastro-

[Continued on page 3136]

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intestinal tract, heart, and lungs, and skull and osseous system was included.

New York Tuberculosis and Health Association

The annual conference of the New York Tuberculosis and Health Association was held on November 10 at the Hotel Statler. The general theme of the conference was "New Needs of Patients Arising from Changing Treatment." The American College of Chest Physicians and the TB Sanatorium Conference sponsored an evening clinical session at the Hotel New Yorker.

Brooklyn Hebrew Home and Hospital for the Aged

The first annual lecture in gerontology was delivered by Dr. Nathan W. Shock, chief, section in gerontology, National Institutes of Health, Bethesda, Maryland, on November 10 at the Brooklyn Hebrew Home and Hospital for the Aged. Dr. Shock spoke on "The Physiological Basis of Aging in the Human."

Meetings—Future

Long Island Jewish Hospital

A series of monthly lectures by visiting pediatricians was inaugurated by the Long Island Jewish Hospital, October 21. Dr. Horace L. Hodes, director, Department of Pediatrics, Mount Sinai, Hospital, New York City and clinical professor of pediatrics, Columbia University, opened the series by speaking on "The Etiology of Infantile Diarrhea." The second lecture will be held on November 18 and all other lectures will be held at 8:30 P.M. on the third Thursday of each month through May, 1955. Pediatric rounds will be made by each of the visiting pediatricians at 11 A.M. on the day following the lectures.

University of Buffalo School of Medicine

A postgraduate course on "School Health" was opened on November 10 for school physicians in cooperation and with the assistance of the New York State Department of Health and the New York State Education Department. The last four conferences in this series of five will be held on Wednesday, November 17; Wednesday, November 24; Wednesday, December 1, and Wednesday, December 8.

The course is geared to point out what the physician should know about the subject presented, what he can do about the problems discussed, and referrals and consultation.

Registration for the course is $25 and is approved by the New York State Education Department for one semester hour credit toward the requirements for the School Medical Supervisor certificate. Checks should be made payable to the University of Buffalo.

Mexican Surgical Assembly

The ninth Mexican Surgical Assembly is being held November 14 to 20, in Mexico City at the Hospital Juarez. The program will consist of general assembly meetings with subjects of common interest to all surgical specialties, a section on audiovisual education in charge of projecting surgical films, television demonstrations, and scientific and commercial exhibits.

Facilities of the new University City Medical School and other new hospitals will be available and an elaborate program of social festivities and short trips have been arranged by the ladies auxiliaries and entertainment committees. Among the New York state doctors participating will be Drs. Herbert C. Maier, Frederick Amendola, George Slaughter, Robert Kennedy, Lawrence Pool, Ivan Kempner, James Winfield, and Francis Donehue.

New York Academy of Medicine

The twentieth series of "Lectures to the Laity" will be inaugurated on November 17 at 8:30 P.M. by Dr. Alexander T. Martin, president, New York Academy of Medicine, and Dr. Sidney Farber, director of research, Children's Cancer Research Foundation, Boston, Massachussetts, will discuss "Chemotherapy of Cancer."

Subsequent lectures in the series and their speakers will be: December 1—"Is Psychiatry a Science?" by Dr. Jules H. Masserman, professor of neurology and psychiatry, Northwestern University; January 5—"The Philosopher Looks at Science," by Ernest Nagel, Ph.D., professor of philosophy, Columbia University; January 19—"Life is for Living," by D. Ewen Cameron, Allan Memorial Institute of Psychiatry, Montreal, Canada, February 2—"Psychosomatic Notions—A Review," by Aldwyn B. Stokes, BM. (Oxford), MRCP (London), professor and head, Department of Psychiatry, University of Toronto; February 16—"Man and His Nutrition," by Charles G. King, Ph.D., D.Sc. (Hon.) scientific director, The Nutrition Foundation, Inc., New York City, professor of chemistry, Columbia University.

Presiding chairmen will be Drs. Joseph Burchenal, James H. Wall, Joseph C. Hinsey, Robert D. Loeb, M. Ralph Kaufman, and Frank G. Boudreau. These lectures are free to the public and no tickets of admission are required.

Capital District Conference on Aging

The Capital District Conference on Aging, sponsored by the Albany County Department of Public Welfare, will be held on Thursday, November 18 at the Ann Lee Home. The Honorable Erastus Corning, II, Mayor of Albany, and Dr. John J. Phelan, medical director, Ann Lee Home, will make the welcoming address. Dr. Frederic D. Zeman,

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[Continued from page 3136]

medical director, Hebrew Home for Aged and Infirm, New York City, will discuss "The Preventive Medicine of Old Age—The Responsibility of the Physician and the Community," and Geneva Mathiason, National Social Welfare Assembly, Inc., New York City, and secretary, National Committee on the Aging, will discuss "The Community's Role in Aging."

A panel on "Medical Problems of Aging" with "Psychologic Aspects of Aging, by Lee Shatin, Ph.D., chief clinical psychologist, Albany Veterans Hospital, and assistant professor of psychology, Albany Medical College; "Nutritional Problems and Heart Disease," by Dr. Raymond Harris, attending cardiologist and assistant medical director, Ann Lee Home; and "The Cold Spring Institute and Aging," with Ruth Andrus, Ph.D., director, Cold Spring Institute, Cold Spring-On-Hudson, will be presented as well as a panel on "Community Services for Aging" during which Paul H. Phillips, executive director, Albany County Chapter, American National Red Cross, will present "What the Voluntary Service Agency Offers the Aged"; Thomas Cudmore, director, Albany Community Chest, Inc., "The Role of the Community," and James Hepinstall, assistant to the superintendent of the Albany Public Schools, will discuss "Adult Education Services for the Aged."

A general discussion will be held with Hyman M. Forstenzer, assistant director for Community Mental Health Services, New York State Department of Mental Hygiene, presiding as moderator.

Brooklyn Psychiatric Society

A meeting of the Brooklyn Psychiatric Society will be held on November 18 at the Methodist Hospital, Brooklyn at 9 P.M. Dr. Morton H. Hand will discuss "Psychiatric Aspects of Dermatologic Disorders."

Fulton County Medical Society

"The Clinical Application of Radioisotopes" will be discussed by Dr. Robert R. Wadlund, director, Radioisotope Laboratory, Albany Hospital, at a meeting of the Fulton County Medical Society, on November 18 at the Hotel Johnstown, Johnstown. This program was arranged by the Committee on Public Health and Education of the Medical Society of the State of New York with the cooperation of New York State Department of Health.

Kings and Queens County Medical Societies

Guest speaker before the combined sections on anesthesiology of the Kings and Queens County Medical Societies on December 2 will be Dr. John J. Levbarg. Dr. Levbarg will speak on "Hypnosis as an Aid in the Practice of Anesthesiology."

The meeting will be held at the Kings County Medical Society Building.

American Academy of Dental Medicine

The ninth midannual meeting and luncheon of the Academy of Dental Medicine will be held December 5, at the Hotel Statler, New York City.

Reservations and programs can be obtained by writing to Dr. William M. Greenhut, 124 East 84th Street, New York 28, New York.

The Myasthenia Gravis Foundation, Inc.

A conference on myasthenia gravis under the auspices of the Myasthenia Gravis Foundation, Inc., will be held December 8 and 9, at the School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania. Physicians and students are invited to attend and all communications should be addressed to: Myasthenia Gravis Foundation, Inc., 2 East 103rd Street, New York 29, New York.

American Committee on Maternal Welfare, Inc.

A congress of the American Committee on Maternal Welfare, Inc. will be held in Chicago at the Palmer House, December 13 to 17. The Congress is cosponsored by the American Committee and the American Academy of Obstetrics and Gynecology.

American Congress on Obstetrics and Gynecology

The sixth American Congress on Obstetrics and Gynecology will be held at the Palmer House, Chicago, December 13 to 17. Sponsored by the American Committee on Maternal Welfare, Inc., and the American Academy of Obstetrics and Gynecology, four major groups concerned in the provision of better care for mothers and babies, medicine, nursing, public health, and hospital administration will be brought together.

General chairman is Dr. R. Gordon Douglas, professor of obstetrics and gynecology, Cornell University Medical College, and obstetrician and gynecologist-in-chief at New York Hospital. Dr. Lawrence M. Randall, professor of obstetrics and gynecology, Mayo Foundation Graduate School, University of Minnesota, Rochester, Minnesota, is general program chairman.

Information about the meeting may be obtained by writing to the Sixth American Congress on Obstetrics and Gynecology, 116 South Michigan Avenue, Chicago 3, Illinois.

Ontario County Medical Society

The December 14 meeting of the Ontario County Medical Society will hear Dr. A. C. Silverman, assistant clinical professor of pediatrics at the State University of New York College of Medicine at Syracuse, speak on, "Infectious Diseases of Childhood," at the Canandaigua Hotel in Canandaigua.

University of Florida Graduate School of Medicine

The ninth annual University of Florida midwinter seminar in ophthalmology and otolaryngology will be held at the Sans Souci Hotel, Miami Beach, the week of January 17, 1954. On January 19, the

[Continued on page 3140]

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midwinter convention of the Florida Society of Ophthalmology and Otolaryngology will hold its meeting, and those attending the seminar are invited to attend.

Lecturers for the seminar will be: Dr. William F. Hughes, Jr., Chicago; Dr. Phillips Thygeson, San Jose; Dr. James Allen, New Orleans; Dr. Walter H. Fink, Minneapolis; Dr. Milton L. Berliner, New York; Dr. Paul Holinger, Chicago; Dr. Lawrence R. Boies, Minneapolis; Dr. Edmund P. Fowler, Jr., New York City; Dr. Arthur W. Proetz, St. Louis, and Dr. David D. DeWeese, Portland, Oregon.

Personalities

Honored

Dr. Vincent J. Collins, director, Department of Anesthesiology, St. Vincent's Hospital of the City of New York, by an honorary membership to the Brazilian Society of Anesthesiologists at the recent meeting of the Second Congress of the Latin-American Society of Anesthesiologists in Sao Paulo, Brazil. At that time, Dr. Collins was guest lecturer and later also lectured at the Foundation Hospital, Buenos Aires, Argentina, and Medical Center, Santiago, Chile . . . Dr. Leander A. Newman, Port Washington, by the Nassau County Medical Society as the "Doctor of the Year" . . . Dr. Georgia Reid, president of the medical board, New York Infirmary, as woman of the week by the professional women's clubs of Manhattan and the Bronx as part of the nation-wide observance during the week of October 10.

Awarded

Dr. Leona Baumgartner, Commissioner of Health of New York City, the annual award in medicine for "outstanding and untiring efforts through her public offices to aid thousands of orthopedically handicapped people to adjust to normal life," from the New York Philanthropic League, United Order of True Sisters, Inc., and an Albert Lasker Award for 1954 for "Distinguished achievements in public health administration, strengthening personal and community health, our greatest resources."

Elected

Dr. John Beck, radiologist, Staten Island Hospital, to the board of directors, United Medical Service, Inc. . . . Dr. Ralph H. Boots, New York City, chairman, Board of Governors of the New York Chapter, Arthritis and Rheumatism Foundation . . . Dr. George G. Deaver, New York City, president, and Dr. William Cooper, New York City, vice-president, of the Coordinating Council for Cerebral Palsy, New York City . . . Dr. Howard A. Rusk, New York City, president-elect, of the American Congress of Physical Medicine and Rehabilitation, and Dr. William Bierman, New York City, to the editorial board of the *Archives of Physical Medicine and Rehabilitation* . . . Dr. Herman E. Hilleboe, New York State Commissioner of Health, as president of the American Public Health Association.

Appointed

Dr. Richard F. Binzley, director, Syracuse Psychopathic Hospital, as assistant commissioner of mental hygiene . . . Dr. John J. Cashman, New York City, to the medical staff of the Wyoming County Community Hospital . . . Dr. Richard D. Dugan, New York City, as assistant resident in obstetrics and gynecology of Bassett Hospital, Cooperstown . . . Dr. Daniel R. Kaufman, Flushing and Great Neck, to full attending in urology at the Flushing Hospital and a member of the medical board . . . Dr. Theodore G. Klumpp, president of Winthrop-Stearns Inc., as chairman of the Task Force on Medical Services of the Hoover Commission on Organization of the Executive Branch of the Government . . . Dr. Victor Mayer, New York City, medical director for the Sullivan County Cerebral Palsy Association Clinic at Liberty Loomis Hospital.

Dr. William P. Nelson, III, McKownville, as chief of medical service at Albany Veterans Hospital . . . Dr. Joseph C. Peck, formerly of Haverstraw, as a member of the staff of Waddell Hospital in Virginia . . . Dr. John L. Sengstack, as chief of the medical staff of Huntington Hospital, Long Island . . . Dr. John S. Stirling, formerly of Canton, Ohio, as Ontario County pathologist. . . Dr. Charles Taylor, St. Lawrence State Hospital, as senior grade physician in the Veterans Administration Hospital, Salisbury, North Carolina . . . Dr. George R. Weeden and Dr. Arthur H. Applegate, Mohawk, to the staff of Memorial Hospital in Herkimer . . . Dr. Price A. Kirkpatrick, psychiatrist, as director, Domestic Relations Court's Bureau of Mental Services.

Speakers

Drs. Thomas P. Almy, Alexander Brunschwig, W. Amory Burnett, Michael R. Deddish, John A. Evans, Gordon P. McNeer, George T. Pack, Milton R. Porter, Robert S. Sherman, William L. Watson, and Asher Winkelstein, at a round-table conference on recent and changing concepts in the diagnosis and management of cancers of the digestive tract on November 12 at Memorial Center in New York City . . . Dr. Leona Baumgartner, New York City Commissioner of Health, and Dr. Basil C. MacLean, Commissioner of Hospitals, at a meeting of the New York TB and Health Association on November 10 in New York City . . . Dr. J. Burns Amberson, professor of medicine, College of Physicians and Surgeons, Columbia University, on October 18 at the twenty-seventh annual graduate fortnight at the New York Academy of Medicine . . . Dr. Arthur J. Barsky, Mount Sinai Hospital, New York City, at the first annual meeting of the Academy of Psychosomatic Medicine on October 9 in New York City.

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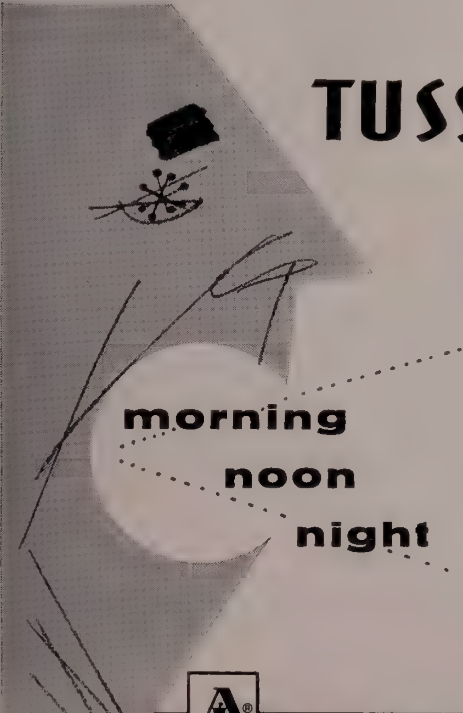

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Dr. E. M. Bluestone, public health specialist of Montefiore Hospital, Bronx, at a meeting of the First District Dental Society in New York City on October 9. . . Dr. Joseph H. Burchenal, Sloan-Kettering Institute for Cancer Research, on October 13, as one of a series of lectures sponsored by Northwestern University's Medical School in the auditorium of the Veterans Administration Research Hospital, Chicago . . . Dr. Robert Dickes, associate professor of psychiatry, State University College of Medicine at New York City, on October 7 at Brooklyn State Hospital . . . Dr. Allan W. Fraser, assistant professor of psychiatry, Cornell University College of Medicine, at the third medical conference of the Muscular Dystrophy Associations of America, Inc., on October 8 in New York City.

Dr. Arnold P. Friedman, director of the headache clinic at Montefiore Hospital, Bronx, at a symposium at the convention of the New York State Academy of General Practice in October . . . Dr. Norman J. Levy, attending psychiatrist, Bellevue Delinquent Clinic, during the thirteenth annual lecture series of the auxiliary council to the Association for the Advancement of Psychoanalysis, on September 29 . . . Dr. Morton L. Levin, assistant New York State Health Commissioner, in October, at the American Public Health Association's eighty-third annual meeting in Buffalo . . . Dr. Basil C. MacLean, Commissioner of Hospitals, at the dedication of a new School of Nursing building, Roosevelt Hospital, on October 14 . . . Dr. Abe Pinsky, assistant professor of psychiatry, State University College of Medicine at New York City, as leader of group discussions held under the auspices of the Auxiliary Council to the Association for the Advancement of Psychoanalysis . . . Dr. Frederick H. Theodore, New York City, at the fifty-ninth annual meeting of the American Academy of Ophthalmology and Otolaryngology, New York City, in September.

Exhibitor

Dr. Samuel K. Levy, Brooklyn, past-president of the Pediatric Section of the Kings County Medical Society and assistant attending pediatrician, Maimonides and Bushwick Hospitals, at the Federal Hall Memorial Museum, New York City, one of his large collection of antique tablespoons, a spoon last used by George Washington, obtained from the family of the late U.S. Chief Justice Charles Evans Hughes.

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Dr. Mario, Hornell, general practice in Hornell . . . Dr. Thomas F. Barrett, general practice in Lackawanna . . . Dr. Edward A. Brent, formerly of Rumania, practice of ophthalmology in Pearl River . . . Dr. Frank P. Corraro, general practice in Worcester . . . Dr. Bruce J. Eppels, Rockville Centre, practice of internal medicine in association with Drs. George F. Bock and Lawrence F. Withington in Watertown . . . Dr. B. H. Finklestein, New York City, general practice in New Windsor . . . Dr. William F. Hughes, Olean, practice of pediatrics in Olean . . . Drs. Alfred L. and D. Norbert E. Kramer, Syracuse, general practice in Dewitt . . . Dr. Norman E. Loomis, general practice in Ontario.

Dr. S. J. Makarewicz, Buffalo, in association with Dr. L. L. Bergner in Williamson . . . Dr. Max Marsh, New York City, general practice in Shrub Oak . . . Dr. Arthur H. Mulligan, Herkimer, duty with the U.S. Navy . . . Dr. Charles L. Palmer, general practice in Elmira . . . Dr. Edward S. Pniewski, Westville, Connecticut, general practice in Hyde Park in association with Dr. H. Sherman Hirst . . . Dr. Francois Prat, Elizabeth, New Jersey, general practice in Victor . . . Dr. Doris S. Rome, practice of gynecology in Albany . . . Dr. Noel H. Seicol, Hartford, Connecticut, practice of internal medicine in Rye . . . Dr. J. Trefz, Rochester, general practice in Dryden while Dr. Charles Luss is in the Navy.

Dr. Robert E. Wallace, Camillus, practice of internal medicine in association with the Slocum-Dickson Clinic in Utica . . . Dr. Hiram B. Van Deusen, resuming the practice of otolaryngology in Genesee after serving in the Navy . . . Dr. F. Stafford Wearn, New York City, the practice of general surgery with Drs. Chauncey M. Lapp and Thomas L. McNamara in Corning.

BOOKS REVIEWED

Surgical Technique and Principles of Operative Surgery. By Lt. Colonel A. V. Partipilo, M.C., AUS, Inactive. Original illustrations by W. C. Shepard and Hooker Goodwin. Fifth edition. Quarto of 704 pages, illustrated. Philadelphia, Lea & Febiger, 1953. Cloth, $15.

This fifth edition of such a well-appreciated book is very well written and illustrated. Ten authors have contributed many of the chapters. In each chapter is a discussion of surgical anatomy, and pathologic, physiologic, and clinical aspects of the subject. Pre- and postoperative treatment are well covered. Mainly, however, it is a textbook of surgical technic with detailed explanation of each step in most of the operations of surgery. For the young surgeon it is a very valuable textbook, for the experienced surgeon an excellent reference book.—Edward P. Dunn

Administrative Medicine, Transactions of the First Conference March 9, 10, and 11, 1953, New York, N. Y. Edited by George S. Stevenson, M.D. Octavo of 176 pages, illustrated. New York,

[Continued on page 3144]

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[Continued from page 3143]

Josiah Macy, Jr. Foundation, 1953. Cloth, $3.00.

This is an excellent and timely contribution to the growing literature on "whither medicine?" The proceedings of a conference among experts, representing a wide variety of disciplines through which they have come to be concerned with administrative medicine, it poses no specific question, provides no all-resolving formulation. Rather it is a discussion of principles and perspectives as they relate to such interdependent and essentially indivisible areas as preventive medicine, medical education, and medical care. Here are the problems of contemporary medicine, informally but critically examined from the different viewpoints of persons pre-eminent in their respective teaching and administrative positions within the broad scope of medical services, with the evident common connection, that much can be done to improve the effectiveness of the overall health program in this country.

Highly recommended to practitioner and "medical executive" alike, to all those vitally concerned with the future of medicine.—Robert W. Hillman

Medicine. By A. E. Clark-Kennedy, M.D. Volume 1. **The Patient and His Disease.** Second edition. Octavo of 410 pages. Edinburgh, E. & S. Livingstone (Baltimore, Williams & Wilkins Co.), 1953. Cloth, $6.00.

This is a most scholarly treatise on the human being as an entity, from the first primitive streak, through the perils and vicissitudes of womb life, through the bludgeonary of labor pains and the trauma of birth, into a cold, unseen, and unseeing world.

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Then follows a long and learned discourse on physical diagnosis, what is a sign and what a symptom, what the patient tells in a really exhaustive history, and the importance of the interpretation of the same, the value of the stripped examination, and how it fits into the jigsaw puzzle that we know as a human being, the neurologic knowledge so important to determine wherein the machine may be slipping to produce the symptoms and signs, then to fit all of this into the grand symptom complex which we call disease. This is gone into with painstaking skill, and yet we do not always reach these happy results, as our autopsies frequently remind us.

The author concludes with a definition of disease that is well worth considering, as to the effect of environment, heredity, and genetics, and our reactions thereto, as no two people are ever the same, physically, mentally, or genetically. Our changing world, with its increasing complexities and anxieties, demands violent and revolutionary adjustments from our bodies to accommodate themselves to these changes, to which we cannot all react the same. In short, it is still the same old tale, revised and revamped though it may be, "One man's meat can still be another man's poison."—Thomas F. Nevins

The Nursing Mother. A Guide to Successful Breast Feeding. By Frank Howard Richardson, M.D. Octavo of 204 pages, illustrated. New York, Prentice-Hall, 1953. Cloth, $2.95.

Without in any way underestimating the tremendous strides that have been made in the science and the technic of artificial feeding of infants, the author presents in simple, understandable language the advantages of breast feeding. Presumably, human milk is the ideal basic food for the normal newborn infant. How to make it available to the infant while the mother continues the activities and interests of the modern woman is one of the many problems dealt with in this little book. How milk is produced in the human female breast and how its quantity may be increased is described in detail. The technic of breast feeding is graphically illustrated. The role of the father in this matter is discussed, and a series of questions that have been frequently asked by mothers and prospective mothers in the experience of the writer are presented in a separate chapter.

The book accomplishes admirably its fundamental purpose of encouraging mothers and prospective mothers to nurse their babies and providing pediatricians and practitioners with simple arguments in favor of this lifesaving procedure.—Benjamin Kramer

Synopsis of Pediatrics. By John Zahorsky, M.D., assisted by T. S. Zahorsky, M.D. Sixth edition. Duodecimo of 470 pages, illustrated. St. Louis, C. V. Mosby Co., 1953. Cloth, $6.00.

This reviewer considers this work a practical book on the subject. However, we can't be enthusiastic about the application of guaiacol ointment to babies' chests, or recommend the treatment of cervical adenitis with the application of ichthyol or iodine ointment.

In the chapter on empyema of the chest, the book still speaks of rib resection, without any mention of the more modern treatment with penicillin instillation.

The book does contain many practical points on subjects that may be read with advantage.—Harry Apfel

Practical Electrocardiography. By Henry J. L. Marriott, M.D. Illustrated by Marcie Ethridge Perry. Octavo of 171 pages, illustrated. Baltimore, Williams & Wilkins Co., 1954. Cloth, $5.00.

This is an elementary treatise on electrocardiography which may be the answer to the question asked by many general practitioners, "Which book can I get to give me a rapid survey of the field of electrocardiography?"

The information given is well organized and presented and will be acceptable for beginners. —Milton Plotz

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2. Heimer, C. B., Grayzel, H. G., and Kramer, B.: Archives of Pediatrics 68:382, 1951.
3. Behrman, H. T., Combes, F. C., Bobroff, A., and Leviticus, R.: Ind. Med. & Surgergy. 18:512, 1949.
4. Turell, R.: New York St. J. M. 50:2282, 1950.

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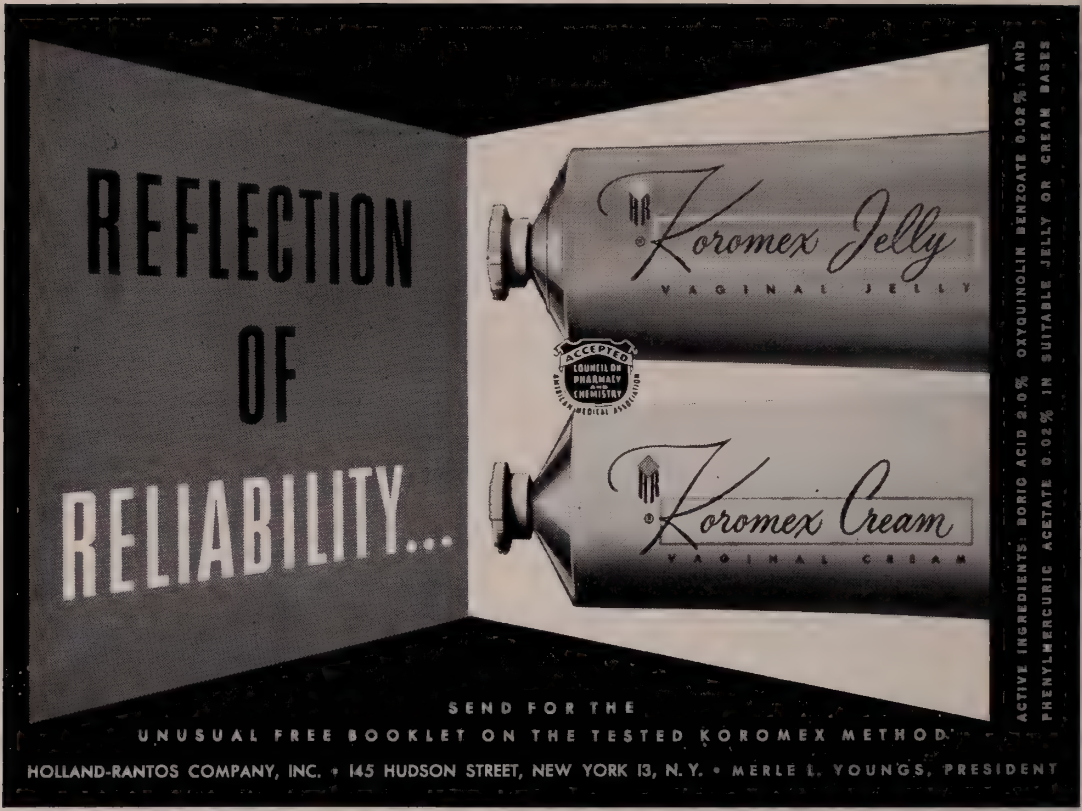
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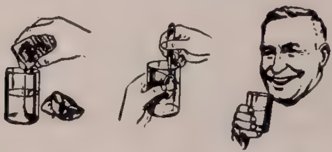

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1. Orugan, R.A.: Radiology, 61:633, Oct., 1953.
2. Everett, E.T., and Rigler, L.G.: Radiology, 58:524, Apr., 1952.

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References:

1. Bernstine, J. B., and Rakoff, A. E.: Vaginal Infections, Infestations, and Discharges, New York, The Blakiston Company, Inc., 1953. 2. Reich, W. J., and Nechtow, M. J.: Practical Gynecology, Philadelphia, J. B. Lippincott Company, 1950, p. 263. 3. Meigs, J. V., and Sturgis, S. H.: Progress in Gynecology, vol. 2, New York, Grune & Stratton, Inc., 1950, p. 433. 4. Lanceley, F.: Brit. J. Ven. Dis. 29: 213, Dec. 1953; abstracted, J.A.M.A. 154: 1467, April 24, 1954. 5. Crossen, R. J.: Diseases of Women, ed. 10, St. Louis, C. V. Mosby Company, 1953, p. 294. 6. Whittington, M. J.: J. Obst. & Gynaec. Brit. Emp. 58: 614, Aug., 1951. 7. Feo, L. G.: Am. J. Trop. Med. 24: 195, May, 1944.

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[1] Silcox, L.E.: Local Use of Microcrystalline Sulfathiazole in Otolaryngology, A.M.A. Arch. Otolaryng. *59*:312 (March) 1954.

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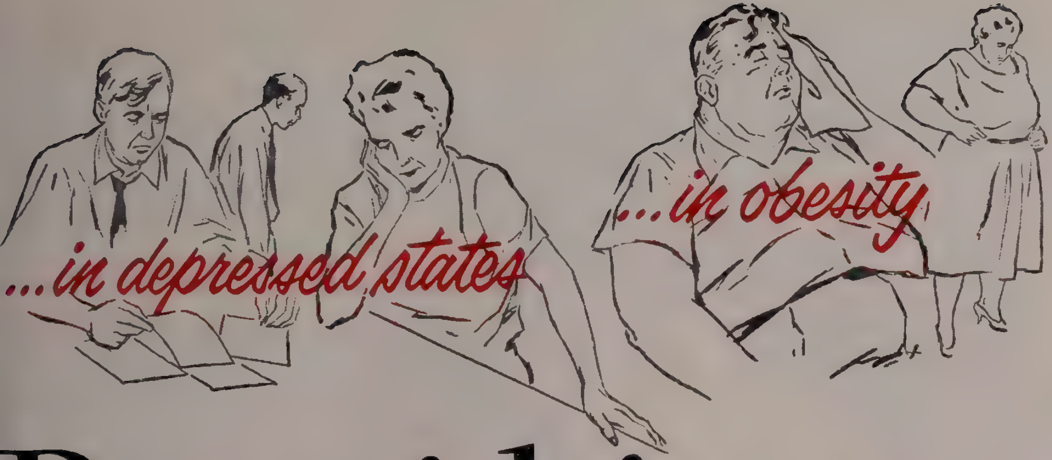

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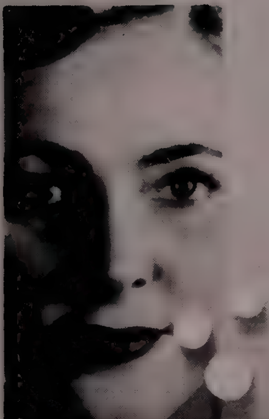

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to combat
resistance
Erythrosulfa*

in refractory or
relapsing cases

ERYTHROMYCIN
the antibiotic of choice
against resistant
Gram-positive cocci . . .

REINFORCED BY
TRIPLE SULFONAMIDES
to cover Gram-negative bacteria
and to potentiate
the erythromycin . . .

Each tablet contains:
Erythromycin . . . . . . 100 mg.
Sulfadiazine . . . . . . 0.083 Gm.
Sulfamerazine . . . . 0.083 Gm.
Sulfamethazine . . . . 0.083 Gm.

Supplied:
Protection-coated tablets
in bottles of 50 and 500.

*TRADEMARK

Upjohn
THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN

heartier appetite
better digestion
more vigorous health
a more useful, more enjoyable life in patients

over 40

where these attributes are diminished by lack of sufficient . . .

Vitamins • Minerals • Lipotropics

GERIFORT *capsules*

It is now definitely established that optimum nutrition—which GERIFORT CAPSULES help to achieve—aids in averting the degenerative, "aging" process.

APC STANDARD OF QUALITY

3 GERIFORT Capsules provide:

Vitamin A (Synth.)	28,000 U.S.P. Units
Vitamin B_1	14 Mg.
Vitamin B_2	14 Mg.
Vitamin B_6	5 Mg.
Vitamin C	210 Mg.
Vitamin D	2,800 U.S.P. Units
Niacinamide	180 Mg.
Iron	20 Mg.
Calcium	188 Mg.
Phosphorus	160 Mg.
Iodine	0.1 Mg.
Calcium Pantothenate	20 Mg.
Folic Acid	1.5 Mg.
Vitamin E	10 Int. Units
Vitamin B_{12}	5 Mcg.
Choline Bitartrate	200 Mg.
Inositol	100 Mg.
dl-Methionine	20 Mg.
Rutin	60 Mg.
Biotin	50 Mcg.
Cobalt	0.1 Mg.
Copper	0.2 Mg.
Magnesium	2 Mg.
Mangenese	0.5 Mg.
Potassium	0.05 Mg.
Zinc	1.5 Mg.

Recommended daily dose . . . 1 to 3 capsules

GERIFORT
GERIFORT

Bottles of 30 and 100 capsules

send for samples and literature

AMERICAN PHARMACEUTICAL COMPANY
Manufacturing Chemists **New York 54, N. Y.**
Over 37 years of service to the profession

PAIN HAS TWO ASPECTS. WHY TREAT ONLY ONE?

Pain has two aspects—physical and psychic. Most analgesics, however, treat only physical pain. But as Krantz and Carr point out: ". . . the emotional trauma produced by the pain is an essential segment of the pain syndrome which must be treated."[1]

'Daprisal' does just that. 'Daprisal' relieves the psychic aspects of pain because it contains the components of Dexamyl* —S.K.F.'s widely prescribed mood-ameliorating preparation.

'Daprisal' also relieves physical pain because it provides the combined analgesic effect of acetylsalicylic acid and phenacetin —potentiated by amobarbital.

FORMULA: Each 'Daprisal' tablet contains Dexedrine* Sulfate (dextro-amphetamine sulfate, S.K.F.), 5 mg.; amobarbital, ½ gr. (32 mg.); acetylsalicylic acid, 2½ gr. (0.16 Gm.); phenacetin, 2½ gr. (0.16 Gm.).

DAPRISAL*

for the relief of pain and the mental and emotional distress that prolongs and intensifies pain

Smith, Kline & French Laboratories, Philadelphia

*T. M. Reg. U. S. Pat. Off.

---

[1] Krantz, J. C., and Carr, C. J.: Pharmacologic Principles of Medical Practice, Baltimore, Williams & Wilkins Co., 1951, p. 587.

New...

"Uses of Wine in Medical Practice (a Summary)"

—published by the Wine Advisory Board, California

Praised through the ages for its tonic effect, wine—the classic beverage of moderation—has been the object of intensive physiologic and pharmacologic study during the past 15 years.

Much of this research, which is still in progress, has been instituted in various centers by the Wine Advisory Board of California in an effort to separate fact from folklore and so evaluate the true place of wine in medical practice.

Aside from the psychobiologic effects of wine, a phase of research very difficult of objective proof, there is rapidly accumulating a definite literature covering the precise effects of wine on the human host.

A cross-section of highly interesting research findings have been summarized briefly in this new brochure intended for distribution to the medical profession.

The table of contents includes chapters on—

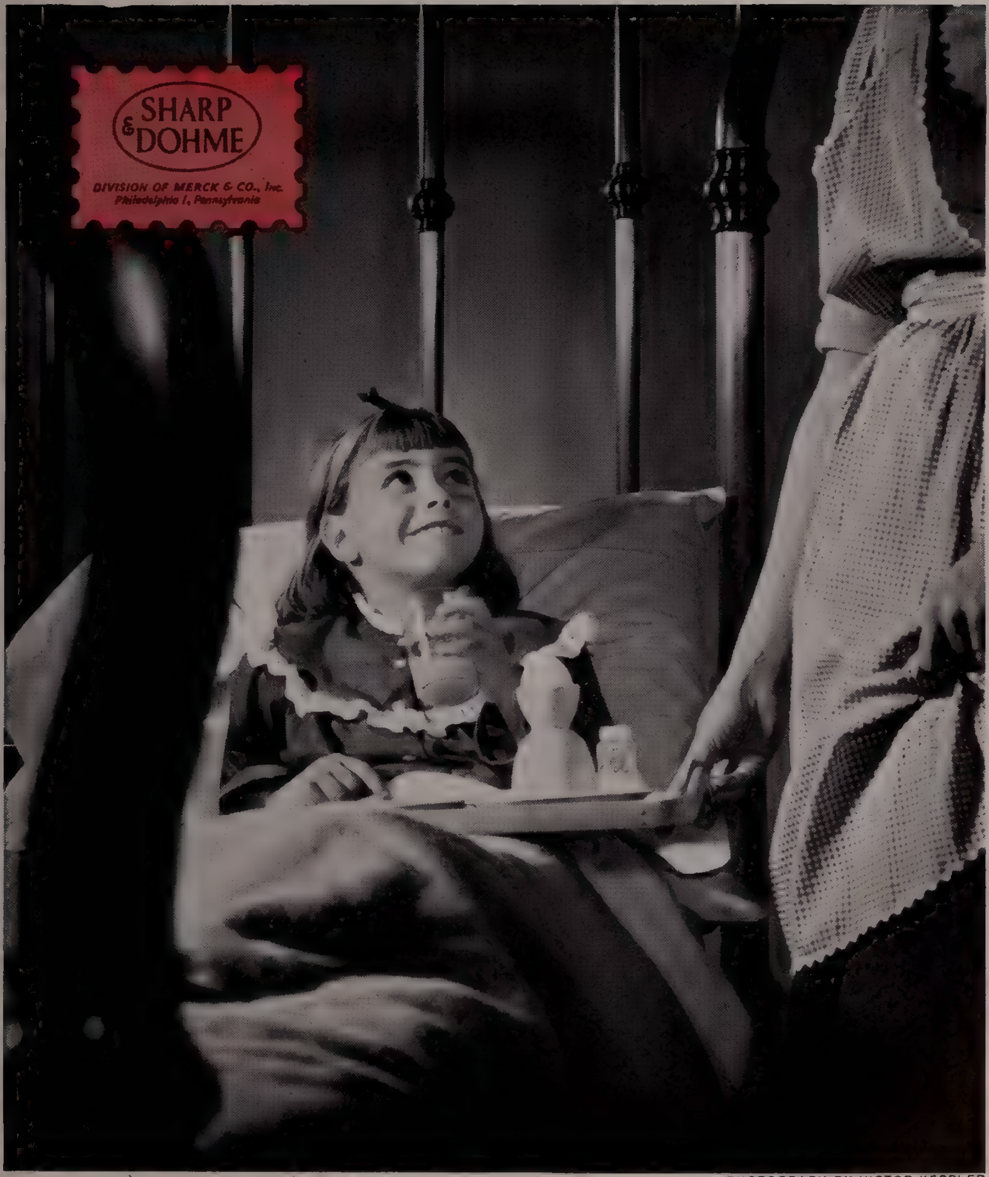
"Chemical Constituents of Wine"
"Wine in Gastroenterology"
"Wine in Pharmacy"
"Wine and Nutrition"
"Wine in Geriatrics and the Treatment of the Convalescent"

It will be noted that many of the important physiological properties of wine differ significantly from those of plain alcohol. For a few cents a day your patients can have the appetite-stimulating, relaxing properties of wines produced from the world's finest grape varieties grown in an ideal climate and processed with modern wine-making skill.

We believe you will find "Uses of Wine in Medical Practice" a valuable addition to your files. A copy is available to you, at no expense, by writing to:

Wine Advisory Board, 717 Market Street, San Francisco 3, California.

SHARP & DOHME
DIVISION OF MERCK & CO., Inc.
Philadelphia 1, Pennsylvania



PHOTOGRAPH BY VICTOR KEPPLER

"Now I can swallow easily—my throat's much better"

TRACINETS®

BACITRACIN-TYROTHRICIN TROCHES WITH BENZOCAINE

Your patients will like TRACINETS because they really soothe irritated throats—taste good, besides.

Two topical antibiotics combined, bacitracin and tyrothricin, give your patients double antibacterial action, while benzocaine provides a soothing, anesthetic effect. In severe throat infections, TRACINETS conveniently supplement systemic therapy.

Quick Information: Each troche contains 50 units of bacitracin, 1 mg. of tyrothricin, 5 mg. of benzocaine. In vials of 12.

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For complete and authoritative data on physicians, hospitals, medical society and administrative officials in New York State, the official publication of the Medical Society of the State of New York is an invaluable reference volume.

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ELECTRON PHOTOMICROGRAPH

Diplococcus pneumoniae 35,000 X

Diplococcus pneumoniae (Streptococcus pneumoniae) is a Gram-positive organism commonly involved in

lobar—and bronchopneumonia • chronic bronchitis • mastoiditis • sinusitis otitis media • and meningitis.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

*TRADEMARK, REG. U. S. PAT. OFF.

Upjohn

ELECTRON PHOTOMICROGRAPH

Streptococcus faecalis 35,000 X

Streptococcus faecalis is a Gram-positive organism commonly involved in a variety of pathologic conditions, including

urinary tract infections • subacute bacterial endocarditis • peritonitis.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

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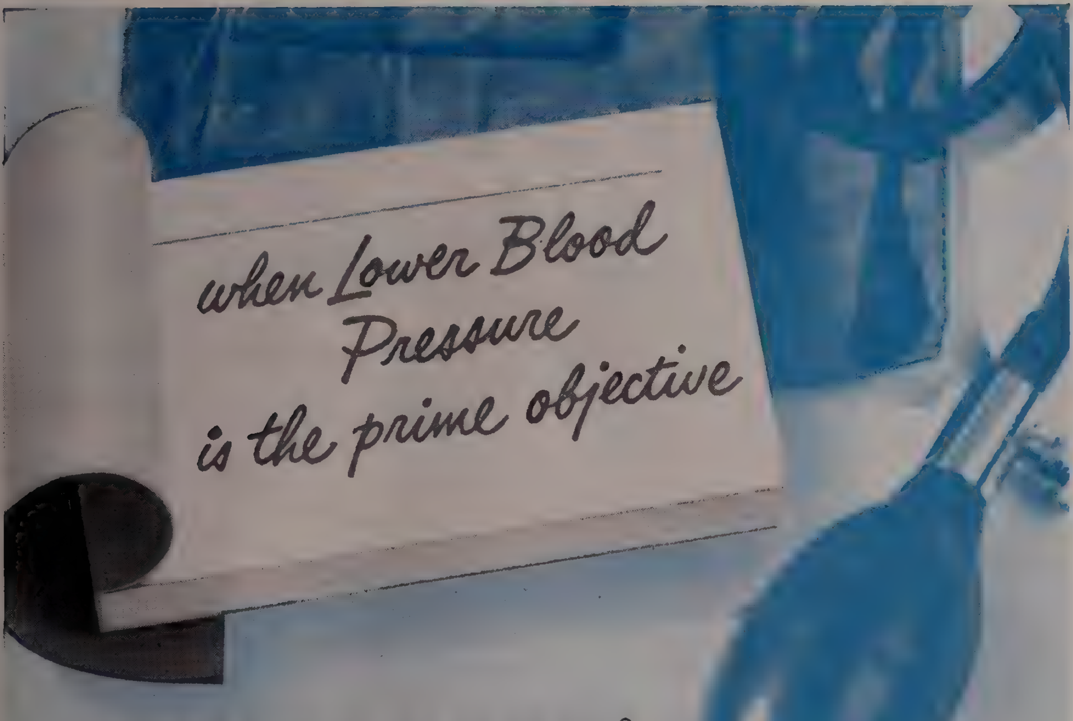


UNITENSEN® tannate TABLETS

brand of cryptenamine

IS THE MOST DEPENDABLE HYPOTENSIVE DRUG YET DEVELOPED

Whatever the collateral therapy in moderate to severe hypertension, the therapeutic objective is far more than tranquility or euphoria. The prime objective is to lower blood pressure.

Unitensen is a potent, true blood pressure lowering agent . . . the safest and most significant yet developed. Unitensen contains cryptenamine, a newly isolated alkaloid fraction of Veratrum viride. In the majority of patients, Unitensen produces positive and sustained blood pressure control.

UNITENSEN

- **decisively controls blood pressure for prolonged periods**
- **no sympatholytic or parasympatholytic action**
- **no postural hypotension and collapse**
- **no ganglionic blocking**
- **renal function is not impaired**
- **free from dangerous side actions**
- **duo-assayed for hypotensive action and emesis**
- **simplified dosage—usually 1 tablet b.i.d. or t.i.d.**
- ***saves money for your patients***

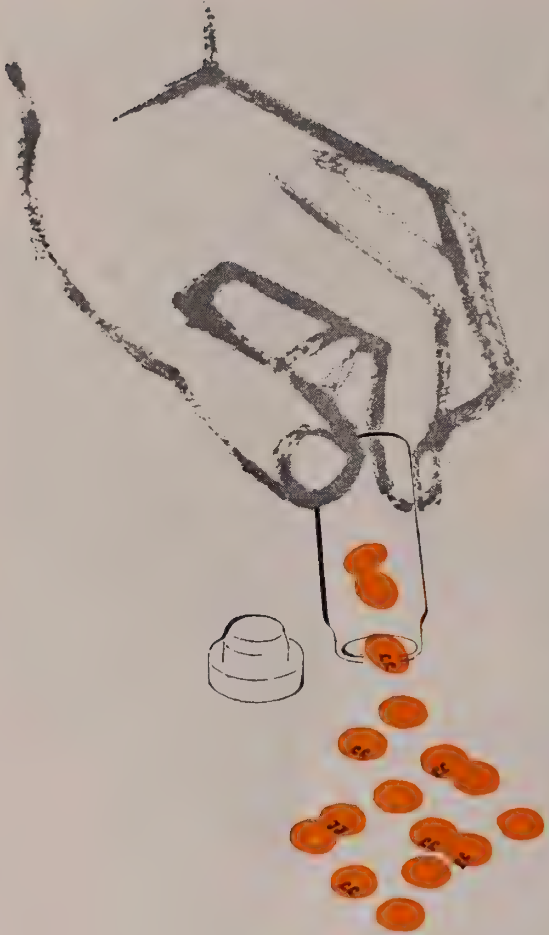
Each white, uncoated, scored tablet supplies:

Cryptenamine*. . .2 mg.†
(as the tannate salt)

*ester alkaloids of Veratrum viride obtained by an exclusive Irwin-Neisler nonaqueous extraction process.
†equivalent to 260 Carotid Sinus Reflex Units.

Bottles of 50, 100, 500 and 1000.

IRWIN, NEISLER & COMPANY • DECATUR, ILLINOIS



ACHROMYCIN
TETRACYCLINE
TABLETS

A widely prescribed form of the outstanding broad-spectrum antibiotic

Sugar-coated, easy-to-swallow ACHROMYCIN Tablets are available in three potencies: 50, 100, and 250 mg.

In each of its many forms, ACHROMYCIN exhibits notable characteristics: it diffuses rapidly in body tissues and fluids; gastrointestinal irritation is rare and mild in nature.

ACHROMYCIN has proved effective against a wide variety of infections including those caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain virus-like and protozoan organisms.

Lederle

OTHER DOSAGE FORMS

CAPSULES: 50, 100, and 250 mg.

PEDIATRIC DROPS: (see opposite page)

ORAL SUSPENSION: (see opposite page)

SPERSOIDS* Dispersible Powder (Chocolate Flavor): 50 mg. per rounded teaspoonful (3 Gm.), 12 and 25 dose bottles

SOLUBLE TABLETS: 50 mg.

INTRAVENOUS: vials of 100, 250, and 500 mg.

INTRAMUSCULAR: vials of 100 mg. (for dilution with 2 cc. of sterile water or saline)

TOPICAL OINTMENT (3%): ½ and 1 oz. tubes

OPHTHALMIC OINTMENT (1%): ⅛ oz. tubes

EAR SOLUTION (0.5%): 10 cc. dropper bottles

*REG. U.S. PAT. OFF.

ACHROMYCIN*

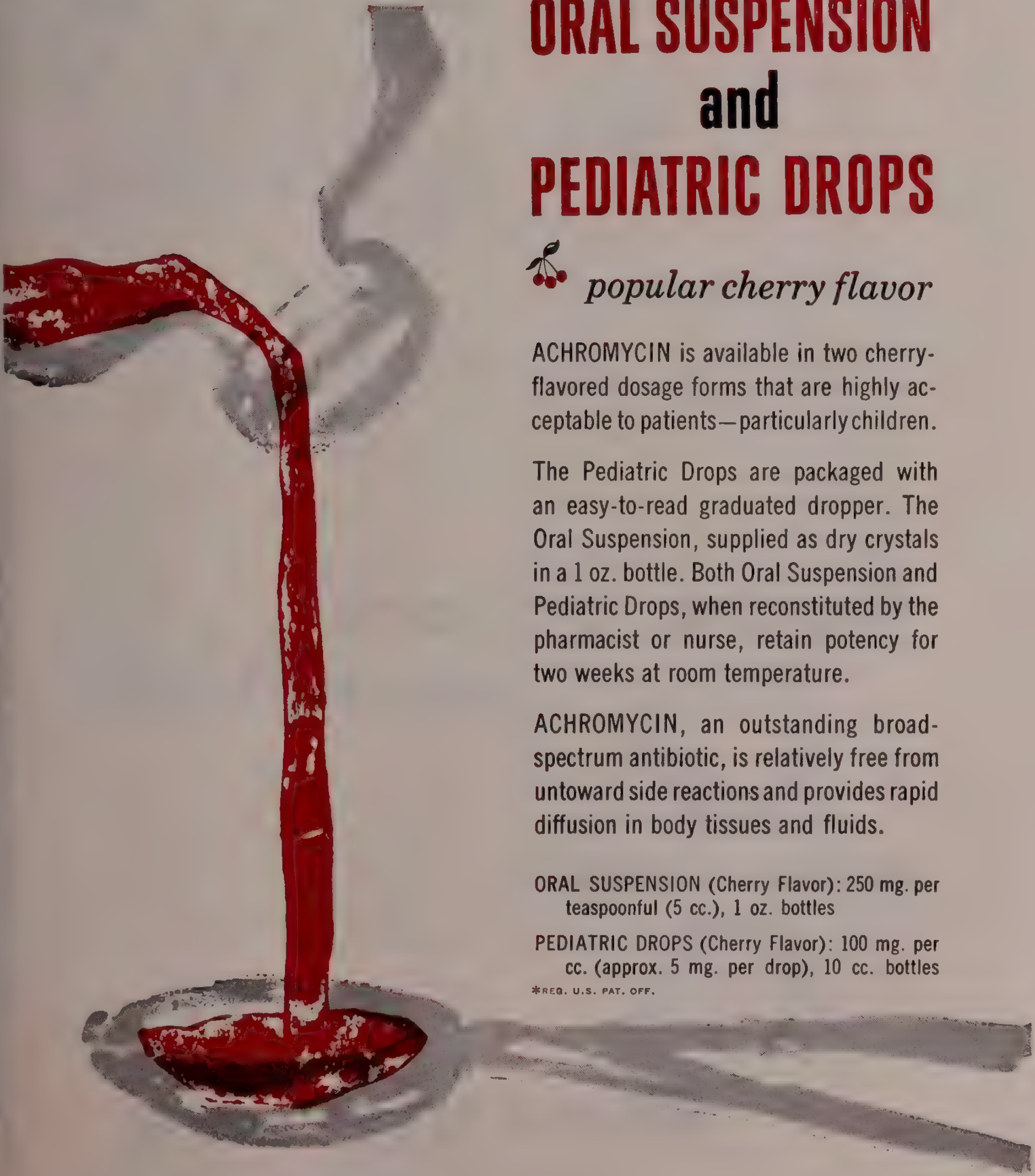
Tetracycline Lederle

ACHROMYCIN*

Tetracycline Lederle

ORAL SUSPENSION
and
PEDIATRIC DROPS

popular cherry flavor



ACHROMYCIN is available in two cherry-flavored dosage forms that are highly acceptable to patients—particularly children.

The Pediatric Drops are packaged with an easy-to-read graduated dropper. The Oral Suspension, supplied as dry crystals in a 1 oz. bottle. Both Oral Suspension and Pediatric Drops, when reconstituted by the pharmacist or nurse, retain potency for two weeks at room temperature.

ACHROMYCIN, an outstanding broad-spectrum antibiotic, is relatively free from untoward side reactions and provides rapid diffusion in body tissues and fluids.

ORAL SUSPENSION (Cherry Flavor): 250 mg. per teaspoonful (5 cc.), 1 oz. bottles

PEDIATRIC DROPS (Cherry Flavor): 100 mg. per cc. (approx. 5 mg. per drop), 10 cc. bottles

*REG. U.S. PAT. OFF.

LEDERLE LABORATORIES DIVISION
AMERICAN Cyanamid COMPANY PEARL RIVER, N.Y.

Lederle

This drug has proved able
to control the disease
in two-thirds of patients
with ulcerative colitis,
who had previously failed to
respond to standard colitis
therapy currently in use*.

Azulfidine

BRAND OF SALICYLAZOSULFAPYRIDINE

PHARMACIA LABORATORIES, INC.

270 Park Avenue, New York 17, N. Y.

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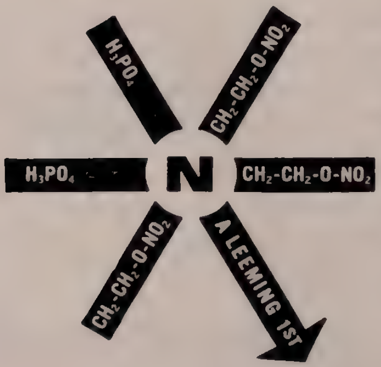
* See MORRISON: Rev. of Gastroent., Oct. 1953.

Angina pectoris prevention



The new strategy in angina pectoris is prevention, the new low-dose, long-acting drug—METAMINE. Most effective milligram for milligram, and better tolerated, METAMINE prevents attacks or greatly diminishes their number and severity. *Dosage:* 1 tablet (2 mg.) after each meal; 1-2 tablets at bedtime.

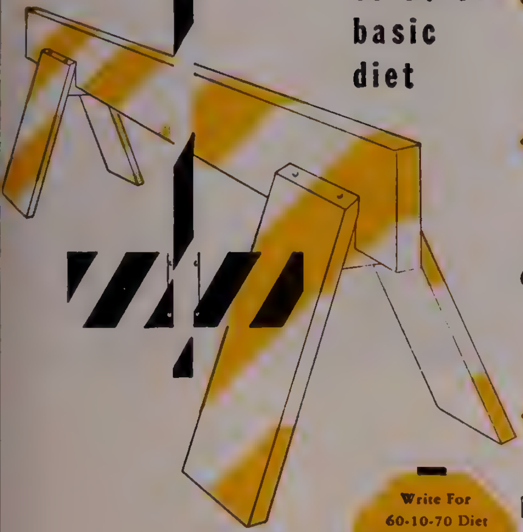
Thos. Leeming & Co. Inc.

155 EAST 44TH STREET, NEW YORK 17, N.Y.

Metamine®

Triethanolamine trinitrate biphosphate, Leeming, tablets 2 mg.

Bottles of 50 and 500.



overcoming
weight
control
obstacles

Obedrin®

and
the
60-10-70
basic
diet

Patients can lose weight and maintain a restricted diet, in comfort, without undesirable side effects . . .

EXCESSIVE DESIRE FOR FOOD

Obedrin offers the full anorexigenic value of Methamphetamine to curb the desire for food, while counteracting mood depression. Patient co-operation is made easier.

NERVOUS TENSION

To avoid excitation and insomnia, Pentobarbital is the ideal daytime sedative. It counteracts over-stimulation by Methamphetamine, but does not diminish the anorexigenic action.

VITAMIN DEFICIENCIES

Obedrin tablets contain adequate amounts of vitamins B_1 and B_2 to supplement the 60-10-70 Basic Diet, but not enough to stimulate the appetite.

EXCESSIVE TISSUE FLUIDS

Large doses of Ascorbic Acid aid in the mobilization of fluids, so often an obstacle in obesity.

BULK NOT NECESSARY

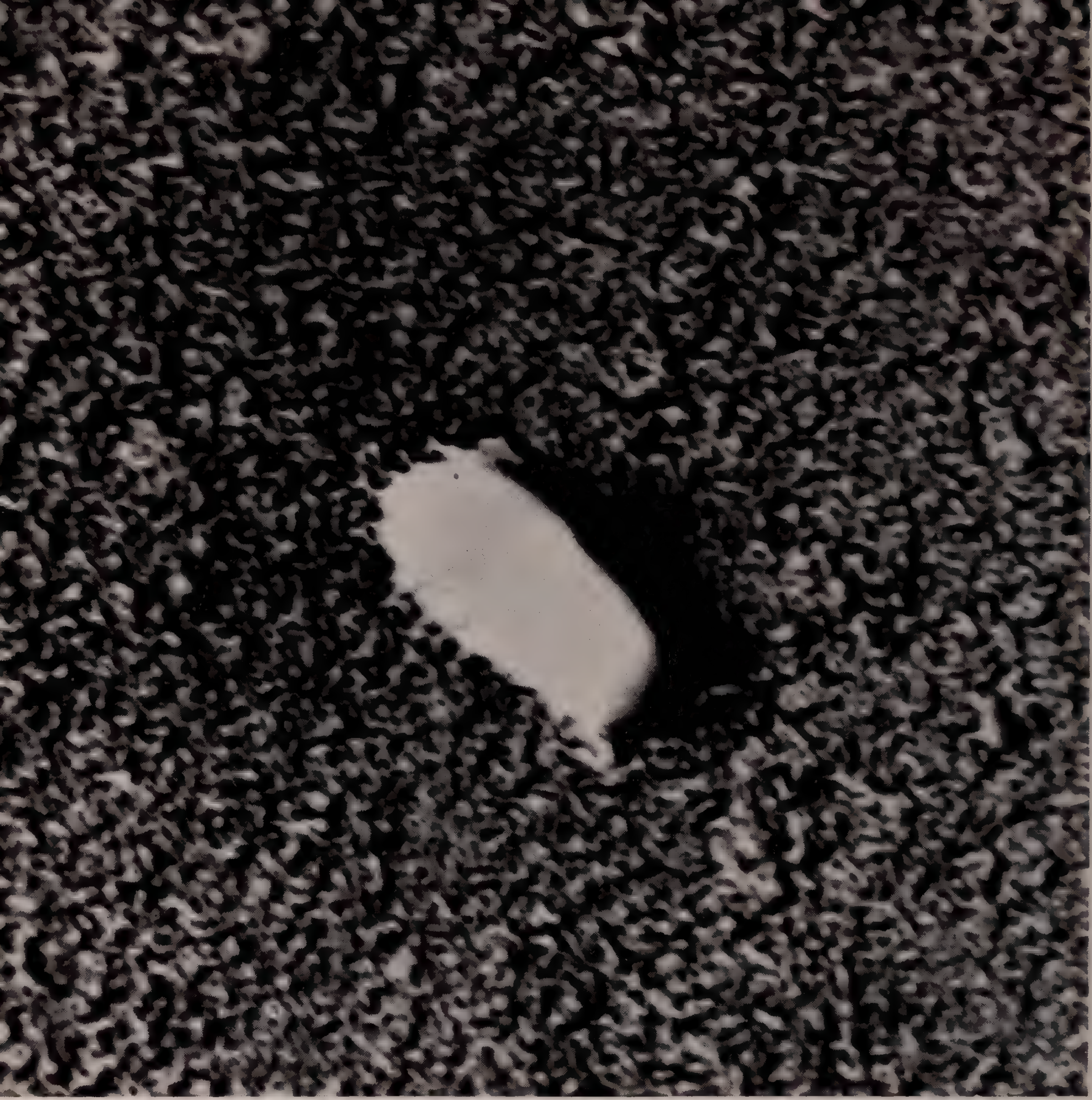
The 60-10-70 Basic Diet provides enough roughage, so artificial bulk is unnecessary. The hazards of impaction caused by "bulk" producers is obviated.

Write For
60-10-70 Diet
Pads, Weight Charts
And Professional
Sample Of
Obedrin

S. E. MASSENGILL CO.
Bristol, Tennessee

Each tablet contains:

Semoxydrine HCl (Methamphetamine HCl)	5 mg.
Pentobarbital	20 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	0.5 mg.
Riboflavin	1 mg.
Niacin	5 mg.



ELECTRON PHOTOMICROGRAPH

Klebsiella pneumoniae 35,000 X

Klebsiella pneumoniae (Friedländer's bacillus) is a Gram-negative
capsulated organism commonly involved in
various pathologic conditions of the nose and accessory sinuses,
in addition to bronchopneumonia and bronchiectasis.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

TETRACYCLINE HYDROCHLORIDE

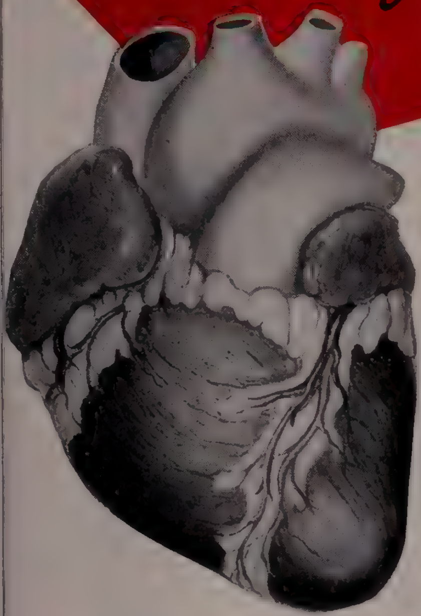
100 mg. and 250 mg. capsules

*TRADEMARK, REG. U.S. PAT. OFF.

Upjohn

IN ANGINA PECTORIS

A Closer Approach to Definitive Therapy



Pentoxylon, the newest therapy in angina pectoris and status anginosus, combines the tranquilizing and bradycrotic effects of Rauwiloid® and the long-acting coronary vasodilating effect of pentaerythritol tetranitrate (PETN).

The rationale of this new combination of drugs is based in part upon the well-known observation that the frequency and severity of anginal attacks are worsened by fear and apprehension. The Rauwiloid effect in Pentoxylon serves to slow the rapid pulse which accompanies apprehension and pain. The slower heart rate, with its lengthened diastole, permits better coronary filling, more adequate ventricular filling, and wider stroke volume. Thus the work demand on the myocardium is diminished while PETN exerts its prolonged coronary dilating effect. Pentoxylon offers therapy in angina without xanthines, without stimulation of cardiac rate or work.

Development of full effectiveness of Pentoxylon requires about 2 weeks of therapy, though benefits have been observed after 24 hours. Continuing therapy over a period of time with Pentoxylon—in the usual dosage of 1 tablet q.i.d.—can be expected to reduce markedly or to abolish the nitroglycerin requirements.

- Reduces nitroglycerin needs
- Reduces severity of attacks
- Reduces incidence of attacks
- Increases exercise tolerance
- Reduces tachycardia
- Reduces anxiety, allays apprehension
- Lowers blood pressure in hypertensives
- Does not lower blood pressure in normotensives
- Produces objective improvement demonstrable by EKG.

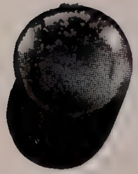
Descriptive brochure on request.

PENTOXYLON™

Each tablet contains pentaerythritol tetranitrate (PETN) 10 mg. and Rauwiloid® 1 mg.

Another **Riker** *Original*

RIKER LABORATORIES, INC., LOS ANGELES 48, CALIFORNIA



eliminate

intravenous

aminophylline!

TABLETS

AL·AMPHYLLINE

aminophylline-colloidal aluminum hydroxide-magnesium trisilicate compound

Intravenous Results With New Oral Compound—And Without Gastric Irritation.

AL-AMPHYLLINE, a new development of the Raymer Medical and Research Departments, presents aminophylline in a new oral dosage form that produces blood levels comparable to those attained with parenterally administered aminophylline, with the further advantage that these levels are sustained over many hours. In addition, AL-AMPHYLLINE does not cause gastric irritation.

The colloidal aluminum hydroxide and the exceptional purity of the aminophylline contained in AL-AMPHYLLINE Tablets are responsible for the fact that AL-AMPHYLLINE Tablets are so well tolerated. Magnesium trisilicate is also included in the formula, to prevent possible constipation.

Since AL-AMPHYLLINE Tablets are uncoated, aminophylline absorption is rapid, producing satisfactory blood levels within an hour (see table below).

Aminophylline Blood Levels — mg./100 cc. Plasma
(Aminophylline dosage was 0.5 Gm. in each case)

Aminophylline Preparation	1 hour	3 hours	6 hours
AL-AMPHYLLINE TABLETS (4)	1.78	1.65	1.35
AL-AMPHYLLINE TABLETS (4)	1.67	1.84	1.26
AL-AMPHYLLINE TABLETS (4)	1.18	1.54	1.19
AL-AMPHYLLINE TABLETS (4)	0.90	1.16	0.91
Intravenous Aminophylline (0.5 Gm.)	1.33	0.84	—
Intravenous Aminophylline (0.5 Gm.)[1]	1.60	1.30	0.70
Aminophylline Suppository (0.5 Gm.)	0.11	0.22	0.38
Aminophylline Suppository (0.5 Gm.)	0.26	0.51	1.09

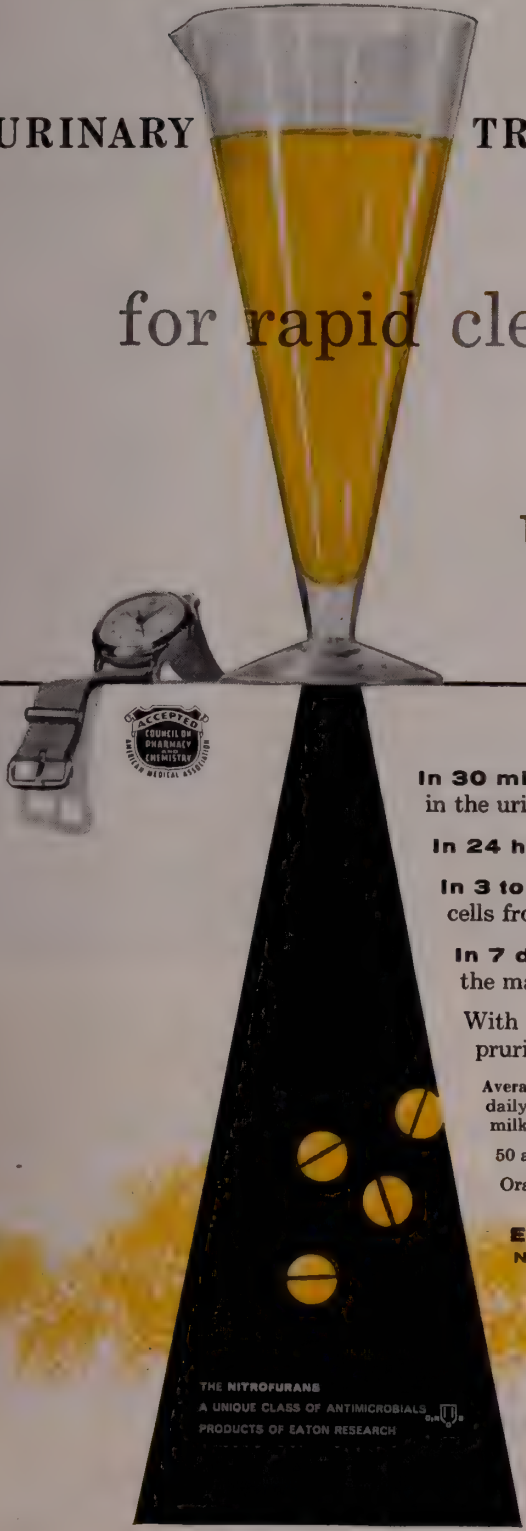
RAYMER

RAYMER PHARMACAL COMPANY
Jasper & Willard Streets
Philadelphia 34, Pa.

[1] J. Pharmacol. Exper Therap., 100:309, 1950.

For use in all conditions where aminophylline is indicated. *Dosage Range:* 1 to 4 tablets as required. *Supplied:* bottles of 100, 500 and 1,000 tablets. *Formula:* Aminophylline, 125 mg.; Colloidal Aluminum Hydroxide, 150 mg.; Magnesium Trisilicate, 250 mg. *Also available:* AL-AMPHYLLINE with Phenobarbital (15 mg. per yellow tablet), bottles of 100.

serving the medical profession for a third of a century.


ACCEPTED
COUNCIL ON PHARMACY AND CHEMISTRY
AMERICAN MEDICAL ASSOCIATION
THE NITROFURANS
A UNIQUE CLASS OF ANTIMICROBIALS
PRODUCTS OF EATON RESEARCH

use FURADANTIN first...

IN URINARY TRACT INFECTIONS

for rapid clearing of the urine

In 30 minutes: antibacterial concentrations in the urine

In 24 hours: the urine is frequently clear

In 3 to 5 days: complete clearing of pus cells from the urine

In 7 days: sterilization of the urine in the majority of cases

With Furadantin there is no proctitis, pruritus ani, or crystalluria.

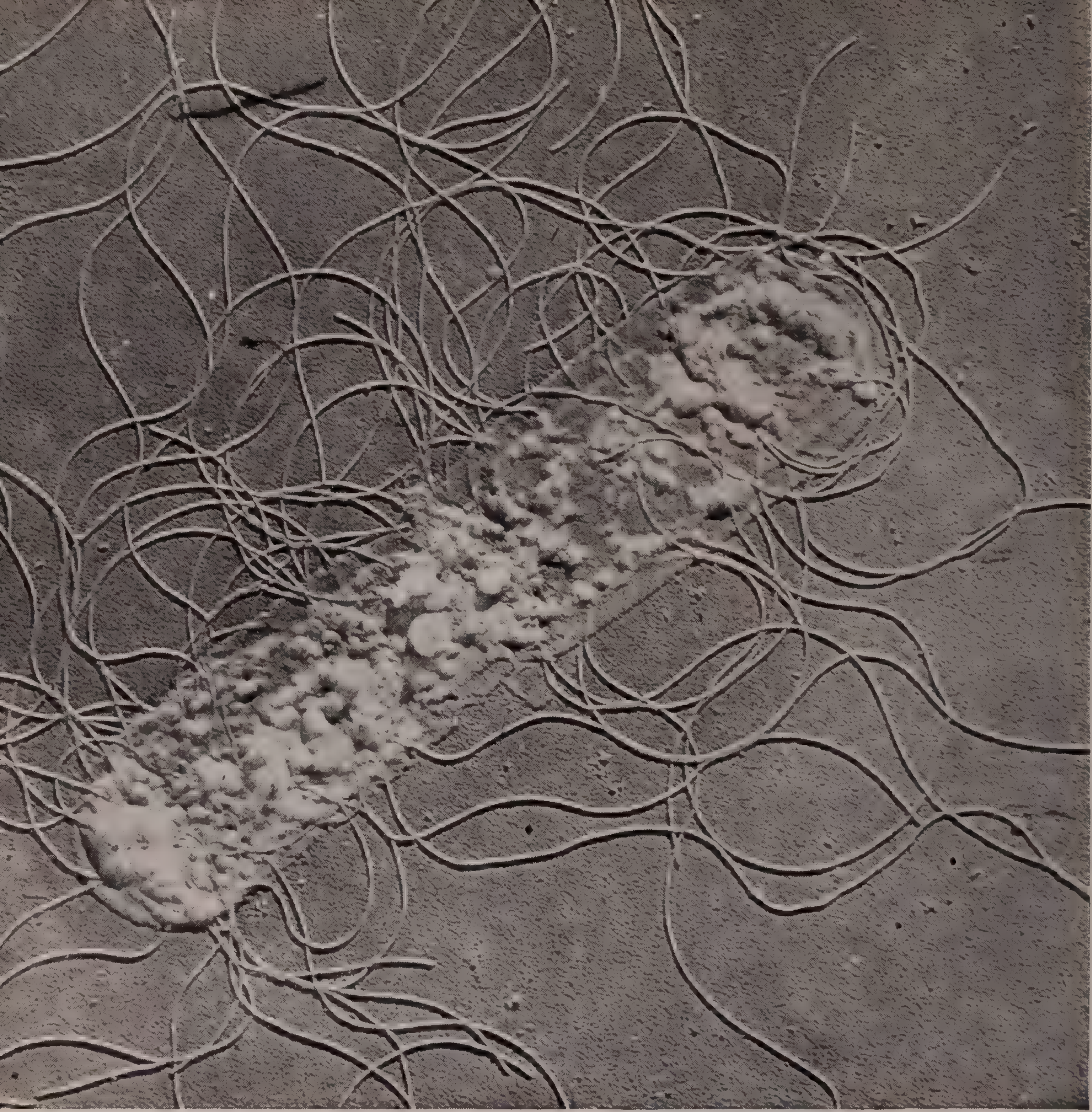
Average adult dosage: Four 100 mg. tablets daily, taken with meals and with food or milk before retiring.

50 and 100 mg. tablets.

Oral Suspension, 5 mg. per cc.

EATON LABORATORIES
NORWICH, NEW YORK

FURADANTIN®
brand of nitrofurantoin, Eaton



ELECTRON PHOTOMICROGRAPH COURTESY R.C.A. LABORATORIES

Proteus vulgaris 25,000 X

Proteus vulgaris is a Gram-negative organism commonly involved in

urinary tract infections • septicemia

peritonitis following low perforation of the gut.

***It** is another of the more than 30 organisms susceptible to*

PANMYCIN*

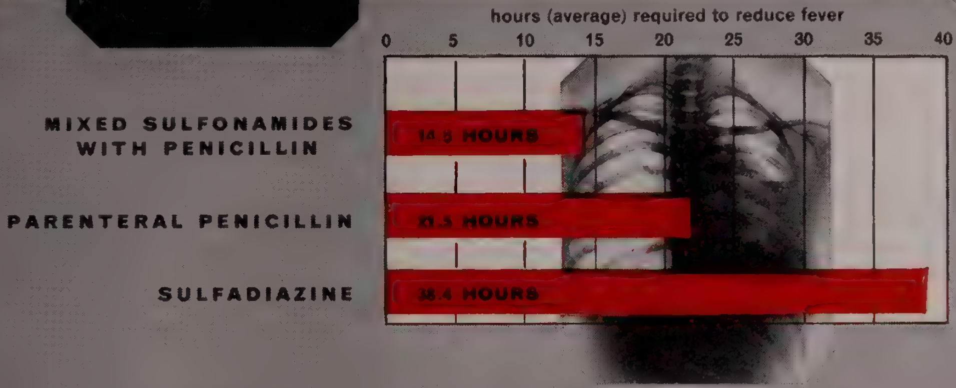
TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U. S. PAT. OFF.

combined action means faster patient recovery



Vollmer, Pomerance and Brandt observed that the administration of sulfonamide mixtures when combined with penicillin reduced fever in patients with pneumonia more rapidly than sulfadiazine or penicillin alone.*

the preferred quadri-sulfa mixture...

DELTAMIDE® *w*/penicillin

combines 4 of the most useful sulfonamides with penicillin for—

a wider antibacterial spectrum

the advantages of a sulfonamide combination: faster therapeutic blood levels and better sustained; higher solubility in the urine; greatly reduced renal toxicity and lessened side-effects.

the true potentiation of action that occurs with the use of sulfonamide mixtures

the truly synergistic action that occurs when sulfonamides and penicillin are combined

Each tablet or teaspoonful of the pleasant-tasting **chocolate-flavored** suspension contains:

DELTAMIDE		DELTAMIDE *w*/penicillin
0.167 Gm.	sulfadiazine	0.167 Gm.
0.167 Gm.	sulfamerazine	0.167 Gm.
0.056 Gm.	sulfamethazine	0.056 Gm.
0.111 Gm.	sulfacetamide	0.111 Gm.
—	penicillin G	250,000 Units

Deltamide

Tablets: Bottles of 100 and 1000.

Suspension: Bottles of 4 and 16 oz.

Deltamide *w*/penicillin

Tablets: Bottles of 36 and 100.

Powder for Suspension: 60 cc. bottles to provide 2 oz. of suspension by the addition of 40 cc. of water.

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*Vollmer, H.; Pomerance, H. H., and Brandt, I. K.: New York State J. Med. 50: 2293, 1950.

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On May 29th, 1954, the Joint Committee of the Medical Research Council and Nuffield Foundation published a most significant finding on arthritis therapy—that "for practical purposes" there appears to be *"surprisingly little to choose between cortisone and aspirin."*[1]

"Sixty-one patients in the early stages of rheumatoid arthritis...have been allocated at random to treatment with one or other agent (cortisone 30 cases, aspirin 31 cases)...

"Observations made one week, eight weeks, thirteen weeks, and approximately one year after the start of treatment reveal that the two groups have run a closely parallel course in nearly all the recorded characteristics—namely, joint tenderness, range of movement in the wrist, strength of grip, tests of dexterity of hand and foot, and clinical judgments of the activity of the disease and of the patient's functional capacity."[1]

These findings spotlight an earlier report that "aspirin in large doses has definite beneficial results closely akin to those received from ACTH."[2]

High gastric intolerance to aspirin noted among arthritics—a problem easily met by the use of BUFFERIN.

In this latest study, the side-effects recorded for both groups "were equal in the early months of treatment but *became less in the aspirin group as time passed.*"[1]

Of clinical significance, however, is the high percentage of gastric intolerance to straight aspirin found among the arthritic patients—*42% as against 3 to 10% variously reported for the general population.*[3, 4]

Earlier investigations reveal the disadvantages of using sodium bicarbonate with aspirin—namely, the lowering of blood salicylate levels and the possible retention of the sodium ion.[2]

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REFERENCES: 1. Brit. M. J. 1:1223 (May 29) 1954. 2. M. Times 81:41 (Jan.) 1953. 3. J. Am. Pharm. Assoc., Sc. Ed. 39:21, 1950. 4. Ind. Med. 20:480 (Oct.) 1951.

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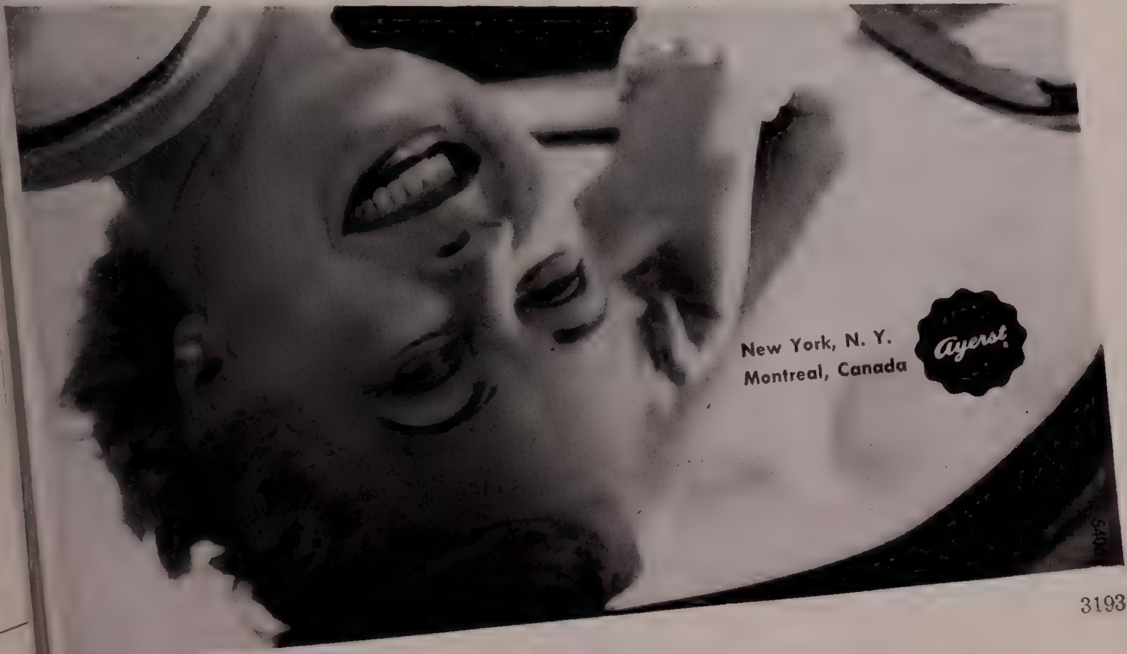

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EDITORIALS

This Is Your Journal

For over fifty years the NEW YORK STATE JOURNAL OF MEDICINE has faithfully served the profession of medicine in the State as a medium whereby recent advances in the science and art of medicine and surgery have been disseminated quickly.

It was founded not only with the purpose of promoting postgraduate teaching but also to develop medical writers. In 1951, 650 authors submitted 420 articles; in 1952, 667 authors submitted 440 articles, and in 1953, 568 authors submitted 449 articles for possible publication. It would thus appear that yearly there is a slow, steady increase in the number of physicians who think of the JOURNAL with its semimonthly issues reaching 24,380[1] readers as an attractive medium for the publication of their scientific writing.

Under a policy adopted in 1953, the JOURNAL is sent gratis, by the Medical Society of the State of New York, to all the senior medical students in the nine medical schools of the State who request it. Thus there is a large group, some 600 men and women, each of whom becomes familiar during the academic year with the JOURNAL and seems to be appreciative of the opportunity.

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[1] Circulation statement of June 30, 1954.

A popular feature of the publication is the clinicopathologic conferences. The editor is constantly asked why the JOURNAL does not publish more of them. The answer is that for some reason the various institutions in the State conducting them seem reluctant to submit them for publication. It may be that those doctors conducting such conferences are not aware of the demand for and the popularity of this particular type of conference. The JOURNAL would be happy to have more material of this kind submitted for publication and is making every effort to obtain it. Every member of the Society could assist by bringing this request to the attention of the department heads of the several hospitals and teaching institutions of the State.

During the years the editors have endeavored to impress upon authors of scientific articles the importance of as much brevity as possible. It is gratifying to acknowledge with thanks the response in general to this request. Readers have only so much time. The number of publications is legion. Every author of a scientific article has a better chance to have it read if it says something and says it briefly.

The editors will continue to revise upwards the standards of acceptance of scientific articles with the help of our authors, many consultants, and the Publication Committee.

Editorial Comment

Christmas Seals. According to the recent report of the New York Tuberculosis and Health Association we learn that, despite the first failure of the tuberculosis Christmas Seal sale since depression years and a $68,761.37 deficit, the New York Tuberculosis and Health Association, a community agency serving Manhattan, Bronx, and Staten Island, set a new record in 1953 for services to the community in its work of preventing and controlling tuberculosis.

Having geared its program to the fact that tuberculosis no longer carries a death sentence and concerning itself with the problems of the living, the New York Tuberculosis and Health Association during 1953 was able to reach a total of 951,049 people in this area in its work of preventing and controlling this chronic disease.

During 1953, the report notes, the Association's tuberculosis case-finding program made possible the taking of 59,863 chest x-rays to find tuberculosis.

Through the rehabilitation service, which provides aftercare to help the recovered tuberculosis patient get back to work and into the swing of normal life, 1,027 men and women were helped.

Through specially organized groups, 859,927 men, women, and children were contacted in person or through groups. These men and women learned more about tuberculosis and health through meetings, films, talks and exhibits, pamphlets, posters, statistical services, annual reports, and monthly bulletins. In estimating the number of persons reached in its tuberculosis control program, the New York Tuberculosis and Health Association did not include the 850,000 people who received tuberculosis information with their Christmas Seals nor the thousands of newspaper readers, television viewers, radio listeners, and moviegoers who were reminded about tuberculosis.

Summarizing the aims and policy of the Tuberculosis Association, Myron I. Borg, Jr., its president, noted in the annual report that modern science is bringing about a changing climate in tuberculosis today. "The more people who survive tuberculosis, the more we must concentrate on the problems of the living," he states in the report.

Since this goal is not likely to be attained in the near future, continued support of the tuberculosis Christmas Seal sale would seem to be imperative.

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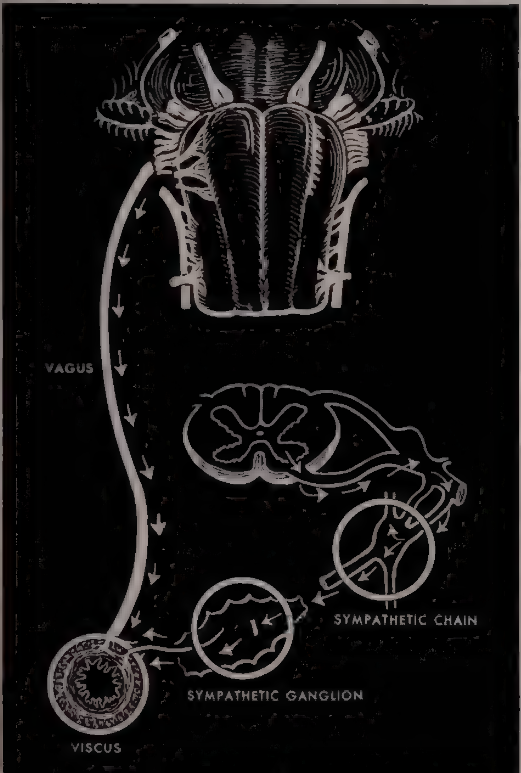

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For the average patient one tablet of Pro-Banthine (15 mg.) with each meal and two tablets (30 mg.) at bedtime will be adequate. G. D. Searle & Co., Research in the Service of Medicine.

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[1] Schwartz I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: Gastroenterology *25:*416 (Nov.) 1953.

[2] Roback, R. A., and Beal, J. M.: Gastroenterology *25:*24 (Sept.) 1953.

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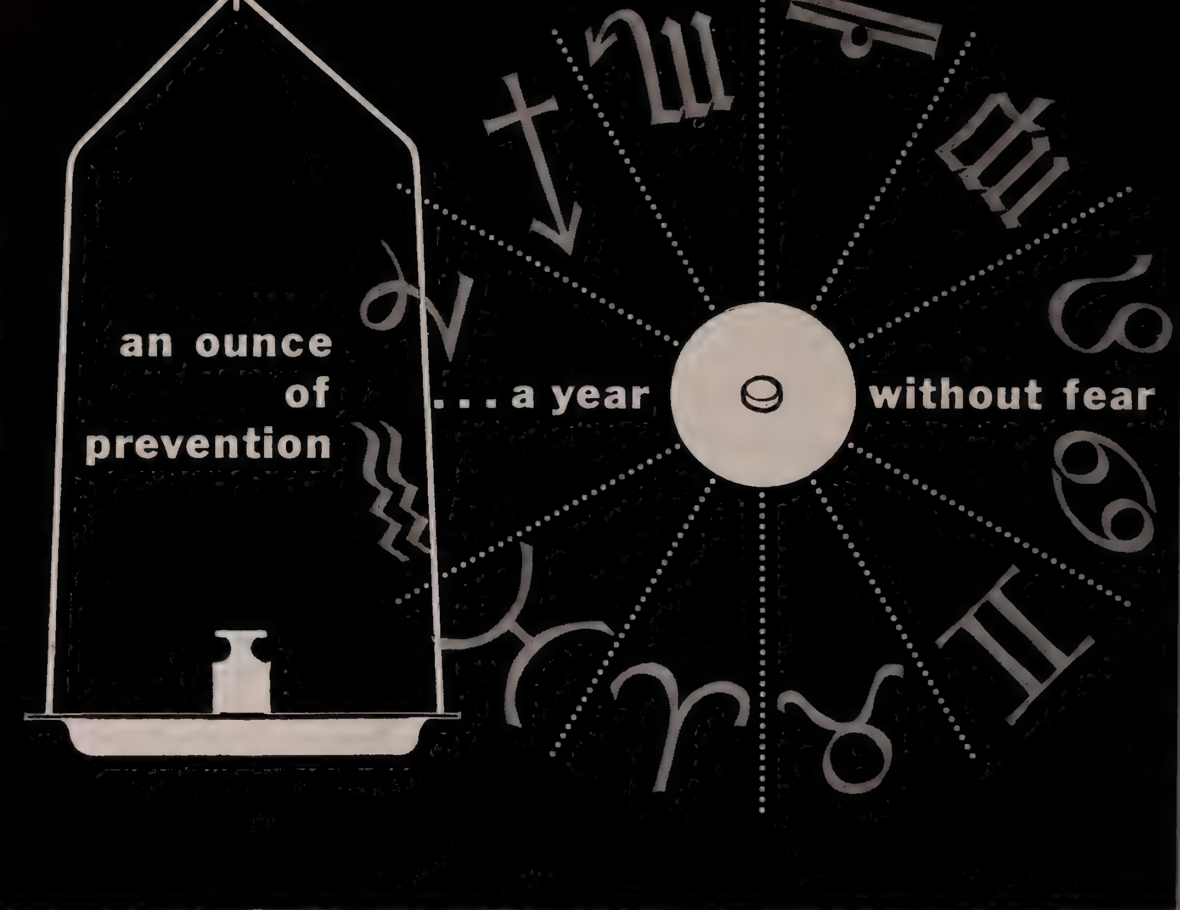

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According to tests made by Russek and coworkers, Peritrate is unexcelled in exerting a prolonged prophylactic effect in angina pectoris. The results achieved ". . . were comparable to those obtained with glyceryl trinitrate (nitroglycerin), but the duration of action was considerably more prolonged."[1] Patients on Peritrate generally exhibit significant EKG improvement,[1,2] and their need for nitroglycerin is often reduced.[3] A continuing year-round schedule of 10 or 20 mg. 4 times a day will usually:

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1. Russek, H. I.; Urbach, K. F.; Doerner, A. A., and Zohman, B. L.: J.A.M.A. *153*:207 (Sept. 19) 1953. 2. Winsor, T., and Humphreys, P.: Angiology *3*:1 (Feb.) 1952. 3. Plotz, M.: New York State J. Med. *52*:2012 (Aug. 15) 1952.

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SCIENTIFIC ARTICLES

Mediastinal Pathology Discovered by the Chance X-ray of the Chest

IDA LEVINE, M.D., AND HENRY GREENFIELD, M.D., BROOKLYN, NEW YORK

(*From the Department of Thoracic Diseases, Beth-El Hospital, and the Chest Division, Kings County Hospital*)

THE presentation of unusual case material has little practical value if it serves only as an exhibition of rarities. To the practicing physician the finding of a unique case may tickle his medical fancy and add spice to his day without necessarily increasing his diagnostic skill. It is our interest in the latter which makes us feel that a consideration of asymptomatic mediastinal lesions may be of practical, everyday use and not an exercise in oddities.

We come to this conclusion when we think about the results of chest survey examinations. The routine chest survey yields a certain amount of asymptomatic pathology. The yield depends on multiple factors, of which age, sex, occupation, and family history are perhaps the most significant. For example, limiting the study to tuberculosis and considering only one variable, that of age, Boucot and Sokoloff[1] have shown that the yield varied from 1 per cent in food handlers aged fifteen to twenty-five years up to 8 per cent in food handlers over sixty-five years of age. Combining several variables, Boucot and Cooper[2] found that the incidence of tuberculosis suspects varied from 0.3 per cent in primary school children, to 2.5 per cent in healthy industrial workers, to 6.4 per cent in Philadelphia General Hospital patients, to 8.4 per cent in diabetics. Similarly, abnormalities of a nontuberculous nature have also been documented. Table I summarizes chest survey findings briefly. On the whole, we expect that 5 per cent of all routine chest films taken on the so-called healthy population will yield some degree of intrathoracic abnormality[3] and that at least 10 per cent of routine chest films taken on hospital admissions will show significant pathology.[10,11]

TABLE I.—CHEST SURVEY ABNORMALITIES FOUND IN GENERAL POPULATION

Findings	Per Cent
Reinfection tuberculosis	1.5[3]
Active tuberculosis cases	0.1[3]
Nontuberculous pulmonary lesions	1.2[4]
Pulmonary carcinoma	0.08[5]
Pulmonary sarcoidosis	0.04[6]
Bronchiectasis	0.13[7]
Cardiac lesions	1.3[8] to 4[9]

TABLE II.—200 ROUTINE REFERRALS OVER AGE 40 TO BROWNSVILLE CHEST CLINIC

Results	Number of Cases	Per Cent
Negative chest film	140	70
Reinfection tuberculosis	14	7
Bronchiectasis, emphysema, pneumonitis	12	6
Carcinoma	2	1
Pleurisy	9	4.5
Cardiac abnormalities (mainly arteriosclerotic)	21	10.5
Mediastinal abnormalities	2	1

Perhaps we can point up the general value of the chance chest film even more graphically by reporting a particular experience. We have felt that the routine chest film should be as much a part of a good physical examination as is a blood count or a urine analysis. In our particular health district we have a general practitioner who agrees with us. He uses the chest film as part of his routine examination, and those who hesitate to pay for the x-ray are then referred to the local chest clinic.* We reviewed his last 200 consecutive referrals over the age of forty. The results are shown in Table II.

Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Chest Diseases, May 14, 1954.

* Brownsville Chest Clinic, Bureau of Tuberculosis, New York City Department of Health.

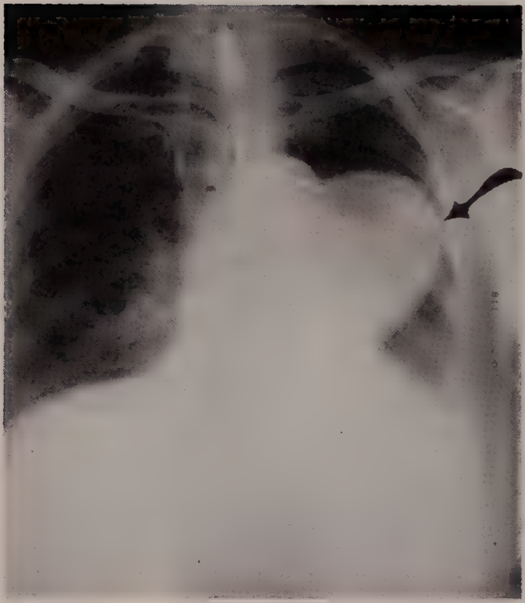

FIG. 1. *Case 1*—Left mediastinal density lined with calcium.

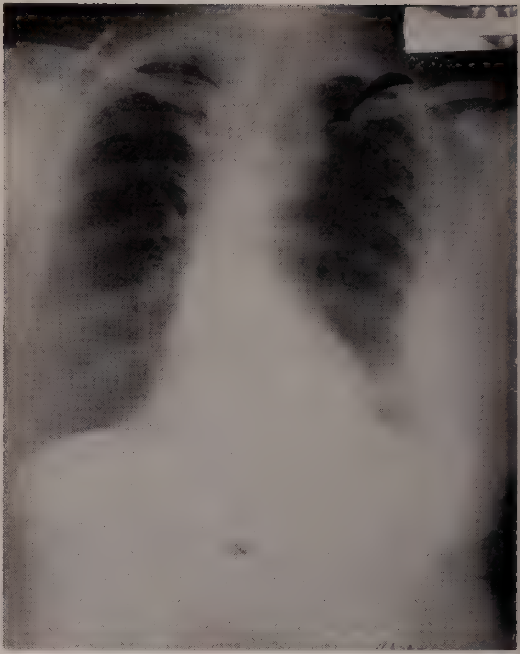

FIG. 2. *Case 2*—Density just above the aortic arch.

We may now return to our opening statement that the asymptomatic mediastinal lesion found on the chance x-ray is not a medical oddity. Our clinical impression is that it is at least as frequent as asymptomatic pulmonary neoplasms and that we can expect to find such a lesion in about one out of every 2,000 survey chest films. In reviewing the histories of these patients we find that many of these individuals prove to be truly asymptomatic, some have nonrelated coincidental complaints, some have symptoms arising from secondary changes (particularly bronchiectasis), and only a very small number have complaints caused by the mediastinal lesions but misinterpreted by the physician until the chest film was seen. The lesions may be found in any part of the mediastinum and may have any degree of clinical significance.[12] We would like to illustrate this by showing representative lesions in the order of their frequency as we ourselves found them.

Case Reports

Cardiovascular abnormalities, which at first glance were not obviously related to the circulatory system, were the most common. Sometimes the relationship was easy to prove; at other times it was not. Here is a simple example of what might at first glance be called noncardiovascular mediastinal pathology.

CASE 1.—F. R., a seventy-three-year-old female, was admitted to the Brownsville Chest Clinic on September 9, 1952, complaining of a slightly productive cough of six weeks duration. She was known to have had hypertension for many years. Physical examination revealed a blood pressure of 200/110 and occasional fine rales at her right lung base. Her posteroanterior chest film showed a left mediastinal density lined with calcium (Fig. 1). A left oblique view showed this density to be continuous with the aortic shadow. The patient died of a ruptured aortic aneurysm three months later.

Sometimes angiography is necessary to show the relationship between the mediastinal density and the cardiovascular system.

CASE 2.—A. R., a sixty-eight-year-old female, was admitted to the Brownsville Chest Clinic on December 3, 1953, complaining of weakness, dyspnea on exertion, weight loss, and a cough productive of copious white sputum for eight weeks. Physical examination was negative except for a Parkinsonian tremor and a blood pressure of 180/110. Her posteroanterior chest film showed a density just above the aortic arch (Fig. 2). This density pushed the esophagus forward, and the angiogram established the relationship between this density and the aorta.

At other times a postmortem examination is required to make a definitive diagnosis.

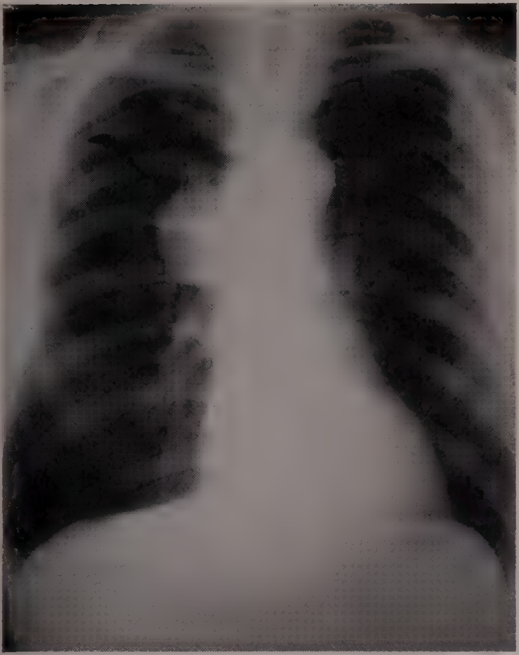

FIG. 3. *Case 3.*—Rounded density in the right mediastinal region.

CASE 3.—J. S., a seventy-six-year-old male, was seen privately in 1951 because of a bloody urine of three days duration. He had had angina since 1944 and a chronic cough for years. His routine physical examination was noncontributory; his postero-anterior chest film showed a rounded density in the right mediastinal region (Fig. 3), and the right lateral film showed it to be placed anteriorly. No further study was accepted because his urinary complaints disappeared. In December, 1953, he was hospitalized at the Jewish Hospital of Brooklyn because of a recurrence of his bloody urine. Cystoscopy demonstrated a bladder malignancy which was partially removed through the vesicoscope. He died suddenly nine days later, and the postmortem examination disclosed that the mediastinal shadow had been cast by a saccular aneurysm of the ascending aorta.

We have found the second largest number of mediastinal lesions to be related to the thyroid gland. Usually a careful examination of the neck will establish the diagnosis even without an x-ray, but it may not always do so.

CASE 4.—F. G., a sixty-two-year-old female, was admitted to the Brownsville Chest Clinic for a survey chest film (Fig. 4). When the upper mediastinal abnormality was seen, she was recalled for study. She now complained of headache, nervousness, and palpitation for three weeks. Her thyroid gland was visible and palpable in the neck and was apparently free of nodules. The surgeon removed an orange-sized adenoma from the left substernal region as well as the cervical portion of the thyroid. The lateral view showed the extent to which the gland filled the upper portion of the thorax.

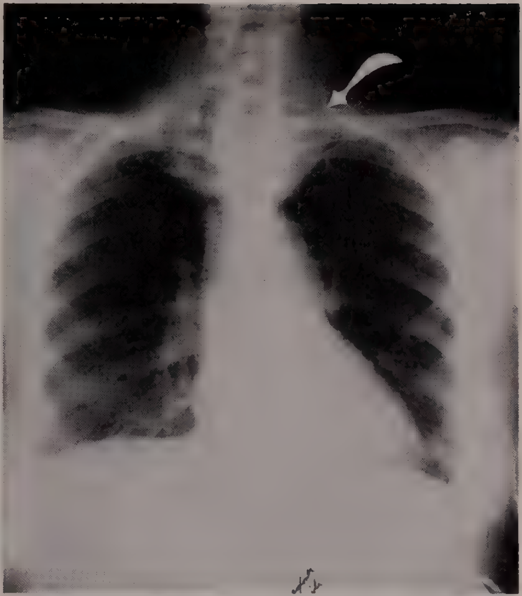

FIG. 4. *Case 4*—Superior mediastinal density.

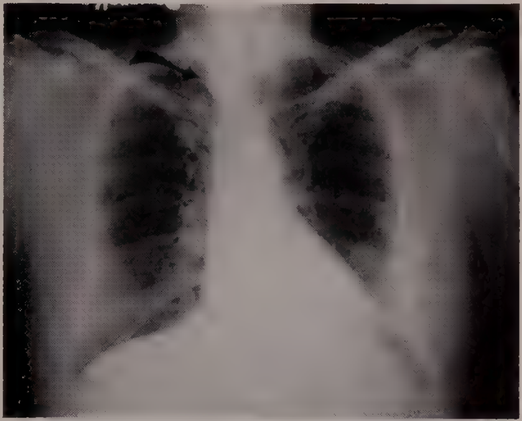

FIG. 5 *Case 5*—Plum-sized lump low in the neck.

At times the thyroid gland may cast a bilateral upper mediastinal shadow instead of the typical unilateral shadow which displaces the trachea, and we have seen upper mediastinal calcification which was caused by a calcified thyroid adenoma.

CASE 5.—J. A., a fifty-eight-year-old male, was seen privately for a routine "checkup." A hard, plum-sized lump could be felt low in the neck and could be seen on the chest film (Fig. 5). This nodule

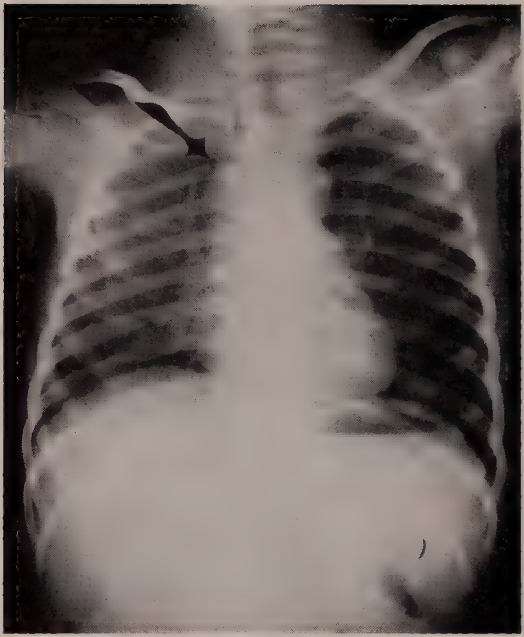

FIG. 6. *Case 6*—Widened mediastinum.

was removed at the Beth-El Hospital and proved to be a thyroid adenoma which had practically completely calcified.

We found the third largest group of mediastinal abnormalities to be related to lymph node pathology, and these were mainly tuberculous in nature. Completely calcified nodes, such as may eventually result in the "middle lobe syndrome," are accepted as tuberculous in origin. But we have also attributed the partially calcified nodes which are associated with a positive tuberculin to a tuberculous etiology, even though we accept the fact that it is impossible clinically to distinguish them from hamartomas of the mediastinal surface of the lung.

CASE 6.—R. D., a six-year-old asymptomatic tuberculosis contact, was admitted to the Brownsville Chest Clinic on December 15, 1953, for routine supervision. His Mantoux test was positive, and his posteroanterior chest film showed a widened mediastinum (Fig. 6). The oblique view clearly demonstrated calcium in his enlarged right upper mediastinal nodes.

CASE 7.—L. D., a twenty-seven-year-old female, was referred to the Kings County Hospital for study because of an abnormal prenatal chest film (Fig. 7). She was asymptomatic, and her physical examination was negative except for her pregnancy. Because of the closeness of the density to the aortic shadow, kymographic studies were done; the mass did not pulsate. Tomography then demonstrated areas of calcification within the density. The diagnosis of a benign tumor mass, probably in the nature of calcified tuberculous lymph nodes, was made; surgery was not advised.

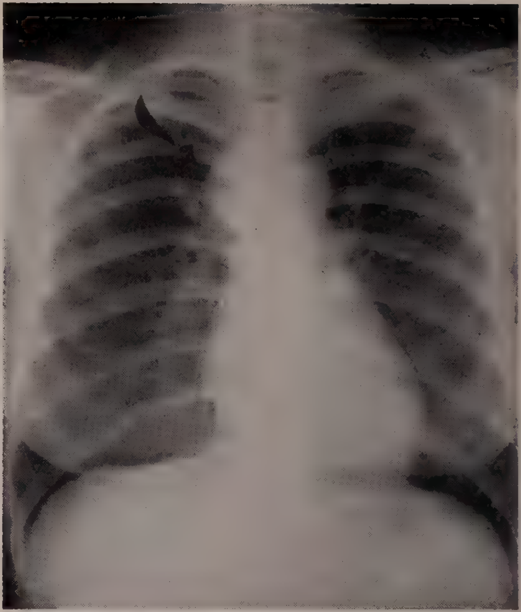

FIG. 7. *Case 7*—Abnormal prenatal chest film.

In our experience the fourth group in order of frequency was made up of abnormalities related to the esophagus and the diaphragm, chiefly diverticula and hernias. We are arbitrarily limiting our discussion of this group to a patient showing a hernia through the foramen of Morgagni because the case illustrated the amount of colon which can enter the chest without presenting a gas bubble.

CASE 8.—L. T., a sixty-five-year-old female, was referred to the Beth-El Chest Clinic because of a chronic productive cough and occasional small hemoptyses. Her past history was negative except for an accident to her lower chest over ten years ago (her refrigerator had toppled forward and struck her). Physical examination revealed fine rales at her right lung base, both anteriorly and posteriorly. Her posteroanterior chest film showed a density in her right cardiophrenic region (Fig. 8). A Lipiodol study revealed bronchiectasis of the right middle and lower lobes, and a barium enema demonstrated a large herniation of the colon into the chest (Fig. 9). This patient's disturbing bronchiectasis may have been secondary to her asymptomatic hernia.

Fifth in frequency we would place the developmental cysts: the neurofibromas usually located

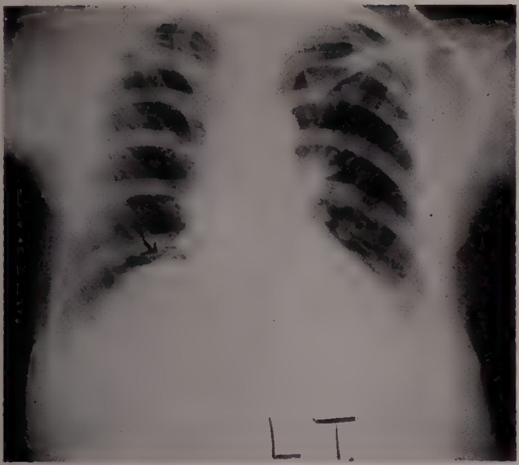

FIG. 8. *Case 8*—Density in right cardiophrenic region.

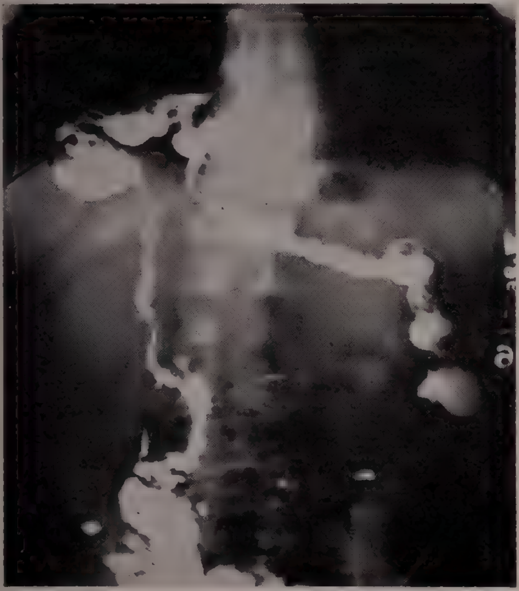

FIG. 9. *Case 8*—Barium enema demonstrating a large herniation of the colon into the chest.

in the vertebral gutter, the dermoids usually found in the anterior mediastinum, the pericardial cysts arising from the pericardium, and the bronchogenic and celomic cysts. Some of these are easily recognized because of their location.

CASE 9.—I. G., a twenty-nine-year-old female, was referred to the Kings County Hospital because of an abnormal prenatal chest film (Fig. 10). This mediastinal abnormality was shown to lie in the anterior mediastinum. After delivery she decided to have the tumor removed because she had noted fatigue and dyspnea during her pregnancy. A benign cystic teratoma was found and removed.

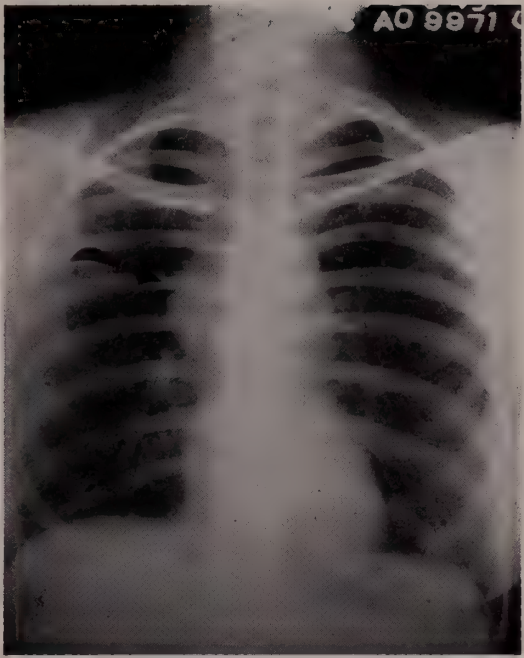

FIG. 10. *Case 9*—Abnormal prenatal chest film.

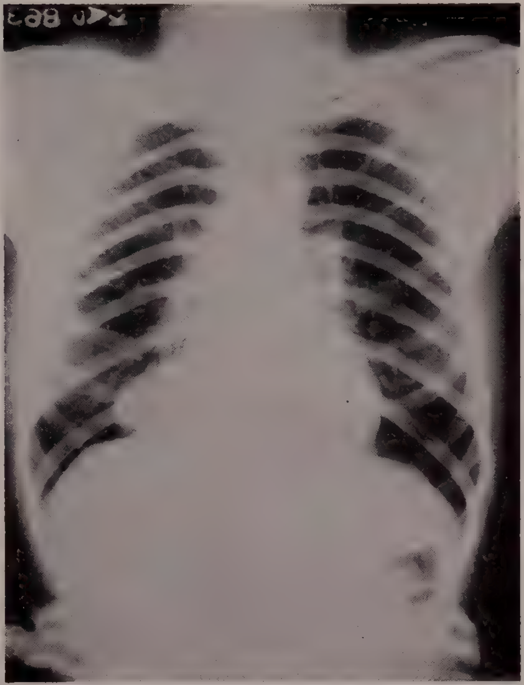

FIG. 11. *Case 10*—Asymptomatic density in right cardiophrenic region.

CASE 10.—J. P., a forty-year-old male, was referred to his surgeon on August 20, 1953, by the Kings County Pre-employment Clinic because an asymptomatic density had been found in his right

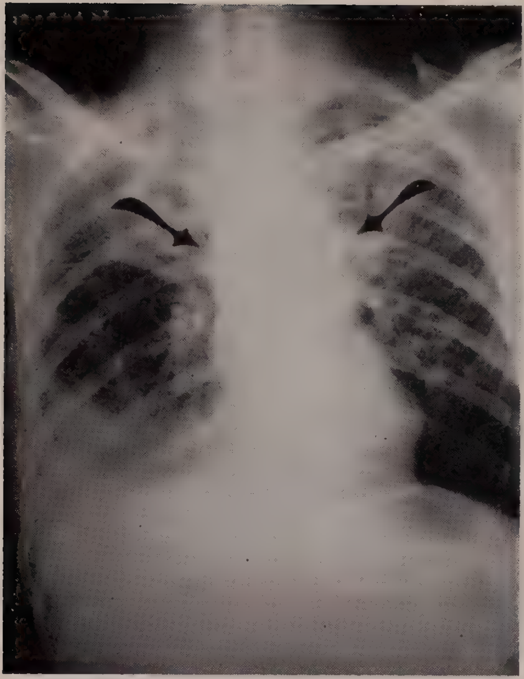

FIG. 12. *Case 11*—Widened mediastinal shadow.

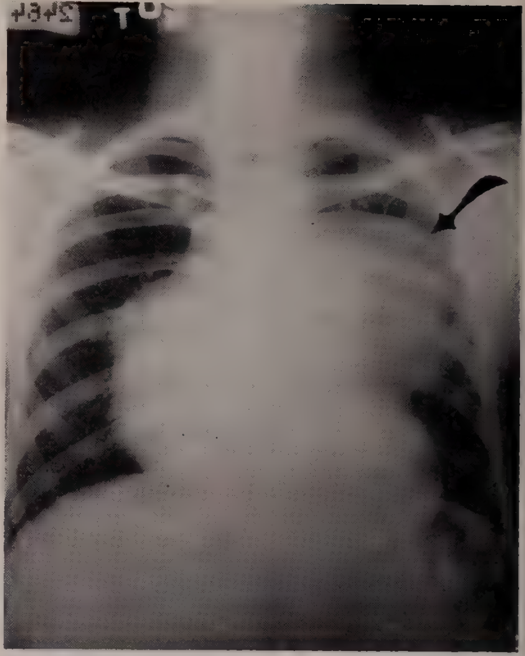

FIG. 13. *Case 12*—Left anterior mediastinal lesion in addition to cardiac enlargement.

cardiophrenic region (Fig. 11). The lateral view showed the mass to be anteriorly placed just behind the sternum. The surgeon dissected a cyst away from the pericardium, and the pathologist described a mesothelial-lined structure which was consistent with the diagnosis of a pericardial cyst.

The least common group of asymptomatic mediastinal lesions was made up of infections and malignant changes. At first thought it is difficult to believe that such serious conditions can remain asymptomatic or misdiagnosed for any length of time, and yet this is so.

CASE 11.—L. B., a thirty-seven-year-old male, was studied by the Kings County Hospital Medical Service because of a four-week history of fatigue, headache, nausea, and vomiting; he denied other symptoms. When his chest film was seen (Fig. 12), he was transferred to the Tuberculosis Service on January 23, 1953. He was given triple antituberculosis therapy, and as his lungs cleared, it became obvious a few months later that his widened mediastinal shadow was not due to a tortuous aorta, as originally diagnosed, but rather to a paravertebral cold abscess. An overexposed film and spine x-rays demonstrated this clearly. The patient has had no characteristic complaints of any sort in spite of close questioning.

CASE 12.—T. T., a nineteen-year-old male, was admitted to the Kings County Hospital on April 21, 1948, because of weakness, dizziness, dyspnea, left shoulder pain, and fever, all of three weeks duration. He had had rheumatic heart disease since the age of eleven, and the clinical impression was that he now had an acute exacerbation of his rheumatic fever. His chest film showed a left anterior mediastinal lesion in addition to his cardiac enlargement (Fig. 13). He died after three months of hospitalization in spite of deep x-ray therapy, and the postmortem examination showed this lesion to have been a malignant teratoma.

Summary and Conclusions

1. Illustrative cases of asymptomatic mediastinal lesions have been taken from various sources and presented in the order of their frequency as we saw them.
2. Asymptomatic mediastinal pathology can be found in any part of the mediastinum and may be of any degree of clinical significance.
3. It occurs often enough not to be considered a medical rarity.
4. It is discovered most easily by means of the routine chest film since physical findings may or may not be present.
5. It is another reason for considering the routine chest x-ray an integral part of a complete physical examination.

1263 EASTERN PARKWAY
855 OCEAN AVENUE

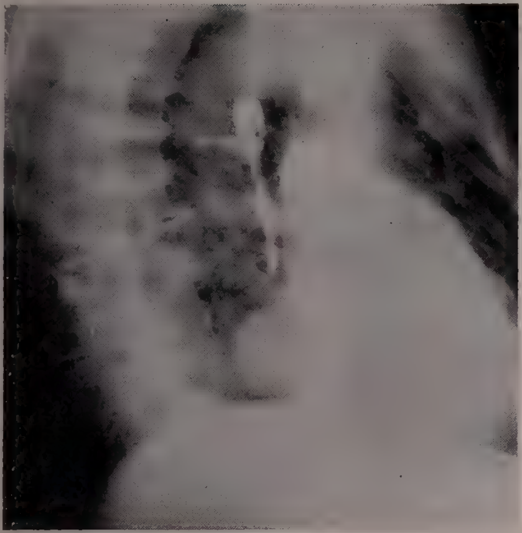

FIG. A. Oblique roentgenogram of chest showing large, well-defined, round density posterior to heart and just above diaphragm. There is anterior displacement of the barium-filled esophagus. This conventional chest roentgenogram suggests a mediastinal neoplasm.

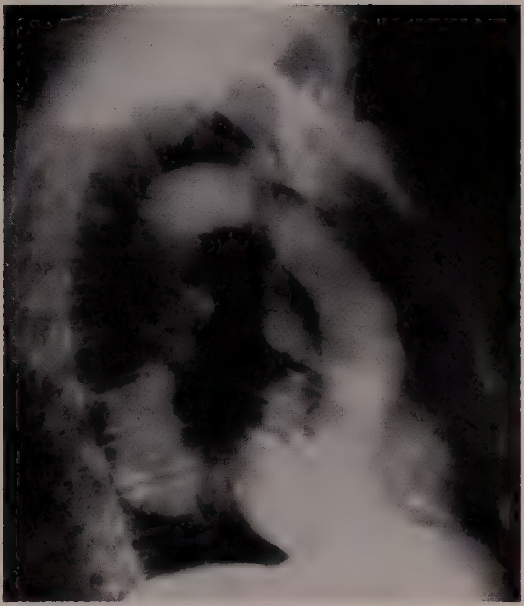

FIG. B. Angiocardiogram demonstrates the round mass to be a markedly tortuous aorta.

The Brownsville Chest Clinic cases were presented through the courtesy of Dr. A. B. Robins, Director, Bureau of Tuberculosis, New York City Department of Health. The Kings County Hospital cases were presented through the courtesy of Dr. C. E. Hamilton, Director, Tuberculosis Service, Kings County Hospital, Brooklyn. The Beth-El Hospital cases were presented through the courtesy of Dr. I. Snapper, Director of Medicine, Beth-El Hospital, Brooklyn. The angiogram was presented through the courtesy of Dr. I. Kroop, cardiologist, Jewish Sanitarium and Hospital for Chronic Diseases, Brooklyn.

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Discussion

John A. Evans, M.D., *New York City.*—We are indebted to Drs. Levine and Greenfield for an interesting and informative paper on a phase of chest survey findings which has received relatively little attention. I shall limit my discussion to a few general comments relative to the diagnosis of mediastinal lesions and to a few specific remarks on points made by the authors. In addition, with your indulgence, I should also like to avail myself of the traditional prerogative of a discussant to show three or four slides pertinent to the discussion.

The precise diagnosis of abnormal mediastinal shadows on conventional chest roentgenograms is difficult and often impossible. Diagnostic accuracy can be increased by careful roentgenoscopy and by the application of special roentgen technics. Fluoroscopy may yield much valuable information about the dynamics of the lesion, its attachments, its position and appearance during respiration. It will also show in which view the lesion is best demonstrated. Of the special technics we have found angiocardiography to be the most helpful and informative. This is perhaps best illustrated by the following two cases.

The first case is that of a sixty-five-year-old man admitted to the New York Hospital because of abdominal pain and what was thought to be a mediastinal mass demonstrated on a lateral chest roentgenogram. The round density was thought to represent a neoplasm. It was closely associated with the esophagus which it displaced anteriorly (Fig. A). Overpenetrated films in anteroposterior and lateral projections disclosed the true nature of the mass to be a markedly sinuous aorta. This was confirmed by angiocardiography (Fig. B).

The second case is that of a sixty-nine-year-old male who had no chest complaints but who on a routine chest radiograph was found to have an

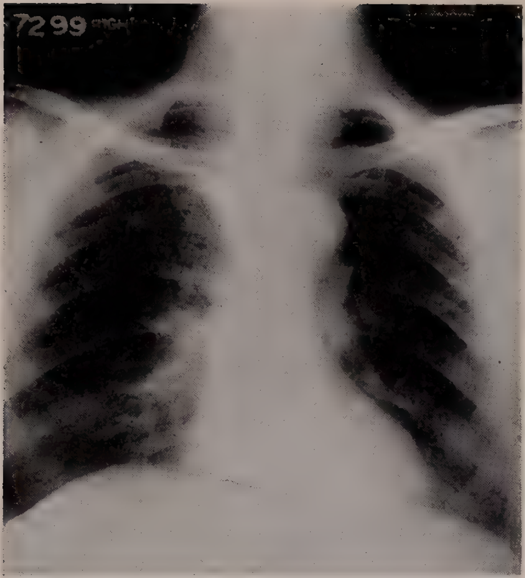

FIG. C. Frontal chest roentgenogram reveals widening of the right border of the superior mediastinum.

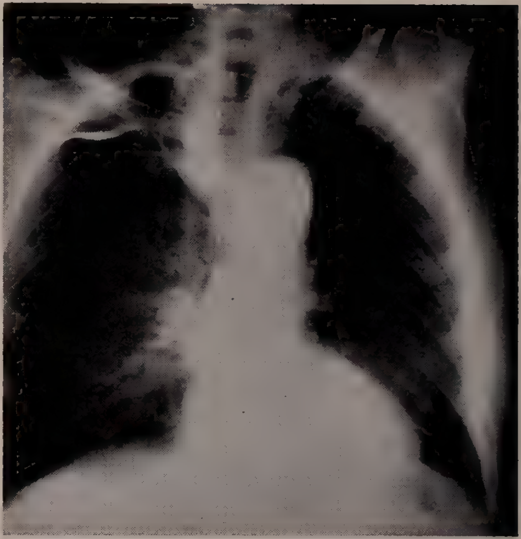

FIG. D. Angiocardiography demonstrates the mediastinal widening to be the result of a buckled innominate artery.

abnormally wide superior mediastinal silhouette (Fig. C). There were no other abnormal findings. Angiocardiography revealed the widened right border of the mediastinum to be a buckled innominate artery (Fig. D). Widening of the right superior mediastinal shadow on a conventional chest x-ray in a patient in the older age group and with evidence of an arteriosclerotic, tortuous aorta and without tracheal compression or deviation should raise the suspicion of a buckled innominate artery. In questionable cases angiocardiography may prevent a needless thoracotomy.

The authors state that the asymptomatic mediastinal lesion "is at least as frequent as asymptomatic pulmonary neoplasm." It is my opinion that in our photoroentgen service it is much more frequent, especially unsuspected mediastinal cysts and hernias.

The authors make an excellent point when they say that a routine chest x-ray is as important a part of a physical examination as a urinalysis or blood count. None will take issue with the fact that reliance cannot be placed on percussion and auscultation for the detection of asymptomatic chest pathology.

I am not quite clear whether Drs. Levine and Greenfield meant to include unsuspected cardiac lesions in Table II. These are probably the most common significant lesions detected in chest films but often are ignored in many surveys. Especially important is congenital heart disease such as pulmonary stenosis, patent ductus arteriosus, and interatrial septal defects. Many cases of unsuspected rheumatic heart disease are also detected.

The authors find abnormalities associated with the esophagus and diaphragm fourth in frequency of unsuspected mediastinal pathology. Such lesions may be much more common, especially hiatus hernia which they do not mention. For the detection of this abnormality one must be alert to the significance of retrocardiac densities or gas shadows. Occasionally, cardiospasm will be asymptomatic and produce an abnormal mediastinal silhouette.

The lungs and mediastinum are, as the authors imply, not the only regions where unsuspected pathology may be detected on routine chest survey films. "All four corners of the film" should be examined. Other areas which may yield unsuspected pathology are the neck, shoulders, bony thorax, and subdiaphragmatic structures.

No physician, in so far as he is a physician, considers his own good in what he prescribes, but the good of his patient; for the true physician is also a ruler having the human body as a subject and is not a mere money-maker.—PLATO

A Five-Year Review of the Premature Infant Program in New York City

JEAN PAKTER, M.D., AND HAROLD JACOBZINER, M.D., NEW YORK CITY

(*From the New York City Department of Health*)

THE need for a program[1] to care for the prematurely born infant was recognized in New York City seventeen years ago. In 1937 the Commissioner of the New York City Department of Health, John L. Rice, appointed a committee to investigate the problem and make recommendations. A start was made in setting up standards for care and urging that a city-wide program be developed. World War II interrupted progress, and so it was not until the latter part of 1948 that a plan for a premature program was put into effect. Essentially, the plan consisted of establishing and developing the following:

1. Minimum standards for the care of premature infants and educational programs.
2. Centers in hospitals for the care of premature infants.
3. A premature transport service.
4. A payment program to centers by the city to foster specialized care for premature infants.
5. A home care and follow-up program.
6. Improved prenatal care and other factors relating to incidence of prematurity.
7. Statistical analysis of data concerning prematures.
8. Community cooperation.

Establishment of Standards and Educational Programs

In 1948 the Health Department published Standards for the Care of Premature Infants[2] as recommended by the Pediatric Advisory Committee. These were distributed throughout the city to all hospitals with maternity and newborn services and to all concerned with the care of the premature. Recommendations for the proper obstetric management[3] during delivery of prematures were also drawn up with the aid and endorsement of the Obstetric Advisory Committee and distributed to hospitals and interested individuals. Fundamentals of care were stressed with four basic principles in mind: (1) prevention of infection, (2) maintenance of respiration, (3) proper feeding methods, and (4) maintenance of body temperature. It was urged that hospitals which could not meet the standards arrange for transfer of the premature infants to those hospitals with adequate facilities. However, every hospital was to provide for the immediate care of the infants by having suitable equipment and properly trained personnel.

In June, 1953, five years later, Section 110 of the Sanitary Code was revised. This section pertains to hospitals with maternity and newborn services. Regulations were adopted which incorporated the standards for the care of premature infants. These were fundamentals relating to the proper physical setup, equipment, and staffing of premature nurseries. Hospitals that planned to give long-term care to premature infants were required to make the necessary provisions.

As part of the educational program, Federal funds were made available through the Children's Bureau and the New York State Department of Health for instruction of doctors and nurses actively engaged in the care of premature infants. These institutes have been conducted for the past five years at the Cornell University Medical College, New York City. Instruction in premature nursery work has been available at several hospitals. The arrangements for these opportunities for specialized training in premature care have been facilitated by the Maternity and Newborn Division of the New York City Department of Health.

Establishment of Premature Centers

The care essential for premature infants has been so highly specialized and costly that the average hospital could not maintain the required professional personnel. This is particularly true today in an era of nursing shortages. Further,

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TABLE I.—GROWTH OF PREMATURE CENTERS—1948 TO 1953

Hospital	Type	Opened	Location	Approved for Payment	Theoretic Capacity	Present Operating Capacity
New York	Voluntary	Before 1948	Manhattan	July 1, 1950	22	22
Flushing	Voluntary	1948	Queens	July 1, 1950	30	14*
Babies	Voluntary	1949	Manhattan	July 1, 1950	23	23
St. Vincent	Voluntary	1949	Manhattan	July 1, 1950	30	30
Lincoln	Municipal	1949	Bronx	July 1, 1950	16	16
Harlem	Municipal	1950	Manhattan	November 1, 1950	40	40
Queens General	Municipal	1950	Queens	Pending	21	8
Bellevue	Municipal	1951	Manhattan	November 26, 1952	30	30
Kings County	Municipal	1952	Brooklyn	November 26, 1952	45	35*
Mt. Sinai	Voluntary	Late 1953	Manhattan	January 1, 1954	46	22*
TOTAL					303	240

* The operating capacity of several centers has not reached full expansion because of a shortage of nurses.

the physical setup and necessary equipment were costly and prohibitive for the average hospital. All this was apparent in the initial phases of the program, and, therefore, several hospitals throughout the city shared their excellent facilities and made available their specialized resources for premature infant care to their neighboring hospitals. This actually marked the beginning of premature centers.[4]

During the past five years ten premature centers have been developed. Half of them are located in municipal hospitals, and the other half are located in voluntary hospitals. These have been serving all hospitals in the city electing to transfer their prematures. In New York City there are three types of hospitals, municipal, voluntary, and proprietary. Each type has utilized the services of the centers.

Table I depicts the growth of the centers since 1948. The total bed capacity of the centers has increased from 52 to 303 in five years:

Year	Number of Beds
1948	52
1949	121
1950	182
1951	212
1952	257
1953	303

However, because of nursing shortages only 240 beds are being utilized at present. Even today, the centers find the task of recruiting and maintaining adequate staff a difficult one. Certainly the average hospital with an occasional premature infant could not be expected to maintain the required nursing personnel. The solution for this hospital has been to utilize premature centers.

The original plans for the development of premature centers aimed to establish 18 to 20 centers throughout the city. This was based on the average number of premature infants (under 2,500 Gm.) born every year which is approximately 14,000. Of these, 4,000 were under 2,000 Gm. The average stay of the premature infant in the hospital was at least one month. In order to provide sufficient center beds, it had been estimated that 500 beds would be required. This was based on the principle that infants weighing 2,000 Gm. or over could usually remain in the hospital of birth and receive adequate care.

Hill-Burton funds enabled hospitals to plan construction of premature centers. However, since the end of 1953 Hill-Burton funds for such purposes have no longer been available. This may have a discouraging effect on the development of new centers. Additional facilities for prematures are still needed in several boroughs, and because new centers will not be available in the immediate future, the revised Section 110 of the Sanitary Code has taken cognizance of this fact and aimed to foster and promote the development of specialized services for the prematurely born in all maternity services.

Table II indicates the number of requests for transports and the percentage of babies transported. (These figures do not include requests from the borough of Richmond. Since this borough is relatively inaccessible for transport ambulance service, it is hoped that a center will develop in Richmond.) It may be noted that the number of requests increased at a more rapid rate than the accommodations available in the centers. As a result 20 to 30 per cent of requests still cannot be met. The need for centers is evident in view of the persistent demand for such services.

Establishment of a Premature Transport Service

Much thought was given to the safe and rapid

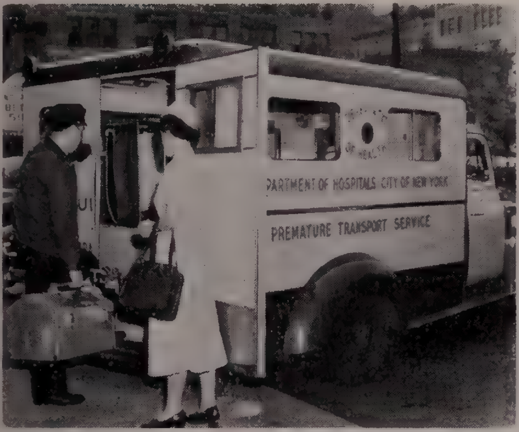
DEPARTMENT OF HOSPITALS CITY OF NEW YORK
PREMATURE TRANSPORT SERVICE

FIG. 1. Ambulance for premature transport service under joint administration of the Department of Hospitals and Department of Health.

TABLE II.—NUMBER REQUESTED AND NUMBER TRANSPORTED OVER FIVE-YEAR PERIOD

Year	Requests Made	Babies Transported	Per Cent Requests Granted
1949	622	560	90
1950	887	691	78
1951	1,095	825	75
1952	1,114	784	70
1953	1,116	897	80
TOTAL	4,834	3,757	78

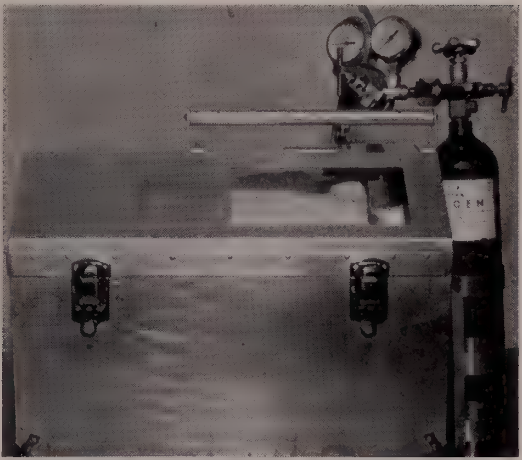

FIG. 2. Pragel portable carrier utilized for transport of premature infants.

TABLE III.—HOSPITALS UTILIZING THE PREMATURE TRANSPORT SERVICE

	Utilize Service	Do Not Utilize	Requests for 1953	Per Cent of Total
Proprietary	27	0	469	42 (all private)
Voluntary	32	27 (5 have centers)	318	29 (service and private)
Municipal	9	5 (have centers)	253	23 (all service)
Home	..	..	45	4
Other	..	..	31	2
TOTAL	68	32	1,116*	100

*Of 1,116 requests 44 per cent were service cases, 56 per cent were private.

transfer from the place of birth to a premature center. The aim was not only to transport the infants without harm or hazard but to provide the same type of skilled care en route that would be provided in the center. Two city agencies, the Department of Health and Department of Hospitals, combined their services and shared the responsibility and costs of maintaining this service.[5] The estimated cost of an ambulance trip is about $26 at present. As the calls increase, the costs per trip will diminish. It has been estimated that the average amount of time the infant is in transit is under one-half hour. The Department of Hospitals provides a specially designed and equipped ambulance and trained staff of ambulance drivers (Fig. 1). The Department of Health staffs the ambulance twenty-four hours a day, seven days a week with public health nurses who have received special training in the care of prematures. A clerk is assigned to this service who is responsible for accepting calls, arranging trips, and clearing centers for vacancies. Proper safeguards are taken to maintain the necessary heat and oxygen, when indicated, from the moment the infant is transferred to the portable carrier until arrival at the center (Fig. 2). During the trip the infant is carefully observed by the nurse for respiratory difficulty. If it is due to accumulation of secretions, the respiratory difficulty is relieved by aspiration. The nurse's bag contains necessary equipment for aspiration as well as emergency drugs which are seldom resorted to.

All the proprietary hospitals and more than half of the voluntary and municipal hospitals that lack centers have utilized this service. It is interesting to note that more requests came for private cases than service cases (Table III).

Priorities for transport of the premature babies were set up in the following order: (1) the infants born at home, (2) the smallest infants, and (3) the infants in critical condition. In 1953, 93 per cent of the infants transported were under 2,000 Gm. Of the infants moved, over 70 per cent survived. These figures will be discussed in greater detail later.

Several interesting facts have emerged from a review of the records of the babies transported

TABLE IV.—CENTERS REPORT ON PERCENTAGE OF FAMILIES REQUIRING FINANCIAL ASSISTANCE IN 1953

Center	Type of Hospital	No Financial Assistance		Partial Assistance		Full Assistance		Total
		Number	Per Cent	Number	Per Cent	Number	Per Cent	
1	Voluntary	92	34	19	7	161	59	272
2	Voluntary	35	17	25	13	145	70	205
3	Voluntary	43	16	16	6	217	78	276
4	Voluntary	99	36	39	14	136	50	274
5	Municipal	0	0	13	4	314	96	327
6	Municipal	3	0.8	5	1+	357	98	365
7	Municipal	0	0	1	0.2	426	99.8	427
8	Municipal	1	0.5	3	1.5	198	89	202
TOTAL		273	12	121	5	1,954	83	2,348

in 1953. In over 16 per cent the mother had a previous history of prematurity. In 22 per cent the mother received little or no prenatal care. Over 12 per cent were multiple births. In 6 per cent there was a history of pre-eclampsia or toxemia. In 17 per cent a history of an obstetric complication existed. In 7 per cent some medical complication such as rheumatic heart disease or penumonia was cited.

Premature Payment Program

Although one cannot measure the merit of a program in saving lives in terms of dollars, it is important for a community planning a program to know what the costs are.[6] It has been estimated that the minimum cost of care for a premature infant is about $18 per day. It is necessary, therefore, to help hospitals with premature centers defray part of their expenditures. On July 1, 1950, the Premature Payment Program was instituted. However, reimbursement by the city was set at $12 per day which is one third less than the estimated cost of care. Before a premature center could qualify for payment, the standards and criteria established by the Pediatric Advisory Committee had to be met. Approval of a center is granted for a one-year period and is renewed annually following a survey of the center. At the present time nine centers are approved for payment, and one center is still pending approval.

The average total cost of care for a premature infant in a center is $350. This is based on an average stay of one month. Parents who are financially able are expected to pay the hospital directly for such care. This number constitutes a small minority (Table IV). The majority of parents are unable to meet the high costs and require assistance. For this reason a financial eligibility plan has been devised, based on "cost of living" data. This is revised periodically as indicated in keeping with the current economic trend. Figure 3 shows the schedules utilized as a guide by premature centers to determine financial eligibility of family. Of the total amount of payment thus far, only 2 to 3 per cent has been made by parents. The balance has been contributed by the city. The city derives 50 per cent of its funds from the State under the provisions of State aid for the care of physically handicapped children.

One of the impelling reasons for requesting transfer of babies to centers is the inability of parents to pay for the costly care required, as well as the fact that the necessary specialized care is not readily available in all hospitals. In 1953, of 2,348 babies in centers, 83 per cent required full financial assistance (Table IV).

Home Care and Follow-up Program

For the ultimate welfare of the baby, much thought and concern must be given to the care the infant will receive after discharge from the hospital. Considerable advance planning and preparation are required. Soon after the infant is admitted to the center, the parents are asked to come in to meet the social service worker and nurse in charge of the baby. An opportunity is thus provided for the staff to become familiar with any problems which may prove obstacles to the baby's future well-being. The mother is urged to visit the center often and is given ample time for demonstration and instruction by the nurse, as well as an opportunity to give her baby care under the watchful eye of the nurse. This gives the parent the encouragement and reassurance so often needed. In addition, the Visiting Nurse Service in the community is notified when a premature infant is admitted to the center. A home visit is made well in advance of the baby's discharge to ascertain the home conditions. Any problems thus brought to light are reported back to the hospital.

Schedule 1. Guide to obtain FAMILY SIZE #

Size of Family	Family Size #
3 persons or less	3
4 persons	4
5 persons	5
6 persons	6
7 persons	7
8 persons	8
9 persons	9
10 persons	10

A premature infant is counted as one member of the family.

Schedule 2. Guide to obtain FAMILY INCOME #

Income per Year	Family Income #
Under $4100	3
$4100–4649	4
4650–5099	5
5100–5549	6
5550–5949	7
5950–6299	8
6300–6649	9
6650 & over	10

to obtain ELIGIBILITY #:

Subtract Family Size # from Family Income #. Examples:

Family Income #.......	4	Family Income #........	6	Family Income #.......	3
Family Size #..........	4	Family Size #...........	4	Family Size #..........	5
Elig. # (+ or −).......	0	Elig. # (+ or −) #......	+2	Elig. # (+ or −) #.....	−2

Note: When the Family Income # is greater than the Family Size #, the Eligibility # will be a plus figure; when the Family Income # is smaller than the Family Size #, the Eligibility # will be a minus figure.

Schedule 3. Guide to family payment (to be revised after each 30 days of care. * See below)

Eligibility #	Amount of Family Payment (Subject to modification when circumstances warrant)
If minus or zero	No family payment
If +1	$3.00 per day
If +2	$6.00 per day
If +3	$9.00 per day
If +4 or more	Full family payment

* If the Family Eligibility # is a plus number, the number is reduced by one after each 30 days of care. Examples:

A family with Eligibility # of +4 would not be eligible for assistance for the first 30 days.
The family then becomes +3 and pays $9.00 per day for the next 30 days.
If the infant remains another 30 days, the family becomes +2 and pays $6.00 per day.
After 120 days, the family has an Eligibility #0 and would no longer contribute.

FIG. 3. Financial eligibility guide for premature centers to determine amount of family payment for care of prematures.

After the infant is discharged from the hospital, the visiting nurse follows up with another home visit to give the mother the added guidance she may require. Where the home situation precludes discharge of an infant to the mother, arrangements are made through a voluntary agency, the Speedwell Society, to place the infant in a foster home for periods up to three months. In the interim further plans can be made for the baby's ultimate care and return to its home. Seventy-five infants have thus been cared for during the past two years.

The importance of continued medical supervision is impressed upon the parent. In the city there are well-baby clinics or child health stations available if the parent cannot afford private care.

With regard to following the course of infants after discharge, most premature centers operate "follow-up" clinics which provide opportunities for long-range studies on future growth and development of the premature infants as well as for guidance of the parents. A plan is now under way to have the centers submit to the Department summaries of the progress, the condition at time of discharge, and arrangements for future care of each premature infant.

Improved Prenatal Care and Other Factors Relating to the Incidence of Prematurity

In 1953 a total of 162,087 babies were born alive. In other words, of these, 14,049 or 8.7 per cent were prematurely born. The incidence of prematurity has been at a constant level during the five years the program has been in operation. The lack of significant reduction in the incidence of premature births indicates that greater efforts in the prevention of prematurity must be made.

On closer scrutiny it is noted that the incidence of prematurity shows quite a wide range within

TABLE V.—BIRTHS AND DEATHS AMONG PREMATURE INFANTS IN NEW YORK CITY IN 1952*

Weight Groups (Gm.)	Total Number	Per Cent Distribution by Group	Number Died	Per Cent Mortality
1,000 and under	907	6	805	89
1,001 to 1,500	1,045	7 } 30	461	44
1,501 to 2,000	2,459	17	357	15
2,001 to 2,500	10,010	70	433	4
TOTAL	14,421	100	2,056	14.3

* Data for 1952 are provisional.

the city. It varies from borough to borough and by type of hospital and is closely correlated with socioeconomic conditions.[7–10]

Early and adequate prenatal care and preconception care are important factors in the prevention of prematurity. The Maternity and Newborn Division of the Department of Health is presently studying the availability and quality of prenatal services throughout the city. A sampling of all live birth records for the city reveals that 10 per cent of the mothers had received no prenatal care and that in 49 per cent prenatal care was not started until the second trimester. On reviewing the records of premature babies, it was noted that 22 per cent of the mothers received no prenatal care. Efforts are being directed to the critical areas to stimulate earlier and better prenatal care.

Statistical Analysis of Data Concerning Prematures

Since the birth weight must be recorded on every birth certificate, statistics are available on the incidence of live births in various weight groups. For convenience the premature infants have been allocated in four weight groups with the smallest group of babies 1,000 Gm. and under and increasing by increments of 500 Gm. up to 2,500 Gm. In comparing the distribution in the various weight groups it is noted that 70 per cent of all prematures born in the city are in the weight group of 2,001 to 2,500 Gm. (Table V). The remaining 30 per cent are distributed in the other three weight groups. Over half of the 30 per cent are in the 1,501 to 2,000-Gm. group. The survivals are least in the lowest weight groups. This distribution has been a fairly constant one in the past five years. In 1952 the mortality in the group of 1,000 Gm. and under was 89 per cent; in the next group of 1,001 to 1,500 Gm. the mortality was 44 per cent; in the group of 1,501 to 2,000 Gm. the mortality was 15 per cent; in the largest group of 2,001 to 2,500 Gm. the mortality was 4 per cent. It is important to note, however, that the mortality in the group of babies born weighing 2,001 to 2,500 Gm. was still four times higher than in the full-term babies weighing over 2,500 Gm. The mortality

TABLE VI.—BIRTHS AND DEATHS AMONG PREMATURE INFANTS BORN IN HOSPITALS WITH PREMATURE CENTERS IN 1952

Weight Groups (Gm.)	Total Number	Per Cent Distribution by Weight	Number Died	Per Cent Mortality	Per Cent City-wide Mortality
1,000 and under	161	9	143	89	89
1,001 to 1,500	174	9	61	35	44
1,501 to 2,000	343	18	49	14	15
2,001 to 2,500	1,184	64	41	3	4
TOTAL	1,862	100	294	15.8	14.3

TABLE VII.—COMPARATIVE MORTALITY AMONG PREMATURES, 1952*

	City Wide				Born in Centers				Transports to Centers				Requested But Not Transported			
Weight (Gm.)	Total Number	Per Cent Distribution by Weight	Number Died	Per Cent Mortality	Total Number	Per Cent Distribution by Weight	Number Died	Per Cent Mortality	Total Number	Per Cent Distribution by Weight	Number Died	Per Cent Mortality	Total Number	Per Cent Distribution by Weight	Number Died	Per Cent Mortality
1,000	907	6+	805	88.8	161	9	143	88.8	101	17	83	82.1	36	15	36	100
1,001 to 1,500	1,045	7+	461	44.1	174	9+	61	35	241	40	69	28.6	40	15	38	95
1,501 to 2,000	2,459	17	357	14.5	343	18	49	14.2	218	36	24	11	112	42	37	33
2,001 to 2,500	10,010	69.4	433	4.3	1,184	63	41	3.4	43	7	3	7	75	28	3	4
TOTAL	14,421	100	2,056	14.3	1,862	99+	294	15.7	603	100	179	29.6	263	100	114	47

* City-wide figures for 1952 are provisional.

TABLE VIII.—COMPARISON OF MORTALITY RATES OF LIVEBORN INFANTS BY WEIGHT GROUPS IN NEW YORK CITY, 1948 TO 1952

Weight (Gm.)	Range of Numbers of Live Births	1948	1949	1950	1951	1952*
		Numbers of Live Births				
Under 1,001	....	736	828	938	967	907
1,001 to 1,500	....	1,007	952	977	1,021	1,045
1,501 to 2,000	....	2,513	2,458	2,459	2,495	2,459
2,001 to 2,500	....	9,670	9,572	9,413	10,074	10,010
2,500 and over	....	144,045	143,123	142,031	148,198	149,103
		Mortality Rates				
Under 1,001	736 to 967	96.8	96.9	96.8	93.9	88.8
1,001 to 1,500	952 to 1,045	60.0	48.6	46.3	53.0	44.1
1,501 to 2,000	2,458 to 2,513	23.3	19.3	17.7	16.6	14.5
2,001 to 2,500	9,413 to 10,074	5.3	5.2	4.9	4.4	4.3
Total under 2,500	13,559 to 14,599	17.3	16.2	16.3	15.8	14.3
Total over 2,500	142,031 to 149,103	1.2	1.2	1.1	1.0	1.3

* Provisional figures.

for the entire group of prematures born in the city in 1952 was 14.3 per cent. This compares favorably with rates for other urban localities.

Tables VI and VII depict a group of premature infants born in hospitals with premature centers. The mortality in the smallest weight group was the same as that of the city-wide group of that weight. The centers may be reflecting a much more accurate account of all babies born in this weight group, whereas on the city-wide basis some in this group are being reported as stillbirths. Thus, the mortality in this weight group may not be entirely comparable. However, the mortality in the weight group of 1,001 to 1,500 Gm. shows a significantly lower rate, namely, 35 per cent in the centers as against 44 per cent in the city-wide group of similar weight. In the 1,501- to 2,000-Gm. and 2,001- to 2,500-Gm. groups, the mortalities were 14 and 3 per cent, respectively, as compared with 15 and 4 per cent of the city-wide groups of these weights.

In analyzing the group of infants transported it is noteworthy that 93 per cent of the infants are in the weight groups under 2,000 Gm. as compared with 30 per cent in the city-wide distribution of premature infants by weight group (Table VII). This is to be expected since priority for transport is given to the smaller prematures or those in critical condition. The over-all mortality figures are, therefore, much higher, namely, 29.6 per cent for transport babies as compared with 14.3 per cent for the city as a whole. It is obviously important to make comparisons within similar weight groupings. Even then care must be exercised in interpretations of these figures. For example, the mortality rate in the lowest weight group of babies transported is 82 per cent. One might hastily conclude that, compared with the 89 per cent mortality of the city-wide or center born-in group, this represented a salutary effect of a transport trip to the center. It is possible, however, that the feeblest have already expired before transport could be arranged. On that basis, if one deferred transporting until twenty-four hours after birth, a further diminution in mortality could be anticipated.

Likewise, another example of possible misinterpretation is noted in the largest weight group. The mortality of 7 per cent is higher in transported babies than in the other comparable weight groups. Does this mean that transporting larger premature infants to centers has dire effects? We think not. Rather, it is more likely due to the fact that the larger premature infant has been selected for transport because its condition was unfavorable.

The higher mortality rates, for babies for whom requests were made but were not transported, may indicate the great value of transporting babies, or it may indicate in large measure a group of very debilitated infants who died before transport could be arranged (Table VII). In the borough of Richmond which is not serviced by a center, the mortality rate of prematures has been the highest of all boroughs in three of the past four years. Several hospitals with premature centers[11,12] have statistical records indicating a significant drop in mortality rates of prematures since their centers were developed. In one hospital the mortality rate of the prematures was reduced by one half after the establishment of a center.[11] The collection of statistics by a hospital must include all deaths of liveborn infants, no matter how short the duration of life, those occurring in the delivery room, or parts of the hospital other than the nursery. Suggested methods

TABLE IX.—MORTALITY STATISTICS OF INFANTS IN PREMATURE CENTERS, 1950 TO JUNE, 1953

Weight Groups and Years	Born In	Number Died	Per Cent Mortality	Born Out	Number Died	Per Cent Mortality
1,000 Gm.						
1950	64	63	98.4	57	30	52.6
1951	159	144	90.6	127	94	74.0
1952	161	143	88.8	101	83	82.1
1953 (6 months)	129	107	82.9	56	48	85.7
1,001 to 1,500 Gm.						
1950	82	37	45.1	88	32	36.5
1951	169	75	44.3	197	71	36.0
1952	174	61	35.0	241	69	28.6
1953 (6 months)	136	46	33.8	156	50	30.3
1,501 to 2,000 Gm.						
1950	171	25	14.6	91	8	8.8
1951	373	51	13.7	222	24	10.8
1952	343	49	14.2	218	24	11.0
1953 (6 months)	248	27	10.9	182	22	12.1
2,001 to 2,500 Gm.						
1950	602	21	3.5	46	3	6.5
1951	1,247	40	3.2	67	6	9.0
1952	1,184	40	3.4	43	3	7.0
1953 (6 months)	842	24	2.9	32	4	12.5

have been previously reported in the literature.[13] The need for further refinement in collecting data for proper interpretation has been pointed out.[14]

In order to evaluate the progress of the premature program in the city, a comparison has been made, year by year since 1948, of the mortality rates among liveborn infants by weight groups (Table VIII). It is evident on analyzing the figures that a definite downward trend in mortality is present. This is more marked in the weight groups under 2,000 Gm. than in the weight group of babies over 2,000 Gm.

The weight groups of 1,001 to 1,500 Gm. and 1,501 to 2,000 Gm. show the greatest diminution in mortality from 60 to 44 per cent and 23 to $14^1/_2$ per cent, respectively, whereas in the group of 2,000 to 2,500 Gm. the mortality has dropped only 1 per cent from 5.3 to 4.3 per cent.

The mortality rates of premature infants born in and cared for in hospitals with centers since 1950 also show a definite downward trend for each weight group (Table IX).

The data suggest that advances have been made in the medical and nursing management of the premature infants resulting in a saving of many lives. This is true not only for the babies in premature centers but to a lesser extent for the prematures throughout the city.

If the rates of 1948 had continued to prevail, it is estimated that more than 800 children born in the past five years and alive today would have died in early infancy.

Even after the neonatal period, the infant who was prematurely born runs a much higher risk of succumbing before the year ends. The death rate in the postneonatal period has shown no appreciable decline in the five-year period. In the smallest weight category the death rate in the postneonatal period is 14 times higher than in the full-term infant; ten times higher in the 1,001- to 1,500-Gm. weight group; five times higher in the 1,501- to 2,000-Gm. group; and three to four times higher in the 2,000- to 2,500-Gm. group than in the full-term infant.

Intensive study of the factors contributing to these high postneonatal mortality rates is needed if improvement is to be effected.

Community Cooperation

It is evident that any preventive program will be effective in a measure comparable only to the degree of cooperation and wholehearted interest given by the various groups involved in a community—parents, doctors, nurses, social service workers, educators, all working together. Hospitals utilizing the transport service and hospitals with premature centers must cooperate. Municipal, voluntary, and proprietary hospitals must share a common interest. The agencies of the city, Departments of Health, Hospitals, and Welfare, have to coordinate as do the voluntary agencies of the city, such as the Visiting Nurse Service and other community organizations. The collaborative effort of all the various agencies must be fostered and supported still further to the ultimate advantage of the prematurely born infant.

Summary and Conclusion

The program for prematurely born infants in

New York City has been reviewed from its inception to the present, representing a five-year period.

Aims and accomplishments have been outlined, and some directions for the future have been pointed out.

It is apparent that while much good has been achieved during these formative years, there is still a great need for continued active interest and research to consolidate and improve further the gains already made. Investigation, particularly in the physiology and pathology of the premature infant, should be fostered. Extensive follow-up studies of the prematurely born should be conducted. And last, more vigorous efforts should be directed to the problems of the prevention of prematurity. If any inroads are to be made, the collaborative effort of all the various agencies is essential.

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Experience with Simple Cystectomy in the Treatment of Carcinoma of the Bladder

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THIS report is based on an analysis of all cases of bladder carcinoma treated by simple cystectomy at Memorial Center during the interval 1943 to 1949.

In the male simple cystectomy involved removal of the bladder, usually with the prostate and seminal vesicles and occasionally with small amounts of perivesical fat and overlying peritoneum. In the female the procedure involved removal of the bladder with varying segments of urethra, occasionally with all or part of the female genital organs or with segments of adjacent peritoneum and perivesical fat. No systematic effort was made to remove the peritoneum of the pelvic floor, the perivesical fat, or the pelvic lymph nodes.

No attempt will be made to detail the various and complicated considerations which enter into any decision for or against the use of cystectomy, but the following factors adversely influenced the selection of patients for the procedure: (1) the patient was under the care of a staff member who did not recommend the procedure, (2) the tumor was thought to be suitable for more conservative therapy, (3) the tumor was thought to be inoperable either because of extensive disease in the pelvis or because of distant metastases, (4) the patient was in poor general condition precluding the possibility of an extensive operation, (5) the patient refused cystectomy, or (6) the patient died or developed complications following preliminary urinary diversion, preventing ultimate cystectomy.

Sixty-five patients with bladder carcinoma were submitted to simple cystectomy during the interval 1943 to 1949, and a minimum of five

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TABLE I.—AGE AND SEX INCIDENCE IN 65 CASES

	Males	Females
Number	51	14
Age (years)		
Mean	59.6	56.4
Median	57	60
Range	39 to 70	30 to 69

TABLE II.—CLASSIFICATION OF GRADE AND STAGE OF NEOPLASM

Grade of neoplasm
- Papilloma
- Grade I carcinoma
- Grade II carcinoma
- Grade III carcinoma
- Grade IV carcinoma

Stage of neoplasm
- Stage O—tumor limited to mucosa
- Stage A—tumor not beyond submucosa
- Stage B_1—tumor not more than halfway through muscle
- Stage B_2—tumor more than halfway through muscle but not beyond muscle
- Stage C—tumor beyond muscle but not metastatic
- Stage D_1—tumor metastatic to points within the confines of the pelvis
- Stage D_2—tumor metastatic to points outside the confines of the pelvis

years of follow-up is available in each case. No instance of papilloma is included in this series, and with the exception of one instance of adenocarcinoma all of the patients had the usual epidermoid carcinoma of the bladder. These 65 patients probably comprise about one fourth of all patients with bladder cancer seen during the time interval under consideration. The distribution of the cases with respect to age and sex is indicated in Table I.

In the pathologic analysis of the bladder neoplasms in this series of cases the dual classification suggested by Marshall[1] has been employed (Table II and Fig. 1). For convenience and simplicity grade I and grade II neoplasms are combined under the designation, "low grade carcinoma," and grade III and IV lesions as "high grade carcinoma."

Analysis of the 65 cases with respect to the grade and stage of the neoplasm as determined by pathologic study of the entire surgical specimen is presented in Table III. Several comments are warranted:

1. The small number of cases and the factors of selection previously enumerated prevent any generalizations from this data regarding the incidence of the various stages and grades of bladder tumors in over-all bladder cancer experience.

2. *In this small series* 65 per cent of the tumors treated by cystectomy were deeply infiltrating lesions (B_2, C, D), while 35 per cent were superficially infiltrating neoplasms (A, B_1).

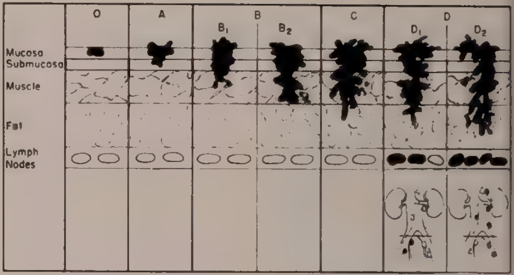

FIG. 1. Stages of vesical neoplasms.

TABLE III.—PATHOLOGIC STAGE AND GRADE OF BLADDER CARCINOMA IN 65 CASES

Pathologic Stage	Pathologic Grade	Total Cases	Per Cent Total Cases for Each Stage and Grade	Per Cent Total Cases for Each Stage
A	Low	9	13.8	24.6
	High	7	10.8	
B_1	Low	5	7.7	10.8
	High	2	3.1	
B_2	Low	2	3.1	13.9
	High	7	10.8	
C	Low	2	3.1	32.3
	High	19	29.2	
D	Low	2	3.1	18.5
	High	10	15.4	

3. *In this small series* high grade tumors occurred with greater relative frequency in association with deeply infiltrating tumors (B_2, C, D) than in association with the superficially infiltrating growths (A, B_1).

4. Since systematic node dissection was not carried out in any of the cases in this group, it is probable that a number of stage D lesions went unrecognized.

The over-all results of cystectomy in the 65 cases have been summarized in Table IV. There were six postoperative deaths, a mortality rate of 9.2 per cent. Two patients died of cardiac failure, one of pulmonary embolus, one of peritonitis, one of overwhelming sepsis, and one from a compression fracture of a preoperatively unrecognized cervical spine metastasis. Nineteen patients had nonfatal postoperative complications of varying degrees of severity.

Four patients died within two years of operation of unknown causes, and it is at least possible that these patients died of cancer. Three patients died of causes obviously unrelated to bladder cancer or to the upper urinary tracts.

Eight patients died of uremia, six within one year of operation. This observation is of interest. It was initially hoped that total cystec-

TABLE IV.—SURVIVAL DATA IN 65 CASES

	Time Interval After Operation 0 to 1 Years	 1 to 2 Years	 3 to 4 Years	 4 to 5 Years	 5 or More Years	Total
Postoperative deaths	6	..	..	..	..	6
Died of unknown causes	2	2	..	..	..	4
Died of unrelated causes	2	..	..	..	..	3
Died of renal causes	6	1	..	..	..	8
Died of cancer	14	14	4	1	1	36
Living without evidence of cancer	..	..	..	..	..	8

TABLE V.—RELATIONSHIP BETWEEN PATHOLOGIC STAGE AND GRADE AND SURVIVAL

		Period of Survival in Years						
Stage	Grade	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 or More	Total
A	Low	..	1	..	..	..	5	6
	High	..	2	..	..	..	2	4
B_1	Low	2	1	..	..	..	1	4
	High	..	..	..	..	..	..	..
B_2	Low	..	1	..	..	..	1	2
	High	1	1	1	..	..	1	4
C	Low	2	..	..	..	..	..	2
	High	5	6	2	1	..	1	15
D	Low	1	..	..	..	..	..	1
	High	3	2	1	..	1	1	8

tomy with its consequent necessity for urinary diversion would afford protection of the upper urinary tracts from the effects of obstruction and infection which so often complicate the management of bladder cancer in the intact bladder. However, the presence of varying degrees of renal damage by the time of cystectomy, coupled with the now well-recognized hazards of ureterostomy, either cutaneous or intestinal, combined to produce a significant mortality, as indicated.

Thirty-six patients died of recurrent and/or metastatic cancer. Two comments are warranted with regard to these patients. Approximately two thirds of the 36 patients had evidence of cancer locally recurrent within the pelvis and/or in the inguinal lymph nodes at the time of death, with or without simultaneous evidence of distant metastases. Of the 36 deaths from cancer occurring within the follow-up period, 28 occurred within two years of cystectomy and 32 within three years of the operation.

Eight patients survived five or more years without evidence of disease.

The relationship between the pathologic grade and stage of the bladder carcinoma and the survival following cystectomy is indicated in Table V. The 46 cases tabulated include 36 known to have died of cancer, eight known to be living five or more years without evidence of cancer, and two who died more than five years following cystectomy of causes other than cancer (Table IV).

The small number of cases does not permit generalization from this data regarding the prognosis of the different stage bladder neoplasms following cystectomy. In this small series simple cystectomy has resulted in the survival of seven out of ten patients with stage A lesions, one out of four with stage B_1 lesions, and two out of six with stage B_2 lesions. In this small series simple cystectomy has resulted in a very poor five-year survival rate for patients with stage C and D lesions.

Comment

Generalizations have already been made concerning the factors which governed the selection of patients for cystectomy. The operation of simple cystectomy, as planned and executed in the great majority of the patients in this series, involved little more than a "segmental resection" of the entire bladder and made no consistent provision for encompassing any disease which had extended beyond the confines of the bladder proper. In the development of a rationale for simple cystectomy it was reasoned that the procedure, at the very least, would prevent deaths from (1) upper urinary tract obstruction and infection resulting from uncontrolled tumor within the intact bladder, (2) hemorrhage from uncontrolled tumor within the intact bladder, and (3) the development of new neoplasms (as contrasted with recurrent neoplasms) within the intact bladder.

Interpretation of the age and sex incidence of bladder carcinoma recorded in this group of patients must be tempered by the fact that the series of cases is not only small but also highly selected. Fully half of the patients submitted to cystectomy had lesions which by the most optimistic criteria would have to be considered advanced (Table III).

The relatively high operative mortality and complication rates are due to the fact that (1) simple cystectomy (especially when combined with simultaneous bilateral ureterointestinal anastomosis) represents a major technical effort, (2) patients were rarely eliminated as candidates for cystectomy simply because they were not good operative risks, and (3) these procedures were, in fact, performed by a variety of surgeons whose technical proficiency with the operation has improved since this initial experience.

The over-all results presented in Table IV require little comment. Those listed as dying of unknown causes may have died of cancer. On the other hand, deaths from unrelated causes in this age group are to be anticipated, and the three deaths so recorded were from coronary thrombosis, periarteritis nodosa, and aortic thrombosis, respectively.

The eight deaths from renal causes recorded in this series emphasize the fact that the initial premise regarding the protection of the upper urinary tracts afforded by cystectomy is, by virtue of the hazards of urinary diversion, at least partially invalidated. However, about half of the renal deaths were at least in part the result of renal damage which was already evident at the time of cystectomy.

Analysis of the deaths resulting from cancer revealed two important facts:

1. Simple cystectomy was an obviously inadequate cancer operation in those patients who subsequently developed local recurrence and/or regional metastases (inguinal lymph nodes). The first principle in the development of an operation for the control of any cancer requires that the procedure be adequate for the control of the primary lesion.

2. Deaths from recurrent and/or metastatic cancer occurred for the most part within two years of cystectomy (Table IV). In retrospect it is evident that 12 of the 18 patients who survived beyond the two-year period following cystectomy were still alive five years postoperatively. Furthermore, only two of the 14 patients living three years postoperatively died during the subsequent two-year period. Whether these observations regarding the survival of patients with bladder carcinoma have general application to estimates of prognosis for all types of treatment of such neoplasms will have to be determined by a more extensive experience than is here reported.

Although the relationship between the depth of infiltration of a bladder tumor and the prognosis had been casually recognized for many years, the careful autopsy study of patients dying with bladder cancer carried out by Jewett and Strong[2] precipitated widespread clinical interest in this subject. The importance of such an analysis is supported by the data presented in Table V. Although the number of cases is small, the findings certainly suggest that low stage lesions (A, B_1, B_2?) are more amenable to successful control by cystectomy than are the high stage tumors (B_2?, C, D). Granting the validity of the data shown, three major questions present themselves:

1. How accurately can one predict from preoperative analysis the stage and grade of a bladder tumor? Marshall[1] found preoperative estimates to be 81 per cent accurate in this regard.

2. Should cystectomy be carried out in patients with low stage lesions, or does more conservative therapy produce equally good results? The study of Colby and Kerr[3] seems to answer this question in favor of conservative therapy, but a final answer will depend on careful reevaluation of all technics for the treatment of bladder cancer in terms of the pathologic grade and stage of the individual lesion. Such analyses are currently in progress.

3. Do more radical therapeutic technics, i.e., radical cystectomy and pelvic exenteration, improve survival rates among patients with high stage lesions? Such an investigation is currently in progress.[4]

Summary

An analysis of 65 patients with bladder carcinoma treated by simple cystectomy and followed for at least five years has been presented and discussed.

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Bone Changes in Children with Lesions of the Spinal Cord or Roots

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ORTHOPEDIC complications in paraplegic patients have been reported upon extensively in the literature, particularly by French and American authors. In addition to soft tissue pathology with which this paper is not concerned, three complications are generally described: bone atrophy, spontaneous fractures, and bone erosion in areas underlying trophic ulcers. None of these sequelae has been considered of major consequence in the rehabilitation of the paraplegic patient.

The cases reported in the literature deal primarily with war veterans or industrial workers, and the pathologic changes in bone, therefore, are described in the fully matured, adult skeleton. There is only scant reference to the sequelae of spinal cord lesions in children.[1]

Since growing bone is subject to constant remodeling concomitant with increase in length and width, one might expect more profound alterations in its structure following denervation. Moore[2] reported a very high incidence of peripheral nerve pathology associated with congenital deformities; he felt that the nervous system may have an unrecognized function in coordinating and guiding the growth processes so that a normal pattern of growth is obtained. If this function can be attributed to the nervous system in utero, there is no reason to believe that the neural influence on bone would cease abruptly at birth. De Castro[3] (1925) established that nerve fibers are intimately associated with the osteoblasts of growing bone; he suggested that these nerves are probably concerned with the modeling of bone. Harrell[4] confirmed the work of De Castro and postulated that the nerve fibers in close relation to the bone cells may represent the sensory and afferent endings for a reflex control of bone growth and maintenance.

The purpose of this study is to present the more unusual osseous complications which may be observed in children with motor and sensory paralysis of the lower extremities.

Osteopsathyrosis

This term is sometimes used to denote abnormal fragility of bone with repeated, pathologic fractures, encountered in osteogenesis imperfecta and in certain conditions of known etiology as hyperparathyroidism and renal rickets.[5] It is also applicable in the cases to be described below. Osteopsathyrosis, as a complication in the denervated limb of children, is not to be confused with the occasional and infrequent spontaneous fractures which may occur also in the adult paraplegic patient.

CASE 1.—T. M., a well-developed boy, two and one-half years old, fell from a moving automobile on January 8, 1949, sustaining a linear fracture in the frontal area of the skull and an avulsion of the lumbosacral roots on the left. X-rays of the spine and pelvic girdle were negative for fracture or dislocation. On his admission to the New York State Rehabilitation Hospital six weeks after the accident, examination revealed paresis of the external rectus muscle of the left eye; there was complete, flaccid paralysis of the left lower extremity with loss of sensation extending proximally to within 1 inch of the inguinal ligament. Bladder and bowel control were not impaired. The diagnosis of avulsion of the lumbosacral roots was confirmed, but in the opinion of the consulting neurosurgeon surgical intervention was not indicated.

Within a period of three years (April, 1949, to February, 1952), the patient sustained ten pathologic fractures in the long bones of the involved extremity (Fig. 1); these occurred without any known injury and could only be attributed to abnormal fragility of bone. During the healing stage of each fracture the patient was encouraged to bear weight in a well-molded plaster hip spica in order to stimulate bone metabolism. In each case, however, shortly after plaster immobilization was discontinued, a new fracture would be sustained at a different site; a long leg brace did not offer adequate protection, even in bed.

Disarticulation of the involved extremity was considered but was not deemed advisable because of the high level of anesthesia and the difficulties one would encounter in fitting the patient with an artificial limb. Since the last fracture was

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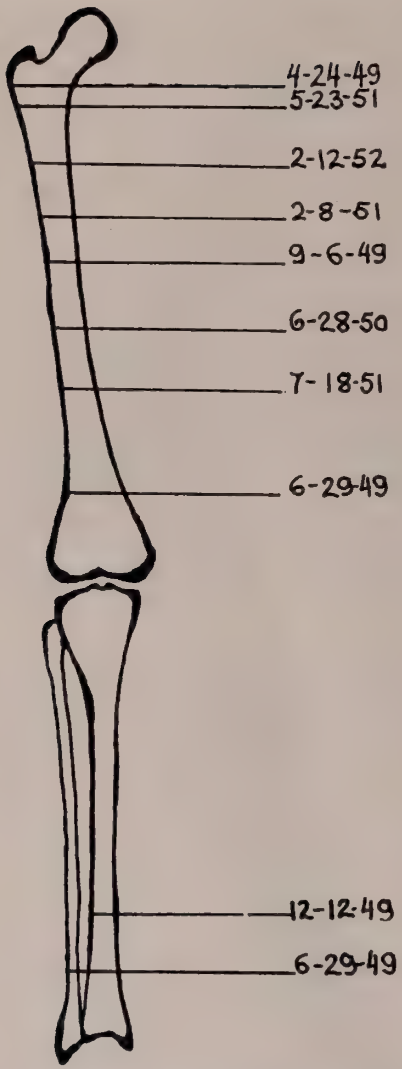

Fig. 1. Diagrammatic sketch of a lower extremity showing the dates and approximate location of multiple pathologic fractures sustained in Case 1 between April, 1949, and February, 1952. The type of fracture (transverse, oblique, or spiral) is not depicted in this illustration.

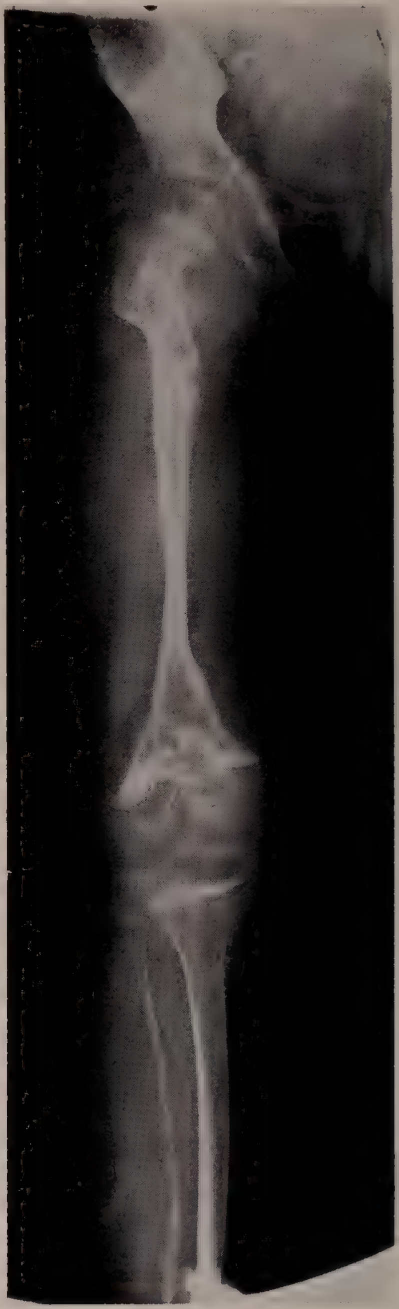

Fig. 2. Anteroposterior view of the left lower extremity in Case 1, showing the irregularity and premature closure of the distal femoral epiphysis. The roentgenograms also reveal the narrowing and sclerosis of the femoral shaft with obliteration of the medullary canal along the middle third.

incurred (February 12, 1952), the left lower extremity has been continuously protected by means of a "walking" plaster spica. The patient has been very active, and although the leg portion of the plaster cast has broken through on two occasions, no additional fractures have been sustained. It is possible that the abnormal fragility of the bones in the denervated limb of this patient may diminish with age. Even then, the difficult problem will not be completely solved; at seven years of age the length discrepancy already amounts to 9 cm., and the distal femoral epiphysis is prematurely closed (Fig. 2).

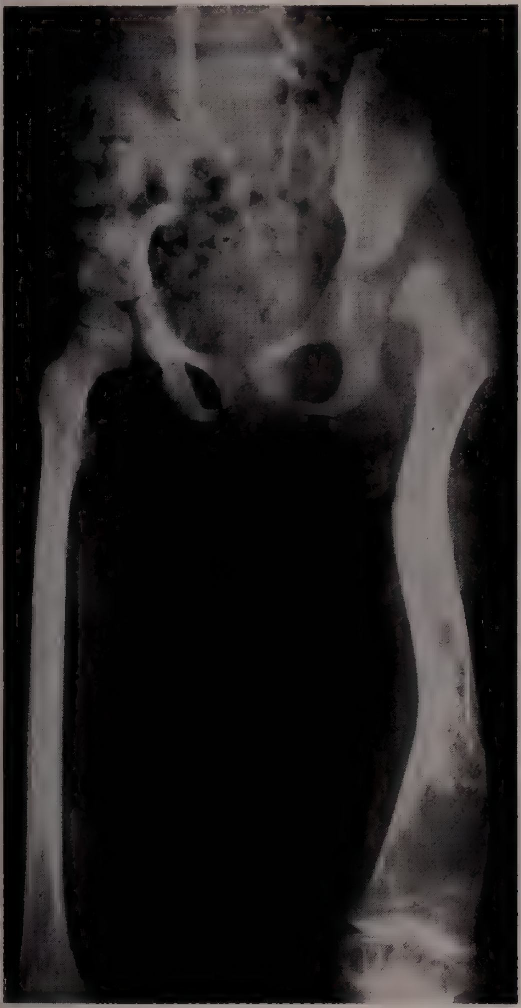

Fig. 3. Anteroposterior view of the femora in Case 2. Note the expansion of the right femoral shaft with thinning of the cortex and irregular trabeculations. The appearance of the right femur resembles that of fibrous osteodystrophy.

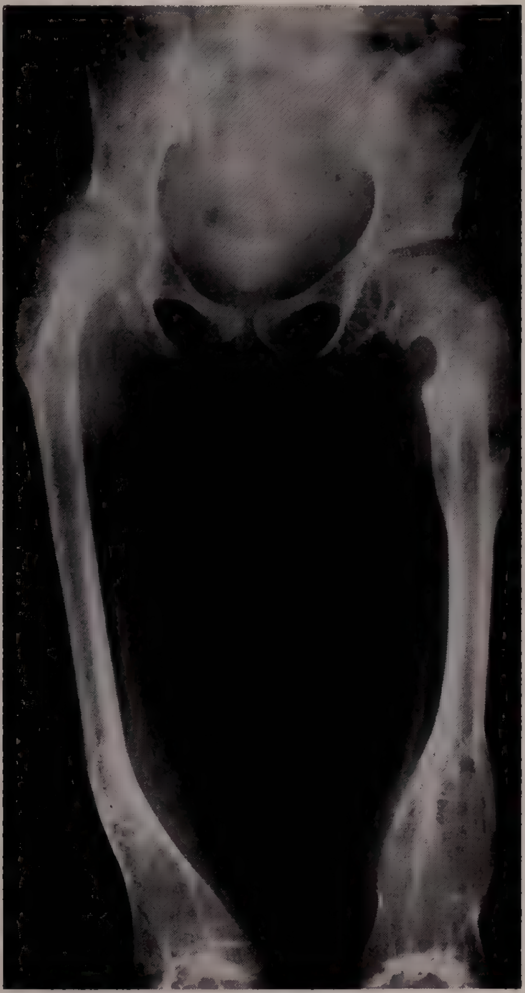

Fig. 4. Anteroposterior view of the femora in Case 3, showing the structural changes following multiple pathologic fractures. Note the appearance of the left femur two years after the last fracture was incurred; there is cystic expansion with honeycombing in the distal third, while the rest of the shaft is surrounded by periosteal new bone.

Case 2.—K. S. was born on April 19, 1945, with spina bifida aperta. An accompanying myelomeningocele was repaired at six months of age; the patient, nevertheless, remained with complete flaccid paraplegia and with a sensory loss extending proximally to the first lumbar segment. She was admitted to the New York State Rehabilitation Hospital in August, 1951, immobilized in a plaster hip spica. During the preceding twelve months, the patient had sustained five pathologic fractures in the right lower extremity at another institution. All the fractures (femur three, tibia two) healed rapidly. On April 30, 1952, four months after ambulatory activities with braces were begun, she sustained a supracondylar fracture of the right femur while in bed and without any known injury. Rehabilitation was again interrupted in December, 1952, when the patient incurred an additional fracture in the right femur and another in the right tibia. Swelling with discoloration was noted by a nurse on routine bed care, and there was no history of trauma.

It is interesting to note that all eight pathologic fractures were sustained in the same extremity. The x-ray appearance of the right femur is suggestive of fibrous osteodystrophy (Fig. 3).

Case 3.—K. W., a four-year-old girl, was admitted to the New York State Rehabilitation Hospital on October 6, 1947, with the diagnosis of "transverse myelitis secondary to Rocky Mountain spotted fever." Examination revealed complete

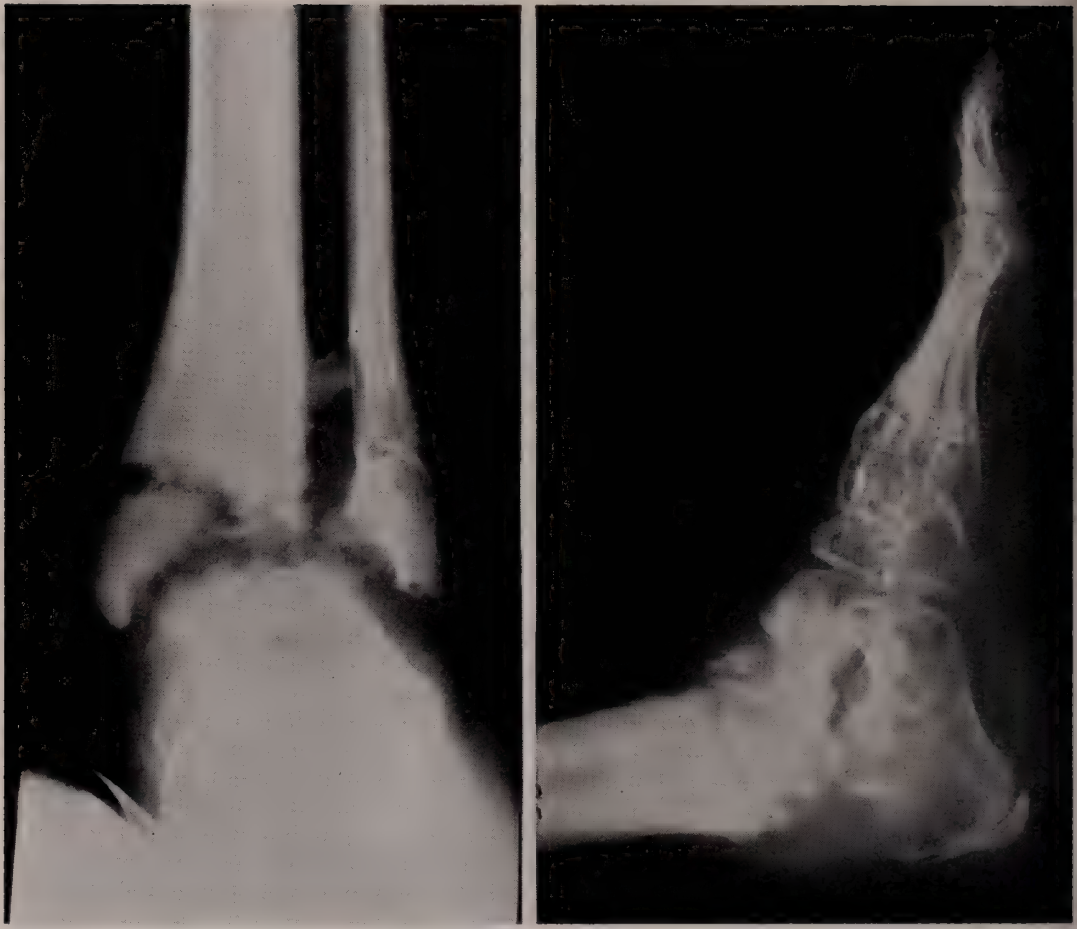

FIG. 5. Anteroposterior and lateral views of the right ankle in Case 4. The neurotrophic changes in the ankle, developing after an attempted arthrodesis, are well shown.

flaccid paraplegia with loss of sensation extending to the tenth dorsal segment. The trunk musculature was essentially flail. There was no voluntary control of the bladder and bowel. The patient was fitted with bilateral long leg braces attached to a Knight spinal brace, and she was started on a program of rehabilitation. Within a period of two and one-half years (June, 1948 to December, 1950) 12 pathologic fractures were incurred in the long bones of both lower extremities. The fractures were invariably sustained in bed without any known cause except that the patient was without the benefit of brace immobilization. Serum protein, calcium, phosphorus, and phosphatase levels were within normal limits. All the fractures healed rapidly following plaster immobilization of the involved limb. The patient is now ten years old (June, 1953), and she ambulates well with the aid of long leg braces and crutches using a swing-through gait. There have been no additional fractures for over two years.

The x-ray appearance of the right femur, two years after the last fracture was incurred, suggests failure of the remodeling process to keep pace with normal bone repair (Fig. 4).

The cases reported above, indicate a serious complication of motor and sensory denervation in children. Repeated pathologic fractures occurred with a frequency characteristic of osteogenesis imperfecta and resulted in marked disorganization of the bony architecture. The structural changes in the involved bones varied: In Case 1 there is marked narrowing and sclerosis of the femoral shaft with irregularity and premature closure of the distal epiphysis; in Case 2 the outstanding features are broadening or expansion of the femoral shaft, thinning of the cortex, and irregular trabeculation; in Case 3 cystic expansion with honeycombing is present in the distal third of the femur, while the rest of the

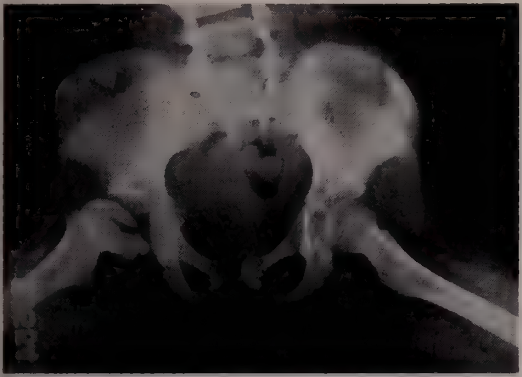

FIG. 6. Lateral view of the hips in Case 5. Note the flattening and expansion of the right femoral head and neck; a large area of rarefaction can be readily seen in the capital epiphysis.

shaft is enclosed in a tubular layer of periosteal bone. In reference to the last case, it is interesting to note that thickening of the femur with an "involucrum" of periosteal bone has also been reported in osteogenesis imperfecta.[6,7]

Disturbed bone metabolism from prolonged inactivity could not explain the abnormal bone fragility; the patients were encouraged to bear weight even during the healing stage of the fractures, and, in general, they were "up and around" more than many of the severely involved poliomyelitis patients in whom a similar bone disturbance has not been encountered. Serum protein, calcium, and phosphorus levels were within normal limits on repeated examinations. It is significant that in all three patients the initial fracture was sustained before six years of age. Repeated, spontaneous fractures have not been noted in older paraplegic children treated at the New York State Rehabilitation Hospital. As in osteogenesis imperfecta, it is possible that the susceptibility of bone to spontaneous fractures may diminish with age. Increased resistance to minimal trauma has been observed in Case 3, and a similar tendency is becoming manifest in Case 1.

Neurotrophic Joint

Multiple, repeated trauma to an insensitive joint are known to produce the characteristic changes of neuroarthropathy. A neurotrophic joint, however, may be initiated by an intraarticular fracture; it may also be initiated by the acute trauma of surgery as demonstrated by the following case.

CASE 4.—S. Z. was born on November 9, 1941, with spinal bifida aperta and myelomeningocele which was repaired at three months of age. On admission to the New York State Rehabilitation Hospital in February, 1948, both lower extremities were flail below the knee; the quadriceps and the hip flexors were rated as good; the rest of the musculature about the hip and knee was subfunctional bilaterally. Neurologic examination revealed scattered areas of anesthesia extending proximally to the twelfth dorsal segment.

On October 27, 1950, a tibiotarsal arthrodesis was attempted to correct a marked eversion deformity in the right ankle which interfered with the wearing of a brace. Subsequent x-rays revealed failure of fusion and development of a neurotrophic joint (Fig. 5).

During the past ten years 12 joint stabilization procedures have been performed in paraplegic children at the New York State Rehabilitation Hospital; these included ten subtalar and two ankle arthrodeses. Neuroarthropathy resulted in one patient. The frequency of this complication following surgery cannot be deduced from the above data since the number of operations is too small to be statistically significant.

"Coxa plana"

CASE 5.—C. F., born on February 28, 1941, with spina bifida aperta, was admitted to the orthopedic service of Bellevue Hospital in January, 1942, for correction of equinovarus feet and external rotation contracture of the right hip. Muscle examination revealed bilateral flaccid paralysis below the knee and moderate weakness in the rest of the extremity. Extensive areas of anesthesia were present in the right lower extremity.

The foot deformities were satisfactorily corrected by wedging casts, but the outward rotation of the hip remained unchanged after twenty days of plaster immobilization in internal rotation. X-rays were negative for hip joint pathology; the capital epiphyses were normal in appearance and well developed for the patient's age. Five years later, x-rays revealed marked flattening and expansion of the right femoral head with a large area of rarefaction present in the epiphysis (Fig. 6).

Unfortunately, there were no interim x-rays in this patient, and, therefore, neither the early changes in the hip nor the time of onset could be determined. It is conceivable that the lesion in the femoral capital epiphysis represents a vascular disturbance secondary to the attempted correction of the external rotation contracture of the hip. Forceful manipulation, however, was not employed, and the mild trauma per se could not account for the marked changes in the femoral head; it seems reasonable to assume that denervation of the hip was at least a contributing factor.

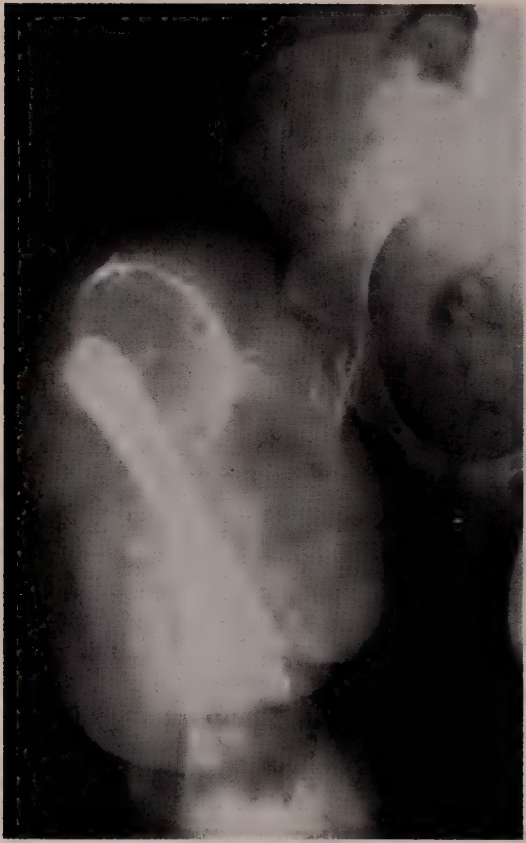

FIG. 7. Anteroposterior view of the left femur in Case 6, showing an old, ununited subtrochanteric fracture with an extensive, false socket in the proximal fragment. A healed fracture is noted in the lower third of the femur.

Pseudoarthrosis

It has been well established that fractures in paraplegic children heal readily and with abundant callus. The following case is of interest because of nonunion and the development of a neoarthrosis at the site of fracture.

CASE 6.—G. S., a six-year-old girl, was born with spina bifida aperta. In spite of early surgical repair of a meningocele the patient remained with complete flaccid paraplegia. At the age of four years, she fell off a couch at home, sustaining a fracture of the left femur. The mother did not consider the possibility of a fracture because of the absence of pain, and it was not until two months later that she admitted the child to an orthopedic clinic. A pillow splint was then applied, immobilizing the thighs in the abducted position.

The patient was admitted to the orthopedic service of Bellevue Hospital in March, 1953, for correction of flexion contractures of the knees and equinovarus deformities of the feet. Both lower extremities were flail, and sensation was absent as far proximally as the groin. The left thigh could be moved passively in all planes through an axis located just below the trochanteric region.

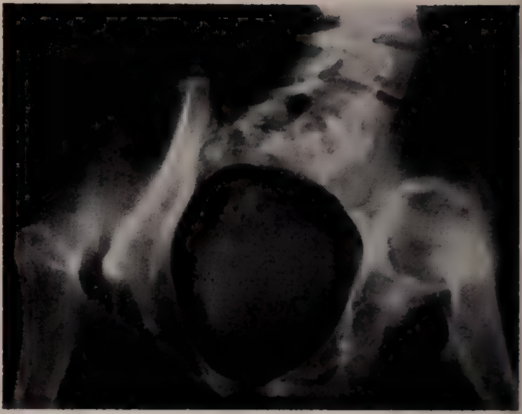

FIG. 8. Anteroposterior view of the pelvis in a patient with spina bifida and bilateral dislocation of the hip. Note the extensive gouging of a false acetabulum on the left, with areas of irregular calcification suggestive of neurotrophic pathology.

X-rays revealed an old, ununited subtrochanteric fracture of the left femur; an extensive, wide, false socket had developed in the proximal fragment (Fig. 7).

The formation of a secondary socket of unusual dimensions has been noted in still another paraplegic child with spina bifida and bilateral dislocation of the hips (Fig. 8). The x-ray appearance of the false acetabulum in this patient is strongly suggestive of neurotrophic pathology.

Summary and Conclusion

1. Bone sequelae in the denervated limbs of children have been described.

2. Denervation is more detrimental to the growing bone of a child than to the mature bone of an adult.

3. An intact nervous system may be necessary for proper bone growth and maintenance, at least in younger children.

20 EAST 74TH STREET

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The Management of Leukemia in Adults

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LEUKEMIA requires careful and continuous clinical management during the course of the disease. Supportive measures are important, and a number of specific agents are available which are of considerable value in temporarily relieving symptoms and restoring the patient to apparently normal health. The best results are obtained by applying these treatments appropriately and in adequate dosage. Although insufficient treatment may deny the patient long periods of good health, excessive use of these agents may result in serious toxic consequences.

The object of treatment is to maintain the patient in the best possible condition with the least amount of therapy; as the disease progresses, more vigorous treatment is required. The chronic and acute leukemias will be discussed separately.

Several representations of the natural course of chronic leukemia are shown in Fig. 1, the basic disease proceeding at a rapid, moderate, or slow rate in different individuals. The main effect of treatment is to suppress the manifestations of the disease and thus return the patient to apparently normal health, but there is little evidence that treatment affects the basic evolution of the disease or substantially prolongs life.[1,2]

Chronic Myelocytic Leukemia

The majority of cases occur during the middle years, twenty to forty, and to a lesser extent in older individuals. The course is progressive and ultimately fatal. The average survival time is three to four years, and about 20 per cent of patients survive longer than five years after the clinical onset of the disease A satisfactory response to treatment consists in a fall in the leukocyte count to normal levels, a spontaneous rise in hemoglobin level, decrease in size of the enlarged spleen and liver, and symptomatic improvement. There is a number of agents that have been used successfully to accomplish this result in responsive patients.

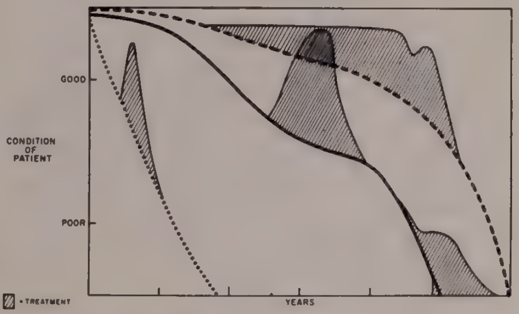

FIG. 1. Varied natural courses of chronic leukemia.

X-ray therapy is probably the single most useful therapeutic method. Early in the disease x-rays are given to the enlarged spleen, at a total dose of 200 to 400 r in four to six days. In early cases this may be sufficient to produce a long remission. After an interval of three to four weeks, if the response is not adequate, further treatment may be given. As the disease progresses, the patient may require a larger dose of x-rays to the spleen or x-ray therapy to the enlarged liver. In some cases a course of spray x-ray, 10 to 50 r, is given to the long bones. We have given some patients with persistently enlarged spleens total doses of 1,000 to 2,000 r. In the late acute stages of the disease when thrombocytopenia occurs, x-ray therapy may be dangerous by enhancing a bleeding tendency. Small doses, however, may still be used locally to relieve symptoms due to infiltration of skin, lymph node enlargement, or oral lesions.

Radioactive phosphorus (P^{32}) has effects similar to those of total body irradiation. The usual dose is from 3 to 10 mc. given orally. Following a course of treatment, if a satisfactory response does not occur after four to ten weeks, further P^{32} may be given. A good response may continue for six months or longer. Osgood[3] prefers maintenance therapy with P^{32}. In the late stages of the disease P^{32} is usually no longer effective.

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There is a group of chemicals, referred to as *polyfunctional alkylating agents*, which are of value. The drugs in this group are nitrogen mustard (HN2), triethylene melamine (TEM), and related compounds such as triethylene phosphoramide (TEPA) and triethylene thiophosphoramide (ThioTEPA). Myleran is also included in this group. The application of these related compounds may be briefly noted.

HN2[4] is given intravenously, and the usual course of treatment is a total dose of 0.4 mg. per Kg. in two to four divided doses. HN2 is used principally in patients with far-advanced disease with an adequate platelet count but apparently refractory to x-ray therapy. A trial of this agent may determine whether the patient is still responsive to active therapy.

For oral maintenance therapy Myleran[5] at present appears to be the most convenient agent in this group. The initial dose is usually 4 to 6 mg. per day given at any time during the day. After a total dose of 150 to 250 mg. a clinical response may be expected. The drug is well tolerated, but excessive doses, as in the case of the other alkylating agents, will produce delayed and sometimes serious bone marrow depression. TEM[6] is given orally in single doses of 2.5 to 5 mg. per day; the drug is taken with plain water on an empty stomach before breakfast, and food is withheld for one hour. Usually 10 mg. are given the first week, and subsequent treatment is given on the basis of the leukocyte count and the clinical response. A dose of 5 to 10 mg. per month may provide maintenance control in some patients. The other analogs of TEM do not offer any particular advantage in treatment.

Urethane[7] is useful in some patients. The usual dose is 2 to 4 Gm. per day given in enteric-coated capsules or in solution. Urethane may cause nausea, vomiting, and drowsiness in about half of the patients. After a total dose ranging from 30 to 300 Gm. hematologic improvement may occur; the patient may be continued on maintenance dosage of 1 to 2 Gm. per day. Again, excessive dosage may cause bone marrow depression.

Fowler's solution (potassium arsenite) may be useful in the early stages of chronic myelocytic leukemia. The dosage usually starts at 5 drops three times daily, and the dose is then increased at the rate of one drop per day until either 20 drops three times daily is reached, signs of toxicity appear, or hematologic remission is achieved. Dosage is then decreased, and a maintenance dose of about 5 drops three times daily is established.

6-mercaptopurine (Purinethol) is given orally.[8] The usual dose is 2.5 mg. per Kg. of body weight (150 to 200 mg. daily in the average adult). Usually there are no symptoms associated with its use. It will regularly produce remissions in chronic myelocytic leukemia, but treatment must be controlled by continuous observation since the patients usually relapse abruptly when the drug is stopped. Purinethol has sometimes been useful in producing brief periods of improvement in patients with far-advanced disease who have apparently become resistant to other forms of treatment.

When the patient is being satisfactorily managed with one form of treatment, it should be continued. As the response becomes less satisfactory, it is often desirable to shift to another form of treatment, such as x-ray to Myleran, or Myleran to 6-mercaptopurine, or to another trial of x-ray. In some of the patients who are apparently refractory to these drugs and doing poorly, a course of nitrogen mustard may determine whether the patient is potentially responsive. It should be noted that when the leukocyte count is elevated, rapid therapy with such effective agents as nitrogen mustards, x-rays, urethane, and 6-mercaptopurine may cause marked white cell destruction resulting in increased uric acid formation. This may lead to uric acid deposition in the kidney with oliguria and sometimes hematuria. Treatment should be started very cautiously in these patients.

The antimetabolite 6-mercaptopurine may occasionally produce a satisfactory response and in particular should be tried in patients who are going into the thrombocytopenic and terminal stage of the disease. The terminal stage of the disease is usually indicated by increased refractoriness to treatment, the presence of low-grade fever, an increase of blast forms in the peripheral blood and bone marrow, severe anemia, and a fall in the platelet count. It is important to continue to treat these patients aggressively because of the possibility that they may show further improvement. Cortisone is ordinarily not useful in chronic myelocytic leukemia, but in far-advanced disease where thrombocytopenia and bleeding are present, cortisone may exert a favorable effect on the bleeding tendencies.

Chronic Lymphatic Leukemia

This is a distinctly different disease from chronic myelocytic leukemia and should be managed conservatively. It runs a variable course in that it is very active in some patients, whereas in others it is a relatively benign condition. The average survival time, however, is three to four years after clinical onset. In the early stages of the disease, when the patient is practically asymptomatic, there may be no indication for treatment. If enlarged nodes, liver, or spleen are present, which produce symptoms, small doses of x-rays in the range of 100 to 200 r may cause a satisfactory regression. This also may produce a fall in the elevated leukocyte count and a rise in the hemoglobin level and platelet count.

As the disease becomes more active, there are several agents that may be used. Radioactive phosphorus (P^{32}) is given cautiously in doses of 3 to 5 mc. by mouth. By intermittent treatment the manifestations of the disease may be suppressed for long periods.

TEM may be similarly effective in some cases. Chronic lymphatic leukemia is sometimes markedly sensitive to this drug. The usual starting dose is 2.5 mg. during the first week. If the white count begins to fall, the drug is withheld until it is stabilized. In some cases a dose of 2.5 to 5 mg. has produced a satisfactory therapeutic result with a fall in the elevated white cell count and a spontaneous rise in hemoglobin level. In other patients after an initial trial at small doses without any evidence of response, larger doses are then given. If, on what appears to be an adequate trial of TEM, the patient develops a fall in the leukocyte count but shows a decrease in hemoglobin level and platelets, treatment should be stopped. The continued use of TEM in this situation may cause thrombocytopenia, bleeding, and depression of normal hematopoiesis without improving the leukemic process.

In some cases cortisone[9] and hydrocortisone have been of considerable value. They may produce a decrease in size of enlarged nodes, liver, and spleen, a spontaneous rise in the hemoglobin level and platelets, and a general improvement of the patient's condition. The leukocyte count may rise initially on cortisone, although with continuing treatment it may then gradually fall. The usual starting dose is 100 to 300 mg. cortisone per day, and if there is a good response, the dose is gradually decreased and the patient maintained on the smallest dose that will keep him in good general condition; this may be as little as 25 to 50 mg. per day. Cortisone therapy must be used carefully since it has a number of undesirable physiologic consequences and may actually further increase the susceptibility of these patients to infection. We use it principally in the late stages of the disease and in patients with acquired hemolytic anemia, which occasionally is a complicating factor. The terminal event in this disease is usually intractable anemia, hemorrhagic manifestations due to thrombocytopenia, or intercurrent infection. While the usual pyogenic infections can be controlled by antibiotics, the incidence of tuberculosis and fungous infections has apparently increased.

In chronic lymphatic leukemia it is desirable to use as little treatment as possible consistent with the adequate relief of symptoms and the maintenance of the patient's general well-being and activity. The various agents are given cautiously, and if improvement does not occur or the disease is apparently worsening on one method of therapy, another method should be considered. In our experience more harm has been done by overtreatment than by undertreatment of this disease. The use of other forms of nitrogen mustard or related compounds, such as HN2, Myleran, and TEPA have not been of particular value as compared to TEM. Generally urethane, Fowler's solution, and the antimetabolites, amethopterin and 6-mercaptopurine, have little or no therapeutic activity in chronic lymphatic leukemia.

Acute Leukemia

Acute leukemia runs a rapid course, and death usually occurs within six months in untreated cases. The diagnosis of acute leukemia is made in patients with an acute and rapidly progressive form of leukemia and by a bone marrow picture showing marked infiltration with blast cells. Bone marrow examination is essential for diagnosis. While there are several types of acute leukemia, from the point of view of treatment in adults we do not make a great effort to distinguish them because there is little evidence that one type responds better than another.

Favorable responses to treatment are not frequent, and when they occur, they are usually brief. In young adults hematologic remissions have been obtained with cortisone or ACTH in about 20 to 25 per cent of the patients. Initially, the dose of cortisone is large, 300 mg. per day in four divided doses. In patients acutely ill a more rapid response may be obtained with intravenous ACTH, 50 mg. per day by continuous infusions, and then treatment is continued with cortisone. The dose of cortisone is gradually decreased if hematologic improvement occurs. A satisfactory response consists in a fall in the leukocyte count, or an elevation if leukopenia is present, a spontaneous rise in the hemoglobin level, and a restoration of the bone marrow to a normal appearance. Remissions usually last about four to ten weeks followed by a hematologic and clinical relapse, even if the hormone is continued. In adults second remissions are uncommon. In the older adults cortisone is practically without beneficial effect, although when severe bleeding tendencies are present, cortisone may cause some decrease in bleeding.

The antimetabolite 6-mercaptopurine (Purinethol) has been useful in all ages in the adult group. Generally, hematologic and clinical remissions occur in about 15 per cent of the patients with a somewhat higher figure in the younger individuals, and another 20 per cent are partially improved. The drug has been effective in monocytic leukemia and acute myeloblastic leukemia, and it is perhaps less valuable in acute lymphatic leukemia. The initial dose is 2.5 mg. per Kg. daily, and the patient is followed carefully. Some patients are unusually sensitive to 6-mercaptopurine, and if the leukocyte count is high, a precipitous drop may occur. However, after four to five days, if the leukocyte count is not appreciably changed, the drug is continued at full doses. If the patient is acutely ill after an initial trial at the small dose without improvement or any effect on the blood picture or bone marrow, the dose may be raised to 3 to 5 mg. per Kg. daily. If the leukocyte count falls but there is no marked clinical improvement, the drug is often continued, even in the presence of a marked leukopenia. The decision to continue therapy is based on the appearance of the bone marrow. If the bone marrow is hyperplastic, suggesting there are large numbers of surviving leukemic cells, 6-mercaptopurine has been given in the presence of a leukocyte count of 500. In some cases a spontaneous rise in the leukocyte count then may occur under treatment. Remissions may vary from a few weeks to many months. The responsive patient is usually given a maintenance dose of 6-mercaptopurine, in the range of 1.5 to 2.5 mg. per Kg. per day. When relapse occurs, the dose may be increased, but further improvement is rare.

In the monocytic leukemias 6-mercaptopurine may occasionally produce marked improvement. If the platelet count is not too depressed, small doses of TEM or nitrogen mustard may cause symptomatic relief and reduce an elevated leukocyte count, although true hematologic remissions do not occur. X-ray therapy should not be used generally when the platelet count is depressed, but small doses (100 to 200 r) may have marked palliative effects and cause considerable relief of local bone pain, leukemic infiltrations, mouth lesions, or specific organ involvement producing symptoms. The folic acid antagonists have been effective in only rare cases of acute leukemia in adults.

Generally, it may be concluded that there is a variety of agents that are presently available for the treatment of chronic leukemia in adults which can suppress the manifestations of the disease and keep the patient in good health for long periods. None is curative nor exerts a profound effect on the course of the disease in most patients. The patient's condition is often improved during the major portion of the disease, and in acute leukemia there may actually be a substantial prolongation of life. Supportive measures, particularly the use of blood transfusions and antibiotics, are essential, especially in tiding the patient over critical periods in the disease. By careful and continuous management, the patient is encouraged in the knowledge that something is being done and that methods of treatment are available which exert a favorable effect on the disease. This leads to the justified hope that more effective agents or better methods of using the available drugs will be found in the near future. Leukemia is frequently gratifying to treat because of the great benefits that can occur with proper and adequate management.

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The Ocular Fundus in Relation to General Body Disease[*]

ARTHUR J. BEDELL, M.D., F.A.C.S., F.I.C.S. (HON.), ALBANY, NEW YORK

THE fundus of the eye is literally the stage on which the diseases of life are portrayed and the ravages of time displayed. In no other part of the body can changes in the arteries and veins, degenerations or inflammations, be so readily visualized. Those who can recognize and interpret clinical signs find that no single method of physical examination is as important as ophthalmoscopy.

To refresh your memories and stimulate your renewed interest, a series of color photographs of the interior of living human eyes afflicted with constitutional maladies will be exhibited.

Diabetes

The baffling problems of how to prevent, treat, and perhaps cure diabetes are engaging the attention of every physician. The relation of the fundus changes to the duration, the severity, and the effectiveness of measures of control presents a challenge to all.

The earliest retinal alterations are either small, sharply defined exudate spots or minute hemorrhages or both. These are usually in the central area but may be peripapillary or on the nasal side of the disk.

The photographs show as time passes that some exudates disappear, new ones form, and often several coalesce to make large yellowish masses. Soon after or coincident with the exudates the retinal veins become dilated, a very suggestive sign. The arteries may remain normal for a long period. After the patient has had diabetes for several years, new vessels appear over the disk. These are small and few in the beginning but become more numerous and larger until finally congeries of vessels and connective tissue extensions develop into a sheet of retinitis proliferans. On occasion large hemorrhages form between the retina and vitreous. These may produce immense folds suggesting, in configuration and sometimes in appearance, detachment of the retina. However, the diagnosis will not be difficult if care is taken in the analysis of them, for they rarely fluctuate when the globe is ro-

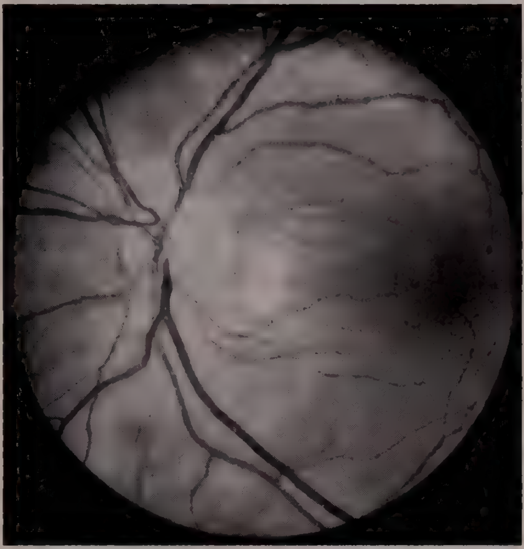

FIG. 1. Normal fundus.

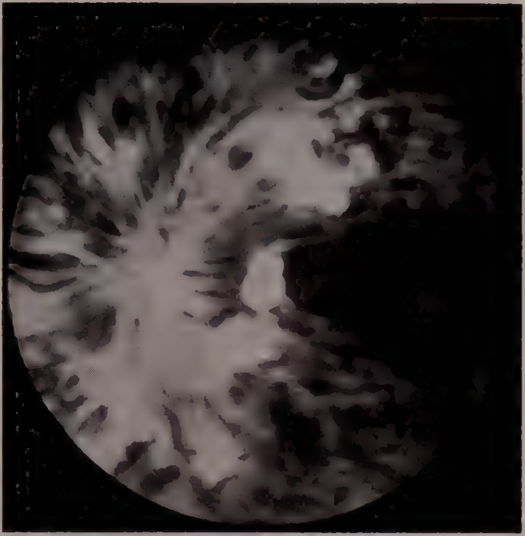

FIG. 2. Thrombosis, central retinal vein in a male, age fifty-two.

Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, General Sessions, May 10, 1954.

[*] A brief summary of remarks made in conjunction with the demonstration of 100 Kodachromes.

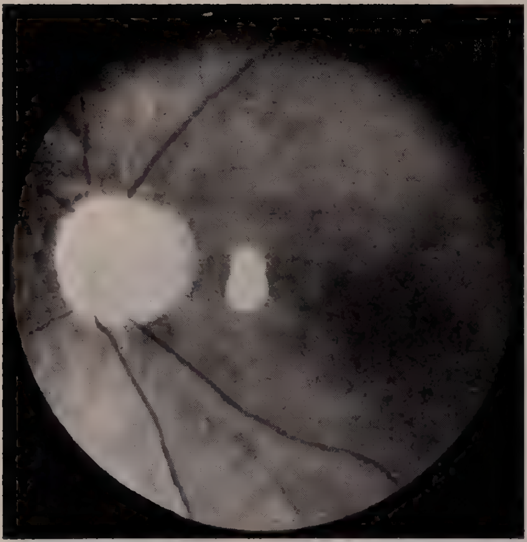

FIG. 3. Embolism, central retinal artery.

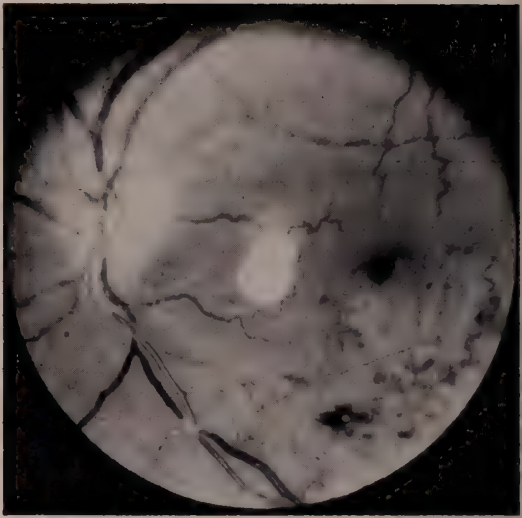

FIG. 5. Hypertension arteriosclerosis in sixty-one-year-old male.

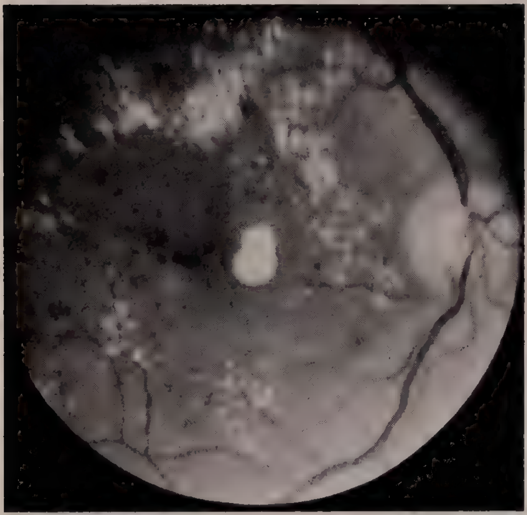

FIG. 4. Diabetic retinopathy in fifty-three-year-old woman.

tated in contrast to the waving retina in detachment.

Retinopathy is most common in diabetes of mild grade but may be in any grade, even those of great severity which appear from blood sugar determination to be under control. It is because of this seemingly anomalous situation that the internist tells the patient he is doing well while the ophthalmologist urges greater restrictions. From the ophthalmoscopic standpoint fresh retinal hemorrhages and exudates indicate active hyperglycemia or the continuance of changes inaugurated when the sugar level was too high for the patient.

That diabetes and nephritis may be present at the same time has been known for years, but recently this fact has been restated in a way to remind the diagnostician to make complete laboratory tests and so discover both diseases. The most important ophthalmologic dictum is that the retinopathy is in direct relation to the duration of the diabetes, regardless of the age of the patient when it starts. The prognosis is increasingly grave after diabetes has been present twenty years.

It is well known that a diabetic is prone to attacks of neuritis so that optic neuritis and even secondary optic atrophy are not uncommon.

Hypertension

Hypertension with its ever-increasing complications and rising death rate is another medical mystery with innumerable ramifications. The fundus picture varies with the age of the patient, the type, the duration, and the family forebears.

No discussion of hypertension should start without a frank, clear-cut pronouncement that the majority of hypertensives show no ophthalmoscopic deviations from normal.

There are two types of hypertension, the benign and the fulminating, and although the former may, after many years, become the latter, such metamorphosis is comparatively rare.

It is imperative that the age of the patient be known before the retinal arteries can be classified. For instance, the pathologically constricted arteries present in some phases of hyper-

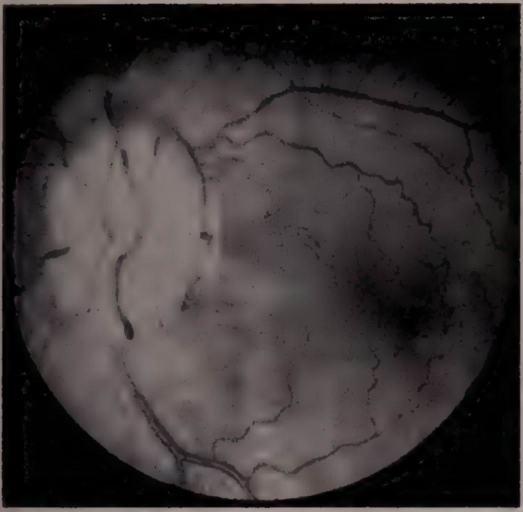

FIG. 6. Papilledema, hypertension in fifty-five-year-old woman.

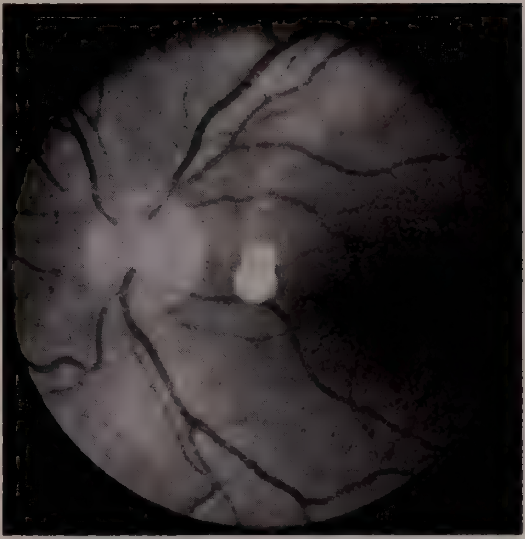

FIG. 7. Nephritic retinopathy in twenty-four-year-old male.

tension in early life are duplicated in the physiologic narrow ones usually present in the elderly. To demonstrate vessel changes photographs are shown to illustrate in an unforgettable manner disk congestion as contrasted with congestion of the fundus. Normally a retinal artery crosses a vein without indenting it or retarding the blood flow, but when the artery is stiffened by pathologic processes, compression and displacement of the vein takes place.

In the hypertensive state the artery reflex is intensified until it resembles a bright copper wire. As time passes, this becomes a silver line; subsequently atheromatous plaques may develop in the artery wall (atherosclerosis). With the progressing vessel alterations the retina may become edematous in small, isolated, gray-white spots, cotton wool, or the entire retina dull gray from fluid retention, or the edema may be restricted to the disk, a true papilledema (choked disk). Fortunately, nowadays, this hypertensive choked disk is usually recognized as an indication of circulatory disturbance and not the result of increased intracranial pressure from an expanding brain lesion such as a tumor or an abscess.

The other signs of hypertensive retinopathy, hemorrhages, exudates, and edema, must be considered as transitory for they may come and go, even while the vessel degeneration progresses, so that the prognosis as to life depends upon the vessel state and not upon these ephemeral omens. In fact, retinal edema, exudates, and hemorrhages may completely disappear before the patient dies. The arteries are particularly altered in hypertension. When hypertensive disease passes from the quiet, benign phase to the fulminating, or, as some writers still call it, the malignant stage, hemorrhages and exudates with retinal edema develop.

Elevated blood pressure may be reduced by drugs, regulated by diet, occasionally lowered by an operation on the sympathetic nervous system or removal of an adrenal tumor. If time permitted, the fundus changes before and after sympathectomy would be shown, but only two cases must suffice.

One patient died after a few years of invalidism; the other, a man, is leading an active life six years after operation.

There seem to be excellent reasons for believing that operation is not the answer to the control of the hypertension except when caused by a pheochromocytoma where operation is imperative.

Renal

The terminal stage of the retinopathy in chronic kidney disease is practically the same as that found in fulminating hypertension: retinal edema, exudates, and hemorrhages. Often, however, the dysfunction may be quickly controlled, and lines of exudate radiating from the macula, the result of nonprotein nitrogen excess, entirely disappear.

When the arteries are narrow with a diffuse retinal edema, soft exudates, and a stellate figure in the macula, the finger of death has been laid

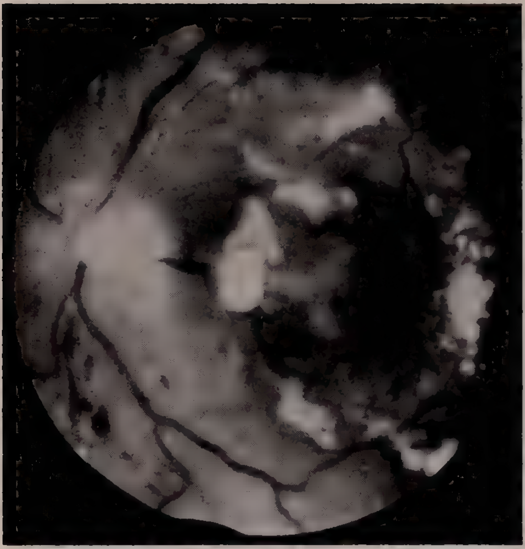

FIG. 8. Nephritic retinopathy. Same patient as Fig. 7, twenty-six months later. Patient died two months later.

upon the sufferer, and there is no hope. If the patient is young, the retinopathy may develop very acutely, and death comes quickly. Sometimes an extensive, severe retinopathy regresses, but even when this happens, it does not mean that the patient will survive more than eighteen months.

Pregnancy

Pregnancy may be complicated by hypertension, nephritis, or toxemia. The first symptom suggesting ocular fundus pathology is transitory blindness.

This is of such vital significance that it must never be lightly passed over, for most often it is the result of retinal artery spasm. When the spells of blurred sight increase in frequency, duration, or both, the uterus must be emptied to prevent permanent hypertension, impaired vision, or total blindness. Spasms are difficult to see because of their fleeting character and even more difficult to photograph.

If the intoxication is not relieved, the retina becomes edematous, a macular star forms, and if the patient survives, permanent hypertension supervenes. The severity of the vascular degeneration may be reflected in an alarming swelling of the optic disk. This is an urgent indication for the prompt cessation of pregnancy. Occasionally an optic atrophy or a degenerative retinopathy results.

Tuberculosis

Acute tuberculosis of the fundus is characterized by a peculiar foggy vitreous which prevents a clear view of the lesion or lesions, and it is only when the fog begins to fade that the circumscribed gray spot of infiltration can be seen. There may be a single large tubercle which is often in the macular region, or crops of small ones may appear, especially shortly before death. After a quiescent period there may be a fresh outbreak similar to that observed in the course of pulmonary tuberculosis. Incidentally, neither retinal nor choroidal tubercles are common in open pulmonary tuberculosis. Hemorrhage is an inaugural sign and is frequently followed by organized scars similar to those found in the lungs of patients with fibroid phthisis. A rare form of tuberculosis is a perineuritis caused by a tubercle close to the disk. This looks like a sudden occlusion of the central retinal vein, with loss of disk outline, many hemorrhages, narrow arteries, and distended veins.

Syphilis

Syphilis of the fundus is evident as choroiditis, chorioretinitis, retinitis, or optic nerve involvement. The specific choroiditis consists of widely distributed, small, white scleral spots over which the choroid has disappeared, leaving irregular specks of pigment—the "salt and pepper fundus" well described more than fifty years ago.

Extensive syphilitic choroiditis is not readily distinguished from that caused by other agents.

The optic nerve may be the site of an optic neuritis, a perineuritis, or from the beginning a progressive atrophy which strangely enough is still called primary optic atrophy. There is no such thing as a primary atrophy for it always follows infection or trauma.

Summary

After this demonstration we hope that every physician will use the ophthalmoscope in his routine general examinations and thereby increase his diagnostic skill to the benefit of all his patients.

344 STATE STREET

The Pathology of Glaucoma

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(From the Department of Ophthalmology, New York University Post-Graduate Medical School, and the New York Eye and Ear Infirmary)

THE pathologic findings in eyes enucleated for glaucoma show some characteristic variations in all types of the disease. A brief review of the normal microscopic anatomy of the iris angle and the structures adjacent to the limbus and sclera is necessary for intelligent comprehension.

The cornea with its functional five layers loses both Bowman's membrane and Descemet's membrane at the beginning of the limbus. For a distance of 0.75 or 1 mm. the structure of the fibrous tunic may be described as consisting of three layers. They are the covering epithelium and subepithelial tissue, the dense connective tissue making up the body of the limbus, and the corneal scleral trabeculae in the internal scleral furrow. The fibrous tunic is reduced greatly in thickness in this area and is covered by loose areolar connective tissue permeated by blood vessels which end in loops at the corneal margin. The supporting loose tissue maintains the surface epithelium which is beginning to thicken and form transitional epithelium characteristic of the anterior portion of the bulbar conjunctiva. It is in this area that most of the anterior operations are performed for the relief of glaucoma. If the corneoscleral trabeculae and Schlemm's canal are obliterated by anterior synechiae, a pseudoangle is formed. Frequently, incisions are placed so far forward that they involve Descemet's membrane which permits aqueous to enter the corneal stroma. A cloudy stroma for some distance from the incision is the inevitable result.

The anterior portion of the sclera measures approximately 1 mm. in thickness, aided by the anterior scleral ring to which is attached the ciliary muscle. The thickness of this portion of the fibrous tunic greatly diminishes as the insertion of the recti muscles is reached, where it is sometimes less than 0.5 mm. in thickness. Since the sclera in this region is being used more and more as a surgical approach for the relief of glaucoma, the thickness of the fibrous tunic must be carefully estimated.

The sclera may be described as consisting of three layers: the loose, mildly vascular episcleral connective tissue, or episclera; the dense avascular connective tissue forming the middle portion of the structure; and the inner layer known as the lamina fusca, which is only differentiated by its chromatophores. Internal to this layer is a potential space, the perichoroidal space, which extends as far forward as the anterior scleral ring, or anterior scleral spur as it is sometimes called. Separations of the ciliary body in this region are often seen following decompression operations for glaucoma and after cataract extractions.

The iris may be described as consisting of five ill-defined layers, the endothelium, the anterior border layer, and the vessel layer. The posterior part of the iris is composed of the dilator pupillae and pigment epithelium, and the constrictor pupillae is interposed near the pupillary margin. The anterior surface is drawn into folds and exhibits definite crypts which are more evident in the pupillary zone, marked by the circulus arteriosis minor. An occasional crypt is seen near the iris angle but is not constant in all preparations. The circulation is through radicals from the greater arterial circle which lies in the anterior part of the ciliary body. These radicals supply the lesser arterial circle just described. The major portion of the blood supply is from the long posterior ciliary and the anterior ciliary vessels. The iris is attached some distance internal to the anterior scleral spur and becomes part of the ciliary body. The iris angle is normal and well rounded, and there is no obstruction to the escape of aqueous into the spaces of Fontana, canal of Schlemm, and the anterior ciliary veins.

The ciliary body maintains its shape by the aid of the ciliary muscle which is composed of an inner circular series of fibers connected with meridional fibers by a series of radiating bands. The greater arterial circle of the iris lies just internal and anterior to the circular group of muscle fibers. The ciliary processes consist of loose

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Ophthalmology and Otolaryngology, May 14, 1954.

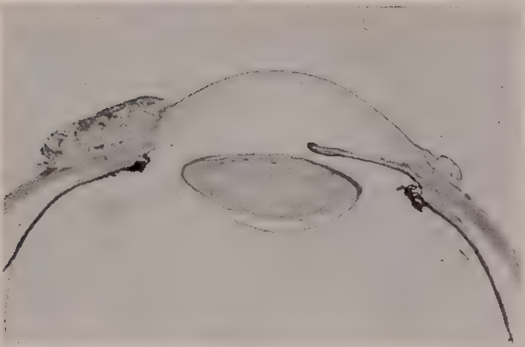
FIG. 1. Iridectomy operation with edematous bleb.

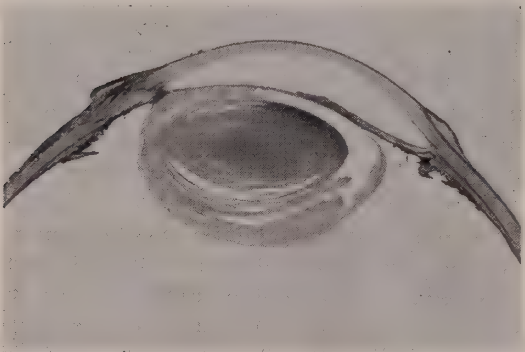
FIG. 2. Iridectomy and electrolysis with dislocation and injury to the crystalline lens.

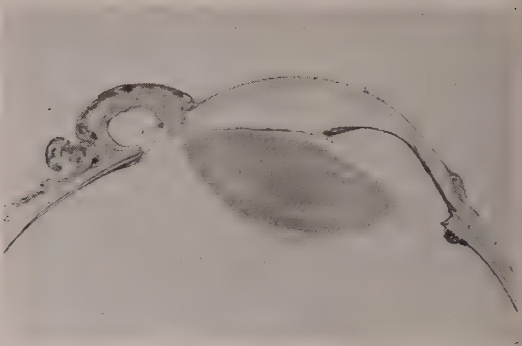
FIG. 3. Anterior corneosclerectomy with iris inclusion and ectopia lentis.

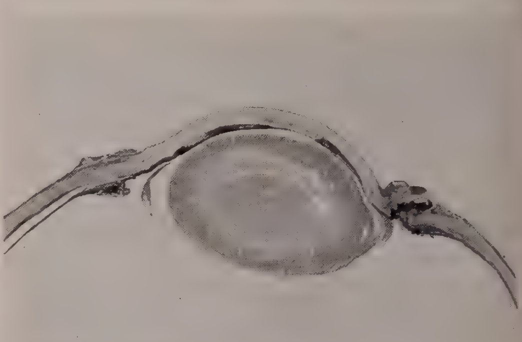
FIG. 4. Herniation of ciliary body after an iris inclusion operation resembling an Elliot trephination.

areolar tissue which is quite vascular and covered with a pigment layer and nonpigmented epithelial elements. Posterior to the corona ciliaris the ciliary muscle becomes thinner, and the inner layers gradually decrease in thickness until the ora serrata is reached. At this point there is a transition into choroid and pigment epithelium and retina, and the lamina vitrea becomes a definite entity.

Microscopic findings in eyes enucleated after glaucoma operations such as the iridectomy, the iris inclusion, the cyclodialysis, and the trephine show the following changes: (1) thinning of the fibrous tunic, (2) changes in the corneal epithelium, (3) congestion in the internal sulcus and limbus, (4) shallow or deep anterior chamber, (5) anterior peripheral synechiae, (6) atrophy of the iris and ciliary body, (7) changes in the crystalline lens, (8) depression of the optic papilla, (9) atrophy of the optic nerve, and (10) changes in the vitreous body.

Most of the eyes sent to the laboratory following unsuccessful iridectomy operations show a failure in restoration of the iris angle in that region (Figs. 1 and 2). The incision is usually too far forward, and the root of the iris remains adherent to the cornea. Secondary chronic inflammatory reactions are usually noted in the specimens.

The iris inclusion operations are usually closed by the formation of fibrous bands and contraction of the filtration bleb (Figs. 3 and 4).

Most of the eyes on which the cyclodialysis procedure was performed show fibrous closure of the wound or separation of the underlying sclera by hemorrhage.

Specimens on which the trephine operation was performed show closure by fibrosis or dislocation of the crystalline lens with its impingement on the filtration wound. In some cases the bleb has become infected and involves the anterior portion of the globe.

Eyes with juvenile glaucoma, on which the goniotomy procedure was performed, usually show a definite closure of the wound by fibrous tissue.

Coagulating procedures, such as the cyclodiathermy and cycloelectrolysis operations, have received considerable support from surgeons in various countries. Undoubtedly there is some

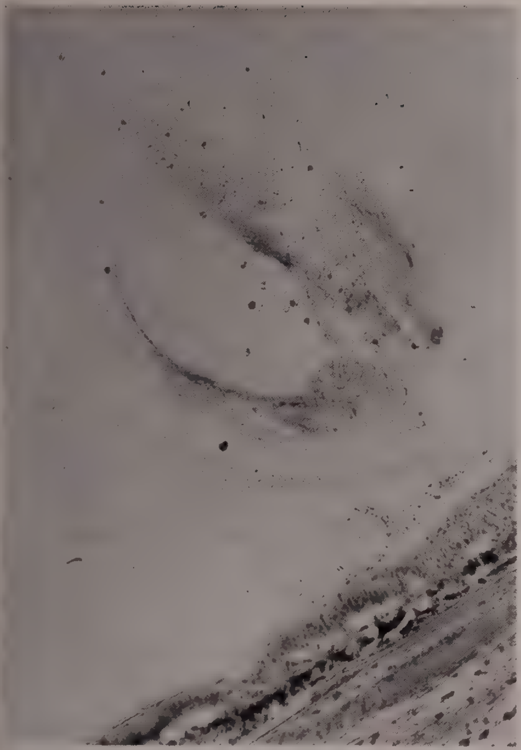

FIG. 5. Vitreous scorch by perforating diathermy pin.

relief from glaucoma by these procedures, or the operations would not be performed. Eyes sent to the laboratory after these operations were usually subjected to this treatment after other operations had failed. Obviously, impressions gained by a study of the results of these operations in the laboratory is prejudicial. It is difficult to determine microscopically by the reaction of the ciliary body and vitreous to either procedure whether the cyclodiathermy or cycloelectrolysis operation was performed.

The specimen here presented represents a perforating cyclodiathermy operation and illustrates the damage done not only to the ciliary body and the pigment epithelium but also to the neighboring vitreous (Fig. 5). The perforation may be traced from the surface into the vitreous where flamelike extensions, resembling a cup filled with red blood cells, may be seen without difficulty. Strands extend out into the vitreous which will eventually produce fibrous adhesions and may extend to form a definite cyclitic membrane.

Apparently the heat affected the crystalline lens nearby because there is evidence of liquefaction in the posterior cortex near the equator. From the appearance of this eye it would seem that the perforating diathermy operation is a dangerous procedure. It is possible that a nonperforating procedure or very short pins of less than 0.5 mm. in length should be used.

The following conclusions may be gained from this survey of the surgical pathology of glaucoma:

1. A comparison of the normal histology of the eye with eyes removed for glaucoma usually shows the cause of operative failure.
2. The iridectomy operation usually fails because the stump is too long, and the synechia is not relieved.
3. The iris inclusion operation may be closed by proliferating fibrous tissue.
4. Cyclodialysis operations may fail because of fibrosis or hemorrhage.
5. Trephine operations may suffer collapse of the bleb, late infection, or fibrous closure.
6. Coagulative procedures, such as the cyclodiathermy and cycloelectrolysis, may fail because of perforations extending into the vitreous and damage to adjoining structures.
7. Only failures from glaucoma surgery are seen in the laboratory, and none of the above operations should be condemned entirely.

17 EAST 72ND STREET

Discussion

Joseph A. C. Wadsworth, M.D., *New York City.*—As usual, Dr. Payne has reduced some of the complications following glaucoma surgery to the simplest common denominator. Dr. Payne's ability to present the fundamental principles in a clear, concise manner adds emphasis to the important facts that he stressed.

There are several small points that I should like to bring out that may explain some of the complications following trephine, iridencleisis, and cyclodialysis.

It is well known that cataract formation often follows a trephine operation. This may not be due to a gross injury to the lens at the time of operation but probably results from minute injuries to the capsule. The small ruptures in the capsule may eventually seal over but not before the lens has imbibed fluid with a resultant swelling of the lens and cataract formation.

It is necessary to make an iridodialysis when performing an iridencleisis. If the peripheral iris stump remains in the region of the coloboma, the angle will be closed. Such a development will tend to defeat the purpose of the operation.

In cyclodialysis, hemorrhage into the anterior chamber can be a troublesome and dangerous sequela to the operation. Often, this hemorrhage can be prevented if the scleral incision is placed anterior to the anterior ciliary arteries. By making the incision 5 mm. or less behind the limbus, the cyclodialysis spatula will not rupture one of these vessels, and thereby one may avoid the hemorrhage. The prevention of hemorrhage into the anterior chamber may eliminate a secondary rise in tension as well as discourage the formation of scar tissue in the cyclodialysis.

I consider this paper very important, and many of the points that Dr. Payne stressed should be considered before ever performing an antiglaucoma operation.

Practical Aspects of Electrocardiography During Anesthesia and Surgery

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(*From the Departments of Anesthesia and Medicine, Beth Israel Hospital*)

Within recent years the electrocardiogram has been moved into the operating room, first as the continuous recording electrocardiograph and more recently as the continuously visualized cardioscope. At first in many institutions the cardiologist moved into the operating room along with the machine. With the increasing number of cardioscopes in use and the ever-widening indications for its use it has been apparent for some years that the anesthesiologist is expected to do his own interpreting.

This, at first glance, might appear a rather complex assignment. Cardiologists in recent years have greatly increased their understanding of the electrical activity of the heart. With it has come a large body of precise information, both as to different leads and the significance of the records secured. Fortunately, it is not necessary for the anesthesiologist to venture into so highly esoteric a field. The information available and necessary for evaluation of a patient's cardiac status during operation can be secured simply, quickly, and definitively if an orderly approach be made. The following is a basic procedure that can be followed.

First, whenever possible, a preoperative electrocardiogram is taken and studied. This serves as a baseline for future comparison. Then, just prior to induction (of anesthesia) another brief tracing is made. This indicates any change that has taken place as a result either of emotion or of the premedication which is now presumably at peak effect. At this time, too, it is desirable to select the particular lead which it is planned to use during the operative period. Obviously, it is not feasible to record or observe continuously even the three standard leads. Whichever lead demonstrates the best P wave is the one selected. In most cases this has turned out to be lead II.

Having selected our lead, it is time to examine the record critically. Simultaneously certain observations are made. Is the rhythm regular and the morphology of the complexes constant? Are there definite P waves, QRS complexes, and T waves which are easily identifiable? Is every P wave followed by a QRS and conversely every QRS preceded by a P wave? If all this is so, we are dealing with a regular sinus rhythm, one in which the sinus node is controlling the heart. Figure 1 illustrates this so-called normal electrocardiogram.

The next simple observation concerns the cardiac rate, which is noted so that future change to either a bradycardia or tachycardia may be recognized. Many operating room models have incorporated into the machine a tachymeter.

Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Anesthesiology, May 14, 1954.

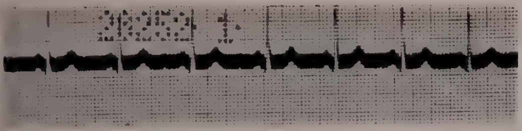

FIG. 1. Normal electrocardiogram.

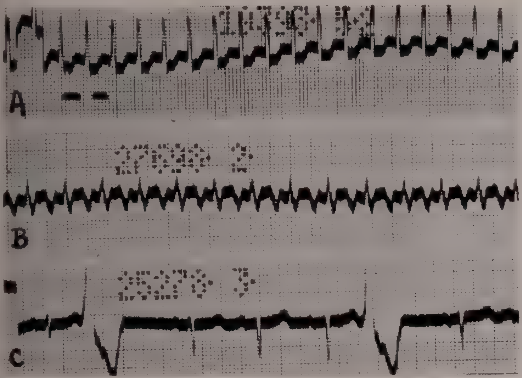

FIG. 2. (*A*) Supraventricular tachycardia. (*B*) Auricular flutter. (*C*) Premature ventricular contractions.

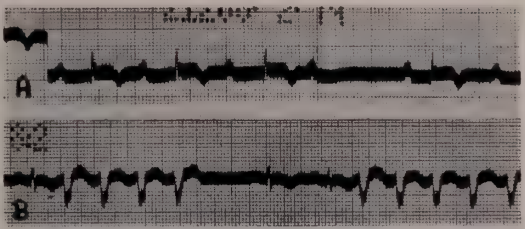

FIG. 3. (*A*) Auriculoventricular block. (*B*) Bursts of ventricular tachycardia.

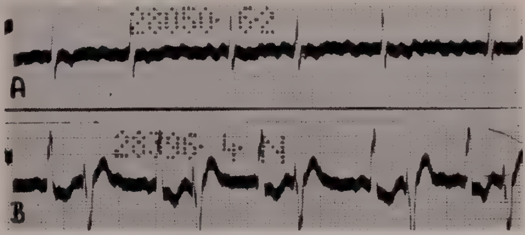

FIG. 4. (*A*) Auricular fibrillation with constant QRS. (*B*) Variable QRS due to frequent ventricular extrasystoles.

This indicates, numerically, the cardiac rate at each heartbeat. This, of course, makes the foregoing a simple matter.

The commonest changes with which we are concerned during anesthesia and surgery are abnormalities of rhythm. If these occur, there are certain observations that will help determine the type of irregularity, often the cause, and thus the therapy.

First, is this a regularly recurring irregularity? Does the morphology change with the irregularity? Can P waves be identified indicating auricular activity? If so, is there a P wave associated with the irregular beat? Figures 2A and 2B would be manifest clinically as tachycardias with almost identical rates, but in the top tracing there are no P waves indicating a supraventricular tachycardia. In the middle tracing there are two P waves to each QRS or an auricular flutter with 2:1 conduction. Next it should be noted whether all the complexes are of an abnormal type or whether the original basic rhythm is still discernible. Figure 2C shows a change in the morphology of the QRS complex with the absence of a preceding P wave. This is interposed on a normal basic rhythm. These are premature ventricular contractions.

Irregularities may be active or passive. The latter, which is due to a conduction defect, usually will manifest itself as a dropped beat. Figure 3A demonstrates a dropped beat due to an auriculoventricular block. This is a passive defect as against an active irregularity where a new focus instigates its own beat. Other information to be elicited is whether these active or passive irregularities are intermittent or occur in bursts. If in bursts, are they periodically recurring? Figure 3B shows bursts of ventricular tachycardia. This is an active defect. Clinically it would be difficult to differentiate these two, but they obviously vary tremendously in significance.

The abnormal rhythm may not be superimposed on the basic pattern. Instead it may be totally irregular. If so, what is the frequency of the complexes, and are these of constant morphology?

Figures 4A and 4B are both totally irregular. The upper tracing is a case of auricular fibrillation with constant QRS's, whereas the lower tracing shows a variable QRS due to frequent ventricular extrasystoles—again a difficult clinical differentiation with markedly different therapeutic and prognostic significance.

There may also be changes in contour as well as rhythm. Fortunately, for the most part, these are of little significance during the operative period. Here we find regular sinus rhythm, but alterations in the form of the various complexes can be observed.

Some of the more significant contour changes we see are widening and slurring of the QRS complex due to a transient auriculoventricular block. This we saw in Fig. 3A. Anoxia usually

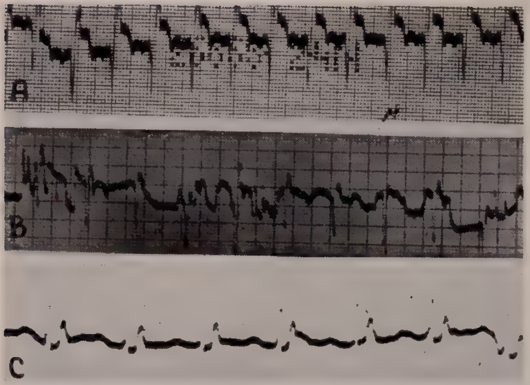

FIG. 5. (*A*) ST shift resulting from injury to epicardium or endocardium. (*B*) Ectopic pattern occurring before entry into pleura while muscle masses were being manipulated. (*C*) Tracing taken immediately after surgeon was asked to stop his manipulation.

produces this type of contour change. Injury to the epicardium or endocardium, as in coronary artery damage, would produce an ST shift. This is shown in Fig. 5A. Various transient contour changes may result from handling of the heart or compression of the major blood vessels.

Thus, it is necessary to remain alert for certain danger signals. Most important, of course, is cessation of electrical activity. This obviously requires no further comment. Next are repetitive bursts of accelerating activity indicating progressive domination of an ectopic focus. Next are irregularities with marked variation in morphology indicating progressive myocardial insufficiency. Last is the truly bizarre tracing with chaotic action. This is of serious prognostic import when it arises from the heart itself, but most often it is due to electrical artefacts originating outside the myocardium. These two must be differentiated by asking the surgeon to stop his manipulation, at which time the ectopic patterns should also cease, thus indicating their source. Figure 5B is typical of this sort of thing. It occurred during a mitral commissurotomy but in the interval just before going into the pleura while large muscle masses were being manipulated. Figure 5C was taken immediately after the surgeon was asked to "cease and desist." Had this occurred during manipulation of the heart, it might have been very difficult.

We have here presented in very basic form an approach to the evaluation of an electrocardiogram in the operating room. Obviously, in so short a time it has not been feasible to enter into a detailed interpretation of the changes described, but a capsule review of this sort should enable one to determine whether this is a normal or abnormal tracing and the type and significance of the abnormality if it exists. Fortunately, this takes far less time in the doing than it has in the telling.

Prescription Is Written for "Physician-Doldrums"

A prescription has been written by a Philadelphia radiologist which points toward a cure for that virus sometimes contracted by physicians at their many scientific meetings—a disease called "The Doldrums." The virus is caught from hearing too many long-winded speakers read dry, poorly prepared medical papers.

Offering the suggested therapy is Dr. Robert P. Barden. His prescription is presented in an editorial in the current issue of *Radiology*. The title is, "So You Are Going To Present a Scientific Paper?" When a doctor arises to read his pet scientific paper, writes Dr. Barden, ". . . . . from the standpoint of education, entertainment and personal promotion, this may be a catastrophe."

Here are some ingredients in Dr. Barden's prescription:

1. Finish the paper before the deadline. If allotted 20 minutes, speak for 17.
2. Never say all you know, and retire from the podium while your listeners are hoping for more.
3. Talk in headlines. Explain just enough to make the main thought clear.
4. Be simple in concept, terse in expression, logical in progression from one idea to the next.

Concluding, Dr. Barden writes: After rehearsing the presentation alone several times, stop-watch in hand, try it on one of your colleagues—or even your wife.

Abnormal Involuntary Movements

A Critical Evaluation of Diagnosis, Treatment, and Prognosis

ABRAHAM M. RABINER, M.D., BROOKLYN, NEW YORK

(From the Division of Neurology, State University of New York College of Medicine at New York City, and the Neurological Service, Jewish Chronic Disease Hospital)

ABNORMAL involuntary movements are motor phenomena that cannot be controlled. In a totally paralyzed limb no abnormal involuntary movements are visible. At times in a patient recovering from hemiplegia, tremors, or choreoathetotic movements may appear. Conversely, when a patient with bilateral tremors or choreoathetoid movements has a cerebral vascular lesion producing paralysis of one half of the body (hemiplegia), the abnormal involuntary movements disappear in the paralyzed limbs. This is the basis for some of the operative procedures attempting to eliminate tremor in parkinsonism. The neurosurgeon sections part of the motor fibers and produces some degree of paralysis.

The anterior horn cells in the spinal cord through the anterior nerve roots and peripheral nerves innervate skeletal muscles. When this lower motor neuron is interrupted, the muscles are completely isolated from the nervous system. The reflex arc is broken, and this results in absent deep tendon reflexes. This type of flaccid paralysis is present in acute anterior poliomyelitis. Fiber pathways originating from cerebral structures influence the anterior horn cells. This pathway (corticospinal tract) is called the upper motor neuron system. Interruption of these fibers may occur in the brain as in lesions of the internal capsule or in the lateral columns of the spinal cord. There results impairment of voluntary motor power ranging from weakness to paralysis. The spinal reflex arc, however, is not interrupted; on the contrary, since these corticospinal fibers normally inhibit the deep tendon reflexes, interruption of their conductivity results in hyperactive deep tendon reflexes, and muscle tone is increased, resulting in spasticity. Traveling with these corticospinal fibers or conveyed through them are influences from other structures in the brain. These may be designated the extrapyramidal system. The corticospinal fibers for voluntary motor power have been referred to as the pyramidal system. This extrapyramidal system subserves the coordination and synchronization of oppositely acting groups of muscles so that there may occur the smooth type of motor function normally present. When the extrapyramidal system is affected by pathology, this coordination mechanism is disrupted, and various types of abnormal involuntary movements appear in the muscles. Such abnormal involuntary movements occur when the affected part of the body is at rest, although they may be accentuated during voluntary activities or under the influence of emotional factors. It is important to appreciate that an action tremor occurs in patients during voluntary activity. This is seen in clinical syndromes when there is dysfunction of the cerebellum or its connecting pathways. The cerebellar mechanism also coordinates and synchronizes oppositely acting muscle groups so that motor functions may be uniform and smooth. The cerebellar activity, however, manifests itself only when the motor action is voluntarily initiated. During such volitional motor activities the movements are ataxic, and an intention type of tremor occurs, disappearing only when the part is at rest.

Visualization of the area about the internal capsule reveals three nuclear masses in its immediate vicinity (the basal ganglia). The optic thalamus is a great way station between ascending sensory pathways and the cortex and is the link in the many fiber pathways between the cortex and various subcortical areas. It is a great relay station and an important censor for all forms of sensation, for motor functions as well as for emotional control. The lenticular nucleus has two distinct structural units; the mesial two thirds constitute the globus pallidum which concerns itself with regulation of muscle tone so that disease of this structure results in increased

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, General Sessions, May 10, 1954.

tone of all muscle groups affected (rigidity). With rigidity there is observed an alternating tremor. This tremor is present only at rest and disappears during the performance of a voluntary motor act, in contrast to the intention tremor due to cerebellar disorders which is not present at rest but occurs only when the limb goes into action.

The muscle rigidity may affect the musculature of the entire body. The patient winks infrequently, the face has a masked, expressionless appearance, speech is monotonous, and the patient walks like a slow motion picture of himself with loss of associated arm swing so that he appears like a statue walking. This is the clinical picture present in parkinsonism.

The outer third of the lenticular nucleus is the putamen. The putamen and caudate nucleus constitute the neostriatum in contrast to the pallidum which is termed the old or palliostriatum. The neostriatum-putamen-caudate complex concerns itself also with coordination and synchronization of opposing muscle groups.

Disease of this mechanism results in a veritable chaos of movements. These may be described as involuntary, irregular, purposeless, arrhythmic; they may be jerky, sudden, and apparently forced and are observed at rest, although they may be augmented during emotional stress or in attempted performance of voluntary acts. A slow wormlike type is called athetosis; the more rapid form is chorea. A combination of both may be present—choreoathetosis. As a matter of fact, when athetosis becomes rapid, it is chorea, and chorea slowed up is athetosis. Athetosis, then, is a slow motion picture of chorea. Fundamentally, a tremor is a pendulum-like movement in which the to-and-fro components are equal in amplitude and equal in timing. A tremor may be slow or rapid, it may have a wide or small amplitude, but it is always a rhythmic movement. Chorea and athetosis, on the other hand, are arrhythmic. The to-and-fro components are unequal in timing as well as in amplitude. Thus, the initial jerk may be quick and of small dimension, whereas the recoil may be slow and wide in amplitude. Tremor and rigidity occur in pathology of the globus pallidum. Other structures have been involved in association with tremor and rigidity. Among these is the substantia nigra. Pathology of the caudate-putamen complex produces the choreo-athetotic type of abnormal involuntary movement. Another structure belonging to this neostriatal system is the subthalamic nucleus of Luys. Pathology of the latter is associated with a wider amplitude type of movement in which the arm is thrown forward and backward in a wide arclike movement known as hemiballismus.

Many theories as to the mechanisms underlying the production of these abnormal involuntary movements have been proposed. Thus far, no adequate explanation has appeared acceptable to all.

Abnormal involuntary movements appear in the muscles when these nuclear masses (caudate, putamen, pallidum) are destroyed, but similar abnormal movements have never been reproduced from stimulation of these structures. This suggests that disease of these structures releases or permits the abnormal movements to appear in the muscles. However, by stimulation of no other brain structures have such abnormal movements been reproduced.

The author, therefore, has offered a concept concerning the mechanism for the production of these abnormal involuntary movements. We are constantly exposed to molecular displacements in the environment. Physicists speak of the apparent restfulness of all matter as an apparent optic illusion. Actually, everything is in a state of restlessness. An inanimate object in suspension viewed under the microscope is in constant motion (Brownian movement). We would be in a state of similar restlessness were it not for the normal influences of these extrapyramidal subcortical nuclear structures. These molecular displacements enter the body through the sensorium and pass into the neural mechanisms and would appear in our muscles, were it not for these extrapyramidal nuclear masses which apprehend them and alter and modulate them so that when they pass to the cerebral cortex and then down through the corticospinal motor pathways, they have been neutralized and do not normally appear in the muscles. When, however, any one of these nuclear masses is diseased, the particular type of abnormal involuntary movement which it would influence appears unchanged in the skeletal musculature. The fact that all these abnormal involuntary movements are not present during sleep would tend to support this concept. When the curtain of consciousness is lowered, these molecular displacements are not permitted to enter the body. They appear in such patients at the moment of awakening when the curtain of consciousness is lifted.

Clinical Syndromes

SYDENHAM'S CHOREA.—This occurs in children in association with tonsillitis, rheumatic fever, and endocarditis. The caudate-putamen complex becomes involved. The child appears restless, and jerky involuntary movements affect all extremities with facial grimacing, blinking of the eyes, and movements of the head. The pathology in the neostriatum is fortunately reversible so that in the main the course is self-limited. These children usually recover in a matter of weeks. Treatment should include absolute rest and relaxation with elimination as much as possible of disturbing environmental stimuli. They need only mild sedation and supportive therapy. Typhoid vaccine has been advocated and may shorten the duration of the illness. They usually recover, however, under the simple regime outlined above. If permitted to return to routine activities with some choreic movements still present, the entire illness may recur because any vestige of abnormal involuntary movement persisting indicates that the pathologic process is still active, and the entire clinical disorder may be reactivated. A chronic form of chorea may follow encephalitis. At times such patients respond favorably to typhoid vaccine therapy.

HUNTINGTON'S CHOREA (PROGRESSIVE, DEGENERATIVE, HEREDITARY CHOREA).—This disorder occurs in adult life. There is degeneration of the neostriatum with pathology also in the cerebral cortex. The abnormal involuntary movements increase in severity with intellectual deterioration. The disorder affects several members of a family and may be transmitted to subsequent generations.

CHOREA GRAVIDARUM.—Chorea may occur during pregnancy and constitutes a serious problem. In the majority of cases the abnormal involuntary movements disappear after the baby is delivered. Rarely, the choreiform movements may jeopardize the mother's life and necessitate termination of the pregnancy.

CEREBRAL PALSY.—Patients with cerebral palsy may have bilateral impairment of motor power due to disease of the corticospinal system as well as extrapyramidal abnormal involuntary movements. Pathology of the cerebral structures may have occurred during intrauterine life or from trauma during labor or at the time of delivery. Encephalitis in infancy may be the basis. Occasionally, maldevelopment of the brain occurs. The clinical picture is apparent in early childhood. Any combinations may occur: spastic tetraplegia, diplegia, tremors, and double athetosis with or without intellectual defect, depending on the extent of involvement of the neostriatum, pallidum, or both. There is often disease of the cerebral cortex as well as the pathways from the cortex to the subcortical structures and the spinal cord. Treatment of these cases is rehabilitation. Formerly many of these patients were cared for unsatisfactorily by one attendant. Today, teams including pediatrician, orthopedist, neurologist, psychiatrist, psychologist, speech therapist, occupational therapist, physical therapist, social worker, and teacher may and can offer a great deal to this group of patients.

DYSTONIA MUSCULORUM DEFORMANS.—These are patients with abnormal involuntary movements, in the main of neostriatal origin with choreoathetosis of all muscle groups, simulating the so-called double athetosis of the cerebral palsy group. They differ, however, from cerebral palsy in that they are normal at birth and develop normally until early adult life when the first symptoms are initiated. Some begin as spasmodic torticollis; others develop spasmodic inversion of the foot or spasms of the fingers and hands, often mistakenly called writer's cramp, occupational neurosis, etc. With time the affection spreads to involve all the extremities as well as proximal muscle groups of the pelvic and shoulder girdles, resulting in grotesque torsion spasms. Hypertonia and hypotonia alternately appear in the same muscle groups, and this has suggested the designation, dystonia musculorum deformans or dysbasia lordoticum progressiva. This progressive disease has no acceptable treatment except custodial care and transient benefits from rehabilitation technics.

PARALYSIS AGITANS (PARKINSONISM).—Not more than several decades ago this disorder was considered a functional disease of the nervous system. It usually affected elderly individuals with extensive cerebral arteriosclerosis so that with multiple areas of encephalomalacia the exact pathologic localization for the symptoms of this disorder was undetermined.

It is now established that the pathology in the main affects the globus pallidum and substantia nigra. The pure disease entity, paralysis agitans, rarely occurs before the age of forty. It is characterized by muscle rigidity and passive tremor. These people usually begin to slow up in motor activities and develop tremor of the fingers of one hand, and with time the rigidity and tremor spread to affect the entire musculature.

The tremor occurs at rest and disappears during voluntary activity. They walk slowly, rigidly, en masse. Although many speak of weakness, this is not truly a palsy. The muscle rigidity slows up motor activity and simulates weakness. They are able to perform every type of motor activity if they do so quickly but find it difficult to do so slowly. The rigidity of the facial muscles produces the masked, expressionless appearance. They wink infrequently and have a fixed stare. Speech is monotonous. They do not swing their arms when walking. It is a slowly progressive disorder but never fatal.

Following the epidemic of lethargic encephalitis in 1918, numerous cases of a clinical picture simulating paralysis agitans developed. Like all counterfeits these postencephalitic parkinsonian syndromes can be recognized. Young people and even children are affected. In addition to the features of paralysis agitans, the pathology in the midbrain and neighboring structures results in additional symptomatology. The skin of the face and forehead is often shiny and greasy. Ocular muscle weakness and oculogyric spasms with forced upward gaze or forced lateral eye movements occur. Drooling of saliva is a frequent symptom. Endocrine disorders such as obesity, hirsutism, cachexia, and altered menstrual cycle may occur.

Elderly people with cerebral arteriosclerosis and multiple areas of encephalomalacia due to occlusion of cerebral blood vessels develop pseudobulbar palsy. As part of this, there is often a picture of parkinsonism. These three forms are entirely separate clinical entities. The treatment differs.

Drugs of the atropine, belladonna, hyoscine, and stramonium group have been used for years to produce some lessening of rigidity and tremor, and their effects are on a par with the various newer synthetic preparations that have appeared in recent years. Surgical operations for lessening muscle rigidity and favorably influencing the tremor have been performed by neurosurgeons. These operative procedures, in my opinion, are still in the experimental stage. None of them effects a cure. At best they may abolish tremor in a limb with lessening rigidity, permitting more freedom of action.

In my experience activity is the important factor in the therapeutic regime of the patient with parkinsonism. The muscle rigidity causes the patient to seek rest. Like water which on a cold day freezes if motionless but does not freeze when moving, so these patients become more rigid when inactive. When active, they retard the tendency to become slowly more rigid, and the rigidity already present is decreased. As a matter of fact, I have seen many instances of inactivity due to physical and mental disease bring to light the parkinsonian picture which had not been apparent previously. Obviously, this therapeutic regime should be advised only in patients where there are no other physical factors contraindicating such activity.

Wilson's Disease.—Hepatolenticular degeneration is a familial degenerative disease and occurs in early life with gradual development of tremors, increased muscle tone, and intellectual deterioration. Pathologically, there is disease of the lenticular nucleus as well as in other areas of the brain with a simultaneous hypertrophic cirrhosis of the liver. The pathology of the entire lenticular nucleus produces a combination of parkinsonian tremor and choreoathetoid movements. A circumcorneal golden-brown pigment is present (Kayser-Fleischer ring).

Prognosis

In the main extrapyramidal clinical syndromes are not fatal diseases. The prognosis is unfavorable in Wilson's disease where with rapid emaciation there is at times a fatal termination within a few months or years. A study of 75 patients with parkinsonism who died in the three-year period 1951 to 1953 at the Jewish Chronic Disease Hospital reveals that in no case was death related to the parkinsonism. Misleading statements by those who talk of parkinsonism as a fatal disease should be discouraged for it leads to needless hopelessness in a large group of patients who can live a contented existence if their morale is maintained. They must be active. If these patients are inactive, the muscle rigidity and tremor increase in severity. Activity retards the tendency to development of added rigidity and lessens the rigidity already present.

890 Park Place

Pseudo-Occult Fractures

JACOB H. TURKELL, M.D., FOREST HILLS, NEW YORK

RECENT fractures of bone may present few of the classic clinical signs. The fracture line may be so fine as to be deceptively unapparent on routine clinical and roentgenographic examination. To those with military experience the "march" fractures are classic examples. Armed forces medical personnel have learned not to rely on initial negative roentgenograms but to follow through by serial x-rays when, at the end of two or three weeks, the fine crack in the bone may become visible. In civilian life one may tend to be less perceptive and fail to identify the true con-

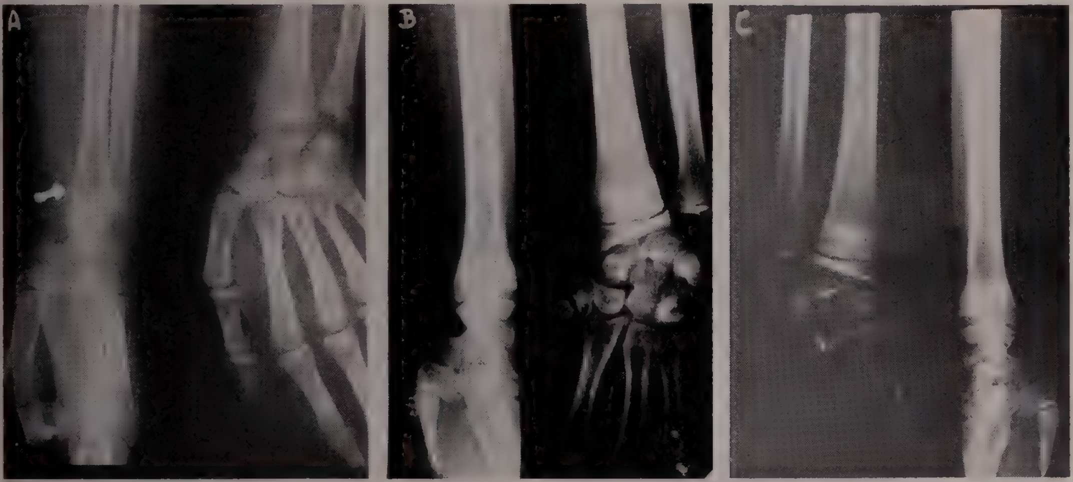


FIG. 1. (*A*) January 16, 1954—Apparently normal roentgenogram of traumatized wrist taken at time of injury; arrow indicates site of persistently localized point tenderness on light fingertip percussion; fracture of radius suspected. (*B*) February 6, 1954—Roentgenograms taken three weeks later show reactive linear medullary osseous sclerosis with concomitant periosteal reaction indicative of fracture repair. (*C*) Light print more clearly depicting the medullary reaction.

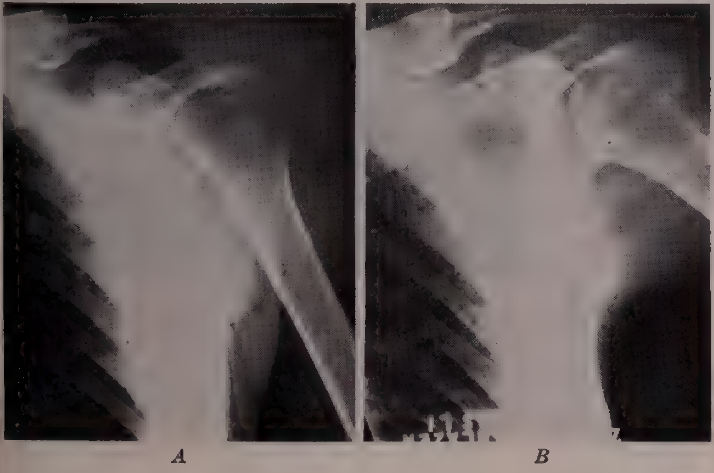


FIG. 2. (*A*) December 12, 1953—Negative roentgenograms at time of injury; patient unable to move shoulder, considerable pain; ditigal percussion evoked localized sharp tenderness at base of humeral head. (*B*) February 19, 1954—Roentgenogram of same shoulder showing line of increased medullary sclerosis transversing base of humeral head indicative of healed fracture.

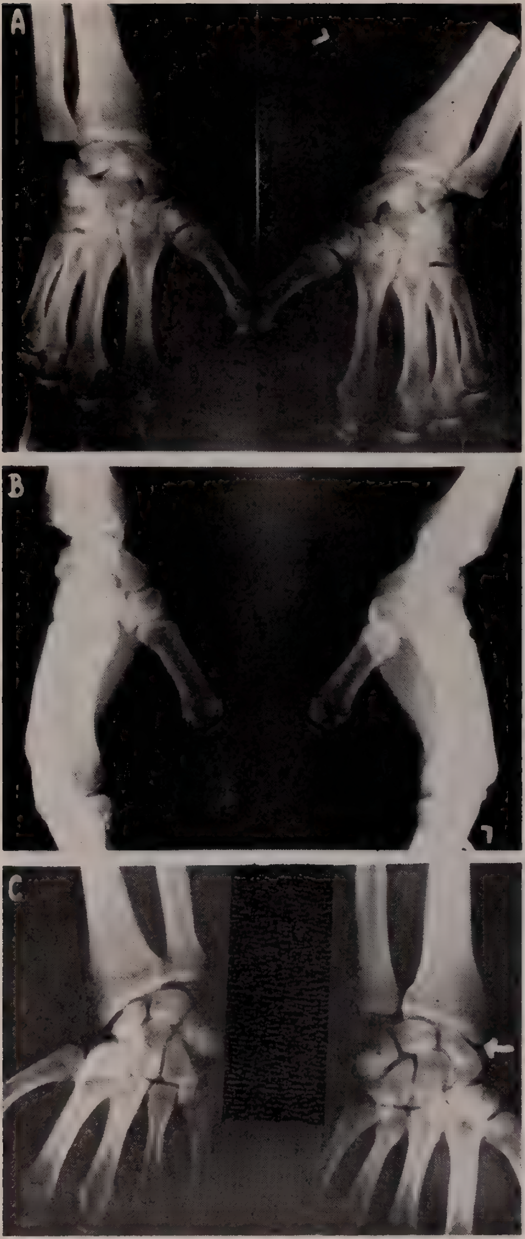


FIG. 3. February 23, 1954—Patient sustained injury to right wrist. Case referred as a simple strain. Clinically, sharp localized pain over navicular on gentle fingertip percussion. Multiplane comparative roentgenograms show fine linear crack of navicular carpal bone in only one phase (*C*). Comparative films of carpal or tarsal bones should always be taken to help differentiate developmental aberrations.

dition. The importance of accurate diagnosis is self-evident, not only with regard to therapy but from the standpoint of medical-legal implications which can arise.

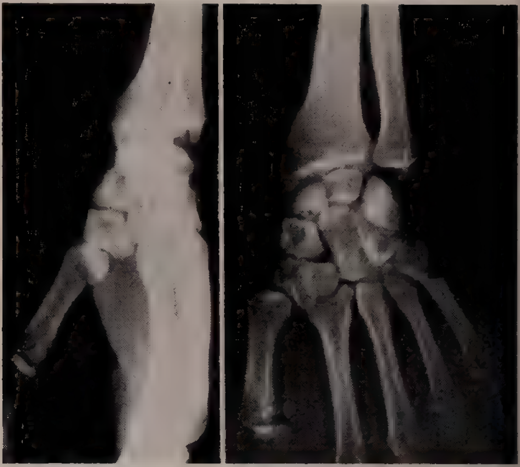


FIG. 4. November 3, 1953—Roentgenogram demonstrating sequela of unrecognized pseudo-occult fracture of navicular; injury was treated as simple wrist strain. Patient has nonunion and cystic degeneration of navicular bone with resultant chronic wrist pain and disability. Prognosis poor even after indicated surgical therapy.

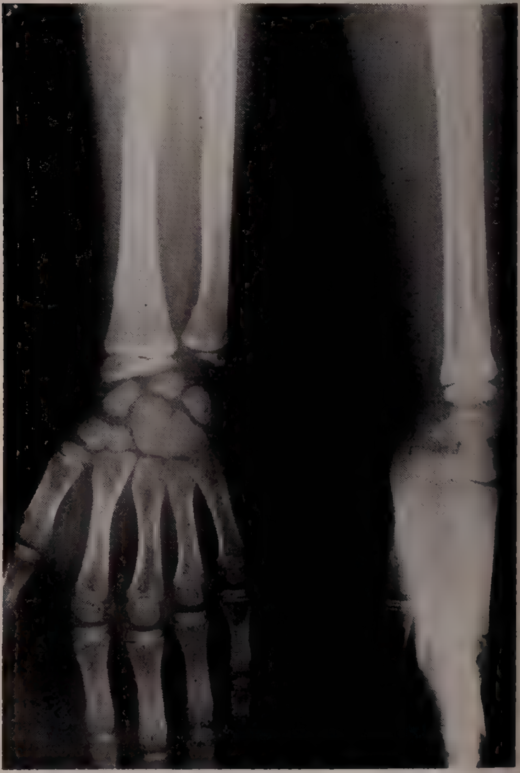


FIG. 5. Roentgenogram illustrating buckle type of fracture; diagnosis obviously manifest by cortical bulging despite absence of medullary crack. Similar types of cases not included in this report.

The cases illustrated in this presentation dem-

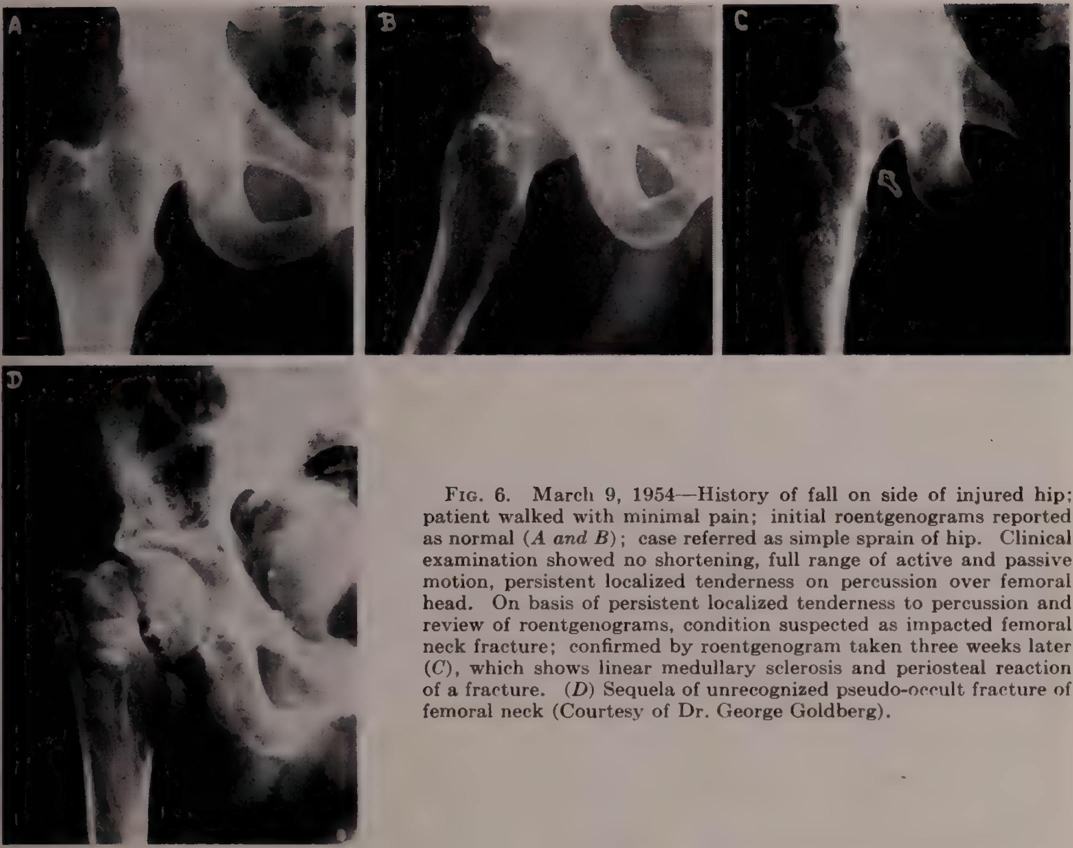
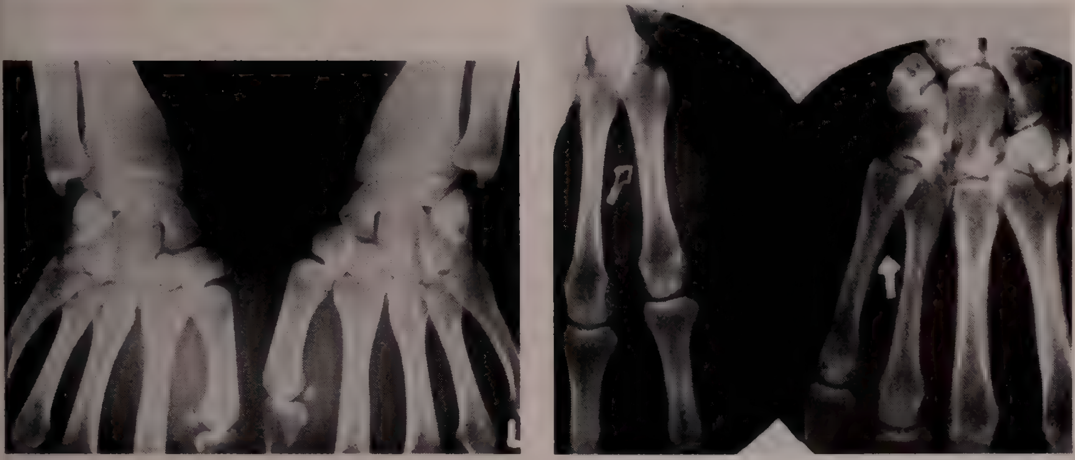


FIG. 6. March 9, 1954—History of fall on side of injured hip; patient walked with minimal pain; initial roentgenograms reported as normal (*A and B*); case referred as simple sprain of hip. Clinical examination showed no shortening, full range of active and passive motion, persistent localized tenderness on percussion over femoral head. On basis of persistent localized tenderness to percussion and review of roentgenograms, condition suspected as impacted femoral neck fracture; confirmed by roentgenogram taken three weeks later (*C*), which shows linear medullary sclerosis and periosteal reaction of a fracture. (*D*) Sequela of unrecognized pseudo-occult fracture of femoral neck (Courtesy of Dr. George Goldberg).



A

B

FIG. 7. (*A*) Roentgenogram showing permanent linear line of disappearing radial epiphyseal plate, not to be misinterpreted as fracture; may persist into late adult life. (*B*) Linear shadows of diminished density cast by nutrient canals should be differentiated from fracture. A roentgenogram taken three or four weeks later will help to distinguish these normal findings from fracture by absence of reactive changes.

onstrate the paramount significance of the clinical impression in determining at the time of injury whether one may be dealing with a pseudo-occult fracture.

In most fractures the clinical features are obvious. There is local swelling, ecchymosis, deformity, and considerable pain. The roentgenograms are clearly identifying. In the cases under discussion these features may be minimal, the initial roentgenograms may not reveal any obvious abnormality, and the condition may be dismissed as a simple contusion or sprain. Fractures of the carpal navicular bone frequently are overlooked by diagnosing simple tenderness and incomplete x-ray study as a sprain of the wrist. It is the diagnostic significance of localized bone tenderness which may implicate fracture that this report wishes to emphasize.

One should strongly suspect that the condition is more than a simple contusion if a discrete area of tenderness is elicited by light and gentle fingertip percussion of the bone. This area is often localized to one point, tenderness is persistently present at the same site, and digital percussion of this site causes unequivocal, constant, marked tenderness. The reaction is sharp and distinctive from the relatively milder pain diffusely and irregularly evoked by palpation of the contiguous adjacent contused areas. It is consistently present over the same point, irrespective of from which direction it is approached by the advancing digital percussion or tapping of the involved bone. At this one distinctive site there is an expression of pain clearly more intense and often associated with a protective reaction, such as an attempt to withdraw the limb. It is this sign of persistent localized bone tenderness which may indicate fracture. In these cases if the routine x-ray views commonly employed fail to disclose an obvious crack in the bone, then it is advisable to take roentgenograms in multiple planes or to do serial roentgen studies.

The accompanying illustrations demonstrate the above observation, the sequela of not recognizing the true condition, and normal roentgen findings not to be confused with fracture (Figs. 1 to 7).

Summary

The presence of distinctive, localized osseous point tenderness elicited by fingertip percussion implicates fracture unless this is ruled out by multiplane and serial roentgenographic examinations.

Pseudo-occult fractures are only fractures which were not recognized by adequate roentgen studies, either by failure to employ multiple projections at the time of injury or by serial follow-up examinations.

The clinical impression at the time of injury takes precedence over routine negative roentgenograms in determining therapy. The x-ray is only foolproof if repeated at intervals and in multiple planes.

110-45 QUEENS BOULEVARD

Public Health Aspects of the Development of Antibiotic-Resistant Staphylococci

Staphylococci apparently are fast becoming the leading cause of bacterial infection; evidence indicates that at least half of all strains isolated in large hospitals are independently resistant to penicillin, streptomycin, aureomycin, and Terramycin. The authors of this paper summarize antibiotic resistance of 125 strains to seven drugs (chloromycetin, erythromycin, and magnamycin in addition to the four mentioned above).

All strains were resistant in varying degrees to the antibiotics except for erythromycin and magnamycin. Since the survey was completed, however, these two drugs have been used on a wider scale, and as a result strains resistant to them have been isolated also.

Having found that tube dilution and disk methods of determining sensitivity are essentially on a par, the authors recommend the latter procedure as a routine guide to therapy. They conclude that a general increase in staphylococcal infections is probably related to the increased incidence of antibiotic-resistant strains. Obviously, they add, it is no longer possible for the clinician to select an antibiotic at will for such infections.—*Amedeo Boni, Ph.D., Florence Pfaff, Elizabeth Free, and Robert Swerlock, M.D., American Journal of Public Health, June, 1954*

Intravenous Cholangiography

Preliminary Report

JOSEPH C. WEISMAN, M.D., KEW GARDENS, NEW YORK

A METHOD which would help in the differential diagnosis of upper right quadrant pathology, especially following cholecystectomy, would be a distinct boon. Postoperative cholangiography, utilizing a draining T tube, has been used for a number of years to demonstrate the presence or absence of residual calculi. The problem of visualizing the common duct after a healed cholecystectomy or when obstruction is suspected from other causes has not been satisfactory despite recent literature describing the occasional visualization of the common duct with Telepaque[1] and Teridax.[2] These opaque media do not concentrate in the bile ducts sufficiently for visualization after cholecystectomy.

An intravenous aqueous iodized solution was exhibited at the Seventh International Congress of Radiology in Copenhagen in 1953. It was introduced in West Germany by Schering and is known there as Biligrafin. Most of the clinical investigation of this preparation has been conducted in Germany, both for study of the gallbladder and the biliary passages.

Biligrafin* is a water-soluble powder with a molecular weight of 1,183.85 and an iodine content of 64.32 per cent. The chemical formula is not of special interest to practicing physicians. In animal experiments the concentration of Biligrafin in the bile was found to be 30 to 100 times that in the circulating blood. According to the company literature, within ten to fifteen minutes after the intravenous administration the hepatic and common ducts are opacified sufficiently to cast radiopaque shadows. After twenty-five minutes the biliary passages are visualized under normal and abnormal conditions. Within sixty minutes the gallbladder begins to fill, maximum opacification being seen within two to three hours. Nonvisualization of the gallbladder is seen where there is disease of the hepatobiliary system, usually cholelithiasis. The usual dose is one ampule containing 20 cc. of Biligrafin. A double dose of 40 cc. is suggested if the patient is obese or if the primary purpose of the examination is the visualization of the biliary passages. Only about 10 per cent of the dose is excreted by the kidneys, larger percentages being excreted by the kidneys in the presence of liver disease. Ampules containing 1 cc. are furnished for allergic testing. There is little or no reaction following the injection of 20 cc. of Biligrafin, even if injected fairly rapidly. When a 40-cc. dose is injected, there is a temporary sensation of nausea and warmth. The larger dose is best administered on an empty stomach.

In an attempt to confirm the optimistic literature and excellent radiographic reproductions, a number of suitable cases were picked for study. These included patients in whom the gallbladder had been removed and who had recurring symptoms and patients with moderate jaundice and upper right quadrant problems. Gallbladder visualization was not of interest since the existing oral opaque media for this purpose are quite satisfactory. Since only a limited amount of Biligrafin was available, the series is small.

CASE 1.—The first case was that of Y. W., a sixty-six-year-old woman, with a history of some type of gallbladder surgery about twenty years ago. A gallbladder study was desired to determine whether the gallbladder had been drained with residual stones. Nonvisualization was noted after Telepaque. Twenty minutes after a 20-cc. injection of Biligrafin, the hepatic and common ducts were demonstrated (Fig. 1). The gallbladder was not visualized. A report was rendered stating that the gallbladder was removed and that the common duct was somewhat dilated. The next day a transcript of her operative record stated that a cholecystectomy was performed at the original operation. This case proved that Biligrafin concentrated sufficiently in the ducts to produce visualization, whereas the oral opaque medium was not helpful.

CASE 2.—The second patient had a nonfunctioning gallbladder by oral opaque media, and after a 20-cc. injection of Biligrafin no visualization of the ducts could be obtained.

CASE 3.—The third case was that of Mrs. L. G., age twenty-six, who had a cholecystectomy two

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* Biligrafin was supplied by Schering A. G. Berlin (West). Since this article was written, the drug has been introduced to the American market by E. R. Squibb and Sons as Cholografin.

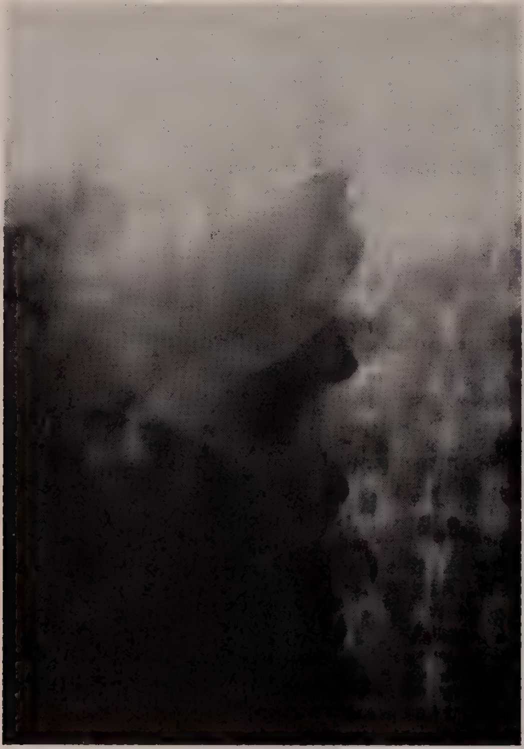

Fig. 1. *Case 1*—Somewhat dilated common duct twenty minutes after a 20-cc. injection of Biligrafin. Cholecystectomy had been performed twenty years ago.

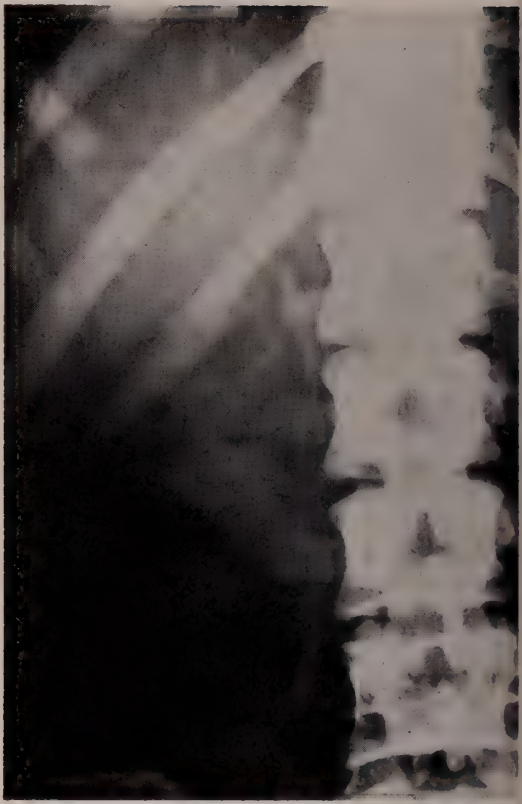

Fig. 2. *Case 3*—Normal hepatic and common duct forty-five minutes after a 40-cc. injection of Biligrafin. Cholecystectomy had been performed two years ago.

years previously. No visualization of the ducts could be obtained with Telepaque following instructions in the accompanying literature. After the intravenous injection of 20 cc. of Biligrafin, no visualization of the ducts could be obtained. The following day a 40-cc. dose was injected. At twenty and forty minutes the hepatic and common ducts were normally visualized (Fig. 2).

Case 4.—The fourth case was that of Mrs. R. F., age fifty. Moderate jaundice and severe right upper quadrant distress was the presenting picture. After the oral administration of Telepaque a small gallbladder was visualized. No calculi could be demonstrated. A 20-cc. dose of Biligrafin was administered, and films taken at about one, two, and three hours demonstrated a small, contracted gallbladder and a markedly dilated obstructed common duct (Fig. 3). At operation this radiologic picture was confirmed. A large stone was removed from the end of the common duct.

Case 5.—The fifth patient was Mrs. S. S., age fifty-eight. Flat plate of the gallbladder region revealed a small opaque calculus in the region of the sphincter of Oddi. After Telepaque neither the gallbladder nor ducts could be demonstrated. One hour after a 20-cc. intravenous injection of Biligrafin, the common duct could be demonstrated. It was dilated and obstructed by the previously noted opaque calculus. At operation this finding was confirmed.

Case 6.—The sixth patient was Mrs. H. A., age forty-three. Flat plate revealed several calculi in the gallbladder region with a single calculus in the region of the common duct. After Teridax faint visualization of the gallbladder was obtained. After the intravenous administration of 40 cc. of Biligrafin, films taken at varying intervals failed to demonstrate the ducts.

Case 7.—The seventh patient was Mrs. B. R., age thirty-seven, who had a cholecystectomy six years before. Telepaque failed to demonstrate the ducts despite careful following of the suggested procedure. After the intravenous administration of 40 cc. of Biligrafin faint visualization of the common duct was obtained although the duodenum and proximal loops of jejunum were sharply outlined, apparently due to the flow of Biligrafin through the common duct. The renal calyces and pelves were also well

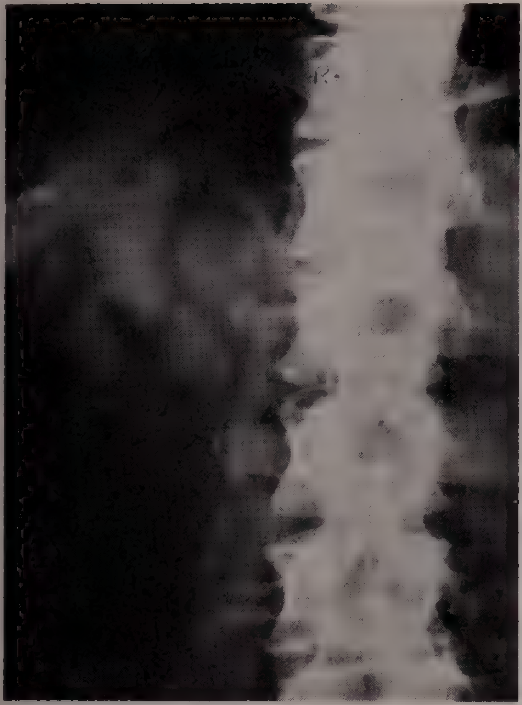

FIG. 3. *Case 4*—Small contracted gallbladder and markedly dilated obstructed common duct one hour and fifty minutes after a 20-cc. injection of Biligrafin. A large obstructing calculus was removed at operation and the radiologic picture confirmed.

visualized. Unfortunately the patient did not stay in the hospital long enough to study the possibility of liver damage as the cause of the excessive excretion through the kidneys.

Summary

1. An interesting injectable aqueous iodized solution which concentrates in the bile ducts and gallbladder within one-half to three hours is being used in West Germany.
2. In over 60 per cent of normal and pathologic cases the common duct can be demonstrated, even after cholecystectomy.
3. In one case a pathologically contracted gallbladder and an obstructed common duct were demonstrated and proved at operation.
4. This drug is a useful adjunct in the differential diagnosis of right upper quadrant pathology, especially following cholecystectomy.
5. This small series does not depict the true value of this drug since it is in short supply at this time.
6. Further research with this drug or improvement of this type of drug may produce a preparation which would infallibly demonstrate the structure of the liver and hepatic and common bile ducts.

119-40 80TH ROAD

The author wishes to thank Dr. A. N. Saperstein for his cooperation.

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Waterborne Fluorides and Mortality

The authors analyzed the mortality statistics in 64 cities from 16 states. Thirty-two cities were classified as "fluoride," that is, the water analysis showed a fluoride content of 0.07 part per million or more. The other 32, with which the former were paired, were classed as "nonfluoride," with 0.25 p.p.m. or less. The analysis took into account mortality from all causes and mortality from the five leading causes: heart disease, cancer, intracranial lesions, nephritis, and cirrhosis of the liver. Results of the study did not reveal any significant difference in mortality figures between the cities with the higher and lower fluoride traces in the water. The authors feel, in view of the widespread interest in water fluoridation from a dental health viewpoint, that such data are pertinent at this time. —*Thomas L. Hagan, D.D.S., Morton Pasternack, and Grace C. Scholz, Public Health Reports, May, 1954*

MEDICAL CONFERENCE

St. Mary's Hospital
Rochester, New York

AUGUST 15, 1954

Banti's Syndrome

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(*From the Department of Medicine, Georgetown University Medical School*)

Few eponymic diseases have provoked such a controversy of terms as this one. The confusion has developed because the entity that Banti described is at complete variance in most instances with that of the syndrome which bears his name. Moreover, with the advent of definitive corrective surgery for disorders of the portal venous system it becomes a matter of great importance to know precisely whereof we speak in dealing with this condition.

In the first part of this discussion I will attempt to outline the evolution of the present-day concept of the Banti problem and in the second part will consider the importance of making a differentiation as to causes, along with some comments on management.

PART I

Banti's Disease as Originally Conceived

Banti[1,2] believed that the clinical course and the pathologic findings distinguished his 50 cases of splenomegaly as a definite entity. He specifically stated that malaria, syphilis, hepatic and gastric disease, alcohol, dietary deficiencies, and factors peculiar to climate and locality were without influence in this condition. However, he was unable to name any specific etiologic agent. According to his original description, three phases of the disease were noted:

Stage 1—Onset of splenomegaly, anemia, and leukopenia; duration three to five years.

Stage 2—Ushered in with urinary changes characterized by diminished volume, high specific gravity, and presence of urobilin, associated with progressive hepatomegaly and constant splenomegaly which may be felt at the pelvic brim; duration twelve to eighteen months.

Stage 3—Very ill patient with ascites. jaundice, gastrointestinal hemorrhages, shrinking liver, and persistent splenomegaly; terminated by death from hepatic insufficiency or hemorrhage.

Observations on the blood picture did not indicate any pathognomonic pattern. The red corpuscles were diminished but not below 3,000,000. Hemoglobin was reduced; the lowest figure was 35 per cent. Color index was always less than 1. Hence, the anemia was of a hypochromic microcytic variety. A leukopenia between 1,500 and 3,500 white cells was present with a relative lymphocytosis. Banti did not mention thrombocytopenia. Nothing was found to indicate active blood destruction.

The pathologic findings in the spleen were thought to be characteristic. The organ rarely weighed less than 1,000 Gm. and occasionally as much as 3,000 Gm. The chief microscopic change was described as a thickening of the splenic reticular network throughout. It was most pronounced outside the follicles in the region of the prefollicular (penicillar) arterioles and later progressed to encompass the malpighian corpuscle (follicle of spleen) with the formation of a sclerotic nodule. This was termed "fibroadenic" by Banti since the spleen was considered one of the lymphatic glandular organs (adenie) and this represented an increase in the fibrillar network (fibro).

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In the first stage of Banti's disease it had been steadfastly maintained by its author that the liver was completely normal. On this point Banti made his explicit statement, despite much criticism, that the disease began in the spleen, and only later did the liver become involved (second and third stages). An unknown infectious agent was postulated as producing the "fibro-adenie" changes about the penicillar arteries. Whatever the agent, it was not thought to produce cellular exudative or granulomatous reaction in the splenic pulp. Banti also noted a chronic sclerosing endophlebitis of the portal and splenic veins as early as the first stage, but no mention of splenic or portal vein thrombosis was made in his writings. Subsequently, the liver demonstrated an appearance indistinguishable from Laennec cirrhosis.

The Banti Syndrome

The original concept that Banti's disease is a homogeneous entity has been disputed by both clinicians and pathologists. The "fibro-adenie" changes of the spleen have been seen in proved cases of hepatic cirrhosis (portal and postnecrotic), portal and splenic vein thrombosis, leukemia, subacute bacterial endocarditis, and Cooley's anemia. This was recognized by Banti himself, but apparently the changes were quite outstanding in his reported cases. Carefully studied cases of other clinicians, presenting many of the features of Banti's disease but not the so-called typical course, have been shown to have primary hepatic disease or obstruction in the portal venous system causing esophageal varices and secondary hypersplenism. Hemorrhage from varices usually explained the anemia, and the hypersplenism accounted for the other hematologic features of leukopenia and thrombocytopenia. This has led to a movement for omitting the term Banti's disease from the medical nomenclature and using instead the term Banti's syndrome, which better indicates the composite nature of the clinical entity. Others feel that even more specific terminology should be employed by discarding both terms and explicitly describing the problem as portal hypertension secondary to intrahepatic obstruction (cirrhosis) or extrahepatic obstruction (portal vein thrombosis) with or without esophageal varices or hypersplenism.

The heterogeneous nature of the Banti syndrome was emphasized by the work of Larrabee[3] in 1934 from the Boston City Hospital and Rousselot[4] in 1936 from the Spleen Clinic at the Presbyterian Hospital in New York. They independently reported a series of cases grouped together because of their Banti-like features of anemia, splenomegaly, leukopenia, ascites, and gastrointestinal bleeding. All of these had either a splenectomy or postmortem examination. As a result of these two excellent studies, a number of conditions were documented as giving rise to the Banti syndrome, such as Laennec cirrhosis, toxic cirrhosis, unclassified cirrhosis, schistosomiasis, syphilitic cirrhosis, thrombosis of the splenic and portal veins, and cavernous transformation of the portal vein. Adhesions about the portal vein and severe ptosis of the spleen were mentioned by Larrabee but not strongly endorsed as causative conditions. It was the assumption of both authors that the common denominator of the Banti syndrome was portal hypertension due to intrahepatic or extrahepatic obstruction and that the splenomegaly and splenic pathologic changes were due to chronic venous congestion. They considered the term "Banti's syndrome" synonymous with congestive splenomegaly. However, in approximately 50 per cent of Rousselot's cases and 15 per cent of Larrabee's cases, no obstructive factor could be demonstrated at operation. Thompson[5,6] later confirmed the presence of increased pressure in the portal system by taking manometer readings from the splenic vein in cases of Banti syndrome.

Does Banti's Disease Really Exist?

Having also observed instances of Banti's syndrome and what has been termed "congestive splenomegaly" without evidence of obstruction to flow of splenic venous blood, Ravenna[7] in 1940 proposed an interesting theory to explain this, based upon the pathologic findings in the spleen. He suggested that the fibrosis about the prefollicular and follicular arterioles ("fibro-adenie" changes of Banti) caused interference with the function of these vessels which regulate the intake of blood by the spleen. As a consequence, an increased quantity of blood enters, causing congestion. The elastic tension of the supporting splenic framework secondarily increases, raising the pressure of the outflowing blood in the splenic vein and eventually also in the portal vein. Subsequently the development of cirrhosis or portal thrombosis is thought to aggravate and later overshadow these initial changes by further increasing venous hypertension. Ravenna thus feels that the cases in which there are no evident obstructive factors are akin to what Banti described, with the primary lesion being in the spleen.

Croizat *et al.*,[8] as recently as 1953, in the French literature, reported their studies on 70 cases of Banti syndrome and isolated 11 cases which were considered to be truly Banti's disease. In all cases portal vein pressures were taken and were normal in the 11 cases mentioned. The microscopic appearance of the spleen in these was said to correspond with the pathologic picture that Banti described.

The 11 cases so described were considered to be in stage 1 according to Banti's nomenclature. Liver biopsy was done in four instances, and a very slight amount of fibrosis was described which it was assumed could not be causing splenic changes in view of normal portal venous pressure. Thus, it was concluded that this fibrosis represented early liver changes secondary to the splenic involvement, according to Banti's line of reasoning.

Certainly it can be said that most cases of "Banti's syndrome," as we now understand it, are not due to some primary cryptogenic spleen involvement. The importance of microscopic examination of liver sections to rule out disease there has been stressed by various investigators. One cannot rely on the gross appearance. Possibly, as more cases without macroscopic evidence of intrahepatic obstruction are evaluated by liver biopsy and as more cases without demonstrable evidence of extrahepatic obstruction are studied by methods designed to outline the portal venous system, further inroads will be made on that puzzling group within the Banti syndrome that still defies categorization.

Definition of Banti Syndrome

Keeping this background work in mind, we can, if so desired, use the term "Banti syndrome," realizing that by definition it is a multietiologic group having in common the clinical findings of anemia, leukopenia, thrombocytopenia, splenomegaly, and gastrointestinal hemorrhage due to portal hypertension and hypersplenism.

Normal portal vein pressure is between 100 to 200 mm. In the Banti syndrome readings are elevated to 250 to 500 mm. by back pressure due to intrahepatic or extrahepatic obstruction. Collaterals that develop cause esophageal and gastric varices which can rupture.

Enlargement of the spleen resulting from vascular congestion or hyperplasia (as may occur in cirrhosis) causes the secondary hematologic effects. Doan[9] believes that there is increased destruction of blood cells and platelets by the spleen. Damashek[10] postulates an inhibitory humoral effect of the spleen on the bone marrow.

In concluding this part of the discussion, we can outline the causes of the Banti syndrome as follows:

- Intrahepatic—cirrhosis
  - Laennec
  - Postnecrotic
    - Infectious
    - Toxic
  - Biliary
  - Syphilitic
  - Hemochromatosis
- Extrahepatic
  - Venous
    - Thrombosis of portal or splenic veins
    - Developmental constrictive anomalies of portal system
    - Adhesions about the portal system
  - Splenic
    - Banti's disease

PART II

Clinical Importance of Differentiating Causes of the Banti Syndrome

It is important to differentiate the intrahepatic and the extrahepatic causes of the Banti syndrome from the standpoint of both prognosis and treatment. Practically speaking, this resolves itself into the differential diagnosis between cirrhosis of the liver and thrombosis or stricture of the portal venous system. Clinically cirrhosis can be strongly suspected from the presence of hepatomegaly; a history of hepatitis, alcoholism, or toxic exposure; jaundice; ascites; spider angiomata, and palmar erythema. With extrahepatic venous obstruction the findings just mentioned are absent, with the exception that ascites occasionally develops. Splenomegaly is usually present in both situations and thus is not a good distinguishing feature. Abnormal liver function tests are usually found only in cirrhosis. Above all, liver biopsy is most helpful and will usually settle the issue unless the sample of liver tissue taken does not truly represent the whole hepatic picture. Additionally valuable as aids are the methods for outlining the portal venous system by the injection of radiopaque material directly into the tributary veins or into the spleen and the taking of manometric readings at various points in the portal venous system. Both of the procedures are done at the time of surgery.

Although patients with esophageal varices from cirrhosis or extrahepatic portal obstruction bleed with approximately equal frequency, the mortality rate among the cirrhotics exceeds that of the other group by 40 to 50 per cent, according to the data of Shull[11] collected at Massachusetts General Hospital 1934–1935. In all likelihood this is due to the adverse effect of anoxia on an already seriously diseased liver. It is the feeling that cirrhotics who bleed die not from blood loss, but from hepatic insufficiency. To illustrate the point further, let me quote again from Shull's work in which he found that the mortality risk of the first and all subsequent hemorrhages in extrahepatic portal block was 5 per cent or less. However, in cirrhosis the risk of the first episode was 17 per cent with a sharp increase from each recurrence, approaching 50 per cent by the third or fourth time.

It should be noted that the operative mortality with the portacaval anastomosis procedure in good hands is about 20 per cent for the cirrhotic group and about 6 per cent for the extrahepatic block group. The interesting thing about these figures is that, in each instance, they closely approximate the mortality risk from a single episode of esophageal bleeding. Thus, one can almost categorically state, all other factors being equal, that the risk of operation is no greater than that from another bleeding episode. Further, it has been shown that those cirrhotic patients in whom the diagnosis of bleeding from esophageal varices has been established will have a 50 per cent chance of recurrent hemorrhage within a year. With the extrahepatic obstructive group the incidence of recurrent gastrointestinal hemorrhage is only 10 per cent within the same period.

From these facts it can be readily seen that the internist must distinguish as nearly as possible the etiologic factors producing the Banti syndrome in order to estimate his patient's chances. The surgeon, too, is benefited by foreknowledge. From a brief consideration of the anatomy, we can arrive at the conclusion that whereas the portacaval anastomosis might be curative for cirrhosis, it will be of no value in thrombosis of the portal or splenic veins. Under these circumstances either simple splenectomy (if the thrombosis were close to the hilus of the spleen) or splenectomy and splenorenal shunt (if the thrombosis were in the portal vein or hepatic end of the splenic vein) would be indicated.

Management

Intelligent management presupposes an accurate diagnosis. Liver disease must be treated in the usual fashion, depending on its severity. The main objective in the Banti syndrome is the prevention of recurrent bleeding from the esophageal varices. Various methods have been devised to attain this end and may be summarized as follows:

EFFECTIVE PROCEDURES.—Portacaval shunt entails the anastomosis of the portal vein to the inferior vena cava, as a side-to-side or end (portal)-to-side (cava) joining. It is most effective for cirrhosis.

Splenorenal shunt consists of splenectomy and the anastomosis of the splenic vein to the left renal vein. It presumes a good functioning kidney on the opposite side in case the left one should be injured. The procedure is useful both in cirrhosis and extrahepatic portal block. It has the advantage that if decompression in a given case of cirrhosis is not sufficient to improve the varices, then a portacaval shunt can be subsequently done.

LESS EFFECTIVE PROCEDURES.—These may be listed as follows: (1) sclerosing of esophageal varices, (2) ligation of paraesophageal and paracardiac veins, (3) splenectomy or splenic artery ligation, (4) ligation of hepatic artery, or (5) resection of distal esophagus and cardia of stomach.

Sclerosing has not been very successful in general usage.

Ligation of the paraesophageal veins and paracardiac veins is sometimes done in an emergency. In experienced hands results have been reported as good.

Splenectomy and/or ligation of the splenic artery may temporarily stop bleeding from varices. It is estimated that this will remove about 40 per cent of the blood load from the portal system.

Hepatic artery ligation is based upon the supposition that portal hypertension in cirrhosis is due to the presence of small arteriovenous shunts created by the distorted hepatic architecture. Although it decreases the portal tension, it has an extremely adverse effect on the liver and may prove fatal.

Esophagectomy and partial gastrectomy should be reserved as the final effort in the event of failure of the shunt procedures.

EMERGENCY AND TEMPORIZING MEASURES.—Under this heading will be considered blood transfusions and the use of the Blakemore-Sengstaken balloon tube. We rely completely on these measures to carry the patient until his condition is suitable for a shunt procedure. Our experience with emergency surgery in bleeding cirrhotics has been that they tolerate such intervention very poorly. As a general rule, we wait about two weeks after a bleeding episode before doing the anastomosis. Experience has also pointed out the danger of waiting too long. Recurrent hemorrhage has removed an occasional patient from the operative schedule, even while we were building him up in the hospital.

Conclusion

In closing, I believe that it would make for more universal understanding of the specific problem if we did not use the term "Banti syndrome," even though the criteria are fulfilled. It is apparent to all that many cases of cirrhosis have varices without thrombocytopenia or leukopenia. They will bleed as readily as one with the full-blown Banti picture. Such division is superficial since the basic pathology in each is the same. This reasoning also applies to the extrahepatic portal obstructive group. It will be much clearer to describe what we mean in terms of portal hypertension due to intrahepatic or extrahepatic obstruction, with or without varices or hypersplenism. Perhaps we should retain the term "Banti's disease" to apply to those rare cases in which no obstructive factor can be demonstrated.

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Kerosene Poisoning Is Still Problem for New England Physicians

Kerosene poisoning in small children is still a problem to New England doctors in rural areas where the fluid is used extensively for heating and cooking purposes. This is the report of four physicians at the University of Vermont College of Medicine, Burlington, Vermont, in a recent issue of *Radiology*. Reporting on their ten-year experience with more than a hundred children between the ages of eight months to two years are Drs. Joseph C. Foley, Nicholas B. Dreyer, A. Bradley Soule, and Ephraim Wool.

"In our more or less rural section of the country, we have seen 101 children during the past ten years who were brought into local hospitals after swallowing or aspirating kerosene left carelessly within reach," they write. Two of the children died. Many of them developed chemical pneumonitis. All of them had obtained the kerosene from containers left carelessly around their homes.

Sufficient evidence doesn't exist from chest radiographs taken of all the youngsters to establish the presence of residual damage due to kerosene ingestions—but the four physicians still strongly incline toward that conclusion. They warn: In treatment, gastric lavage should be employed judiciously; great care should be exercised to avoid aspiration.

The doctors' best advice to their New England families: Keep the kerosene out of reach. An ounce of prevention is worth a pound of cure.

CASE REPORT

A Case of Local Gigantism of the Left Forefoot and Two Toes

JOHN LANZKRON, M.D., MIDDLETOWN, NEW YORK

(From the Middletown State Hospital)

POTTER in his book, *Pathology of the Fetus and the Newborn,*[1] states, "Local gigantism of the bones and soft tissues of one or more digits of a hand or foot or even a larger part of an extremity is uncommon, but several cases have been observed." Thomas[2] has made the following statement: "Hypertrophy of toes is rare; more common in males than in females."

The following is a report of one of these rare instances of local gigantism.

Case Report

Mr. J. F., seventy-nine years old, was admitted to the Middletown State Hospital for a psychosis with cerebral arteriosclerosis.

He stated that he had been handicapped since birth because his left foot was deformed and too large to fit into an ordinary shoe. He had been called "Jerry Big Foot" by his friends. Besides this malformation no other congenital defects could be found in this patient.

Measurements of the feet and toes are given in Table I. The big toe and fourth and fifth toes were normal and of equal size in both feet.

As can be seen from the illustrations, there was overgrowth and asymmetry of the second and third metatarsal bones, as well as the phalanges of the second and third toes of the left foot (Figs. 1, 2, and 3).

The left foot shows arthritic changes of the second and third metatarsophalangeal joints and of the interphalangeal joints of the second and third toes with ankylosis and deformation of the involved toes.

Comment

This case is reported because it belongs to the abnormalities and curiosities of nature. One similar case was published by Thomas.[2]

TABLE I.—MEASUREMENTS OF FEET AND TOES

	Measurements (Inches)	
	Length	Width
Foot		
Right (normal)	$9\frac{1}{2}$	4 (base of toes)
Left	$12\frac{1}{2}$	$4\frac{1}{2}$ (base of toes)
Second toe		
Right	2	$\frac{1}{2}$
Left	$3\frac{3}{4}$	2
Third toe		
Right	$1\frac{1}{2}$	$\frac{1}{2}$
Left	$3\frac{1}{2}$	$1\frac{1}{2}$

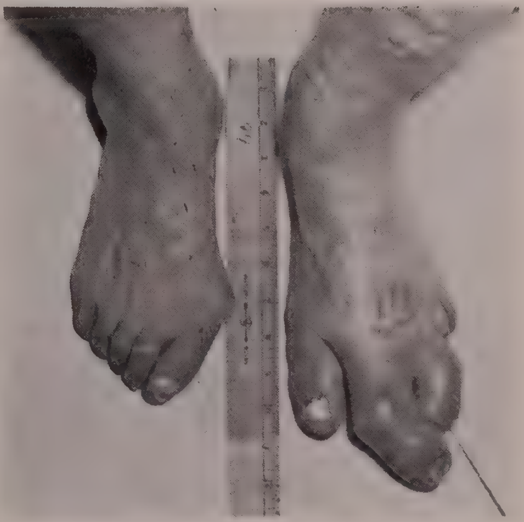

FIG. 1. Photograph of feet.

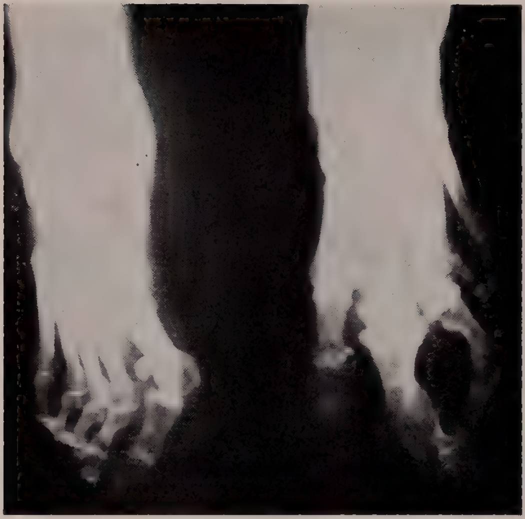

FIG. 2. Anteroposterior x-ray of both feet.

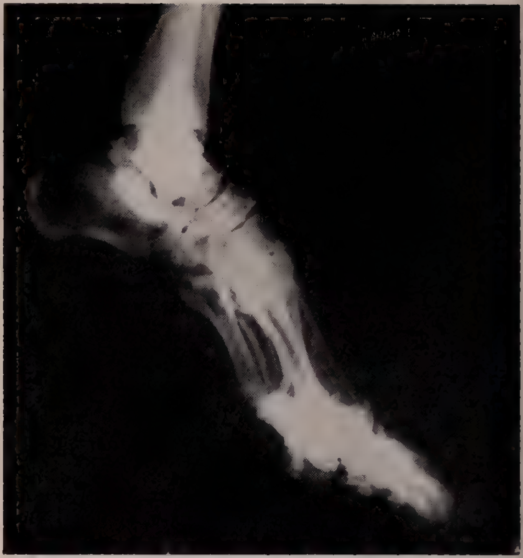

FIG. 3. Lateral x-ray of the left foot.

The author wishes to express his appreciation to Dr. Walter A. Schmitz, senior director, and to Mr. John Eckert, photographer, for their helpfulness.

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ANNOUNCEMENT

SCIENTIFIC EXHIBITS

1955 ANNUAL CONVENTION MEDICAL SOCIETY OF THE STATE OF NEW YORK

Applications for space for the scientific exhibits should be made directly to the Chairman of the Subcommittee on Scientific Exhibits of the Convention Committee:

WILLIAM L. WATSON, M.D.
340 East 72nd Street
New York 21, New York

The Annual Convention will be held May 9 to 13, 1955, at the Hotel Statler, Buffalo.

No applications can be considered after January 1, 1955.

There will be two groups of awards:

Group I: Awards in Group I are made for exhibits of individual investigation, which are judged on the basis of originality and excellence of presentation.

Group II: Awards in Group II are made for exhibits which do not exemplify purely experimental studies and which are judged on the basis of presentation and correlation of facts.

W. P. ANDERTON, M.D., *Secretary*
Medical Society of the State of New York

SPECIAL ARTICLE

Public Health Trends in New York State

Chronic Diseases and Disabilities

HERMAN E. HILLEBOE, M.D., ALBANY, NEW YORK

(*Commissioner, New York State Department of Health, and President, American Public Health Association*)

On this fiftieth anniversary of our Annual Health Conference, it is appropriate to scan public health history to learn something of the development of our present Department of Health in New York State so that we may attempt to forecast some of the activities of the future. Back in colonial days the laws clearly expressed the power of local authorities to enact sanitary regulations, guard the public health, and protect life. One of the earliest of a long list of quarantine laws enacted in New York is found in Chapter 36, Laws of 1778, entitled "An act to prevent the spreading of smallpox within this state." These early health statutes usually specified that the Governor himself must exercise the power to discharge a person with a contagious disease from quarantine; he was really the Chief Quarantine Officer. Ever since the close of the Revolutionary War the Port of New York has guarded against diseases with particular care.

In 1796 the Legislature passed an act to provide a health officer for the City of New York who was empowered to board all vessels coming into the port to determine whether or not such vessels were free of infection. The great fear in those early days centered about the importation of "contagious and pestilential diseases" from foreign countries. Each new outbreak of contagious disease created a new quarantine law in a vain effort to protect the people around our seaports. The administration of too numerous quarantine laws became so burdensome and ineffective that in May, 1880, the Legislature created the first State Board of Health to correct the situation.

Chapter 322, Laws of 1880, required the appointment of three commissioners of health and six other persons to constitute the Board of Health. This first Board went into action in a hurry; the law was passed on May 18, and the Board organized its first meeting on May 29. Its first annual report, published in January, 1881, is quite an impressive document, considering that the Board had functioned for only seven months, had to establish bylaws and standing committees, and had to provide services to the people of the State with an annual budget of $4,690.62.

The broad authority of the State Health Department of today had its inception in the laws of 1880. The annual report to Governor Alonzo B. Cornell stated that "the Board is required to report to you upon the vital statistics, sanitary conditions, and prospects of the state, and to communicate such other information, and suggest such legislative action and precautions as shall be deemed proper for the protection of life and health."

The population of the State at that time was about five million; one half of the people lived in 24 cities and 340 villages. This first Board of Health insisted that each community organize its local board of health. It recognized a fundamental principle in public health practice that "Public Health Laws have become a necessity in every state and municipality, and sanitary regulations are necessary for every town and village. . . ."

In its first half year of operation the Board of Health communicated with over 14,000 town, village, and city officials to acquaint them with the new public health laws, to establish local boards of health, to enlist their support in recording births, deaths, and marriages, and to exchange information and important documents. The registration of prevalent diseases added up to only a few hundred cases each month; in the summer of 1880 only about 20 cities and villages in the State kept any public records of deaths.

The far-reaching effects of a system of registration and vital statistics were accurately predicted by the Secretary of the Board when he reported, "By this ceaseless survey, description, comparison, and mapping of the courses of disease and the varying rates and causes of mortality in more than a thousand registration districts, the whole state will derive practical results far more useful than any merely numerical summaries that would only record the total losses by death and the gains by birth and the establishment of families by marriage."

Between 1880 and 1892 the State added some 50 chapters to the public health laws, covering a wide variety of subjects of general health. In 1893 the first real attempt to codify the public health laws was made; the new statute repealed 60 old laws and in 125 sections embraced all health matters considered essential for the protection of the public

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health. The State Board of Health continued its basic program of developing and strengthening local boards of health, gathering vital records, and extending public health services throughout the State.

In the years between 1880 and 1901 it became increasingly apparent that an administrative Board of Health was a cumbersome way of carrying on the many duties imposed by law. Too many commissioners and too many divisions with divided controls retarded progress and impaired efficiency. The recognition of the need to correct this defect led to the enactment of Chapter 29, Laws of 1901, which abolished the Board of Health with nine commissioners and created a Department of Health with a single commissioner as the head. Dr. Daniel Lewis of New York City took office in February, 1901, and served as Commissioner of Health of New York State until the end of 1904. He was followed by Dr. Eugene H. Porter who served from 1905 to 1913.

Few changes in the public health law were made until 1913, except that in 1909 amendments to the law during that period were brought together as Chapter 45 of the Consolidated Laws of 1909.

In 1913 the State Health Department's program was ready for change, and a forward-looking group of social and medical statesmen grasped the opportunity to change the direction and magnitude of public health activities in the State after the election of a new Governor in the fall of 1912. It is recorded that the Governor-Elect, William Sulzer, met with representatives of health and welfare agencies to hear their views on improving State services. Fortunately, the great social statesman, Homer Folks, of the State Charities Aid Association, was there to express the need for expansion of the State Health Department. This meeting led to further discussion on plans for the Commissionership of Health, during which the Governor said he wanted "the best health man in the United States." Homer Folks and his associate, John A. Kingsbury, pointed out that existing laws made this very difficult and suggested creating a commission to revise the entire health organization, including qualifications for the Commissioner.

In January, 1913, the Governor appointed a special commission for the purpose of "receiving suggestions and making such recommendations as may seem fitting with regard to what changes, if any, are at this time advisable in the laws of this state relating to and affecting public health, and in public health administration." It was a stroke of good fortune that Dr. Hermann M. Biggs, Chief Medical Officer of the Department of Health of New York City, was available to serve as chairman of the commission. Under his leadership that department had set the pace for the world in the practical application of new scientific knowledge, especially in bacteriology and preventive medicine. He had demonstrated, beyond question, the truth of the motto of the New Yord City Health Department that "Public Health is purchasable. Within natural limitations every community can determine its own death rate." Under his guidance expenditures for public health brought substantial results.

The membership of the special commission sparkled with nine bright names in health and welfare, with Homer Folks as secretary.* Those of you who serve on health committees today often feel exhausted after a series of sessions on one particular phase of public health. Imagine the intensity of effort of this group that held ten public hearings on the whole field of public health in the period from January 10 to February 15. On that date a momentous report was presented to the Governor, recommending a complete reorganization of the State Department of Health. The Governor transmitted the Commission's proposed bill to the Legislature which enacted it without change into law. Time has proved this to be one of the great social advances in the history of our State. It was a milestone in the history of state health administration in the United States second only to the creation of the first state health department in Massachusetts in 1869.

The major reforms embodied in that law are known to all of you in the field of public health: (1) creation of a Public Health Council to act as advisors to the Commissioner, with power to enact and amend a sanitary code but without executive and administrative powers; (2) adequate salary and qualifications for the Commissioner of Health; (3) broadened scope of activities in child hygiene, public health nursing, and tuberculosis that would permit the same transformation of health services in upstate New York that had occurred in New York City; (4) general supervision over local health authorities. The bill was signed by the Governor in May, 1913, and the department's appropriation was increased from $180,000 to $298,000.

Dr. Biggs was appointed chairman of the newly created Public Health Council on June 27, 1913, and on January 1, 1914, he became State Commissioner of Health. He faced the task of applying the new preventive medicine to upstate New York with the same vigor and judgment that he had demonstrated in New York City for twenty-five years. He recruited men of high caliber to assist him in building a modern health department that became outstanding during his eight years of distinguished service. In 1914 he set up the Division of Laboratories and Research, which became world-renowned under the leadership of Dr. Augustus B. Wadsworth, whose passing we mourned only recently.

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* SPECIAL COMMISSION 1913: Dr. Hermann M. Biggs, *Chairman;* Dr. E. R. Baldwin, Saranac; Hon. Homer Folks, Secretary; Mr. John A. Kingsbury, New York Association for Improving the Condition of the Poor; Dr. W. E. Milbank, Albany; Professor M. A. Nutting, Head of Department of Nursing and Teaching, State Teachers College; Dr. J. C. Otis, Poughkeepsie; Mr. Ainsly Wilcox, Buffalo; Commissioner of Health Eugene H. Porter.

By 1916 the State Department of Health had a top level staff and a firm footing in public acceptance and financial resources. It had weathered the storm of political interference and was on its way to stabilized operation. Under Dr. Biggs's guidance the science of bacteriology was applied to the control of infectious diseases; health education was popularized, leading to improvement in personal hygiene, and health department services were organized for the prevention and early diagnosis of communicable disease.

On June 28, 1923, this great career in American public health came to an end with the death of Dr. Biggs at the age of sixty-three. He had given distinguished service to the people of New York State and to the cause of public health throughout the world. Dr. Matthias Nicoll, Jr., served as Commissioner of Health from 1923 to 1929 and had the responsibility of carrying out the program initiated under Dr. Biggs.

No general revision of the Public Health Law of 1913 occurred until 1930 when Governor Franklin D. Roosevelt appointed a second health commission, under the chairmanship of Dr. Livingston Farrand. Dr. Thomas Parran, Jr., was appointed Commissioner of Health in 1930 and served as secretary of the second commission, whose purpose was to study the administrative and legal aspects of public health and "to examine critically the extent to which the health needs of the people were being met."[*]

The Legislature took favorable action on the commission's report, expanding the services of the State Health Department in tuberculosis control, cancer control, and venereal disease control and mandating full-time health officers for cities over 50,000 population. Action was postponed on the recommendations for mandatory county health departments for the entire State. It is of interest that in the intervening years since 1930, 12 upstate counties have established county health departments, which, with the four previously established and the health departments of New York City and nine upstate cities, cover 82 per cent of the population of the State.

When Dr. Thomas Parran left his State post to become Surgeon-General of the United States Public Health Service in 1936, Dr. Edward S. Godfrey, Jr., succeeded him and served until his retirement at age sixty-five in June, 1947. During the terms of these two commissioners great strides were made in carrying out the proposals contained in the 1930 Commission report.

Again in 1938, a third commission came into being under Governor Herbert H. Lehman, whose purpose was to formulate a long-range health program for the State.[*] This commission issued several documents from 1939 to 1947, covering many phases of health activities besides those in the State Department of Health. In June, 1941, the "New York State Commission to Formulate a Long Range Health Program" was changed to the "New York State Health Preparedness Commission" and served as the Health Section of the State Council of Defense. This commission had the difficult task of creating and supervising emergency medical services, first for defense and later for the war effort. Its report of April, 1942, to Governor Thomas E. Dewey and the Legislature is an important document in the history of public health planning in New York State and has proved valuable in the planning of our present civil defense activities.

In 1944 the Commission invited a group of experts to a conference to formulate a program for the care of the chronically ill. In its final report early in 1947 a noteworthy document was published which recommended provision of State-wide appropriate facilities.

In 1945 it became apparent that the State should take stock of its expanding tuberculosis program. At Governor Dewey's behest legislation was enacted requiring the State Department of Health to make a critical study of the current problem, particularly the social and economic aspects of the tuberculosis problem. Such a study was made, and a report was presented to the Governor in 1945, which set forth two fundamental approaches to this problem, one economic and the other medical: (1) To achieve equality of opportunity for patients suffering from this disease, the application of the means test for tuberculosis hospital care and treatment should be eliminated; (2) the State Health Department should be free to authorize admission of a patient to any hospital in the State when a suitable bed for such a patient was not available in his respective county or district hospital.

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[*] New York State Health Commission 1930: Dr. Livingston Farrand, President of Cornell University, *Chairman;* Dr. George W. Cottis; Dr. Simon Flexner, Director, Rockefeller Institute for Medical Research; Hon. Homer Folks, Secretary, State Charities Aid Association; Dr. Edward L. Keyes, President, American Social Hygiene Association; Mr. John A. Kingsbury, Secretary, Milbank Memorial Fund; Mrs. Henry Goddard Leach, Chairman, New York League of Women Voters; Hon. Henry Morgenthau; Dr. Matthias Nicoll, Jr., County Health Commissioner of Westchester County; Mr. John M. O'Hanlon, Secretary, New York State Federation of Labor; Dr. Thomas Parran, Jr., State Commissioner of Health; Dr. William H. Ross, President, Medical Society of the State of New York; Miss Katharine Tucker, Director, National Organization for Public Health Nursing; Dr. Linsly R. Williams, Director, New York Academy of Medicine.

[*] Temporary State Commission to Study and Recommend Way and Means for Carrying out Declared Policy of the State with Regard to the Health of Its Inhabitants, July 21, 1938: *Senators*—Hon. Leon A. Fischel, New York City, Chairman; Hon. Emmett L. Doyle, Rochester; Hon. Francis L. McElroy, Syracuse; Hon. Jos. R. Hanley, Perry.

Assemblymen—Hon. Lee B. Mailler, Cornwall-on-Hudson, Orange County, Vice-Chairman; Hon. Warren C. Daniels, Parishville, St. Lawrence County; Hon. Meyer Goldberg, New York City; Hon. Robert F. Wagner, Jr., New York City, Secretary; Hon. Nathaniel M. Minkoff, New York City.

Appointed by Governor—Mr. R. V. Richcord, New York City; Mr. Harry D. O'Connell, Rochester; Miss Elsie M. Bond, State Charities Aid Association, New York City; Dr. Thomas P. Farmer, Syracuse, Medical Society of the State of New York.

Technical Consultant—Dr. H. Jackson Davis, New York City.

The temporary State Commission was created by Chapter 682 of the laws of 1938: "It shall be the duty of the Commission to recommend to the legislature a long range State Health program in accordance with the policy declared in section I of the Chapter."

The Governor's recommendations resulting from this survey provided for improving local facilities for the community by giving State aid at a rate of $2.50 per patient-day to any county or city expending public funds for the hospital care of tuberculosis patients. On January 1, 1954, because of increased costs for hospital care, State aid increased from $2.50 to $5.00 per patient-day.

Since 1946 the Department has directed its effort towards fundamental and applied research in public health on a scale unparalleled in any other state health department. To cite but a few activities, we have a new nine million dollar cancer research institute and a chronic disease institute at Buffalo, a cardiovascular health center and a new virus research laboratory and new blood research laboratory at Albany, and several research projects at our State Tuberculosis hospitals and the State Rehabilitation Hospital.

At the same time regular programs have been expanded and improved for the benefit of all our citizens. We have greatly expanded our training program for existing personnel and new recruits in all fields of public health and medical sciences to meet the needs of health services for our people.

In 1951, when war threatened once again, a Civil Defense Commission was created by law, and the State Commissioner of Health became a member of this body, which has the terrible responsibility of protecting the people of the State against the havoc of atomic and hydrogen bombs, gas, chemical, and bacteriologic warfare.

Only the high spots have been touched in this brief review of the development of the State Health Department's program since 1880. The courage and vision of the early pioneers in and out of government helped make possible the State Health Department of today with its annual appropriation of nearly 64 million dollars and over 4,000 employes.

But what of the future? Let us look at a few vital statistics and see if we can predict some of the major problems awaiting solution by the staffs of the departments of health and their colleagues in the medical profession and voluntary health agencies.

As background, we should know something about population trends in New York State. The birth rate in New York State, as in most states, declined steadily prior to World War II, reaching its lowest point in history in 1936 (14 per 1,000). An upward swing commenced in 1940 and has continued to the present, contrary to assumptions at the end of the war. The birth rate rose from 14.0 per 1,000 in 1935–1939 to 20 in 1949–1951. The pessimistic prediction that the average American household would have only two children failed to materialize. In 1936 the birth rate per 1,000 females, aged fifteen to forty-five years, was 54; by 1951 this rate had jumped to 91. Furthermore, there has been a greater increase in second and third births than in first births, and even fourth births have shown a surprising rise. Proportionately, the recent increase in birth rate has been greatest among women in the younger age groups: fifteen to nineteen and twenty to twenty-four. The hard-headed home builders are betting big money that the increase will continue; they're building three-bedroom instead of two-bedroom homes.

The downward trend of the death rate in New York State has exceeded all predictions in the past fifty years. Under existing mortality conditions the risk of dying with a given year is high in infancy, drops to less than 1 per 1,000 among five to fifteen-year-olds, and rises at an ever steeper angle to certainty near the century mark. Further gains are possible in the younger ages because they have occurred in certain segments of the population in this and other countries. But such gains will not appreciably reduce the total death rate, already less than 11 per 1,000. In fact, an upward trend is bound to set in before long because of the progressive aging of the population.

Population forecasts rest on the shifting sands of births, deaths, and migrations. Unforeseen events and unrelieved world tensions may upset the most careful arithmetic, but let us see what the most likely predictions hold in store for us. Our vital statisticians estimate that New York State's population will increase from 14,800,000 in 1950 to 18,800,000 in 1975 if one assumes age-specific birth rates similar to 1949–1951, migration equal to the annual average for 1940–1950, and age-specific death rates that decline at the rate of that same decade. If these estimates are confirmed, in 1975 the State will have fewer persons under five years and in the twenty-five to forty-four and forty-five to sixty-four-year groups; there will be more persons five to twenty-four and sixty-five years and over. In fact, the sixty-five and older group will comprise 13 per cent of the total population in 1975 as compared to only 8.5 per cent in 1950. Our wage-earners not only will have to support their own children but must also worry about added family members of long-lived elders.

It is clearly evident that our public health problems of the future will be concentrated among older persons, among whom chronic disease and disability are more prevalent; their social and economic overtones will have an impact on almost every family. Our plans must encompass the degenerative diseases, the long-term illnesses, and the disabling conditions of older age groups.

This does not mean that we can relax our guard against communicable diseases, nor lessen our campaign to reduce infant and maternal mortality, nor let up on our crusade to eradicate tuberculosis. Environmental sanitation is as important as ever and requires constant vigilance to keep the air, water, food, and milk free from pollutants including those spawned by atomic fission. Nor can we relieve ourselves of the costly burden of medical defense against atomic and other modern forms of potential warfare. However, it does mean that we have some additional planning to do if we are to meet the demands of the future in protection of public health.

Let us examine some of the specific factors involved, define some of the common terms we will use, and establish some general principles to guide us in the challenging years ahead.

At the 1953 meeting of the American Assembly, which Dwight D. Eisenhower established in 1950 when he was president of Columbia University, it was pointed out by Dean Arthur Larson of the University of Pittsburgh Law School, that the Federal-state-private division of functions in human welfare is quite simple and probably the only kind that will work in this country. He sets forth two basic principles. One was enunciated by Abraham Lincoln when he said that the role of government is to do for the people what needs to be done, but which they cannot by individual effort do at all, or do so well. The second is implicit in our constitutional form of government: that if the thing must be done by the government, it should be done at as local a level as possible, and only if it cannot be done by the state, should it be done by the Federal government. This philosophy is a sound one to follow in developing our future public health programs in New York State.

During the past year I have held a series of meetings with key members of my staff on the subjects of chronic disease and disability, geriatrics, and rehabilitation and their relationship to the public's health. We have systematically surveyed the literature, consulted outside experts, and attended national conferences where these subjects were discussed by representatives of the medical and allied professions, government, business, labor, and farm groups. Our aim was to throw light on these major public health problems so that we could prepare to take effective steps towards their solution.

Chronic disease and disability may be defined as those physical and mental conditions which (1) are permanent, recurrent, or progressive or (2) require permanent or long-term medical supervision, change of living habits, housing or occupation, or other social adjustment, or an organized program of rehabilitation. Purposely, this definition contains no limitation by age. For brevity I suggest that we use the initials "CDD" for chronic disease and disability just as we have used "TB" for tuberculosis in the past.

Because of existing child health and rehabilitation programs and maternal health services, our major attention in this discussion will be directed toward adults. Also, because of existing mental health programs under the Department of Mental Hygiene and the Mental Health Commission, we will discuss physical conditions mainly, with attention, of course, to their psychosomatic components.

What are the geriatric aspects of chronic disease? Geriatrics may be defined as that branch of medical science which is concerned with old age and its diseases and disabilities. Some purists differentiate geriatrics from gerontology, which has been defined as the scientific study of the phenomena of old age. Or, if one desires variety, we can speak also of geratology, the science of the phenomena of decadence (especially of animals approaching extinction). But let us simply use the term geriatrics in our discussion; besides, we now have a full-time geriatrician on the staff of the State Health Department.

What is old age? It depends upon the age of the person asking the question. To one's sixteen-year-old son, his father is the "old man" at age forty-five. At forty-five one looks upon sixty-five years of age as the jumping-off place for pensions and relief from major family responsibilities. At sixty-five, when one is hale and hearty, something beyond seventy-five is the old-age bracket. After seventy-five, it's just a question of time. So, our definition of old age must be rather vague for the moment and on a sliding scale somewhere beyond the half century mark, depending on your age, sex, mental and physical health, and disposition. For social security purposes sixty-five years of age is the dividing line.

There are psychologic reasons for giving special attention to CDD among older age groups. In our culture old age brings with it lessened social acceptance and diminishing prestige. In the field of CDD, older age groups carry several liabilities: (1) They have a higher incidence and prevalence of CDD than younger groups; (2) they are likely to have multiple involvements; (3) they have less economic resources and less ability to pay their own way; (4) they are apt to receive less family concern and help, and (5) they respond less well to therapeutic measures and can usually be treated for their ailments but not cured. These critical factors increase the need for special services and facilities among older people, especially hospital and other types of institutional care. For these reasons our CDD program will need to give special emphasis to geriatrics in the future in the same way that we have given special attention to pediatrics in the past and present.

Each CDD has its special aspects, both medical and social. It is also true that any long-term affliction, whatever its cause or characteristics, more often than not presents problems that have common denominators with other CDD's. They may require similar medical and social services, such as diagnostic clinics, treatment and rehabilitation facilities, financial assistance, foster and nursing home care. They may require help in solving difficulties in human relations, especially in the homes of relatives, in overcoming emotional disturbances, in obtaining employment, even though their physical and mental infirmities vary considerably. These common denominators in CDD form convincing evidence of the need for a systematic approach to this enormously complex problem.

The State Health Department has already established programs of prevention, diagnosis, treatment, rehabilitation, and research in several CDD categories such as tuberculosis, cancer, physically handicapped children, and adults with poliomyelitis. These public health activities, which include service, research, and training are well accepted by the medical and lay public alike. Each of the existing programs can contribute knowledge and experience to the new programs that await launching. It seems essential in our planning of a CDD program to use both the common denominator approach and the specific category one.

From the standpoint of special categories it is our firm judgment that the following CDD's comprise public health problems that require our attention in the near future: (1) disorders of the heart and circulation; (2) diabetes mellitus; (3) neuromuscular disturbances, particularly multiple sclerosis, muscular dystrophy, and the myotonias; (4) arthritis and the rheumatic diseases. It is urgent that we give further study and attention to these cripplers and killers that burden every community in our State medically, socially, and economically. There are other categories, of course, but these are the ones that deserve a high priority in our planning of future public health activities.

Why are CDD's public health problems? Most people cannot solve these problems because of their incredible complexity, exorbitant cost, unpredictable duration, and tendency to recur. One can readily list specific reasons why public health must concern itself with CDD's:

1. They constitute the major causes of economic insecurity.
2. They cause over 70 per cent of all deaths in our State.
3. Their incidence is rising with the increasing proportion of older persons in our population.
4. Their relative importance is increasing because the acute and chronic communicable diseases and their sequelae are rapidly coming under control.
5. Too little is known of their cause, prevention, and cure; we need more studies and demonstrations that will teach us how to plan, execute, and evaluate essential public health projects.
6. The many different agencies and services involved require integration and mobilization to be most effective.
7. There is widespread demand by the public for organized community action in this field. People are banded together into voluntary associations, each with a special interest, and pressing their demands with success on their elected representatives in government.

The National Commission on Chronic Illness was created by the major professional organizations in the field of health to study and encourage the development of local programs. Other states, such as Connecticut, New Jersey, and California, have established state agencies for this purpose. The New York State Department of Health has taken a first step toward such an agency through the establishment of a position of principal public health physician for Chronic Disease and Geriatrics in the Division of Medical Services. By doing this we hope to provide stimulus and assistance to county and city health departments and to the district health offices in the development of their own CDD programs.

In the public health attack on CDD problems there is need for a determination of priorities. Here is a tentative list we have set up for consideration:

1. There is a demand for further activity in the field of cardiovascular diseases.
2. Formulation of local programs for diabetes detection on a State-wide basis is indicated.
3. Adult rehabilitation programs can follow the same successful pattern that is available for handicapped children.
4. Public health nursing services in the home can be expanded into a true home-care program for persons with chronic disorders, especially among the older age groups.
5. Detection and screening of CDD offer great possibilities if resources are combined; mass x-ray surveys can uncover tuberculosis, heart disease, and lung tumors all at the same time if the search is diligent.
6. In larger communities especially, an information and clearinghouse center is needed for the interchange of knowledge on the many types of medical services the chronically ill require. This may be organized by the local health department or other public agencies depending upon the wishes of each community.

During the coming year we will carry on detailed discussions of these problems with representatives of the State Medical Society, the Conference of County, City and District Health Officers, the New York State Health Officers Association, voluntary health agencies, and leaders in government. Once we have consulted with these groups, whose opinions we hold in high regard, we will make plans to go forward with these new projects in public health. We will extend new measures to promote public health only as rapidly as the majority of the medical and lay public are prepared to accept and support them. This has been our policy in the past, and it shall continue to be so in the future.

During the past year the State Health Department has enjoyed closer association with health officers throughout the State than at any time within its recent history. The Conference of County, City, and District Health Officers includes all the full-time public health physicians in upstate areas and New York City. The State Health Officers Association includes about 275 of the 531 local health officers who serve part-time throughout upstate New York. These two organizations have formed a joint committee, at my request, to meet at regular intervals to work out problems of mutual concern to all of us. By a three to one vote the local health officers have agreed upon a State-wide campaign to stimulate the establishment of county health departments in counties of over 100,000 population. By spacing this program over the next few years there will be ample time to obtain local understanding and support, rearrange budgets, and procure qualified health officers. The benefits of this extension of full-time local health services will be felt not only in the nine counties with over 100,000 population but also in every section of the State.

The joint committee has worked out a series of postgraduate courses for local health officers. Already, several sessions have been held locally, and more are planned for this summer and fall, on the important subject of "The Use of Gamma Globulin and Salk's Vaccine in the Prevention of Poliomyelitis." Over 240 local health officers attended the postgraduate course on heart disease held here yesterday. I have asked the joint committee to revise the schedule of duties of local health officers in line with modern functions of the State and local health departments; this should be completed by fall. I have also asked the joint committee to study the question of equitable salaries for local health officers so that we may approach this problem with a strong and united front.

By working together on common problems the public health physician and the family doctor have learned that preventive medicine and curative medicine are inseparable in the protection of the public health. The keystone of preventive medicine in the community is the devoted family physician, especially the one who keeps abreast of new developments in public health. This is particularly true of the busy practitioner who does double duty as local health officer for the greater good of the community.

As we plan for new activities in public health, we need to understand the meaning of preventive medicine to the private physician and the public health physician. Preventive medicine is concerned with the prevention of progression of disease and disability, as well as the prevention of their occurrence. The division between the sphere of interest of the family doctor and the public health physician is based largely on the seriousness and the extent of the health problems in the community and upon the community's interest and recognition of these problems.

Preventive medicine problems become public health ones when, because of their nature, they require organized community action for their solution. Accordingly, the preventive medicine problems occupying the attention of the public health physician and his staff in one area may, in another area, be the sole concern of the private physician. Thus, preventive medicine is an essential part of good medical practice. Every physician must continually be alert to the opportunities for disease prevention among his patients. The public health physician, as a specialist in preventive medicine, must have an appreciation of the important contribution that can be made by family doctors in the field of preventive medicine. The public health physician must utilize his own staff and facilities not to replace but to supplement and to enhance the work of the private physician. With such joint effort the community can enjoy to the utmost lasting benefits inherent in any sound program of preventive medicine. Preventive medicine viewed in this broad prospective is a synthesis of the efforts of the family physician and the public health physician, each of whom contributes to the common goal of minimizing the effects of disease and disability and thereby promotes optimum health for the community and its individual citizens.

In 1947 when I first came to work with you in New York State, I had no idea how long I might remain in the important position which I have the honor to hold. It has been an enriching and satisfying experience. My roots have gone down so far that I feel as if I were a part of the good earth of New York State. In whatever accomplishment has attended the administration of the State Department of Health these past years, I am deeply obligated to my deputies, my assistant commissioners, my headquarters and field staff, and the Public Health Council. My gratitude is equally great to the army of conscientious health workers in every area of the State who have cooperated so heartily in our joint endeavors.

I am proud to have the privilege of serving the people of New York State with you, and I am looking forward with anticipation and confidence to the task that faces us in the years ahead—the consolidation of our public health programs in the fields of Chronic Disease and Disability for people of all ages. Upon the strength and soundness of these programs rests the future happiness and well-being of the people of our people.

HISTORY OF MEDICINE in New York State

Editor
FREDERIC D. ZEMAN, M.D.

Medical Correspondence and Other Writings in Seventeenth Century New York

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The medical correspondence and other writings which have come down to us from the colony which was New Netherlands until 1664 and New York thereafter are scanty in volume and have suffered much from the ravages of time. When we consider the conditions with which the colonists struggled during that century, the lack of literary production is not surprising. As an example, in 1628, four years after the establishment of Dutch authority, New Amsterdam was a mere trading post of 276 people, including Walloons and slaves. The early comers' ambition was "to reap a fortune and assume a title to immovable property. Revenue, immediate and prospective, was the consideration of the Colonists of that day, and religion, education and science must needs wait a more convenient time."[1] This spirit, together with the rude and crude conditions under which the colonists were forced to live, did not encourage literary pursuits or the exchange of letters between the medical men and their contemporaries in America or in the old country.

Furthermore, the bulk of the medical care rendered was by meagerly educated ship and barber surgeons and by midwives. Examination of writings and provincial records among the Historical Manuscripts of the Secretary of State in the New York State Library in Albany reveals how frequently the citizens of the colony during the seventeenth century were able only to make their marks as signatures. These marks make an interesting study since each individual tried to make his own as unique as possible. To a curious degree they resemble brand marks now use by cattle owners on western ranches. Some have a superficial resemblance to Chinese characters.

From these observations it is obvious that much of the citizenry of that time was illiterate. Even the few well-educated physicians were diverted largely to governmental and church positions and did little in the way of medical practice. By 1652 the population of New Amsterdam was only about 1,000, many of whom were in poor circumstances—little encouragement, indeed, for well-educated physicians to attempt to support themselves in the private practice of medicine!

In reviewing the literary survivals from the years before 1700, reference should be made, first, to the historical researches made by Heaton, who completed a very extensive review of library resources available.[2] I am much indebted to him for references to source materials. These are to be found chiefly in the Rare Book Room of the New York Academy of Medicine, the Division of Manuscripts of the New York State Library in the State Educational building in Albany, and at the New York Historical Society. One rare item is in the Henry E. Huntington Library in San Marino, California.[3] Inquiries to all of the Reformed Collegiate churches in New York and New Jersey, in hope of finding surviving papers of clergymen-physicians, particularly those of Dr. Samuel Megapolensis, have not been productive. Efforts being made to locate seventeenth century correspondence between the professors at the Universities of Leyden and Utrecht in Holland and their medical graduates in New Netherlands so far have been unsuccessful. A recent inquiry by Dr. Fenwick Beekman has not

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even been able to locate the student record of his distinguished forebear, Dr. Gerardus Beekman who, it has been supposed, studied at Leyden in 1671.

Tragically, much of the invaluable and irreplaceable records of the seventeenth century in the New York State Library were either destroyed or seriously damaged in 1911 in the disastrous fire in the west wing of the State Capitol building which then housed the collection. Certain of the sets of the old Dutch papers were either burned or badly scorched. The same was true of the translations made by E. B. O'Callaghan. In some instances the originals survived, and O'Callaghan's work was lost, while in others his are the only surviving records.

The list of healers, ship and barber surgeons, doctors of medicine, clergymen-physicians, and midwives,* approximately 33 in all, begins with Sebastian Jansen Krol who came over as early as 1624 as a "Ziekentrooster" or a "comforter of the sick," and ends with Cornelius Viele, a Long Island physician, whose claim to fame is the survival of a court proceeding wherein he sued a patient for nonpayment of his bill in 1694.[4,†]

The earliest record found is a letter written on November 6, 1626, by P. van Courten from Middleburg to the Directors of the West India Company at Amsterdam with regard to a "claim of Jan Pryce [Price], barber [surgeon], which has been several times presented by Sieur de Bats, but 'has until now not been complied with.'" He stated, "The skipper Arjaen Jorjs [Adriaen Jorisz Thienpont] has now arrived from New Netherland." Apparently, the surgeon-barber came with him and sought a settlement of his accounts. The letter says of the latter: "Since 8 July, 1623, he has been in your Honor's actual service and continued until now to the day which can be ascertained from the Journal: his barber's (surgeon's) chest, as also the chest in which the peltries were (whereof vander Hulst has received the half), although the said barber (surgeon) has earned the said peltries by (surgically) bleeding the Indians, he (vander Hulst) obtained possession of unjustly; his old father, who is being supported by the Poor (masters), prays most earnestly that still the earned wages may be paid over to him and also that the chests and their contents be handed to Joos and Jan de Bats, and we secure the Honorable Gentlemen (of the Company) against all further claims."[5] Skipper Adriaen Jorisz Thienpont arrived on the 4th inst., which see in Schaghen's letter of November 5.

Perusal of these old papers of three centuries ago brings to light revealing glimpses of the life and medical problems of that era of early beginnings in New Amsterdam and New York. While they concern chiefly court records and, therefore, perhaps give an exaggerated "crime sheet" sort of picture of life in the colony, they are revealing of the unsettled state of society during that period.

Probably a number of the early colonists were adventurers, social misfits, ne'er-do-wells, and even criminals who had come voluntarily or had been shipped over by their mother countries, glad to be rid of their presence. In the New World the handicaps of origin were magnified by the hardships, isolation, loneliness, poor housing, and lack of normal family life for many of the newcomers.

Hence, the old medical records are frequently concerned with the end results of various forms of violence: fisticuffs, beating with clubs, fights with knives and swords, attempted rape, other types of abnormal sex behavior, drunkenness, robbery, murder, and exchange of insults and lawsuits. For example, during the year 1638 alone, the following occurrences were recorded: murder of Gerrit Jansen on May 4, assault on Sheriff Bredenbert July 19, attempt to throw a man's wife out of doors on July 22, and charges of nymphomania and subsequent adultery against Thomas Beecher's wife during a drinking party. Also, with regard to this episode surgeon Gerrit Schutt wrote a report that Jan Damen in a frenzy attacked Christina, Dirck Holgersen's wife, slashed her skirt, beat her with his fists, and tore her cap off! Dirck then threw a pewter mug at Jan but missed him and was attacked in turn by Damen with a knife. Dirck, "being sober," refused to draw his knife in turn and defended himself with a post! (So much for an early medical report of social pathology.)

Surgeon Harman Meinderts van der Bogaert, who arrived in 1630 on the ship Eendracht with colonists bound for Rensselaerswyck, served the West India Company for several years, chiefly at Fort Orange. Four years after arrival, he made

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[*] See Appendix at end of article.

[†] Cornelius Viele is listed in the Medical Register of the City of New York, Collections of the New York Historical Society, under the following spellings: Cornelius Viellers 1692 (vol. 25, p. 218); Cornelius Veiller 1702 (vol. 25, p. 338); Cornelius Viele or Fielc 1695–1699 (vol. 43–44).

the famous midwinter march with two companions, Jeronimus de la Croix and William Tomassen, and kept a journal of their adventures. In it he described a visit to treat a sick Indian and other calls for his medical services. A copy of the journal was found among the patroon's papers at Amsterdam, Holland, in 1895, and it is now in the Henry E. Huntington Library at San Marino, California. It is entitled, "Narrative of a Journey into the Mohawk and Oneida Country, 1634–1635." Through the kindness of that library, photostatic copies of that manuscript were obtained.*

Other records of that journey came to light in 1938. They are a letter and map prepared by de la Croix. According to Van Loon, they "consist of two sheets of paper, one 8 × $10^1/_2$ and the other, $8^1/_2 \times 7^1/_2$ in size, the smaller sheet which contains the map being nibbled by mice along the upper edge of the same as were other documents in the collection."[6]

The letter, apparently a copy of the original by a poorly educated scribe, refers to Bogaert as "Master Meynderss" and "Master Harm" and mistook the correct date when the letter was written, December 14, for December 19, because "4" and "9" in the old Dutch chirography closely resembled each other. Also, he misspelled de la Croix's name.

Of medical interest in the letter is mention of incisions made by surgeon Bogaert in Tomassen's feet, perhaps swollen by frostbite or by infection and requiring incision and drainage. It was recorded that Bogaert used bear's grease as a remedy, learned from the Indians. The map seems remarkably accurate for the period and probably was drawn from information provided by friendly Indians, as well as from observations made by the three explorers.

As another example of the many frustrations and social misbehaviors recorded in the colony, Surgeon Bogaert came to a violent and tragic end. Accused of an offense with a Negro slave boy on February 1, 1646, he "fled to an Indian hut in the interior of (the) country and was caught there by the marshall of the court," according to the official records of Fort Orange. Bogaert attempted to fight off arrest, and in some way the hut was set on fire, and Bogaert died in the conflagration which "burned not only the Indians' provisions for the winter, but also all their Wampum and Peltry; for which they demanded satisfaction." The Council recognized the justice of the claim and decided to "sell Hermanus' Garden in order to pay the Indians from the proceeds."

Johannes de la Montagne, French Huguenot of ancient and noble family, who obtained his medical degree at Leyden, was the first medical graduate to come to New Amsterdam, arriving in 1636 or 1637, and at once rose to leadership in executive councils of the government and attained considerable reputation as a military leader in Indian wars. According to Shrady, Dr. de la Montagne "was invested with a more ample authority than any Board of Health or corps of medical examiners of the present day." It was said of him in a contemporary account that he "was the only doctor in Manhattan in whom the settlers had any confidence. His emergence in public matters allowed but little attention even to the plainest sanitary requirements." Unfortunately, practically no written accounts of Dr. de la Montagne's medical work have survived, and it is possible that he devoted practically all of his time to governmental affairs. Governor Kieft appointed Dr. de la Montagne to a seat in the Town Council in 1638, a position he retained under Governor Stuyvesant. When a public school was established in New York, de la Montagne was appointed as schoolmaster. That psychiatric problems were rife in those earlier days is evidenced by a record regarding this remarkable man's abilities: "thus it is to be conceded that la Montayne served as a buffer between the irascible Governor and the hysterical people."

Hans Kierstede, a ship surgeon who landed in 1638, left a few interesting medical records. In an entry in an original Dutch manuscript dated May 4, 1638, there was a declaration by Hans Kierstede and Gerrit Schutt, surgeons, as to the cause of Gerrit Jansen's death.

> This day, the 18th May 1638, before me Cornelius van Tienhoven, secretary of New Netherland, came and appeared Master Hans and Master Gerrit, both surgeons in the service of the West India Company here in New Netherland, at the request of the Fiscal Ulrich Lupold, and have, by true Christian words instead and with promise of solemn oath if necessary, testified attested and declared that it is true and truthful that on the 15th ultimo in the afternoon, they visited with others the person of Gerrit Jansen gunner in Fort Amsterdam, and found that he

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* Photostatic copies of the manuscript have been placed in the Long Island Historical Society Library and in the Rare Book Room of the New York Academy of Medicine.

> was stabbed in his left side about two fingers breadth below the nipple, in an upward direction, and in their opinion it penetrated through the lung into the heart, whereupon death followed. All which they, attestants declare to be true, and that they have done all this without simulation or regard of persons, maintaining that everyone is bound to bear testimony of the truth...
>
> This done at Fort Amsterdam in New Netherland, on the day and year aforesaid.—Gerrit Schutt, Surgeon, Hans Kierstede.

This is not only the first medical record in the Dutch manuscripts in Albany but is really a coroner's case! Interestingly, no actual autopsy examination was made.

Again in 1638, October 6, occurred an event of far-reaching consequences which was recorded in a declaration as to the conversation between Lysbet Dircksen, midwife, and Grietje Reyniers, wife of Anthony Jansen, regarding the paternity of her newly born child.

> Before me Cornelis van Tienhoven, Secretary of New Amsterdam, appeared Lysbet Dircksen, aged 45 years, wife of Barendt Dircksen, at the request of Everardus Bogardus, minister of this place, and by true Christian words, in place and with promise of an oath if needs be, hath declared, testified, and attested that it is true and truthful that she, the appearer, being invited as a midwife, by Grietje Reyniers to assist her in pains on lying-in and when she, the appearer had received the child, Grietje Reyniers asked the midwife whom did the child resemble, was it like Andries Hudde, or her husband, Anthony Jansen? Whereupon the midwife answered, "If you do not know who the father is, how should I come to know; however the child is somewhat brown." All which aforesaid, the appearer declares to be true and that it is done only to bear testimony to the truth, to no one's prejudice or injury.
>
> This done in Fort Amsterdam this 6th October 1638. This is the mark of Lysbeth Dircksen, above named.

The Reverend Bogardus' wife, Annetje, was the daughter of the town's first midwife, Tryn Jansen, which apparently gave him an advantageous position in his crusade against the person whom obviously he considered the colony's "Scarlet Woman." Grietje retaliated by accusing him of swearing a false oath. In reply, testimony was taken against her moral character dating from the time when she was a serving maid in a tavern in Holland. The final episode was a revenge attempt to blacken the reputation of no less a person than Mrs. Bogardus because she had been seen to raise the edge of her petticoat on passing a certain house! As a consequence, the gentleman residing there had to testify that Mrs. Bogardus had not crossed his threshold, and that a muddy and uneven spot in the road had caused her to lift her skirt a trifle!

It was not until nearly a century later, in 1716, that midwives were regulated by law and sworn "to be faithful in their service—to commit no frauds" and "above all never to speak of the secrets of their office."

On May 17, 1639, in a statement signed by Hans Kierstede, witnessed by Tomas Coninck and Serjeant Jeuriaensen Rodolff, Kierstede stated that

> Some time ago (was) called to Jacob Jeuriaensen from Dantsic who was wounded by one Jochem Beeckman, a soldier: he, the appearer: then found the wound to be behind in the buttock, about three fingers width from his fundament, going downwards toward the neck of the bladder, the great artery and great nerve cut, which progressed favorably up to the 8th or 9th day, and looked as if it would reach a good and desirable cure, but as the patient did not follow the surgeon's order,—nor did himself observe a proper diet according to the instructions of the surgeon, who found him standing up in front of his bunk, he asked said Jacob Jeuriaensen, "Why did you come out of the bunk?" He answered, "I wanted a pot." He bled so profusely at that time he, the surgeon, could with difficulty stop the bleeding and the wound burst open and bled considerably since, sometimes twice and sometimes once in 24 hours; so that in consequence of the profuse hemorrhage Jacob Jeuriaensen is become so weak and feeble that the appearer cannot effect a good cure, who declares the patient himself to be the causa movena of the sudden bleeding of the wound.

On April 11, 1643, was recorded another result of a quarrel in which a "Philip Gerraerdy from Paris" was stabbed accidentally while intervening in a quarrel between Jan Damen and his manservant, as follows:

> Hans Kierstede surgeon, residency on the Island of Manhattan, declares at the request of the fiscal van der Hoykens, that he found Philip Gerraerdy wounded close to the spine on the right side, between the short rib and the shoulder blade, the cut running in upwards toward the shoulder, but the wound does not penetrate, and is not at present fatal...Witnessed by John Lightfoote and Touchyn Briel and his mark.

Kierstede was mentioned in one of the letters of the Director of the Colony as having served the Company "long and faithfully." Apparently, for the reason of his service, he received grants of land on the Strand (now Pearl Street) in 1647, 1653, and 1656. Dr. I. Snapper* provided me with another case report, as follows: It is known that Kierstede took care of a man, who had been knifed, one handbreadth below the umbilicus. After examination the surgeon came to the conclusion that neither the intestine nor another important organ was involved. After the patient had been in bed for two days with much pain and with complete absence of stool, Kierstede gave him a laxative consisting of rhubarb and senna leaves. The patient was relieved but remained distended as before. Friends of the patient then, behind the back of the surgeon, bought a male goat. They cut the throat of the goat and administered half a pint of goat's blood to the patient. Even this combined treatment of surgeon and laymen was not successful, and the patient died next day.

On February 12, 1652, the surgeons of New Amsterdam petitioned Governor Stuyvesant and the Council for the exclusive privilege to shave. Apparently these surgeons were Hans Kierstede, Jacob Hendricksen Varrevanger, and Jacob L. Oragne, who made the protest against the invasion of the "ship barbers."

The Council, in reply, stated "that shaving is properly not in the province of the surgeons, but is only an appendix to their calling, that nobody can be prevented to please himself in this manner or to serve anybody else for friendship's sake, out of courtesy and without receiving payment for it," but "keeping a shop to do it in" is "expressly forbidden." Moreover, in the interest of the public health, ship's barbers are forbidden to "dress any wounds, bleed or prescribe for anyone on land" without the consent of the surgeons or "at least Dr. La Montagne."[7]

Dr. Varrevanger became very much concerned over the lack of proper medical care for ailing soldiers and other employes of the Dutch West India Company. In a report to the Director and the Council on December 12, 1658, he wrote:

> He is sorry to learn that such sick people must suffer much through cold, inconveniences, and the untidiness of the people who have taken the poor fellows into their houses where bad smells and filth counteract all health-producing effects of the medicaments given by him, the surgeon. Death has been the result of it in several cases and many deaths will follow.
>
> He requests, therefore, that by order of the Director and Council a proper place may be arranged for the reception of such patients, to be taken care of by a faithful person, who is to assist them bodily with food and fire and allow soldiers to pay for it out of their wages and rations, Company's negroes to be attended at Company's expense as thought most advisable.

The consequence was the first hospital on Manhattan Island and perhaps the first in North America, and "on the 20th day of December, 1658, Hilletje Wilbruch, the wife of Condil Tubias Wilbruch, was appointed its matron at a yearly salary of 100 florins. It became known as the Old Hospital. It was sold by the Governor in 1680, for 200, after it had become unserviceable, and better buildings were supplied."

The social position of a doctor at that time is illustrated by the fact that Dr. Varrevanger's name was omitted from the list of 20 "Great Citizens" but was included in the compilation of "Small Citizens" which numbered 204. Apparently Ward McAllister's 400 prominent citizens of fifty years ago was not a new idea!

In 1642 the famous dominie, Johannes Megapolensis, settled in Albany with his son Samuel. Samuel was born in the Netherlands about 1630 and was sent by his father to Harvard College in 1653, where he was a classmate of Increase Mather. But he did not graduate, for in 1656 he was enrolled at the University of Utrecht from which he received the divinity degree in 1659. He was ordained to the ministry by the classis of Amsterdam in 1662 and was nominated as pastor of the church in Breukelen. Meanwhile, however, he had matriculated at Leyden University on November 16, 1661, and on June 2, 1663, he was ordered to give up his medical studies and take up his church post. Actually, he did not leave until January 20, 1664. After this remarkably extensive liberal arts, seminary, and medical education, there is no record surviving that he actually engaged in medical practice in the New World.

On October 27, 1655, there was another record concerning de la Montagne. Stokes stated in his *Iconography* that Stuyvesant addressed a confidential letter to the directors at Amsterdam, the text of which has not been known hitherto, although there is a contemporary copy in *New Netherlands Papers*, Number 1223, in the New York Public Library. The most important items in the letter: He says, in part, that

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* Formerly Professor of Medicine at the University of Amsterdam and now Director of Medical Services at Beth-El Hospital of Brooklyn.

> he returned from Curacao to "Mannades," on July 10, in the ship "De Liefde;" Councillor Nicasius de Sille not a trustworthy man; exploit on South (Delaware) River, against the Swedes and account of expedition to be had from his Journal and general missives sent over to directors; has no confidence in Johan de la Montagne; blames massacres by Indians on officials of New Netherland. Councillor Montagne is a bad instrument—a snake harboured in the bosom of the Colony; Restoration of captives in hands of Indians is hindered; La Montagne's "mix up" with the Swedes after the capitulation; uproariously attacked the bringing over of the Swedes.

As late as August 18, 1662, a letter has survived from de la Montagne written at Fort Orange telling of his financial difficulties, of which a portion may be quoted:

> Honorable, Valient and Worthy Lords. My Lords, I have received here a letter of the 1st July last, and read the same with sorrow, not for the reproof, which I accept with thanks, but for my accounts which to me appear astonishing; because from the extract sent me by Sieur Jacob Sam the previous year...

He found himself in serious financial straits, with debts totaling over 1,100 florins, which same (in his own words)

> excessive sum I behold with great heart grief, not that my conscience witnesses to me than I am fallen into the same by any quis cingit ostio that I may have practiced, having (without boasting) always kept my household in victuals and clothes as temperately as a common burgher here; but the excessive dearth of all things has driven me insensibly into such need and poverty, as that never in the 68 years that I have lived, so great distress have felt, finding myself destitute of all means to provide for my daily bread, and provisions for the winter; but my hope rests in those who until now have always helped me. It were well if that considering my support one should deem it to be sufficient; but those who have knowledge of the advantages of this place can well judge, that I spending in bread, small beer and wood f. 800, have of necessity light money of the balance left to speak of.
>
> I should to your Worthy Honors send a request, with an obligation in the form of a Note of the Honorable Lord Director Kieft, deceased, to me, given; but the sudden departure of this yacht in haste, did not permit me, yet hope to do it the coming Monday with the other yacht.
>
> In the meanwhile I remain, your Worthy Honors' humble and willing servant, La Montagne. In Fort Orange, 18th August A°. 1662.
>
> [Superscribed] Honorable, Valiant and Worthy Lords, My Lords Petrus Stuyvesant Director General and the Council of New Netherland.

The progenitor of the Beekman family line which has extended down to the present day was William Beekman (not a physician), who was twenty-three years old when he arrived on May 11, 1647, in the train of Director General Peter Stuyvesant. His son, Gerardus Beekman, was a practitioner of medicine and was supposed to have studied medicine at the University of Leyden in 1671. However, present-day researches by the Beekman family have failed to find his name registered. Nonetheless, I am indebted to Miss Gertrude Annan in the Rare Book Room of the New York Academy of Medicine for the privilege of examining two nearly identical volumes which appear to be the Dutch translations in handwritten form of Franciscus de la Boe Sylvius' *Praxeos Medicae*, which had been published in Latin between 1672 and 1674. Either these remarkable volumes were translated while Dr. Gerardus Beekman and his son, Dr. William Beekman, were at Leyden or represent copies of volumes brought to the New World by someone else.

Through the helpfulness of Mr. Douglas M. Scott of New York City, preliminary translations of these volumes were made, revealing the following information: These texts by Franciscus de le Boe Sylvius were entitled, *Idea Praxeos Medicae, Frankfurt, 1671*, MS.I "in the hand of Gerardus Beekman," 1674; MS. II "in the hand of William Beekman," 1705.[8] There is a reference to a translation of Sylvius by Richard Gower of London, 1675, entitled, "A new idea of the practice of physic." Apparently Gerardus Beekman in 1674 acquired or made a translation of the Latin original into Dutch with added marginalia. He was then twenty-one years of age. He made a memo to give the manuscript to Nicholas Van Cortlandt for some special occasion on March 24, 1705. The text and marginal notes in both the first and second volumes are in the same hands by Drs. Gerardus and William Beekman, respectively. Some of the notes were résumés or explications of the material in the text opposite or were brief indications of the subject matter. They remind one somewhat of attempts of modern medical students to outline their texts in preparation for examinations.

Complete translations of these manuscripts might be very interesting Arbeit by themselves. Chapter heads are indications of the medical concepts of that day. They deal with such ideas as, "healing of increased thirst," "rapid movements of the blood in the lung," "fermentation of the food in the stomach," "separation of the chyle from the excrements of the belly," "of the injurious penetration of the chyle through the fleshy lining of the intestines," "of the constant and living injury to the efferescence of the blood in the right ventricle of the heart," "of hectic long-range and malignant fevers," and a multitude of other such ideas. There was mention of the need to bleed the patient when the universal motion of the blood of the vessels of the lungs was very much hindered. "Bloet makinge" (blood making) was referred to in a marginal note in MS. II.

These volumes were in the library of the Beekman mansion at what is now 50th Street and East River for many years. They were mute witnesses at the trial of Nathan Hale as a spy and of André receiving his orders from General Howe to meet Benedict Arnold at West Point. The mansion was General Howe's headquarters during the Revolution. The first volume has old rawhide leather bindings, while the second volume is better bound with stamped leather and brass hinges. Perhaps they may be styled the Oslerian system of medicine of that day. Dr. Beekman led a very adventurous and exciting life which was climaxed by his imprisonment for supporting the "Geisler Rebellion" and was sentenced to be hung. While in prison, he petitioned Governor Slaughter to be allowed to visit his patients on Long Island who were dangerously ill in an epidemic, but this was refused. He was pardoned in 1693 or 1694 and in 1710 received a letter from Queen Anne appointing him as Acting Governor of the province. This letter has survived.

At the time the Dutch surrendered, a fully fledged physician, Dr. Johannes Kerfbyle, a graduate of the Leyden University, was practicing in the colony. He was born in Amsterdam in 1635 and enrolled in Leyden in 1656 and 1661. He wrote his thesis, "De Dysenteria," in 1660. A few years later he emigrated to New Amsterdam where he rose to a considerable eminence as a practitioner of medicine. In 1691 he performed the first postmortem examination made in America. He made an autopsy on the body of Governor Slaughter who was suspected to have been poisoned.

Immediately after the British took possession of the colony, a curious law was promulgated by the Duke of York for the government of all the lands included within the Duke's patent. This law was evidently directed against the hosts of quacks and imposters who were evidently exploiting the credulousness of the settlers. The edict reads as follows:

> That no person or persons whatever employed about the bodys of men, women, or children for the preservation of life or health as chirurgeons, midwives, physicians, or others, presume to put forth or exercise any act contrary to the known approved rule of art in each mystery or occupation, or exercise any force, violence, or cruelty upon or towards the body of any, whether young or old, without the advice and consent of such as are skilful in the same art (if such may be had) or at least of some of the wisest and gravest then present, and consent of the patient or patients if they be mentis compotes, much less contrary to such advice and consent, upon such severe punishment as the nature of the fact may deserve; which law, nevertheless, is not intended to discourage any from all lawful use of their skill, but rather to encourage and direct them in the right use thereof, and to inhibit and restrain the presumptious arrogance of such as, through confidence of their own skill or any other sinister respects, dare bodily attempt to exercise any violence upon or towards the body of young or old, one or another, to the prejudice or hazard of the life or limb of man, woman or child.

For some reason, very few manuscripts or documents for the period after the British conquest in 1664 can be found, perhaps because the Duke of York treated the colony purely as private property for his personal exploitation. One practitioner, Jonas Wood, was licensed to practice at Huntington, Long Island, October 16, 1677, by the General Court of Assizes. As reported by Claude Heaton,[9] the following document is quoted:

> Upon Intimation of divers Considerable Cures in Chirurgery done on severall persons by Mr. Jonas Wood of Huntington, and the great godd hee is capable of doeing in that art, but that hee is

> not willing publickely to practice it without some particular license or Allowance from Authority as the Law directs. There being likewise no other Chirurgeon in these parts. The Crt have recd satisfaction of the abilityes of ye sd Mr. Wood in that faculty. They do allow of his practice in Chirurgery of which all persons concerned may take notice accordingly.

Also, in 1691,

> The request of John Stuart humbly showeth, that in as much as it has pleased God to make me a master of a family, I finding it a necessity to settle myself, I am willing to settle among you, to follow the trade of a cooper, as also to practice the art of surgery. I do therefore request that you be pleased to give me a right of 18 or 20 acres of land that is tillable, a little east of the Blue Point, near the Plain Edge. It is the bit of that hollow, called the Bloody Hollow, for which I shall be very thankful, and also ready and willing to serve you in either of the arts aforesaid, so far as I have understanding.

The final record of the century is an English manuscript dated 1694 concerning the suit of Cornelius Viele.

> Of this city chirurgian in a plea of trespass on the case of pledges etc. against Dirck Hawkins for three pounds "tenn shillings ourr money of New York" for having cured him (restored him to his perfect health again). When Hawkins again became ill, Veile again cured him and charged 9 lbs. "tenn shillings" which Hawkins refused to pay and Veile brot suit.[4]

In conclusion, the medical correspondence and other records of the seventeenth century seem to begin and end on a note of economics. In between is the fragmentary history of a raw, new colony with all of the conflicts, hardships, and achievements incidental to the foundation of present-day New York.

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Appendix

Medical Men in Seventeenth Century New York

1624—Sebastian Jansen Krol, comforter of the sick.
1626—Jan Pryce, barber surgeon, from 1623.
1630—Van der Bogaert, ship's surgeon.
1637 (or 1636)
—Johannes de la Montagne.
1638—Hans Kierstede; Jan Petersen, surgeon (barber), at S. River; Peter Van de Linde.
Also Tryn Jansen, midwife, licensed earlier; Mother Annetje Jans, who married Reverend Everardus Bogardus.
1640—Gerardus Schutt, Van Essendelft.
1642—Abraham Staats, Rensselaerwyck; Johannes Megapolensis, Albany 1654.
1646—Jacob Hendricksen Varrevanger.
1647–1652
—William Hays, Peter Ureucht, Isaac Jansen, Jacob Mallenancy, John Pan.
1652—Jan Croon, Aldart Swartout, Jacob Hughes.
1658—William van Rasenberg.
1660—Harmen Wessels.
1662—Samuel Megapolensis, Paulus van der Beeck.
1663—Reverend William Leverich of Long Island and Connecticut.
1671—Gerardus Beekman (1653–1723).
1672—Dr. Henry Taylor.
1677—Jonas Wood, licensed healer, Huntington.
1680—Varrevanger, founded Old Hospital of the Five Houses; Hillatje Wilbruch, matron.
1691—John Stuart, cooper and surgeon, Hempstead.
1698—Cornelius Viele.

Discussion

Russell L. Cecil, M.D., *New York City.*—Dr. Curran has given us an interesting and amusing account of New York medicine in the seventeenth century, a period which has been a closed book to most of us. Going back, as I did not long ago for the Academy of Medicine, to review medical practice in New York a hundred years ago, one had the feeling that the physicians of 1850 were not so very different from those of today. They were more argumentative, stronger on creeds than on facts, but with professional and ethical standards quite like our own. When we jump back three hundred years to 1650, things really were quite different, as Dr. Curran has so well pointed out. Yet, fundamentally, medicine must have been pretty much the same absorbing profession then that it is today.

I was particularly interested in what Dr. Curran had to say about Harman van der Bogaert. This remarkable man made quite a record for himself in the Dutch colony. As pointed out by Dr. Curran, the official records of Fort Orange indicate that after being accused of sodomy, he died a violent death when trying to escape from the marshall of the court. Dr. James Walsh, however, in his *History of Medicine in New York State*, states that Dr. van den Bogaert lost his life at a comparatively early age through the treachery of the Indians but that in the meantime he had made a permanent place for himself in colonial history.

Dr. Curran referred to Jan Pryce, a barber-surgeon, who evidently had trouble in collecting his bill for services rendered to the skipper, Adriaen Thienpont. The barbers and the surgeons always seem to have been in hot water in early colonial days. This came about from jealousy of the barber-surgeons over the fact that certain ones who set up as barbers were not surgeons. The idea of the barber acting as a surgeon had become so generally accepted that practically anyone who did barbering was likely to be applied to for surgical operations. The real surgeons tried to prevent this practice by securing legal regulation of the practice of shaving. Finally, in 1652, "On the petition of the chirurgeons of New Amsterdam, that none but they alone be allowed to shave; the directors and council understanding that shaving doth not appertain exclusively to chirurgery, but is an appendix thereunto; that no man can be prevented operating on himself, nor to do another a friendly act, provided it be through courtesy, and not for gain, which is hereby forbidden." It was then further ordered that "Ship barbers shall not be allowed to dress any wounds nor minister any potions on shore, without the previous knowledge and special consent of the petitioners, or at least of Dr. La Montagne."

As Dr. Curran points out, obstetrics of the seventeenth century was almost entirely in the hands of midwives. The practice of obstetrics by men was regarded with great disfavor until well after the middle of the eighteenth century. Some of the New York midwives became famous and were looked upon as great benefactors. However, New York seems to have been among the first colonies to lift the ban of prejudice against men midwives. By 1745 a death notice reads: "Last night died in the prime of life, to the almost universal regret and sorrow to this city, Mr. John Dupuy, M.D., a man Midwife in which last character may be truly said as David did of Goliath's sword 'there is none like unto him.' "

In going over the correspondence and history of early colonial medicine in New Amsterdam, one cannot but be impressed by the number of familiar names he encounters among the medical profession of that day and how many of them are still extant in New York Medicine today: Gerardus Beekman, a distinguished forebear of our own Dr. Fenwick Beekman; John Van Beuren, no doubt an ancestor of Dr. Frederick Van Beuren, former Dean of the College of Physicians and Surgeons; Dr. Isaac Du Bois, probably an ancestor of Dr. Eugene Du Bois, whose family belonged to the old Dutch colony; Dr. Cornelius Van Dyke, possibly an ancestor of Dr. Henry Van Dyke.

Many of the physicians of New Amsterdam were elected to political office and were evidently considered first-rate citizens. It was interesting to note that even after the Dutch colony was taken over in 1664 by the British, Gerardus Beekman, a Dutchman and physician, held many positions of public trust and was one of the members of Governor Leslie's Council. After the overthrow and execution of Leslie, Dr. Beekman was tried for treason, convicted and sentenced to be hanged, but was pardoned. In spite of this unfortunate experience Dr. Beekman continued to be interested in political affairs and was a member of the Provincial Council under several governors.

The riders in a race do not stop short when they reach the goal. There is a little finishing canter before coming to a standstill. There is time to hear the kind voice of friends and to say to one's self: "The work is done." But just as one says that, the answer comes: "The race is over, but the work never is done while the power to work remains." The canter that brings you to a standstill need not be only coming to rest. It cannot be, while you still live. For to live is to function. That is all there is in living.—OLIVER WENDELL HOLMES, JR.

MINUTES OF THE COUNCIL

The following is a summary of the minutes of the September, 1954, meeting of the Council of the Medical Society of the State of New York.

THE Council met on September 9, 1954, from 9 to 11:41 A.M. at the Manhattan Club, Madison Square, New York City. Dr. Dan Mellen, president, presided.

Secretary's Report

Dues Remissions.—The Council voted to remit annual State dues of ten members for 1954 because of illness, of three members for 1953 and of 69 members for 1954 because of service with the armed forces, and of one member for 1954 because of financial hardship. It was also voted to request remission of American Medical Association dues of three members for 1953 and of 52 members for 1954.

Executive Committee.—Dr. Anderton reported as follows on communications considered at the meeting of the Executive Committee on September 8, 1954:

1. A letter dated August 31 from Dr. John J. Clemmer, director of the Bender Hygienic Laboratory, Albany, requesting approval of the Society for active sponsorship of the program of the National Committee for Careers in Medical Technology. The Executive Committee recommended approval of this request.

Approval *was voted.*

2 & 3. There were two letters, one from the executive secretary of the Onondaga County Society and the other from the executive secretary of Monroe County, requesting remission of dues for members who are seventy-two and seventy-three, respectively. They have both been nominated for retired membership; however, there is no place in the Bylaws which allows us to rescind dues on account of age. On the other hand, the American Medical Association does rescind dues for members over seventy upon request. I, therefore, move that the American Medical Association be requested to rescind the 1954 dues of Dr. Vernon J. Snyder and Dr. Austin G. Morris.

It was so *voted.*

4. Your Executive Committee was also notified in regard to the contents of letters received from Miss Katherine Van Etten, thanking the Society for sympathy and for the flowers that were sent to her father's funeral.

5. The Council will remember that Dr. George G. Deaver was nominated by our Society to the Employment of the Handicapped Week Committee of the President of the United States for citation as an outstanding person in that field for the year 1954. The National Committee awards a citation to each nominee whether they get the national prize or not. They have suggested that Dr. Deaver be presented with this citation by the National Government "at a suitable ceremony." The Executive Committee recommends that be at the House of Delegates meeting in May, 1955, in Buffalo.

After discussion it *was voted* to approve the recommendation.

6. Also for the information of the Council, I was instructed to report in regard to a letter from Dr. Jack Ruthberg, assistant director of Mount Sinai Hospital, about the institution in the hospital of regular preceptorship in the attending staff for each intern and resident, in an effort to teach them and indoctrinate them in medical ethics and socioeconomic medical matters. This is the first effort of its kind that has been undertaken. The House of Delegates has recommended that sort of thing, and it would spread if the members of this Council were to further it in all of their own hospitals.

7. The last thing that the Executive Committee took up was a bunch of 75 postal cards signed by members of the State Society who are graduates of the Chicago Medical School. Each is printed with a blank at the bottom for the signature of our member, and at the top the typewritten name, "Dear Dr. Anderton: I would like to have the proportion of my regular State Medical Society dues for 1954, which goes to the American Medical Education Foundation, designated for the use of The Chicago Medical School of which I am an alumnus."

Our Society donated $25,000 to the American Medical Education Foundation. If the individual proportion of each one of our members is allocated from that amount to his medical school, it will create considerable of an arithmetic problem for Mr. Alexander, our accountant. The Executive Committee recommends that the secretary communicate with the American Medical Education Foundation and the Chicago Medical School to the effect that any such action on our part does not seem feasible.

After discussion it *was voted* to approve the recommendation of the Executive Committee, and that the assistant secretary send individual responses to the doctors who made the request, stating that the donation made by this Society was a single donation and does not represent cumulative individual donations.

It *was voted* to approve the report of the Executive Committee.

General.—Dr. Anderton reported: "Your secretary regretfully notifies the Council that he attended Dr. George W. Kosmak's funeral on July 10, 1954, and Dr. Nathan B. Van Etten's, July 26. Flowers were sent to both in the name of the Medical Society of the State of New York. Letters of condolence, signed by Dr. Dan Mellen and myself, were sent to Mrs. Kosmak and Miss Katherine Van Etten.

"During the summer months, work at the headquarters office has progressed satisfactorily. Preparations for district branch meetings have been almost completed, and preliminary arrangements for the annual meeting are under way. Individual cards and hospital information for the 1955 *Medical Directory of New York State* are being processed.

"The annual outing for members of the headquarters staff was held at Bear Mountain Park, June 29. It was well attended and much enjoyed.

"In accordance with the Council's vote, President Mellen appointed to the Legislation Committee Dr. Joseph G. Zimring, of Long Beach, and Dr. Theodore B. Steinhausen, of Rochester, to replace Dr. John M. Galbraith and Dr. Christopher Parnall, Jr., of Glen Cove and Rochester, respectively, who were unable to serve. Dr. Samuel Garlan, of New York City, was appointed a member of the Hospital and Professional Relations Advisory Subcommittee, instead of Dr. Elton R. Dickson, of Binghamton, who declined. Dr. Louis H. Bauer, of Hempstead, felt that his other duties should prevent him from membership on the Medical Expense Insurance Subcommittee of the Economics Committee; his successor has not been appointed. President Mellen appointed Dr. Robert Calihan, of Rochester, to the Medical Licensure and Medical Service Committee, replacing Dr. Ivan N. Peterson, of Owego, who declined. Dr. Curtis T. Prout, of White Plains, was made chairman of the Mental Hygiene Subcommittee of the Public Health and Education Committee, replacing Dr. Harold H. Dodds, of Utica, who is unable to serve on the subcommittee.

"The Pharmaceutical Association of New York State has notified me that Mr. Nicholas Gesoalde, Mr. Calvin Berger, and Mr. John F. O'Brien will be the members of that association on the joint committee with our Society for the current Society year.

"Delegates to neighbor society annual meetings have been appointed as follows: Vermont, Dr. Renato J. Azzari and Dr. Denver M. Vickers; Pennsylvania, Dr. Dan Mellen and Dr. W. P. Anderton; New Jersey, Dr. Dan Mellen and Dr. J. Stanley Kenney.

"In the latter part of August, your secretary visited 16 of the communities which have requested help in obtaining a physician.

"Other secretarial activities were as follows: June 16—Second District Branch Executive Committee, Garden City; June 21 to 24—American Medical Association, San Francisco, California; June 26—Third District Branch Executive Committee, Kingston; June 28—Ninth District Branch Executive Committee, White Plains; June 30—Nurse Coordinating Council, New York City; July 7—Sixth District Branch Executive Committee, Binghamton; July 12—Conference of Professional Organizations, Albany; July 15—meetings of Medical Expense Insurance Subcommittee of Economics Committee, Syracuse; July 22—Nurse Education Committee, conference with Regent Maurillo, Associate Commissioner of Education Newsom, Assistant Commissioner of Education Killough, Secretary of State Board of Medical Examiners Ezell, and Miss Mary Ellen Manley, secretary of the State Board of Nurse Examiners, regarding the shortage of nurses and nursing education, New York City; July 22—Office Management Committee of Blood Banks Association; July 22—meeting of "Women for Bricker Amendment"; August 5—with President Mellen, who addressed an exploratory conference on intrastate air pollution problems under the auspices of the New York State Joint Legislative Committee on Natural Resources, in Albany.

"The New York State Conference of Professional Organizations met at the New York State Bar Association, Albany, July 12, 1954. Representatives attended from the New York State Bar Association, New York State Architects Association, New York State Dental Association, and the New York State Society of Certified Public Accountants, as well as your secretary. It is proposed that this conference will deal with matters of common interest, such as legislation and ethics. The next meeting is scheduled for Saturday, November 6, 1954, at 12:30 P.M. (luncheon). At that meeting the principal item will be expected legislation regarding the practice of professional engineering by corporations. Your secretary, therefore, suggests that Dr. James Greenough, chairman of the Legislation Committee, and Dr. Harold B. Smith, executive officer, be requested to attend, or have our Society otherwise properly represented."

It was so *voted*.

The Secretary's report *was accepted*.

The Treasurer's report was accepted.

Executive Session

It was voted that the Council go into executive session to discuss the budget.

When the Council arose from executive session, Dr. Anderton reported: "Mr. President, in executive session the Council voted to recommend to the House that the Society meet in New York three consecutive years and in Buffalo the succeeding one year, purely for economic reasons; second, it is recommended that the loan to the Blood Banks Association of New York State, Inc., be from capital funds; third, it is recommended that no donations be made at this time; fourth, the proposal regarding integration of the Bureau of Medical Care Insurance, the Bureau of Workmen's Compensation, and the Industrial Health Bureau be referred to the Planning Committee to report if possible next month, otherwise in November."

It *was voted* to approve the report.

Reports of Committees

Blood Banks Commission.—Dr. J. Stanley Kenney, president of the Blood Banks Association of New York State, Inc., made the following report:

"We should consider:

"1. It is estimated that 500,000 pints of blood are required annually in this State to meet civilian needs.

"2. There are approximately 15,000,000 people in this State.

"3. Today's paramount problem is how to secure 500,000 blood units annually. Such a vast amount of blood is becoming increasingly difficult to secure.

"4. There is always the problem of the rare type of blood—how to provide it quickly.

"5. The institution and maintenance of a continuous program in the use of blood and to encourage and develop research.

"6. The American Medical Association continually emphasizes its policy of state societies having blood banking organizations under their control, with the view to a national coordination of all blood banking facilities.

"7. The blood assurance portion of our program is the core of this whole venture. It is the feeling of those of us studying the long-range program of the Association that 100,000 persons must be enrolled to justify the existence of the blood assurance project. It is considered a new and realistic approach to the problem of procuring donors (subscribers).

"Both the office staff and the accounting department are preparing a detailed statement of what has been accomplished during the past year, expenditures, and objectives for the next several months. Our Genesee County project was highly successful. Our clearinghouse has been in operation since April 19, 1954.

"As a result of the response from the public to the Genesee County Medical Society's pilot project of the blood assurance program, it was necessary to work out an arrangement whereby blood collected as surplus in this area could be allocated to depository banks. This has been accomplished, and the cooperating blood banks, with due consideration for regional needs, are distributed throughout the State.

"I should like to report two other items: (1) the clearinghouse for the Blood Banks Association has met every request from the Genesee County Blood Banks that were drawing on their credit with us; (2) the blood in the depository banks, which is being held for us on a one-for-one exchange basis, is being liquidated very satisfactorily."

Mr. A. Carl Messinger was invited to address the Council. He displayed charts and stated: "This shows the total collected in blood in Genesee County from July 28, 1,228 units. The objective was 1,000.

"This line shows the total shipped out of Genesee County to blood banks in the State was 1,057 units of blood, $14,798.

"The total liquidated by immediate cash transactions to June 18—and bear in mind that the sums go to Genesee Blood Banks, not to the Blood Banks Association—was 204 units.

"The total shipped to depository banks to June 18, when the special program stopped, was 853 units.

"The total shipped from depository banks to July 28 and also held for the Blood Resources Fund (that is, 5 per cent of the total collected, and that 5 per cent is a method of reinsurance for blood banks so that if they run into a catastrophe or for hardship cases, the Blood Reserve Fund will forward whatever blood is available to help them out in their difficulties) so you have the total shipped from depository banks, 261 units, and the 5 per cent held for the Blood Resources Fund which the Association controls, 62 units, a total of 323 units.

"The total liquidated by September 30, an estimate partially, would include the 261 units shipped to July 28, the 62 units of the Blood Reserve Fund, the 204 units liquidated to June 18 by cash transaction, and the 48 units which the Bender Blood Bank has paid off in a monetary transaction, and then from July 28 to September 30 we estimate that we will liquidate a total of 300 units. Broome County we have called on a number of times, and they have not been able to comply. The Red Cross is their donor procurement agent, but they tell us, from September on, they will be able to take care of commitments. New York University-Bellevue does not always supply our requests, but with these 300 units we will then have 875 liquidated or $12,312, out of the original 1,057 units, and we will have 182 units left on September 30 that we will still have to liquidate for the Genesee County Banks."

Dr. Kenney continued: "Preparations are under way for the introduction of the blood assurance program into the five counties of New York City, Orange County (and I hope the axis represented by Nyack, Newburgh, Goshen, Middletown, and Liberty). In accordance with the Boston agreement, approval is being requested from the county medical societies, the area blood banks, and the local units of the American Hospital Association. The Blood Assurance Program is also on the September agenda of the coordinating council of the five county medical societies of metropolitan New York (the First District Branch). Richmond County has given its endorsement. Queens County will be visited on September 21 and New York County at their October meeting. In addition, letters have been forwarded to the counties of Kings and Bronx, seeking cooperation.

"A word about Orange County. In this area the Red Cross has withdrawn its program as a result of local Red Cross chapters being unwilling or unable to pay the increased cost of blood sent into the county from the New York City Regional Red Cross Blood Bank. When the charge was increased from $2.50 a pint to $4.00 a pint, the local chapter simply stated that it was beyond their ability to pay. The Red Cross regional bank therefore cut off Orange County from its supply of blood, and the local physicians and hospitals turned to us.

"The Association has been supplying blood to institutional members in Orange County. The Horton Memorial Hospital in Middletown is now running a local clearinghouse of its own. The Orange County Medical Society, through its president, Dr. Seward, is planning to devote a fall meeting to the blood assurance program. However, technical facilities of the county blood banks must be brought to a greater degree of efficiency before the assurance program can be properly introduced.

"A special committee of the Association to lay plans for the introduction of the blood assurance program into Erie and Niagara Counties has already held its first meeting. Among those present at that meeting were Dr. Ernest Witebsky, Dr. Robert Tarail, representing the Roswell Park Memorial Institute, Dr. Kinzly, past-president of the Eighth District Branch, and Mr. Messinger.

"We have supplied the State Hospital Association with a 1,600-word article at their request. *Modern Hospital*, a national publication for hospital administrators, has scheduled an article on our Association and our Blood Assurance Program. *Readers Digest* has sent a writer to Genesee County to prepare a story on the Blood Assurance Program Pilot Project. He met Mr. Messinger in Buffalo and Batavia. Interviews were arranged with the president and public relations chairman of the Genesee County Medical Society, the two hospital administrators, Dr. Ernest Witebsky, and beneficiaries of the assurance plan, as well as representatives of industry and other groups.

"Speakers have been supplied for the following organizations: State Nurses Association (annual convention), Catholic Nurses Association, Hospital Association of Greater New York, Society of Industrial Medicine, New York State Association of Approved Public Health Laboratories, our State Woman's Auxiliary, and the county medical societies already referred to. I have personally been invited to be a member of a panel representing five state associations which will conduct a forum at the annual meeting of the American Association of Blood Banks in Washington, September 14.

"We shall need the personal support of each Council member and trustee of the State Medical Society. We already have gained a large measure of support from the rank and file of physicians once they have become acquainted with the program. As far as the medical profession in New York State is concerned, the Blood Banks Association is synonymous with the Medical Society of the State of New York."

Dr. Kenney read a letter from the United Steelworkers of America, C.I.O., Local Union Number 1831, at Batavia.

> Dear Dr. Kenney:
>
> As president of Local Union #1831, United Steelworkers of America, C.I.O., I should like you to know that we are appreciative of the Blood Assurance Program in this community.
>
> When we presented the plan to our members, we found that they were pleased that such a program had been devised by the physicians and that it afforded a year's protection for each member of the family, no matter how large that family might be, without financial cost.
>
> We shall look forward to working along with you in the future both in increasing our membership and in renewing the certificates as they come due.
>
> Sincerely,
> Philip P. Pastore, President
> Local Union #1831 U.S.W.C.I.O.

It *was voted* that the report be accepted with thanks.

Convention.—Dr. Thomas M. d'Angelo, chairman, stated that the report of the Convention Committee had been distributed to the members.

The 148th Annual Convention of the Medical Society of the State of New York was held at the Hotel Statler in New York City, from May 10 through 14, 1954.

Registration.—Registration figures totaled well above the 6,000 mark:

Physicians	3,901
Guests (Included are medical students, interns, dentists, nurses, technicians, etc.)	1,421
Technical exhibitors	1,093
Total	6,415

House of Delegates.—The House of Delegates met during the first three days. A long evening session was held on Tuesday. Forty-five resolutions were acted upon.

A new section was established on allergy, which will hold its first scientific meeting in 1955. The Section on Ophthalmology and Otolaryngology was divided into the Section on Ophthalmology and the Section on Otolaryngology. They will have separate meetings at the 1955 convention.

Scientific Program.—The arrangements of the 1953 scientific program were found to be successful and were repeated. Questionnaires, asking for the opinion of the doctors on the type of meetings, were collected at all scientific meetings. Although not many were returned, the consensus was that the new type of program should be continued. The program contained approximately 100 scientific dissertations.

The Session on Legal Medicine, new this year, had an interesting and well-attended meeting.

Attendance figures for scientific meetings follow:

Sections		
Anesthesiology	Friday A.M.	125
Chest Diseases	Friday A.M.	100
Dermatology and Syphilology	Friday A.M.	106
Gastroenterology and Proctology	Friday A.M.	63
General Practice	Thursday A.M.	150
Industrial Medicine and Surgery	Friday A.M.	50
Medicine	Friday A.M.	58
Neurology and Psychiatry	Friday A.M.	40
Obstetrics and Gynecology	Thursday A.M.	80
Ophthalmology and Otolaryngology	Friday A.M.	110
Orthopedic Surgery	Thursday A.M.	140
Pathology and Clinical Pathology	Thursday A.M.	60
Pediatrics	Friday A.M.	50
Preventive Medicine and Public Health	Friday A.M.	55
Radiology	Thursday A.M.	100
Surgery	Thursday A.M.	44
Urology	Thursday A.M.	70
Sessions		
History of Medicine	Thursday A.M.	40
Legal Medicine	Friday A.M.	62
Physical Medicine	Thursday A.M.	85
Public Relations	Thursday A.M.	60
General Sessions	Monday P.M.	100
	Tuesday P.M.	200

	Wednesday P.M.	300
	Thursday P.M.	400
	Friday P.M.	150
Postgraduate Lectures	Tuesday A.M.	110
	Wednesday A.M.	125
Round Table Discussion	Monday 8 P.M.	150
Blood Banks Association of New York State	Thursday A.M.	125

Eighty carefully selected scientific exhibits were shown. The Scientific Awards Committee selected six for recognition (see the September 1 issue of the New York State Journal of Medicine, Part II) and the House of Delegates voted them awards. Certificates are being sent to the winning exhibitors.

Scientific Motion Pictures.—The motion picture exhibit was planned by the chairman of the Subcommittee on Scientific Motion Pictures, Dr. Colgate Phillips, and presented by the Medical Film Guild. The chairman submitted a report of his activities to the convention chairman, with suggestions for future chairmen.

Technical Exhibits.—Mr. Charles L. Baldwin, in charge of technical exhibits, reported 146 exhibits. The technical exhibitors expressed their appreciation of the attendance.

Annual Meeting and Dinner Dance.—The annual meeting and dinner dance was held on the Wednesday evening. Dr. J. Stanley Kenney, chairman, Dinner and Dance Committee, arranged an excellent dance and entertainment. The speakers were Drs. Eggston, Mellen, Reuling; the toastmaster, Dr. Louis H. Bauer; the guest of honor, Mr. Arthur H. Motley, president, Parade Publications, Inc., who spoke on the medical press and the public.

Woman's Auxiliary.—The Woman's Auxiliary to the Medical Society of the State of New York had their convention simultaneously with the State Society.

An efficient corps of hostesses helped direct doctors to meeting rooms. Some noted attendance and distributed and collected questionnaires.

Miscellaneous.—For the first time a convention service was engaged to provide assistance to members and guests in making their stay in New York enjoyable—the Languild Convention Service. They obtained theater and sporting event tickets, made train and plane reservations, assisted with shopping and sightseeing, and in other ways were helpful.

A card of thanks was sent to each participant in the scientific program and to members of the Woman's Auxiliary hostess committee.

It *was voted* to approve the report.

Economics.—Dr. Renato J. Azzari, chairman, stated: "The report of the Economics Committee is incorporated in the agenda and consists of the report of the Subcommittee on Medical Expense Insurance, of which Dr. Wertz is chairman, and the report of the Bureau of Medical Care Insurance, which carries with it the activities of the director of the Bureau of Medical Care Insurance. Also incorporated in the report in the agenda is the quarterly progress report to June 30, 1954, which, too, shows the activities of the director of the bureau.

(The quarterly report referred to will be found on pages 2745, 2746, and 2747 of the October 1 issue of the New York State Journal of Medicine. The other reports follow.)

Subcommittee on Medical Expense Insurance.—The following is a report of the Subcommittee on Medical Expense Insurance, Dr. Carlton E. Wertz, chairman.

The Subcommittee met at the Syracuse Hotel, Syracuse, New York, at 10 A.M., July 15, 1954. The full committee, with the exception of one excused member was present, and Dr. W. P. Anderton, ex officio, also a representative of the State of New York Insurance Department and the executive director of Western New York Medical Plan, Buffalo.

Dr. Wertz reported on the present status of Medical Indemnity of America, Inc. (MIA) and Health Service, Inc. (HSI) in regard to the underwriting of national and State-wide groups. Dr. Wertz expressed concern over the fact that because MIA was not licensed in New York State, local Blue Shield plans were unable to accept any medical coverage now being underwritten by HSI. (It is to be noted that since the July 15 meeting, MIA has applied for licensure in the State of New York.)

The Subcommittee considered a resolution introduced into the House of Delegates by Dr. W. Alex Newlands of Westchester County and referred by the Council, whereby voluntary medical services could be continued in the event an insured member became unemployed. This was referred to the Bureau of Medical Care Insurance with a recommendation that Mr. Farrell confer with the State Insurance Department and interested Plans.

A letter from Mr. Walter Brooks, Deputy Superintendent of Insurance of the State of New York, was read, regarding the Leonard Davis Agency, Inc., Poughkeepsie, and other material submitted to the Insurance Department by the Bureau of Medical Care Insurance. After discussion, it was recommended that Mr. Farrell contact Mr. Brooks again on this matter.

The Subcommittee considered a resolution by the Medical Society of the County of Schenectady requesting that the Northeastern New York Medical Service, Albany, amend its bylaws by adding a rider to the article pertaining to service benefits. The purpose of the amendment was to relieve the doctor of the responsibility of accepting the schedule of allowances for service cases where a subscriber has dual coverage. It was recommended by the Subcommittee that Mr. Farrell consult with the Insurance Department to determine whether or not such a change in the subscriber's contract would be permissible.

The Subcommittee also considered a request from Dr. Ralph Emerson of the Nassau County Medical Society, regarding the inclusion of assistant's fee in New York State Blue Shield Medical Care Plans. The Northeastern New York Medical Service has been experimenting for the past six months with this additional coverage in certain areas, and it was suggested that Mr. Farrell contact the Albany Plan in regard to its experience and what the additional utilization and cost would be to the Plan.

A joint meeting of the Subcommittee and New York State Blue Shield Plan representatives was held at 2:30 P.M., July 15, 1954, also at the Syracuse Hotel. The purpose of the joint meeting was to discuss policy regarding the underwriting of groups within the State by HSI and its effect on local Blue Shield plans. It was pointed out that in the instance of the Niagara-Mohawk group where a specific type of coverage was requested, it was necessary to call upon HSI, in order to bid because the uniform State-wide contract recommended by the Subcommittee was not acceptable to the group.

It was the consensus of those present that in order for local Blue Shield plans to retain the basic coverage offered through a national underwriting company, it will be necessary that MIA be licensed in New York State and that any rates quoted by a national underwriting company would have to be adequate in relation to the local plan experience. Dr. Wertz pointed out that when State-wide groups request benefits which are not available on the local level all plans which would be affected should be apprised of any proposals suggested by a union or employer through any particular plan.

BUREAU OF MEDICAL CARE INSURANCE.—Following is the report of the Bureau of Medical Care Insurance, George P. Farrell, director.

Your director attended the annual meeting of the American Medical Association in San Francisco, June 19 to 24, 1954, and was present at the Medical Civil Defense Conference and the Conference of Presidents at the Palace Hotel, June 20; the annual meeting of the Medical Society Executive's Conference at the Fairmont Hotel, June 20; the sessions of the House of Delegates and several reference committee meetings. He also attended, on invitation, the meetings of the New York State delegation.

On July 6, 1954, your director conferred with Mr. George A. Walters, representative of Health Service, Inc. and Medical Indemnity of America, Inc. in New York. On July 16, 1954, he attended a meeting of the Subcommittee on Medical Expense Insurance held at the Syracuse Hotel, Syracuse, at 10 A.M., and a joint meeting of the Subcommittee and plan representatives at 2:30 P.M.

August 25, 1954, your director had an interview with Mr. Walter Brooks, Deputy Superintendent of Insurance in Albany, at the request of the Subcommittee, to pursue further the information given to the Subcommittee by Mr. Brooks regarding the Leonard Davis Insurance Agency. Additional information was developed at this interview, and the Bureau is in the process of obtaining information for the Insurance Department, specifically in reference to the schedule of allowances and premium rates of the contract negotiated by Mr. Davis with the Hoffman Manufacturing Company. Progress on this matter is being reported to the chairmen of the Council Committee on Economics and the Subcommittee on Medical Expense Insurance.

At the request of the Subcommittee your director has contacted the State of New York Insurance Department regarding the resolution presented to the Subcommittee for further study, whereby voluntary medical services could be continued in the event the insured became unemployed. Due to vacations the proper officials of the Insurance Department will not be available for consultation until after September 7, 1954. Your director also learned that this matter has been discussed by the Executive Committee of United Medical Service and that the committee was not in favor of setting up reserves for periods of unemployment. They also felt it would fall within the scope of social insurance.

A resolution passed by the Medical Society of the County of Schenectady and referred to the Subcommittee, regarding dual coverage for surgical care for people who are entitled to service benefits, will also be discussed on recommendation of the Subcommittee with Insurance Department officials.

Your director, at the request of the Subcommittee, has contacted the Northeastern New York Medical Service, Albany, in regard to its experience in the payment of assistant's fee in surgical cases. Information is now being developed by the Plan, and a report on cost and utilization will be submitted to the Subcommittee.

With reference to the need for a uniform schedule of allowances by the various State departments, as suggested by Dr. Curphey, the Bureau has prepared a format for surgical and medical procedures, using the standard nomenclature system which can be used as a basis for comparative purposes in the evaluation of fees by the State departments.

It *was voted* to adopt the report.

Legislation.—Dr. James Greenough, chairman, presented the following report:

There has been no meeting of the Committee during the summer. Your executive officer and chairman have been laying the groundwork for the coming year.

Owing to the reapportionment of the State made by the Legislature in 1954, our groupings of upstate county legislation chairmen have been altered. As of this date, six local meetings have been held which we have both attended. These were in Buffalo August 3, Canandaigua August 4, Norwich August 5, Rhinebeck August 6, Long Beach, Long Island August 7, and Ogdensburg August 19. The last two will be held in Schenectady August 26 and Kingston September 2. This afternoon there will be a meeting of our Executive Committee and the Legislation chairmen of the metropolitan area to complete our coverage of the State.

At these meetings the program for the coming year has been discussed. Our channels of communication between the Albany office and the county societies have been strengthened. Many helpful suggestions were offered at each meeting. These meetings have been of definite value in integrating local and State activities.

Dr. Smith has made a critical study of the Medical Practice Act. His conclusions in regard to important problems have been incorporated in the second bulletin of the year which you have received. This work prepares the ground for carrying out the resolution of the House of Delegates calling for a "comprehensive investigation of the entire effect of changes of modern medical practice on the license to practice medicine in New York State." Fortunately, Dr. Brown, chairman of the Committee on Hospital and Professional Relations, to which this resolution was referred in conjunction with the Committee on Legislation, was able to attend our meeting in Buffalo and has followed the progress to date.

Preliminary work has been started on the resolution included in the report of the Reference Committee on Legislation at the last annual meeting, regarding a study of the law relating to the disposition of dead bodies. Your chairman feels that an informal meeting of interested persons should be held in New York in the near future to discuss what action should be taken. Representatives of anatomists, pathologists, medical schools, medical examiners, welfare departments, and morticians should be present. Such a preliminary meeting should be of great help in formulating the policy of the Committee on Legislation.

Your chairman has been in touch with Mrs. Charles M. Brane, chairman of the Woman's Auxiliary Committee on Legislation. She requested an article concerning legislation which was published in the July issue of the *Distaff*. Through Mrs. Brane the Auxiliary has promised continued enthusiastic support of our program. The committee is grateful for this very valuable help.

Your chairman has discussed with Dr. Redway, the editor of the JOURNAL, ways and means by which the JOURNAL can help in legislative matters.

It *was voted* to accept the report.

Medical Defense.—Dr. Anderton reported for Dr. J. G. Fred Hiss, chairman: "Mr. President, your Medical Defense Committee met yesterday and asked me to report that the committee requests that a letter from the State Society be sent to the medical societies of the counties of Erie, Monroe, Onondaga, Bronx, Albany, New York, Queens, and Kings, urging that they send representatives to a civil defense conference in Chicago on October 30 and 31, and that their representatives send their registration in advance to Dr. Harry R. Mendelsohn, 4534 Whetsel Avenue, Cincinnati 27, Ohio."

Approval *was voted*.

Office Administration and Policies.—Dr. John J. Masterson, chairman, reported: "The Office Administration and Policies Committee met on September 8, 1954.

"Various personnel matters were settled.

It *was voted* to approve the report.

Publication.—Dr. Masterson, chairman, stated: "There was a meeting of the Publication Committee on September 8, 1954.

"The Editor's report was accepted.

"It was decided that the publication date for the history of our Society be January 1, 1957.

"There was a general discussion of the celebration of the sesquicentennial. It was the sense of the meeting that the Council be requested to authorize the appointment of a Sesquicentennial Committee.

"It was decided to exchange the JOURNAL with the *Armed Forces Medical Journal* and with the Chinese Association for the Advancement of Science. We voted to approve the request for a complimentary JOURNAL subscription for the *Utah State Medical Journal.*

"It was voted to publish an article submitted by Dr. Harold Wainerdi. Dr. Wainerdi's article was the result of a paper published in the June 1, 1954, issue of the JOURNAL by Dr. E. M. Abrahamson on multiple sclerosis.

"We decided to hold a dinner meeting for the Associate Editorial Board on November 10.

"The Committee decided not to join the Audit Bureau of Circulation.

"The committee approved listing the Postgraduate Center for Psychotherapy, Inc., in the 1955 *Directory.*

"It was decided we could not approve the request for a complimentary copy of the 1953 *Directory* by Dr. Sacha Levitan, District Health Officer of the New York City Department of Health, to be used in the Fort Greene Health Center, because of the number of directories on hand.

"A complimentary copy of the 1953 *Directory* was voted for the Armed Forces Medical Library, Washington, D.C.

"We also approved the request of the Sterling Convalescent Home for a free rerun of their advertisement as published in the 1953 *Directory.*"

The Council *voted* to approve the report.

Public Health and Education.—Dr. Theodore J. Curphey, chairman, submitted a report which stated that he had attended two meetings and arranged one panel discussion, one regional teaching day, and 18 postgraduate lectures in ten counties.

The report continued:

1. As part of the Tenth Annual Institute of Community Leadership sponsored by the New York State Citizens' Council, the Citizens' Health Council held its third annual meeting at Geneva June 17 to 19. Represented at the meeting, in addition to the State Society, were the State Charities Aid Association, the Dental Society of the State of New York, the State Labor Department, Education Department, and Health Department.

2. Your chairman spent several hours with Dr. Gordon discussing the program for the Subcommittee on Maternal and Child Welfare.

3. The Health Examination Form which was drawn up and approved by the Subcommittee on General Practice for distribution to all physicians in the State is a guide for simplifying and shortening the routine office examination and to assist in making every doctor's office a "cancer detection center." It is in the process of printing by the State Health Department. Letterheads of the Council Committee on Public Health and Education have been forwarded to the Health Department for the letter of transmittal.

4. On June 10, 1954, the Council referred to this committee a resolution concerning the appointment of a committee to work jointly with a committee from the New York State Society of Anesthesiologists on minimum standards of therapy and "to

establish essentials of acceptable schools of inhalation therapy. . .and to formulate a basis for the certification of technicians." Dr. Max Fein, as chairman of the Joint Council of Pathologists, Radiologists, Anesthesiologists and Physiatrists, has suggested that the following persons be named to this committee: Drs. Paul Wood, Moses Krakow, and Vincent Collins. Your chairman concurs in this proposal.

5. Your chairman agrees with Dr. Greenough, chairman of the Committee on Legislation, that before any recommendation goes to the Governor a small committee should be formed for the purpose of discussing the possibility of establishing a commission to study the law in regard to the disposition of dead bodies, as recommended by the reference committee at the House of Delegates. We have suggested that Drs. Alfred Angrist, John Clemmer, and Maxwell Fein be included on such a study committee.

6. Dr. Curtis Prout, director of the Westchester Division of New York Hospital, has accepted the chairmanship of the Subcommittee on Mental Hygiene.

Dr. Anderton stated: "Mr. Chairman, Dr. Curphey, who has to be at a meeting in Washington today, has asked me to read this supplementary report dated September 9, 1954:

> On September 8 a memorandum prepared by the Subcommittee on the Hard of Hearing and the Deaf was mailed to the president of each county medical society, which included a suggested "alert" to be published in local bulletins. This dealt with the importance of early detection of deafness in the infant.
>
> Your chairman would like to report that, in an effort to achieve the most effective distribution of the recent revision of the *Course Outline Book*, copies are being sent to the Board of Directors of the New York State Citizens' Council and to those who attended the Institute of Community Leadership in June at Geneva. They are also being mailed to a list furnished by the New York Tuberculosis and Health Association, local executive secretaries, who carry on community-wide health education programs, including the medium of television.

"Dr. Curphey also wanted to report to the Council that a release from the State Health Department regarding gamma globulin was submitted to him for approval. He could not approve of it conscientiously because it was a matter that required considerable study. He tried to contact the members of our Advisory Committee on Polio to the Health Commissioner, but all of them were away at the time. Therefore the news release from the Health Department did not carry the usual statement that our Society concurred."

It *was voted* to accept the reports.

Public Relations.—Dr. Floyd S. Winslow, chairman, submitted the following report: "Much of the summer efforts of the Bureau were concentrated on public relations projects for the fall. As part of the schedule, the men curtailed their field work.

"One of the principal activities was the preparation for the Fall Conference of County Medical Society Public Relations Chairmen scheduled for Saturday, October 9, at the Hotel Biltmore in New York City. In addition to preparing a program and obtaining speakers, a 'Public Relations Kit for County Medical Societies' was compiled. Invitations were sent to county medical society public relations committee chairmen, executive secretaries, and a few guests.

"The final copy of the Guide for Cooperation between the medical profession and the media of information, such as the press, radio, and television, is now at the printers. Your committee plans to mail a copy to every newspaper in the State and to every member of the State Medical Society.

"After the House of Delegates approved the Guide for Cooperation at the last annual meeting, the Hospital Association of New York State, which had cooperated in writing the section on hospitals, wrote the following letter to Dr. John C. McClintock, chairman of the Subcommittee which prepared the Guide:

> Dear Doctor McClintock:
>
> The "Guide for Cooperation," Hospital Section, was approved by members of the Association while convened in annual meeting May 26, 1954. Their approval, however, carried one minor amendment to Section B, item 2. Underscoring in the following item indicates the added phrase:
>
> B. Information to be given News Agencies.
>
> 2. When newspapers request the photographing of a patient in the hospital, such permission shall be given, *in the discretion of the administration*, if the patient consents and if the attending doctor decides the patient's condition or interests will not be jeopardized. If the patient is a minor, permission of parents or guardian must be obtained unless the minor is "emancipated." If the minor is of sufficient maturity, his consent should also be secured. No pictures will be permitted of unconscious patients or patients suffering from severe facial injuries.
>
> I am hopeful that when all approvals are in, it will be possible to have the "Guide" in its entirety printed in some form for distribution to all interested parties. Kind regards,
>
> Sincerely,
> Charles M. Royle
> Executive Director

"Your committee recommends that the Council approve the request of the Hospital Association of New York State."

Approval *was voted.*

"Our 12-pamphlet series on economic subjects continued to attract attention. The American Professional Pharmacist, a national publication sent exclusively to prescription pharmacists, hospital pharmacists, and pharmaceutical educators, requested permission to use two of the pamphlets in a special article. Permission was granted to use 'How High Is Up' and 'Doctor Bill.' Copies of these 12 pamphlets also were made available to the public by means of a special rack on display at the Bureau's public relations exhibit in the Hall of Springs at Saratoga.

"Working in cooperation with the New York

State Journal of Medicine, the Bureau distributed copies of special releases on scientific articles appearing in the Journal.

"On September 1 and 2, Mr. Miebach and the field staff attended the annual Public Relations Institute of the American Medical Association in Chicago.

"The Bureau worked closely with the Woman's Auxiliary as reported elsewhere. A sketch of the exhibit sponsored by the Auxiliary at the Syracuse State Fair was prepared by the Bureau, and assistance was rendered in setting it up.

"Plans were made for the publicizing of the district branch meetings as well as for registration to be conducted at the meetings by the field representatives. Releases covering programs of the district branches and the talks of the State Society representatives were sent to newspapers in the district branch areas."

Dr. Winslow stated: "In March of this year, Erie County Society sent to its membership a communication entitled 'Ethical Considerations.' This was similar to our Guide for Cooperation, but it applied to Erie County. Now, it occurred to the officers of the Erie County Society that if we send out another article on this subject, there may be some conflict. The resolution by the House of Delegates said that a copy of this guide was to be forwarded to every member of the Society. Erie County asks that in their county we send all copies to the office of the county society rather than to their membership so that they can coordinate the thoughts in their county code with our State code. I think that is a reasonable request, and I move this be done."

Approval *was voted.*

Woman's Auxiliary.—At the request of Dr. Andrew A. Eggston, chairman, Dr. Anderton reported that President Mellen, Mrs. Bennett, the president of the Woman's Auxiliary, and he had visited the Woman's Auxiliary exhibit at the State fair. The exhibit consisted of three main parts: one on nutrition, another on nurse recruitment, and a third devoted to distribution of some of the pamphlets prepared by the Public and Professional Relations Bureau. Unfortunately the exhibit was in a not very accessible location on the fair grounds.

Workmen's Compensation.—Dr. Gerald D. Dorman, chairman, presented the following report:

In our June report we referred to the question of the interpretation of Item 9 of the medical fee schedule which provides a fee of $15 for assistant to surgeon. "In hospital with intern staff no charge to be made for services of intern or assistant." The State Insurance Fund claims that they pay the hospital a fee which includes interns and residents, and where they are not available, the State Insurance Fund believes it should not be required to pay an additional fee for assistance at operation. We reported that this matter was brought to the attention of the Workmen's Compensation Board. As we have continued to receive complaints from physicians whose bills had been held up or objected to, we brought the matter, in the absence of Miss Donlon on vacation, to the attention of Mr. Robert E. Marshall, Administrative Deputy of the Workmen's Compensation Board on July 2. We intend to pursue the matter to a conclusion believing that the critical shortage of interns throughout the State, especially in the smaller hospitals, requires a definitive constructive interpretation of the fee schedule to provide for the payment of a fee where interns or residents are not available for compensation operations.

Also our report last month alluded to the refusal of certain insurance carriers to pay a specialist's fee where the condition treated was a minor one, even though within the range of practice of the particular specialist. We had been informed that the Medical Practice Committee was denying payment at specialist rates in certain cases of a minor nature and also that the chairman of the Workmen's Compensation Board had written a letter in which she stated that the question of necessity for specialist care was an arbitrable issue. We objected to this interpretation and made our position known to the Chairman of the Workmen's Compensation Board. On July 19, 1954, Mr. George T. Clark, secretary of the Workmen's Compensation Board, informed us that the executive secretary of the Medical Registration Section, who is also Secretary to the Medical Practice Committee, was answering inquiries concerning fees to be allowed a specialist as follows: "When a specialist renders care and treatment to a workmen's compensation claimant for a condition which is within the physician's specialty, such physician is entitled to the fee allowed for that specialty. However, should a physician render treatment for a condition outside of his field of specialization, then such physician is entitled to general practitioner rates."

This conforms with our interpretation of Item 9a of the May 1, 1949 fee schedule. Mr. Clark agreed with our interpretation. There remains only verification of our position by Miss Donlon. We quote from her communication on this question: "Whether or not a case requires specialist care is one of professional opinion and discretion, but that is not solely the professional opinion or discretion of the doctor who performs this service and renders his bill. The Workmen's Compensation Law sets up safeguards around that situation. Any carrier has a right to object to a bill and if, in the particular case, it is the decision of the arbitrators that specialist care was not indicated, the fee will be in accordance with Item 9a."

We disagreed with this as it would completely nullify free choice. It is not within the province of an arbitration committee to decide the question of the necessity of specialist care. Every patient is entitled to this if he chooses to select a specialist. The arbitration procedure can only decide the value of a physician's services in accordance with the fee schedule. A literal interpretation of Miss Donlon's opinion would do away with free choice and create havoc with medical care in this State.

We wish to report that Mr. Archie O. Dawson, Moreland Commissioner, has been appointed by President Eisenhower to the Federal bench and assumed his new position June 1, 1954. Mr. Charles Hamilton, Jr., has been appointed Moreland Commissioner by Governor Dewey to succeed Mr. Dawson. Mr. J. Trubin is now acting as Counsel to the Commission.

Before Mr. Dawson was appointed judge, the hospitals and the medical profession were given time up to June 1 to comply with the provisions of the Workmen's Compensation Law with respect to the payment and division of fees for medical care in hospitals. With our assistance a uniform statement was drawn up by the county medical societies covering the proration of fees in hospital practice and also a statement concerning the authority of a physician to charge for services rendered under his active supervision.

It has recently come to our attention that the Department of Hospitals in the City of New York has issued General Order #580, dated July 28, 1954, governing Section 13-h of the Workmen's Compensation Law concerning medical treatment by hospitals. Among the pertinent items in this order is one to the effect that the physician in attendance in public hospitals must be the judge as to when the emergency of the case has terminated. In case of a dispute the matter shall be referred to the compensation board of the medical society of the county in which the hospital is located for immediate decision.

The order then goes on to state that the modification of the New York City Charter provides that members of the medical staff who are serving as part time clinicians may not charge patients for hospital medical services except that they may accept medical fees for services rendered to patients covered by the Workmen's Compensation Law. It is now the policy of the municipal hospitals, as outlined in the order, to accept only emergency workmen's compensation patients. Patients who do not require hospitalization shall be given emergency care only. Patients requiring hospitalization may be hospitalized only for the period of the emergency. The attending physician must decide when the emergency is terminated. It is the responsibility of the Department of Hospitals to provide medical care for employes of the City of New York under the Workmen's Compensation Law (Section 13-h), but such patients shall be discharged immediately after the conclusion of emergency treatment unless they execute in writing a waiver of their right to select their own physician. As the law provides, a municipal hospital may at its discretion admit a workmen's compensation case where the employer or insurance carrier has failed to provide hospitalization for the patient when requested to do so.

The new order provides that every compensation case shall be marked as such in the admitting room so that it may be so identified on the ward. The physician in charge of each service shall allocate the cases among the qualified visiting physicians, surgeons, and specialists on his service so as to assure an equitable distribution of cases subject to the special needs of the patients. The visiting physician, surgeon, or specialist to whom a case is so assigned shall be known as the "physician in attendance."

The physician in charge is reponsible for the proper care of all patients until the case is assigned to a physician in attendance and up to then shall be responsible for the filing of all required reports. The physician in attendance is primarily responsible for medical care rendered to all patients assigned to him. When the latter has concluded his period of service, the case assigned to him shall be reallocated by the physician in charge of the service to the incoming visiting physician, surgeon, or specialist in the same manner and subject to the same conditions required to be followed in the original allocation of the case. The superseding physician, surgeon, or specialist to whom a case is so allocated shall become the "physician in attendance," and shall, before beginning treatment of the patient, make a reasonable effort to communicate with the preceding physician in attendance to ascertain the patient's condition and shall also timely file all required attending physician's reports as required by the Workmen's Compensation Law.

In regard to forms the order states that the responsibility of preparing and filing attending physician's reports required under the Workmen's Compensation Law shall be that of the physician in attendance, provided such physician rendered the treatment himself or if it was rendered under his immediate supervision and *in his presence.* Employes specifically assigned to workmen's compensation cases shall assist the physician in attendance in the preparation of forms, if so requested, but the responsibility for all statements and opinions is that of the physician in attendance. In no instance shall compensation forms be signed by a physician who has *not* rendered medical care. When a salaried hospital physician who is licensed to practice medicine in the State of New York renders emergency treatment, other than under the immediate personal supervision of the physician in attendance, *he* shall sign the workmen's compensation forms.

In regard to billing, clerks will be assigned for the specific purpose of filing hospital bills for the following: (*a*) board and ward accommodations; (*b*) medical and surgical supplies; (*c*) nursing facilities; (*d*) all services rendered exclusively by or under the supervision of a salaried hospital physician on the hospital staff which are required in order to provide the emergency treatment authorized by Section 13-h of the Workmen's Compensation Law.

All bills under this latter item shall include the names and qualifications of all physicians and persons rendering such services. Comment: No mention is made as to payment for such services.

With respect to physicians' bills, physicians in attendance or physician consultants shall bill only for actual services rendered by them to the patient, and these bills shall be in accordance with the fee schedule or by agreement between the physician and the employer or carrier. Clerks assigned for the specific purpose, when requested, may assist the physician in preparing bills.

An intern or salaried hospital physician shall not bill or accept payment for medical services he has rendered to a patient.

With respect to this item referring to salaried physicians, we have already received a communication from the Anesthetists Association requesting a meeting to discuss its implications. This would apply especially to anesthetists, radiologists, pathologists, and other salaried physicians. The anesthetists are salaried licensed physicians. Under the Workmen's Compensation Law, as licensed physicians, they are entitled to bill for services to compensation claimants and to payment under the amendment to the New York City Charter which permits the payment of physicians for treatment rendered compensation claimants in city hospitals. The voluntary hospitals under the provisions of Section 13-c 2 are entitled to obtain a license to conduct an x-ray laboratory or bureau and bill for the services of a qualified salaried roentgenologist. It is quite conceivable that the municipality may, at the next session of the Legislature, press for legislation to include municipal hospitals in this section. This would have a profound effect upon services of salaried anesthetists, radiologists, and pathologists under the terms of their employment.

Section 13-d of the Workmen's Compensation Law concerning the splitting and distribution of fees is cited. This prohibits a physician from assigning his fees to the hospital. The order finally concludes by bespeaking strict compliance with the order by all physicians and employes of hospitals. In the event of duplication of charges by physicians and hospitals, the assigned clerk shall bring this to the attention of the medical superintendent.

We have again called to the attention of the chairman of the Workmen's Compensation Board the advisability of appointing an impartial committee to revise and edit the workmen's compensation fee schedule. From time to time we have drawn to her attention specific questions requiring revision, additions, corrections, etc.

We are confronted almost weekly with protests from specialists who complain about the inadequacy of the $3.00 fee for subsequent office visits. Recently we have received strong protests against the inadequacy of the fees paid for psychotherapy in compensation cases. A $3.00 fee is totally inadequate for follow-up treatment involving at least thirty to sixty minutes at each visit; many insurance carriers refuse to authorize a fee greater than that stipulated in the fee schedule. Many competent physicians are reluctant to accept patients at these substandard fees. We hope the chairman of the Workmen's Compensation Board will in the not too far distant future pay attention to our suggestions for fee schedule revisions.

Your director at the request of the President of the Essex County Medical Society participated in a special meeting of said county society called for Sunday morning, June 20, 1954, in Westport, New York, to iron out some difficulty between a member of the Society and the Republic Steel Corporation which conducts a small hospital and medical bureau in Mineville for its employes.

The report *was approved.*

Report of Delegates to the American Medical Association

Dr. Floyd S. Winslow chairman of the delegation, presented the following report: "The following represented our Society at the House of Delegates of the American Medical Association, June 21 to 24, inclusive, in San Francisco: Drs. W. P. Anderton, James R. Reuling, Carlton E. Wertz, Edward P. Flood, Herbert H. Bauckus, Thurman B. Givan, Harold F. R. Brown, Floyd S. Winslow, Ezra A. Wolff, J. Stanley Kenney, John J. Masterson, Maurice J. Dattelbaum, Andrew A. Eggston, Renato J. Azzari, Peter M. Murray, Peter J. Di Natale, Thomas M. d'Angelo.

"The delegation met Monday, June 21, from 9:10 until 9:45 A.M. Dr. Floyd S. Winslow was elected chairman.

"Mr. Royal Ryan, executive vice-president of the New York Convention and Visitors Bureau, addressed the delegation regarding our invitation for the American Medical Association to meet in New York City. He invited the delegation to luncheon Wednesday, June 23. This was enjoyed by your delegation and many other delegates.

"Dr. Louis H. Bauer explained to the delegation that the Council on Medical Services intended to advise stopping the use of the A.M.A. seal of acceptance by Blue Shield and Blue Cross Plans.

"Mr. Hodson, legal counsel of the American Medical Association, addressed the meeting in regard to the New York State resolution calling for changes of interpretations in the code of ethics. Present were Drs. Kenney, Masterson, Dattelbaum, Eggston, Azzari, Murray, Di Natale, Anderton, Wertz, Bauckus, Flood, Givan, Brown, and Wolff; excused were Drs. d'Angelo and Reuling.

"The delegation met again, Wednesday, June 23, from 1:35 until 1:50 P.M. Present were Drs. Kenney, Wolff, Azzari, Masterson, Bauckus, Murray, Dattelbaum, Winslow, Givan, d'Angelo, Flood, Eggston, Wertz, Brown, and Anderton; and by invitation, Dr. Redway, Mr. Farrell, and Mr. Miebach.

"It was decided to support Dr. Edward R. Cunniffe to succeed himself on the Judicial Council. However, this was impossible because Dr. Cunniffe's name was omitted from nomination by the president of the American Medical Association at Dr. Cunniffe's request.

"It was also voted to support Dr. Robert L. Novy, of Michigan, for member of the Council on Medical Service.

"For trustees to succeed themselves, the delegation agreed to support Dr. David Allman, of New Jersey, and Dr. Francis J. Blasingame, of Texas.

"We voted to support Dr. Floyd S. Winslow for member of the Council on Constitution and Bylaws.

"After discussion of candidates it was agreed that your delegates would vote according to their consciences for president and vice-president.

"Dr. Winslow was chosen to nominate Speaker James R. Reuling to succeed himself.

"Your delegation was instructed by the New York State House of Delegates to introduce three resolutions. All three were introduced under title by Dr. Anderton.

"The resolution requiring representation of non-university-affiliated hospitals on the American Medical Association Council on Medical Education and Hospitals was referred to the Reference Committee on Medical Education and Hospitals. This committee reported adversely, and the House rejected the resolution.

"The resolution regarding retirement benefits for physicians in the armed service was referred to the Reference Committee on Military Affairs, which did not approve on account of the complexity of the subject, present world conditions, and the unlikelihood of such proposed legislation being passed by the Congress. The House upheld its committee.

"The New York resolution regarding principles of medical ethics of the American Medical Association, after study by the Reference Committee on Miscellaneous Business, was referred to the Judicial Council, and a report requested at Miami, Florida, in November.

"You referred to your delegation a request from Dr. Herbert Berger, Richmond County, to have a resolution introduced, which advocated treatment of narcotic addicts by established or new clinics. Your delegation voted to have this resolution introduced by Dr. Eggston. The reference committee voted referral to the Board of Trustees. It was so voted by the House.

"The House of Delegates was entertained by the San Francisco Medical Society at a sumptuous banquet, Monday, June 21, and at other social gatherings.

"Dr. Winslow was re-elected a member of the Committee on Constitution and Bylaws, and Dr. Reuling was re-elected Speaker.

"Your delegates were conscientious in their attendance, and efficiently represented the Medical Society of the State of New York."

It *was voted* to adopt the report.

New Business

Sesquicentennial Celebration.—Dr. Anderton stated: "At a recent meeting of one of our committees a proposal was advocated that we have a special sesquicentennial committee. The Society is expecting to celebrate its sesquicentennial in 1957. I, therefore, move that the President be requested to appoint a sesquicentennial committee."

This *was voted*.

Death of Dr. John R. MacElroy.—"It is requested that the secretary be instructed to write a letter of sympathy to the family of Dr. MacElroy, of Saratoga County, who was the first of our distinguished fifty-year practitioners."

It was so *voted*.

Amendments to Principles of Professional Conduct

After discussion it *was voted* "that this Council recommends that these changes made in the *Principles of Professional Conduct* at the last meeting of the House of Delegates, be again considered at the next annual meeting of the House of Delegates, and that in the meantime they shall not become operative."

Increase in Membership To Be Sought.—Dr. Greenough stated: "We spend a great deal of time trying to pare our expenses, but I notice we have only between 21,300 and 21,600 members in our Society, out of about 30,000 physicians in the State. It would seem to me we might try to improve income by considering how to persuade more physicians to join the State Medical Society. I move that the Planning Committee take up the possibility of increasing the membership, through contact with the county societies."

Approval *was voted*.

Publicity for Income Needs.—Dr. Reuling stated: "A question was just raised here as to increasing our dues income, which I believe is a very important consideration, because from what I can tell by a study of this proposed budget it looks like we are going to be behind $35,000 even if three bureaus are operated as one unit, with the possibility of $55,000 if we do not. Even if we pare down some other things, it still looks like $30,000 or $40,000 in the red on this year's operation. I believe that with our expanded activities it is important for this Council to call the attention of the general membership to the probable necessity of raising the dues at some future time; whether it is next year or the year after, it is immaterial. I believe this Council should instruct the editor to write in the JOURNAL on this proposition to alert the membership at large. I think, if you wait until the time of the annual meeting and then ask for a raise of dues, you will get a lot of opposition because the delegates have not had a chance to consider it at home. I believe now is the time to start educating the membership to these things that the House of Delegates does, such as putting in a Bureau of Industrial Medicine and creating increasing needs, and if it is handled properly and our membership is informed ahead of time, you will not have as much opposition. I simply throw the thought out whether the members of the Council want to do anything with it or not. I believe that you should consider it and should lay the groundwork for some future raise in dues."

After discussion it *was voted* that the Treasurer be requested to prepare for publication an authoritative, factual statement of allocation of funds within the Society.

A New York landlord, impatient over restrictions imposed upon him by the rent controls, attempted to evict a tenant illegally. The knowing tenant replied with one of the shortest notes ever written. "Sir, I remain. Yours truly."—*Tonics and Sedatives, J.A.M.A., March 27, 1954*

NECROLOGY

Joseph Elias Braunstein, M.D., of Brooklyn, died on October 18 at the age of seventy-five. Dr. Braunstein graduated from New York University and Bellevue Hospital Medical School in 1908. He was a member of the Brooklyn Otolaryngological Society, the Brooklyn Ophthalmological Society, and was consultant in nose and throat at the Greenpoint Hospital. In 1912 Dr. Braunstein helped establish the Menorah Home for Aged and Infirm in Brooklyn, serving as president from 1925 until 1950. He retired from practice in 1951.

Dr. Braunstein belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John Bauer, M.D., of Astoria, died of a heart attack on September 27 while attending a patient in the Hospital for Joint Diseases. He was fifty-four years old. Dr. Bauer received his medical degree from the University of Pecs in Hungary in 1927. He was clinical assistant attending physician in arthritis at the Hospital for Joint Diseases. Dr. Bauer was a member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Frank Perrin Bayliss, M.D., of Syracuse, died on October 17 at the age of seventy-eight. Dr. Bayliss graduated from Syracuse University College of Medicine in 1905 and interned at the Rhode Island State Hospital. He had practiced in Utica and Remsen before his retirement. Dr. Bayliss belonged to the Oneida County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Thomas Joseph Cleary, M.D., of Brooklyn, died on July 24 at the age of sixty-eight. Dr. Cleary received his medical degree from Georgetown University Medical School in 1908.

Lewis Gregory Cole, M.D., of White Plains, died on October 16 at the age of eighty. Dr. Cole graduated from Columbia University College of Physicians and Surgeons in 1898. He was a Diplomate of the American Board of Radiology, a Fellow of the American College of Radiology, and a member of the American Roentgen Ray Society, the New York Roentgen Society, and the New York Academy of Medicine. Dr. Cole was consulting roentgenologist at the United Hospital, Port Chester, and Flower and Fifth Avenue Hospitals, New York City. He belonged to the Westchester County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Eliza A. Fancher Cottis, M.D., of Jamestown and Fort Lauderdale, Florida, died on October 4 in Jamestown at the age of seventy-seven. Dr. Cottis graduated from Cornell University Medical College in 1905. She had been retired for some time.

Thomas Jefferson Currie, M.D., of Geneva, died on October 2 at the age of ninety-two. Dr. Currie graduated from New York University Medical School in 1888. He was a member of the American Psychiatric Association and the Geneva Academy of Medicine. Dr. Currie had been on the staff of the Willard State Hospital from 1891 until he retired in 1932. He also served on the staff of the Geneva General Hospital. Dr. Currie belonged to the Seneca County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Floyd Howard Densmore, M.D., of Rochester, died suddenly on September 21 of a heart attack. He was forty-six years old. Dr. Densmore received his medical degree from the University of Michigan School of Medicine in 1933 and interned at the Rochester General Hospital. He was a Fellow of the American College of Surgeons and a member of the Rochester Academy of Medicine and the Rochester Pathological Society. Dr. Densmore was attending surgeon at the Rochester General Hospital. He belonged to the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Solomon M. Fialka, M.D., of Brooklyn, died on October 18 at his home at the age of sixty. He received his medical degree from Boston University School of Medicine in 1924. Dr. Fialka was assistant attending physician at the Maimonides Hospital.

Dr. Fialka belonged to the Kings County Medical Society and the Medical Society of the State of New York.

Abraham Fialko, M.D., of Rome, died on October 19 within hours of his brother, Dr. Solomon Fialka. Dr. Fialko was sixty-seven years old. He received his medical degree from the University of Bern, Switzerland, in 1931. A member of the American Association on Mental Deficiency and the Mohawk Valley Neuropsychiatric Society, Dr. Fialko was senior attending psychiatrist at the Rome State School.

John Thomas Fowkes, Sr., M.D., of La Fargeville, died on October 17 at his home at the age of eighty-seven. Dr. Fowkes received his medical degree from the University of Ontario in 1891 and had practiced for sixty-three years. One of the oldest practicing physicians in northern New York, he was associate attending staff physician at the Mercy and House of the Good Samaritan Hospitals. He had served for more than fifty years as health officer for the town of Orleans. Dr. Fowkes had been a member of the Jefferson County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Howard Fox, M.D., of New York City, died on October 19 at St. Clare's Hospital at the age of eighty-one. Dr. Fox graduated from Columbia University College of Physicians and Surgeons in 1898 and did postgraduate study in Berlin and Vienna. Formerly professor of dermatology at the Dartmouth Medical School, he also had been professor of dermatology and syphilology at the New York Polyclinic Medical School and Hospital and the New York University College of Medicine.

Dr. Fox was a Diplomate of the American Board of Dermatology and Syphilology. He was a member of the American Dermatological Association, the American Academy of Dermatology and Syphilology, the Society for Investigative Dermatology, the New York Academy of Medicine, the New York Dermatological Society, and the Manhattan Dermatological Society.

Formerly editor of the *Archives of Dermatology and Syphilology,* Dr. Fox was a founder of the American Board of Dermatology and Syphilology and the American Academy of Dermatology and Syphilology and had served as the first president of both.

He was consulting dermatologist to the Bellevue, Beth Israel, University, Willard Parker, Metropolitan, Knickerbocker, Manhattan Eye, Ear, and Throat, Lenox Hill, Lutheran, Union, Kings Park, and Flower and Fifth Avenue Hospitals. He was also a consultant at the St. Vincent's Hospital in Montclair and the Vassar Brothers Hospital in Poughkeepsie.

In 1938 Dr. Fox was president of the New York County Medical Society. He also belonged to the Medical Society of the State of New York and the American Medical Association.

Martin Friedrich, M.D., of Brooklyn, died on October 18 of a heart attack at the age of fifty-two. Dr. Friedrich graduated from Long Island College Hospital School of Medicine in 1925. He was a Diplomate of the American Board of Internal Medicine and a Fellow of the American College of Gastroenterologists. Dr. Friedrich was assistant attending physician at the Jewish Hospital and associate attending physician at the Jewish Hospital for Chronic Diseases.

Peter Angelo Gallo, M.D., of Brooklyn, died on September 21 at the age of forty-seven. Dr. Gallo graduated from New York Homeopathic Medical College in 1933. He was a member of the Pan American Medical Association, the Clinical Society of the New York Diabetes Association, and the Brooklyn Society of Internal Medicine.

Dr. Gallo was associate attending physician at Long Island College Hospital and assistant attending physician at the Methodist Hospital. He belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Isidor Graff, M.D., of Niagara Falls, died on September 20 in Meyer Memorial Hospital, Buffalo, at the age of forty-four. Dr. Graff graduated from the University of Buffalo School of Medicine in 1933. He belonged to the Niagara County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

David Gilbert Gregor, M.D., of Watertown, died on October 17 at the House of the Good Samaritan Hospital at the age of sixty-one. Dr. Gregor graduated from Columbia University College of Physicians and Surgeons in 1919 and interned at the New York Hospital and Lying-In Hospital. He was a Fellow of the American College of Surgeons and was consulting surgeon at the St. Lawrence State Hospital, chief of the surgical service at the Mercy Hospital, and attending surgeon at the House of the Good Samaritan Hospital.

President of the Jefferson County Medical Society in 1934, Dr. Gregor also belonged to the Medical Society of the State of New York and the American Medical Association.

Moses Herman, M.D., of New York City, died on October 20 in Montefiore Hospital at the age of sixty-eight. Dr. Herman graduated from Long Island College Hospital School of Medicine in 1909. He belonged to the New York County Medical Society and the Medical Society of the State of New York.

Orlando DuBois Ingalls, M.D., of Hurley, died on October 4 at Kingston Hospital at the age of seventy-five. Dr. Ingalls graduated from New York Homeopathic Medical College in 1903 and interned at the Cumberland Hospital. Before his retirement in 1951 he had been attending radiologist at the Kingston Hospital. A past president of the Ulster County Medical Society, Dr. Ingalls also had belonged to the Medical Society of the State of New York and the American Medical Association.

Arthur Merry Johnston, M.D., of Utica, died after a long illness on September 29. He was eighty years old. Dr. Johnston graduated from New York University Medical College in 1896 and interned at the City Hospital. He was honorary attending physician at the St. Elizabeth's Hospital. Dr. Johnston was honored by the Medical Society of the State of New York in 1948 for more than fifty years of active practice. He belonged to the Oneida County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Ernest Ellsworth Keet, M.D., of Jamaica, died while playing golf on October 5 at the age of seventy. Dr. Keet graduated from Cornell University Medical College in 1907 and interned at the Lincoln Hospital. He was a Fellow of the American College of Physicians. Dr. Keet was medical director and attending physician at the Jamaica Hospital and served as consultant to the Queens General Hospital. He was a member of the Queens County Medical Society and the Medical Society of the State of New York.

David Kuperstein, M.D., of Brooklyn, died of a heart attack on September 20 at the age of fifty-three. Dr. Kuperstein graduated from Long Island College Hospital School of Medicine in 1925 and interned at the Greenpoint Hospital. A Diplomate of the American Board of Obstetrics and Gynecology and a Fellow of the American College of Surgeons, he was a member of the American Academy of Obstetrics and Gynecology, the American Geriatrics Society, the Association of Military Surgeons of the United States, and the Brooklyn Gynecological Society.

Dr. Kuperstein was attending obstetrician and gynecologist at the Greenpoint Hospital and associate attending gynecologist at the Jewish Hospital of Brooklyn. From 1929 to 1946 he was an instructor in gynecology and obstetrics at the Long Island College of Medicine.

Dr. Kuperstein belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Julius Kurzrock, M.D., of Nashville, Tennessee, formerly of New York City, died on October 15 at the age of sixty-one. Dr. Kurzrock graduated from Fordham University School of Medicine in 1918 and interned at Harlem Hospital. He was a Diplomate of the American Board of Obstetrics and Gynecology and a member of the New York Academy of Medicine. Dr. Kurzrock had been associate attending obstetrician at the Polyclinic Hospital.

Morton Stuart Lane, M.D., of Buffalo, died on September 23 at the age of eighty-six. Dr. Lane received his medical degree from Trinity College of the University of Toronto, Canada, in 1894. He had practiced in Buffalo for forty years.

Joseph Zimmerman McDermott, M.D., of New York City, died on July 11 at the age of seventy-one. Dr. McDermott received his medical degree from Columbia University College of Physicians and Surgeons in 1905. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Gouverneur Morris Phelps, M.D., of South Ashfield, Massachusetts, formerly of New York City, died October 18 at the age of seventy-five. Dr. Phelps graduated from Columbia University College of Physicians and Surgeons in 1907 and was a Fellow of the American College of Surgeons. Before his retirement Dr. Phelps was on the staff of the Roosevelt Hospital and the Manhattan Eye, Ear, and Throat Hospital. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Antonio Pisani, M.D., of New York City, died on September 14 a few hours before he was posthumously named "Outstanding General Practitioner of the Year" by the Medical Society of the State of New York. Dr. Pisani was eighty-one years old. He graduated from Columbia University College of Physicians and Surgeons in 1896 and for fifty-eight years practiced medicine in the same office on New York City's lower East Side. Dr. Pisani served as a visiting physician at the Columbus Hospital from 1915 to 1948 and was president of the medical board from 1942 to 1944.

A member of the Medical Society of the State of New York since 1902, Dr. Pisani also belonged to the New York County Medical Society and the American Medical Association.

Joseph Michael Purcell, M.D., of Mechanicville, died on October 12 at his home at the age of eighty-three. Dr. Purcell graduated from New York Homeopathic School of Medicine in 1894. He served several terms as local health officer of Mechanicville. Dr. Purcell belonged to the Saratoga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Jonathan Savetsky, M.D., of the Bronx, died on August 11 at the age of forty-four. Dr. Savetsky received his medical degree from the University of Lausanne, Switzerland, in 1939 and interned at the Bronx Hospital. Dr. Savetsky was a member of the Bronx Otolaryngology Society. He was adjunct attending physician in ear, nose, throat, and bronchoscopy at the Bronx Hospital and associate attending ear, nose, and throat physician at the Daughters of Jacob Hospital.

Dr. Savetsky belonged to the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

William Schusterson, M.D., of New York City, was found dead in his office on October 18. He was fifty-four years old. Dr. Schusterson graduated from New York University and Bellevue Hospital Medical School in 1921.

Saul Sheifer, M.D., of New York City, died October 22 in Manhattan General Hospital after a long illness. He was seventy-one years old. Dr. Sheifer graduated from Long Island College Hospital School of Medicine in 1911. He served in World War I as a lieutenant in the U. S. Army Medical Corps.

Benjamin E. Sheitlis, M.D., of New York City, died in New York Hospital on October 17 at the age of seventy-three. Dr. Sheitlis graduated from Cornell University College of Medicine in 1903 and interned at the Beth Israel Hospital. Before his retirement twenty years ago for reasons of health, he had been chief of the outpatient surgical department and adjunct attending gynecologist at the Sydenham Hospital. He was a member of the New York County Medical Society and the Medical Society of the State of New York.

Harry Van Ness Spaulding, M.D., of New York City, died in Phoenix, Arizona, of a coronary attack on October 20 at the age of sixty-nine. Dr. Spaulding graduated from Cornell University College of Medicine in 1908 and interned at the St. Mary's Hospital for Children, New York Hospital, and the Lying-In Hospital. He was a Fellow of the American College of Surgeons and a member of the New York Academy of Medicine. A founder of the American Academy of Compensation Medicine, Dr. Spaulding also was a former president of the New York chapter of the Pan American Medical Association. He was attending surgeon at St. Clare's Hospital, consulting surgeon at the Columbus, North Hudson Hospitals in Weehawken, New Jersey, and the St. Francis Hospital in Port Jervis.

Dr. Spaulding was consulting orthopedic surgeon at the Manhattan General Hospital and the Municipal Sanitorium in Otisville. He had been regional medical director for several railroads and had been an impartial examiner of the Federal Compensation Bureau and the Workmen's Compensation Board of New York.

Dr. Spaulding belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

William Holmes Stewart, M.D., of New York City, died on October 12 at the age of eighty-six. Dr. Stewart graduated from New York University College of Medicine in 1891 and interned at the City Hospital. He was a Diplomate of the American Board of Radiology, a Fellow of the American College of Physicians, and a Fellow of the American College of Radiology. A past president of the American Gastroenterology Association, Dr. Stewart was also president of the American Roentgen Ray Society in 1922. He was a member of the New York Academy of Medicine.

Dr. Stewart had been professor of radiology at Columbia University College of Physicians and Surgeons. He retired from active practice about fifteen years ago but retained his post as consulting radiologist to the Lenox Hill and Long Island College Hospitals. During World War I he served as a major in the United States Army Medical Corps.

Dr. Stewart belonged to the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Jacob J. Sussman, M.D., of Brooklyn, died on July 12 at the age of sixty-six. Dr. Sussman graduated from Long Island College Hospital School of Medicine in 1911. He was associate attending otorhinolaryngologist at the Maimonides Hospital. Dr. Sussman belonged to the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

NEWS FROM THE MEDICAL SCHOOLS

Albany Medical College

Cancer Society Award—Grants totaling $15,365 have been awarded for the study of cancer by the New York State Division of the American Cancer Society. The grants will be under the direction of Dr. Kenneth B. Olson, head, of Oncology in the Department of Medicine, and will be used for the construction of two new pieces of equipment as well as for social work with cancer patients, the continuation of a cancer register at Albany Hospital, and the study of cytology, which is a renewal.

Cardiovascular Research Grant—An $8,000 grant for cardiovascular research has been awarded to the College by the United States Public Health Service. Dr. Matthew Levy, assistant professor of the Physiology Department, and Mrs. David Brind, research and teaching fellow in physiology, will direct the project specified in the gift.

Receives Grant—A new grant of $4,660 from the United States Public Health Service has been received by Dr. E. M. Bogdanove, Department of Anatomy, for research of the glandular and nervous system.

Grants—A grant totaling $50,000 for the purpose of aiding the school to expand and improve its teaching program has been received by the College. Part is designated for use in instruction in the prevention, diagnosis, and treatment of cardiovascular disease, and an equal amount has been given for aid in the teaching of technics of cancer treatment. These awards are made by the United States Public Health Service.

Liver Study—A grant of $14,230 has been awarded to the Department of Surgery from the United States Public Health Service. The money will be used for supplies and equipment and technical assistance in carrying out this research study.

Columbia University College of Physicians and Surgeons

Awarded—The Department of Physical Medicine and Rehabilitation has received a grant from the Lorenz Foundation, Inc., for "physiological studies of rest as a recovery from fatigue." The study will be under the direction of Dr. Robert C. Darling, professor of physical medicine and rehabilitation.

New York Medical College

Appointed—Dr. David Meyers, visiting physician at Metropolitan Hospital, director, Chest Clinic, Welfare Island Dispensary, adjunct professor of medicine, Polyclinic Post-Graduate Medical School, was appointed assistant clinical professor of medicine, New York City, in September.

New York University College of Medicine

Retired—Dr. William C. Von Glahn retired with the title of professor emeritus as professor and chairman of the Department of Pathology. Dr. Lewis Thomas, formerly professor of pediatrics and internal medicine, and American Legion Heart research professor, University of Minnesota Medical School, has been appointed to succeed Dr. Von Glahn.

Appointed—Dr. Gerhard W. E. Plaut has been appointed associate professor of biochemistry at the College.

Promoted—Dr. Milton Helpern, chief medical examiner of New York City, has been promoted to the rank of professor and chairman, Department of Forensic Medicine.

Awarded—Jerome Fabricant, class of 1956, won the 1954, $500 Jerry Price Memorial Prize which was awarded by the American League against Epilepsy. The winning essay appeared in the November issue of *Epilepsia*.

State University of New York College of Medicine at New York City

Research Society—A meeting of the Research Society was held in Hoagland Hall on October 13. J. B. Hamilton and M. Johansson, Department of Anatomy, discussed influence of sex chromosomes and castration upon life span in meal moths: animals in which the sex chromosomes are homogeneous in males and heterogeneous in females; C. H. Campbell, Department of Microbiology and Immunology, the antigenic role of the excretions and secretions of Trichinella spiralis in the production of immunity in mice; S. Weidmann, Department of Physiology and Pharmacology, the action of calcium ions and cocaine on the electrical properties of the heart, and a colloquium and demonstration was held by the Department of Physiology and Pharmacology.

Cornerstone Ceremony—The unveiling of the cornerstone at the College's new Basic Sciences Building on Clarkson Avenue in Brooklyn took place on October 21 with both President Dwight D. Eisenhower and Governor Thomas E. Dewey participating in the ceremony. Before Governor Dewey pulled the ceremonial cord, both he and President Eisenhower, who was a surprise guest, delivered short addresses to an audience of about 1,000 persons including faculty, students, and alumni of the College and representatives of affiliated hospitals and other interested groups.

Also participating in the ceremony were Dr. Carlyle Jacobsen, executive dean for medical education, who presided; Dr. Howard W. Potter, acting dean of the College; Mr. Charles Garside, chairman of the executive committee of the Board of Trustees; and Mr. Frank C. Moore, presiding officer of the Board of Trustees and former Lieutenant Governor of the State of New York.

New Hospital Affiliation—Affiliation of the College with the Jewish Chronic Disease Hospital at East 49th Street and Rutland Road for elective teaching of medical students has recently been approved. Electives to be taught at the Hospital are medicine, adult rehabilitation, and pediatric rehabilitation. Under the affiliation agreement, recommendations for appointment of chiefs of Hospital services affiliated with the College will be transmitted by the State University to the trustees of the Hospital for approval. This agreement brings the College's total number of hospital affiliations in Brooklyn to 13.

New Appointments—Dr. Walton Howard Marsh, formerly with the Crile V. A. Hospital in Cleveland, has been appointed associate professor of pathology at the College.

MEDICAL NEWS

Outstanding General Practitioner for 1954—The late Dr. Antonio Pisani of New York City was elected posthumously the "Outstanding General Practitioner for 1954" by the Council of the Medical Society of the State of New York on October 14. Dr. Pisani had practiced medicine in the lower East Side of New York City for fifty-eight years and had been a member of New York County Medical Society for fifty-two years.

Dr. Pisani received his degree from Columbia University's College of Physicians and Surgeons in 1896. For thirty-three years he was a visiting physician at Columbus Hospital and was closely associated with Mother Cabrini, founder of the Hospital. From 1942 to 1944 he was a member of the Medical Board of Columbus Hospital. In 1913 Dr. Pisani was honored by Victor Emmanuel III, King of Italy, with the title of Chevalier of the Crown of Italy for his unselfish work to promote educational standards and opportunities among children of immigrants.

Just prior to his death, Dr. Pisani was honored by the East River Savings Bank in recognition of his fifty years as a trustee.

African Safaris and Research Expeditions—The African Safaris and Research Expeditions has announced the first medical scientific expedition through Africa which will depart from New York City on January 4, 1955. The group will be limited to members of the American Medical Association and their immediate families. Limited to 30 persons, the expedition will visit Hospital for Europeans and Laboratory of Tropical Research in Elizabethville, South African Institute for Medical Research in Johannesburg, Poliomyelitis Research Foundation and Serum Farm in South Africa, University of Cape Town Medical and Research Centers, Cape Town Groote Schuur Hospital, Medical School for natives, and the Princess Astrid Institute of Tropical Medicine in Leopoldville, and field jungle units which will devote their attention exclusively to research in tropical endemic diseases.

Two of the most interesting features of the trip will be an invitational visit to the annual meeting of the East African Association of Surgeons at Kampala, Uganda, January 25 and 26, and a specially arranged seminar at the Institute of Tropical Medicine, Antwerp, Belgium. The expedition will take seventy-three days and at the end of the tour, a full 16-mm. color sound movie will be available to the members of the tour for showing to state and county medical societies.

Further information may be obtained directly from African Safaris and Research Expeditions, P.O. Box 144, Riverside, California, or Sabena, Belgian Airline Office, 422 Madison Avenue, New York 17, New York, MUrray Hill 8-5757.

Robert Roesler de Villiers Foundation Inc.—Contest III of the Robert Roesler de Villiers Foundation Inc. was opened October 20, 1954. Papers will be received up to October 20, 1955, and copies of the detailed offer can be obtained from the office of the Foundation, 1172 Park Avenue, New York 28, New York.

The Foundation initiated the contest to give recognition and help along significant discoveries concerning the knowledge and treatment of leukemia and allied diseases. An award of $1,000 will be given for the most important paper which is deserving and makes a significant contribution to the knowledge of the nature, causes, origin, treatment, or cure of acute leukemia and allied conditions, and will be increased to $1,500 if the paper is found to be of outstanding importance, and should such paper describe a preventive measure, a cure or effective therapy, an award of $5,000 will be made.

Authors residing in the countries of the Western Hemisphere are requested to submit five easily legible copies of each paper to Sol Haberman, Ph.D., Secretary-General, International Society of Hematology, 3600 Gaston Avenue, Dallas, Texas. Entries should be written in English and accompanied by five English translations or at least five detailed English summaries, and must arrive not later than October 20, 1955, the anniversary of Robert Roesler de Villiers death.

Papers to be considered for the contest shall have been either published or accepted for publication by a reputable journal in or outside of the United States between October 20, 1952, and October 20, 1955, but not prior to October 20, 1952. Exceptional unpublished prize-winning papers submitted will be withheld from publication if requested by the author or authors for one year after April 30, 1956, provided the desire has been expressed by the author or authors to publish it themselves at a meeting of a scientific society or otherwise during that one-year period.

Mississippi Valley Medical Society 1951 Essay Contest—The fifteenth annual essay contest of the Mississippi Valley Medical Society will be held in 1955. A cash prize of $100, a gold medal, and certificate of award for the best unpublished essay on any subject of a general medical interest, including medical economics and education, and practical value to the general practitioner of medicine will be presented to the winning essay.

Contestants must be members of the American Medical Association who are residents and citizens

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[Continued from page 3290]

of the United States. The award will be presented at the twentieth annual meeting of the Society which will be held at the Jefferson Hotel, St. Louis, Missouri, September 28, 29, 30, 1955.

All contributions shall be typewritten in English in manuscript form, submitted in five copies not to exceed 5,000 words, and must be received not later than May 1, 1955. Further details may be obtained by writing to Dr. Harold Swanberg, secretary, Mississippi Valley Medical Society, 209-224 W.C.U. Building, Quincy, Illinois.

Ciba Foundation, London—The Trustees of the Ciba Foundation for the promotion of international cooperation in medical and chemical research, wishing to encourage well-conceived research relevant to basic problems of aging, invite candidates to submit work in the field for "awards" for 1954 to 1955. Details of the conditions may be obtained on application to G. E. W. Wolstenholme, director and secretary to the Executive Council, Ciba Foundation, 41, Portland Place, London, W.1, England.

Five awards of an average value of £300 each are available and the announcement of awards will be made in July, 1955. Entries must be received by not later than February 28, 1955, and will be judged by an independent international panel of distinguished scientists who will advise the executive council on their findings and will also have power to recommend variation in the size and number of the awards according to the standard of entries.

In making the awards preference will be given to younger workers. The work submitted should be unpublished; may be under consideration for publication at the closing date for entries; may be in the candidate's own language but a summary in English not exceeding 500 words must be attached. Where there is one or more coauthor, the name of the leading author should be indicated; it is to him that the award will normally be made, and it will be left to his discretion to share this award appropriately with his coauthors.

Department of Health, Education, and Welfare—A competitive examination for appointment of Medical Officers to the Regular Corps of the United State Public Health Service will be held in various places throughout the country on February 15, 16, and 17, 1955. Basic requirements for the openings, assistant surgeon and senior assistant surgeon, are United States citizenship, at least twenty-one years of age, graduation from a recognized school of medicine. Applicants for assistant surgeon must have at least seven years of collegiate and professional training and appropriate experience, and for senior assistant surgeon, at least ten years of collegiate and professional training and appropriate experience.

Entrance examinations will include an oral interview, physical examination, and comprehensive objective examinations in the professional field. Application forms may be obtained by writing to the Chief, Division of Personnel, Public Health Service, Department of Health, Education, and Welfare, Washington 25, D.C. Completed application forms must be received in the Division of Personnel no later than January 12, 1955.

Livingston County Medical Society—The officers elected to serve for the Livingston County Medical Society on October 20 were: *president*—Dr. Emerson Learn, Mt. Morris; *vice-president*—Dr. Laverne G. Wagner, Dansville; *secretary-treasurer*—Dr. Charles Greenberg, Sonyea; and to the board of censors—Dr. V. I. Bonafede, Sonyea.

Fourth District Branch—Election of officers for the Fourth District Branch was held on October 21. The following doctors were elected: *president*—Dr. Alfred A. Harmann, Malone; *first vice-president*—Dr. Leonard J. Schiff, Plattsburg; *second vice-president*—Dr. Roman R. Violyn, Amsterdam; *secretary*—Dr. Milton Greenberg, Hudson Falls; and *treasurer*—Dr. Arthur Q. Penta, Schenectady. Assumption of office will take place following the adjournment of the 1955 House of Delegates, and term of office will be for two years.

Meetings—Past

American Medical Writer's Association

New York State doctors elected by the American Medical Writers' Association at their eleventh annual meeting held in Chicago in September were Dr. Alexander B. Gutman, professor of medicine, Columbia University, first vice-president, and Dr. Charles D. Marple, medical director, American Heart Association, director. At the meeting it was also announced that the University of Oklahoma School of Journalism had joined with the Universities of Illinois and Missouri in establishing a four-year course in medical journalism and medical writing.

Pan-Pacific Surgical Association

The sixth Congress of the Pan-Pacific Surgical Association was held in Honolulu, October 7 through 18. New York State doctors who spoke were: Dr. J. William Hinton, Dr. Herbert Willy Meyer, and Dr. George T. Pack at the section on general surgery; Dr. John Conley at the section on otolaryngology; Dr. Jere W. Lord, Jr., at the cardiovascular section.

Long Island Psychiatric Society

Dr. Henry A. Davidson, assistant superintendent, Essex County Hospital, New Jersey, addressed the members of the Long Island Psychiatric Society at the Veterans Administration Hospital, Northport, Long Island, on October 19. Dr. Davidson spoke on "The Psychiatrist as an Expert Witness."

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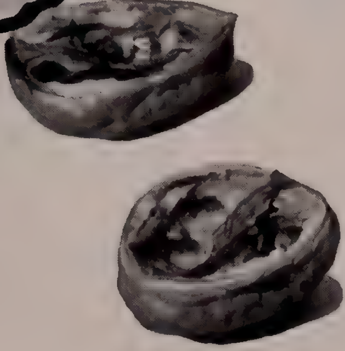

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[Continued from page 3292]

New York Academy of Medicine

"Infections and Their Management" was the theme of the twenty-seventh annual graduate fortnight of the New York Academy of Medicine which was held from October 18 to 29. New York State doctors who participated in the Fortnight were:

Drs. Charles G. Adsit, Jr., Albert H. Aldridge, J. Burns Amberson, and Arthur F. Anderson, New York City; Dr. Alfred Angrist, Jamaica; Drs. Emanuel Appelbaum and Alvan L. Barach, New York City; Dr. Charles Begg, Port Washington; Drs. Carl A. Berntsen, Jr., F. J. Borrelli, David M. Bosworth, Harold W. Brown, Morton S. Bryer, Joseph H. Burchenal, Aaron D. Chaves, Joseph G. Chusid, Anthony C. Cipollaro, Frank C. Combes, New York City; Dr. James F. Connell, Jr., Staten Island; Drs. James P. Croce, Douglas Damrosch, and C. G. de Guiterrez-Mahoney, New York City; Dr. N. Diamond, Freeport; Dr. John A. Di Fiore, New York City; Dr. Dominick J. Di Maio, Brooklyn; Drs. A. M. Donnenfeld, Henry L. Dorfmann, Morton H. Edelman, and Ludwig W. Eichna, New York City; Dr. F. P. Ferrer, Brooklyn; Drs. Joseph W. Fielding and Charles K. Friedberg, New York City; Dr. Raymond Gettinger, Flushing; Drs. Frank Glenn, David V. Habif, John E. Hammett, Franklin M. Hanger, Norman L. Higinbotham, Horace L. Hodes, George T. Hoffmann, Frank L. Horsfall, Jr., Edward L. Howes, Julia M. Jones, Samuel Karelitz, B. H. Kean, T. J. Kirwin, Yale Kneeland, Jr., Jerome L. Kohn, Saul Krugman, John L. Lattimer, H. S. Lawrence, and David Lehr, New York City; Drs. Morris Leider, Perrin H. Long, and Elmer H. Loughlin, Brooklyn; Dr. F. Lovelock, Flushing; Drs. Herbert C. Maier, Alexander T. Martin, W. Ross McCarty, Walsh McDermott, Currier McEwen, Thomas H. McGavack, Rustin McIntosh, George W. Melcher, Jr., Frank L. Meleney, W. L. Mersheimer, and Harry Most, New York City; Dr. W. G. Mullin, Brooklyn; Drs. Peter Marshall Murray, Carl Muschenheim, G. R. Nagamatsu, Carl T. Nelson, Girard Oberrender, B. J. Pisani, Joseph Post, Paul Reznikoff, Charles A. Ribaudo, Dickinson W. Richards, Sydney J. Ritter, Harry M. Rose, New York City; Dr. Bernard Roswit, Bronx; Drs. Francis Roth, Louis M. Rousselot, Henry G. Schaffeld, I. M. Scheinker, New York City: Dr. G. J. Seaman, Brooklyn; Dr. David Seegal, New York City; Dr. H. Shatin, Bronx; Drs. Ned Shnayerson, Howard B. Shookhoff, Solomon Silver, William Silverman, M. E. Silverstein, Irwin Sobel, Hamilton Southworth, Clifford L. Spingarn, Philip M. Stimson, New York City; Dr. Gene H. Stollerman, Irvington; Drs. M. L. Stone, William S. Tillett, E. Alphonse Timpanelli, Ralph Tompsett, Alfred J. Vignec, B. J. Wattiker, and Louis Weinstein, New York City; Dr. Julius Wolf, New Hyde Park; Dr. Robert L. Yeager, Pomona; Dr. M. Ziff, New York City, and Dr. Harry Zimmerman, Bronx.

Albany County Medical Society

The October meeting of the Albany County

Medical Society was held on October 26 at the University Club. Dr. Sydney S. Gellis, assistant professor of pediatrics, Harvard Medical School, spoke on "Recent Advances in Pediatrics."

Chemung County Chapter: Academy of General Practice and Chemung County Medical Society

"The Use of the Laboratory in Clinical Medicine" was presented by Dr. Milton Bohrod, director of laboratories, Rochester General Hospital, at a meeting of the Chemung County Chapter of the Academy of General Practice and the Chemung County Medical Society on October 27.

This program was arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

Schenectady County Medical Society

The regular meeting of the Schenectady County Medical Society was held on November 2 at the Mohawk Gulf Club. Dr. Emory Burnett, professor of surgery, Temple University Medical School, and director, Department of Surgery, Temple University Hospital, Philadelphia, presented a paper on "Gastrointestinal Bleeding."

Broome County Medical Society

Speakers at the Cardiac Teaching Day of the Broome County Medical Society on November 4 were: Dr. J. Scott Butterworth, assistant professor of medicine, New York University Post-Graduate Medical School, who discussed "Activity versus Inactivity in the Treatment of Myocardial Infarction and Failure of the Circulation"; Dr. Harry Gold, professor of clinical pharmacology, Cornell University Medical College, who discussed "Management of Congestive Failure"; Dr. William J. Messinger, assistant professor of clinical medicine, New York University College of Medicine, who discussed "Cardiac Emergencies, Including Cardiac Arrhythmias"; and Dr. Charles P. Bailey, Bailey Thoracic Clinic, Philadelphia.

The program was arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

State University of New York College of Medicine at New York City

The nineteenth Adam M. Miller Memorial Lecture was delivered at the State University College of Medicine at New York City by Dr. W. F. Hamilton, professor of physiology, Medical College of Georgia, on November 5. Dr. Hamilton discussed "The Physiology of Congestive Failure."

American College of Chest Physicians

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[Continued on page 3296]

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[Continued from page 3295]

sored by the Council on Postgraduate Medical Education, American College of Chest Physicians, with the cooperation of the New York State Chapter of the College and the members of the faculties and staffs of the medical schools and hospitals of New York City, was held at the Hotel New Yorker, November 8 through 12.

Participating doctors were: Dr. J. Winthrop Peabody, Georgetown University School of Medicine, Washington, D.C.; Dr. David M. Spain, assistant professor, College of Physicians and Surgeons, Columbia University; Dr. George Leiner, associate attending physician, Montefiore Hospital, and consultant in pulmonary physiology, Veterans Administration Hospital, East Orange, New Jersey; Dr. Henry G. Schaffeld, assistant visiting physician, chest service, Bellevue Hospital, and assistant attending in medicine, Roosevelt Hospital; Dr. Morton Galdston, assistant professor of medicine, New York University College of Medicine; Dr. Francis J. Lovelock, chief, pulmonary disease section, Veterans Administration Hospital; Dr. Daniel S. Lukas, assistant professor of medicine, Cornell University Medical College, director, cardiopulmonary laboratory, and assistant attending physician, New York Hospital, and assistant visiting physician, Second (Cornell) Medical Division, Bellevue Hospital.

Also: Dr. Harry Golembe, assistant clinical professor of medicine, New York Medical College, Flower and Fifth Avenue Hospitals, and roentgenologist, Liberty Maimonides Hospital and Grossinger Clinic, Liberty; Dr. Arthur J. Cracovaner, clinical professor of otorhinolaryngology, Postgraduate Medical School, New York University—Bellevue Medical Center; Dr. Hyman E. Bass, associate in medicine, Albert Einstein College of Medicine; Dr. Israel Steinberg, assistant clinical professor of medicine and radiology, Cornell University Medical College, and assistant attending physician and radiologist, New York Hospital; Dr. James S. Edlin, associate clinical professor of medicine, New York Medical College; Dr. Oscar Auerbach, chief, Laboratory Service, Veterans Administration Hospital, East Orange, New Jersey, and associate professor of pathology, New York Medical College; Dr. Milton I. Levine, assistant professor of pediatrics, Cornell University Medical College, and associate attending pediatrician and director, Children's Pulmonary Clinic, New York Hospital.

Also: Dr. Robert G. Bloch, chief, Division of Pulmonary Diseases, Montefiore Hospital, and clinical professor of medicine, Columbia University; Dr. Arthur H. Aufses, attending thoracic surgeon, Montefiore Hospital; Dr. J. Maxwell Chamberlain, associate surgeon, Columbia University College of Physicians and Surgeons, and associate visiting, Bellevue Hospital, attending thoracic surgeon, Roosevelt Hospital; Dr. Cranston W. Holman, associate professor of clinical surgery, Cornell University Medical College, and director, Second Surgical Division, Bellevue Hospital; Dr. Julia M. Jones, visiting physician, Chest Service, Bellevue Hospital, Columbia University Division, and assistant professor of medicine, College of Physicians and Surgeons, Columbia University; Dr. Morris Rubin, assistant professor of surgery, Albert Einstein College of Medicine.

Also: Dr. Arthur M. Master, cardiologist, Mount Sinai Hospital, and associate clinical professor of medicine, College of Physicians and Surgeons, Columbia University; Dr. Charles E. Kossmann, associate professor of medicine, New York University College of Medicine, visiting physician, Bellevue Hospital, attending physician in cardiovascular diseases, Lenox Hill Hospital; Dr. George P. Robb, attending physician, Fourth Medical Service, Bellevue Hospital, and consultant in cardiology to the Surgeon in General, United States Army; Dr. Arthur Grishman, assistant attending, Department of Cardiology, Mount Sinai Hospital; Dr. William Dock, professor of medicine, State University of New York College of Medicine at New York City.

Also: Dr. J. Scott Butterworth, associate professor of medicine, New York University Postgraduate Medical School, and visiting physician, Fourth Medical Division, Bellevue Hospital; Dr. Sigmund A. Brahms, radiologist, Mount Sinai Hospital; Dr. Milton Mendlowitz, associate attending physician, Mount Sinai Hospital; Dr. Quentin B. Deming, assistant professor of medicine, College of Physicians and Surgeons, Columbia University; Dr. Arthur M. Fishberg, director of medicine, Beth Israel Hospital; Dr. Richard E. Lee, assistant professor of clinical medicine, and physician-in-chief, Hypertension Clinic, New York Hospital-Cornell Medical Center; Dr. George A. Perera, associate professor of medicine, Columbia University College of Physicians and Surgeons; Dr. Nathaniel E. Reich, assistant professor of clinical medicine, State University of New York College of Medicine at New York City, and cardiologist, Jewish Hospital for Chronic Diseases, and attending physician, Unity Hospital, Brooklyn; Dr. Mark Ravitch, director, Department of Surgery, Mount Sinai Hospital.

Also: Dr. Jere W. Lord, Jr., professor of clinical surgery, New York University Postgraduate Medical School, and attending surgeon, University Hospital; Dr. Samuel A. Thompson, associate professor of surgery, New York Medical College, attending surgeon, Flower and Fifth Avenue Hospitals, and director, Thoracic Surgery, Metropolitan Hospital; Dr. Donald A. Davis, assistant professor of clinical surgery, New York University Postgraduate Medical School; Dr. Alfred S. Dooneief, physician-in-charge, Montefiore Hospital, Westchester Division, and attending physician, Montefiore Hospital, and lecturer in medicine, Columbia University.

Also: Dr. Edward H. Robitzek, attending physician, Sea View, Richmond Memorial, Staten Island Hospitals, and consulting physician, St. Vincent's Hospital, Staten Island; Dr. Ralph R. Tompsett, associate professor of clinical medicine, Cornell University Medical College; Dr. Robert L. Yeager, medical director, Summit Park Sanatorium, and consulting physician, Good Samaritan, New York

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State Rehabilitation, Rockland State, Letchworth Village, and Nyack Hospitals; Dr. David Ulmar, associate professor of clinical medicine, New York University Postgraduate Medical School; Dr. Edgar Mayer, clinical professor of medicine, New York University Postgraduate Medical Center; Dr. Leopold G. Koss, director of cytology and assistant attending pathologist, Memorial Center for Cancer and Allied Diseases, and assistant professor of clinical medicine, Memorial Center for Cancer and Allied Diseases, and assistant attending physician, New York Hospital; Dr. Herbert C. Maier, director of surgery, Lenox Hill Hospital, and assistant clinical professor of surgery, College of Physicians and Surgeons, Columbia University; Dr. James J. Nickson, chairman, Department of Radiation Therapy, Memorial Center for Cancer and Allied Diseases.

Also: Dr. Bernard Roswit, chief, Radiotherapy Department, and director, Radioisotope Unit, Veterans Administration Hospital, Bronx, and visiting consultant radiologist, New York University-Bellevue Medical Center; Dr. Arthur Purdy Stout, professor of surgery, emeritus, Columbia University, consulting surgical pathologist, Presbyterian Hospital, and consulting pathologist, Francis Delafield Hospital; Dr. Lloyd F. Craver, attending physician, Memorial Center for Cancer and Allied Diseases, and professor of clinical medicine, Cornell University Medical College; Dr. William G. Cahan, assistant attending surgeon, Thoracic Service, Memorial Hospital, and instructor in surgery, Department of Surgery, Cornell University Medical College; Dr. Henry D. Diamond, assistant attending surgeon, Thoracic Surgeon, Thoracic Service, Memorial Hospital, instructor in surgery, Department of Surgery, Cornell University Medical College.

Also: Dr. W. P. Laird Myers, assistant professor of medicine, Sloan-Kettering Division, Cornell University Medical College, assistant attending physician, Memorial Hospital; Dr. Leonard Greenburg, associate clinical professor of industrial medicine, New York University-Bellevue Medical College, commissioner, Department of Air Pollution Control, City Of New York; Dr. H. Easton McMahon, assistant clinical professor of cardiology, New York Polyclinic Postgraduate Medical School; Dr. Hyman Alexander, assistant clinical professor of medicine, New York University Postgraduate Medical School, director, Chest Service, Willard Parker Hospital, and visiting physician, Sea View Hospital; Dr. Alvan L. Barach, clinical professor of medicine, College of Physicians and Surgeons, Columbia University, and associate attending physician, Presbyterian Hospital; Dr. Hylan A. Bickerman, associate in medicine, College of Physicians and Surgeons, Columbia University, and Research Fellow, Columbia Research Division, Goldwater Memorial Hospital, and assistant in medicine; Presbyterian Hospital.

Also: Dr. Gustav J. Beck, instructor in medicine, Columbia University; Dr. Louis A. Scarrone, Research Fellow, First Division (Columbia University) Research Service, Goldwater Memorial Hospital, and assistant in medicine, Columbia University; Dr. Virginia Apgar, professor of anesthesiology, College of Physicians and Surgeons, Columbia University, clinical director, Anesthesia Service, Columbia-Presbyterian Medical Center; Dr. Emil A. Naclerio, associate-in-charge, Thoracic Surgery, Harlem Hospital, and director, Thoracic Surgery, Columbus Hospital; Dr. Elliott S. Hurwitt, chief, Surgical Division, Montefiore Hospital, and clinical professor of surgery, Columbia University; Dr. Houck Bolton, thoracic surgeon, and Dr. Charles P. Bailey, director, thoracic surgery, Hahnemann Medical College, Philadelphia; Dr. George Humphreys, II, attending surgeon and director, Surgical Division, Presbyterian Hospital.

Also: Dr. Ralph A. Deterling, associate professor of surgery, College of Physicians and Surgeons, associate attending surgeon, Presbyterian Hospital; Dr. Foster Murray, director emeritus, Tuberculosis Service, Kingston Avenue Hospital, Brooklyn; Dr. Mortimer E. Bader, research assistant, Department of Medicine, Mount Sinai Hospital; Dr. Joseph Harkavy, consulting allergist, Mount Sinai Hospital, head, allergy service, Montefiore Hospital; Dr. Eli H. Rubin, professor of medicine, Albert Einstein College of Medicine, Yeshiva University; Dr. Maurice S. Segal, clinical professor of medicine, Tufts College Medical School, and director, Department of Inhalational Therapy, Boston City Hospital, Boston; Dr. Arthur Q. Penta, director, Department of Bronchoesophagology, Ellis and St. Clare's Hospitals, Schenectady, and visiting lecturer, Department of Medicine, Temple University Medical School, Philadelphia; Dr. Coleman B. Rabin, assistant clinical professor of medicine, Columbia University, and Dr. Charles E. Hamilton, chief, Chest Service, Open Division, Kings County Hospital, Brooklyn.

New York Tuberculosis and Health Association

The annual conference of the New York Tuberculosis and Health Association was held November 10 at the Hotel Statler, New York City. Among the New York State doctors taking part were: Dr. Frances Lansdown, visiting physician, Bellevue Hospital; Dr. Leona Baumgartner, Commissioner of Health of New York City; Dr. Basil C. MacLean, Commissioner of Hospitals; Dr. Carl Muschenheim, Cornell University Medical College; Dr. Arthur B. Robins, director, Bureau of Tuberculosis, Department of Health, and director, Division of Tuberculosis, Department of Hospitals, and Drs. Oscar Auerbach, J. Maxwell Chamberlain, Edward H. Robitzek, Ralph R. Tompsett, and Robert L. Yeager.

Steuben County Medical Society

"Rheumatic Fever; Rheumatic Heart Disease" was the subject of a talk given by Dr. Howard A. Joos, instructor in pediatrics, University of Rochester School of Medicine and Dentistry, and assistant pediatrician, Strong Memorial Hospital, at a meet-

[Continued on page 3300]

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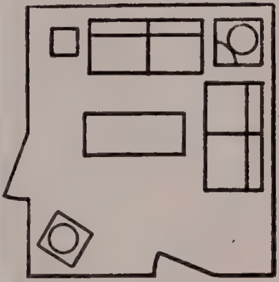

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[Continued from page 3298]

ing of the Steuben County Medical Society on November 11.

The program was arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

Mount Sinai Hospital of New York

The twelfth annual Bela Schick Lecture was delivered by Dr. Milton J. E. Senn, Sterling Professor of Pediatrics and Psychiatry, Yale University, on November 12. Dr. Senn spoke on "The Yale Developmental Examination, Its Origin, Meaning, and Usefulness."

A clinical conference on "Management of Hypertension" was held at the Mount Sinai Hospital on November 15. Dr. Milton Mendlowitz gave the introductory remarks on mechanism, Dr. Alexander B. Gutman discussed "Sodium Depletion"; Drs. Gerald Brill and Albert D. Parets, "Antihypertensive Drugs: (*a*) Rauwolfia Derivatives" (*b*) Drs. Amos Lieberman and Raymond S. Megibow, "Protoveratrine and Apresoline," and Drs. Bernard Levine and Milton Mendlowitz, "Ganglion Blocking Drugs."

The next clinical conference will be held Monday, December 20. The conferences start promptly at 8:30 P.M. and are held in the Blumenthal Auditorium which is entered through the Hospital gardens on Fifth Avenue and 99th Street.

United States Army Reserve, Fort Hamilton

"The Selection of Psychotherapeutic Methods in Emotional Disorders" was discussed on November 16 by Dr. Maximilian Silbermann, associate attending neurologist, Neurological Institute, Columbia-Presbyterian Medical Center, and assistant professor of clinical neurology, College of Physicians and Surgeons, Columbia University, at a conference held by professional officers of the 344th General Hospital, United States Army Reserve at Fort Hamilton, Brooklyn.

Kings County Radiological Society

A meeting of the Kings County Radiological Society was held on November 18. Dr. Jacob R. Freid, attending radiation therapist, Montefiore Hospital and Bronx Hospital, discussed "Experience at the Montefiore Hospital with Cobalt 60 Beam Teletherapy Unit in the Treatment of Cancer," and Dr. Sidney Rubenfeld, director of radiation therapy, Bellevue Hospital, and professor of clinical radiology, New York University College of Medicine, spoke on "Two Million Volt X-Ray Therapy." Dr. H. I. Teperson, attending radiation therapist, Beth El Hospital, and director of radiology, Brooklyn Hebrew Hospital, opened the discussion.

Oneida County Academy of General Practice

Dr. Edward H. Townsend, instructor in pediatrics, University of Rochester School of Medicine and Dentistry; Dr. William W. Howe, Jr., instructor in orthopedic surgery, University of Rochester School of Medicine and Dentistry, and Dr. Lawrence K. Pickett, clinical assistant professor of surgery, State University of New York College of Medicine at Syracuse, were participants in a symposium on pediatrics in Utica on November 18.

This program was sponsored by the Utica Academy of Medicine and the Oneida County Chapter of the Academy of General Practice and arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health, as postgraduate education.

Kings County Pediatric Section

The Pediatric Section of the Medical Society of the County of Kings and Academy of Medicine of Brooklyn presented Dr. Leo M. Davidoff, professor and chairman, Department of Surgery, Albert Einstein College of Medicine, and director of surgery and chief of neurosurgery, Bronx Municipal Hospital, and neurosurgeon, Mount Sinai Hospital, New York City, and Dr. Bernard Epstein, chief of radiology, Long Island Jewish Hospital, New Hyde Park, who spoke on "The X-Ray Diagnosis of Lesions of the Brain in Children," at their meeting in November.

Meetings—Future

St. Francis Hospital and Sanatorium for Cardiac Children

A group of seminars on "Heart Disease" was started on November 9 with the "Medical Aspects of Mitral Commissurotomy" presented. The following dates and subjects will complete the group: December 14, 1954—"Electrolyte Problems in Congestive Heart Failure"; January 11, 1955—"Anesthesia in Cardiovascular Surgery"; February 8, 1955—"Audiovisual Aids in Cardiac Auscultation"; March 8—"The Management of Disorders in Cardiac Rhythm"; April 12—"Surgical Aspects of Congenital Heart Disease"; and May 10—"The Surgery of Acquired Heart Disease."

Participating faculty of the seminars includes: Dr. Louis A. Soloff, clinical professor of medicine, Temple University School of Medicine and Hospital, Philadelphia; Dr. Louis Leiter, chief, medical division, Montefiore Hospital, clinical professor of medicine, College of Physicians and Surgeons, Columbia University; Dr. J. Scott Butterworth, associate professor of medicine, New York University-Postgraduate Medical School; Dr. Harry Gold, professor of clinical pharmacology, Cornell University Medical College, attending physician-in-charge, cardiovascular research unit, Beth Israel Hospital, attending physician (cardiology), Hospital for Joint Diseases, and managing editor, Cornell Conferences on Therapy; Dr. Robert E. Gross, Ladd Professor of Children's Surgery, Harvard Medical School, surgeon-in-chief, The Children's

[Continued on page 3302]

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[Continued from page 3300]

Hospital, Boston, Massachusetts; and Dr. Robert P. Glover, chief, thoracic and cardiac surgery, Presbyterian, Episcopal, Fitzgerald Mercy and Lakenau Hospitals, and St. Christopher's Hospital for Children, clinical professor of thoracic surgery, Hahnemann Medical College and Hospital, director, Thoracic and Cardiovascular Research Laboratories, Presbyterian Hospital, Philadelphia.

The seminars will be held on the second Tuesday of each month from 10 A.M. to 12 NOON, in the Lecture Hall of St. Francis Hospital. Further information may be obtained by writing to the Reverend Mother Superior, F.M.M., superintendent, St. Francis Hospital and Sanatorium for Cardiac Children, Roslyn, Long Island, New York, or telephoning Manhasset 7-3300.

American Academy of Dermatology and Syphilology

The thirteenth annual meeting of the American Academy of Dermatology and Syphilology will be held December 4 to 9 in the Palmer House, Chicago.

Two new round table panels on "Cutaneous Testing" and "Hereditary Dermatoses" will be held plus seven special courses on histopathology, mycology, x-ray and radium therapy, bacteriology, and virology. Special lectures will be given, and among these will be one by Dr. Frederick Urbach, associate chief, Cancer Research (Dermatology), Roswell Park Memorial Institute, Buffalo, on "Treatment of Xanthomas."

Fifteen symposia and 12 round table panels are also scheduled as well as a number of scientific and technical exhibits.

Mark J. Schoenberg Memorial Lecture

The eighth annual Mark J. Schoenberg Memorial Lecture will be given by Dr. Joseph Igersheimer, Boston, at the New York Academy of Medicine on Monday, December 6 at 8 P.M. The lecture is sponsored by the National Society for the Prevention of Blindness and the New York Society for Clinical Ophthalmology.

New York Cancer Society

The third meeting of the New York Cancer Society will be held on Tuesday, December 7 in Hosack Hall, New York Academy of Medicine, at 8:30 P.M. A panel discussion on "Management of Cancer of the Larynx" will be presented.

Dr. Maurice Lenz, professor of clinical radiology, Columbia University, will be the moderator; Dr. Daniel S. Cunning, clinical professor of otolaryngology, New York University; Dr. Chevalier L. Jackson, professor of laryngology, Temple University, Philadelphia; Dr. Clara Okrainetz, attending radiotherapist, Manhattan Eye, Ear and Throat Hospital; Dr. Leroy A. Schall, professor of laryngology, and Dr. Milford D. Schulz, instructor of radiology, of Harvard University, and Dr. Sidney M. Silverstone, instructor of radiology, Columbia University, will be the participants.

Members of the medical profession and medical students are cordially invited. The next meeting of the 1954 to 1955 season will be held at the New York Academy of Medicine on the evening of January 4, 1955.

University of Buffalo School of Medicine

A postgraduate course on "Management of Trauma" is being offered by the University of Buffalo School of Medicine, December 8 and 9. Designed for general practitioners, surgeons, and industrial physicians who treat patients for minor or major injuries, the course will review basic principles and recent developments in the management of the more common types of injuries.

On Wednesday, December 8, starting at 9 A.M. the following topics will be presented: "Primary Management of Trauma" with a film on "First Aid," talks on the initial evaluation of trauma, shock, splitting, and artificial respiration; "Thoracic Trauma" with a talk on basic principles in the management of chest injuries; "Head and Face Injuries" under which scalp and cranium, eye injuries, face, soft tissue injuries, face fractures, nose injuries, and dental injuries will be discussed. The concluding program for the day will be "Trauma Conference."

Thursday, December 9: A film on "Introduction to Fractures" will be shown; "Trauma of the Hand"—basic principles in the treatment of hand injuries, bones, tendons, and soft tissues will be discussed; "Abdominal Trauma" with a discussion of recognition and management of abdominal injuries; "Common Fractures" under which the clavicle and shaft of the humerus, elbow and forearm fractures in children, wrist, femur, and ankle will be covered; and the concluding session will be a "Trauma Conference."

Checks should be made payable to the University of Buffalo and enclosed with registration form and directed to Dr. Milton Terris, assistant dean for postgraduate education, University of Buffalo School of Medicine, 3435 Main Street, Buffalo 14, New York.

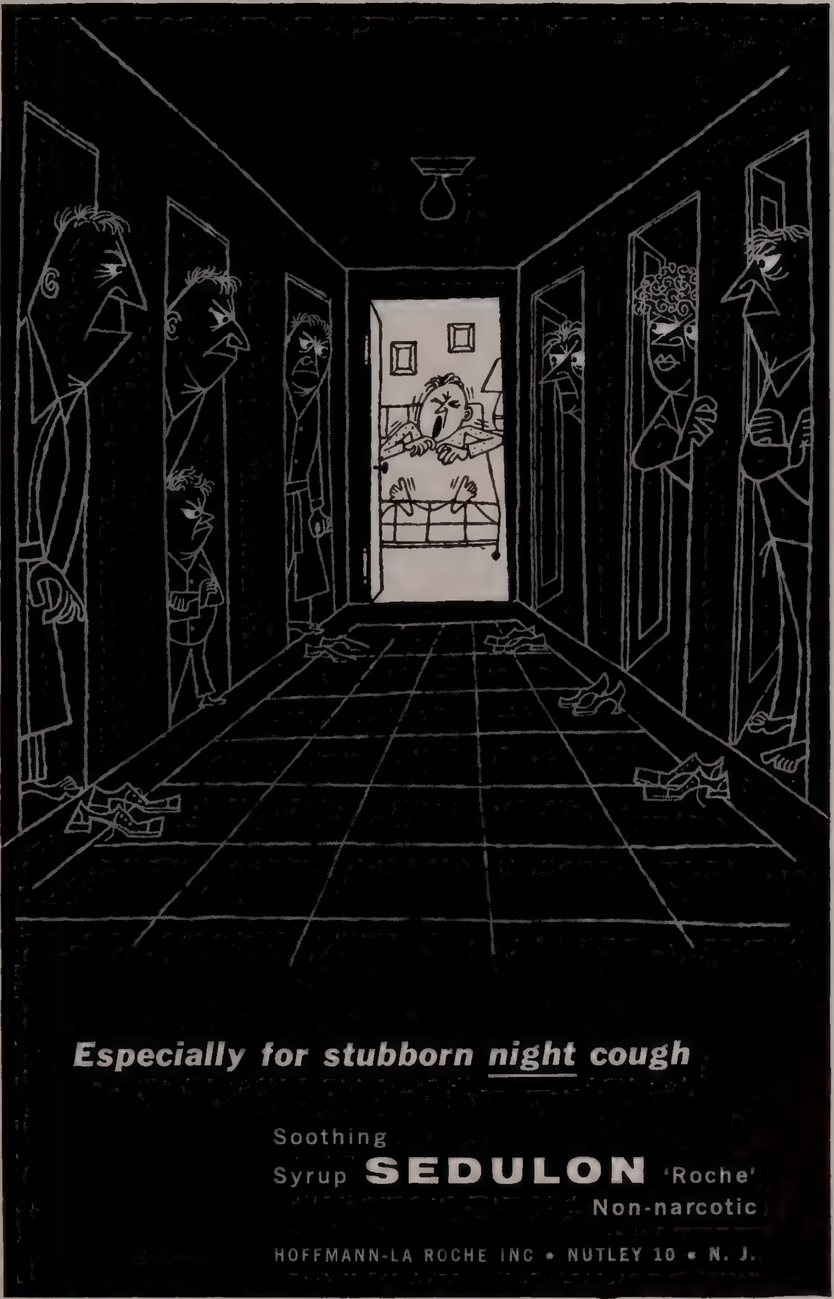
Brooklyn Urological Society

Dr. B. Marvin Harvard, Urological Department of Yale University, will be the guest speaker at a meeting of the Brooklyn Urological Society on December 14. Dr. Harvard will discuss "Experiences with the Use of Cortisone in the Management of Far-Advanced Cancer of the Prostate," and the meeting will be held at the Kings County Medical Society Building.

Geneva Academy of Medicine

Postgraduate instruction for the Geneva Academy of Medicine has been arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health. The dates, speakers, and their subjects are as follows:

[Continued on page 3304]



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[Continued from page 3302]

December 20—Dr. Sydney Weintraub, professor of clinical radiology, Cornell University Medical College, "Some Aspects of Gastrointestinal Roentgenology in Medical Diagnosis"; *January 17, 1955*—Dr. Ferdinand McAllister, assistant professor of clinical surgery, Columbia University College of Physicians and Surgeons, "Cardiac Surgery"; *February 21, 1955*— Dr. Maurice Bruger, associate professor of medicine, New York University Post-Graduate Medical School, "The Pathogenesis of Edema"; and *March 21, 1955*— Dr. Gervais W. McAuliffe, associate professor of otolaryngology, Cornell University Medical College, "Differential Diagnosis of Cough."

The programs will start at 8:30 P.M.

Personalities

Honored

Dr. Harry B. Kirkland, chief, Second Division Cornell Cardiac Clinic, Bellevue Hospital, by members of his staff at a reception celebrating his twentieth anniversary as clinic chief. . . Dr. Bela Schick, New York City, guest of honor at a dinner in Philadelphia in behalf of the Albert Einstein College of Medicine of Yeshiva University at which the Department of Pediatrics now being erected will be named after him. . .Dr. Edwin G. Zabriskie, by the staff of the Neurological Institute, Presbyterian Hospital at Columbia-Presbyterian Medical Center in honor of his eightieth birthday.

Awarded

Dr. Donald A. Covalt, New York City, the W. L. Faulkes award from the National Rehabilitation Association at the conference banquet on October 26 in Baltimore.

Elected

Dr. Harold E. B. Pardee, New York City, as president of the New York Heart Association. . .Dr. Rudolph N. Schullinger, attending surgeon, Presbyterian Hospital, New York City, a charter trustee of Princeton University.

Appointed

Dr. Carl Binger, New York City, as lecturer on psychiatry at Harvard Medical School and consulting visiting psychiatrist at Massachusetts General Hospital. . .Dr. Phillip W. De Wolfe, to succeed Dr. Robert Park as Hofstra College physician. . .Dr. E. Armand Scala, Suffern, a member of the courtesy staff; Dr. Michael R. Deddish, New York, consultant in proctology; Dr. Jack W. Garnant, Nyack, consultant in pediatrics; Dr. George L. Kauer, Jr., New York City, consultant in hematology, at the Tuxedo Memorial Hospital. . .Dr. Thomas P. Halky, New Rochelle, as assistant city physician. . .Dr. Arnold Joffee, Tuckahoe, full-time chief, X-Ray Department at Mount Vernon Hospital. . .Dr. Melvin S. Martin as director, new Physical Therapy Department, Warsaw Hospital. . .Dr. John P. Ryan, Tarrytown, as assistant pathologist-medical examiner, County Department of Laboratories and Research, County Medical Examiner. . .Dr. Irving S. Wright, New York City, as a member of the National Advisory Heart Council. . .Dr. James R. Reuling, Bayside, a member of a liaison committee to work with government officials, by the American Medical Association.

Speakers

Dr. Lauretta Bender, professor of clinical psychiatry, New York University-Bellevue Medical Center's College of Medicine, at the fund-raising dinner dance for the League for Emotionally Disturbed Children, Inc., at which she was guest of honor on October 23 at the Hotel Plaza. . .Dr. Michael M. Dacso, director, Geriatrics Rehabilitation Project, Goldwater Memorial Hospital, on the Third International Gerontological Congress held in London in July, at a meeting of the New York City Welfare and Health Council. . .Dr. Harold W. Lovell, associate professor of neurology, New York Medical College, at a conference at the Seamen's Church Institute under the auspices of the Department of Christian Social Relations of the Protestant Episcopal Diocese of New York on October 20. . .Dr. Basil C. MacLean, Commissioner of Hospitals, at special service in New York Cathedral of St. John the Divine, marking the opening of the new nine-story Florence Stokes Clark Building as an addition to St. Luke's Hospital, in October. . .Drs. A. Charles Posner, Aaron Prigot, Norman G. Konicoff, and James C. Whitaker, Harlem Hospital, at the second annual symposium on antibiotics sponsored by the Antibiotics Division of the Food and Drug Administration in collaboration with the *Journal of Antibiotics and Chemotherapy*, in Washington, D.C., in October. . .Dr. Melvin I. Matlin, director of pediatrics, St. Francis Hospital, Hillcrest, at the nurse-career day on October 21. . .Dr. Howard A. Rusk, at the eighty-fourth annual Congress of Correction held in Philadelphia on October 27.

New Offices

Dr. Leo Collins, practice of obstetrics and gynecology, after completing a tour of active duty with the Navy, in Albany. . .Dr. Wilton A. Doane, practice of general and thoracic surgery in association with the Slocum-Dickson Clinic, in Utica. . .Dr. Melvin D. Jones, general practice for Endicott-Johnson Shoe Company, in Endicott. . .Dr. William M. MacEllven, general practice in Webster. . .Dr. Eric W. Stern, practice of internal medicine and obstetrics, and Dr. Charles Hayden Tracy, general practice, with the Foster-Hatch Group in Dundee . . .Dr. Sidney Wachtell, Mamaroneck, general practice in Mamaroneck.

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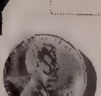

BOOKS RECEIVED

(*The following books were received during the month of September, 1954*)

Emotions and Bodily Changes. A Survey of Literature on Psychosomatic Interrelationships, 1910–1953. By Flanders Dunbar, M.D. Fourth edition with supplementary material and additional bibliography. Octavo of 1,192 pages. New York, Columbia University Press, 1954. Cloth, $15.

The Only Child. A Guide for Parents and Only Children of All Ages. By Norma E. Cutts, Ph.D., and Nicholas Moseley, Ph.D. Octavo of 245 pages. New York, G. P. Putnam's Sons, 1954. Cloth, $3.50.

Diagnosis and Treatment of the Acute Phase of Poliomyelitis and Its Complications. Edited by Albert G. Bower, M.D. Octavo of 257 pages, illustrated. Baltimore, Williams & Wilkins Co., 1954. Cloth, $6.50.

Fundamentals of Internal Medicine. By Wallace Mason Yater, M.D. This edition prepared with the assistance of William Francis Oliver, M.D. Fourth edition. Octavo of 1,276 pages, illustrated. New York, Appleton-Century-Crofts, 1954. Cloth, $13.50.

Liver Injury. Transactions of the Twelfth Conference, September 21, 22 and 23, 1953, Princeton, N.J. Edited by F. W. Hoffbauer, M.D. Octavo of 231 pages, illustrated. New York, Josiah Macy, Jr. Foundation, 1954. Cloth, $4.25.

The Practice of Sanitation. By Col. Edward Scott Hopkins, Medical Service Corps, U.S.A.R., and Wilmer Henry Schulze. Second edition. Octavo of 466 pages, illustrated. Baltimore, Williams & Wilkins Co., 1954. Cloth, $8.00.

Principles of Payment for Hospital Care. Approved by the Board of Trustees and the House of Delegates of the American Hospital Association as a guide to hospitals and agencies which contract to purchase hospital care in their negotiations concerning rates of reimbursement. Octavo of 16 pages. Chicago, American Hospital Association, 1954.

Clinical Aspects of the Autonomic Nervous System. By L. A. Gillilan, M.D. Illustrated by the author. Octavo of 316 pages. 42 illustrations. Boston, Little, Brown & Co., 1954. Cloth, $6.50.

Nervousness, Indigestion and Pain. By Walter C. Alvarez, M.D. Popular edition. Octavo of 235 pages. New York, Harper & Brothers, 1954. Cloth, $3.50.

Biochemical Determinants of Microbial Diseases. By René J. Dubos, M.D. Octavo of 152 pages. Cambridge, Harvard University Press, 1954. Cloth, $3.50.

Symposium on Problems of Gerontology. Proceedings of a Symposium held under the auspices of The Johns Hopkins University, School of Hygiene and Public Health and The National Vitamin Foundation, Incorporated, New York City, March 2, 1954. By F. H. Bethell, M.D., B. F. Chow, Ph.D., C. S. Davidson, M.D., H. J. Deuel, Jr., Ph.D., *et al.* Octavo of 137 pages, illustrated. New York, National Vitamin Foundation, 1954. Paper, $2.50. (Nutrition Symposium Series No. 9.)

The Medical Clinics of North America. Boston Number. September, 1954. Octavo. Illustrated. Philadelphia, W. B. Saunders Company, 1954. Published Bimonthly (six numbers a year). Cloth, $18 net; Paper, $15 net.

The Year Book of Medicine (1954–1955 Year Book Series). Edited by Paul B. Beeson, M.D., Carl Muschenheim, M.D., William B. Castle, M.D., Tinsley R. Harrison, M.D., *et al.* Duodecimo of 711 pages, illustrated. Chicago, Year Book Publishers, 1954. Cloth, $6.00.

BOOKS REVIEWED

Cardiovascular Surgery. By Gerald H. Pratt, M.D. Octavo of 843 pages, illustrated. Philadelphia, Lea & Febiger, 1954. Cloth, $15.

Gerald Pratt's new book on cardiovascular surgery is a useful addition to the literature.

About a hundred of the volume's more than 800 pages are devoted to the newer surgery of the heart and pericardium. Short discussions of each condition which is accessible to surgery are given, and the more important references in the literature are indicated.

As might have been expected from Pratt, whose experience in peripheral vascular surgery is so vast, the major portion of the book is devoted to diseases of the arteries, veins, and lymphatic system. These are discussed lucidly and thoroughly so that this work can serve as a desirable reference volume for internists and other doctors as well as for surgeons.—Milton Plotz

May's Manual of the Diseases of the Eye. For Students and General Practitioners. Revised and Edited by Charles A. Perera, M.D. Twenty-first edition. Duodecimo of 512 pages, illustrated. Baltimore, Williams & Wilkins Co., 1953. Cloth, $6.00.

May's Manual of the Diseases of the Eye, written especially for students, general practitioners, and nurses, has been the outstanding text on this subject since 1900. The current twenty-first edition prepared by Perera will unquestionably continue to fulfill this role. Without any increase in the size of the book, Perera has been able to incorporate all essential new matter available since the previous printing three years ago, and nothing appears to have been omitted.

Usually in such compact texts the effort to cover all aspects of a subject results in the elimination of many highly important matters, but in this volume such is not the case.

The book is profusely and beautifully illustrated with photographs, sketches, and color pictures of intraocular as well as surface pathologic conditions. It is deservedly recommended as the most valuable book of its kind for all students and practitioners.—Walter V. Moore

Doctor at Sea. By Richard Gordon. Octavo of 191 pages. New York, Harcourt, Brace & Co., 1953, 1954. Cloth, $3.00.

Richard Gordon is the *nom de plume* of a London doctor aged thirty-one, who has authored *Doctor in the House,* and who has been included among the younger British humorists. This is the story of the voyage of the *S. S. Lotus* from Liverpool to Rio, as told by its young doctor, on his first trip at sea, who knew nothing of maritime medicine and as little as possible of general practice. Do not expect to learn a lot about medicine at sea, because much of the book deals with the life and behavior of the members of the crew and captain ashore as well as at sea.

The one medical emergency the young M.D. had to meet had its humorous side. He made a diagnosis of acute appendicitis in a sailor two days from port. His preparation for surgery revealed the fact that the surgical kit had disappeared. He had never performed a laparotomy and had only imperfectly viewed one, "....all I saw were the abscesses on the back of the neck of my fellow student." Fortunately the sailor escaped the emergency surgery by a timely recovery from a belly-ache.

The book will pass your time pleasantly and with amusement.—Joseph Raphael

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[Continued on page 3309]

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[Continued from page 3308]

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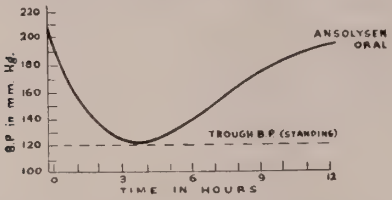

Dosage: The starting dose is 20 mg., taken orally every 8 hours. The morning dose may be taken before or after breakfast, but the patient should consistently follow the course elected. Each dose is increased by 20 mg. every second day until the patient experiences a little faintness or giddiness in the standing position (postural hypotension) at the time of maximum drug action.[3] The ideal dose is nearly always 20 mg. less than the dose that just succeeds in causing faintness in the standing posture.

Maintenance of Effective Dose: Where several daily recordings of pressure can be made by the patient or a member of his family, the physician can easily adjust ANSOLYSEN dosage as necessary.[2,4] Home pressures should be taken with the patient in the standing position and at the time of maximum drug effect. For more complete information on this method, see package circular or other ANSOLYSEN literature.

Where taking of home blood pressures is not practical, control of dosage by symptoms[2] of hypotension is more useful than the taking of occasional blood pressures. If it is uncertain whether an effective dose is being maintained, it should be increased by 20 mg. increments cautiously until mild faintness occurs in the standing posture. Thus, control of dosage is in terms of hypotensive symptoms such as faintness or lightheadedness and not in terms of by-effects such as dry mouth or blurred vision.

Adjunctive Therapy: The concomitant use of reserpine with ANSOLYSEN produces smoother blood pressure response, decreases the dose of ANSOLYSEN required,[2] and minimizes by-effects from parasympathetic blockade.[5]

Precautions: ANSOLYSEN affects sympathetic and parasympathetic nerve transmission. Improper technique may result in marked postural hypotension, constipation, dryness of the mouth, blurred vision, urinary retention (especially in males with enlarged prostates), and, rarely, obstipation or paralytic ileus.

It is mandatory to maintain normal bowel function. Pilocarpine nitrate, 2.5 to 5 mg., taken with each dose of ANSOLYSEN, usually controls constipation, blurred vision, and dryness of mouth.[2] If pilocarpine fails to control constipation, 15 to 30 mg. of Prostigmin®[2] may be taken upon arising; if necessary, a laxative such as Petrogalar® with Phenolphthalein may be taken at bedtime. In the presence of constipation, the dose of ANSOLYSEN should be reduced until normal bowel function returns; then the dose should be gradually restored to the optimal level.

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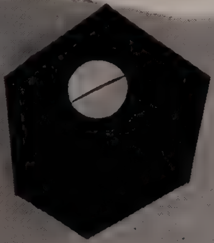

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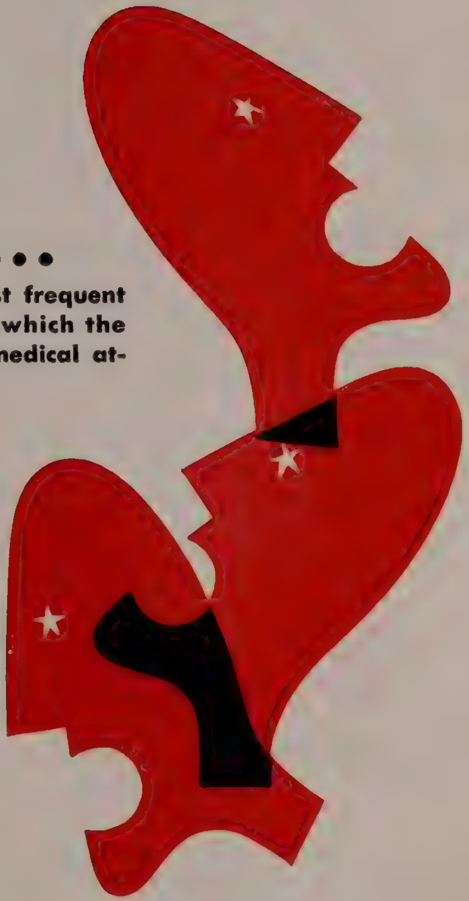

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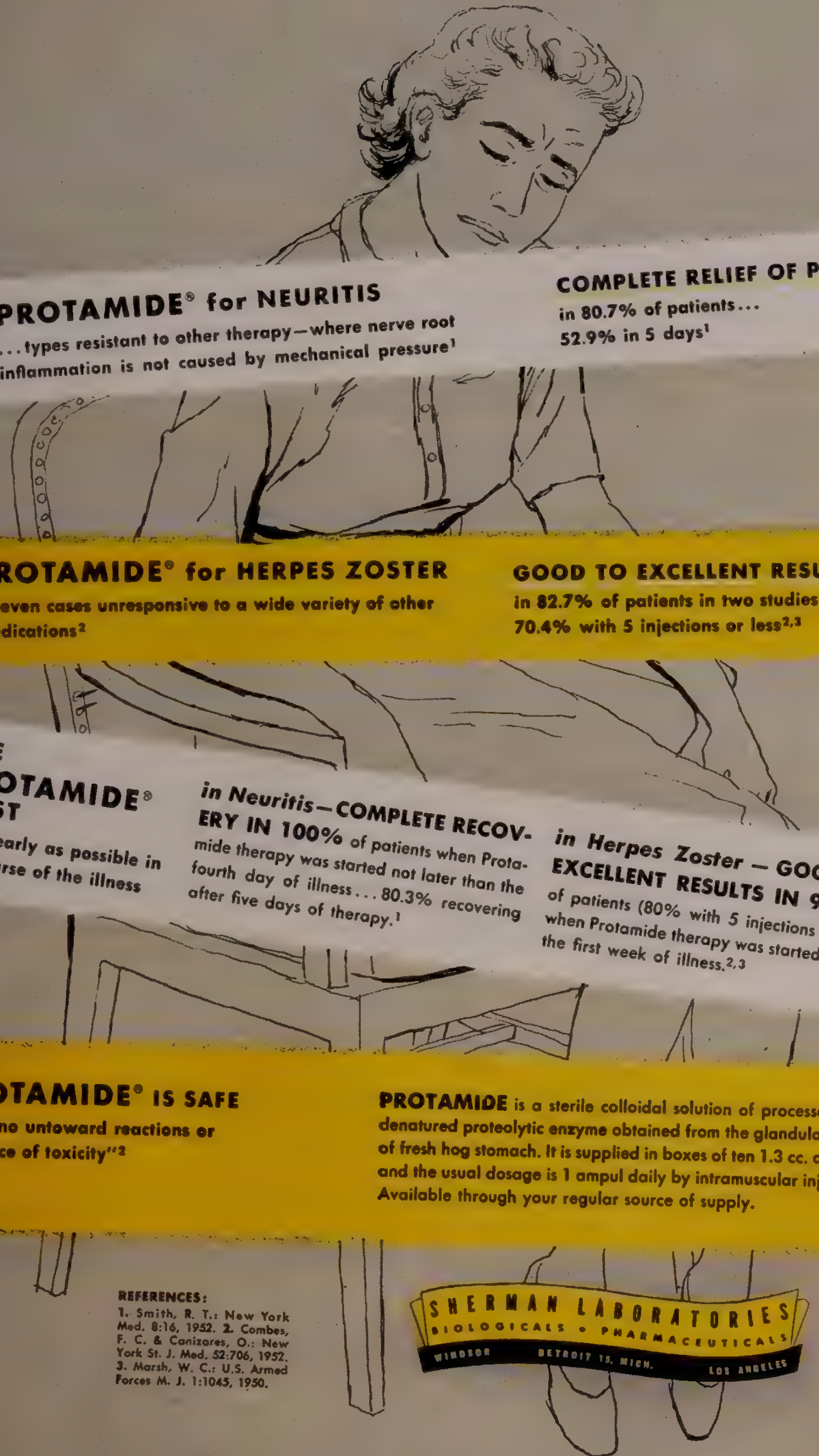

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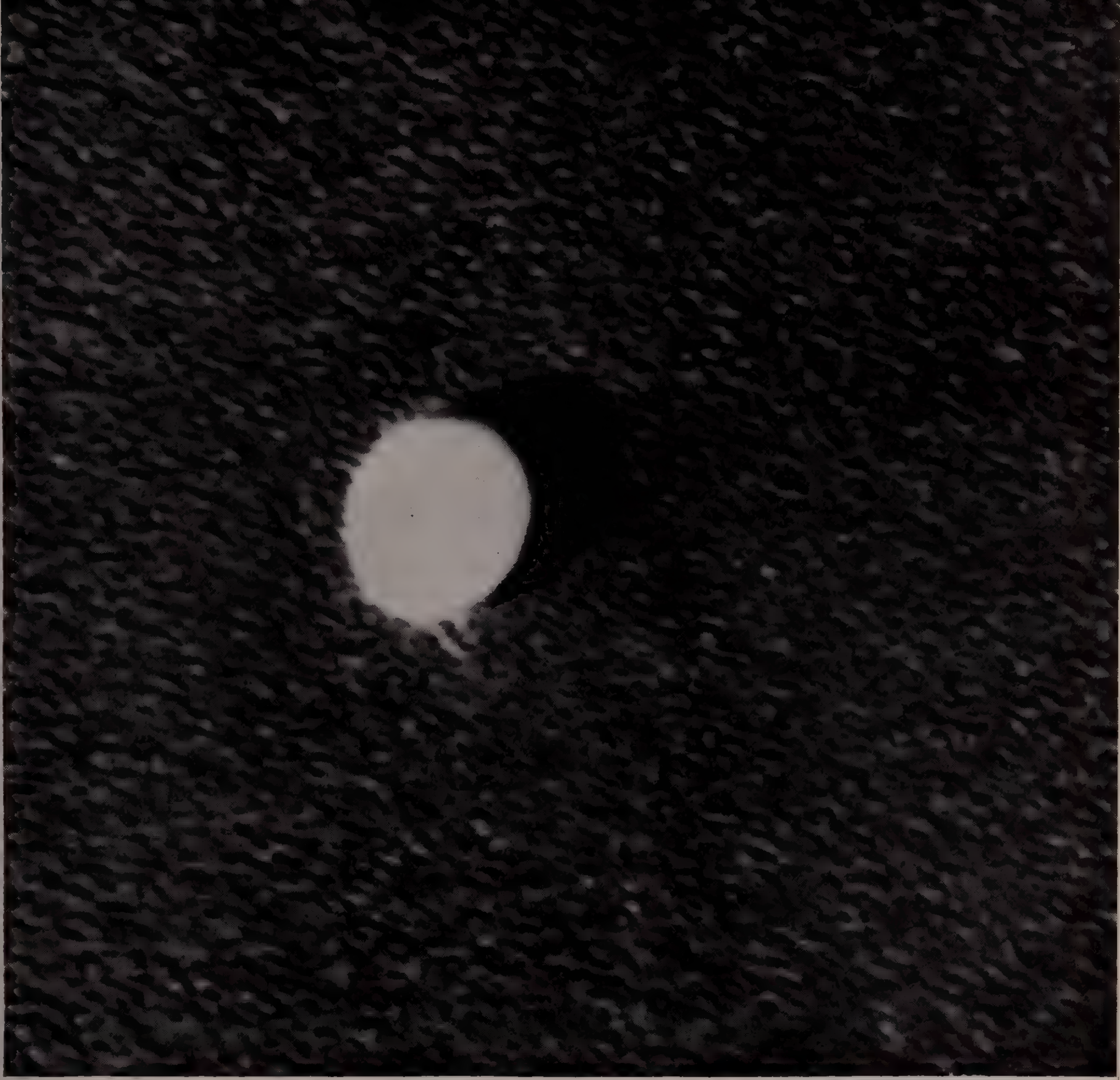

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An excellent vehicle for many foods, KNOX GELATINE enhances the diet, giving an interest many times to the patient where none existed. As a concentrated protein Gelatine Drink, KNOX GELATINE supplies the added protein supplement often so necessary in postoperative diets.

1. Co Tui, Minutes of the Conference on Metabolism, Aspects of Convalescence, Including Bone and Wound Healing. Josiah Macy, Jr., Foundation, 5th Meeting, Page 57, 1943.

For your patient's protection, be sure you specify KNOX, so that the patient does not mistakenly get flavored gelatin dessert powders, which are 85 per cent sugar.

Available at grocery stores in 4-envelope family size and 32-envelope economy size packages.

KNOX
UNFLAVORED
GELATINE
KNOX
32
GELATINE

KNOX
GELATINE U. S. P.

ALL PROTEIN
NO SUGAR

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Veratrite®

the drug of seasoned judgment
in management of hypertension

now contains...
cryptenamine

Veratrite® – practice-proved by more than 20 years of use in thousands of cases of mild and moderate hypertension—*now contains cryptenamine.*

Cryptenamine is a new alkaloid fraction of Veratrum viride—isolated by Irwin-Neisler—which produces sustained falls in blood pressure over prolonged periods and with unparalleled safety.

Veratrite produces striking subjective improvement of the patient – relief of headache and dizziness.

Patients with labile hypertension show marked reductions in both systolic and diastolic blood pressure. These reductions can be maintained with continuous therapy. The earliest sign of successful Veratrite therapy is a distinct feeling of well-being, without excessive or unnatural euphoria.

Each Veratrite tabule contains:
Cryptenamine* .....40 C.S.R. Units†
(as tannate salts)
Sodium Nitrite ....1 gr.
Phenobarbital ....¼ gr.
Warning: May be habit-forming.

*Ester alkaloids of Veratrum viride obtained by an exclusive Irwin-Neisler nonaqueous extraction process.

†Carotid Sinus Reflex

Bottles of 100, 500 and 1000.

IRWIN, NEISLER & COMPANY
DECATUR, ILLINOIS

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NEW- MAJOR ADVANCE
IN ADRENOCORTICAL THERAPY

TOPICAL OINTMENTS OF
'ALFLORONE'
ACETATE

Indications: Therapeutic range of ALFLORONE is essentially the same as topical forms of hydrocortisone (Compound F).
Supplied: Topical ointments of ALFLORONE Acetate (Fludrocortisone Acetate, Merck) 9, alpha-Fluorohydrocortisone Acetate; now available in 5-Gm. tubes in concentrations of 0.1% *and* 0.25% in an emollient base.

CUT THE COST OF THERAPY

SHARP & DOHME
Division of Merck & Co., Inc.

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THE ORIGINAL ENTERIC-COATED TABLET
OF THEOBROMINE SODIUM ACETATE

provides
EFFECTIVE
WELL-TOLERATED
PROLONGED
VASO-DILATION

in
CORONARY
ARTERY
DISEASE

REPEATEDLY SHOWN and proven by objective tests on human subjects[1] — this is one of the most effective of all the commonly known Xanthine derivatives. Because of the enteric coating it may be used with marked freedom from the gastric distress characteristic of ordinary Xanthine therapy. Thus THESODATE, with its reasonable prescription price also, enjoys a greater patient acceptability.

Available: In bottles of 100, 500, 1000.

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*(7½ gr.) 0.5 Gm. *(3¾ gr.) 0.25 Gm.

THESODATE WITH PHENOBARBITAL

*(7½ gr.) 0.5 Gm. with (½ gr.) 30 mg.
(7½ gr.) 0.5 Gm. with (¼ gr.) 15 mg.
*(3¾ gr.) 0.25 Gm. with (¼ gr.) 15 mg.

THESODATE WITH POTASSIUM IODIDE

(5 gr.) 0.3 Gm. with (2 gr.) 0.12 Gm.

THESODATE, POTASSIUM IODIDE WITH PHENOBARBITAL

(5 gr.) 0.3 Gm., (2 gr.) 0.12 Gm. with (¼ gr.) 15 mg.

*In capsule form also, bottles of 25 and 100.

1. Riseman, J. E. F. and Brown, M. G. Arch. Int. Med. 60: 100, 1937
2. Brown, M. G. and Riseman, J. E. F. JAMA 109: 256, 1937.
3. Riseman, J. E. F. N. E. J. Med. 229: 670, 1943.

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Brewer
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SPERSOIDS

SPERSOIDS*:
Dispersible Powder
50 mg. per teaspoonful (3 Gm.)

ACHROMYCIN

PEDIATRIC DROPS: *Cherry flavor.*
Approx. 5 mg. per drop.
Graduated dropper.

ACHROMYCIN
OINTMENT

OINTMENT *(3%)*

ACHROMYCIN
ORAL SUSPENSION
1.5 Gm.

ORAL SUSPENSION:
Cherry flavor. 250 mg.
per 5 cc. teaspoonful.

ACHR

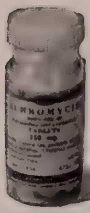
now available in these many convenient forms:

ACHROMYCIN

OPHTHALMIC OINTMENT *(1%)*

ACHROMYCIN
CAPSULES

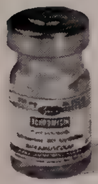
CAPSULES: *250 mg., 100 mg., 50 mg.*


ACHROMYCIN
TABLETS

TABLETS: *250 mg., 100 mg., 50 mg.*

INTRAVENOUS: *500 mg., 250 mg., 100 mg.*

SOLUBLE TABLETS: *50 mg.*



INTRAMUSCULAR: *100 mg.*

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Tetracycline Lederle

EAR SOLUTION *(0.5%)*

ACHROMYCIN, the new broad-spectrum antibiotic, is now available in a wide range of forms for oral, topical and parenteral use in children and adults. New forms are being prepared as rapidly as research permits.

ACHROMYCIN is definitely less irritating to the gastro-intestinal tract. It more rapidly diffuses into body tissues and fluids. It maintains effective potency for a full 24-hours in solution.

ACHROMYCIN has proved effective against a wide variety of infections including those caused by Gram-positive and Gram-negative bacteria, rickettsia, and protozoan organisms.

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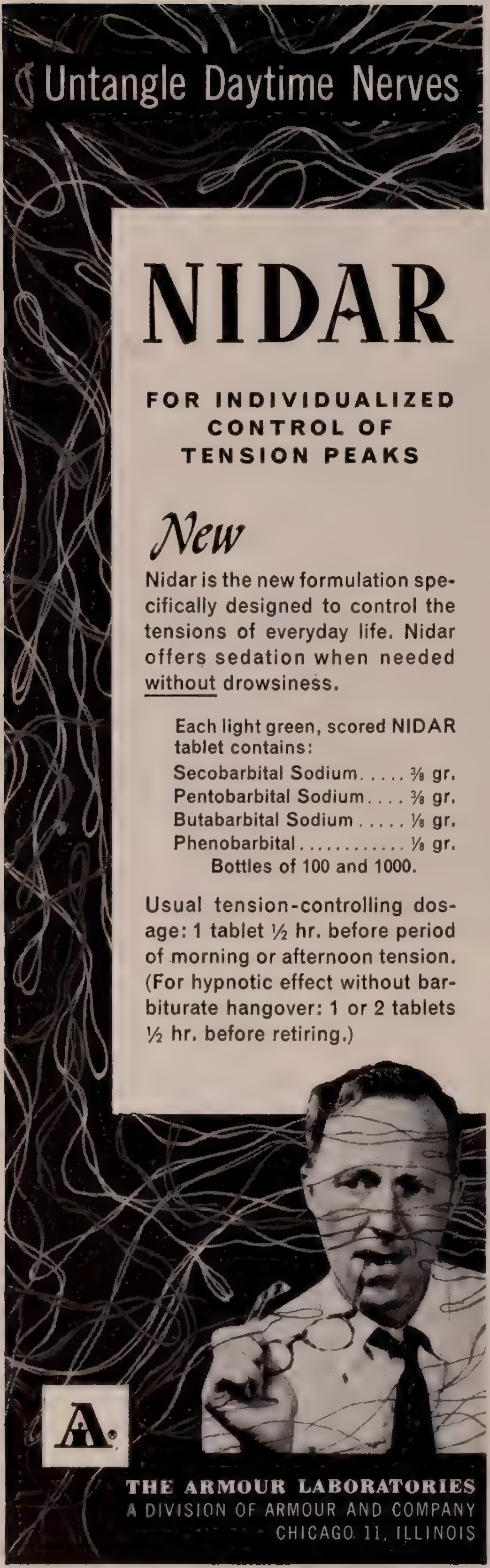

Untangle Daytime Nerves

NIDAR

FOR INDIVIDUALIZED CONTROL OF TENSION PEAKS

New

Nidar is the new formulation specifically designed to control the tensions of everyday life. Nidar offers sedation when needed without drowsiness.

Each light green, scored NIDAR tablet contains:

Secobarbital Sodium	⅜ gr.
Pentobarbital Sodium	⅜ gr.
Butabarbital Sodium	⅛ gr.
Phenobarbital	⅛ gr.

Bottles of 100 and 1000.

Usual tension-controlling dosage: 1 tablet ½ hr. before period of morning or afternoon tension. (For hypnotic effect without barbiturate hangover: 1 or 2 tablets ½ hr. before retiring.)

THE ARMOUR LABORATORIES
A DIVISION OF ARMOUR AND COMPANY
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NEW- MAJOR ADVANCE IN ADRENOCORTICAL THERAPY

COMPARED WITH TOPICAL HYDROCORTISONE (COMPOUND F)

TOPICAL OINTMENTS OF

'ALFLORONE'

ACETATE

EFFECTIVE IN 1/10TH THE CONCENTRATION

TOPICAL OINTMENTS OF

'ALFLORONE'

ACETATE

SIGNIFICANTLY CUT THE COST OF THERAPY

TOPICAL OINTMENTS OF

'ALFLORONE'

ACETATE

A SIMILAR WIDE MARGIN OF SAFETY

Indications: Therapeutic range of ALFLORONE is essentially the same as topical forms of hydrocortisone (Compound F).

Supplied: Topical ointments of ALFLORONE Acetate (Fludrocortisone Acetate, Merck) 9, alpha-Fluorohydrocortisone Acetate; now available in 5-Gm. tubes in concentrations of 0.1% *and* 0.25% in an emollient base.

SHARP & DOHME

Division of Merck & Co., Inc.

Based on clinical evidence, weight for weight, ALFLORONE is the most effective anti-inflammatory agent yet developed for topical use.

FOR THE FIRST TIME!

A Famous Name Brand with a Filter!

AT A POPULAR FILTER PRICE
Old Gold CIGARETTES REGULAR SIZE
Old Gold CIGARETTES FILTER KINGS
Old Gold CIGARETTES KING SIZE
TWENTY
Regular Size...Filter Kings...King Size
America's First Family of Cigarettes

OLD GOLD FILTER KINGS

The One Filter Cigarette that really Tastes like a Treat

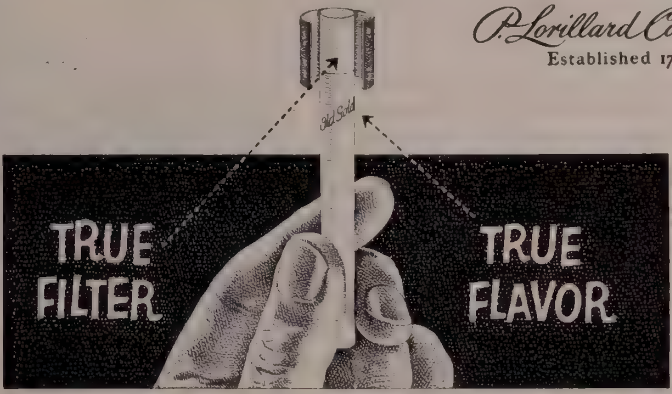
Here's the first famous name brand to give you a filter. And when you see the Old Gold name on the pack, you know you're getting a quality tobacco product.

Rich tobacco taste—the Old Gold tobacco men have done it again! The world's most respected tobacco craftsmen have created a wonderful new filter cigarette that reflects every year of their company's nearly 200-year tobacco heritage. Old Gold Filter Kings give you true tobacco taste in every single puff.

On sale now along with the other members of the Old Gold Family—Old Gold regular and Old Gold king size—new Old Gold Filter Kings sell at a popular filter price. Whichever kind of cigarette you prefer, just make sure it's one of the family . . . America's First Family of Cigarettes—Old Gold.

Doctors: Today Old Gold Filter Kings are sold in most U. S. cities, and our distribution is expanding every day. If your city does not yet have Filter Kings, simply write to P. Lorillard Company, 119 W. 40th St., New York, N. Y., and special arrangements will be made to make them available to you.

P. Lorillard Company
Established 1760



True filter—true flavor—The effective filter that lets real flavor through. Pure white . . . never too loose . . . never too tight—this easy draw filter makes every puff taste like a treat.

Cortisone vs. Salicylate in Rheumatoid Arthritis

Latest clinical report proves cortisone no better than aspirin in the treatment of rheumatoid arthritis.

On May 29th, 1954, the Joint Committee of the Medical Research Council and Nuffield Foundation published a most significant finding on arthritis therapy—that "for practical purposes" there appears to be *"surprisingly little to choose between cortisone and aspirin."*[1]

"Sixty-one patients in the early stages of rheumatoid arthritis...have been allocated at random to treatment with one or other agent (cortisone 30 cases, aspirin 31 cases)...

"Observations made one week, eight weeks, thirteen weeks, and approximately one year after the start of treatment reveal that the two groups have run a closely parallel course in nearly all the recorded characteristics—namely, joint tenderness, range of movement in the wrist, strength of grip, tests of dexterity of hand and foot, and clinical judgments of the activity of the disease and of the patient's functional capacity."[1]

These findings spotlight an earlier report that "aspirin in large doses has definite beneficial results closely akin to those received from ACTH."[2]

High gastric intolerance to aspirin noted among arthritics—a problem easily met by the use of BUFFERIN.

In this latest study, the side-effects recorded for both groups "were equal in the early months of treatment but *became less in the aspirin group as time passed."*[1]

Of clinical significance, however, is the high percentage of gastric intolerance to straight aspirin found among the arthritic patients—*42% as against 3 to 10% variously reported for the general population.*[3, 4]

Earlier investigations reveal the disadvantages of using sodium bicarbonate with aspirin—namely, the lowering of blood salicylate levels and the possible retention of the sodium ion.[2]

BUFFERIN *offers an answer to this problem.*

Unlike straight aspirin, BUFFERIN *is well tolerated, even when given in large doses.*[4]

BUFFERIN contains no sodium. It combines aspirin with two antacid and buffering agents which protect the gastric mucosa against irritation from salicylates—at the same time providing faster absorption of salicylates into the blood stream.

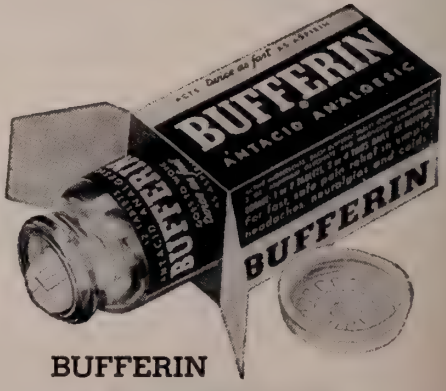
REFERENCES: 1. Brit. M. J. 1:1223 (May 29) 1954. 2. M. Times 81:41 (Jan.) 1953. 3. J. Am. Pharm. Assoc., Sc. Ed. 39:21, 1950. 4. Ind. Med. 20:480 (Oct.) 1951.

BUFFERIN® *should be used for the long continued salicylate dosage required by* ***ARTHRITICS***

...because BUFFERIN provides relief of arthritic pain without upsetting the stomach.

...because BUFFERIN's antacids effectively prevent gastric irritation and speed the absorption of BUFFERIN's analgesic ingredient.

...because BUFFERIN's antacids do not lower the blood salicylate levels, as does sodium bicarbonate.



BUFFERIN

ACTS TWICE AS FAST AS ASPIRIN
DOES NOT UPSET THE STOMACH

Each BUFFERIN tablet combines aluminum glycinate and magnesium carbonate with 5 grains of acetylsalicylic acid. Available in vials of 12 and 36 tablets and in bottles of 100.

BRISTOL-MYERS CO., 19 West 50 Street, New York 20, New York

rauwolfia in its optimal form

- ***Rauwiloid is not the crude rauwolfia root.*** Rauwiloid presents the total hypotensive activity of the pure whole Rauwolfia serpentina (Benth.) root—but it is freed from the inert dross of the whole root and its undesirable substances such as yohimbine-type alkaloids.

- ***Rauwiloid is not merely a single contained alkaloid of rauwolfia.*** Rauwiloid provides the balanced action of the several potent alkaloids in rauwolfia; reserpine—regardless of the brand name under which it is marketed—is only one of the desirable alkaloids in Rauwiloid.

- ***Rauwiloid contains, besides reserpine, other active alkaloids, such as rescinnamine,***[1,2] reported to be more potent than reserpine.

- ***Rauwiloid is the original alseroxylon fraction of unadulterated Rauwolfia serpentina (Benth.)***—rauwolfia in its optimal form—virtually no side actions—no known contraindications. It rarely needs dosage adjustment. The dose for most patients is 2 tablets (2 mg. each) at bedtime.

If you have prescribed rauwolfia in other forms, it will not take many patients to convince you that Rauwiloid serves better. Please write for clinical samples.

---

1. Klohs, M. W.; Draper, M. D., and Keller, F.: J. Am. Chem. Soc. *76*:2843 (May 20) 1954.

2. Cronheim, G.; Brown, W.; Cawthorne, J.; Toekes, M. I., and Ungari, J.: Proc. Soc. Exper. Biol. & Med. *86*:110 (May) 1954.

IN HYPERTENSION

Rauwiloid®

Riker *LABORATORIES, INC. LOS ANGELES 48, CALIF.*

ANNUAL CLINICAL CONFERENCE

CHICAGO MEDICAL SOCIETY

March 1, 2, 3, 4, 1955
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DAILY HALF-HOUR LECTURES BY OUTSTANDING TEACHERS AND SPEAKERS on subjects of interest to both general practitioner and specialist.

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NEW- MAJOR ADVANCE IN ADRENOCORTICAL THERAPY

TOPICAL OINTMENTS OF

'ALFLORONE'
ACETATE

Indications: Therapeutic range of ALFLORONE is essentially the same as topical forms of hydrocortisone (Compound F).
Supplied: Topical ointments of ALFLORONE Acetate (Fludrocortisone Acetate, Merck) 9, alpha-Fluorohydrocortisone Acetate; now available in 5-Gm. tubes in concentrations of 0.1% *and* 0.25% in an emollient base

CUT THE COST OF THERAPY

SHARP & DOHME
Division of Merck & Co., Inc.

TUSSAR ...quiets coughs

morning
noon
night

By mild expectorant and calming action, Tussar provides 'round-the-clock control of even obstinate, hacking coughs.

Tussar contains a superior antihistamine—prophenpyridamine maleate—and dihydrocodeinone bitartrate, approximately 6 times more potent than codeine. This means cough sedation with much smaller dosage.

Tussar is well tolerated and pleasant tasting. You can prescribe it with confidence in any age group.

Each fluid ounce of TUSSAR contains:

Dihydrocodeinone Bitartrate Warning—May be habit forming.	1/6 gr.
Potassium Guaiacol Sulfonate, N.F.	8 gr.
Sodium Citrate, U.S.P.	13.2 gr.
Citric Acid, U.S.P.	2 gr.
Prophenpyridamine Maleate (10 mg./teasp., 5 cc. medicinal)	1 gr.
Chloroform, U.S.P.	2 minims
Methyl Paraben, U.S.P.	0.1%

Flavor, sweetening, aroma, vehicle.

If desired, either ammonium chloride, potassium iodide, or ephedrine can be added to Tussar. Supplied in 16 oz. and 1 gal. bottles.

THE ARMOUR LABORATORIES
A DIVISION OF ARMOUR AND COMPANY • CHICAGO 11, ILLINOIS

NEW- MAJOR ADVANCE IN ADRENOCORTICAL THERAPY

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Supplied: Topical ointments of ALFLORONE Acetate (Fludrocortisone Acetate, Merck) 9-alpha-Fluorohydrocortisone Acetate, now available in 5-Gm. tubes in concentrations of 0.1% and 0.25% in an emollient base.

CUT THE COST OF THERAPY

SHARP & DOHME
Division of Merck & Co., Inc.

Karo

helps to support this dramatic growth!

. . . a carbohydrate of choice in milk modification for 3 generations

For the newborn

Karo Syrup is a milk additive that is hypoallergenic and bacteria-free. Since it is rich in easily digested dextrose, maltose and dextrins, it provides carbohydrates in directly assimilable form. This minimum demand on the digestive function is important during the first weeks. It makes possible a formula containing 15 calories per ounce even during the period when fat digestion is least efficient.

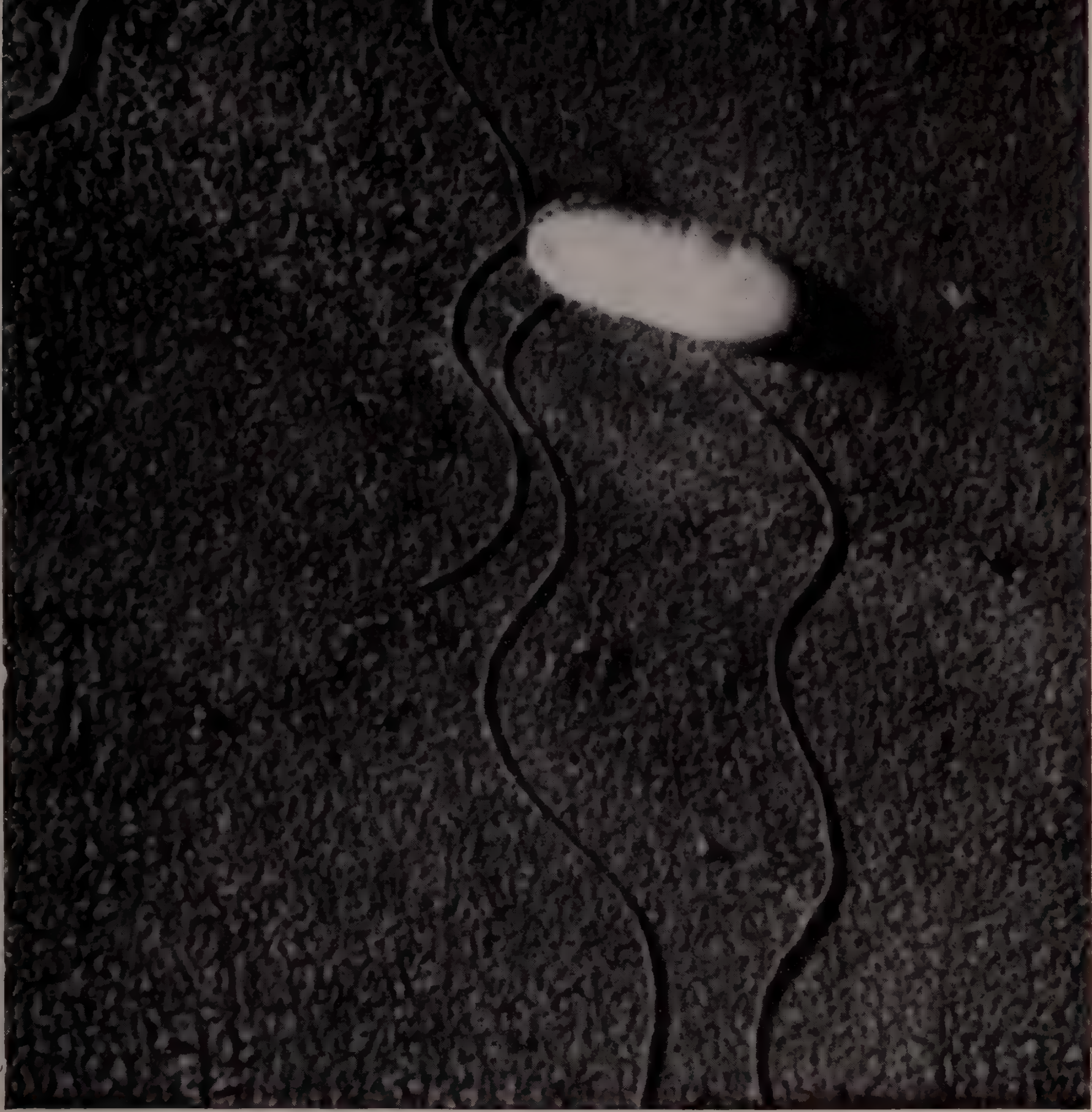
During the first months

When growth is most rapid, Karo helps to meet the accelerated nutritional demand. It offers in convenient, well tolerated form the carbohydrate additive which is usually prescribed, since milk alone provides just 28% of the optimum 60% carbohydrates. Karo Syrup is also readily available, inexpensive, a miscible liquid that is easy to use. Light and dark Karo are interchangeable in formulas—both yield 60 calories per tablespoon.

For the older infant

Karo eases the transition from formula to whole milk, from liquid to solid foods. The familiar taste of Karo makes whole milk more readily accepted, and many solid foods will be easily introduced into the diet if flavored with a little Karo Syrup. Rapidly assimilable carbohydrate is needed for the rapid metabolism of the small child. Since Karo is low in osmotic pressure, it is non-irritating. It also precludes fermentation because no excess of hydrolized sugars is formed.

Medical Division
CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.



ELECTRON PHOTOMICROGRAPH

Salmonella paratyphi B 26,000 X

Salmonella paratyphi B (Salmonella schottmuelleri) is

a Gram-negative organism which causes

food poisoning • chronic enteritis • septicemia.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U. S. PAT. OFF.

Enriched Bread

a Valiant Guardian Against Deficiency Disease

As a result of the nationwide enrichment of bread, the average American consumes notably more thiamine, riboflavin, niacin, and iron.[1] Enriched bread has thus served as a vigilant guardian against beriberi, ariboflavinosis, pellagra, and iron-deficiency disease.[2]

According to calculated values, the food supply of the nation during 1942-1948 provided 25 per cent more thiamine, 10 per cent more riboflavin, 15 per cent more niacin, and 14 per cent more iron than it would have without the nationwide enrichment of bread and flour.[3,4]

In consequence of this nutritional enhancement of the nation's food supply, enriched bread has been a material aid in improving national nutritional health.[2,4,5,6]

Enriched bread also supplies important amounts of high-grade protein, calcium, and nutrient energy. Its protein, comprising flour protein and milk protein, contributes significantly to sound growth and tissue maintenance.

---

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6. Sherman, H.C.: The Nutritional Improvement of Life, New York, Columbia University Press, 1950, pp. 86-87.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

AMERICAN BAKERS ASSOCIATION

20 NORTH WACKER DRIVE • CHICAGO 6, ILLINOIS

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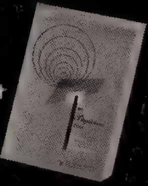

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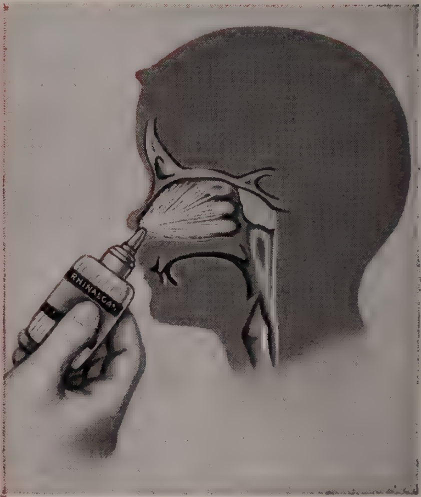

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EDITORIALS

The Season's Greetings

For the first time in many years the Christmas season of 1954 finds the world comparatively free from active warfare. That this pacific situation will long continue is a matter for conjecture depending upon the degree of good will and understanding that exists among the peoples of the earth.

Modern technology has, potentially at least, increased the productivity of many lands and nations so that basic physical needs at least can be met. The onrushing development of atomic power opens up broad vistas of increased self-help for many who would apply this power constructively rather than destructively. So that utilizing even present knowledge of procedure and augmenting this potential by wide power distribution, the future becomes ever brighter, more fascinating to contemplate.

And in so far as the peaceful uses of atomic power are impressed upon the minds of men too, less likely does it become that its destructive power will occupy their thoughts. Power we must have to maintain a modern civilization, but it must be directed by men of good will to peaceful pursuits preceded by learning, accompanied by tolerance, and followed by understanding. But to manage and direct this power wisely for the benefit of all peoples a degree of spiritual guidance and uplift must be sought which far transcends that which man has exercised in the space of recorded history. Perhaps man's greatest need is time to invite his soul, time for prayer and meditation.

It is our hope for this Christmas-tide that the medical profession, dedicated to the alleviation of illness, the promotion of health, and the postponement of death, by the diligent exercise of its art and science may continue to lead the hosts of men of good will toward the attainment and preservation, under God, of the ideal of peace on earth and the brotherhood of mankind.

Intern and Resident Training

There has been some concern in recent years about facilities for resident and intern training in this country. Recent graduates as well as practicing physicians interested in the subject of graduate training will read with satisfaction the 28th annual report of the Council on Medical Education and Hospitals of the American Medical Association.[1] Briefly summarized, it appears that there are now 75 per cent more physicians in full-time graduate training in United States hospitals than there were ten years ago, it was reported.

On the first of this year there were about 26,000 interns and residents training in hospital staff positions, compared to about 15,000 in 1945.

During the same period the number of openings for full-time graduate work doubled. On January 1, 1954, there were 34,172 openings compared to 16,095 in 1945. As of September 1, a total of 33,985 positions were open for the 1954–1955 year, including 22,763 residencies and fellowships and 11,222 internships. Residency openings decreased from 23,630 last year, and internships increased from 11,006.

In 1945 applicants filled about 15,000, or more than 90 per cent, of the openings. In 1952–1953 they filled about 74 per cent or 26,894 of the positions. The Council said this indicated a fundamental problem—the opportunities for intern and resident service had been increasing more rapidly than the number of available applicants. However, the percentage of filled positions increased to about 79 for the 1953–1954 year.

The Council helps provide better medical care by approving for training programs only hospitals meeting satisfactory basic educational and clinical standards. As of January 1, there were 1,347 approved hospitals offering such training. Hospitals offering internship programs increased only 7 per cent in ten years, while the number of available positions rose 26 per cent. The Council said the number of positions offered varies from year to year depending on the demand for staff members by approved hospitals. It said this suggests that careful self-appraisal by hospitals of their individual needs could result in "a sharp decline if not in the elimination of" the present excess of positions available. This appraisal should be from the standpoint "not alone of services required but of their potential for providing a worth-while educational experience for these graduates."

About 90 per cent of the interns entered rotating programs designed to lay a foundation for general practice residencies or further specialty training. The trend toward higher pay for interns seemed to be slowing, the Council said. Last year 44 per cent of the hospitals paid more than $150 a month; this year 30 per cent paid that. However, hospitals paying more than $200 had a lower occupancy rate for their positions than the lower-salary hospitals, indicating that the salary level "is not a decisive factor in attracting an intern staff."

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[1] J.A.M.A. 156: 315 (Sept. 25) 1954.

Commenting editorially on the report, the J.A.M.A. says in part:[2]

> The report refers to an announcement made this spring by the Council and the American Board of Pediatrics, in accordance with which only those programs providing two years of fully integrated training will be approved after July 1, 1957. Policies similar to this have already been adopted in the fields of anesthesiology, orthopedic surgery, otolaryngology, and general surgery. The basic principle is that of assuring a resident of progressive responsibility with continuity of supervision and experience during the course of his training period. From an educational standpoint, the justification for programs offering partial training in a specialty is not evident. It can be anticipated that this general principle will be extended to other specialties where it is applicable.
>
> The Council in its report makes grateful acknowledgment to the many organizations with which it collaborates for their continued support in the field of graduate education and to the medical staffs and administrations of hospitals throughout the country for providing the data on which the report is based. Through the assistance and cooperation of these individuals and organizations it has been possible to present a current appraisal of the situation relating to this increasingly important aspect of medical education, training at the graduate level. The report is commended to the attention of the profession, medical educators, hospital administrators, and others interested in the subject, as well as, more particularly, to the young graduate making plans for his professional career.

We hope our membership will take note of these facts not only for their own information but also for the possible correction of less well-informed persons or agencies.

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[2] *Ibid.*, p. 431.

ANNOUNCEMENT

PRIZE ESSAYS

The Lucien Howe Prize and the Merrit H. Cash Prize will be open for competition at the next Annual Convention of the Medical Society of the State of New York, May 9 to 13, 1955, in Buffalo.

The *Lucien Howe Prize* of $100 will be presented for the best original contribution on some branch of surgery, preferably ophthalmology. The author need not be a member of the Medical Society of the State of New York.

The *Merrit H. Cash Prize* of $100 will be given to the author of the best original essay on some medical or surgical subject. Competition is limited to the members of the Medical Society of the State of New York who at the time of the competition are residents of New York State.

The following conditions must be observed:

Essays shall be typewritten or printed with the name of the prize for which the essay is submitted, and the only means of identification of the author shall be a motto or other device. The essay shall be accompanied by a sealed envelope having on the outside the same motto or device and containing the name and address of the writer.

If the committee considers that no essay or contribution is worthy of a prize, it will not be awarded.

Any essay that may win a prize automatically becomes the property of the Medical Society of the State of New York, "to be published as it may direct."

All essays must be presented not later than *February 1, 1955*, and sent to the Chairman of the Committee on Prize Essays of the Medical Society of the State of New York, 386 Fourth Avenue, New York 16, New York.

R. Townley Paton, M.D., *Chairman*
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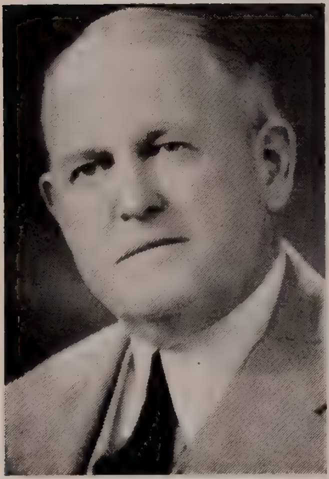
PRESIDENT'S PAGE

What the Society Does—Further Benefits



DAN MELLEN, M.D.

Through the years the art and science of medicine in its development has become a vast undertaking touching all facets of community life. Recognizing this, the Society has created numerous committees of a special nature to consider problems in numerous categories, as, for instance, legislation, workmen's compensation, medical care insurance, nursing problems, industrial health, malpractice insurance and defense, veterans medical service, and the like. These committees meet throughout the year to consider current questions arising in their various jurisdictions. Many of the Council committees, such as the Workmen's Compensation and the Committee on Medical Care Insurance, have the assistance of a permanent bureau under a specially qualified director to maintain continuous contact with the membership, to answer inquiries, to study and compile reports, and to maintain relationships with various agencies such as Blue Cross and Blue Shield, State government, social and welfare agencies, and others.

The entire complicated mechanism of a modern state medical society is centered about the office of the secretary and general manager. His office is the informational nerve center of the Society. Day after day, by telephone, mail, and wire, questions and requests stream from the medical profession and the public through his office. These questions range from the serious to the trivial, but all must be answered.

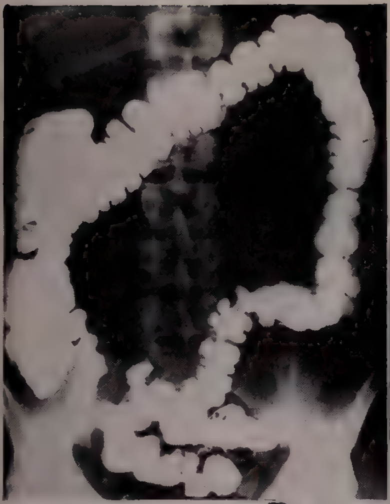
The secretary and general manager must attend all meetings of the Society, House of Delegates, Council, and Board of Trustees. Through his office he records the name and date of admission of each member of the Society and provides for registration at all sessions of the Society. It is his duty to assist officers of district branches, the organization and improvement of county societies and in the extension of the power and influence of the Society, to notify members of meetings and officers, councillors, trustees, and board and committee members of appointments and duties. He makes an annual report to the House of Delegates and helps prepare all programs. He is a member of the Council and ex-officio member of all boards and committees.

In addition, his office is in charge of all the paid employes of the Society.

I could not conclude this brief résumé without mentioning the services to the membership of the Physicians' Home and the War Memorial, founded in 1948 and now contributing toward seven years education for each son and daughter of a deceased member fallen in battle or dying from service-connected illness during World War II.

Perhaps these pages have served to remind you of the widespread and continuous activities of your Society in your interest and that of the public. We are often apt to forget them, possibly because they are so numerous and because they function so well on the whole as to attract little attention. For this reason it is well, I think, to remind you from time to time that your Society is working around the clock, year in and year out, as it has done for nearly one hundred and fifty years, to assist you in your every professional need.

Dan Mellen



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Surgical Sympathectomy for Obliterative Vascular Disease

GERALD H. PRATT, M.D., F.A.C.S., NEW YORK CITY

(From the Surgical Service and Vascular Clinic of St. Vincent's Hospital and the New York University College of Medicine)

MEDICAL and surgical interest in vascular and cardiovascular diseases is at its height today. Direct cardiac surgery is now feasible. One of every six surgical papers is written on these subjects. This is due to the fact that longevity has increased from the average age of forty-seven years at the time of Abraham Lincoln to seventy-seven years today. In addition, two out of every three persons alive after their fortieth birthday will die of some cardiovascular disease or its complication.[1] Before modern preventive medicine and surgery were practiced, most patients did not survive until the age when vascular lesions became of importance. The excellent pediatric care with control of contagion, the antibiotics, and the advances in anesthesia and surgical skill permit patients to live to a time when degenerative diseases, of which those of the vascular system are foremost, must be met and controlled if the patient is to survive. For example, 40 per cent of males at the age of forty have arteriosclerosis.[2]

Thus, as surgeons, we must have an interest in these lesions because they are challenging us for solution, whether or not they are our primary surgical interest. If the muscle, bone, or nerve supply to a part is injured, the function of the part may be lost. If the blood supply is obstructed, the part or the individual is destroyed.

The sympathetic system plays a major role in the symptomatology, prognosis, and therapy of many lesions of blood vessels. Certain diseases, such as Raynaud's disease, causalgia, frostbite, and to some extent the postphlebitic syndrome, in addition to other vascular lesions, result from an overactivity and overstimulation of this system. Some of the lesions caused by these diseases can be relieved, or even reversed, in their disease process by an interruption of this sympathetic system. These diseases may be called the primary examples of sympathetic dysfunction.

There is a second group of diseases of the arterial system which develop spastic and occlusive lesions in the artery of a secondary nature. In these the vasoconstriction effect manifests itself extensively and sometimes dominantly on a reflex basis secondary to the stimulus of an occlusive arterial lesion. Since sympathectomy is an accepted treatment in many of the primary sympathetic diseases, our discussion will deal primarily with the part that the sympathetic system and sympathectomy may play in the course and therapy of the occlusive arterial lesions, the remaining, unconquered killer of the largest number of patients with which we must contend today.

For many years the surgeon's interest in a patient with obliterative arterial disease began and ended with the amputation which he performed for the inevitable gangrene. To some extent he was the clearinghouse for the service and, like an executioner, was called in to remove the offending part. One might add that too often his therapy caused the patient to follow the amputated limb to a grave. The high mortality rate in amputations for obliterative arterial disease

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Surgery, May 13, 1954.

ranged from 35 per cent in hospitals where amputations were rarely performed to 5 to 10 per cent in institutions where modern vascular services were established.

In more recent years the surgeon's potential part in the therapy of these lesions has been accepted by most, but not all, of our medical confrères. Many of these latter are sincere, honest, and intelligent internists who believe they can obtain better results without using that "last resort," surgery. To some extent this descriptive term, "last resort," has delayed the development of surgical therapy for these lesions. The surgeon often is called only when the lesion is hopelessly advanced. To overcome this attitude we must show that the mortality and morbidity can be reduced by judiciously applied surgery, including sympathectomy. This thought in no way detracts from the necessity for continued study of the etiology, pathogenesis, and prophylactic therapy of this disease.

The Sympathetic System

The sympathetic system is still not understood. Some physicians think the sympathetic system was just discovered. Actually, Galen[3] made the earliest reference to the sympathetic system in the second century, and Vesalius[3] described both the sympathetic chain and its ganglia in 1543. In the sixteenth century Harvey[3] discussed the connection between the circulation and the sympathetic system, and Claude Bernard[3] in 1851 demonstrated that the sympathetic system controlled metabolism and body temperature. John Hunter[4] first noted that the blood vessels contracted when subjected to trauma.

The sympathetics are a defense mechanism in which a reflex vasoconstriction occurs in blood vessels in response to a stimulus such as trauma. This trauma may be a direct one, such as a gunshot wound or laceration, in which event nature prevents excess hemorrhage from the vessels by spasm. By spasm also blood is squeezed out from the injured vessel and collateral vessels so that they remain patent to carry blood if their continuity is re-established. To initiate this spasm the trauma need not be an external one. Thus an arterial plaque, clot, or calcium deposit may initiate the stimulus to the reflex vasoconstriction.

The physiologic mechanism of this spasm still is not well understood. There is an autonomous spasm at cell level, as was shown by Landis[5] in the rabbit's severed ears and further proved by Levinson and Essex[6] and Page.[7] The latter showed that a substance from a shocked dog's ear would cause spasm in the vessels of a rabbit's ear. Bach,[8] Gopfert,[9] and Lewis[10] called this substance histamine, and White[11] called it sympathin; Landis[12] thought it was defibrinated blood, and Page[7] and Chambers[13] called it an unknown toxin. Our clinic refers to the stimulator as "spastin."

Phemister,[14] Barnes and Trueta[15] all have shown that there is a nervous origin of vasoconstriction. Whether this is all a neurogenic reflex with afferent stimuli from the source of the stimulus to the cord and ganglia and efferent stimuli reversely or whether the stimulus causes a chemical to spill into the bloodstream with subsequent constriction can be argued either way, but the most important thing is to recognize the fact that there is a spasm.

The amount and effect of the spasm vary in different individuals and in different instances. It depends upon the strength of the stimulus, the degree and suddeness of the occlusion, the condition of the blood vessels and of the sympathetic system, and their ability to respond.

In occlusive arterial diseases a plaque or clot may initiate spasm in that diseased vessel and in its collaterals. This may result in sufficient spastic occlusion to slow the bloodstream and to cause clot.

The disease itself thus is the initiator of a reflex vicious circle which may become self-perpetuating. The breaking of such a cycle before final clotting occurs thus can add materially to the therapy. The best point at which to interrupt this mechanism is at the ganglion itself. If done before permanent damage has occurred, the progression of occlusion may be slowed, made segmental, or reversed.

Peripheral Resistance

The importance of peripheral resistance must be emphasized. The pressure fall from the aorta to a terminal branch is about 25 mm. Hg and from there to the capillary bed 65 mm. Hg. Thus it takes two and one-half times the pressure to overcome resistance in the arteriolar bed as it did to pass through the main arteries.

While the cross section of the arterioles is only 25 times more than the terminal branches, the resistance in an arteriole is over 1,000 times greater than in a terminal branch.[16] We believe sympathectomy releases this resistance and dilates the arterioles.

Therapy

The general therapy is directed toward keeping the skin covering intact, the removal of all causes for spasm, of which nicotine is our prime example, and a stimulation of collateral supply by use of the part, baths, and perhaps some drugs. Anticoagulants to prevent a clot in the slowed stream have a place in the treatment. Surgical efforts are twofold: (1) to bridge or bypass a segmental block by a graft, a still not perfected technic, and (2) to release constriction by sympathectomy. For the first type of operation a distal open vessel is necessary. This technic should be augmented by sympathectomy.

There are three types of collateral circulation, the hypervascularization, the supplementary branches and the so-called bridging collaterals, or the "vital detours." Sympathectomy helps all three types.[17,18]

Anatomy of the Lumbar Sympathetic System

A word about the anatomy of lumbar sympathetics is of importance. This system primarily is a plexus and *not* a nerve. The lumbar chain begins as a thin, stringlike attachment from the twelfth thoracic, lateral but tightly attached to the vertebra, and often is crossed over by the lumbar veins at right angles. The ganglia vary in number from three to four, but there may be as many as eight, and they may fuse. Any thickening in the cord itself may be a ganglia. Each lumbar nerve has from one to three or four communicating branches arising at or between the ganglia, and these may anastomose widely with each other. In general, the twelfth thoracic and first and second lumbar rami ascend after their origin; the third usually goes transversely but may ascend or descend, and the fourth and fifth usually descend in their course. Some of these rami run in the psoas muscle itself. The external iliac and genitofemoral nerves also serve at times as carriers for sympathetic fibers and may account for the failure to get an adequate denervation when only the chain itself is removed.

In the male the fourth lumbar spine anatomically is at the level of the iliac crest, while in the female the fourth disk or fifth lumbar vertebra is usually at the crest. In the exaggerated position used in retroperitoneal sympathectomy the promontory of the sacrum actually may be elevated above the crest.[19] In addition, an extra muscle origin of the crux of the diaphragm from the vertebrae may cover the chain, as may other fasciae and muscles in this area. Other nerves, blood vessels, lymph nodes, lumbar veins, and even the ureter may further obscure sympathetic identification.

Technic of Sympathectomy

We believe that lumbar sympathectomy, to be complete, should always include every lumbar ganglia, including the fifth, often twelfth dorsal, and each nerve filament which makes up the plexus. From our experience sympathectomy effect cannot be obtained by the removal of the second and third ganglia alone, as is advocated in most operative technics. We feel that often a poor or equivocal result reported by many clinics after sympathectomy is caused by an entirely inadequate effacement of the sympathetic innervation. This opinion is further emphasized by the fact that we have reoperated and removed ganglia from 14 patients in our own series who already had had a so-called sympathectomy with poor results.

Anesthesia

We feel that lumbar sympathectomy is most safely performed under spinal anesthesia. Whether a hyper- or hypobaric technic is used depends on the experience of the anesthesiologist, but in the hands of our anesthesiology department hypobaric has proved most effective and safe.[20,21] We feel strongly that this anesthesia should not be augmented by Pentothal or other general anesthetics, which are too often given for the benefit of the anesthesiologist and not for the patient. We have shown in a series of 30 operations on patients over the age of eighty that this anesthesia is a safe one. Only one death occurred in this group.

Results of Sympathectomy

All of the surgical sympathectomies performed on our service during a five and one-half-year period from June, 1948, to December, 1953, inclusive, have been reviewed. Five hundred and four operations were performed on 362 patients during this period. Of these operations 309 or 61 per cent were performed for occlusive arterial disease on 221 patients. Seventy patients had 132 procedures performed for venous diseases and the postphlebitic syndrome.

The sex variations in these patients showed a ratio of three males to one female, which corresponds to the sex incidence of this disease. The average age of these patients was fifty-eight, the oldest being eighty-seven and the youngest seventeen. Thirty sympathectomies were performed for occlusive arterial disease on patients over eighty years of age.

It was decided to analyze these patients and their operative response critically. It has been said, and rightly so, that figures can be made to confirm any story one wishes to tell. The two worst results one may obtain in treating the patient with occlusive arterial disease are to lose the patient's life or to lose the limb. There can be many extenuating circumstances contributing to both of these lamentable end results. Extensive and rapidly progressing disease, the presence of gangrene, advanced age, severe cardiac, renal, or diabetic complications, the continuation of smoking, and further trauma all may play an extensive part and can be used, if one desires, to vary his results and to prove a point. In some of our patients sympathectomy was performed in an effort to amputate at a lower level than would otherwise be possible. In this review, however, all such factors have been discounted, and our figures were analyzed merely to show loss of life and loss of limb in patients with occlusive arterial disease who had a sympathectomy performed.

MORTALITY.—There is a follow-up of from six months to five years on 118 of our 221 patients (64 per cent). Since death or loss of limb usually follows shortly, we consider our findings representative. Nine or 3 per cent of these patients who had sympathectomy died. Seven of the nine were sixty years of age or over, five dying of coronary occlusion, one of progressive gangrene, two of generalized arteriosclerosis, and one of mesenteric thrombosis. The operation per se did not appear to contribute to their demise, but they died during the postoperative period or shortly thereafter.

AMPUTATION.—Of the patients who had sympathectomy 184 had arteriosclerosis without diabetes. There were 22 amputations in this group, an amputation rate of 11 per cent. Eighty-one of the patients had arteriosclerosis and diabetes, and there were 31 amputations required, 34 per cent. This figure again points up the importance of infection, which is present more often in the diabetic, in determining the outcome. There were four amputations in the 20 sympathectomies performed on patients with thromboangiitis obliterans. Thus there was a 20 per cent amputation rate in this group. In discussing extenuating circumstances we would say that only the 20 patients with the most advanced disease were operated. Our over-all picture of 0.6 per cent amputations for thromboangiitis obliterans in the five and one-half-year period, however, speaks well for the conservative management in this group.

Of the nine patients who had an acute arterial occlusion and had sympathectomy, there were two amputations, which gives a figure of 22 per cent. (Three of the five patients with frostbite who had sympathectomy came to partial amputation, and in this group we have an amputation rate of 60 per cent.) Thus we have a total amputation rate of 62 after 309 sympathectomies, or 20 per cent. Twenty-four of these major amputations were below and 35 above the knee. We feel that sympathectomy contributed to the lower operative site in the 35 per cent which were amputated below the knee.

It is of interest to compare the presenting symptoms of these patients with the amputation rate. The largest number of our patients (179) were operated for coldness and claudication of an advanced type. Only 8 or 4.4 per cent of those came to amputation. Where there was ulceration and infection, as there was in 65 patients, 21 or 32 per cent required amputation. Where there was gangrene or ulceration and infection as occurred in 100 of our patients, 44 per cent lost their limb, but 56 per cent did not. Thus, gangrene, pain at rest, and ulceration were the most serious symptoms prognostically, in that order.

PATHOLOGIC REPORTS.—In an effort to explain some of our failures, we analyzed the pathologic reports on these 309 sympathectomies. One likes to feel that he removed the tissue that needed to be removed, whether it be an appendix, a cancer, or the sympathetic chain. We also like to believe that our hospitals do not lose the specimens, make the sections of the right tissue, and report on it accurately. In 258 of the 309 operations, sympathetic chain, ganglia, or sympathetic nerves were reported pathologically. In 17 per cent of our patients, however, lymphoid tissue was reported; in one no nerve or ganglia was seen, and in 33 no pathologic report was found to be returned, the specimen either not being sent or lost. Thus, in 17 per cent of our patients we had no pathologic confirmation that lumbar sympathectomy actually was performed. Were other hospitals not in a similar state as far as their pathologic confirmation of the tissue removed, we probably would hesitate to present these figures. Nine of our amputations occurred in these patients, not a significant figure however.

Conclusions

Sympathectomy, we believe, is an excellent therapeutic measure to employ in patients with occlusive arterial disease, provided that (1) gangrene is not already present, (2) it is not used to replace the underlying medical management, (3) the patient has a fair chance of surviving the operation, (4) the patient has given evidence of a desire and ability to stop smoking, and (5) all other corrective measures for the underlying disease are taken. Our series of patients demonstrated that in 247 out of 309 patients (80 per cent) amputation did not follow sympathetic denervation, and these were patients with advanced occlusions. The sympathetic denervation must be a *complete effacement* and not a mere partial resection.

It is the feeling of our clinic that many poor results are due to an ineffective or inadequate sympathectomy. Sympathectomy is not a cure-all, such as an appendectomy or cholecystectomy, but when carefully employed, it may be sufficient to maintain the delicate balance between the vascular supply, infection, and loss of limb. Pain at rest is a dangerous symptom. In the patient with active gangrene amputation will follow two out of three times, in spite of but, we believe, not because of sympathectomy. Paradoxic gangrene per se has not been seen by the author. It is his feeling that if gangrene occurs after sympathectomy, it is because the disease was already irreversible or operative trauma caused an occlusion.

30 East 60th Street

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Discussion

Kenneth C. Olson, M.D., *Albany.*—As he stated early in the paper, Dr. Pratt has emphasized the application of lumbar sympathectomy to occlusive arterial lesions. Our experience with patients with arteriosclerosis alone compared with those patients with arteriosclerosis and diabetes differs somewhat from Dr. Pratt's conclusions, although I must admit that his series is larger than ours. In our experience patients with diabetes responded more favorably than those with arteriosclerosis alone. There was some improvement in claudication in practically all the diabetics undergoing sympathectomy but in about only one half of the patients with arteriosclerosis alone. We also found, as some others have, that it was possible to secure a viable extremity in almost twice as many patients in the diabetic group as in the arteriosclerotic group. We have felt that because of the inflammatory element frequently present in the diabetic, a larger vasoconstrictor component was present than in the pure arteriosclerotic and that, therefore, their response to sympathectomy was more marked.

I was happy to hear Dr. Pratt make note of the fact that longevity has increased considerably, especially during the past few decades, and has now reached seventy-seven years. I think that we should give more thought to the fact that these people in the so-called "older" age group may have a longer life expectancy than we realize, and this should be taken into consideration in planning amputations in this group of patients. For instance, a white male at age sixty has a life expectancy of sixteen years; at sixty-five, thirteen years; at seventy, ten years; at seventy-five, eight years; at eighty, six years, and at eighty-five, four and one-half years. I am convinced that most of us do not take this into consideration when planning an amputation that may render a patient nonambulatory for the rest of his life, which may amount to a considerable number of years in many cases, particularly in those patients who do not present an unusual amount of renal, cerebral, or cardiac involvement.

Dr. Pratt states that in some of the patients in his series sympathectomy was done in an effort to lower the amputation level in patients on whom amputation was inevitable. He feels that sympathectomy contributed to a below-knee amputation on 39 per cent of the patients in his series who required amputation. That, we feel, represents one of the most important functions of a lumbar sympathectomy. A below-knee amputation has a distinct advantage over an above-knee amputation, particularly when both legs are involved in the pathologic process and the patient may eventually become, as so often he does, a bilateral amputee. When a patient already has had a unilateral amputation, particularly if it has been an above-knee amputation, and the remaining extremity shows signs of involvement, it is essential to salvage this apparently useless extremity and then to maintain its uselessness in terms of ambulation. If the patient is to be confined to a nonambulatory existence because of bilateral amputations, it is certainly more profitable for him to have the length and weight of a nonfunctioning pain-free leg to serve to a certain degree as ballast, to facilitate balance, and to permit him more agility in his maneuvering about.

While many may feel that the question of an above-knee versus a below-knee amputation is one of minor significance, that it is trite and quite inconsequential, we feel that, quite the contrary, it is of major concern in so far as it pertains to nonambulatory patients who may still have a pretty considerable life expectancy. I think that often in this group of patients we place too much emphasis on an attempt to produce a suitable prosthetic-bearing stump at the expense of length, while actually many of these patients in the older age group with a progressive pathologic process should be prohibited from using a prosthesis and would derive much more benefit from a longer extremity. An attempt should be made to maintain a viable, pain-free extremity rather than to encourage early deterioration of the remaining leg by increasing its work load, which does occur when a prosthesis is used. I'm sure that there is considerable virtue in attempting to salvage length in a nonprosthetic-bearing extremity, and this should almost always be attempted by doing a lumbar sympathectomy on these patients with occlusive arterial disease.

The Management of Acute Leukemia in Childhood

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UP UNTIL 1948 there was no specific treatment for acute leukemia in children, but that year Farber *et al.*[1] reported the production of remissions with some degree of regularity in children with this disease by the use of a folic acid antagonist, Aminopterin. Since that time considerable progress has been made in the chemotherapy of acute leukemia, and we now have three different classes of agents at our disposal: (1) the folic acid antagonists of which Methotrexate (Amethopterin) and Aminopterin are examples, (2) the purine antagonists of which mercaptopurine and thioguanine are examples, and (3) the adrenocortical hormones of which ACTH and cortisone are examples. Any of these agents is capable of producing temporary remissions in children with acute leukemia.

By a good hematologic and clinical remission we mean one in which the marrow returns from 90 to 100 per cent leukemic cells to essentially normal morphology and function with less than 30 per cent leukemic stem cells and lymphocytes and contains 70 per cent or more of normal erythroid and myeloid elements. Megakaryocytes should also return in normal numbers. This improvement in the marrow is reflected by a return of the total leukocyte count of the peripheral blood to normal from either its previously elevated or diminished count, by a disappearance of the abnormal cells, by a rise in hemo-

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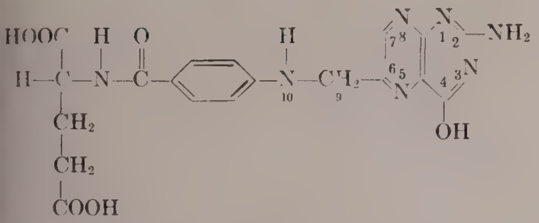
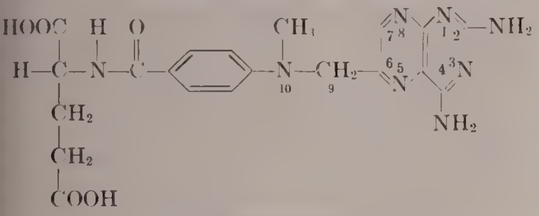


Folic Acid
[(Pteroylglutamic) Acid, PGA]



Methotrexate
(Amethopterin, 4-Amino-N^{10}-methylpteroylglutamic Acid)

FIG. 1. Formulas of folic acid and Methotrexate (Amethopterin).

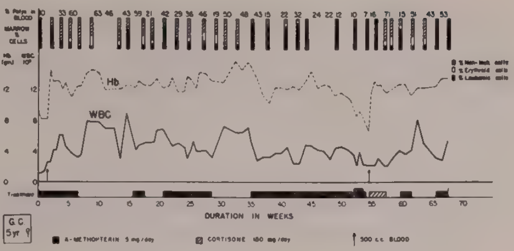


FIG. 2. Treatment of a child with Methotrexate (Amethopterin).

globin and red cell counts to usual levels, and by a return of platelets to normal. Clinically there is a return to complete health with a disappearance of splenomegaly, hepatomegaly, lymphadenopathy, and the hemorrhagic manifestations. The activity of the patient and the appetite should become normal.

Antimetabolites

In Fig. 1 are shown the formulas (1) of folic acid, a vitamin essential for the growth and maturation of normal red cells and white cells and also, apparently, even more essential for the growth of certain types of leukemic cells, and (2) of Methotrexate (Amethopterin) which is 4-amino-N^{10}-methyl folic acid, a closely related chemical compound which is antagonistic to both folic acid and its biologically more active counterpart, citrovorum factor.

METHOTREXATE.—Methotrexate is generally given by mouth at a dose of 2.5 mg. daily in a single dose to a five-year-old child. At this dosage level most cases can be treated for long periods of time without toxic manifestation, but since it may be necessary in some cases to increase this dosage to 5 mg. daily or even more in order to achieve a remission, some evidence of toxicity may then appear. The first signs would be loss of appetite followed by small, yellowish ulcerations of the buccal mucosa and lips surrounded by a reddish areola. These signs in themselves are not dangerous, but they may be precursors of more serious ulcerations of the gastrointestinal tract, and for this reason it is best to discontinue or reduce therapy when mouth ulceration occurs.

The production of a remission with the folic acid antagonists generally takes from three to eight weeks, and good clinical and hematologic remissions may be expected in at least 30 per cent of the children so treated. Farber[2] in compiling the statistics presented at the Second Conference of the Folic Acid Antagonists[3] found that 68 per cent of 425 children reported received substantial improvement from such therapy. Once a remission is achieved by such therapy, the drug may be continued, or it may be stopped. If treatment is stopped, however, it is essential to observe the bone marrow every two weeks in order that treatment may be restarted at the first sign of a marrow relapse before clinical symptoms occur.[4] Maintenance therapy can be carried on with these drugs for many months without any harm to the child's development. Figure 2 is a graph showing a child who was treated with Methotrexate (Amethopterin) for over a year by the intermittent technic of therapy and was kept in good clinical remission all during that time, although there were frequent partial marrow relapses as shown by the sternal aspiration.

MERCAPTOPURINE.—Another antimetabolite which has been useful in the treatment of acute leukemia is 6-mercaptopurine[5] which was synthesized and shown to be a purine antagonist by Elion *et al.*[6,7] and demonstrated to have tumor-inhibiting activity in sarcoma 180 in mice by Clarke *et al.*[8] It is given at a dose of 2.5 mg. per Kg. of body weight, which in the average five-year-old child would be approximately 50 mg. daily by mouth in a single dose. At this dosage level in children there are almost no symptoms of toxicity, but at higher levels, up to 5 or 7.5

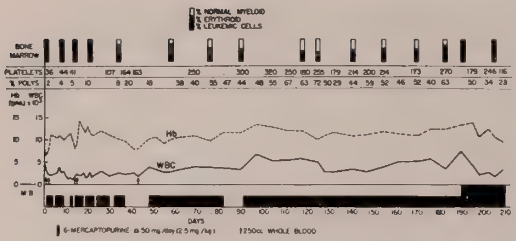


FIG. 3. Response to mercaptopurine.

mg. per Kg. daily, signs of marrow depression and gastrointestinal toxicity with nausea, vomiting, and diarrhea may become apparent. At the routine dosage, however, there is usually no impairment of appetite.

In one series of 87 children with acute leukemia treated with mercaptopurine good clinical and hematologic remissions were achieved in 41, partial remissions in 16, and 30 were considered failures.[9] The remissions achieved by this compound last from one to ten months, somewhat shorter than with Methotrexate but somewhat longer than with cortisone and ACTH. Maintenance therapy has generally been used by us because it appears that patients relapse rather rapidly when mercaptopurine is discontinued. Figure 3 shows a fairly typical response to mercaptopurine in a three-year-old child with improvement in the marrow, rise in the percentage of polymorphonuclear leukocytes and platelets, and maintenance of hemoglobin levels. This remission continued for approximately six months, and then the patient relapsed despite the continuance and even increase in the dosage of mercaptopurine.

It is of interest that mercaptopurine is able to produce remissions in a certain percentage of children whose disease is resistant to the folic acid antagonists or to the steroids, and similarly, in patients whose disease is resistant to mercaptopurine, the steroids and Methotrexate may also produce further remissions.

Steroid Hormones

Of the steroid hormones, cortisone by mouth every six hours is the most commonly used drug, and the dosage for a child of five would probably be in the neighborhood of 150 to 200 mg. daily. When the patient is very acutely ill, particularly if there is nausea and vomiting so that oral medication is difficult, ACTH by constant intravenous drip at 25 mg. a day seems to have somewhat more rapid action.

At the relatively high doses of steroids which are necessary to produce rapid remissions in this disease, certain undesirable side-effects may become evident. Sodium retention with consequent water retention and edema may be guarded against by keeping the patients on a low salt diet. Hypokalemia and metabolic alkalosis may usually be avoided by giving adequate quantities (2 to 3 Gm. daily) of potassium chloride orally. The gain in weight which follows the enormous appetite engendered by this class of agent can be avoided to a certain extent by limiting the patient's intake to a diet which would be considered adequate for a child of his size and weight, although in a child as ravenously hungry as many of these this may be difficult. Hypertension, sometimes going on to hypertensive encephalopathy, may be a serious complication of such therapy, and at the appearance of a definite hypertension the dose should be cut or discontinued entirely.

With the steroids good clinical and hematologic remissions may be achieved in 50 to 70 per cent of children,[10] and in contrast to the folic acid antagonists and the purine antagonists, the beneficial effects of steroid therapy may be apparent within a few days of the initiation of treatment. The remissions, however, are generally not of such long duration as with the antimetabolites.

Comment

With these three different classes of agents available, it is probable that in most cases members of all three groups will be used eventually, but the pediatrician is frequently faced with the question of which drug to use in the initiation of therapy. Our plan of treatment in such cases is based on three facts:

1. The antimetabolites cause longer and more satisfactory remissions but take three to eight weeks to exert their beneficial effects.
2. The steroid hormones act much more rapidly than the antimetabolites, but the remissions are of relatively short duration.
3. There is no cross resistance between the three different classes of agents, and patients whose disease has become resistant to one may still respond to the others.

Thus, if the child appears acutely ill with a hemorrhagic diathesis and with high fever and it does not appear that there would be time for the antimetabolites to exert their beneficial effect, the patient is started on cortisone or

ACTH. On the other hand, if the child is in such condition that there appears to be time for the antimetabolites to act, he would be started on either Methotrexate (Amethopterin) or mercaptopurine. In such children with high white counts it is our feeling that mercaptopurine is somewhat safer as a starting agent than Methotrexate, but in those patients having a low total leukocyte count Methotrexate is just as safe to use and may produce a longer initial remission. It is our policy to consider the antimetabolites as our main reliance for therapy, using the steroids only in emergencies where there is not sufficient time for the antimetabolites to act or when resistance has developed to these other two classes of agents. Thus, the patient treated initially with the steroids would be switched to an antimetabolite as soon as the immediate period of danger was over and carried on with the antimetabolites as long as possible. A patient initially started on Methotrexate would be continued on that drug until resistance developed and then switched to mercaptopurine unless there appeared to be a particular indication for the steroids.

It would appear that the addition of these three agents, used sequentially as outlined above, to the armamentarium of the clinician has increased the survival time of children with acute leukemia. Of 218 untreated cases of acute leukemia in children collected from the literature by Tivey[11] 50 per cent survived 3.9 months from the start of their disease, and only 5 per cent were alive twelve months after the onset. Of 154 children with the same disease treated at Memorial Hospital with the folic acid antagonists and/or the steroids before the time of mercaptopurine, 50 per cent survived 8.9 months from the start of their disease, and 29 per cent were alive at twelve months. Of 52 children treated by us by the technic outlined above since mercaptopurine became available, 50 per cent survived 12.5 months, and 52 per cent were alive at twelve months after the start of their disease. With the tremendous amount of research being conducted on leukemia both in this country and throughout the world, it would be surprising indeed if far greater progress in the treatment of acute leukemia were not made in the foreseeable future.

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. . .*Among the delusions offered us by fuzzy-minded people is that imaginary creature, the Common Man. It is dinned into us that this is the Century of the Common Man. The whole idea is another cousin of the Soviet proletariat. The Uncommon Man is to be whittled down to size. It is the negation of individual dignity and a slogan of mediocrity and uniformity.*

The Common Man dogma may be of use as a vote-getting apparatus. It supposedly proves the humility of demagogues.

The greatest strides of human progress have come from uncommon men and women. . . .

The humor of it is that when we get sick, we want an uncommon doctor. When we go to war, we yearn for an uncommon general or admiral. When we choose the president of a university, we want an uncommon educator. . .—HERBERT HOOVER

Treatment of Brain Abscess

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THE stages of development of the treatment of localized intracranial suppuration have closely paralleled the major advances in medical practice as well as those of neurosurgical methods. From the time of Lister the principles and technics available for management of suppuration in any area have been utilized with appropriate modification in the therapy of brain abscess, as formulated and practiced by Macewen,[1] Eagleton,[2] King,[3] Dandy,[4] Vincent,[5] and Grant.[6] The arrival of the chemotherapeutic and antibiotic era revolutionized the management of infectious processes in general and completely altered the concepts of treatment of intracranial suppurative processes. In a consideration of the present-day care of a patient with brain abscess, it seems appropriate that initial attention be directed to fundamental pathologic changes. Subsequently, awareness of the pathophysiologic alterations consequent upon the presence of abscess in the brain should permit reasonable formulation of a plan of management. Although the nature of etiologic agents as well as the pathogenesis of various types of abscesses all have significance, our remarks will be limited exclusively to management of the abscess and its attendant manifestations by virtue of the fact that it resides in the brain.

By definition an abscess is a circumscribed area of suppuration in which tissue necrosis is present. The progress of the infectious process is governed by the virulence of the organism, its site of implantation, and the general resistance of the host. There may result widespread invasion of the brain, focal suppuration, or spontaneous resolution. By reducing the virility of the invading organisms, antibiotics and chemotherapeutic agents have in many instances seemingly reversed localized encephalitic lesions which in the past were destined to become true abscess. In other circumstances the use of antibiotic drugs has hastened the formation of suppuration amenable to surgery.

In reaction to infectious agents the brain manifests specific responses which differ in certain respects from other tissues. There is a paucity of connective tissue, the principal site of mesoblastic activity being in areas adjacent to blood vessels. The greater part of the wall of a localized cerebral suppurative lesion is composed of this tissue, although other cellular elements aid in the confinement of the infection. In chronic brain abscess there is an outer zone of glia proliferation and concentration, but the role of some of these cells, particularly the microglia, is somewhat debatable. They seem to aid in the phagocytic response. The presence of such changes in the brain induces considerable cerebral swelling, brain displacement, and increased intracranial pressure.

Initially with the acute inflammatory lesion there may be fever and diffuse cerebral signs with pleocytosis in the cerebrospinal fluid. When localized suppuration has supervened, the clinical signs of inflammation have subsided. Suggestions of a focal brain lesion may be present at this time, and over a period additional symptomatic as well as objective evidence of an intracranial mass becomes evident.

The aim of therapy can then be logically resolved into management of the inflammatory process with antibiotics and appropriate surgical therapy directed to the mass. The ultimate hope, of course, is the complete eradication of the pathologic process. Antibiotic and chemotherapeutic agents have now effectively permitted success in the treatment of the initial phases of the inflammatory lesion. By reducing the virulence of invading organisms and allowing time for host resistance to become established, these drugs have reduced the incidence of subsequent suppurative changes and have maintained life in situations which would have been completely unfavorable under other circumstances. The continued administration of such agents during the surgical phase of treatment has also obviated to a degree the threat of lethal meningitis. In fact, even intraventricular rupture of chronic

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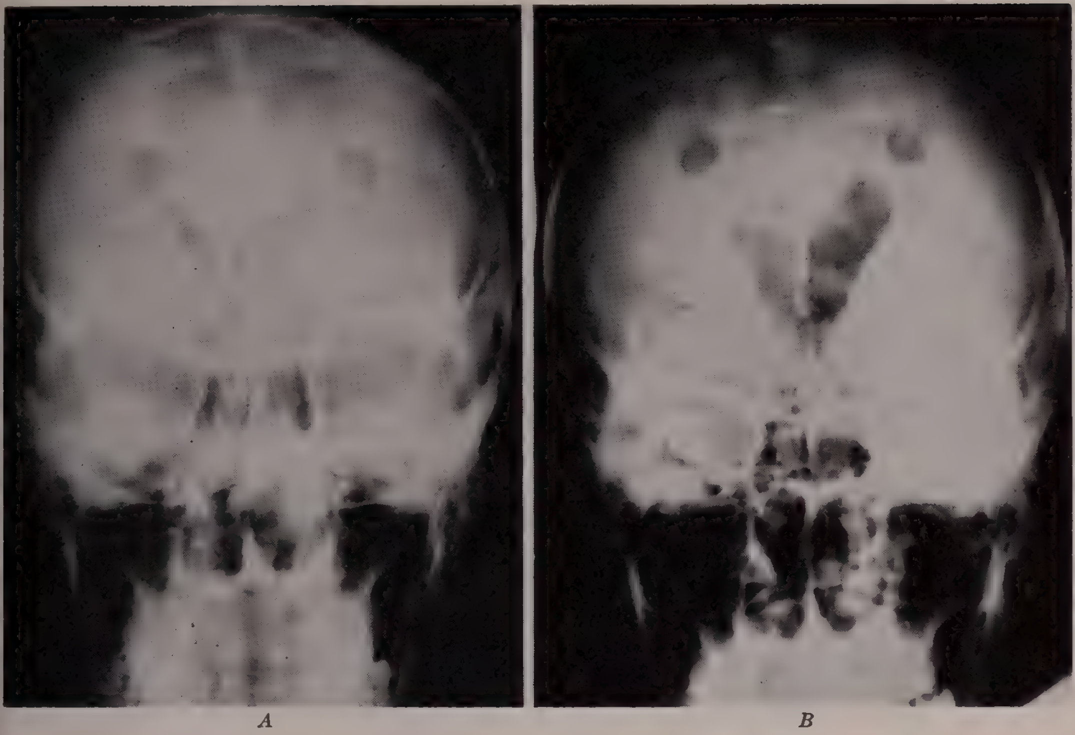

FIG. 1. (*A*) Ventriculogram demonstrating left temporal mass lesion. (*B*) Repeat study one month after evacuation of abscess showing midline system with dilation of ventricle on side of lesion.

brain abscess today need not necessarily result in a fatal outcome.

Surgical intervention is contingent primarily on the factors of increased intracranial pressure and advancing neurologic deficits. There have been innumerable exponents of many forms of surgical technics, but all hope to accomplish similar ends. As we review the successes and failures of the era of the drain, both open and closed, the periods of marsupialization, of simple tapping, and catheter drainage, and more recently that of complete excision, it is quite apparent that with each phase of the various endeavors certain events were insurmountable, and a chosen method was never always sufficient unto itself. So too, today, no one method is generally applicable, and under certain circumstances a combination of procedures may be superior.

In an approach to any single problem, the diagnosis of localized brain abscess having been made, the immediate concern of the surgeon is to reduce or abolish the effects of the mass lesion, and if this can be accomplished by a relatively simple procedure, this naturally warrants initial trial. Specifically, simple evacuation of the abscess through an appropriately placed burr hole may be sufficient to control the alteration of intracranial tension and maintain life. Depending upon the future course of events, further measures may be necessary. On occasion a seemingly satisfactory clinical state may change precipitously to an irretrievable situation. Neurologic signs and variations in the conscious state, indicative of either progression or regression of the pathologic process, must be diligently and repeatedly assessed. In those instances where simple tapping seems to have effected a "cure," pneumoencephalographic studies must always confirm the absence of a mass lesion before the patient is discharged. Very often such studies may disclose no evidence of a remaining mass, and only under these circumstances can we speak in terms of cure.

Occasionally simple drainage of an intracerebral abscess through a ventricular cannula is not sufficient, and recurrence, continuation, or extension of neurologic abnormality indicates the necessity for further measures. In these instances total excision of the abscess has been effective. In our hands, evacuation of pus from an abscess

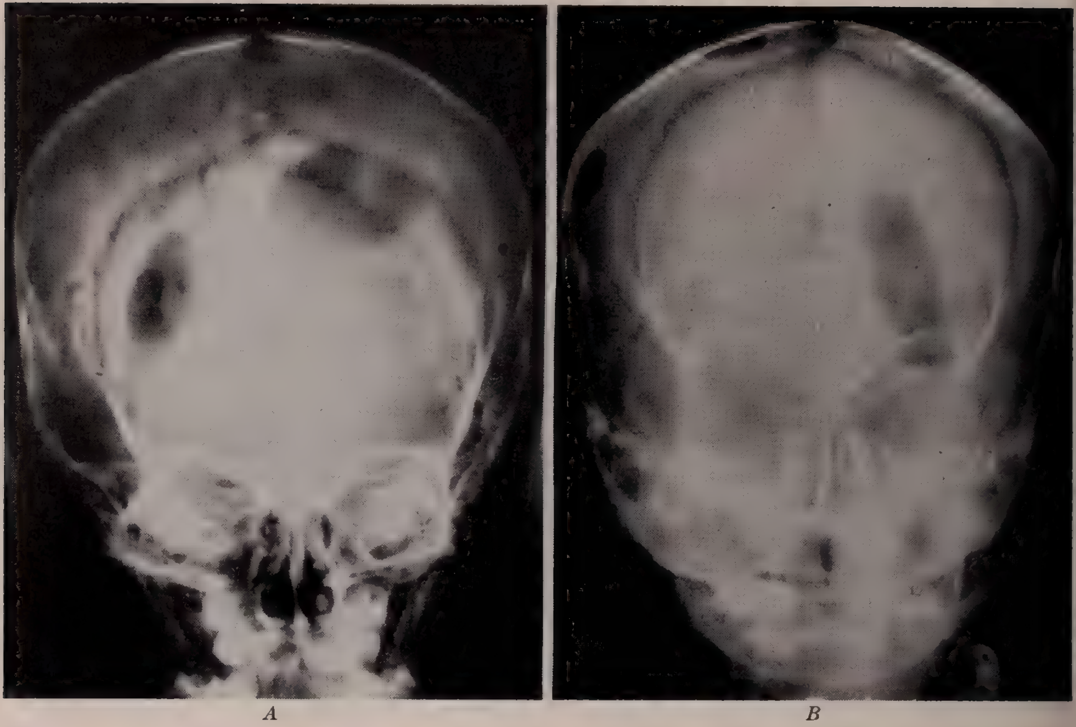

FIG. 2. (*A*) Ventriculogram with air filling a large abscess cavity. (*B*) Postoperative ventriculogram (twenty-eight days) with failure of filling of the right lateral ventricle. The demonstrated temporal and occipital horns of the left lateral ventricle appear in normal position.

cavity through a simple trephine opening combined with massive doses of antibiotic drugs has resulted in most instances in subsidence of symptoms and eventual recovery with minimal sequelae.

By and large, with the aim of medical and surgical therapy clearly in mind, as well as the pathophysiologic alterations associated with the lesion, one can proceed with the expectation of a complete eradication of this curable brain lesion with a minimum of neurologic deficit in a living patient. The following brief outline of the clinical course of several patients treated in this fashion will re-emphasize some of these points.

Case Reports

CASE 1.—A twenty-seven-year-old male was admitted to the hospital following two weeks of left-sided headache. There was a mild drowsy state and evidence of aphasia with a right homonymous hemianopsia and right hemiparesis. Papilledema was evident. Ventriculographic examination disclosed a left temporal mass lesion, but because of the great rapidity of the progress of clinical features a brain abscess was suspected (Fig. 1A). Accordingly, an exploring ventricular cannula was introduced through a left temporal burr hole. At a depth of 8 mm. purulent material was obtained and a total of 45 cc. of pus evacuated. The cavity was irrigated with penicillin solution and the wound closed. There was progressive improvement from this time, and subsequent pneumoencephalographic examination disclosed an undisturbed ventricular system (Fig. 1B). During hospitalization over 16,000,000 units of penicillin and a total of 85.5 Gm. of streptomycin were administered over the course of twenty-one days.

This course of events is illustrative of the success that may be obtained from simple tapping of an intracerebral abscess cavity with complete subsidence of the process.

CASE 2.—A four-year-old female with a congenital cardiac abnormality designated as the tetralogy of Fallot was admitted to the hospital following several convulsive seizures. For the month preceding admission to the hospital an indeterminate amount of penicillin had been given sporadically for fever of an undetermined origin. At entry meningitis was apparent, the spinal fluid containing 40,000 white blood cells per cc., predominantly polymorpho-

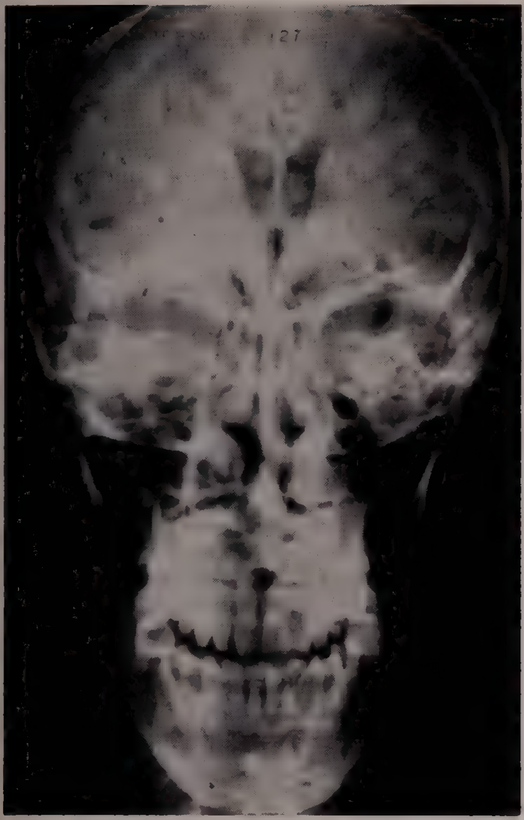

FIG. 3. Postoperative pneumoencephalogram in Case 3 thirty-two days after tapping of left temporal abscess.

nuclear leukocytes. In the course of the next three days indications of a focal right cerebral lesion appeared, and there was increasing edema of the optic nerve heads. Ventriculographic examination disclosed a multiloculated right frontoparietal lesion which was filled with air introduced from the opposite lateral ventricle (Fig. 2A). Eight cubic centimeters of pus were evacuated through a right posterior frontal burr hole, and 70 cc. were removed in a similar fashion at a right parietal opening. The respective cavities were not irrigated with penicillin. Postoperatively massive doses of antibiotics were continued, and gradually complete recovery ensued. Before discharge another ventriculographic examination disclosed a midline system, but the right lateral cerebral ventricle was not visualized (Fig. 2B). At the time meningitis was evident, penicillin (300,000 units every three hours), dihydrostreptomycin (600 mg. a day), and sulfa compounds were used. Administration of penicillin was continued in doses of over 2,000,000 units a day for eighteen days postoperatively.

Several features of the problem of brain abscess as it exists today are demonstrated by this patient. The nonlethal rupture of brain abscess into the ventricular system and the possibility of a presumed cure of an extensive suppurative lesion in a moribund child is certainly a product of the antibiotic era.

CASE 3.—A twenty-nine-year-old male was admitted to the hospital in a moribund state. There was a history of a draining left ear, meningitis, and subsequently convulsive seizures. A mastoidectomy at another hospital had improved the situation to a degree, but shortly thereafter marked stupor and decerebrate rigidity appeared. Thirty-five cubic centimeters of pus were evacuated through a left temporoparietal burr hole and the cavity irrigated with 1:1,000 penicillin solution. Recovery was slow, but pneumoencephalographic examination carried out thirty-two days postoperatively indicated the absence of a significant mass (Fig. 3). Here, too, antiobiotic and chemotherapeutic agents were administered over a prolonged period. Penicillin was administered both intravenously and intramuscularly so that approximately 2,000,000 units were received each day. Terramycin, 1,000 mg., as well as sulfadiazine were given daily for two weeks following operation.

In a situation such as this a rapid, relatively simple surgical procedure permitted recovery from a state of severe neurologic dysfunction.

CASE 4.—A seventeen-year-old male was admitted to the hospital with signs of an expanding intracranial lesion with no lateralizing features. There was bilateral papilledema. During the course of ventriculography a right parietal abscess cavity was entered and a catheter left in situ. Within the next twenty-four hours there was little drainage along the catheter, and quite rapidly after an initial period of improvement, marked stupor and decerebration appeared. Accordingly, through a right parietal craniotomy opening a large encapsulated brain abscess was removed. Recovery was good, but unfortunately blindness from severe papilledema ensued and has persisted. Penicillin (2,000,000 units each day) and streptomycin (2 Gm. per day) were utilized for twenty-two days postoperatively.

In this patient simple tapping was ineffectual and catheter drainage useless. It was not until the entire mass was removed that recovery ensued.

Summary

It is evident that with the use of chemotherapeutic and antibiotic agents the mode of therapy in the over-all problem of brain abscess has been modified. Although, because of these drugs, more radical surgical procedures such as complete excision are possible, also due to their effectiveness simple surgical maneuvers may be sufficient to accomplish the desired end. It would indeed be amiss to portray such formulations as originating from any one source since other authors have outlined similar proposals. It is clearly our desire to portray the problem of brain abscess as it is evident today and to indicate the necessity for an approach to individual issues on a pathoanatomic and pathophysiologic basis with the support of antibiotic and chemotherapeutic agents.

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Discussion

William F. Beswick, M.D., *Buffalo.*—The use of antibiotic and chemotherapeutic agents has dramatically lowered the incidence of intracranial abscesses during the past fifteen years. A large percentage of those that have started as the result of delayed or inadequate medical therapy are arrested at various stages of development as has been pointed out by Drs. Cook, Druckemiller, and Freedman.

In other instances when the virulence of the organisms is overwhelming to the host tissue resistance and medication, the infectious process proceeds to either a diffuse nonsuppurative inflammatory reaction or may finally, if death does not supervene, go on to abscess formation. While the course is being determined, anxious hours and days are in store for the physicians in attendance. Premature surgical interference can be disastrous by adding trauma to the inflammatory process, thereby increasing the swelling and extending the infection.

Twenty years ago, Dr. Walter Dandy recognized this danger and wrote, "In combating brain abscess just as in brain tumors, nature is constantly hampered by limited space available. She can indeed take care of space-consuming lesions of surprising size, often as large as a baseball by eliminating blood, cerebrospinal fluid, and normal watery content of the brain." It was his feeling that minimal manipulation of the delicate tissues was essential. I quote further: "When an abscess is drained, the traumatic edema and inflammatory swelling exact an ever-increasing additional amount of intracranial room, which soon exceeds the space released by evacuation of pus, and which soon exceeds Nature's bounds of compensation. To one who has carefully studied the sequence of events following customary drainage of chronic brain abscesses, the conclusion is inevitable that many patients afflicted succumb from the effect of the treatment rather than from the abscess itself." Dr. Dandy recommended that the approach to the abscess be by way of a small burr hole opening in the bone and that a ventricular needle be used to enter the abscess cavity through a tiny, dural opening. He warned against any aspiration or irrigation and that the needle should be left in place until pus ceases to drip. This should be repeated as often as indicated by clinical signs.

This work was done during the years when antibiotics and chemotherapy were unavailable. Dandy concluded his paper with this statement, "This procedure is of proved value only for chronic abscesses. Acute abscesses present a far less hopeful outlook. While it is possible that a few cases may be helped from the acute to the chronic stage by tapping an acute abscess, many are so virulent and fulminating that a cure is impossible. Certainly the contraindications to continuous drainage—which could only be futile, for there is little to drain—are even greater than for chronic abscesses."

Today, it is my feeling that the method of treatment of brain abscess presented to us by Drs. Cook, Druckemiller, and Freedman is most acceptable. The addition of a radiopaque material with the antibiotic offers a method of following the behavior of the abscess radiographically as introduced by Edgar Kahn. Regardless of location it is difficult to accept the method of radical extirpation of the chronic abscess. The associated damage to surrounding functioning nervous tissue compels this attitude. However, when one confronts evidence of cerebral abscess associated with congenital cardiac malformations, this method of radical extirpation and suctioning away of all necrotic and softened tissues seems to be the only course to follow. Here there is notoriously little attempt of the local defenses to wall off the infected thromboembolic process. Such treatment must be instituted immediately as a lifesaving measure.

Fortunately (psycho-) analysis is not the only way to resolve inner conflicts. Life itself still remains a very effective therapist.—Karen Horeny, M.D.

Chronic Simple Glaucoma: Results of the Mechanistic Approach

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OF THE present era it may be said that the problem of chronic simple glaucoma is being attacked from all sides and with all kinds of technics. The histology of the chamber angle and of the fluid exits in the anterior segment are being investigated in early glaucomatous eyes willed to individual ophthalmologists or eye banks. In eyes of the same type and origin the histology of the glaucomatous optic nerve disease is being correlated with the perimetric in vivo findings. Under Duke-Elder's leadership a systematic search is being made for the systemic vascular disease underlying glaucoma. And last but not least, the mechanistic approach is making great strides, trying to unravel by physiologic, physical, and chemical means the mechanism of the elevated, unstable ocular tension and of its response to drugs.

It is in the latter field that considerable progress has been made during the last five years, principally through the development or improvement of methods which permit actual measurements in vivo and in situ of some of the characteristics of the ocular fluid exchange. While the data established thus far are scanty and fragmentary, they are very gratifying to the workers in this field because they are of a more quantitative nature than any data reported previously. For the first time in the history of ophthalmology it has been possible to establish statistical correlations between measurements of the ocular tension, on the one hand, and its component factors, on the other.

Since the story of the mechanistic approach is closely tied up with the development of the methods, this discussion of the mechanism of chronic simple glaucoma will be built around the specific methods to which our present knowledge has to be credited. These methods may be classified under three headings: (1) observation of the aqueous veins and laminated veins in their genuine state and under the influence of mechanical manipulation or drugs, (2) measurement of the rate of flow through the anterior chamber, and (3) measurement of the capacity of the outflow channels.

The principal lesson learned from observing aqueous or laminated veins in their genuine state is the steady flow visible within them. Since they are direct outlets of Schlemm's canal,[1] the flow visible in these special veins is incontrovertible proof of a steady flow in the more proximal sections of the trabeculum-canal of Schlemm system as well as in the anterior chamber. The question arises as to what is the quantitative relationship between the rate of flow through the anterior chamber, that is the over-all flow, and the rate of flow through a given aqueous vein. There undoubtedly is a relationship, but its investigation is fraught with difficulties. The principal hurdle is the gross inaccuracy of all estimates of the total, aggregate vascular bed made up by aqueous veins. Another difficulty is the now well-established fact that narrow and wide aqueous veins respond differently to certain mechanical manipulations.

In a small series of eyes with early senile cataract I failed to find any correlation between the size and number of the visible aqueous veins and Grant's coefficient of outflow. Eyes with the most striking aqueous veins did not consistently show a higher coefficient of outflow than eyes with very few and narrow aqueous veins. The number and size of the visible aqueous veins in nonglaucomatous eyes is apparently not related to any functional characteristic of the eye but rather represents a caprice of nature.

There are, however, situations in which a change in the rate of flow in the aqueous veins clearly reflects a change in the over-all rate of aqueous flow. Acceleration of the latter by compression of the globe is followed in most instances by a noticeable acceleration of the flow within or widening of the aqueous veins. This phenomenon was the basis of Goldmann's[2,3]

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method for the estimation of what he called the apparent outflow pressure, that is, the pressure difference between anterior chamber and aqueous outlets at the episcleral level. The determination of the amount of external pressure necessary to produce a barely visible widening of one aqueous vein has proved a difficult task in my hands. As a gross semiquantitative classroom demonstration, the method is very impressive in showing acceleration of flow in aqueous veins upon the application of considerable external pressure. Lister[4] has found the method to be of diagnostic value in that glaucomatous eyes required grossly more external pressure than nonglaucomatous eyes to produce the acceleration or widening phenomenon.

The relative pressures prevailing in aqueous veins and their blood-bearing tributaries or recipient vessels have been investigated extensively by applying external pressure below the junctions and observing the resultant changes in the direction and velocity of aqueous and blood flow. While most junctions under these conditions give fairly consistent and characteristic responses (aqueous inflow or blood inflow), it is being realized that these responses may be more indicative of local pressure differences than of the major gradients in aqueous flow. In the words of Ascher, the discoverer of the aqueous veins, "the response of a given vessel to mechanical manipulation is usually a constant and reproducible characteristic of the individual vessel depending upon a number of local factors. . . . Tests performed on single aqueous veins concern particular outflow channels and not the eye as a functional whole."[5]

One very important characteristic of the flow through aqueous veins lends itself to actual measurement without appreciable disturbance of the ocular circulation, i.e., the absolute pressure. By means of several different devices it has been possible to apply and to measure the amount of external pressure necessary to stop the flow in single episcleral veins.[2,3,6–9] Such measurements can be made on most episcleral vessels, irrespective of their contents, and repeated as often as the examiner deems necessary. Remarkably consistent results have been obtained by different examiners. Close to the place of emergence from the sclera the pressure in aqueous veins varies around a mean of 9.5 mm. of Hg in nonglaucomatous eyes.[2,3] The mean for eyes affected with chronic simple glaucoma may be slightly lower than that for nonglaucomatous eyes.[2,3,7,8] After one blood-bearing vein has joined the aqueous vein, the pressure is found to be about 1 mm. lower than close to the emissarium. Approximately that amount of pressure prevails in most of the blood-bearing veins on the anterior sclera. In the veins emerging farther back, presumably directly from the ciliary body, the pressure is considerably higher. In these veins Thomassen[6] found the pressure to parallel closely and to precede slightly the marked diurnal fluctuations of tension that occur in most eyes affected with chronic simple glaucoma. It is important to distinguish clearly between the two types of veins. The pressure prevailing in the anterior ones which are visibly connected with aqueous veins is definitely not elevated in chronic simple glaucoma. Elevation of the venous pressure, therefore, cannot be the direct cause of the lasting elevations of ocular tension characteristic of chronic simple glaucoma or, in the words of the author of the most recent publication on this subject, Bain,[9] "changes in the venous pressure do not themselves cause pathologic rises in the ocular tension." These statements in no way negate the possibility of transient experimental variations in venous pressure causing transient tension changes in normal or glaucomatous eyes Nor do the foregoing statements negate the possibility of glaucomas other than those of the chronic simple type being caused by pathologic lasting elevations of the venous pressure, such as result from arteriovenous fistulas (Weekers[10]).

TABLE I.—MEASUREMENTS OF OUTFLOW PRESSURE

	Controls		Chronic Simple Glaucoma	
	Goldmann	Loehlein	Goldmann	Loehlein
T	16.8	14.5	40.7	21.2
P_v	9.5	9.7	7.6	8
P_0	7.3	4.8	33	13.2

For the sake of completeness it might be mentioned that the pressure in the anterior ciliary arteries is not significantly altered in chronic simple glaucoma.

The information gained thus far suggests treatment of the over-all flow in the anterior segment of the human eye in accordance with the rules of hydrodynamics, that is, by establishing a relationship between the pressures at two well-defined loci with the rate of flow and the resistance encountered between the two loci. The anterior chamber and the emissaria of the aqueous veins are the logical sites with the ocular tension (T) and the pressure in the aqueous veins (P_v) as the respective pressures. The objections could be raised that net outflow may occur through channels other than the trabeculum-canal of Schlemm system. Such flow could occur through the iris vessels or the uveal trabeculum and Kiss' ciliary plexus[11,12] as the result of osmotic or hydrostatic forces. By very attractive argumentation Goldmann[2,3] arrived at the conclusion that the amounts of water leaving the eye (not simply changing places with water molecules in the bloodstream) by channels other than the trabeculum-canal of Schlemm system are negligible as long as the permeability of the blood-aqueous barrier remains approximately normal, a condition which is fulfilled most of the time in eyes with chronic simple glaucoma. The pressure difference $T-P_v$ may thus be considered as the outflow pressure of the aqueous flow. From Table I it is evident that this outflow pressure in eyes affected with chronic simple glaucoma very markedly exceeds the outflow pressure in control eyes. Since the length of the passage is the same, the greater outflow pressure in simple glaucoma could mean either a greater rate of flow or greater resistance.

The rate of flow cannot be determined by cannulating one of those very large aqueous veins that one sees occasionally for the obvious reason that we would not know what portion of the overall flow we were measuring. The measurements have to be made on the anterior chamber portion of the aqueous flow, using a tracer substance that enters the aqueous by diffusion, is chemically and pharmacologically inert, and whose concentration in the aqueous can be determined and followed in situ. Fluorescein serves this purpose very well in an intricate and laborious method conceived and worked out by Goldmann[2,3] who has been the pioneer in the field of rate of flow measurements in the human eye. His method has the disadvantage that a period of two to three hours is necessary for a complete test. During this time the ocular tension and fluid exchange should remain in a fairly steady state except for the addition of Fluorescein to the diffusible contents of the aqueous. The Fluorescein concentration in the anterior chamber depend on factors other than the net rate of fluid movement through the chambers; the magnitude of these "other" factors is not definitely known. Goldmann concluded from his data that the minute volume of the anterior chamber is 2.2 ± 0.37 cu. mm. in the nonglaucomatous human eye. The mean for the minute volume of 14 eyes affected with chronic simple glaucoma was 1.7 cu. mm., slightly but significantly less than in nonglaucomatous eyes. Complicated, complex, and laborious as Goldmann's method undoubtedly is, it has yielded the very important fact that the elevation of the ocular tension in chronic simple glaucoma is not due to hypersecretion. A number of modifications of Goldmann's method are being investigated at present.

That brings us to the third factor governing aqueous flow, the resistance encountered during the passage of aqueous from the anterior chamber to the scleral emissaria. This resistance has very justly received a good deal of attention during the last decade and has become recognized as the outstanding factor in the mechanism of chronic simple glaucoma. It is directly measurable in the human eye with a minimum of discomfort to the examinee. All direct methods of measurement are based on the very characteristic ability of the human eye to give up some of its fluid contents under the effect of external pressure. The actual test consists of determining the amount of fluid given up under a measured amount of external pressure. It is practiced in the United States in the form of Grant's tonography and is coming to the fore in Great Britain under the name of bulbar pressure test (Blaxter[13]). While both tests work on the same principle, they differ in certain respects which are worth considering in some detail. During tonography the electronic tonometer of V. Mueller acts both as the globe-compressing as well as the pressure-measuring instrument. In the bulbar pressure test Bailliart's dynamometer supplies the external pressure while a Schiøtz tonometer of the X-type measures the resultant change in ocular tension. Grant expresses the result of the tonographic test according to the formula:

$$\frac{\Delta V}{(\text{Average } P_T - P_o) \times \text{time}} = C$$

Starting with the denominator, P_o stands for the ocular tension just before the test. P_T is a symbol that has become very important during the last few years. It stands for the new pressure level to which the pre-existing P_o has risen as the result of the application of the tonometer. Since the normal human eye responds to this rise in pressure by expelling more than the normal rate of fluid through its outflow channels, P_T drops steadily during sustained application of a tonometer of constant weight. Because of this steady drop during tonography the average P_T appears in the denominator of Grant's formula. The numerator describes the principal process of tonography, expulsion of fluid, in cu. mm. C, the ratio amount of fluid expressed per mm. of tonometric rise of pressure, has very appropriately been named the coefficient of the facility of outflow. Its reciprocal $1/C$ is a direct measure of the resistance encountered during the passage of aqueous from the anterior chamber to the scleral emissaria.

The result of the bulbar pressure test is expressed as follows (after Blaxter[13]): The ocular tension is measured, with the dynamometer in position, at the beginning and at the end of the test (four minutes apart), and the difference between these two readings is multiplied by 100 and divided by the first reading. Since they are taken with the compressing instrument in place, these readings come pretty close to P_T values. Grant's and Blaxter's formulas are, therefore, very much alike.

Both tonography and the bulbar pressure test suffer from the one principal drawback that they record a process much more complex than the expulsion of aqueous. The sustained application of the tonometer with the resultant elevation of the intraocular pressure probably influences the rate of aqueous formation.[14] Besides, respiratory and other changes in ocular blood volume, possibly of reflex nature, enter into the readings. Accurate continuous recordings of these fluctuations make it possible to pick out points in the tonograms which represent the same phase of the respiratory and other fluctuations of the intraocular pressure and offer, for that reason, a more reliable basis for calculation of the expulsion of aqueous than just the starting and ending points.

Both tonography and bulbar pressure tests can be conducted at various pressure levels at the discretion of the examiner. The range of tonography proper is limited by the available weights and the topheaviness of the tonometer with the 15 Gm. or higher weights but can be extended by the simultaneous application of other pressure-raising devices such as suction cups. The range of the bulbar pressure test extends to the upper limit of tonometry with Schiøtz X-type instruments.

TABLE II.—TEST-RETEST CONSISTENCY OF COEFFICIENT OF FACILITY OF OUTFLOW IN CHRONIC SIMPLE GLAUCOMA

Case	Grant's Coefficient	
	Mean	Standard Deviation
1	0.166	± 0.032
2	0.133	± 0.007
3	0.090	± 0.011
4 right	0.033	± 0.004
left	0.050	± 0.008
5 right	0.034	± 0.009
left	0.033	± 0.008

It is most gratifying to be able to record here that both tonography and the bulbar pressure test have clearly demonstrated the presence of an abnormal resistance to aqueous flow in chronic simple glaucoma. In practically all respects there is close agreement between Blaxter's findings with the bulbar pressure test in Great Britain and the tonographic findings of Weekers and associates in Belgium and of the American authors.[14] The meaning of the increased outflow pressure in glaucoma discussed in the early part of this paper is now clear. In the equation

$$\text{Pressure} = \text{Rate of Flow} \times \text{Resistance}$$

it is the resistance that is abnormally high in chronic simple glaucoma. The nature of this resistance is being investigated by several different technics.

One of the important questions is that of the test-retest consistency of the low facility of outflow in chronic simple glaucoma. Table II shows the results of repeated tonographic tests on seven eyes of five patients with early chronic simple glaucoma. Only in the left eye of case 5 were marked visual field defects present. In the others field defects were slight or nonexistent. The tonographies were done under fairly uniform condition, that is, during late morning hours, without interfering with the patient's normal meal schedule, and after all topical or systemic medications had been withheld for at least three days. All the tests referred to in Table II were done under outpatient conditions, the patient's tension being checked two or three times during the hour preceding the tonography. On the basis of these tests all patients were in a phase of stationary tension at the time of tonography. Each eye was subjected to at least five tonographies under these quasistandard conditions. Table II gives the mean of the readings as well as their standard deviation. Five of the seven eyes could also be tested during phases of descending or ascending tension. All these readings fell within the range of readings obtained during the stationary phase.

The interpretation of these data is somewhat uncertain because of the "impurity" of tonographic recordings. With the greatest possible care one cannot with present methods rule out changes in intraocular blood volume or rate of secretion occurring during tonography and influencing the readings. This possibility has to be more seriously considered if C, the amount of fluid expelled, is small. Therefore, for C values below 0.050 I believe that the present technic of tonography is not accurate enough to attach any significance to the variations observed. One should probably conclude that besides the reduction in the ability to give up fluid under pressure, it is characteristic of glaucoma that this ability becomes more or less fixed. Variations of C values around a mean of 0.1 or greater may be actual, such as undoubtedly occur in the normal eye.

Tonography, as stated before, can be performed at different pressure (P_T) levels. In the normal eye ΔV increases with increasing P_T fairly linearly up to very high P_T values where ΔV, according to our findings, ceases to increase and, a little further on, starts to decline. That decline takes place in the P_T range at which the biomicroscopic phenomena occur that form the basis of Kleinert's compensation-maximum test.[15] This author found that at a certain high intraocular pressure level, produced dynamometrically, the direction of flow in the aqueous veins reverses, and blood influx takes place. The phenomenon of a decrease of ΔV in that pressure range may be the tonographic equivalent of the reversal of flow in the aqueous veins. Thus, there is a very definite upper limit to the normal eye's capacity of giving up more and more fluid under increasing pressure. In the eye affected with chronic simple glaucoma, this capacity is definitely reduced, and an obstruction to outflow becomes detectable first in the middle high and very high tension ranges. A tonographic test with the 10-Gm. weight which may raise the ocular tension to 40 mm. Hg is very apt to demonstrate this obstruction, that is, reduction of outflow compared to the normal eye. Tonography with a 5.5-Gm. weight may on the same, early glaucomatous eye give a practically normal result. From these tonographic findings as well as from Blaxter's findings with the bulbar pressure tests, early simple glaucoma seems to be characterized by a resistance to outflow that is more pronounced under conditions of higher pressure when greater demands are made on the outflow channels. As glaucoma advances, the obstruction to outflow becomes more pronounced in all tension ranges. These findings, unfortunately, imply that tonography is of greater diagnostic value at higher, less physiologic P_T values.

The data available at this time are not sufficient to establish any definite correlations between C, on the one hand, and the evolution of chronic simple glaucoma, on the other. Painfully little can be reported at this time about the relationship of the other factor, the rate of aqueous flow, to the respective stage of glaucoma. That lack of knowledge is particularly disconcerting because the occurrence of transient fluctuations of the rate of aqueous secretion has been definitely demonstrated under certain experimental conditions. At present there exist no methods by which such fluctuations could be conclusively demonstrated in the human eye, but there is good reason to assume their occurrence. It is highly probable that the average rate of fluid production is characteristically altered in chronic simple glaucoma, late in some cases and early in others. The combination of marked obstruction to aqueous outflow with no or only slight reduction in aqueous production probably prevails in most early and moderately chronic simple glaucomas. Such a combination, as far as I can see, could account for all the anomalies of the ocular tension observed in these cases, particularly the exaggerated diurnal fluctuations and the general instability of the ocular tension. Combination of reduced outflow with reduced aqueous production may very well be the basis of so-called low-tension glaucoma.

The disturbance of the mechanics of ocular fluid exchange described in the foregoing may very well be a manifestation of a primarily vascular disease with a specific localization in the anterior uvea. No new clues are available at this point concerning the relationship between the mechanical factors and the optic nerve disease. It is hoped that continued work with the present or more refined methods will soon fill the very large gaps still existing in our knowledge of chronic simple glaucoma.

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Discussion

James I. Farrell, M.D., *Utica.*—Dr. Kronfeld has presented to us a very timely paper in which he has brought us up to date on the work which has been done by numerous men in trying to explain the mechanism of chronic simple glaucoma. Dr. Kronfeld himself has been one of the outstanding researchers in this field. We are certainly most indebted to him for gathering all this data together and presenting it to us in such an interesting and understandable way.

Unfortunately, it has never been my good fortune to observe an aqueous vein, and yet I do not feel too chagrined by this fact since I am sure there are many of you who have not had that privilege either. I feel free in making this statement since I have asked several men with far greater clinical and research opportunities than mine, who have answered me promptly that they have observed one such vein when pointed out to them or admitted that they have never seen one. After hearing Dr. Kronfeld's paper, it would seem to me that it behooves all of us to learn what these veins look like and then to observe them more closely in our suspected or proved glaucomatous patients.

I would like to ask Dr. Kronfeld if he feels that an elevation in the pressure in the scleral veins is an indication that there will be an increase in the intraocular tension in eyes which show no other signs of glaucoma.

I am pleased that the essayist put so much emphasis on the fact that Goldmann had definitely shown that the elevation of intraocular tension in chronic simple glaucoma is *not* due to an overproduction of aqueous.

In discussing the facility of outflow Dr. Kronfeld explains the technics of both Grant and Blaxter. I know that Grant's "coefficient of the facility of outflow" is an expression of cubic millimeters. Is Dr. Blaxter's answer from the bulbar pressure test expressed in this same quantitative way? May I also ask if the anesthetic used in carrying out tonography has any effect on the final answer?

It was stated that Kleinert in carrying out his compensation-maximum test found that the direction of flow in the aqueous veins reverses and blood influx takes place when the intraocular pressure was markedly increased by the dynamometric method. I would like to ask Dr. Kronfeld if he has ever observed this during tonographic tests. Also what is the physiologic explanation of this phenomenon?

We have been given a very good explanation for the basis of so-called low tension glaucoma, but how does one explain the high tension eye (30 to 35 mm. Hg by the Schitøz tonometer) which does not show loss of vision, field changes, or optic nerve changes?

It is most encouraging to hear of the studies that are being made in the field of glaucoma. Let us hope that with the help of the various new technics we will soon be able to diagnose glaucoma earlier than we have heretofore and carry out its treatment with better understanding and success.

Peter C. Kronfeld, M.D., *Closing Remarks.*—In reply to Dr. Farrell's questions I do not remember having seen, heard, or read of a case in which the pressure in the episcleral veins was elevated and the ocular tension was normal. If such a situation did occur, I would suspect the presence of a lesion interfering with the venous outflow from the orbit. Such a lesion would probably produce gross clinical symptoms so that the finding of an elevated venous pressure in the episclera would not be very helpful.

The result of the bulbar pressure test is expressed in pressure and not in volume units because the volume of the indentation produced by the dynamometer is not known.

Tonography is usually performed and is most revealing at pressure levels far below the one at which Kleinert's phenomenon of reversal of flow in the aqueous veins takes place. With regard to the physiologic explanation of this phenomenon, at present we have only theories, one of which I mentioned in the paper.

I regret very much that the data I reported today do not shed any new light on the relation between ocular tension and glaucomatous optic nerve disease.

Where there is fear, there is no religion.—GANDHI

Fibular Hypertrophy in Nonunion of the Tibia

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(*From the Orthopedic Section, Veterans Administration Hospital, Brooklyn*)

According to Wolff's Law the internal architecture and external configuration of bone will conform to the stresses and strains placed upon it. In those situations where the continuity of the tibia remains interrupted, stresses and strains can be placed upon the fibula so that it will respond by increase in size and by reorganization of its trabecular system to resist the tendency to bowing.

There have been instances in which the premature healing of a fibular fracture or an intact fibula has contributed to delayed healing of the tibia by causing what Anderson[1] has called "fibular distraction." Under these circumstances one can surmise with reasonable certainty that the fibula is transmitting weight, and the tibial fracture is, therefore, not receiving the compression stimulus apparently necessary for bony union to proceed to maturity. In these cases interruption of the fibular continuity by osteotomy and protected weight-bearing in a walking plaster or brace have been followed promptly by tibial bony union.

In the case of R. D., two years after injury, the fibula was healed, and a tibial gap persisted. One inch of fibula was excised followed by weight-bearing in a long leg cast. Union followed promptly (Fig. 1).

In reviewing the literature pertaining to the utilization of the fibula in established nonunion and pseudoarthrosis of the tibia, many variations in technic were found. In 1884 Hahn[2] transferred the upper end of the fibula into the proximal tibial fragment. Codivilla[3] advised transferring the lower end of the fibula into the distal tibial fragment. In 1905 the operation was perfected by Huntington (Fig. 2A).[4] Stone[5] in 1907 split the fibula and inserted the distal end of one half into the tibia.

In 1919 Campbell[6] excised the cartilage and ligaments of the upper tibiofibular articulation to obtain increased stability preparatory to tibial bone grafting. Because of growth disturbances this was not applicable in children. In adults, because of the flexibility of the fibula, complete and rigid internal splinting was not provided. Milch[7] in 1939 described a synostosis operation in which bone was placed in the interosseous space between the tibia and fibula. The fact that bowing of the fibula occurred was an indication that it was being subjected to strain (Fig. 3A). Stewart[8] in 1940 described a modification of the Huntington operation to secure adequate immobilization of the tibial fragments preceding extensive tibial bone grafting in a six-year-old child (Fig. 3B). Wilson[9] in 1941 reported nine cases of complicated congenital pseudoarthrosis and described a simple method of two-stage transplantation of the fibula (Fig. 2B). Meyerding[10] in 1941 wrote an excellent review of 15 cases treated by transference of the fibula and tibiofibular fusion. Davis[11] in 1944 utilized the fibula in a number of ingenious ways to obtain tibial continuity (Fig. 4).

The various modifications have been primarily technical, the ultimate aim being to restore the integrity of the tibia. A departure from this is being presented for selected cases of persistent nonunion of the tibia where methods usually adequate have failed either once or more than once or where nonunion is unusual because of a large tibial defect, infection, soft tissue scarring, and/or a precarious circulatory status. In such a situation one is confronted with the alternative of amputation or bone grafting by other than ordinary methods. The approach I herewith propose is to accept the nonunion of the tibia and provide stability to the lower extremity by other means.

Interest in this problem was stimulated when three problem cases presented themselves at the Brooklyn Veterans Hospital at about the same time.

The first of these patients, B. O., had sustained a tibial fracture in 1919 and developed a persistent nonunion. He was admitted to the hospital because amputation had been advised. It was noted that despite the obvious nonunion he had been ambulatory with a brace for over thirty years. X-rays demonstrated a marked hypertrophy of the fibula. After discussion with the patient it was found that he did not want an amputa-

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Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Orthopedic Surgery, May 13, 1954.

The statements and conclusions published by the author are a result of his own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

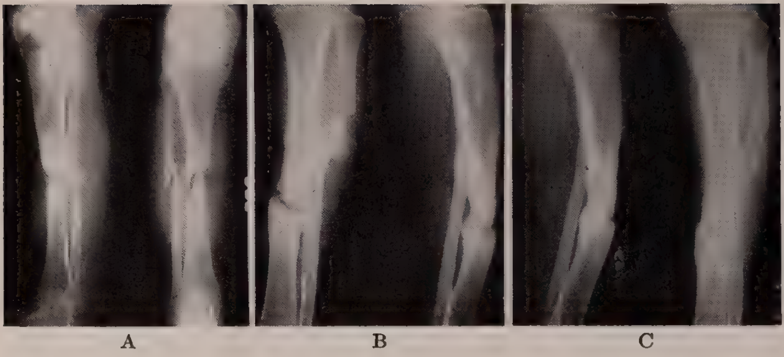

Fig. 1. (*A*) Tibial fracture still evident two years after injury. (*B*) One inch of fibula excised. (*C*) Tibial union in four months.

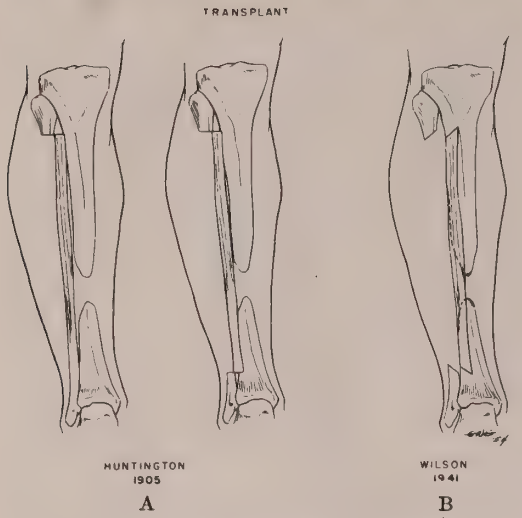

Fig. 2. (*A*) Two-stage fibular transplant. (*B*) Wilson's modification: oblique osteotomies and inlay of fibula into tibial fragments.

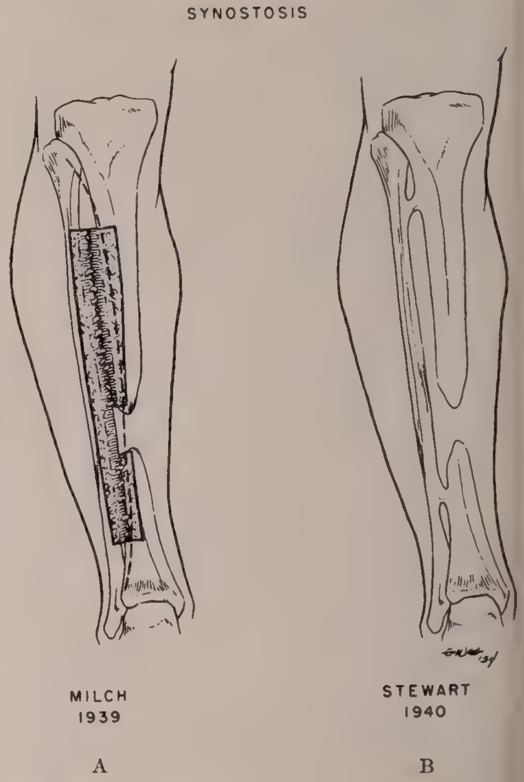

Fig. 3. (*A*) Milch synostosis: long skin incision exposing fracture site; bone placed in interosseous space. (*B*) Stewart synostosis: stabilization of tibial fragments preceding tibial grafting.

tion and was well adjusted with his brace (Fig. 5).

In further support of the contention that the fibula is capable of supporting body weight, patient D. S. was admitted to dermatology for treatment of "oak poison" that he had picked up during deer hunting in the Adirondacks. X-rays of his tibia demonstrated a bony defect at the site of an old tibial fracture; clinically, motion could be demonstrated at the fracture site. The patient had been ambulatory for over four years with no protection and no disability despite a clinical and x-ray nonunion of the tibia (Fig. 6). The fibula was doubled at the level of the tibial fracture.

Patient H. M. had nonunion of the tibia and marked thickening of the fibula. Because of deformity and nonunion an osteotomy of the fibula was performed. The alignment improved, and weight-bearing was instituted in plaster. Tibial union followed (Fig. 7).

Evidence of hypertrophy of the fibula was noted in the case Stewart reported. He noted "the fibula was perfectly straight and somewhat larger than normal." In Wilson's Case 2 with a persistent nonunion following a tibial fracture in childhood, the leg "had required the use of a brace but for the last four years, she had been able to bear full weight on it with perfect comfort." The x-rays of this case showed an enormously hypertrophied fibula similar to that seen in Fig. 5.

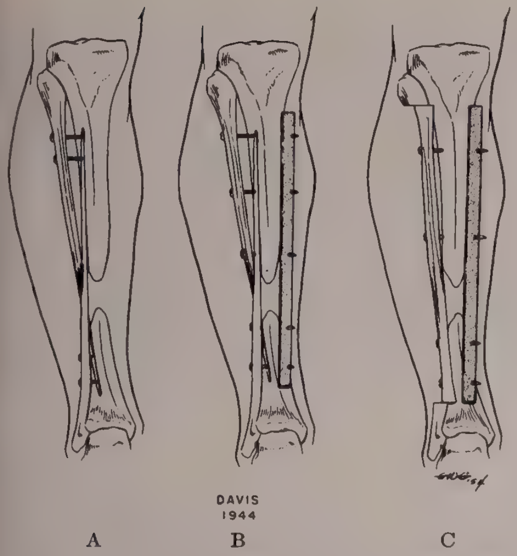

Fig. 4. (*A*) Long oblique osteotomy of fibula fixed to tibia with screws. (*B*) Same as (*A*) with bone graft on opposite side of tibia. (*C*) Fibula transplant with bone graft.

Meyerding remarked on the hypertrophy of transferred fibular shafts, stating that they often approached the size of the replaced tibia.

Fibular Reinforcement

An operative plan, "fibular reinforcement," was formulated that would reproduce a situation conducive to hypertrophy. The proximal and distal tibiofibular joints would be fused, transmitting the body weight through the knee and ankle by way of the fibula (Figs. 8A and 8B).

The fibula would not be transplanted or transferred across the interosseous space, thus avoiding the risks inherent in this procedure. Through small incisions directly over the subcutaneous tibiofibular joints at the knee and ankle, the ligaments and cartilage would be removed, and after packing with cancellous bone, interlocking key grafts would be placed across the intervening spaces. These procedures are relatively minor and can easily be accomplished without a tourniquet and without any serious risks. The incisions can be made well away from the potentially infected site of the tibial nonunion. When the incisions were healed, the patient could be made ambulatory in a long-leg plaster cast or in a brace. If the situation allowed at the initial procedures, to combat the tendency of the fibula to bow, strut grafts, as used by Stewart in his case, could be used to tie in the fibula to the proximal fragment of the tibia (Figs. 9A and 9B). Subsequently, the fibular shaft could be reinforced by the close application of additional bone. By removing one surface of a donor fibula, a cloverleaf type graft could be fashioned and through a small incision slid down on the lateral border of the fibula similarly to the introduction of nested intramedullary nails (Fig. 10). With protected weight-bearing in a long-leg plaster cast and then in a brace, the fibula could be expected to hypertrophy and take over the properties of the tibia.

This procedure was applied to the case of patient E. M. who had had three and one-half years of hospitalization and eight operations. A persistent nonunion existed, and further prolonged hospitalization was a serious consideration. The nonunion of the tibia was accepted, and fibular reinforcement, as proposed, was car-

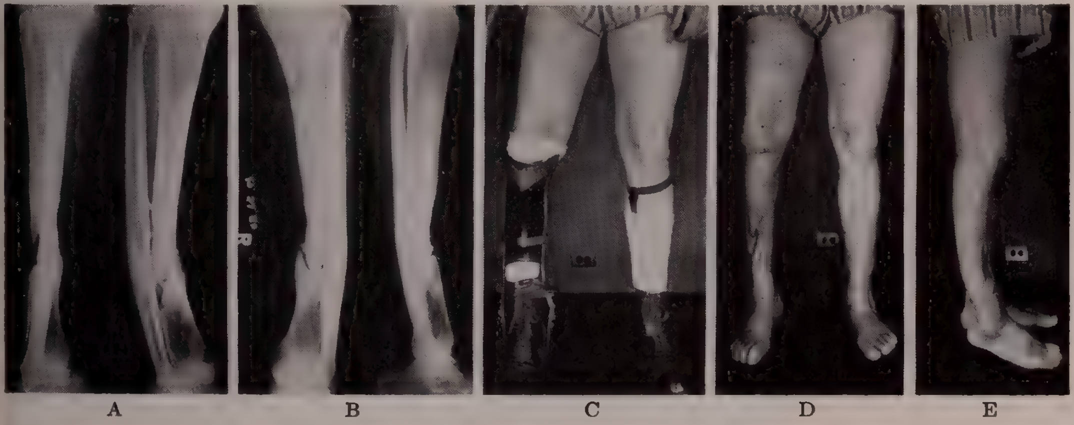

Fig. 5. (*A and B*) Thirty-two years after fracture, nonunion of tibia and hypertrophy of fibula. (*B, C, and D*) Weight-bearing with and without brace.

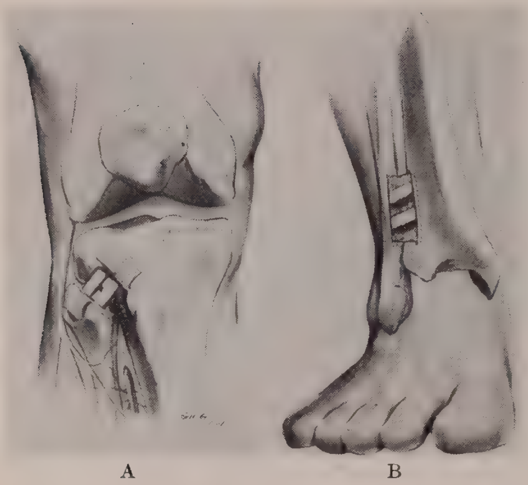

FIG. 6. (*A*) Proximal tibiofibular fusion; grafts locked in place. (*B*) Distal tibiofibular fusion; grafts locked in place.

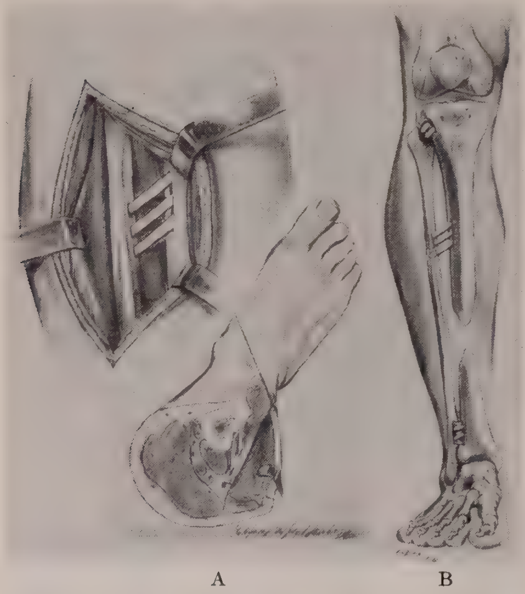

FIG. 7. (*A*) Struts placed across interosseous space from fibula into proximal tibial fragment. (*B*) Struts and tibiofibular fusions.

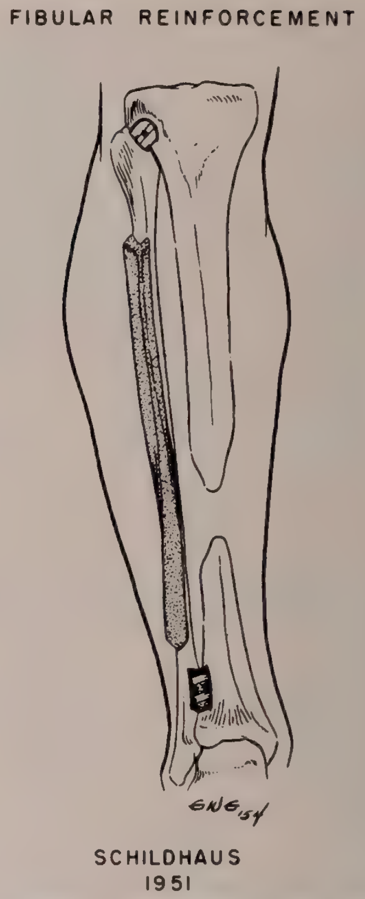

FIG. 8. Fibular reinforcement; bone bank fibula closely applied to fibula.

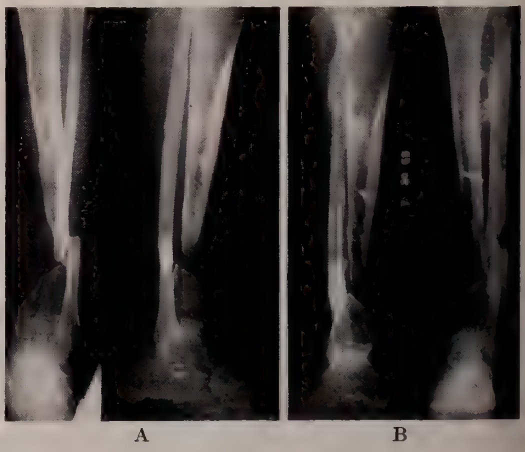

FIG. 9. (*A*) Established nonunion of tiba. (*B*) Fibular reinforcement two years postoperatively.

ried out in stages on three short hospital admissions over the course of one year (Fig. 11). This patient was at work in the post office during this period and now wears a below-knee brace; at home he goes without a brace.

The next case, J. H., came in fully conditioned and ready to have an amputation. He had a tibial gap, soft tissue defect, circulatory embarrassment, and had had seven operations including a sympathectomy and two and one-half years of hospitalization. Fibular reinforcement was elected (Fig. 12). The patient was registered at college for the coming term and has been at school since, ambulatory without crutches, at first with

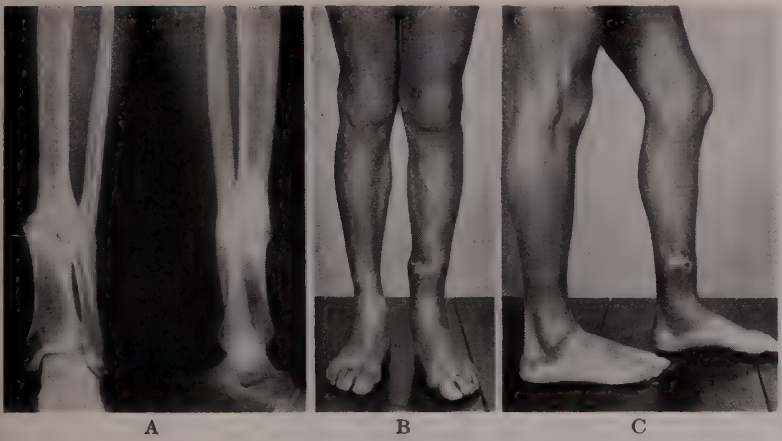

Fig. 10. (*A*) X-ray evidence of delayed union of tibia; clinically, motion present at fracture site; fibula doubled at level of fracture. (*B and C*) Patient capable of full activity without external support.

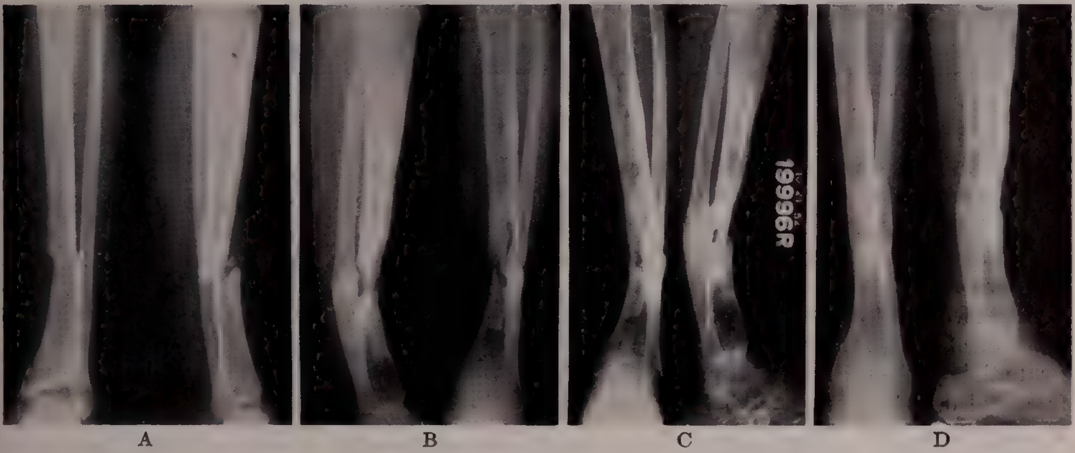

Fig. 11. (*A*) Fracture of tibia, fibula intact. (*B*) Nonunion developing despite fibular osteotomy. (*C*) Hypertrophy of fibula; deformity of extremity. (*D*) Excision of segment of fibula to correct alignment; fibular distraction removed; tibial union followed.

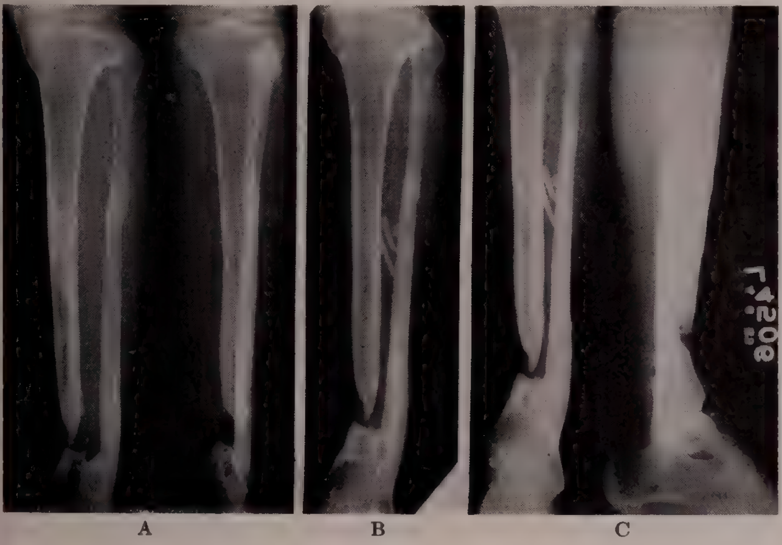

Fig. 12. (*A*) Tibia nonunion; proximal and distal tibiofibular fusions. (*B*) Fibular reinforcement. (*C*) One year later; note width of fibula at level of tibia gap.

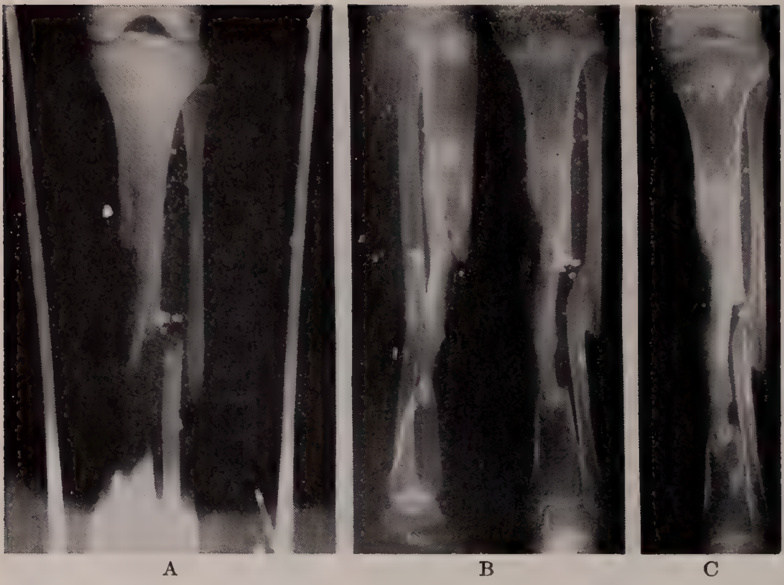

Fig. 13. (*A*) Severe land mine injury to right lower extremity. (*B*) Fracture of tibia despite brace. (*C*) Proximal and distal tibiofibular fusions.

an ischial weight-bearing brace, at present with a below-knee brace. He came into the hospital during Christmas and Easter recesses for short-stage procedures. He goes about at home without a brace.

At present in a third patient, A. R., with an amputation of the left lower extremity and an inadequate tibia in the remaining extremity, which refractured despite a brace, fibular reinforcement is being carried out (Fig. 13).

On the Orthopedic Section at the Brooklyn Veterans Hospital about 25 complicated tibial fractures are seen each year. In the past four years only three patients have been treated by fibular reinforcement. The procedure should be reserved for those problem cases in which the entire patient's situation warrants the acceptance of a nonunion of the tibia as an end result with the possibility of the necessity for the continued use of a brace.

Conclusion

Fibular hypertrophy does occur without transplant when nonunion of the tibia exists. Diverting the stresses through the fibula by proximal and distal tibiofibular arthrodesis theoretically encourages this development of hypertrophy; additional bone reinforces the fibula, strengthens it, and reduces its tendency to bow. The fibula can be utilized to sustain body weight without transfer when nonunion of the tibia persists.

50 Central Park West

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Discussion

Frederick R. Thompson, M.D., *New York City.*—I thank Dr. Schildhaus for bringing up again this most important salvage problem of nonunion of the tibia, which is so common in civilian practice. An all too frequent story is for these cases to be in the hospital for a period of from three to five years, to have several surgical attempts to achieve union and cessation of drainage, and ultimately to have amputation either because of surgical failure to achieve union or because the foot has become stiff in a varus position from long immobilization in plaster. Amputation is a rapid solution for the surgeon, but for the patient it is frequently a calamity and a constant problem for the remainder of his life. In my opinion, in spite of the prolonged time involved, every effort should be made to achieve union with as minimal shortening as is feasible.

Attempts to fuse the fibula to the tibia at the upper and lower end are not so easy as one would imagine from the descriptions in the literature. Fusion at the lower joint is easily accomplished, but at the upper end it carries a high incidence of nonunion. This upper-end fusion is further complicated by the fact that the roentgenograms cannot satisfactorily tell union in many cases for fully a year, unless accessory bone is packed in the interval between the fibula and the upper end of tibia at the lower end of the articulation so that the solidarity will show up by silhouette in a 20-degree internal rotation view. Even if satisfactory union has been obtained at the two ends, it rarely allows the site of tibial nonunion to go on to complete union. As Dr. Schildhaus has shown, over the course of many years the fibula may thicken and may even bow as hypertrophy takes place. Cross fusion of fibula to tibia closer to the site of nonunion is no solution, since even after additional fixation has been achieved by these cross grafts, the primary site of tibial nonunion rarely fills in with bone to heal unless grafting is done as an additional procedure.

Good, successful tibial union has been achieved by many surgeons after excising a portion of the fibula and allowing the site of tibial nonunion to telescope and oppose bony surfaces together. This necessitates shortening the leg, however, and although one would be satisfied to obtain union with a tibia but 1 inch short, this procedure is certainly not advisable where a large tibial gap exists and a shortening of 3 or 4 inches is necessary to obtain apposition of the bony surfaces. In such instances it is obviously better to fill in the gap of nonunion by long iliac barrel-stave grafts, as described by Drs. Cleveland and Winant.[a] This can sometimes be effected in the presence of drainage or with poor skin. It is best attempted, of course, with adequate flaps obtained either by release incisions or by pedicle graft procedures. After the gap of nonunion has been filled in within a reasonable distance to allow surface apposition of the bone ends if telescoping takes place, then a secondary procedure of shortening of the fibula, is usually crowned with success. Such an operative plan is not easy, however, since one is usually dealing with a compound situation where drainage and infection are present.

The fibular reinforcement plan of Dr. Schildhaus, taking the fibula from the sound leg and reinforcing the fibula on the affected leg, is an ingenious method of rapidly increasing the diameter of the fibula to bear weight. It does not, however, solve the primary problem of achieving union across the tibia. This tibial union, in my opinion, must be obtained in one way or another to achieve a satisfactory result.

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Nephrostomy with Partial Marsupialization of the Kidney

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(*From the Department of Urology, Morrisania City Hospital*)

For the purpose of this presentation it is unnecessary to define the precise role of nephrostomy for diversion of the urinary stream. Each urologist's personal experience leads him to favor one method of diversion over others when the choice is optional. However, situations are commonly encountered in which nephrostomy is mandatory, and my immediate intent is to submit certain modifications of the standard procedure which provide almost complete insurance against technical failure.

The principal source of dissatisfaction has been inability to replace the nephrostomy tube easily whenever this is necessary or desirable. When the kidney is replaced in the renal fossa after the operation of nephrostomy per se is completed, the resulting sinus tract is long and tortuous (Fig. 1). Should the tube be removed prematurely by inadvertence or design, its proper replacement is often impossible. When this unpleasant development transpires, as it often does, the purpose of the operation is defeated. It may even be necessary to reopen the wound and expose the kidney again in order to replace the tube within the pelvis.

The suggested technic was developed in the course of a secondary operation of this nature on a desperately ill child, on whom the initial nephrostomy had been performed only thirty-six hours previously. The result was impressive, and the method is now used in all nephrostomies, whether temporary or permanent, with slight modifications to cope with individual problems.

Presented at the 148th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Urology, May 13, 1954.

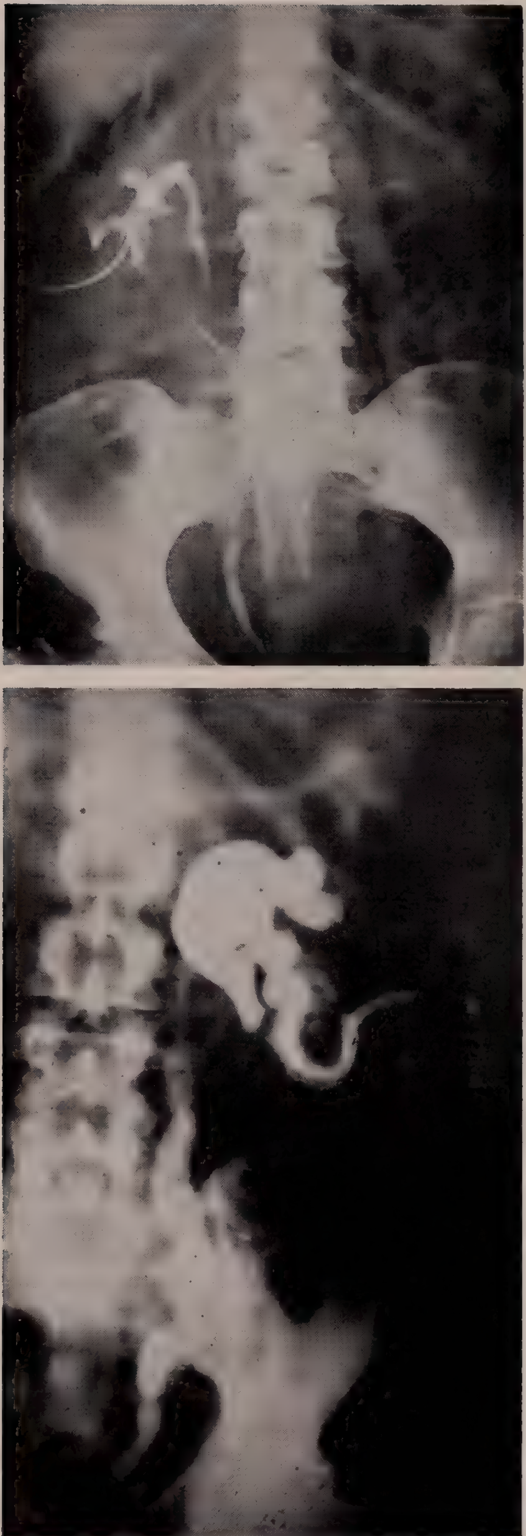

FIG. 1. Tortuous, long sinus tracts obtained with usual technic.

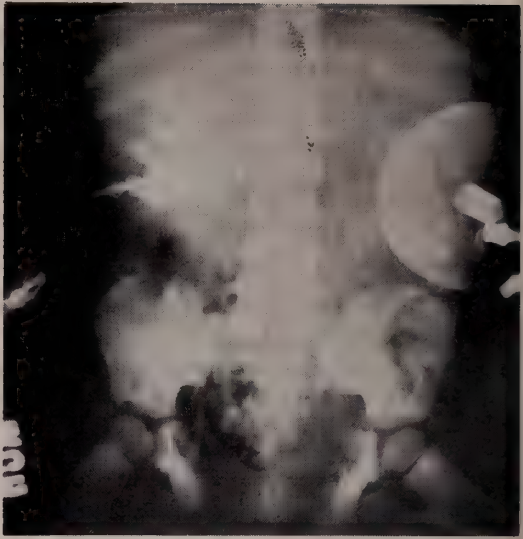

FIG. 2. Short straight sinus obtained with nephrostomy and exteriorization of kidney.

The principles are simple and readily applied. The operation is prolonged slightly, but since additional manipulations do not require handling of viscera, there is no added shock. The one essential step is that of partial exteriorization, or marsupialization, of that portion of the kidney through which the nephrostomy tube emerges. This results in the formation of an extremely short and straight sinus tract, providing direct access to the nephrostomy opening in the kidney (Fig. 2).

The nephrostomy itself may be performed by any of the usual technics. We prefer the method suggested by Cabot[1] in which the pelvis is opened and the cortex perforated from within outward, the tube being drawn into the pelvis by the penetrating forceps. The lower calyx is usually selected as the drain site. Because of their varying curves Randall's stone forceps provide more versatility than the ordinary curved hemostat. If a splinting catheter is desirable, it is manipulated into the pelvis and ureter through the same opening and at the same time. The pyelotomy is then closed to prevent puddling of urine in the wound.

If the nephrostomy is to be permanent, pyelotomy is eliminated, and the necessary manipulations are carried out through the open proximal stump of the ureter which is then doubly ligated. The type of drain used is optional and depends principally on the degree of pelvic dilatation. It is advisable to have a variety of tubes and select the one that seems most suitable when the kidney is exposed. When feasible, the drain

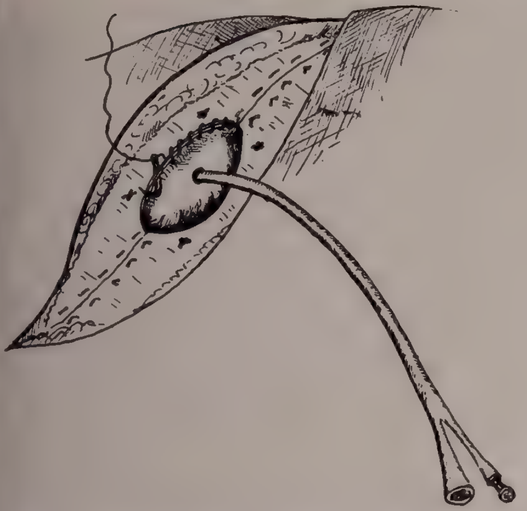

FIG. 3. Tube in kidney. Suturing of parietal layers; skin is treated similarly. Fixation sutures tied.

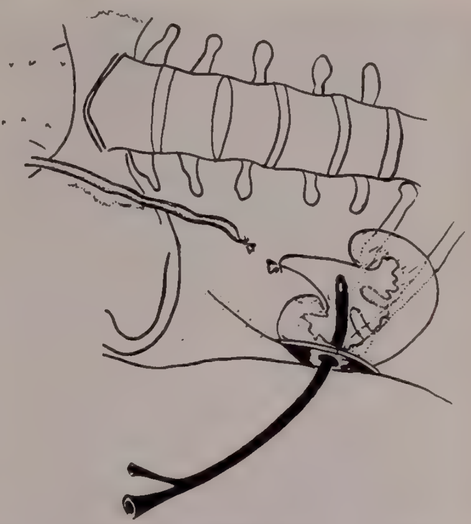

FIG. 4. Schematic representation of location of nephrostomy opening at end of operation.

is secured by one or two sutures that include the kidney capsule.

Exteriorization of the kidney can be accomplished in several ways. In essence the procedure resembles nephropexy, and the lower pole, through which the drain is usually inserted, is displaced into the midportion of the wound and held in position by two or more sutures of Atraumatic number 1 chromic catgut. These are placed both on the anterior and the posterior renal surface. The sutures are left long, and larger needles are then threaded on either end. These sutures are then made to penetrate all the layers of the parietal wall and are tied without tension on the outer surface of the external oblique or latissimus dorsi muscle. If the capsule is too thin to hold sutures, strips of ribbon gut attached to the capsular surface by fine chromic stitches may be used to suspend the kidney.

The selected portion of the kidney thus protrudes through the lumbar incision. Penrose drains are placed where needed in the renal fossa, emerging at the posterior angle of the wound. The method of wound closure is very important. Except for that portion occupied by the protruding kidney, the layers are approximated in the ordinary manner from side to side using interrupted sutures of number 1 chromic catgut. When the kidney is reached, a continuous suture is used to unite the posterior layer of the lumbar fascia to the transversalis fascia, covering over the intervening muscle layers and forming a shallow trough on either side of the exteriorized renal pole (Fig. 3). The skin and subcutaneous tissues are treated similarly, being sutured from side to side at either angle, with the skin edges approximated downward to the fascial suture line around the marsupialized portion of the kidney.

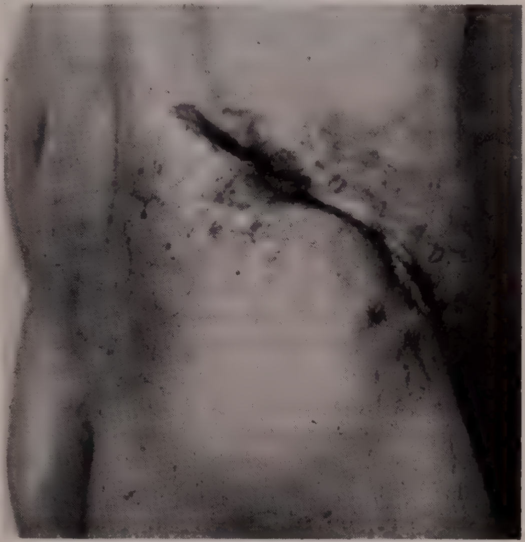

FIG. 5. Healed wound with well-healed sinus tract.

When closure is complete, the exposed part of the kidney and the nephrostomy opening are visible and accessible (Fig. 4). Whenever possible, the nephrostomy tube is sutured to the skin edges. A light gauze pack covers the renal surface, and the remainder of the dressing is applied.

The advantages thus obtained are obvious. Should replacement of the tube become necessary, it can be done with ease under vision and by a direct approach. There have been a number of

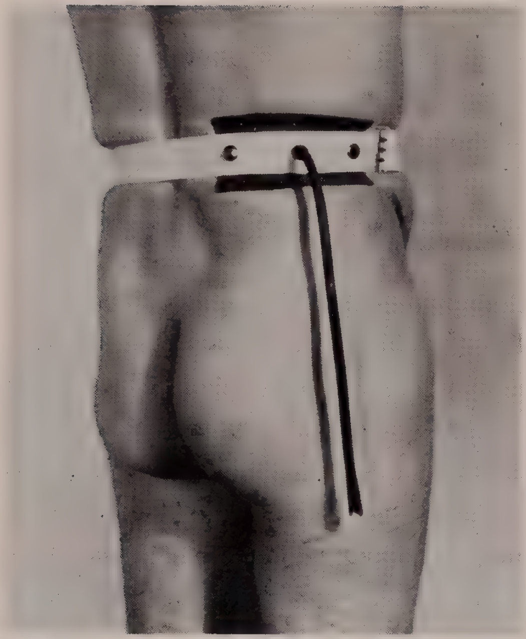

Fig. 6. One method of retaining tube; catheter drains to urinal bag.

cases in which such drainage had to be prolonged or permanent where the tubes have been replaced by untrained attendants with ease. Ordinarily there is no leakage around the tube, and the dressings remain dry. Despite the fact a gap is left in the midportion of the wound, the kidney itself acts as an effective plug, preventing extrusion of the peritoneum and development of a lumbar hernia.

No serious complications or disadvantages attributable to exteriorization of the kidney have been observed in a series which now includes more than 75 cases operated upon since this technic was first instituted in 1940. When a sinus tract has formed (Fig. 5), epithelium covers the surface of the kidney, and the tube can be held in place by simple retaining devices (Fig. 6). Patients are ambulatory and, under favorable circumstances, can be socially active and gainfully employed. Measures intended to control infection and to minimize incrustation and stone formation are instituted early and continued in accordance with later indications.

Bilateral nephrostomy is acceptable as a temporary measure, but because it presents many difficulties in nursing care and management, there are many disadvantages to its use on a permanent basis. It is almost impossible for a patient to lead a comfortable life under such conditions. Since permanent nephrostomy is usually undertaken as a palliative procedure, it seems advisable to use it unilaterally whenever this is possible. In some instances, notably in advanced pelvic carcinoma, one ureter is already occluded by the primary disease, and nephrostomy can be confined to the kidney which possesses residual function. Dr. Seymour Wilhelm in a personal communication stated that when operating for palliative purposes, he removes the poorer kidney and performs a nephrostomy on the contralateral organ.

The operation described in this presentation was first performed on the Urological Service of Morrisania City Hospital under the directorship of Dr. John Duff. The majority of the later cases were done at that institution. Since its inception he and other members of the staff have contributed significantly to the application and refinement of the technical details, and I take this opportunity to express my appreciation for their cooperation.

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1. Cabot, H., and Holland, W. W.: Surg., Gynec. & Obst. 54: 817 (May) 1932.

Discussion

George W. Slaughter, M.D., *New York City.*—Certainly few urologists will not agree with Dr. Kenyon that the major problem of nephrostomy is the maintaining in position and the replacement of the drain. To many of them it will be remembered as the first urologic emergency when, as neophytes, they were called to the ward or clinic to replace a nephrostomy catheter. The magnitude of the emergency rocketed to even greater heights when they found it impossible of accomplishment, the shock to be somewhat lessened when their seniors likewise failed.

The radiographic evidence presented by Dr. Kenyon demonstrates vividly the mechanics of the difficulties. A solution to the problem has been presented. The tract has been shortened, the curves and angles removed, and the possibility of stricture not only reduced to a minimum but made simple to relieve.

These have been accomplished without decreasing the efficiency of the drainage. In fact, the capacity has been increased. When the operation is performed as described, hernia should not result, and the kidney is at the same time protected against trauma.

The author has admitted the limitations of nephrostomy; to them we all subscribe. He has, however, presented a technic capable of insuring proper drainage without the major shortcomings to which this operation is subject. Nephrostomy will be necessary many times in the future; this modification will greatly aid the patient and those responsible for its proper function.

A Geriatric Orientation

WILLIAM HAMMOND, M.D., SCARSDALE, NEW YORK

GERIATRICS is, of necessity, every doctor's business. One cannot pick up a newspaper or periodical without encountering some statistic concerning the growing numbers of older people in our society. In a recent study of a large county in New York State, which had grown in total population between 1940 and 1950 from 573,558 to 625,816, it was found that whereas the growth in total population was 9.1 per cent, the growth in numbers of people over age sixty-five was 43 per cent.[1] Physicians see this trend reflected in their practice. The most recent information is that the number over sixty-five being seen by doctors is running about 20 per cent, that 60 per cent of these are women, that about 75 per cent of the elderly patients are physically impaired and 15 per cent mentally impaired.[1] This increase in disability which seems to go along with increase in age is a challenge to the medical profession as a whole and to the practicing physician in particular. Something can be done about it.

Prophylaxis and cure of many of the illnesses that manifest themselves in later life are not possible at this juncture because we do not yet understand their causes, and thus have nothing to build on. Palliation, although considered by some as an admission of defeat, still holds an important place in geriatric therapy, and we find ourselves using it often and with great benefit. However, there is a positive approach that the physician can make to the medical problems of old people in the fields of prevention and control. What are the things the practicing physician can prevent? First, he can prevent accidents by bringing the patient's special senses of sight and hearing up to the optimum by medical, surgical, and prosthetic means and by causing house traps to be eliminated. The National Safety Council will provide a pamphlet for your patient pointing out these danger spots. The simple installation of a night light on the path to the bathroom will eliminate many falls. Second, the physician can prevent many of the things that stem from faulty nutrition by attention to dentistry and diet. I should like to quote here what a dental consultant* recently had to say on this subject.

It is rare to see an elderly person with a good complement of teeth. Many have lost all of their teeth; nearly all have lost a good number of them.

The aging frequently have difficulty using dentures. A second difficulty is a lack of teeth which have been lost and not replaced. A third difficulty is infected and painful teeth which have been retained in their mouths. There is also a psychological factor in those who are sensitive about missing teeth which show.

1. A person who must wear dentures is fortunate if he begins to use them in middle age. He will usually have more patience and more determination to use them successfully. Most elderly people do not have this patience or determination and many who have dentures wear them only when they appear in public.

Dentures may fit very well, but the successful use of dentures is more dependent on the attitude of the wearer than upon the fit. How well they fit is frequently determined by the age at which they begin to wear them. The ridges of the jaws of younger people will present a more satisfactory foundation than those of older people in whose mouths greater resorption has taken place, and the foundation for dentures is poor. This difficulty of greater resorption can be overcome in most instances if the wearer is determined to use his dentures successfully.

2. The teeth most frequently lost during life are the posterior and since they do not show, often they are not replaced. For this reason we find many aging people whose anterior teeth are presentable but who have lost all or most all of their posterior teeth. They cannot chew and unless their diet consists largely of foods not requiring chewing, they will be improperly nourished and their stomach will be called upon to do more than it is capable of doing.

In those cases where anterior teeth as well have been lost, the psychological factor enters.

3. There are those who have not suffered greatly because of toothache and whose teeth have decayed and/or been attacked by the disease 'periodontoclasia' commonly known as pyorrhea. Because their discomfort is not more than they can stand, and often because of their dread of dental care, these teeth are retained in their mouths and may have serious ill effect on their general health. They may suffer from poor nutrition because chewing is uncomfortable.

Today dentistry has developed to a point which permits the aging to live comfortably with their own or artificial dentures enjoying their food and enjoying life to the limit of their ability.[2]

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* John T. Flynn, Dental Consultant, Westchester County Department of Family and Child Welfare.

It is not too important to think in terms of calories when ordering diets for old people because their expenditure of energy is less. Nitrogen balance and vitamin and mineral supply are the important considerations in this age group. It is estimated that at age sixty to seventy the caloric requirement is 10 per cent less than that of a normal adult with the same activity, that the requirement is 20 per cent less at seventy to eighty and 30 per cent less at age eighty to ninety.[2] Of the total calories 10 to 15 per cent should come from protein. Milk is an important daily food for the elderly for its food value as well as its calcium and phosphorus content. Fresh fruits, salad greens, and freshly cooked vegetables will bring up the vitamin and mineral content to the normal adequate amount. Vitamin supplement need only be used for obvious vitamin deficiencies, conditions which are now rarely seen; in wasting disease and for rapid preoperative and postoperative buildup; also where diet is known to be deficient or where it is restricted for therapeutic purposes or for food faddists. Ruffin's dictum is sound: "that for the most part, prolonged vitamin therapy in the absence of obvious disease is useless."

Joliffe's Standard Satisfactory Diet was designed as a guide to be used in determining inadequacies. This is the minimum below which one should not go: 4 eggs weekly; one serving daily of citrus fruit, tomato or their juices, or fresh uncooked salad greens; 1 pint of milk or its equivalent in cheese (1 ounce to 1 cup); one serving daily of lean meat, poultry, fish, or seafood; one daily serving of another vegetable or fruit; one portion daily of enriched or whole grain cereal or bread.[3] This minimum is very low calorie-wise (800 to 1,000 C.). However, using it as a baseline it can be amplified quantitatively and qualitatively to meet individual requirements. My own preference for diet for an elderly person leading a semisedentary life is one of 2,000 C. with 75 Gm. protein for the female and 2,500 C. with 95 Gm. protein for the male. This can be attractively varied, is not burdensome in quantity, and yet meets the 30 per cent factor of safety recommended by the National Research Council.

The next measure of prevention is the proper care of the feet to avoid complications which can be disabling and even fatal. The fit of the shoe and the weight of the stocking, chosen for warmth and lightness, are as important here as they are to the foot soldier. The only cutting instrument used on the feet by the elderly should be a strong, curved scissors and for nail cutting only. Corns and calluses rarely need to be fussed with, and if so, it is well to employ experts.

Finally many serious complications of the common cold, the upset stomach, the cut, abrasion, or burn can be prevented by giving these minor things serious and respectful attention from the start.

Beyond prevention the skill of the physician can be brought to bear in two positive and constructive ways, by assessment and control. Assessment of physical and mental resources on a continuing basis at intervals of not more than a year, with good records for comparison, is a basic tool in geriatric medicine. You cannot know where you are going unless you know where you are. The assessment of the elderly patient will differ little from that of any other. Memory defect and occasionally fabrication may make the history-taking difficult. The review of systems is particularly important, and one must conscientiously probe for symptoms. In doing this it is helpful to phrase the questions obliquely as well as directly. "Do you have headache?" may be answered negatively, whereas "Do you have any unusual sensation in your head?" may elicit vertigo or tinnitus and thus have an important bearing on the subsequent examination.

It is always well when dealing with the elderly patient to have in the back of your mind the idea that this old person is probably sicker than he seems to be. The attainment of great age often permits more than one pathologic process to be established and to go on concurrently; thus there can be multiplicity. Age has had much time to learn to live with these lesions; thus there is chronicity. The altered reaction patterns and tempo of age can mask and counterfeit; thus there often is duplicity. With these things in mind the approach to the physical examination or assessment of the elderly patient can be more than routine.

The Skin

The geriatrically oriented physician is a specialist in the skin and its contents, and the skin is an excellent place to begin the physical examination of an old person. The skin loses its "vis a tergo" proportionally with age, and one can tell with reasonable accuracy whether a person is old, very old, or extremely old by pinching up the skin over the wrist or forearm and watching it fall back into position. The young skin with plenty of juice in its subcutaneous tissue falls back and smooths out instantaneously. The old skin falls back slowly and takes a perceptible length of time to become smooth. In the very aged this is very marked. In addition to all the usual skin conditions that can occur at any age, there are a few that are common to the aged and should be in your mind as you inspect the aged patient's skin.

Skin cancers make up 15 per cent of all cancers in the male and 10 per cent in the female.[4] The time to catch these is in the precancerous phase. Look carefully to old scars, senile keratoses, leukoplakia, pigmented nevi, and moles. If there is any indication of degeneration, deal with the lesion at once as a malignant one.

Pruritis is sometimes a cause of great distress to older people. Never tag this symptom as senile pruritis until you have satisfied yourself that there is no tangible cause such as diabetes, nephritis, hepatitis, Hodgkin's disease, leukemia, drug or food allergy, or parasitic infection. Some in this age group express, in their skin, sensitivity to commonly used medicaments such as zinc oxide, benzocaine, iodine, or commonly used foods, such as milk, chicken, and wheat.

Varicose eczema and ulcers are likely to be stubborn in the aged. The venous stasis is of long standing, and there is usually deep-seated inflammation of the deep veins; this can be brought out by infrared photography. The tendency here is to overtreat. Mild assistance to nature by elevation, rest, and bandaging often does better. When ulcer occurs, an enzymatic débridement followed by a combined antibiotic salve and a bland petrolatum dressing under light sponge rubber pressure, will often give good results. One takes the risk, of course, of sensitivity to the locally applied antibiotic, but these are calculated risks that the physician is constantly taking with much of our modern pharmacopoeia.

Eyes, Ears, Nose, and Throat

There are two eyelid conditions which are particularly troublesome to the aged, and both are due to diminished muscle power. Ectropion causes constant tearing. Since wiping the eye downward aggravates the condition, the patient should be instructed to wipe upward. There is an effective corrective operation. Entropion frequently leads to conjunctival inflammation. Removing the lashes is helpful, and a short strip of adhesive attached to the skin just below the edge of the lid and pulled tight down the length of the face will roll the lid out and remove the source of irritation long enough for the inflammation to subside. The Ziegler cautery operation is effective in correcting this condition.

Dryness of the eye (keratoconjunctivitis sicca) is another annoying condition. It is difficult to deal with. Artificial tears are available to be dropped in the eye at intervals and are helpful. Opacities in the lens are very common, and not all lead to obscured vision. It is only when they progress centrally and when the coagulative necrosis proceeds steadily that total loss of vision is inevitable. The operation of lens removal is highly effective.

Glaucoma can and does occur quite definitely as a result of the aging of the eye. As the eyeball shrinks, the lens is proportionally larger and narrows the filtration angle. Acute glaucoma is a real ophthalmic emergency, and expert help should be secured for an inflamed eye with dilated pupil and stony-hard increase in tension. The glaucoma of insidious onset may have no eye symptoms or signs except for a gradual contraction of the visual field. The patient may tell you that it is like looking down a hollow tube. The use of miotics may control this condition for very long periods of time, but whatever vision has been lost can never be restored.

Macular degeneration is a common finding in the aged. Here the complaint is loss of central vision. One can reassure these people that while they cannot read or do fine work, they will never be blind.

Audiometric studies done at random on large groups of people showed hearing loss greater than 45 decibels in 9 per cent of all those over sixty-five years of age and slightly more in males than in females.[5] Since loss of perception of higher tones is almost physiologic in aging, the fairest test is on conversational tones and not on the watch-tick which is in the higher frequencies. In the presence of hearing loss in the speech range of 30 decibels or greater in the better ear, one always has to consider what benefit might be obtained by a hearing aid. There are other things than loss of hearing that have a bearing here. If one is satisfied that the middle ear and its ancillary nasopharynx are not altered pathologically and if the perception of conversational tones is improved by channeling them with an ear trumpet, then it is likely that an electronic hearing aid might benefit. However, one must bear in mind that the use of such a hearing aid requires concentration and that perceptive hearing loss is sometimes complicated by pitch distortion and that a hearing aid may further amplify this distortion. The patient must have patience and the ability to learn how to use the aid properly. Only those capable of making this psychologic adjustment will benefit. This conditioning is pretty much the same situation that one has in the use of dentures.

Middle ear infection in the aged should be treated with the greatest respect since it will frequently progress insidiously and with little clinical evidence into the mastoid. Culture, sensitivity tests, and vigorous use of the appropriate antibiotic may prevent permanent damage to the labyrinth and serious loss of hearing.

Ménière's disease is sometimes a vexing problem in the aged. Paroxysmal attacks of rotational or positional vertigo with nausea, vomiting, tinnitus, and hearing loss, usually unilateral, make one suspect true Ménière's disease after the elimination of the possibility of cerebellopontine angle tumor. While there is pathologic evidence to support labyrinthine hydrops as the immediate cause of Ménière's syndrome, there are many theories as to the etiology. Whether it be allergic, endocrine, toxic, circulatory, etc., is still under study. This, of course, leads to a wide variety of therapies. One can cover the waterfront with a combination of dehydration and histamine-nicotinic acid treatment. All else failing, neurosurgery may be drawn upon for nerve severance or ablation of the labyrinth.

Dryness and crusting in the nose is frequently a source of annoyance to elderly patients. It is due to membrane atrophy and consequent loss of moisture, and when the crust is disturbed, bleeding frequently occurs. Prophylaxis is the best procedure here, first by cleaning by gentle swabbing with a mild Dobell's solution and then coating the area with a thin covering of vaseline. Humidifying the air of living areas during the winter months is of considerable help also. Sinus conditions are not usually a problem in the aged because shrinkage of the mucosa and bone atrophy enlarge the sinus openings and promote free drainage. Polyps, when present, can be removed just as easily in the aged as in anybody, and they recur very slowly.

Any persistent change in the voice, particularly in the male, requires careful examination to rule out carcinoma of the larynx.

The Lungs

Respiratory disorders in the aged are conditioned by the fact that the bonv cage of the thorax is more rigid, and there is lessened bellows action in the ventilation process. Also loss of elasticity in the alveolus, the respiratory unit itself, limits the springback in expiration, leaving a considerable stagnant residue of air. It is not uncommon to hear fine crackling rales at the bases of the lungs due entirely to this defect. Thus, one looks for all grades of emphysema in the aged from benign to the severe, complicated by infection, fibrosis, etc. Bronchial asthma in the aged is rarely due to the wider spectrum of allergens but is usually bacterial in origin. Pneumonia in the aged can be the most deceptive of diseases. Its onset can be anything from explosive to latent. It is worth while to look for this whenever one is trying to explain sudden changes in an older person's physical condition. The x-ray is the most reliable diagnostic tool here for you will be frequently amazed at the extent of parenchymatous involvement and the paucity of symptoms and signs. Always keep in mind that the older generation you deal with were heavily exposed to tuberculosis. Rule this disease out routinely, no matter what the presenting symptoms. Mass surveys show a high incidence of tuberculosis in this group, about 19 per cent. It is not unusual for a long dormant or healed focus to become reactivated in old age due to an unexplained breakdown of immune mechanisms. Pathologic study of such old foci in the lungs, regardless of how much fibrocalcific deposit there is, shows areas which have never completely healed, and these frequently communicate with a bronchus and can cause spread of disease. Exogenous reinfection can also occur in this age group as in any other.

Chemotherapy with the new drugs is proving as efficacious in the old age group as in others. One needs to be more cautious in the use of streptomycin and dihydrostreptomycin because of the additive toxic effects of these drugs on the hearing of a group which is already in a period of hearing loss.

The continuous absolute and relative increase in carcinoma of the lung applies as well to the old age group except that after age eighty-five the incidence seems to drop off. One thinks of it as a possibility underlying some of the chronic respiratory conditions in the aged; the long-lasting productive cough, the repeated bouts of bronchopneumonia make one particularly suspicious. The x-ray examination is of great value, and the finding of density or atelectatic areas calls for bronchoscopy. Age is no contraindication for this procedure. Cytologic examination of the sputum for malignant cells has improved to a point of considerable dependability. Recent reports from Clerf[6] on 540 consecutive cases showed 88.3 per cent positive on sputum examination, whereas positive biopsy was obtained in only 30.9 per cent. Also in the same series bronchoscopic examination was negative, but cytologic examination on aspirated secretion was positive in 28.8 per cent. Lesions near the surface of the lung can be biopsied under positive pressure. Never fail to consider also that the lungs may be the seat of metastatic carcinoma. This is understandable since blood from the entire body is constantly passing through the lungs for gas exchange, and seeding can come from anywhere. Growths arising in the stomach, kidneys, adrenals, prostate, and ovary commonly reach the lung in this fashion.

The Heart

A heart which has sustained life through all vicissitudes into the old age period is by and large a good heart and quite responsive to any needed therapy. To assume that all cardiac disorders in the aged stem from arteriosclerosis is a faulty point of departure. The astute physician will think of the causes outside of the heart which can cause cardiac symptoms, some of which are anemia, overnutrition, undernutrition, overactive thyroid, underactive thyroid, disease involving the spine, pulmonary embolus, gallbladder disease, pancreatitis, hiatus hernia. He will be aware that active rheumatic heart disease can be present in the aged and that subacute bacterial endocarditis turns up as well. About 20 per cent of the valvular lesions we hear in the aged are not due to arteriosclerosis. Congenital heart defects are to be found in the old age group by the alert physician.

In regard to blood pressure levels in the aged, there is a definitive study under way at present with no results available at this time. The sensible approach is to consider the blood pressure as subject to wide individual variations and not to regard too sacredly the actual figures. The important consideration is how the patient's heart muscle, kidney tissue, and small retinal and cerebral vessels are standing up. The two dramatically remedial causes of hypertension, pheocrome tumor and unilateral kidney blockage, are operative in the old age group and should be looked for routinely.

Myocardial infarction in the aged needs special mention because it bears a high percentage of complications and can often be masked as to symptoms and signs by congestive failure. It is good routine to have electrocardiographic studies on hemiplegics, for it was found in one study at the Philadelphia General Hospital that 12 per cent of hemiplegics had had antecedent myocardial infarction. It is good medical practice to get the horse before the cart. The mortality statistics of myocardial infarction in the aged are no worse than for any other group, and the same prognostic criteria hold. There are no absolute changes in the electrocardiographic tracing that can be said to be due to old age. Frequently the tracing looks no different from the tracing obtained in youth. Some of the minor changes that may be attributed to aging are somatic tremor, decreased amplitude of P waves in all leads, slight prolongation of all intervals, tendency to left axis deviation, and tendency to slurring of the QRS wave. These findings are purely academic and will have only a small part in the total evaluation of the elderly patient's heart. Above all do not be too alarmed by a bad-looking tracing in the elderly patient since varying degrees of bundle branch block are compatible with long life. The neuromechanism of the carotid sinus becomes definitely more sensitive and more easily triggered in the aged, particularly the male. This is often the sole cause of syncope in the aged, and they should be cautioned against tight clothing about the neck. The doctor too might be cautioned against too vigorous use of carotid pressure to control paroxysmal auricular tachycardia in the aged lest he provoke a reaction more serious than the one he attempts to treat.

The Gastrointestinal Tract

Everyone who deals with the aged is impressed with the good appetite and with the interest in food shown by old people. When this changes, it is a red flag warning to the doctor. Here again one runs over in his mind things outside the gastrointestinal mechanism which can cause anorexia, such things as emotional crisis; chronic infection; endocrine hypofunction of the thyroid, adrenal, or pituitary; cardiac failure; renal failure; drugs commonly given over long periods such as digitalis, mercury, aminophylline. The commonest causes of appetite loss within the gastrointestinal system itself are local mouth conditions such as pyorrhea, abcessed teeth and poorly fitting dentures, constipation, malignancy, and occasionally cirrhosis of the liver, although this disease is not compatible with long life. The incidence of peptic ulcer in the aged is higher than we realize. One recent hospital report shows an incidence of 6 per cent for peptic ulcer in 4,088 admissions, both sexes over sixty-five.[7] These can be new ulcers or, more commonly, recurrences of old ones. There is no proof that gastric acidity diminishes with age. We are learning that this loss of function seems to be more tied in with malnutrition than with age. Peptic ulcer in the aged is likely to be either benign or fraught with complications of which bleeding is the commonest. The vexing question of malignancy always arises when dealing with gastrointestinal conditions in the aged. The test for occult blood in the stool is important. Generally speaking, benign ulcer does not ooze blood the way a malignant one does; the bleeding is more likely to be episodic rather than constant.

While giving malignant disease its full weight (one out of five in the old age group die with malignant disease present),[8] one should think also of the benign things that may give similar symptoms and signs. To enumerate a few: localized abscess from a blown-out diverticulum; obstruction due to adhesions, particularly in women who have had pelvic operations in early life; erosions of gallstones into the intestinal tract; hiatus hernia. The acute abdominal emergency occurs in the aged as well as in any other group. The decision as to what to do must rest on a balancing of the patient's physical assets against his liabilities and a thorough knowledge of all implications of the procedure required, including anesthesia and technic and duration of operation. The common abdominal emergencies in the aged are strangulated hernia, hemorrhage or perforation from ulcer, acute appendicitis, acute cholecystitis, acute pancreatitis, mesenteric thrombosis. There is a tendency in the aged for acute inflammation in the gallbladder, or appendix particularly, to go on to gangrene and perforation so that one's approach to these conditions ought to be radical. Poor blood supply and waning of lymphatic tissue have been advanced as reasons for this tendency. Recognition of this fact by all who deal with old people might help to improve the statistics on appendicitis in the aged. The mortality rate is exactly where it was twenty-five years ago. In the diagnosis of acute abdominal symptoms in the aged, consideration must always be given to certain outsiders that can and do occasionally masquerade in this area, namely, acute coronary disease, pleurisy and pneumonia, renal colic, and occasionally the pre-eruptive stage of herpes zoster.

The Skeletal System

Pediatricians are wont to correlate calendar age with bone age in the closure of fontanelles and epiphyses. At the geriatric end of the line bone age is important too. Bone is a living tissue whose mineral composition fluctuates under influence of other body functions. The factors that influence bone cell activity are alimentation, pH conditions within the alimentary tract, activity of the endocrine glands—pituitary, thyroid, parathyroid, and gonads, and renal competence. Changes in any or all of these systems are reflected in bone structure. In the common condition of osteoporosis we are unable to sort out at this time whether glandular deficiency, vitamin deficiency, or gastrointestinal dysfunction has the predominant influence on bone regression. This condition is found more frequently in women, and its frequency grows with age. When the spine suffers in osteoporosis, there may be weight-bearing pressure effects among the vertebrae, the normal curvatures are accentuated, and the altered stresses and strains lead to much discomfort and low back pain. Osteoporosis, Paget's disease, and metastatic malignancy are to be looked for in all bone pain complained of in the aged.

Paget's disease is often an incidental finding. It occurs either clinically or subclinically in about 4 per cent of the aged[9]; it is insidious, of long duration, and mild in over 50 per cent of the cases.[7] The x-ray appearance of bone density, thickened cortices and loss of normal bone markings, and fuzzy trabeculation of the outer table of the skull identifies this disease.

Multiple myeloma, a rare disease, has its peak incidence at age fifty-five, and one will occasionally encounter it in the aged group up to age seventy-five. It is not unlike metastatic malignancy in its symptomatology, and the x-ray appearance can be confusing. The high serum protein globulin fraction and Bence Jones protein, present only in about 65 per cent of cases, are leads, but bone marrow biopsy is definitive.

Arthritis

One could say that arthritis of some form or another is practically universal in the aged. If we distinguish clearly in our own minds the difference between the two types, rheumatoid arthritis and osteoarthritis, it will clarify our understanding of the clinical course, prognosis, and treatment of these very common disorders. Rheumatoid arthritis is a systemic disease. It is inflammatory and involves synovial membrane primarily and surrounding tissue secondarily. Osteoarthritis, on the other hand, is a localized process and involves cartilage, primarily as a result of trauma. Cartilage, being avascular, can react in only one way, by breaking down. The wearing-down process likewise involves surrounding tissue and provokes reaction in them. We usually see the end stage of rheumatoid arthritis in the aged where deformity and fixed joints have been long established. It is rare to have a first attack of this disease after age fifty. Fortunately this type is rarer than the osteoarthritic. One can give the latter a more hopeful prognosis. The joints may look deplorable, both on inspection and by x-ray, and yet give surprisingly few symptoms. There is no condition in the aged where the attitude of the doctor is so important as in dealing with the arthritic. A simple explanation to the patient of what is going on, pointing out some hopeful aspect which can always be found, and efforts to accommodate the patient's life around the disability are fundamental in approach to this disease.

Diabetes

Diabetes has its peak incidence before age sixty and will be found in about 15 per cent of the sixty- to seventy-year group. Above this age the incidence falls precipitously to less than 5 per cent.[9] The disease is generally compatible with old age and gives much less trouble in control than in the younger age groups. The seriousness of diabetes in the aged is the seriousness of the complications. Vascular degeneration in the peripheral, coronary, cerebral, renal, and retinal vessels and neuropathic changes complicate many cases of longstanding diabetes and will be seen with some frequency in the geriatric population. Here damage has been done and the local condition must be dealt with. Control of hyperglycemia by diet, exercise, and insulin if necessary at least creates a favorable environment for dealing with these conditions. There is reason to believe that poor control makes a bad matter worse, even though we find these conditions developing in the well-regulated diabetic as well. Be prepared for difficulty in the aged diabetic under periods of stress, such as during infections and postoperatively. The principles of treatment are no different except that a higher working level of blood sugar should be maintained as insurance against a precipitous fall which may come about through unforeseen circumstances, such as refusal of food, vomiting, etc.

Genitourinary Problems

Gynecologic conditions in the aged female will arise at some time or other. The presence of leukorrhea requires careful evaluation. It is most commonly due to nonspecific vaginitis associated with atrophic vaginal epithelium. One must keep in mind, however, that certain specific causes must be ruled out, namely, Trichomonas infection, malignancy in the endometrium, cervix, or vagina, and foreign body, which can be anything from a long-forgotten pessary to a submucous calcified fibroid. Careful palpation, inspection, microscopy, and biopsy if necessary will pinpoint any of the above. Relaxation of the pelvic musculature in all its varying degrees has considerable nuisance value in the aged. If the condition is such that a pessary will modify the degree of prolapse sufficiently to abate symptoms, be satisfied with that. Corrective surgery is possible when weighed in the balance of the individual's physical and mental assets and liabilities. Surprisingly good results have been obtained in well-selected cases. Bleeding from the genital tract in the aged female requires most careful consideration. Here again is a battery of benign causes such as cervical or endometrial polyps, submucous fibroid, vaginal varicosities, rectal varicosities confused as vaginal bleeding, and atrophic vaginitis, but lurking in the background is ever the possibility of malignancy. If the source is not apparent on inspection, curettage is mandatory.

Of all the male genitourinary problems in the aged, prostatic hypertrophy and its sequelae are the commonest. This tide of events has wide individual variations, but certainly symptoms of frequency, urgency, and difficulty in emptying the bladder merit a thorough investigation. The finding of an enlarged prostate by rectal palpation is not enough since such a gland may or may not be obstructing. Repeated bouts of cystitis in the presence of an enlarged gland make such a possibility likely. An important determining point is the measurement of residual urine. If this is over 100 cc. and if there is no evidence of any nervous disease which decreases the tonicity of the bladder musculature, one is justified in going further with direct examination by cystoscopy. One should not wait for back pressure and chronic infection to impair renal function, but prove the fact of obstruction early and relieve it early.

Cancer of the prostate stands sixth in the order of site preference in the male. Evidence seems to indicate at this time that there is no relation between prostatic hyperplasia and carcinoma. The prostate normally secretes acid phosphatase into the semen, but the metastatic lesions of prostatic cancer can secrete this substance only into the blood, and this makes the level of serum acid phosphatase a valid but futile test for prostatic cancer. Cytologic search of prostatic fluid has proved disappointing to date but, nevertheless, should not be overlooked in the search for cancer. We must still depend primarily on the feel of the gland, and any suspicious nodule should be seriously investigated.

Mental and Neurologic Conditions

The interrelationship between the physical and mental state in old age needs very careful consideration. Cerebral arteriosclerosis as the basis for infarctions, small or large, solitary or repeated, often does lie at the root of many of the mental and nervous disorders seen in the aged. Incidentally palpation of the radial artery is useless in assessing atherosclerosis or any other vascular disease in the remainder of the body for it has been known for fifty years that the radial artery for some reason escapes the changes that take place in other vessels and is an unreliable indication.[10] Nevertheless, one should think here as well of causes outside of the nervous system that could affect it. Toxic effects on the central nervous system come in the main from a few directions, and the physician handling old people should be familiar with them. Commonly used drugs such as barbiturates, bromide, digitalis, acetanilid, and antihistamines come first to mind; then the toxic effects of acute infection—sometimes the mental aberration will be the first manifestation of such infection; the effect of heart failure and renal failure, impending diabetic coma, severe anemia, and malignant disease. Advanced malnutrition is often a party to many of these and compounds the felony. It is rewarding to clear up a toxic psychosis in an elderly patient by removing the offending drug or digitalizing the failing heart. On the other hand, this explosive reaction in the nervous system may portend dissolution.

Old people have emotional problems just as young ones do. Those in the aged center largely around the matter of security. The aged frequently feel extremely insecure. Illness frightens them because they realize that opportunities to regain strength and vigor or to compensate for financial loss are greatly limited. Anxiety which is so often concealed by pride has a foundation in reality. Here is where the wise physician can do much to secure the peace of mind of his elderly patient by calling in the counsel of clergy, the banker, lawyer, social worker, or trusted relative. This is often a potent form of psychotherapy and is too often overlooked. Every community resource which fosters useful activity, study, independence, and confidence in the remaining abilities should be brought to bear by the doctor and the family. The experience of the Hodson Center in New York City, a recreation and rehabilitation center for the aged, has shown over a five-year period that mental deterioration is less frequent among those attending the center. "Senility" is defined in the dictionaries merely as the state of being physically and mentally old. Clinically we have come to confine the term mostly to its mental connotation. A person is not generally thought to be "senile" until his judgment falters. It might be well to drop this ambiguous term for one such as "mental deterioration of old age" which may be qualified as "mild, moderate, or severe." This condition may well come about as the result of cerebral anoxia since we know in testing flyers, lack of judgment is one of the first signs of oxygen deprivation. The difficult thing to decide is when one crosses the border of senility into psychosis. The progress toward psychosis may be slow and erratic, or it may be sudden and fulminating. Deviations from normal social behavior in the form of hostility with homicidal threats, sexual aberration, total loss of orientation, regression to infantilism, uncontrollable restlessness and noisiness, or deep depression with danger of suicide call for protective treatment in a mental institution. This need not be the end of the road in all cases for modern psychiatric treatment is able to return a limited number of these people to society again.

There is one neurologic disease which is met with frequently in the old age group, namely, Parkinson's disease. The true Parkinson's disease which comes on late in life is insidious. Stiffness and rigidity accompanied by tremor characterize the disease. It is noteworthy that when distracted, the stiffness is relaxed, and, when doing a purposeful voluntary movement, the tremor disappears. The stiffness and clumsiness in rapidly starting an act of precision bothers these people much more than the tremor. In women the masking of the facial expression and inability to smile is frustrating. Trihexyphenidyl hydrochloride (Artane) seems to be an improvement over belladona drugs in controlling the muscle spasm and tremor. Individuals vary widely in their susceptibility to this drug, and tolerance must be worked up slowly and carefully. An early sign of toxicity from this drug is unsteadiness and stumbling in the dark; nausea is noted later. Antihistamines seem to have a synergistic effect when used with this drug. Patients with Parkinson's disease should be urged to keep moving and to keep occupied but cautioned that they will tire easily and not to become depressed over this but make allowances for it.

Summary

After all the returns of the assessment are in, the geriatrically minded physician will cast up a balance of the assets and liabilities of his elderly patient. High on this list will be motivation. If this is good, it is a prime asset. If it is poor, what can be done to improve it? So many people will say, "I am old, I am ill, there is nothing further for me to do." It can be pointed out to these people that everyone who has lived to great age has learned a great deal, has developed some skill in some particular thing, and this should be handed on. Interest them in writing their experiences down or imparting their skills to a younger person. The assessment will undoubtedly turn up conditions that are controllable. Since clinical medicine is to a large degree sublimated physiology,[11] the opportunities for correction and control in all the organ systems are almost without number. The response to therapy in the old individual, while it may be sluggish, erratic, and unpredictable, nevertheless obtains. The aged hematopoietic system will respond when the lacking substance is supplied, whether it be intrinsic factor, extrinsic factor, iron, or protein. By all means keep the therapeutic program simple and sensible. Where there is multiplicity of disease, treat the one most dangerous to life and the one that causes pain. Do not load the older person with the diminishing memory span with a great lot of admonitions and a great diversity of medicines to be taken concurrently. Be as gentle and moderate in therapy of the aged as the pediatrician is with the infant. The estimation of surgical risk in the aged is an important responsibility, particularly if the operation is elective. The cardiovascular-renal system, the cardiorespiratory, and cerebrovascular systems will bear the brunt of the shock and will be called upon to make unusual adjustments. Reasonable integrity in these important areas can usually be expected to support the elderly patient through the operative and postoperative period. The persons with coronary insufficiency, emphysema, bronchiectasis, and parenchymatous renal disease are definitely bad risks. The liberal use of oxygen during anesthesia and postoperatively has been most important in the successful surgery of the aged.

The great fact of our age, mass longevity, is being faced and explored by all the disciplines from economics to theology. The part of medicine is a very practical one, namely, to do all in its power to make the added years as healthy as is possible. Scientific research is at this moment throwing new light on at least two of the major medical problems in the old age period, arteriosclerosis and the arthritides. New conceptions and new therapies based on these will reinforce the positive approach which medicine has always taken to meet any challenge. Each practicing physician chipping away at his own small segment in a positive way will add up to a great achievement.

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Experiences in Treating Coronary and Peripheral Vascular Diseases

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The antispasmodic papaverine has long been prescribed with aminophylline and phenobarbital in the treatment of coronary and peripherovascular conditions. The simultaneous administration of papaverine and the theophylline exerts an antispasmodic and vasodilating effect on the coronary and peripheral vessels that is at least additive and apparently synergistic, and the phenobarbital is given to allay the nervousness and apprehension which so frequently play an aggravating role in anginal states. Indeed, combinations of these three drugs have for years been a standby of the general practitioner in his care of the coronary patient to reduce the frequency and severity of anginal attacks and to help keep the patient free from pain.

The pharmacologic action of papaverine includes an increase in coronary circulation as reported by Macht,[1,2] Lindner and Katz,[3] and Eckenhoff and Hafkenschiel,[4] who found coronary flow increased in descending order by papaverine, aminophylline, amyl nitrite, nitroglycerin, and nikethamide. Katz and Elek[5] reported papaverine eliminated premature ventricular contractions.

Clinically, Mulinos *et al.*[6] reported a good response following the intravenous injection of papaverine in the peripheral vascular spasm seen in Raynaud's disease, although Littauer and Wright[7] had but indifferent results in arteriosclerosis obliterans and thromboangiitis obliterans (Buerger's disease). McCall *et al.*[8] observed improved cerebral circulation in toxemia of pregnancy, while Takats and Jesser[9] and Lesser[10] reported that cases of pulmonary embolism reacted in a way similar to that observed in coronary obstruction and infarction. Most of these reports were on the basis of parenteral, usually intravenous, administration of papaverine, and some of them stressed the feebleness and short duration of action of oral papaverine medication.

A number of chemical derivatives of papaverine have been synthesized. Of these, ethaverine, the tetraethoxy homolog of papaverine, appears to be one of the most promising and has been studied both pharmacologically and clinically. It has been reported that ethaverine has an enhanced papaverine-like effect and that it is a stronger spasmolytic and vasodilator with a more gradual and more lasting action.[11–15] At the same time it seems to be less toxic in equivalent therapeutic doses,[11,12,16–18] while exhibiting no addictive properties.[17]

A drug combination containing ethaverine, theophylline calcium salicylate, and phenobarbital, marketed under the name of Tensodin, recently came to the notice of the author. This preparation was particularly interesting, not only because it contains ethaverine in place of papaverine, but also because the theophylline component, being quite insoluble, is particularly nonirritating to the stomach in contrast to the soluble theophylline salts, including aminophylline, which frequently cause gastric disturbances, a most undesirable side-effect in coronary conditions.

From clinical use of this preparation in general practice over a period of eight months on 17 nonhospitalized, ambulatory patients and three hospitalized cases with cardiovascular and peripheral vascular diseases, the author gained the impression that Tensodin, containing as it does ethaverine, Phyllicin, and phenobarbital, was a better vasodilator and of more benefit to the patients than the papaverine-aminophylline-phenobarbital combination. The ethaverine and Phyllicin seemed indeed to make for a more effective synergistic action. Only one case, a longstanding arteriosclerosis obliterans of seven years duration, showed little benefit. A second case did not continue treatment. In all other cases Tensodin almost uniformly reduced the frequency and severity of the attacks and alleviated pain. This subjective improvement could frequently be corroborated by changes in the electrocardiograms.*

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* The electrocardiograms were done and read by a consultant specializing in cardiac diseases.

Tensodin was given in tablet form; usually two tablets two or three times daily. If an initial dose of one tablet three times a day produced no appreciable results, the daily dosage was increased by one-tablet increments up to two tablets three or four times a day. Patients were told that proper dosage was to be individually determined and were advised that anorexia or nausea might be experienced during the first several doses but that, unless these sensations were too unpleasant (which has not been the case), medication was to be continued because such untoward effects usually soon diminished or ceased. If not, the dosage was to be reduced. The described side-effects were encountered in only four patients. They always were mild and disappeared after several doses or on reduction of the dose or frequency of administration. Tolerance to Tensodin was not observed even after three to five months of continuous medication. This, however, deserves further investigation along with the effects, if any, of sustained employment of the drug for a period of a year or more.

A review of the case histories of the 20 patients showed that all three of the hospitalized patients had coronary occlusion and that one of these also suffered from arteriosclerosis obliterans. Of the 17 ambulant patients five had an anginal syndrome, four coronary insufficiency, four coronary thrombosis, and four showed signs of peripheral vascular disease.

Hospital Cases

All three patients (white males aged fifty-two, fifty-six, and sixty-three) suffered a coronary infarction, which in two cases was exceedingly severe and necessitated energetic therapy. One of the patients had a history of two previous coronary attacks, eight and two years before. A second case suffered for years from peripheral vascular disease with pain in the calves of the legs on walking. The third patient also had pains on walking and showed moderately advanced arteriosclerosis obliterans but experienced only a relatively mild coronary attack.

After the initial shock of the attack was overcome, all three patients were given two tablets of Tensodin four times a day with excellent results. The precordial pain and oppression gradually subsided; apprehension was allayed, and the patients felt more comfortable. After discharge from the hospital in three to four weeks, Tensodin was continued in a dose of one tablet four times a day. All three patients now, after six months, are doing well with only minimal pain or other complaints.

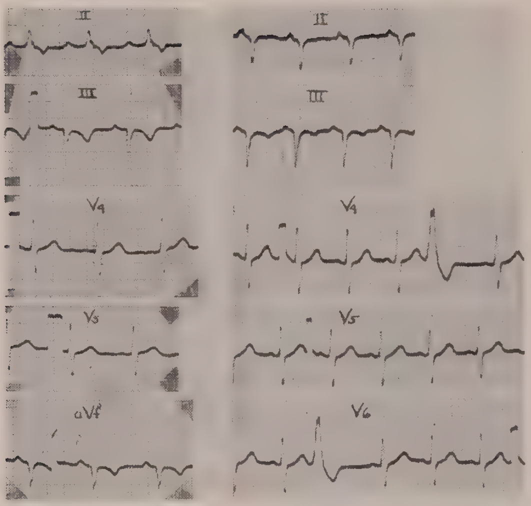
The following short case histories of two of these hospitalized cases illustrate the good results achieved.

Case 1.—I. C., white male, fifty-two years old, suffered a coronary occlusion eight years ago when he was hospitalized for three weeks. He made an uneventful recovery at that time. Another minor coronary episode occurred two years ago. Since then he had suffered from precordial pain on exertion which was relieved at times by nitroglycerin. Blood pressure was 140/85, and slight cardiac enlargement was present. Pulse was 76. There was an occasional hyaline cast in the urine. Dyspnea developed only on severe exertion. Electrocardiographic findings were negative.

Three months ago, returning from work, the man developed a weak feeling and then a severe crushing sensation in the chest with pain radiating down both arms. When seen, he was cold, gray, and clammy. Blood pressure was 60/25 and the pulse irregular, thready, and weak. The heart sounds were poor and distant. He was hospitalized, put into an oxygen tent, and vasopressors, Mercuhydrin, and Dicumarol were given. On the fourth day the patient was put on Tensodin, two tablets four times a day. He did well on this regime. After one week two tablets of Tensodin were given only three times a day. Pulse now was good, rate 76, with heart sounds of good quality. The blood pressure was 95/65. The patient went home after three weeks much improved and without cardiac symptoms. One tablet of Tensodin four times a day was prescribed. Now after two months patient is still taking Tensodin. His general condition is excellent, heart compensated, blood pressure 101/78.

Case 2.—P. M., white male, fifty-six years old, for the past three years had complained of pain and cramps in the calves of legs when walking which were relieved by rest. There was no history of heart disease. The patient was the emotional type, nervous, easily aroused, and tense. He was also a heavy eater and smoker (two and one-half to three packs a day).

At 1:30 A.M., while sleeping, he had a sudden attack of precordial pain and oppression, a feeling of a crushing sensation in the chest, and pain traveling down the right arm. Morphine, $^1/_4$ grain, and one ampul of papaverine intravenously gave some relief. The patient was hospitalized immediately. The blood pressure dropped from 174/88 to 105/45; cold sweat and profound weakness developed. The heart sounds were of poor quality and distant, but there was no arrhythmia.



October 26, 1953 February 15, 1954

Fig. 1. *Case 2*—October 26, 1953—Early posterior wall infarction.
February 15, 1954—As compared to tracing taken on November 20, 1953, T_2 previously inverted, now flat; occasional ventricular premature contractions; residuals of posterior wall infarction.

Upon admission the patient was put on Tensodin, two tablets four times a day for two days, then two tablets three times a day. With this therapy the precordial pains and oppression subsided within three days. Blood pressure now rose to 138/74, and the general condition was much improved with heart sounds of better quality. Electrocardiographic findings, two days after admission, four weeks later, and after four months, showed increasing improvement (Fig. 1). The patient was discharged from the hospital after twelve weeks. He is now taking one tablet of Tensodin four times a day and is symptom-free. He has only minimal pains or cramps in the legs on walking and no precordial pains.

Report on the 17 Ambulant Cases

Anginal Syndrome.—In this group there were four males and one female, ages forty-five to fifty-eight years. No history of cardiovascular accident was elicited; precordial pain was experienced on effort, when walking a long distance, climbing stairs, and occasionally after heavy meals or excitement.

Tensodin, two tablets three to four times a day and later, usually after four to six weeks of therapy, one or two tablets three times a day, helped to reduce the severity and frequency of the paroxysms. The patients were made more comfortable and calm due to the sedative effect. Nervous tension and anxiety which accompanied the vascular disturbances were reduced. The feelings of apprehension were minimized.

Coronary Insufficiency.—There were four males in this group, ages forty-eight to fifty-three years. All showed electrocardiographic changes consistent with coronary insufficiency. Three of these men previously had been taking nitroglycerin.

It is understandable that Tensodin did not prevent coronary attacks in all these patients, and the degree of freedom from attacks or severity of the attacks varied from patient to patient. However, even when complete freedom from attacks was obtained, the patient was advised of the dangers of overexertion and told that the cautions previously observed should be continued. Exercises and activities formerly prohibited might not be indulged in even now. It was stressed that the symptomatic improvement in greater freedom from attacks, greater exercise tolerance, and reduced dependence on nitroglycerin afforded by Tensodin did not indicate an improved capacity for strenuous or unusual activities.

Coronary Thrombosis.—The five males in this group ranged in age from forty-eight to sixty-two years. The diagnosis was corroborated by the electrocardiogram in all cases. All had previously been hospitalized during their first attack which had occurred one to four years previously but had been discharged. They were put on Tensodin therapy, two tablets three times a day. Two of these cases were seen immediately after the initial attack, two cases one year after the attack, and one case three and one-half years after the initial attack.

Tensodin in each case acted to minimize and prevent anginal seizures and helped to limit the damage resulting from coronary vessel obstruction.

Intermittent Claudication and Peripheral Vascular Sclerosis.—In this group there were three males and one female, whose ages ranged from forty-eight to seventy-two years. The woman was forty-eight years old and diabetic. All these patients gave a history of pain and cramps in the calves of legs upon walking which was relieved when resting. Tensodin in the usual dose of two tablets three times daily relieved the pain significantly so that longer distances were tolerated.

The histories of three of these ambulant cases are summarized briefly below for comparison with the two hospital cases reported above.

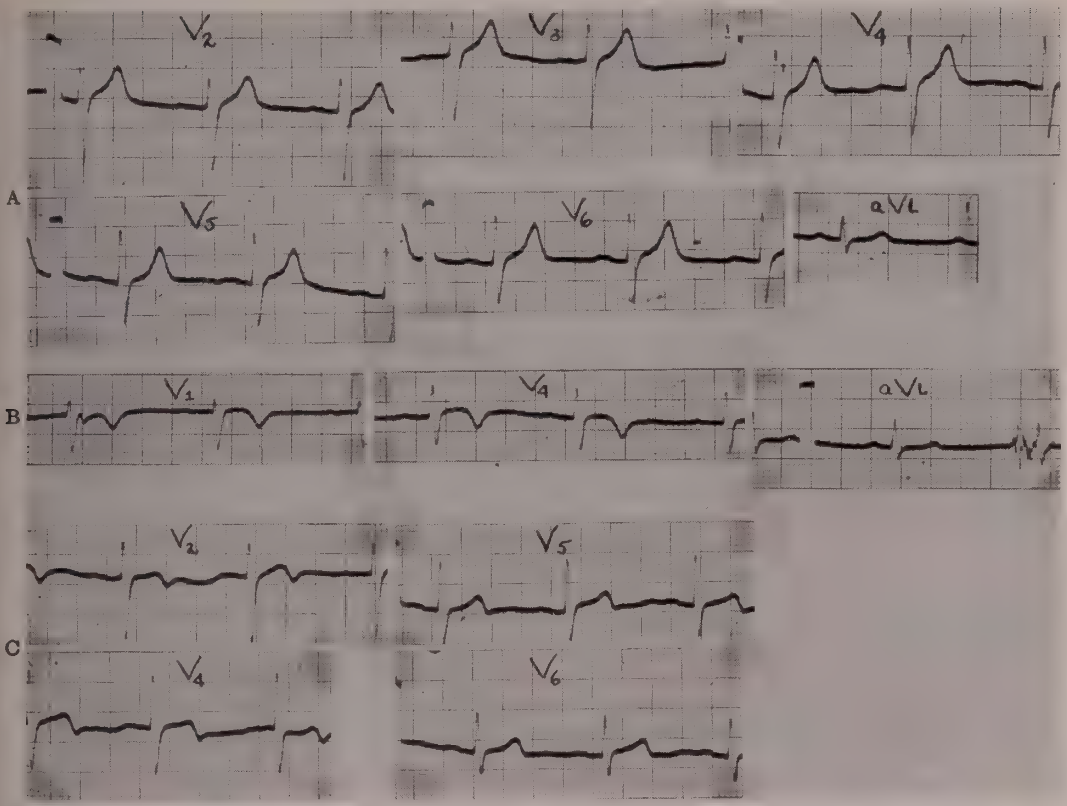


FIG. 2. *Case 3*—(*A*) March 5, 1953—First degree partial auriculoventricular block; RST elevations in II, III, and aVl leads are suggestive of posterior wall ischemias or possible early infarction.

(*B*) June 26, 1953—As compared to tracing taken June 10, T in aVl now upright; stable healing patterns anterior wall infarction.

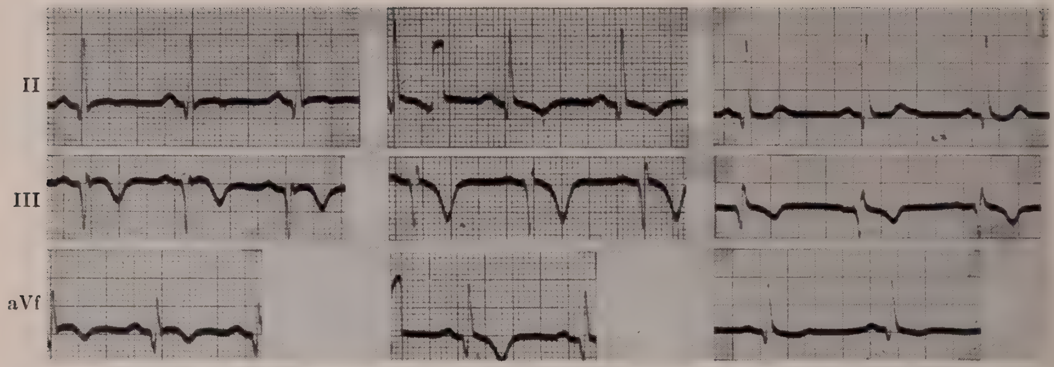
(*C*) July 28, 1953—Myocardial involvement; residuals of previous anterior wall infarction; as compared to tracing taken June 26, T wave positive in V_2 and V_3, now upright in V_4 and V_5; further evolution toward normal.

Case 3.—J. H., white male, sixty-three years old, for the past ten months had complained of pain in calves of legs when walking which was relieved by rest. For the past three months he had had vague anginal pains over the precordium, relieved by nitroglycerin. Blood pressure was 130/90, pulse 70, occasional extrasystoles, heart sounds distant, urine negative. Oscillometry below knee showed 2.0 mm. on the right and 1.0 mm. on the left leg (normal 8 to 11.0 mm.). Diagnosis was arteriosclerosis obliterans, moderately advanced. For the past few days he had had severe sticking precordial pains and discomfort related to effort. The blood pressure was 100/70. Fluoroscopy revealed cardiac enlargement with elongation of the aorta. Electrocardiographic findings on March 5, 1953, gave indications of early posterior wall infarction (Fig. 2). The patient left the hospital after three months. He was put on Tensodin, one tablet four times a day. Now after five months he is still taking the drug three times a day.

Patient is ambulatory and has no complaints. Blood pressure is 135/85. Heart sounds are good, and leg cramps are minimal.

Case 4.—S. F., white male, fifty-five years old, about one year previously suffered a posterior wall infarction as shown by an electrocardiogram taken at the time. The symptoms were typical of coronary infarction with cold sweats, profound prostration, gastric disturbances, and a drop of blood pressure from 160/85 to 110/60. He was put to bed for three weeks at home. Mercuhydrin in 2-cc. doses was given intramuscularly, and phenobarbital, $^1/_4$ grain three times a day, was prescribed. In addition, 3 grains of papaverine were administered orally.

After this the patient was put on nitroglycerin for his anginal pains and precordial distress but continued to complain. Seven months later he was put on Tensodin, two tablets three times a day for two months, followed by one tablet four times a day. Under this medication the symptoms of angina gradually disappeared, apprehension was allayed, and his general condition improved. Nitroglycerin



September 19, 1952 October 10, 1952 April 14, 1953

FIG. 3. *Case 4*—September 19, 1952—Typical evolution recent posterior wall infarction; occasional premature contractions as RST depression in leads I and IV now absent; T_2 and T_3 now inverted.

October 10, 1952—Typical evolution to fixed patterns of posterior wall infarction; as compared to tracing taken September 19, T_2, T_3, and T in aVf more deeply inverted; no premature contractions now present.

April 14, 1953—There are no abnormalities of the ventricular groups diagnostic of myocardial damage.

was no longer needed after initiation of the Tensodin medication. Electrocardiograms taken at time of attack and three weeks and eight months later are shown in Fig. 3.

Case 5.—R. H., white female, fifty-three years old, was seen in an acute attack of coronary insufficiency with cold sweat, cold clammy extremities, dyspnea, weakness, thready pulse, and crushing pains in the chest. The blood pressure fell from 120/65 to 80/40.

Oxygen was given by nasal catheter, aminophylline intravenously, Mercuhydrin intramuscularly. Tensodin was started two days later in a dosage of two tablets four times a day. Two days later the patient had no more pain, blood pressure now was 112/55, the pulse was stronger, and there was no dyspnea. After thirty days the blood pressure was 122/70, the pulse was normal, and there were no complaints. Patient was comfortable.

Summary

Sixteen patients with angina and coronary insufficiency and coronary thrombosis and four with peripheral vascular disease were treated with Tensodin and observed over a period of eight months.

While this series is too small to draw more than purely tentative conclusions, it would seem that the results in this series of patients treated with Tensodin have been better than those obtained with papaverine, aminophylline, or nitroglycerin combinations in patients with similar symptoms. When placed on Tensodin, one or two tablets three times a day, most patients showed an abatement of the anginal symptoms with less dyspnea and greater tolerance for exercise, and the patients with peripheral vascular disease were able to walk greater distances with less discomfort and pain. Side-effects were rarely seen and consisted only of transient mild anorexia and nausea. Tolerance to the drug was not observed.

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Electrolyte Balance in Congestive Heart Failure

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It has been said that since vigorous diuretic treatment of congestive heart failure has come into vogue, no cardiac has been allowed to reach his inevitable end in edema.[1] Not infrequently, this overenthusiastic treatment of the edema results in electrolyte disruption. And whereas the congestive heart failure and edema, as such, may have remained stationary for months or even years, the therapeutically induced electrolyte disturbance often proves fatal quickly and suddenly.[2]

If the cardiac must die, let him die in due time of his heart disease when inevitably it must reach its terminal stages; let not "iatrogenic electrolyte imbalance"[3,4] speed the demise. On the other hand, if the cardiac's failure to respond to treatment is itself a *result* of electrolyte imbalance, then early recognition and proper corrective measures may effectively reverse this refractoriness.[5]

Clinical observation alone is not always sufficient to recognize the early shifts in the state of hydration and electrolyte balance. The signs and symptoms are not sufficiently well defined and are often attributed either to the underlying heart failure itself or to the treatment and medication. Recognition must depend in large measure on laboratory data.[6,7]

The minimum essential laboratory checks in every case of congestive heart failure under active diuretic treatment are[2,7,8] (1) the hematocrit and serum albumin concentration, (2) the blood nonprotein nitrogen or urea nitrogen concentration, (3) the serum electrolytes—sodium, potassium, chloride, and bicarbonate, and (4) the urine chlorides and pH.

The hematocrit and serum albumin concentration are indices of blood volume changes. A rise in either or both indicates hemoconcentration (dehydration):

TABLE I.—NORMAL ELECTROLYTE CONCENTRATION IN THE EXTRACELLULAR FLUID

Cations (+)	Concentration (mEq. per L.)	Anions (−)	Concentration (mEq. per L.)
Sodium (Na^+)	142	Chloride (Cl^-)	103
Potassium (K^+)	5	Bicarbonate (HCO_3^-)	27
Calcium (Ca^{++})	5	Phosphate ($PO_4^{=}$)	2
Magnesium (Mg^{++})	3	Sulfate ($SO_4^{=}$)	1
		Organic acids	6
		Proteins	16
TOTAL	155	TOTAL	155

$$\text{Present plasma volume} = \text{Initial plasma volume} \times \frac{\text{initial hematocrit}}{\text{present hematocrit}}$$

or

$$\text{Present plasma volume} = \text{Initial plasma volume} \times \frac{\text{initial serum albumin}}{\text{present serum albumin}}$$

An increase in hematocrit and/or serum albumin concentration indicates a decrease in plasma volume. An increase in serum albumin concentration is found only when there is hemoconcentration and reduction in the circulating plasma volume, whereas increases in serum globulin or total serum protein may be due to many other causes.[2,6,9,10]

The blood nonprotein nitrogen or urea nitrogen concentration is an index of renal function. A rise in the nonprotein nitrogen occurs early in some forms of electrolyte imbalance, notably in the "low salt syndrome."

The serum electrolyte concentration of sodium, potassium, chloride, and bicarbonate (carbon dioxide combining power), expressed in milliequivalents per liter (mEq. per L.), indicates at once the degree of electrolyte balance or imbalance present (Table I). Normally the sum of the positive ions (cations) equals the sum of the negative ions (anions), which is 155 mEq. per L. Electrical neutrality is then said to be present.[2,7,10,11]

The urine chloride concentration and pH are rough indices of serum chloride levels. A drop in urine chlorides accompanied by a pH in the alka-

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TABLE II.—EXTRACELLULAR FLUID ELECTROLYTE PATTERN IN CONGESTIVE HEART FAILURE WITH EDEMA ON LOW SALT DIET (MILD SALT DEFICIT WITH HYPOTONIC DEHYDRATION)

Cations (+)	Concentration (mEq. per L.)	Anions (−)	Concentration (mEq. per L.)
Sodium (Na^+)*	130	Chloride (Cl^-)	96
Potassium (K^+)	5	Bicarbonate (HCO_3^-)	30
Calcium (Ca^{++})	5	hosphate ($PO_4^=$)	2
Magnesium (Mg^{++})	3	Sulfate ($SO_4^=$)	1
		Organic acids	6
		Proteins	16
TOTAL	143	TOTAL	151

* The sodium concentration is reduced to a greater degree than that of the chloride.

TABLE III.—DIFFERENTIAL DIAGNOSIS BETWEEN HYPOCHLOREMIC ALKALOSIS AND THE LOW SALT SYNDROME

	Hypochloremic Alkalosis	Low Salt Syndrome
Incidence	Common	Relatively uncommon
Prognosis	Fair to good	Grave even with proper treatment; fatal in two thirds of the cases
Serum chloride	Markedly decreased in greater proportion than that of sodium	Decreased, moderately but in lesser proportion than that of sodium
Serum bicarbonate; (carbon dioxide combining power)	Increased, alkalosis	Decreased, acidosis
Serum sodium	Slightly decreased, may be normal	Markedly decreased
Nonprotein nitrogen	No azotemia in early stages; nonprotein nitrogen normal till late	Early azotemia prominent; nonprotein nitrogen elevated markedly
Urine chloride	Normal or increased	Decreased, may be absent
Urine pH	Acid range	Alkaline range
Hematocrit	Decreased — hemodilution, hypotonicity	Increased, hemoconcentration
Serum albumin	Decreased — hemodilution, hypotonicity	Increased, hemoconcentration
Electrocardiogram	Changes indicative of potassium deficit	No characteristic changes

line range in a patient treated with mercurials is strongly suggestive of a threatening low salt syndrome. This is particularly significant if it occurs shortly (within eight hours) after a mercurial injection. The modified Fantus test for urine chlorides is an easily performed and very valuable office procedure. Using one drop of 10 per cent potassium dichromate as the indicator and 0.73 per cent silver nitrate solution as the reagent, titrated against 10 drops of urine, each drop of the silver nitrate solution represents roughly about 250 mg. of sodium chloride (or about 150 mg. of chloride ion) per L. of urine. The average normal is 20 drops, which is equal to about 5 Gm. of sodium chloride per liter of urine.[11] A patient with chloride depletion may show urine chloride values in the range of 1 to 2 drops, i.e., 250 to 500 mg. of sodium chloride per L.

Serum Electrolyte Pattern in Compensated Congestive Heart Failure

The first step leading to edema in congestive heart failure is retention of sodium, not chloride.[2,12–15] The kidneys attempt to preserve normal osmotic pressure and isotonicity of the extracellular fluid by retaining a proportional amount of water. As the extracellular fluid expands with the retained water, the sodium concentration necessarily drops and is then maintained at a slightly lower (hypotonic) level. Instead of the normal 142 mEq. per L., it is about 135 or 138 mEq. per L.

The sodium ions present in excess, although at a lower concentration, then pass through the cellular membrane barrier into the cells[2,16–19] and displace some of the intracellular potassium ions out of the cells into the extracellular space. These potassium ions are then promptly excreted in the urine, and a potassium deficit results.

The shift of sodium ions from the extracellular space into the cells, into the intracellular fluid compartment, leaves a relative excess of chloride ions behind them, which amounts to a "relative" acidosis.

We have, therefore, in the edematous cardiac in congestive heart failure, and before the start of active diuretic therapy, the following sequence: sodium retention, water retention, hypotonicity of the extracellular fluid, shift of sodium into the intracellular fluid compartment, potassium displacement and excretion, and relative acidosis.

The first thing that will inevitably be done to this patient is restriction of his sodium intake. This may compensate for his tendency to retain sodium and water and may be sufficient for a time to maintain a balance, with both sodium and chloride at a lower concentration. The sodium concentration may then be about 130 mEq. per L. and the chloride perhaps 96 mEq. per L. There is, therefore, slight acidosis, mild hypotonicity, and proportionate reduction of the plasma volume. The patient is compensated (Table II).[2,20–22]

Most cardiacs in mild congestive failure get

TABLE IV.—EXTRACELLULAR FLUID ELECTROLYTE PATTERN IN HYPOCHLOREMIC ALKALOSIS

Cations (+)	Concentration (mEq. per L.)	Anions (−)	Concentration (mEq. per L.)
Sodium (Na^+)	138	Chloride (Cl^-)	85
Potassium (K^+)	6	Bicarbonate (HCO_3^-)	38
Calcium (Ca^{++})	5	Phosphate ($PO_4^=$)	2
Magnesium (Mg^{++})	3	Sulfate ($SO_4^=$)	1
		Organic acids	6
		Proteins	16
TOTAL	152	TOTAL	148

along quite well in this range of electrolyte adjustment, in which there is mild hypotonicity of the extracellular fluid as regards the electrolyte concentration and a corresponding reduction in the volume of extracellular fluid as the edema is controlled. This state is referred to as "mild hypotonic dehydration." The margin of safety which these patients have, however, is quite narrow, and if any unusual electrolyte loss is superimposed, as, for example, following an infection or surgery, as a result of overintensive mercurial therapy, or even as a result of removal of body fluid by paracentesis, they are readily thrown off their precarious balance into one of the forms of electrolyte disruption.

The two main forms of electrolyte imbalance encountered in the treatment of congestive heart failure are hypochloremic alkalosis and the low salt syndrome. In simplified terms hypochloremic alkalosis is primarily a chloride deficit, i.e., a hypochloremia associated with alkalosis and with hypopotassemia. By contrast the low salt syndrome (or salt depletion syndrome) is primarily a sodium deficit, a hyponatremia. Necessarily, chloride deficit is also present, but the primary deficit is in sodium. In addition, the low salt syndrome is accompanied by acidosis rather than alkalosis and also by early renal failure and azotemia.[23–26]

Hypochloremic alkalosis is the more common of the two syndromes and is relatively the less serious of the two. It is important to make a differential diagnosis between them because both the prognosis and the treatment are radically different (Table III).

Clinically, on the basis of signs and symptoms alone, they are not easily distinguishable. The differential diagnosis rests mainly on serial laboratory data.

The sequence of events leading to the development of either syndrome may be something like this:[22,27–30] A patient in congestive heart failure has been responding well to a program of rest, digitalis, salt restriction, and an occasional mercurial injection. Gradually, his responsiveness to therapy diminishes, and fluid retention continues or even increases despite treatment. You may be at a loss, at first, to be sure whether his congestive failure and edema are becoming worse because of progressive myocardial deterioration or because the treatment is inadequate; you might accuse the patient of cheating on his salt intake. You may be tempted at this point to push the mercurials a little harder, or you may try to enhance their effect by various "extenders," e.g., aminophylline, decholin, ascorbic acid, pyridoxine,[7,31] or any one of a number of mercurial "synergists." At first there may be an increase in diuresis. Then, as the response again fails, you may be tempted to increase the dosage of the mercurial from 1 to 2 cc. or to give it more often. And that is when the trouble begins—when, despite or because of a reduced response to the mercurial, it is given more often or in greater dosage in the attempt to "force" a response. The refractoriness to mercurials at this point is probably a defense mechanism against further electrolyte depletion. If it continues uncorrected, electrolyte disruption ensues. The particular form of electrolyte imbalance that will develop in the given patient will be determined by the pre-existent renal status and its compensatory mechanism, the degree of dietary salt deprivation, the extent of superimposed external chloride or sodium loss, and the degree of therapeutic acidosis produced with acidic chlorides administered in the form of ammonium chloride, hydrochloric acid, resins, etc. There are still other determining factors that have not as yet been completely clarified.

Hypochloremic Alkalosis

CHEMICAL PATHOLOGY.—The chemical pathology of hypochloremic alkalosis in a given patient is somewhat as follows:[32–37] Mercurial diuresis over a prolonged period has caused an output of chloride ions in excess of sodium.[24,25] The ratio of this excess may range from 2:1 to 4:1. Until now the renal compensatory mechanisms, with or without the regulatory endocrine influences of the adrenals, pituitary, and other unknown factors, have been able to equalize the cation-anion balance. Now these mechanisms have begun to fail. The

TABLE V.—EXTRACELLULAR FLUID ELECTROLYTE PATTERN IN HYPOCHLOREMIC ALKALOSIS WITH HYPOKALEMIA*

Cations (+)	Concentration (mEq. per L.)	Anions (−)	Concentration (mEq. per L.)
Sodium (Na^+)	135	Chloride (Cl^-)	73
Potassium (K^+)	3	Bicarbonate (HCO_3^-)	40
Calcium (Ca^{++})	4	Phosphate ($PO_4^{=}$)	1
Magnesium (Mg^{++})	3	Sulfate ($SO_4^{=}$)	1
		Organic acids	6
		Proteins	16
TOTAL	145	TOTAL	138

* The blood nonprotein nitrogen is normal till late.

TABLE VI.—CALCULATION OF CHLORIDE REPLACEMENT IN HYPOCHLOREMIC ALKALOSIS

Calculation
Patient's weight = 70 Kg.
Patient's serum chlorides = 90 mEq. per L.
Total extracellular fluid = 20% of total body weight = 20% × 70 = 14 L.
Chloride deficit in this patient = 103 mEq. − 90 mEq. = 13 mEq. per L.
Total chloride deficit in this patient = 14 L. × 13 mEq. = 182 mEq.

Replacement
2.14% ammonium chloride solution = 40 mEq. of chloride per 100 cc.
Total required to replace chloride deficit = 182/40 = 455 cc.

precipitating factors for this failure may be many. It may be an amount of stress of one kind or another beyond the patient's capacity; it may be an unusual additional chloride loss through excessive sweating or vomiting, etc., in the face of a rigidly restricted intake of salt; mercurial fastness appears as a defense mechanism against further chloride loss. At this early stage the situation is still reversible. The electrolyte pattern at this point is one of moderate lowering of the chloride ion concentration to about 85 to 90 mEq. per L. and a relatively smaller lowering of the sodium ion concentration to about 135 to 138 mEq. per L. (Table IV). There is a hypochloremia and a relative mild alkalosis. The latter is indicated by the reciprocal rise of the bicarbonate from the normal of 27 mEq. per L. to 38 mEq. per L. (from a carbon dioxide combining power of 60 volumes per cent to 85 volumes per cent). The alkalosis is a relative alkalosis because it is caused not so much by a true increase in base as by a loss of chloride in greater amount than that of sodium.

If allowed to continue uncorrected, the above electrolyte imbalance will deteriorate further. Potassium loss will enter the picture and will become an integral part of it.[19,38] The mechanism of this is a double one. First, renal excretion of potassium is directly promoted by the mercurials. The potassium is excreted with the chloride that is "diuresed" out. Then, the reciprocal relation between sodium and potassium, as previously described, comes into play. The relative excess of sodium over chloride in the extracellular fluid, the intracellular shift of sodium, potassium displacement out of the cells into the extracellular fluid, excretion of potassium in the urine—these are the steps that result in intra- as well as extracellular potassium deficit. As the electrolyte imbalance deteriorates still further, there is true loss of sodium as well, so that we now have: (1) hypochloremia, (2) alkalosis, and (3) hypopotassemia (Table V). The electrolyte pattern is as follows: The sodium ion concentration has dropped to 130 to 135 mEq. per L., the chloride ion concentration is down to 73 to 78 mEq. per L., the bicarbonate is up to 40 mEq. per L., and the potassium ion concentration is down to 3 mEq. per L. and may go down still lower.

CLINICAL FEATURES.—The clinical picture of this syndrome is a combination of the underlying progressive cardiac decompensation with that of hypochloremia. There is unusual and extreme weakness and apathy and anorexia or nausea. There may be increased muscular irritability to the point of tetany with muscle cramps and carpopedal spasms. These are explained by the alkalosis and the decreased calcium ionization secondary to it; there is no true hypocalcemia. With further potassium loss there is muscular atony with generalized muscular hypotonia, areflexia, intestinal atony and distention, tingling of the toes and fingers, cardiac arrhythmias, and characteristic electrocardiographic changes. These latter are lengthening of the Q-T interval, ST depression, T lowering and then widening and inversion, decrease in QRS voltage, prominent U waves, and auriculoventricular block. These changes are present in about 80 per cent of the cases with potassium deficit. Digitalis intoxication is a frequent complication[19,38] of potassium depletion; cardiac dilatation and even necrosis have been described.

TREATMENT.—The treatment of this syndrome consists of stopping the mercurials at once, then replacing the depleted chlorides, and restoring the potassium deficit. The chlorides can be replaced either orally in the early cases or intravenously in the more urgent ones. Assuming 100 per cent absorption from the gastrointestinal tract, 5 Gm. of ammonium chloride will supply about 100 mEq. of chloride ion (exact value is 95 mEq.). For better absorption Vogl[7] recommends that ordinary gelatin capsules rather than the enteric-coated tablets be used. Dilute (10 per cent) U.S.P. hydrochloric acid can be used and will supply 50 mEq. of chloride ion per 20 cc. of acid. This is equivalent in chloride value to about 3 Gm. of ammonium chloride.

On a program of oral chloride intake of 50 to 100 mEq. per day it may take a week to replace the deficit to the point where mercurial fastness will be reversed. When this has to be achieved more urgently or when oral intake is not possible, chloride can be given intravenously in the form of 1 or 2 per cent ammonium chloride in 5 per cent glucose solution. A 2.14 per cent solution of ammonium chloride is available (Baxter) in flasks of 500 cc. yielding 40 mEq. of chloride ion per each 100 cc. Various methods are available for calculating the total chloride deficit and its replacement (Table VI). They are all very rough estimates at best and are only of academic interest. In practice, none of these calculations is sufficiently accurate to be reliable. Suffice it to know that the entire chloride deficit must not be replaced at one or two sittings, that 10 to 15 Gm. of ammonium chloride (equal to 200 to 300 mEq.) are the maximum that may be given intravenously in one day, and that 200 to 250 cc. of a 2 per cent solution are the very maximum that may be given at one sitting at a slow rate of not more than 75 cc. per hour. The replacement of the deficit is thus achieved in repeated small steps, rechecking the serum chlorides after each step, and repeating the procedure until balance is reestablished. Particular care must be exercised in those with renal or hepatic disease. Procaine, 2 to 3 cc. of 1 per cent solution, into the vein before the tourniquet is released may be used to relieve the intense pain and phlebospasm provoked by the irritating ammonium chloride solution.

Restoration of the potassium deficit is essential for adequate correction of the chloride imbalance and alkalosis. Supplying chlorides alone will not do it. Potassium in some form must be added. It can be given orally either as potassium chloride in 5-grain tablets, 3 to 6 Gm. a day, or as a 15 per cent potassium citrate-potassium acetate flavored solution containing 10 grains of each per dose, to a total of 2 to 3 Gm. per day. One gram of potassium chloride yields about 13 mEq. of potassium ion.

Patients who are able to eat will probably get enough potassium in their diet. Orange juice, beef, beef-broth, and potatoes are foods that are particularly rich in potassium. Those who are unable to eat or cannot take oral medication must receive it parenterally. It can be added as the chloride or phosphate to whatever intravenous infusion is administered at the time, so diluted that the concentration will not exceed 60 to 80 mEq. per L. and given no faster than 20 mEq. per hour. Both the chloride and the phosphate of potassium are available in individual ampuls containing from 20 to 60 mEq. of potassium per ampul; 5 Gm. of potassium chloride added to a liter of solution will yield a concentration of 65 mEq. of each, potassium and chloride ions, per liter of solution. Potassium must be given with extreme caution, if at all, to those with renal impairment. What was said about chlorides holds true of potassium: total replacement of the deficit must not be attempted at one sitting. It must be done in several small steps with frequent checks of serum potassium between them.

The Low Salt Syndrome

This is the more serious of the two syndromes and the more difficult to reverse.[38-44] The difference between the low salt syndrome and hypochloremic alkalosis is that in the former the deficit is mainly in sodium, in the latter it is mainly in chloride—in other words, the low salt syndrome is primarily a hyponatremia. The reduction in the concentration of chloride is secondary to the reduction in concentration of sodium and is of relatively smaller magnitude. As a result, there is a relative excess of remaining chloride over that of sodium, hence an acidosis. Eventually, the concentration of both (sodium and chloride) is reduced, hence hypotonicity of the extracellular fluid. Then, later, when there is a shift of water from the hypotonic extracellular space into the cells causing cellular overhydration, the volume of the extracellular fluid is also reduced. The intravascular fluid, i.e., the plasma volume, is reduced so that there is hemoconcentration and increased blood viscosity. In summary, then, the chemical derangement consists of hyponatremia, acidosis, hypotonicity of the extracellular fluid, cellular overhydration, reduced extracellular fluid vol-

TABLE VII.—EXTRACELLULAR FLUID ELECTROLYTE PATTERN IN THE LOW SALT SYNDROME (HYPONATREMIA, ACIDOSIS, HYPOTONICITY, AZOTEMIA)

Cations (+)	Concentration (mEq. per L.)	Anions (−)	Concentration (mEq. per L.) 1	2
Sodium (Na^+)	118	Chlorides (Cl^-)	85	80
Potassium (K^+)	5	Bicarbonates (HCO_3^-)	20	17
Calcium (Ca^{++})	5	Phosphates ($PO_4^{=}$)	4	8
Magnesium (Mg^{++})	3	Sulfate ($SO_4^{=}$)	2	4
		Organic acids	8	10
		Proteins	16	10
TOTAL	131	TOTAL	135	129

Extracellular fluid volume decreased.
Plasma volume decreased:
Hematocrit increased.
Serum albumin increased.

Nonprotein nitrogen increased.
Creatinine increased.
Urine chlorides decreased, may be absent.
Urine pH may be in alkaline range.

ume, reduced plasma volume and hemoconcentration, and azotemia (Table VII).

The serum chemical pattern is constant in that the sodium concentration is reduced. It may be down to 118 to 120 mEq. per L.; the chloride is also down to 85 mEq. per L.; the serum bicarbonate is down to 20 mEq. per L., and later it will go down still lower to, perhaps, 17 mEq. per L.; the organic acids will rise to 8 mEq. per L. and later to 10 mEq. per L.; the sulfates and phosphates also rise, as renal failure ensues, and the blood nonprotein nitrogen may rise to 100, 200, or 300 mg. per 100 ml. The hemoconcentration can be estimated from a rise in the serum albumin concentration as well as from a rise in the hematocrit. The urine is scanty due to the failure of the diuretic response to mercurials and, in addition, is very low in chloride and alkaline in reaction.

PATHOGENESIS.—The pathogenesis of the low salt syndrome has been attributed to two main processes: (1) salt depletion and (2) salt dilution. The two are often intimately combined and mixed.[38]

1. Actual (salt) sodium depletion occurs either by way of overt external salt loss through vomiting, sweating, diarrhea, or removal of pleural or ascitic fluid[4] or as a result of overtreatment with the combined regimen of mercurial diuresis, rigid dietary salt restriction, and oral ammonium chloride while the intake of water is unrestricted. The cardiac in compensated congestive failure is in a state of "adjusted" chronic mild hyponatremia to begin with. It takes little to bring on overt sodium depletion[28,39] via any one of the above mechanisms.

2. Primary renal impairment of diuresis with water retention and overhydration, dilution of sodium in the extracellular space, and shift of water from it into the cells all occur in the manner described earlier. This shift of water and electrolytes into the cells explains the paradox of how increasing edema and weight gain can occur simultaneously with a decreasing extracellular fluid volume. To explain this paradox, there is the additional fact that in the edematous cardiac, with a poor circulation and hypoalbuminemia, the edema fluid is relatively segregated and unabsorbable.[38] If still more water without salt is taken, as is often the case in these patients, it is avidly retained; it then further dilutes the extracellular fluid, and a vicious cycle is established.

The physiologic derangement that ensues is a serious disturbance in (1) cellular metabolism and (2) hemodynamics. The overhydrated, swollen cells are sick; their electrolyte balance is disturbed; their impaired metabolism is reflected in myocardial and renal deterioration, as well as in deterioration of other vital organs (brain, liver, etc.). The disturbance in general hemodynamics is a result of the hemoconcentration and increased blood viscosity. This causes reduced cardiac output, circulatory insufficiency, diminution of effective glomerular blood flow and filtration rate, renal failure, azotemia, and finally circulatory collapse.

Although it is extremely difficult to determine which of the two above processes predominates in the pathogenesis of the hyponatremia in a given case, i.e., salt loss or depletion versus primary water retention and overhydration, the response to treatment will depend on this predominance. It is considerably better in those cases in which actual salt loss is the main precipitating factor. Mere replacement of the sodium deficit in these cases will often prove dramatically effective. Unfortunately, in the majority of cases of hyponatremia in congestive heart failure the response to treatment is poor. It would appear from that fact alone that in the majority of the cases of low salt or hyponatremia syndrome in congestive failure, pure salt depletion, as such, is not the main etiologic factor.[30] Rather, it is a combination of many factors, including both salt dilution and salt depletion. There are still other factors not yet completely clear.

TABLE VIII.—SODIUM REPLACEMENT IN THE LOW SALT SYNDROME

Calculation
  Patient's dry weight = 70 Kg.
  Present weight = 80 Kg.
  Extracellular fluid = 20% of dry body weight
    = 20% × 70 = 14 L.
    Plus edema fluid retained = 1,000 cc. per Kg. weight gained
      = 1,000 cc. × 10 = 10 L.
    Total volume of extracellular fluid = 14 + 10 = 24 L.
  Sodium deficit in this patient = 142 mEq. − 120 mEq. = 22 mEq. per L.
  Total sodium deficit in extracellular fluid = 24 L. × 22 mEq. = 528 mEq. NaCl = 30 Gm. NaCl (1 mEq. = 58 mg. NaCl)
Replacement
  5% NaCl solution = 860 mEq. per L. = 86 mEq. per 100 cc.
  Total required = 528/86 = 6 × 100 = 600 cc. of 5% NaCl solution

In the majority of these cases restitution of a normal electrolyte pattern is difficult and, even when achieved, proves to be of only temporary benefit. At times mercurial fastness is temporarily reversed. However, it is obvious that by the time these patients have developed hyponatremia, their cardiorenal status has become so deteriorated that mere restitution of a normal or near normal electrolyte pattern is not enough to reverse the advanced process. Most of these patients, therefore, do not recover even with appropriate corrective electrolyte therapy. Those that do respond are usually the ones in whom the syndrome had been precipitated by overt external salt loss alone. Occasional dramatic exceptions have been reported.

TREATMENT.—The treatment of this syndrome consists of the administration of hypertonic (5 to 5.85 per cent) sodium chloride solution intravenously in quantities of 200 to 300 cc. at a time daily for two to three days. Water must be withheld, despite the extreme thirst, until serum electrolyte levels have returned toward normal. Total restoration of the sodium deficit must not be attempted at one time. It must be done in several small steps, rechecking the serum electrolyte pattern after each infusion. Supplements of potassium and calcium may also be required and can be added as needed.

Various methods have been proposed for calculating the total sodium deficit and the amount of saline required to restore it (Table VIII). They are all approximations and must be used as such. In practice one must rely on the clinical response to each small infusion and on the laboratory checks between infusions. Not more than one third of the total calculated amount should ever be given in the first infusion. Particular caution must be exercised to prevent too sudden expansion of the circulating plasma volume and the development of pulmonary edema.

Summary

It is clear that the therapy of electrolyte imbalance is difficult and often disappointing. Too often, despite a reconstituted electrolyte pattern, the response to therapy is improved for a temporary period only, and the patient goes on downhill despite all efforts. Early recognition of electrolyte shifts and corrective measures started at once, before they become irreversible, are, therefore, of vital importance. Moreover, one must refrain from too vigorous diuretic therapy, using all the available agents at the same time; one must discontinue the mercurials and evaluate the patient's electrolyte status immediately when the response to them begins to fail.

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Traumatic Injuries to the Internal Mammary Arteries

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MOTHER Nature with all her ingenuity neglected to provide complete protection for the contents of the anterior thoracic cavity. Instead of forming a solid bony anterior chest wall, she unfortunately left the intercostal spaces with their easily penetrable intercostal muscles and the equally vulnerable costochondral cartilages.

A plunging thrust of a sharp weapon into the anterior chest wall stands a considerable probability of severing one of the internal mammary vessels. The usual assailant aims at the sternum or the precordial region. Evasive tactics by the intended victim alters the planned destination of the pointed instrument. However, the osseous anatomic configuration of the anterior chest wall guides the missile into certain channels. The penetrable areas, the intercostal spaces and the costochondral cartilages, constitute about 38 per cent of the total anterior chest wall area. The sternum, composed of the manubrium, body, and xiphoid, together with the ribs comprises the main protecting armor. It is with a great deal of difficulty that a knife blade can penetrate these structures, although the sliding of a blade off the lateral border of the sternum is not uncommon. On the other hand, the costochondral cartilages or the intercostal muscles are easily pierced by sharp instruments, and in these instances the likelihood of transecting the internal mammary vessels is very favorable.

In recent years cases of cardiac arrests have become more plentiful and most likely will continue to increase in frequency. In such cases the emergency opening of the anterior chest wall by cutting the costochondral cartilages, in order to gain access to the heart for massage, may easily injure the underlying internal mammary vessels. Several deaths from exsanguinating hemorrhages of the severed internal mammary vessels have been seen following these emergency thoracotomies.

While the internal mammary vessels deviate slightly in their anatomic position, their most constant course lies in the line parallel to the lateral border of the sternum and about 1 to 2 cm. distant (Fig. 1). They lie directly behind the costochondral cartilages. As a rule, there is one main artery and one or two satellite veins. Some of the smaller arterial branches may course along the main vessel for a distance of one or two ribs and then swerve laterally to join the intercostals or medially to supply the sternum and then anastomose with the opposite vessel. Inferiorly their continuation downwards terminates as the superior epigastric vessels.

Penetrating wounds over the course of these vessels occur usually between the first and fifth rib. As these vessels lie more or less free in a

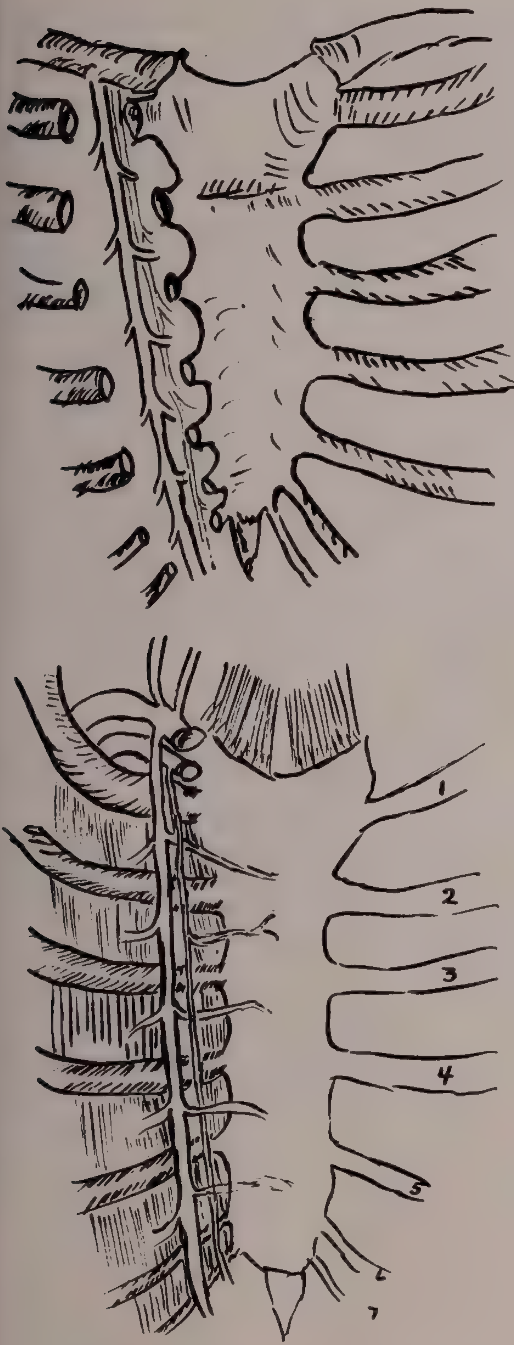

Fig. 1. Internal mammary vessels: anterior view (*upper*) and posterior view (*lower*).

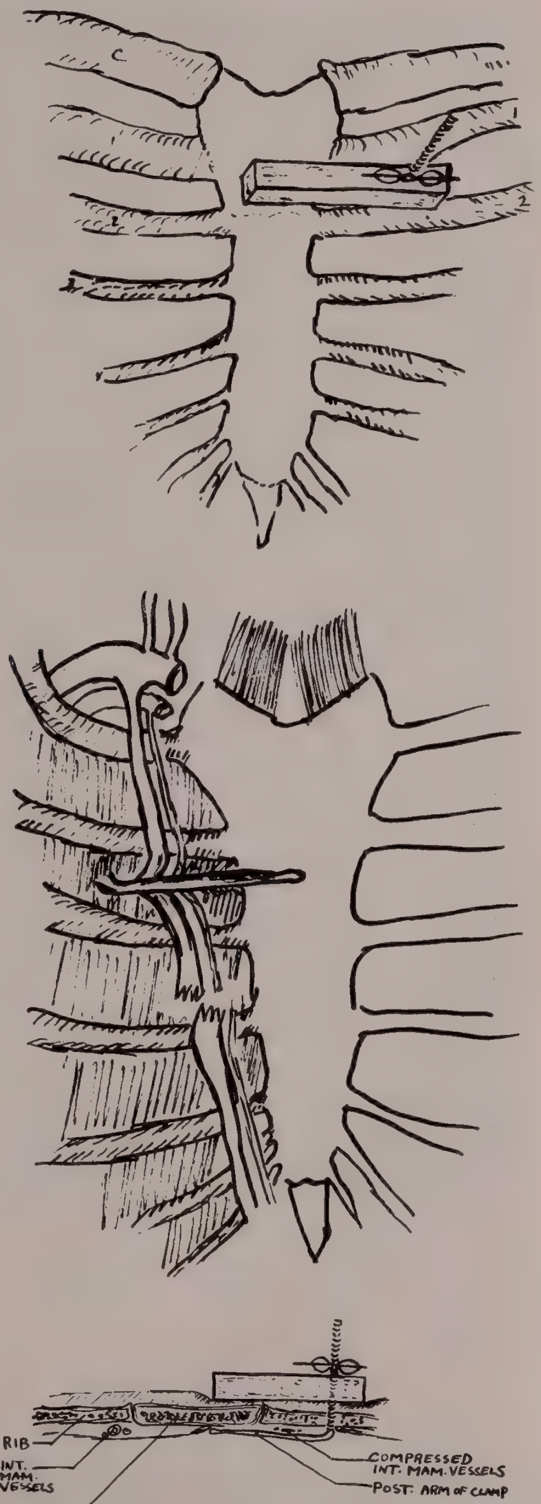
C
1
2
2
RIB
INT. MAM. VESSELS
STERNUM
COMPRESSED INT. MAM. VESSELS
POST. ARM OF CLAMP

Fig. 2. Compression clamp applied: anterior view (*upper*), posterior view (*center*), and cross-sectional view (*lower*).

large potential space and are surrounded only by loose connective tissue, any leakage of blood will continue unimpeded unless controlled. A consequent internal exsanguination into a large cavity may occur. The proximal segment coming off the subclavian artery is the vessel from which the fatal hemorrhage emanates. Its highly sustained pressure due to its proximity to the heart and being one of the first branches of the subclavian all tend toward profuse bleeding. Furthermore, the large receptacle, the thoracic cavity, with the easily collapsible lungs offers the perfect nonresistant recipient. The space is amply large enough to contain a fatal exsanguinating internal hemorrhage without any external evidence of bleeding.

These cases become severe emergencies and should be treated as such. The diagnosis should be suspected in all cases of hemorrhage or shock in which a wound is seen within 2 cm. of the lateral border of the sternum from the first to the fifth rib. The wound may be located either in the intercostal space or through the costochondral cartilage.

The treatment is naturally confined to the rapid control of the hemorrhage and care of the concomitant shock. This paper will confine itself to the control of the bleeding. If adequate facilities are available and time permits, the patient is brought to the operating room, and transfusions are immediately started. The original wound may be enlarged, and the pumping proximal segment of the severed internal mammary artery is clamped and doubly ligated. However, if unable to find the vessel, one may incise the next superior interspace and bluntly dissect through the intercostal muscles down to the internal mammary vessels and pick up the proximal segment there.

If this emergency treatment is not quickly available due to lack of facilities or time, a compression clamp may be used. It is a simple but effective device for compressing the bleeding vessels against the posterior chest wall. It is inserted into the interspace above the wound of entry and 1 inch lateral to the sternal border. The skin is nicked with a scalpel, and the rounded probe-shaped tip of the clamp device is inserted, first in a downward direction until it penetrates the chest wall. Second, it is slid medially for its full $1^1/_2$-inch length, hugging the posterior chest wall and sternal plate. A transverse rectangular wooden-block washer is then slid over the projecting threaded screw arm, and a butterfly nut is screwed over this, thus tightening and compressing the anterior and posterior chest wall between the arms of the device (Fig. 2). As the tightening process continues, it compresses the vessels against the posterior chest wall with resultant hemostasis. A similar procedure may be repeated inferiorly if necessary. Compression of the proximal segment is usually sufficient. This maneuver may prove lifesaving until further procedures are undertaken. The device may be left in situ until permanent occlusion has occurred. The treatment of the shock is conducted simultaneously.

Summary

1. Many deaths are occurring due to hemorrhages from severed internal mammary arteries with internal exsanguination.
2. Mounting incidence of injuries to the internal mammary vessels are due in part to the alarming increase in cardiac arrest with its subsequent emergency thoracotomy for cardiac massage.
3. The anatomy of these vessels is discussed.
4. Treatment is urgent, and if time or other factors render emergency operative treatment impossible, a new type of compression clamp for hemostasis is suggested.

642 Park Avenue

Sugar Coated

The copper pill-rolling pan used in the middle of the last century by William R. Warner, Philadelphia druggist, to manufacture America's first mass produced sugar-coated pills, has been presented to the Smithsonian Institution . . . to become part of an exhibit of early pharmaceutical manufacturing equipment.

The French were sugar-coating pills in the eighteen thirties. When the American pharmacist introduced sugar-coating here, long suffering patients, tired of bitter pills, boomed Mr. Warner's business.

—*New York Herald Tribune, August 8, 1954*

Infectious Mononucleosis Treated with ACTH

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INFECTIOUS mononucleosis is a generalized systemic disease characterized by perivascular infiltration by normal and abnormal lymphocytes,[1] usually considered benign, but manifested in a protean manner. The usual clinical picture of generalized lymphadenopathy, splenomegaly, pharyngitis, and fever may be complicated by the presence of hepatitis,[2,3] thrombocytopenia,[4] myocarditis,[5] cranial nerve involvement, meningeal signs,[6] and coma.[7]

With such bizarre manifestations some definite diagnostic criteria must be established, and those of Hoagland[8] are most adequate. He suggests the following trial:

1. A characteristic serologic reaction (heterophil agglutination) with a titer of at least 1:56 of unabsorbed serum or 1:26 after absorption with guinea pig kidney.
2. Hematologic manifestation of over 50 per cent of the total leukocyte count consisting of lymphocytes with the presence of abnormal lymphocytes. It is our experience that the presence of abnormal lymphocytes is most important when the total lymphocyte count is but slightly elevated.
3. The clinical picture of pharyngeal or typhoidal type.

We have had occasion to see 75 cases of infectious mononucleosis in a twelve-month period which fulfilled these diagnostic criteria. Therapy of this group was carried out with the sulfonamides, chlortetracycline (aureomycin), chloramphenicol, and penicillin. Our experience has been similar to that of Burnett and Milne using aureomycin,[9] Lewis using chloramphenicol,[10] and Bennike using penicillin[11]; there is no effect on the disease per se, and morbidity is not decreased.

The use of ACTH was considered, and a trial with this drug was evaluated in five seriously ill patients who manifested varying types of the disease.

Case Reports

CASE 1.—C. P., an eighteen-year-old airman, was well until May 29, 1953, when he noted the onset of severe headache in the fronto-occipital areas bilaterally which subsided spontaneously in a few hours, only to recur the following day with anorexia. The headache persisted with forceful vomiting but no diarrhea. Slight nuchal rigidity or, more truly, meningismus was noted by the patient on hyperextension. The past history was negative with the exception of an occupational history thought to be of significance. Prior to entry into the service he had worked with cattle, and it was his habit to drink raw milk.

The physical examination revealed an acutely ill eighteen-year-old male appearing agitated with noticeable lip-smacking and rapid wink reflex, often unilateral. Questions were answered accurately after some hesitation. Meningismus was present with some tenderness to deep pressure over the cervical and dorsal spine. The conjunctivae were deeply injected, and scleritis was present but no icterus. The pharynx was boggy and diffusely reddened with hyperplastic lymphoid tissue. The chest was symmetric, and the lungs were clear to percussion and auscultation. The heart was not enlarged. The rhythm was normal sinus with a rate of 100. No murmurs were noted. The abdomen was flat without palpable organs or masses. The skin showed no rash or ticks. There was no glandular enlargement.

Laboratory Findings.—The urine was negative. The initial white blood cell count was 7,400 with a differential count of 73 neutrophils and 23 lymphocytes. None of the latter was abnormal. Agglutinins for typhoid H and O and Brucella abortus and melitensis were negative. An initial heterophil agglutination was 1:14. The differential count after six days of hospitalization showed 28 neutrophils, 14 lymphocytes, 4 monocytes, 1 eosinophil, and 43 atypical lymphocytes. Heterophil agglutination was then 1:112. This reached a peak of 1:896 on the tenth hospital day. The total cholesterol on admission was 190 mg. per cent with cholesterol ester of 119 mg. per cent, cephalin flocculation 4 plus, thymol turbidity 12 units, and serum bilirubin no increase. The prothrombin time was sixteen seconds. The blood picture returned to normal over a period of seven weeks, and the heterophil agglutination fell to a level of 1:56 on the forty-second day. The thymol turbidity subsided, and cephalin flocculation still demonstrated the presence of parenchymal damage on the forty-second day. At the time of discharge, seventy days after the onset, the liver chemistries were all normal.

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Hospital Course.—The course was typhoidal in type with temperatures to 105 F. in spikes twice daily for ten days. With the appearance of extreme toxicity, the presence of generalized glands, and a spleen noted eight days after admission, as well as the presence of atypical lymphocytes in a differential predominantly lymphocytic, the criteria of infectious mononucleosis were assured, and adrenocorticotropic hormone, 20 mg. in 1,000 cc. of 5 per cent dextrose in distilled water, was given by slow intravenous drip. This was repeated each day for a three-day period. Improvement in well-being, loss of toxicity, and loss of anorexia was dramatic during the first administration of ACTH. Coincident with the second dose of ACTH, the temperature fell to normal and remained so throughout the hospital stay. The drug did not change the ultimate course of the disease per se, nor did it effect the lymphadenopathy, splenomegaly, or concurrent parenchymal liver involvement. One is, however, impressed with the sudden and dramatic loss of toxicity, the loss of fever, the return of appetite, and the return of well-being.

Case 2.—A. O. N. was a twenty-two-year-old band school instructor who had experienced anorexia, nausea, headaches, and weakness with nightly chills for one week prior to admission to the base hospital. Several days prior to admission he noted left-sided pleuritic pain without cough or production. The past history was negative throughout.

On physical examination the cervical glands anteriorly and posteriorly were enlarged but not tender. Axillaries and inguinals were also present. The liver on admission was not palpable, but the spleen was palpable three fingerbreadths below the costal margin. The day following admission the liver was palpable one fingerbreadth below the costal margin with discernible icterus of the sclera. The remainder of the physical examination was negative.

Laboratory Findings.—The admission blood smear was positive for abnormal lymphocytes of the Downey type with the total lymphocyte count being 85 per cent. The initial heterophil agglutination was 1:896 unabsorbed and 1:112 after absorption on guinea pig kidney. The total proteins were 7.10 Gm. per 100 cc. with an albumin of 4.43 Gm. per 100 cc. and globulin 2.67 Gm. per 100 cc. Cephalin flocculation was 4 plus, alkaline phosphatase 2.2 Bodansky units, thymol turbidity 10 units. The abnormal range of liver function studies persisted for seven weeks, as did the abnormal hematologic finding. There was then a slow decline in all abnormal findings to normal levels at the end of nine weeks.

Hospital Course.—This patient was acutely ill and markedly toxic in spite of the absence of fever, which was not present during his hospital stay. It was felt that the toxicity and concurrent anorexia might be altered by the use of ACTH. This was begun on the third hospital day with the patient receiving 20 mg. ACTH in 1,000 cc. 5 per cent dextrose in distilled water intravenously by slow drip, continued daily for three days.

The response of this patient from the standpoint of relief of toxicity and return of appetite was rapid and gratifying, occurring within a period of twelve hours. In spite of this response and in spite of its lasting effect—he felt well from that point on—there was no effect on the morbidity of the disease nor on the concurrent hepatitis. This patient was disabled for sixty days, chiefly from the hepatic involvement.

Case 3.—O. R., was a twenty-six-year-old male admitted with complaints of sore throat, stiff neck, dysphagia, and marked malaise on July 8, 1953. He had been hospitalized three weeks previously for a six-day period for acute tonsillitis and had received penicillin. He was discharged afebrile and asymptomatic. The past history was not significant except for a history of scarlet fever with "weak kidneys" manifest as nocturia (once nightly) for a period of one year.

The physical examination revealed a temperature of 99.6 F., pulse 124, respiration 22. He appeared acutely ill and extremely lethargic, complaining bitterly of difficulty in swallowing. The conjunctivae were suffused without petechiae, but no edema of the lids was noted. The tonsils appeared markedly enlarged, meeting in the midline with a grayish-white membrane covering the tonsils and extending into the crypts but not meeting in the midline of the posterior pharynx. The anterior and posterior cervical glands were large, firm, and nontender. Axillaries and inguinal were also palpable. The thyroid was not felt. The chest was symmetric and the lung fields clear to percussion and auscultation. The heart was not enlarged to percussion. The sounds were of good quality with no murmurs present. Rhythm was normal sinus with a rate of 124 on admission but 80 at the time of the examination. There was liver tenderness, but the edge was not palpable. The spleen was not felt. The neurologic survey was negative.

Laboratory Findings.—The admission blood studies revealed the total white count to be 15,150 per cu. mm. The lymphocytes comprised 60 per cent of this figure and neutrophils 38 per cent with 2 per cent monocytes. The smear demonstrated 52 per cent abnormal lymphocytes of the Downey variety. The heterophil agglutination at that time was positive in a 1:896 dilution. Examination of the membrane for Corynebacterium diphtheriae organisms was negative. The throat culture and throat smear at that time showed only normal flora.

Hospital Course.—Because of the marked dysphagia and toxicity, it was decided to place him on intravenous ACTH, 20 mg. in 1,000 cc. 5 per cent dextrose in distilled water each day for four days. At the end of the first day of ACTH he noted less dysphagia, and clinically the tonsillar tissue was less edematous with the membrane disappearing. The toxicity was less, and he appeared alert. The low-grade fever of 100 F. subsided and remained normal during the remainder of the hospital stay. The liver chemistries on admission and during his hospital stay of forty days were normal. Mild lethargia persisted throughout the entire hospital stay.

In this instance the administration of ACTH appeared to affect the acute symptoms and certainly had a marked effect on the ulcerative tonsillopharyngitis and tonsillar hyperplasia which was so marked as to make one consider tracheotomy.

Case 4.—J. C. F. was a twenty-one-year-old male admitted with a five-day history of headache and fever. He also had noted generalized malaise and anorexia and had been treated with sulfonamides and penicillin for four days while on leave without apparent change in symptoms. He denied sore throat, chest pain, cough, or production. The past history was noncontributory, and the only medical history relating to his tour of duty was a submucous resection for a deviated septum.

On physical examination the temperature was 102.2 F., pulse 98, respirations 20. He appeared acutely ill with malar flush and marked conjunctival suffusion. There was no nuchal rigidity. The anterior cervical and the axillary glands were large and nontender. Inguinals were shotty. The spleen was palpable two fingerbreadths below the costal margin and was nontender. The chest was symmetric, and the lungs were clear to percussion and auscultation. No liver tenderness was elicited. Neurologic examination was negative. The rectal mucosa and prostate were normal.

Laboratory Findings.—The admission blood counts showed the white blood cells to be 7,000 with 63 per cent lymphocytes of which 36 were atypical and of the Downey variety; 37 per cent neutrophils comprised the remainder of the count. It should be noted that the platelets were described as adequate at that time. The heterophil agglutination on admission was 1:448. The abnormal lymphocytes persisted during the hospital stay, while the heterophil titer fell from a high of 1:7,168 on the twenty-fifth day to 1:1,792 at the time of discharge.

Hospital Course.—The patient was started on procaine penicillin, 600,000 units intramuscularly daily, on the day of admission. The temperature rose to 103 F. each day, and the patient appeared extremely toxic. On the fifth hospital day he was given ACTH, 20 mg. in 1,000 cc. 5 per cent dextrose in distilled water, and this was continued for three days. The temperature fell to normal on the second day, and there was symptomatic improvement. However, on the eighth day the temperature again went to 104 F. and continued to spike for five days, or two days after the second course of ACTH was reinstituted in the same dosage and continued for a four-day period. During this period of elevated temperature the patient felt well, although a membranous type of tonsillitis was noted, which had not previously been seen, and a pinpoint macular rash was seen to cover the entire body. The following day definite petechiae were noted as well over the abdomen and the anterior aspect of the tibiae and dorsum of the feet. The Rumpel-Leede tourniquet test was negative at this time with the bleeding time reported as two minutes five seconds and the coagulation time three minutes thirty-five seconds. The platelet count at the height of the purpuric manifestation was 60,000. The macular lesions disappeared in seventy-two hours with the purpuric lesions diminishing slowly over a seven-day period.

The ACTH was reinstituted the day following the appearance of the macular rash and coincident with the appearance of petechiae. The patient clinically was markedly improved after the first course of ACTH, and even during the secondary period of temperature rise well-being continued in spite of the membranous tonsillitis and the macular and petechial manifestations. The febrile period ceased during the second day of the second course of ACTH. There was obviously some liver involvement as noted by the thymol turbidity of 12 units, the cephalin flocculation of 3 plus, and the alkaline phosphatase of 8.1 Bodansky units, as well as the subsequently palpable and tender liver noted ten days after admission.

The purpuric manifestation (thrombocytopenic purpura) was considered as a primary complication of the infectious mononucleosis, and the response to ACTH was considered significant. The platelets rose gradually from an initial level of 60,000 to 260,000 per cu. mm. in a twelve-day period.

His convalescence was uneventful but prolonged because of the hepatitis. Again the disease per se was not affected by the use of ACTH.

Case 5.—J. T. S. was a twenty-year-old white airman who noted a sore throat and swelling of the glands in the cervical and postauricular region with fever five days before admission to the base hospital. As the glands became larger, pain was a prominent feature, and severe frontal headaches were experienced. The past history, family history, and review of systems were unrevealing and noncontributory.

Physical examination revealed a temperature of 103 F., pulse 98, respirations 20, and blood pressure 118/76. He was a well-developed, well-nourished white male, acutely ill and exhibiting toxic symptoms including lassitude, myalgia, arthralgia, and severe headache. The throat showed hypertrophic lymphoid tissue and a diffuse injection but no anginal characteristics. Tender, swollen glands were present in the anterior and posterior cervical chain with the axillary and inguinals markedly enlarged. The spleen was palpable and tender three fingerbreaths below the costal margin. Conjunctivae were suffused. The nasal septum was in the midline. The buccal membranes were intact. The chest was symmetric, and the lungs were clear to percussion and auscultation. No liver tenderness was elicited.

Laboratory Findings.—The laboratory studies of note were white blood cells 12,100 with 33 per cent polymorphonuclear cells, 66 per cent lymphocytes and 1 per cent basophils. A small percentage of the lymphocytes were abnormal and resembled the vacuolated Downey cell, while 15 per cent of the lymphocytes were very immature. Sedimentation rate was 9 mm. per hour. The heterophil agglutination was positive 1:256 in unabsorbed serum and 1:128 in absorbed serum. The abnormal blood picture persisted throughout his twenty-two days of hospital care.

Hospital Course.—This was one of spiking temperatures for the first five days with range from 103.6 to 100 F. During this period the patient was toxic and appeared acutely ill. On the third hospital day it was decided to give 20 mg. ACTH by slow intravenous drip "in an effort to make the patient more comfortable." This was administered in 1,000 cc. of 5 per cent dextrose in distilled water over an eight-hour period. It was noted that while the drip was still running, he remarked that he felt better, and the temperature fell to normal and remained so during the rest of the hospital stay. The spleen gradually decreased in size and was no longer palpable on the fifteenth hospital day. The generalized lymphadenopathy likewise disappeared during that period.

It was the feeling that ACTH had an effect on the toxic symptoms, while the over-all pathologic state was not affected.

It is of interest that this man received his ACTH early in the disease, while others treated had been ill for a longer period of time. Of interest will be the response of those severely ill and treated early in their disease.

Comment

Walker[12] in an excellent review of the treatment of infectious mononucleosis with various agents from convalescent serum through the heavy metals, the chemotherapeutic drugs, and all the antibiotics has demonstrated the ineffectiveness of all agents. Recently, Doran and Weisberger[13] reported one seriously ill patient treated with ACTH with marked improvement in the over-all picture as well as the renal complications. These changes came about within the first day, as happened in all the cases reported here. The cases here reported demonstrate the marked toxicity seen in the severe type of infectious mononucleosis, and all showed a striking relief of this one symptom. Case 3 demonstrated a severe ulcerative tonsillopharyngitis with obstructive phenomenon sufficiently great to make one consider tracheotomy. This responded within twenty-four hours after the institution of ACTH. The thrombocytopenic purpura complicating the disease in Case 4 was felt to be directly related to the disease and was benefited by ACTH.

The exact action of ACTH in this disease as in all other diseases can only be speculative. The use of this drug may only bridge the gap by relieving the primary stress of the disease or the mild adrenal insufficiency. It is conceivable that the adrenals themselves are involved by perivascular infiltration, thus leading to mild insufficiency. It would seem to be more than the nonspecific antipyretic effect attributed to ACTH as described by Kass and Finland.[14]

Summary

Five patients severely ill with infectious mononucleosis were treated with ACTH with marked symptomatic improvement, defervescence, and diminution in the severity of the complications except the concurrent hepatitis. It is noted that the morbidity was unchanged in spite of the symptomatic relief.

The use of ACTH intramuscularly and in varying dosages, as well as related components, is under consideration at this time. The indiscriminate use of ACTH is not warranted in the usual uncomplicated infectious mononucleosis but is of value in the complicated, severely ill patient.

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Infrared Photography of the Female Breast
Photographic Technic

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THE breast is the most frequent site of carcinoma in the female. According to statistics from the New York State Department of Health, 5 per cent of all women between the ages of thirty and eighty can expect to develop carcinoma of the breast. The only available method of improving the cure rate is by early detection. The fear of being told the unpleasant truth keeps many women from seeking medical aid. The public has already become indoctrinated with the importance of periodic chest x-rays. If a comparable procedure could be developed for the breasts, women could be trained to have periodic breast examinations without undergoing all the anxiety and fear which is now so frequent.

The primary purpose of this investigation is to determine the value of infrared photography as a supplementary procedure to all the present methods of breast examination. It is not intended to replace clinical examination. To date the diagnostic value of this procedure has not been established. Due to the lack of pre-existing control photographs, attempts to interpret isolated photographs have resulted in discrediting the procedure. A retrospective study of microscopic biopsy material was necessary for the establishment of intraepithelial carcinoma of the cervix uteri as a pathologic entity. A similar plan is underway to determine whether changes in the subcutaneous veins do occur with carcinoma of the breast and also whether these changes occur sufficiently early to have diagnostic value. This method of study has never before been attempted. If successful, a screening program would be in order as part of a periodic examination of the female breast.

The use of infrared photography involves an understanding of photographic technic. It is necessary that all the procedures employed be available to those interested. Failure to obtain desired results may be due to a lack of understanding of the necessary photographic methods. The literature to date does not contain complete information. This report is presented to make available the necessary technical knowledge.

Infrared photography has been utilized for the study of venous vascular patterns since 1933. At that time Haxthausen[1] was the first to apply this procedure to dermatologic problems. He pointed out that the subcutaneous veins, which were invisible to the naked eye, could be demonstrated. Since 1934 Massopust[2] has reported numerous studies. Many other investigators have also published their results.

In cancer of the breast abnormal subcutaneous vascular patterns have been demonstrated with infrared photographs. The film "Carcinoma of the Breast," produced by the National Cancer Institute and the American Cancer Society, presented an infrared photograph of a breast containing carcinoma. A similar photograph appeared in the monograph on *Carcinoma of the Breast* by Haagensen, published by the American Cancer Society.

As already indicated, 5 per cent of all women may expect to develop carcinoma of the breast. Until a specific cancer cure is discovered, the only hope for cure is dependent upon early detection and prompt surgical treatment. The American Cancer Society and other organizations are making great efforts to impress the public with the importance of periodic examinations. Even if all women were examined regularly, there would in many instances be certain cases in which the biopsy would be deferred until the attending doctor was convinced that it was indicated. The solitary tumor might be promptly recognized and treated. The patient with multiple nodules of the breast who may or may not have had a previous biopsy for a benign tumor presents a confusing picture. There are many cases where there is a delay period before the patient consults her physician. There are others where there is a delay period after the patient consults her physician. The shorter the delay period, the better the prognosis will be.

There is no substitute for biopsy of the breast to establish a diagnosis. However, if the changes in the subcutaneous venous patterns of the breast which have been reported with carcinoma of the breast could be detected early enough, this procedure would help to shorten the delay period. Infrared photographs of the breast containing carcinoma have demonstrated marked changes. However, in some cases of carcinoma no marked changes have been recognized. As a result of the usual practice of depending upon single infrared photographs, this procedure has been found to be of no diagnostic value. Nevertheless, changes may have occurred which were not considered significant. Without control photographs it would be impossible to ascertain whether any changes have occurred. If the patient had been photographed regularly over a period of years preceding the development of the carcinoma, minute changes in the venous vascular pattern could be detected. It is not enough to take an infrared photograph of an advanced breast carcinoma and point out that these changes have occurred. It is much more important to observe these changes as early as possible. It is only by means of pre-existing control photographs that we may possibly detect early vascular changes.

Since one out of every 20 women will eventually develop carcinoma of the breast, any procedure that may aid in the early diagnosis should be investigated. This entails the periodic examination of the breasts of a large group of women over a period of years. Statistics from the New York State Department of Health point out that out of each 1,000 women between the ages of thirty and eighty, 1.13 will develop carcinoma of the breast annually. When a sufficient number of women in this experimental group has developed carcinoma of the breast, their control infrared photographs will be examined, and any changes in the venous vascular pattern that may have occurred will be detected. It is only by means of such a project that one may be able to determine whether or not vascular changes actually occur with carcinoma of the breast and, if so, whether they occur early enough to be of diagnostic significance.

The first investigator to point out the importance of this method was Rosenbloom.[3] Contrary to the observations of previous investigators, he found that the vascular patterns as shown by infrared photography were never truly symmetric, also that the presence of asymmetric patterns occur in many normal breasts. Preoperative infrared photographs of breasts containing carcinoma showed some patterns which were obviously abnormal, while others, although asymmetric, were not striking. If infrared photographs had been taken of these women over a period of years, changes might have been detected. Not only should this investigation be carried out upon normal breasts but also upon patients previously operated upon for carcinoma.

The remaining breast might subsequently develop carcinoma, so this second group also offers a means of studying the problem.

If this control study should prove that early vascular changes can be detected by infrared photographs, then this procedure will be as valuable as the chest x-ray for screening purposes for lung pathology.

Photographic Technic

In order to interest others in the investigation of this problem, the photographic technic involved is herewith presented. A clinical view camera with extending bellows should be used. A 5 by 7-inch with a 9.5-inch *f* 4.5 lens has been found satisfactory. Two thousand watts of tungsten lamps are used. This is divided into two vertical banks of five 100-watt bulbs and two reflector lamps each containing a 500-watt 3,200 K. bulb. These lights are all about 36 inches from the patient. The 500-watt reflector lamps are located on either side of the camera, and lateral to these, but at the same distance from the patient, are the vertical banks of lights. The distance of the camera from the patient will depend upon the size of the camera and the lens. The image of the breast on the ground glass should completely fill the field. Flat illumination is essential. In order to determine if the lights are properly placed, the shadows obtained from a yardstick held directly in front of the background are checked and the lights adjusted until the shadows are equal. The reflector lamps are checked in pairs and then the vertical banks similarly checked.

The patient is instructed to wear a skirt and blouse and not to use any body powder on her breasts. She is then placed in front of the camera. A pair of dark polaroid glasses is supplied to her so that she is protected against the intense illumination. She is bared to the waist. In order to elevate the breasts, she is instructed to place her hands behind her head.

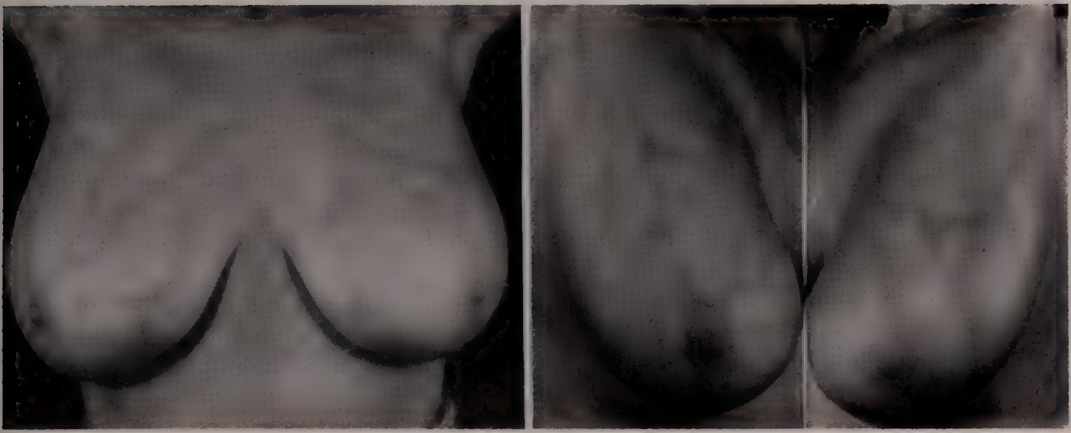

FIG. 1. Anterior and lateral views of normal breasts.

In focusing, a point about one-third the distance back from the nipple to the chest is chosen. Selecting a skin blemish or hair assists in critical focusing. The preliminary focusing with a number 25 Wratten filter as recommended by Massopust was found to be unnecessary. The focusing is done directly on the ground glass without the use of any filter. The film holder containing Eastman infrared cut film is then inserted. The shutter is closed down to about *f*11. However, numerous test exposures must be made for the individual camera and lens to determine the point of most satisfactory results. The number 87 Wratten filter is then placed in the filter holder and the exposure taken at one-half second.

Three exposures are taken of each patient. First, a direct front view which includes both breasts. The patient is then turned at a 45-degree angle. A split-back attachment is inserted onto the camera back. The camera is refocused; the lateral view of the breast and axilla is brought into focus. The film holder is inserted and the exposure made. This same procedure is carried out for the opposite lateral view of the breast. By means of the split-back attachment, both lateral views are taken on a single 5 by 7-inch film, correctly oriented so each nipple points medially. Not only does this save the use of one additional piece of film but keeps the resultant images approximately the same size as on the full front view. The number assigned to the patient is temporarily written on the white label on the film holder. Prior to development, by means of a Stern numbering machine, the number is printed on the negative by an exposure of four seconds.

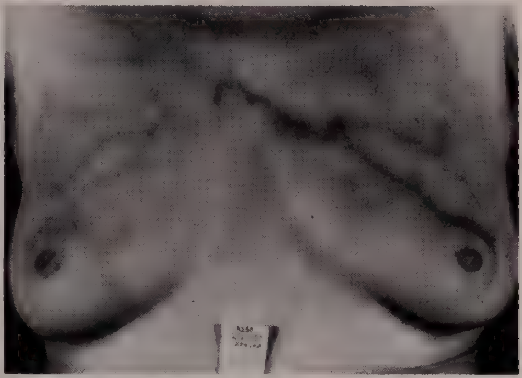

FIG. 2. Striking asymmetry in a woman who presents no evidence of breast disease.

Darkroom Technic

The film holders must be loaded and unloaded in total darkness. The camera, shutter, and film holders must all be infrared-proof. When purchasing any equipment, this should be specified. Shutters with hard rubber blades and film holders with hard rubber slides are not infrared-proof and should not be used. Slides of pressboard material are not infrared-proof. Holder and slides should be of metal or a material specified by the U.S. Signal Corps.

Development

E.K. D 11 is used. However, the hydroquinine content was increased $33^{1}/_{3}$ per cent. The negatives are developed for six to seven minutes at 68 F. The films are then fixed with a standard quick fix, preferably E.K. F 7.

Printing

Prints are made on number 2 Azo or Velox

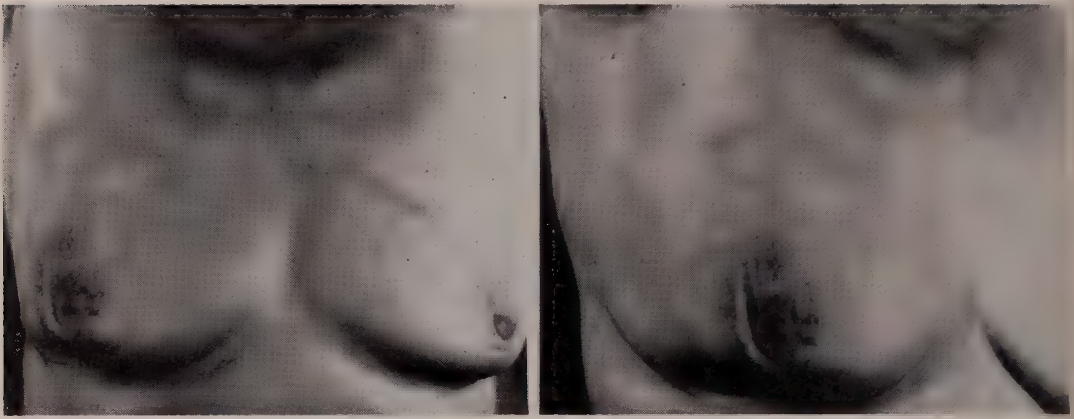

FIG. 3. Carcinoma below the nipple of the right breast.

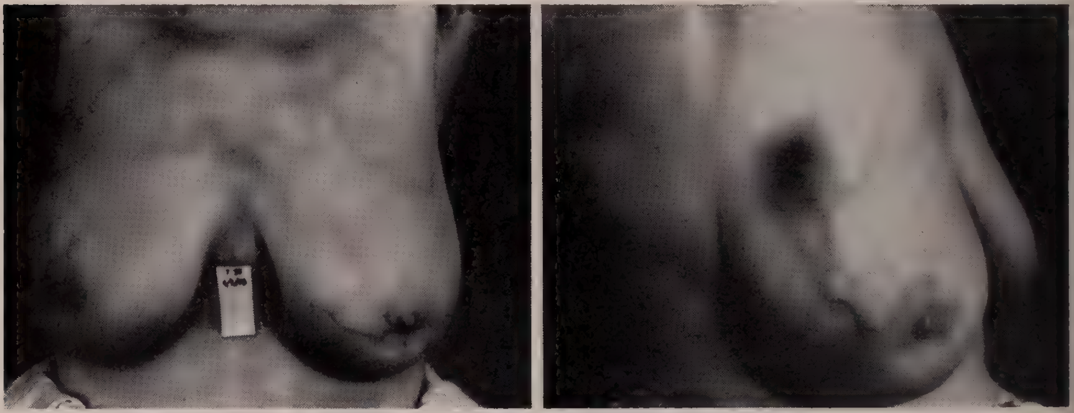

FIG. 4. Lesion well demonstrated on lateral view (*right*).

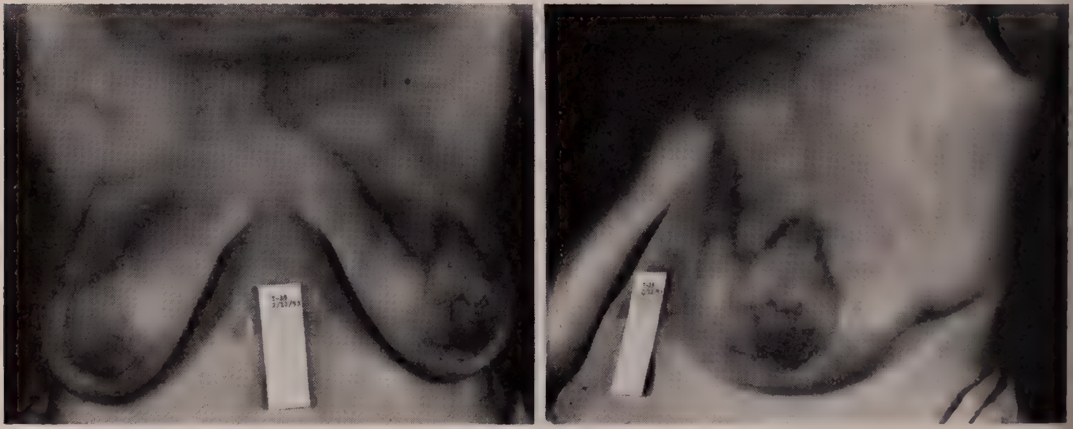

FIG. 5. Carcinoma of the left breast.

paper. The exposure is made with a standard 5 by 7-inch printing machine using two 25-watt bulbs for illumination. The exposure then varies from five to fifteen seconds depending upon the intensity of the negative. This will vary with fluctuations in voltage at the time of exposure. The prints are developed in Dektol developer or E.K. D 72 at 68 F.

The infrared film should be stored at a temperature not above 68 F. If kept for a long period of time, three to six months or more, it should be kept in the refrigerator.

Before using films and film holders, they should be dusted with a static master brush. The lens and camera should also be kept dust-free by the same procedure. Periodically, the camera and film holders should be cleaned with a vacuum cleaner.

Results

The following photographs are presented to illustrate the type of vascular patterns usually observed in normal and abnormal breasts. Figure 1 represents a normal photograph of a forty-eight-year-old patient. It cannot be said that this vascular pattern is symmetric. Figure 1 also shows the lateral views of each breast taken by means of the split-back attachment.

Figure 2 is an infrared photograph of a fifty-one-year-old woman who presents no evidence of breast disease. The striking asymmetry at first glance appears very startling. If a tumor were found in this breast, one would be prone to associate this pattern with the tumor. This illustrates how important control photographs are before one can attempt to interpret the results.

Figure 3 represents carcinoma below the nipple of the right breast in a sixty-six-year-old woman. The oblique view presents a much better pattern than can be obtained with only an anterior view.

Figure 4 shows a woman aged fifty-five. Here, again, the lateral view demonstrates the lesion very well.

Figure 5 consists of anterior and lateral photographs of the breasts of a fifty-five-year-old patient with carcinoma of the left breast.

It is not enough to be able to demonstrate advanced lesions or marked vascular changes. The purpose of the periodic photographs is to determine whether these changes can be detected earlier than by the present existing methods.

Summary

If and when infrared photographs of the female breast are found to aid in the earlier diagnosis of carcinoma, the periodic breast examination should include this procedure.

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ANNOUNCEMENT

SCIENTIFIC EXHIBITS

1955 ANNUAL CONVENTION
MEDICAL SOCIETY OF THE STATE OF NEW YORK

Applications for space for the scientific exhibits should be made directly to the Chairman of the Subcommittee on Scientific Exhibits of the Convention Committee:

William L. Watson, M.D.
340 East 72nd Street
New York 21, New York

The Annual Convention will be held May 9 to 13, 1955, at the Hotel Statler, Buffalo.

No applications can be considered after January 1, 1955.

There will be two groups of awards:

Group I: Awards in Group I are made for exhibits of individual investigation, which are judged on the basis of originality and excellence of presentation.

Group II: Awards in Group II are made for exhibits which do not exemplify purely experimental studies and which are judged on the basis of presentation and correlation of facts.

W. P. Anderton, M.D., *Secretary*
Medical Society of the State of New York

The Use of ACTH in Heat Sickness

HENRY A. SAMPSON, M.D., AND LUCILLE YUEN, M.D., NEW YORK CITY

(*From the Medical Department of the Beekman-Downtown Hospital*)

During the heat wave in the first week of September, 1953, 60 cases of heat sickness were seen and treated in the Emergency Room of the Beekman-Downtown Hospital. Of this number, nine patients required hospitalization.

Although the clinical pictures of heat exhaustion and heat stroke are different, we believe that cases of heat exhaustion, if untreated, may pass on to heat stroke. The patient will complain of extreme weakness, cramps in the muscles, anorexia, and constipation. Then vomiting will ensue; the patient will be pale and bathed in cold and clammy perspiration, and at that time the temperature will be normal or slightly elevated. If no treatment is given, anhydrosis will take place, the urine will diminish in quantity, the temperature will rise, central nervous system symptoms may develop, and convulsions and coma may be terminal events. There are instances where the patient will present symptoms of heat hyperpyrexia without showing any signs of heat exhaustion. This will occur in patients who develop early anhydrosis because of early loss of control of the heat center. According to the literature[1-3] the fatality rate is about 70 per cent in cases when the temperature goes up above 108 F. and 8 per cent in cases when the temperature remains below 108 F.

In order to avoid confusion in the terminology when speaking of pathologic conditions due to heat, it is advisable to remember that there is one etiologic factor involved, and no matter how various the conditions are, they merge into each other and form one entity. This is the reason why we prefer to speak of heat sickness.

Normally the human body has an excellent power of adaptation to environmental temperature. This includes the electrolyte balance and the regulatory heat control center in the hypothalamus. Failure in the control of heat mechanism may occur because of stress due to hot environment. Every element in the heat control mechanism may become involved: loss of water and plasma chlorides, failure in peripheral circulation due to increased demand for blood flow in the capillaries, and high temperature because of instability of the heat center.

Out of the nine patients admitted to the hospital two had a temperature of 100 F., two had 106 F., one 107 F., one 107.6 F., and one 109 F. Only two of them were exposed to the sun. Seven were employed indoors. None was doing strenuous work when he took sick.

Profuse perspiration was present in the patients with temperatures up to 102 F.; the other patients were not perspiring. The most common symptoms were weakness, nausea and vomiting, cramps in the legs and abdominal muscles, and diminution of urine. Mental symptoms were not noted except for one case where the patient was markedly confused.

The striking laboratory data were as follows: The plasma chlorides were decreased to approximately one third of normal in six cases; four patients showed leukocytosis.

In the use of ACTH in our group of patients, we set out (1) to combat stress and (2) to retain the plasma chlorides. A total of 25 to 40 mg. of ACTH was given in 1,000 cc. of normal saline in intravenous infusion. In all cases one dose was sufficient. The usual measures of cooling were applied at the same time. In all cases of hyperpyrexia the temperatures were down to 101 or 102 F. within four to eight hours. Within this period of time most symptoms subsided. Not one patient complained of headache which is so common, sometimes for many weeks after recovery. We did not have one fatal case in this group.

Summary

Nine cases of heat sickness were treated by intravenous ACTH. The temperatures ranged from normal to 109 F. In all cases of hyperpyrexia the temperatures were down within four to eight hours. All patients recovered.

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MEDICAL CONFERENCE

St. Mary's Hospital

Rochester, New York

SEPTEMBER 1, 1954

Hematologic Aspects of Drug Toxicity

FREDERICK STOHLMAN, JR., M.D., BETHESDA, MARYLAND

(*From the National Institutes of Health, Bethesda, Maryland, and the Department of Medicine, Georgetown University School of Medicine, Washington, D.C.*)

THE effect of therapeutic agents on the formed elements of the blood represents one of the most important aspects of hematology to the practicing physician. At present the rapid development of new drugs for the treatment of chronic and infectious diseases makes it imperative that the physician consider the possible complications of therapy before, rather than after, the administration of a drug. Some drugs may require extensive use before it becomes apparent that they have toxic effects on the formed elements. Accordingly, idiosyncrasy may not be noted during the clinical trials conducted prior to the release of a drug. A case in point is the recent experience with chloramphenicol.

The hematologic aspects of drug toxicity may be considered from three standpoints: (1) the clinical syndromes, (2) the mechanisms by which these syndromes are produced, and (3) the treatment.

The clinical manifestations of granulocytopenia seldom if ever occur when the level of circulating granulocytes is in excess of 500. The usual symptom complex is that of soreness and membranous ulceration of mucous membranes, localized lymphoid hyperplasia, and evidence of systemic infection (high fever, chills, etc.). The oral and buccal mucosa are the most frequent sites of these ulcerations and less commonly the skin and mucous surfaces of the nose, anus, rectum, and vagina. Blood cultures may be positive. Prior to the advent of antibiotic therapy the course was frequently fulminant, but recovery or a subacute or chronic course is now the usual pattern of the disease.

The symptoms associated with drug-induced thrombocytopenia are similar to those observed in the idiopathic variety. Petechiae, ecchymoses, and bleeding from the gums are the most common external signs. Intracranial hemorrhage is the most dangerous complication and most frequent cause of death. When the platelet count is in excess of 50,000, bleeding is uncommon.

The onset of hypoplastic anemia is insidious because of the long lifespan of the red cell. As the anemia progresses, symptoms of hypoxia, weakness, fatigability, dyspnea, etc., become apparent. In the absence of chronic blood loss the anemia is normocytic and normochromic. It is usually associated with depression of platelets and white cells.

In addition to the hypoplastic type of anemia due to a primary suppression of erythropoiesis, there are certain drugs which produce an acute hemolytic anemia (sulfonilamide, pamaquin, Primaquine). In such instances there will be a rapid development of anemia, hemoglobinuria (pamaquin, Primaquine), reticulocytosis, leukocytosis, increased urobilinogen excretion, and jaundice when the hemolytic process is severe.

Although knowledge of the pathogenesis of drug-induced granulocytopenia, thrombocytopenia, and anemia is incomplete, it is nonetheless possible to subdivide the toxic effects into two groups: (1) drugs that increase the rate of destruction of formed elements and (2) those that suppress production. The prognosis and treatment of drug idiosyncrasy is dependent upon an understanding of these mechanisms.

Ackroyd[1] in 1949 first described the immunologic mechanism by which Sedormid produces thrombocytopenia. He observed that in the presence of Sedormid and complement, normal platelets were agglutinated and lysed by the serum of a Sedormid-sensitive patient. Normal platelets were not affected by the serum of a Sedormid-sensitive patient if Sedormid was not present in the system. This suggests that Sedormid forms an unusual antigen by combining with the normal platelet and evoking an antibody response in the sensitive individual.

The clinical implications are extremely important. Patients receiving Sedormid for the first time will not develop thrombocytopenia unless there is prolonged administration of the drug. Once a patient is sensitized, thrombocytopenia may develop rapidly, within a matter of hours. Since the antibody is active only against the platelet in combination with the drug, withdrawal of the drug will correct the thrombocytopenia. The prognosis for this type of drug idiosyncrasy is excellent. Similar mechanisms have been described for quinidine thrombocytopenia[2,3] and aminopyrine agranulocytosis.[4]

There are two groups of drugs which suppress the formed elements. One group of drugs in sufficient dosage over a relatively narrow dose range will interfere with the production of one or more of the formed elements in anyone to whom the drug or physical agent is administered. Nitrogen mustards, urethane, and ionizing radiation are examples.

A second group includes drugs that suppress formed elements in some individuals but not in the majority of the population. Unlike the immunologic variety, hypoplasia of the marrow elements is the rule, and other manifestations of allergy are uncommon. Gold, benzol derivatives, chloramphenicol, and phenylbutazone are common examples. Frequently repeated administration or prolonged continual use of the drug is required before "sensitivity" develops. If the drug is discontinued early enough, recovery may occur. On the other hand, unlike the immunologic variety, discontinuance of the drug does not result in recovery in all instances. It has been observed with chloramphenicol that following the second or third short-term course of the drug, there was a fall in the white count which returned to normal after cessation of therapy. A subsequent course of therapy produced a more profound and irreversible suppression of formed elements. It is likely that in sensitive individuals these drugs alter the metabolism of the particular element in question. As usual, prevention of this condition should be more effective than treatment.

Prior to use of drugs known to affect the formed elements, careful consideration should be given to the possible risk from the drug compared to that from the disease. Such drugs should never be administered for relatively innocuous diseases, in the absence of clear evidence that the drug in question is effective, or if other suitable treatment is available. For example, chloramphenicol should never be used for a common cold, virus pneumonia, or in bacterial infections where other broad-spectrum antibiotics would prove effective.

An awareness by the patient of the symptoms of drug toxicity is important for early recognition and treatment. Consequently, specific instructions should be given prior to the initiation of potentially hazardous drugs, including a word as to the likelihood of idiosyncrasy so that the patient does not become unduly alarmed. Once patients have shown evidence of idiosyncrasy to a drug, they should be so informed so that in the future other physicians may be aware of it. A preliminary blood count should be obtained, including a hematocrit or hemoglobin, white blood count and differential, and an estimate of platelet function. Since the routine methods of platelet counting in the average physician's office may be subject to serious error, a clot retraction test as a method of estimating platelet function may be preferable. Repeat counts should be obtained at frequent intervals, once a week during the early course of therapy. With such drugs as the thiouracils, Mesantoin, and others which may be continued indefinitely, counts once every three or four weeks may suffice after the initial period of therapy. If one element is known to be more commonly affected than others, then this should be followed more closely; for example, the white count should be watched during thiouracil administration.

Once evidence of idiosyncrasy has developed, the drug should be discontinued immediately. If an immunologic mechanism is responsible (Sedormid, quinidine, aminopyrine), stopping the drug should result in immediate improvment. If the mechanism is unknown, the prognosis and treatment will depend upon the severity and type of syndrome present. When the patient has been followed closely and evidence of toxicity has been detected before severe depletion of circulating white cells or platelets has occurred, cessation of the drug without further therapy will frequently suffice. If despite careful observation severe depression of formed elements has occurred, more vigorous therapy is indicated.

In severe granulocytopenic states treatment should be initiated when infection becomes evident. Some may prefer the use of antibiotics prophylactically. The desirability of the latter is open to question since in chronic granulocytopenia, prophylactic therapy may result in the development of resistant organisms and infection which is not amenable to antibiotic therapy. When infection is present, multiple blood cultures as well as cultures of local lesions should be obtained prior to the institution of therapy. In severe cases penicillin and a broad-spectrum antibiotic should be started as soon as the cultures have been obtained. Sensitivity tests on the cultured organisms are desirable. After bacteriologic results have been obtained, more specific therapy can be initiated.

Platelet transfusions[5,6] are of considerable value in the treatment of the nonimmunologic variety of thrombocytopenia. Recent developments in this field have made such measures practicable in the average blood bank. The use of vitamin K, calcium, or rutin is valueless in the treatment of drug thrombocytopenia. ACTH and cortisone may be of value, but this is yet to be established.

Transfusion of fresh or stored whole blood is effective in tiding over the patient with hypoplastic or hemolytic anemia. In most instances cessation of those drugs which produce hemolytic anemia in sensitive individuals resolves the condition.

Discussion and Summary

INTERN: Is pentnucleotide of any value in treating granulocytopenia?

DR. STOHLMAN: Specific therapy for the regeneration of white cells is unfortunately lacking. The nucleotides and other drugs tried in the past are without demonstrable benefit.

RESIDENT: Have white cell transfusions ever been tried?

DR. STOHLMAN: The use of white cell transfusions is in the experimental phase and is fraught with difficulties which make it impractical on a clinical level.

INTERN: How about splenectomy?

DR STOHLMAN: In cases of prolonged granulocytopenia alone or in combination with thrombocytopenia or anemia, splenectomy may be considered but should be undertaken with caution. Beneficial results have been obtained in idiopathic refractory anemia,[7] and this may be of benefit in the hypoplastic anemia or granulocytopenia of drug toxicity. Splenectomy is probably without benefit in nonimmunologic thrombocytopenia.

INTERN: You said that platelet transfusions are practical. Could you describe their use in more detail?

DR. STOHLMAN: The use of fresh blood is mandatory. The blood should be collected in Sequestrene (disodium salt of ethylene diamine tetra-acetic acid) in either silicone syringes for direct transfusion or plastic bags. The platelets may then be given in the form of a whole blood transfusion or the blood spun at low speeds and the platelet-rich supernatant plasma given to the patient. Prolonged treatment with platelet transfusions is not feasible. The typing of platelets at present is beyond the scope of all but a few experimental laboratories, and platelet antibodies will undoubtedly result from multiple transfusions.[8] Once such antibodies have developed, subsequent transfusions are ineffective since the transfused platelets are almost immediately destroyed. Nevertheless, this treatment can avert the crippling and possibly fatal sequelae of thrombocytopenia in cases where the platelet level is low for a short period of time.

INTERN: Is the mechanism of production of hemolytic anemia by Primaquine or other drugs established?

DR. STOHLMAN: No.*

If there are no more questions, I would like to say in summary that the preventive aspects of drug toxicity cannot be overemphasized. New drugs should be viewed as potentially hazardous until they have undergone extensive clinical trials.

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* Dern *et al.*[9] have since demonstrated an intraerythrocytic defect in sensitive individuals following the administration of 8-aminoquinolines

The toxic effects of these therapeutic agents on formed elements may arise from an immunologic mechanism producing an accelerated rate of destruction or from unknown causes which suppress production. The prognosis and treatment depend upon which mechanism is operative and are most favorable in the immunologic type.

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ANNOUNCEMENTS

The following announcements concerning suspension, revocation, annullment, and cancellation of medical licenses have been received from Dr. Stiles D. Ezell, secretary, Board of Medical Examiners, University of the State of New York, State Education Department:

License Suspended.—Albert Speed, New York City: medical license number 19777, issued under date of June 25, 1925, suspended for a period of six months. The order of the Commissioner was served on Dr. Speed's attorney on June 11, 1954. His medical license, therefore, stands suspended from June 11, 1954, to December 11, 1954.

License Revoked.—Herman F. Ahrens, New York City: medical license number 16147, issued under date of June 30, 1921, revoked, annulled, and cancelled. The order of the Commissioner was served on Dr. Ahrens on June 16, 1954, and his medical license, therefore, stands revoked as of that date.

License Revoked.—Alphonso Malcolm Seabrook, Schenectady: medical license number 27412, issued under date of October 29, 1932, revoked, annulled, and cancelled. The order of the Commissioner was served on Dr. Seabrook on June 8, 1954, and his medical license, therefore, stands revoked as of that date.

License Revoked.—Pauline E. Rupp, New York City: medical license number 47672, issued under date of September 7, 1948, revoked, annulled, and cancelled. The order of the Commissioner was served on Dr. Rupp on June 21, 1954, and her medical license, therefore, stands revoked as of that date.

License Restored.—Frank H. Herrington, Parkersburg, West Virginia: medical license number 27526, issued under date of September 22, 1932, restored. The order of restoration was forwarded to Dr. Herrington in West Virginia on October 11, 1954.

License Suspension Terminated.—Edward K. Barsky, New York City; suspension of medical license, begun on June 25, 1954, terminated on October 25, 1954.

SPECIAL ARTICLE

The Nonoperating Surgeon

LEON G. BERMAN, M.D., SYRACUSE, NEW YORK

(From the Department of Surgery, State University of New York College of Medicine at Syracuse)

IF YOU posed the word "surgeon" in a psychologic association test, the answer would be "knife." He has been the doer, the cutter, the activist. "Let's operate" often quickly resolves what contemplation and observation might have forestalled.

Certainly in the past twenty-five years emphasis has been increasingly on technologic developments with extension of the surgical horizon, but unfortunately the intellectual and judicial attributes in the training of surgeons have been neglected. Rarely is an accolade given that "he refused to operate," when a carefully observed patient is sent home without a scar for mittelschmerz or pancreatitis or an ileus due to renal colic. Often the referring physician, the patient, and the patient's family will commend him for a felicitous convalescence and fine scar even in the face of unnecessary surgery done as a result of a poor diagnosis and/or poor conscience.

Surgical diagnosis has almost become a lost art. It is considered safer today to cut, look, and see than to undertake the responsibility of delay and observation with proper, thorough investigation of diagnosis. Even good internists succumb to this impatience to know and may importune a young surgeon against his better judgment.

It is a surgical truism that few patients are killed by lack of technic, whereas lack of judgment has often been lethal. Perhaps the most dangerous surgeon is the one with facility and so-called courage who lacks judgment. Today's surgical training programs are often evaluated only by the number and variety of cases done by the residents. Indications and judgments exhibited are frequently neglected. How much more revealing would be a listing of patients spared surgery after proper observation and precise etiologic diagnosis. Narrow specialized training programs in the surgical subspecialties, without the requirements of basic general surgical background, have produced many skillfully trained specialty technicians who are at a loss when confronted with general surgical problems, as they might well be in smaller communities.

It is also a surgical truism that indicated surgery does well even in the face of severe and widespread pathology—and conversely that ill-considered procedures for vague, poorly advised, and semirational indications often end disastrously. Too often new operations have been advised on theoretic grounds with some rationale and have been too quickly popularized before adequate long-term clinical evaluation has been made. Younger surgeons eager to establish status take these up too quickly. Progress will not be held back if these innovations are conducted as pilot series with a proper long-term evaluation before general adoption. Thousands of femoral veins were ligated prophylactically to prevent pulmonary embolism before the final reversal of this procedure was publicized. New procedures triggered by premature publication in surgical literature often prevail even after they are discredited in subsequent follow-up.

Perhaps the most distressing recent trend in surgical literature is the use of the "statistical club" to expand indications for surgery. Wholesale condemnation of abnormal physical findings to the knife is best reflected in the case of the thyroid adenoma—a large operative assault for a relatively small gain. Whether the incidence of malignancy in thyroid adenomas is 0.5 per cent, 5 per cent, or 15 per cent, individual evaluation and judgment should still be the prime determinant. That cystic mastitis may have some increased statistical frequency in the occurrence of cancer of the breast should not lead to wholesale simple mastectomy. Frustration and our inability to differentiate benign from malignant ulcers of the stomach should not make us strike out at all ulcerated stomachs without proper evaluation of the individual case. In the absence of palpable nodes in the neck when oropharyngeal cancer is present, shall we do 100 radical neck dissections for a questionable salvage of nine or ten cases with positive nodes? After all this assault, have we done anything for the patient when all nodes in the dissection are reported as negative?

In our all-pervading concern not to miss one cancer, we become irrational in the management of an entire group. Nothing should pre-empt the place of careful clinical investigation of the individual case with the greatest premium being placed on precise surgical diagnosis and judgment, accepting a calculated risk of error. It will be granted that considered, proper judgment in any case is as variable as the examiner and varies from center to center, depending in large part on the particular surgical elders in the community. However, in the background there should always be an adherence to basic fundamental surgical principles and a balanced knowledge of physiology and pathology. Perhaps the most stricturing influence on a surgeon is attendance at follow-up clinics where long-range results are seen. Most recently there have been numerous reports of long follow-up after subtotal gastrectomy for duodenal ulcer which highlight the fact that a large number of these people never regain their preoperative weight. This kind of observation could have been highlighted ten to twenty years ago in order that we re-evaluate our surgical management of duodenal ulcer.

Last, it is convenient to forget that the act of surgery destroys the control in that patient. Too often, on the basis of a presumed unalterable course one justifies mortality and morbidity by the argument of the "one-way road," the lack of alternative. Too often have experienced physicians seen this to be fallacious even in cancer, whose life history is not always a progressively downhill course.

Certainly in benign disease too little really careful critical evaluation has been made of the morbidity and mortality of the surgical procedure as against the severity and disability of the illness—of the failures of surgery.

True progress in surgery will not be reflected by the fits and starts of the enthusiasts nor by the ever-widening sweep of the knife in the face of incurable disease.

In closing we can learn from Pope who, in his essay on "Criticism," wrote: "Be not the first by whom the new is tried, nor yet the last to lay the old aside."

Older Persons Shouldn't Be Overprotected

"Babying" elderly persons until they feel useless and unwanted may be a good way to hasten them to the grave. The aged should be helped to retain their dignity and pride instead of giving up, Dr. Marc H. Hollender and collaborating writer Stanley A. Frankel, said in the August *Today's Health* magazine, published by the American Medical Association.

"It is as unwise to overprotect our aged parents as to overindulge our children," they said. "Overprotection makes older people feel you deprecate them, regard them as incompetent, incapable, or inferior."

They told of the eighty-three-year-old father of a millionaire who went to work pressing pants, to the embarrassment of his son, who "completely missed the point." The father's work was "probably the one thing that kept him relatively healthy and happy. Permanent retirement to Florida, to seclusion, to peace and quiet might mean only emotional problems, perhaps more rapidly failing health and an earlier grave."

Overprotection can injure the pride of the old person and make him "a permanent, hopeless dependent" instead of someone who might otherwise "put in years of worthwhile service to society." Dependency may mean despondency, irritableness, and a "dictatorial" attitude. In other cases, overprotectiveness causes some to give up trying. They drop back into a state of vegetating instead of actively living.

"Much has been written recently about the undesirability of industry setting up arbitrary retirement ages of sixty or sixty-five," they said. "It has been proved that some men are still active and vigorous at seventy while others are through at fifty. Whenever you automatically retire someone when he has reached a certain chronologic age, you may well condemn that man to an earlier grave, and to an unhappy last few years.

"The latest plans are to retire a man to something rather than from something," giving him a lighter or part-time job. "If business blue-prints a gradual and never-complete retirement for the aging worker, the sons and daughers should go along with it. If the old gentleman (or lady) wants to keep going, it's likely father still knows best. Sometimes the well-meaning impetuosity of youth must bow to the distilled wisdom of age."

SOCIETY OF MEDICAL JURISPRUDENCE

Testimonial Dinner in Honor of Leon T. LeWald, M.D.

NEW YORK CITY

MAY 10, 1954

Address

EDMUND H. LEWIS, SKANEATELES, NEW YORK

(*Chief Judge, Court of Appeals of the State of New York*)

When I received and accepted the invitation to join you tonight at this Seventieth Annual Dinner, it was an honor. And now that I am here, I know what a privilege it is.

It is particularly a privilege to be present when you do honor to Dr. LeWald in recognition of his thirty-five years as an officer and director of this Society. The quality and length of that fine service within this great group of professional men and women proves again how right was he who said that of all the fellowships which we enjoy in life, the most rewarding are the fellowships of important work.

May I add that although your guest of honor, Dr. LeWald, may be one of the great men in medicine, he is not photogenic. He is today far handsomer than the photograph which appears on the program before us. And despite what Dr. Hutter has said about misplaced livers, while I do not know exactly where Dr. LeWald's liver is placed, I am sure—and you will all agree—that his heart is on the right side, whichever that may be.

There are, of course, many factors which make one feel at home, at ease in a group. Tonight I feel at home not only because you have been kind in your welcome and by your courtesies to me, but I realize I have always felt at ease in a medical group. Perhaps it is a "throwback" to my forebears, most of whom were doctors—country doctors were they, generations ago, but good doctors all, for whom every word of the Hippocratic oath had deep meaning and who put all they possessed of strength and medical skill into their comparatively simple professional tasks. Had it not been that I picked up from some of my progenitors a slight amount of color blindness, I think I might have been a doctor sitting with you men of medicine tonight listening to an aging judge who, I happen to know, often suffers from that degree of natural infallibility peculiar to judicial officers.

When I was in college, I remember that President Hadley in my presence defined a college education as a place where for four years a father could expose his son to an intellectual atmosphere in the hope that he might become infected. For twenty-five years as a judicial officer I have been exposed to the problems arising out of the trial of tort cases, civil cases, and criminal cases where both lawyers and doctors have important functions to perform.

So it is that, long ago, I became infected with the idea that, as professional men, doctors and lawyers have much in common which is of importance to them and to the communities where they do their day's work.

And so I have been glad to have it brought home to me tonight that more than seventy years ago a group of medical men here in this metropolitan area sensed the relevancy of legal principles to their day's work in medicine and were wise enough to form this society to promote good fellowship and interest in medical jurisprudence. I am also glad to have sensed during the last few years that in this metropolitan area the partnership of medical science and the law is becoming more closely knit.

At this critical time in the world's history we are mindful that, while science can go far to explain human behavior, only law can regulate it. As medical science is concerned with the functioning of man as a physical being, law is concerned chiefly with his relationships with other men and society at large. Thus, it follows as a matter of logic and reason that medical science and law must move on together in cooperation for the social good. Tonight we are to consider briefly fields of everyday activities where, in turning out our day's work, law and medicine meet.

I number myself among that great body of people who recognize and are proud of the great advance medical science in America has made in its mission to keep this nation in an average state of good health. We recognize, too, what a prodigious task it is to keep the 150 million human beings of this nation in an average state of physical fitness. What medical science and its practice have done during the last twenty-five years has been to make ready that great reserve of physical strength and to put enough fat on our nerves to enable us to meet the heavy demands of two world wars and the cold war which has followed. Indeed, it must be said—and I think my brethren of the law here tonight will admit—that the advance by medicine during those twenty-five years has far exceeded the advance made by its slow-moving, cumbersome side partner, the law.

Of course the two world wars served to accelerate medical thought and action. Before Pearl Harbor the doctors of the nation had been mobilized, through the administration of the Selective Service Act, to a point where in our armed services there was gathered the greatest organized medical force ever developed. As a result, the quality of medical and surgical treatment advanced and was maintained at the cost perhaps of a shortage of doctors at home. When those thousands of medical men came back to their practices at home, they brought new knowledge, new technics in surgery and medication gained from having successfully treated the worst of war conditions, grievous body wounds, mental disorders, and those neuroses which war produces in bulk. When they brought back and applied their new skill, new technic, the new "know-how" to their patients, who in some way had survived their absence, they soon found themselves called into court as witnesses, either as attending physicians or surgeons or as experts. There they met again their brethren of the legal profession who, returning from their own less exacting war experiences, also had found that in the field of tort law there had grown up at home, and was growing, a great volume of negligence actions which allegedly had produced and continued to produce more fractures, more neuroses, more head injuries than our medical friends had seen in either war.

The sacred sacroiliac seemed to their patients more sacred and was more remunerative than ever to the doctor. The great decrease in industrial accidents, due to safety measures devised and instituted under the pressure of war demands, had been more than offset by the increase in automobile accidents. Claims and suits which brought forth in great frequency a conflict of medical opinion as to the diagnosis of resulting injuries and the extent and duration of resulting disability had increased the demand for both legal and medical services. So it was that lawyers and medics met more often, and very properly so. Traumatic neurosis, hysteria, and other mental ills, along with the usual forms of malingering, had become factors of consequence in the administration of claims. Aggravation of a pre-existing arthritis was a common complaint; the aches and pains of everyday life seemed to have become exaggerated in the minds of those who are made sick, sore, and lame by the fault of an automobile driver who negligently operated his car at an excessive speed. And thus were our court calendars clogged with cases in a quantity and of a quality that had no prewar parallel.

We know of course that the remedies which the law affords in personal injury actions, if fault is proved and legal liability is established, is of no avail without proof of medical facts: the nature and extent of the injuries, the resulting incapacity, the prognosis as to recovery, and the cost in money and time of healing. These are facts of first importance and serve to fix the amount of the award, if any.

We know too that the objective of a court trial is to bring out the truth or to come as near to the truth as can be done when a sharp issue of fact exists. So it is that a witness, whether testifying as the attending physician or surgeon or as an expert, makes a serious mistake if he becomes so aligned with the side which retained him as to share with the lawyer the role of mouthpiece. Testimony given by an attending physician or surgeon, which has as its basis knowledge gained by actual observation and an earnest, honest purpose to arrive at a right conclusion no matter who is hurt by the testimony, makes an indelible and always a favorable impression on a jury or a judge sitting without a jury.

Of course, no physician or surgeon should take the stand without making clear to counsel for the party by whom he is called as to what his conclusions are upon the matter as to which he is to testify. If counsel or his client do not think well of his conclusions, the doctor should not permit himself to be called as a witness. That is the reason why I have always thought it to be a serious mistake for a physician or surgeon to make a business of serving as a trial witness in tort cases. Many of us have observed that the man who holds himself out as always available to serve as a medical witness often gives the impression by his testimony that his conclusions are not the result of independent medical analysis of the plaintiff's physical or mental condition but rather are an effort to persuade the jury to the view he had been retained to expound. The members of a jury have discerning eyes and acute ears adjusted so delicately as to sense what is fact and what is prejudice. It does not take long for a judge or jury to size up a medical witness who, in giving his views as to the extent of injuries, proceeds to minimize or exaggerate those injuries to suit the interest of the party who had engaged his services. Indeed, I was surprised some twenty years ago when I moved from the trial bench to an appellate court to find that the difference between a factual statement by a careful, earnest medical witness and a statement made by a witness whose testimony reflects prejudice stands out boldly, even in the cold print of a record on appeal. Of course, this applies whether the testimony has to do with physical or mental disorders which prompt litigation in personal injury cases, workmen's compensation, criminal cases, or proceedings in surrogate's court where the inquiry goes to testimentary capacity.

There was a time when, in another connection, Chief Judge Irving Lehman had occasion to say, "Fairness and courtesy reinforcing scholarship and acumen make the ideal judge." That definition when paraphrased, fits the ideal medical witness, whom I would define as one whose testimony leaves the judge and jury an unforgettable impression of fairness and courtesy based upon medical scholarship of high order and acumen of a kind which inspires confidence in the witness himself. Testimony of that quality is worthy of the best traditions of the medical profession; anything less weakens the case it was designed to support.

I know that among the first objectives of this society is to promote those efforts which will enable doctors and lawyers to render a high level of performance in those cases where they collaborate. Mistakes are expensive in the trial of lawsuits. Even little mistakes by trial counsel or by a medical witness may make a big difference in the result warranted by the proof. To aid in the avoidance of those mistakes I believe every law school should give a required course of lectures by a physician or surgeon of long experience in practice and *in court* to afford the law student the point of view of a medical witness. For like purpose every college of medicine should give a required course of lectures by a lawyer of long experience in the trial of cases to afford the young doctor the point of view of the lawyer by whom he is called as a witness. Most law schools and some medical colleges have such courses, but few, in my opinion, give enough emphasis to the importance to a trial of the *right* type of medical proof from the *right* type of a medical man.

That brings me to a phase of the problem upon which some may be a bit sensitive. I can introduce it by telling you of an instance which came to my attention: A surgeon of my acquaintance in Syracuse, for whom it was not an unusual morning's work to perform several major operations, told me that his surgical work on such a morning did not take out of him a quarter as much strength as he lost by being on the witness stand for half an hour. Indeed, he told me that after the last time he served as a witness—and it was for only a brief period—he went to bed and stayed there for more than a day. As a result of that experience he let it be known that never again would he consent to be a witness in court. I know there are many excellent medical men like the man of whom I have told you who abhor the idea of being called as a witness and being cross-examined despite the fact that they are always in full command of the situation because they know all there is to know about the case. They fail to sense the fact that ordinarily the lawyer doing the cross-examination knows so little about the physical aspect of the case that the best he can do is to try to make the witness lose his temper and thereby convince the jury that the witness is a prejudiced witness.

When a well-equipped doctor makes up his mind he will henceforth resist going into court, that's bad! Nothing worse could happen to medical jurisprudence than that medical men of first rank—with knowledge and experience *and faced right in life*—should think it right to resist a call to testify in a worthy case. That would mean that physicians and surgeons of low level medical knowledge and little experience would occupy the field. I know enough about the traditions and accomplishments of this society to sense the fact that your wholesome and far-reaching influence is against such an abdication.

Now, from our present position in 1954, may we for a moment view our mutual problems as they appear along a broader horizon. In the time of every person here tonight, we have seen changes, some already deeply imbedded, which have greatly altered our national life. I assume, as professional men and women, it is our duty to be reasonably well informed on what is going on at home and abroad. And of equal importance, if not more important, we should *understand*, if that is at all possible, the social, political, and economic consequence of the changes which have taken place and are occurring almost daily. If we begin with 1900, and I am sure there are a few here whose memory goes back that far, we will find in that year that less than one American boy or girl in ten of high school age was actually in high school. Today records and official research show that more than four out of five are in high school. In 1900 only one out of 25 boys and girls in the eighteen to twenty-one-year age was enrolled in college. Today one out of every four is enrolled. Obviously, our society, which today enrolls 25 per cent of its youth in college, will differ from here on in from the social order of 1900 which enrolled only 4 per cent. But to sense the implications of these changes for our national life is difficult. We cannot turn to any other nation for guidance because no other nation has ever carried out such a widespread social experiment.

Turning for a moment to a different field, our *material welfare:* In 1929 when there was an abundance of production, our gross national product was just short of 104 billion dollars. In 1952 the official figures show it was over 346 billion, more than *tripled* in twenty-three years. Today more people in America own automobiles, more people own their own homes, more are living in comfortable circumstances than ever before in our history. Those are not only economic changes; they are sociologic and political developments of far-reaching consequence.

We know that in his time Karl Marx confidently predicted that what he described as "the middle class" would disappear. Instead that so-called middle class has expanded as never before in the history of this nation or any other nation. No recent change, however, has more far-reaching implications for our national life than the violent change in our international position. As late as 1941 we were regarded as an isolationist nation. The records indicate that in 1955 this same nation will spend $8 out of every $10 (four fifths) of its income on defense, foreign affairs, military, economic, and technical aid to friendly nations, and payments still due for past wars. And in another field, perhaps closer to us, the birth rate which started to rise in the forties, the war years, has upset all predictions as to growth in population. Our Federal census bureau in 1946 forecast that our probable peak national population would be 164.5 million to be reached in 1990. Today we are told by authorities who have studied the subject that the peak population predicted for 1990 will be reached in 1956. Of course, this rapid increase has already made itself felt in the schools across the land. And to mention only a few of the many factors which will produce further change we have the electronic controls, industrial television, what is known as continuous flow factories, and atomic energy adapted to peacetime use, along with new experiments in food production which may revolutionize food production in America and throughout the world.

These great ground swells of change in our national life and the constructive features of what these changes mean must be understood in their implications. They demonstrate where we are strong, but they may also demonstrate wherein we are weak. To understand what these changes accomplish presently and what they foreshadow must not be the task assigned alone to scholars and technicians. The inquiry must be undertaken to some extent by our business leaders, by our public officers, by *doctors* and *lawyers* whose affairs are vitally affected, and most important of all by the young men and women who today are the heirs of our past, with all the mistakes and well-doing we contributed, the young men and women who will be the creators of our future. Such an understanding is essential if this nation is to meet with success the challenges and the anxious days which the future holds.

Finally, I am particularly interested in the studies incidental to the changes which the great foundations are making into the problems which beset the *aged* and the *aging*. There is nothing new about growing old. But only recently there has been a widespread awareness of aging as a social problem. Although medical science has lengthened our lifespan and technology has shortened the years one has to work for a living, the investigators are having trouble ascertaining the reasons, if any, why some people grow old gracefully and some have a hard time doing so.

Well, if I may be pardoned for closing on a note which staccatos the first personal pronoun, the fact is that the inexorable provisions of our State constitution require that a judge retire from judicial service on the 31st of December next following his seventieth birthday. I have no objection to that provision, but I do want advice as to how to live a few more useful years, kindly years, such as Mr. Kirby is living. Longevity, I am told, may become a very real problem, and so it is that my friends are doing their best to help me understand that terminal problem. I have had quite a number of letters, but I want to share this one with you oldsters.

It is a poem which bears the title "Why Alcohol Is Good for Man." Perhaps I should say to you that alcohol and I have never been at all intimate friends. Alcohol apparently did not like me. And I thought alcohol would do me no good. But it may be there is something to this prescription. You doctors will know:

The horse and mule live thirty years
  And nothing know of wines or beers,
The sheep and goats at twenty die
  Without a taste of scotch or rye,
The cow drinks water by the ton;
  At eighteen years she's nearly done.
The dog at fifteen cashes in
  With never a drink of rum or gin;
The cat in milk and water soaks,
  And after twelve short years, it croaks!
The modest, sober, bone-dry hen
  Lays eggs for nogs and dies at ten.
All animals are strictly dry,
  They sinless live and early die.
But sinful, ginful, rum-soaked men
  Survive for three score year and ten,
And some of them, tho' very few,
  Stay pickled 'til they're ninety-two.

I don't want to live to be ninety-two! But maybe a little alcohol, a very little, taken with the advice and help of my doctor friends, will help me to live a few more years, which I hope will be useful. If so, I shall thank my doctor friends for their help, as I thank you for your patience tonight.

Medicine and the Law

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(*Immediate Past President, Medical Society of the State of New York*)

SOME forty years ago, while I was a medical student, I had an excellent professor of medical jurisprudence. I am sure this had a great influence on my medical relations with the law. Since then I have been in several very noted murder trials in the South and also have had experience in forensic medicine such as one meets in a medical examiner's position. As a result I have learned to respect and admire most attorneys and the judges with whom I have had contact. Somehow I have always had a longing for indoctrination in legal formulas.

Men of the law are doctors, in a manner, to an anxious public that is in trouble. Theirs is not to dispense medicine but to correct the thinking and conduct of these people. What is more pertinent to one's physical well-being than legal solace and protection? As a matter of fact, lots of people who commit crimes against society, when they are accused or get in trouble, frequently have a convenient heart attack until the clouds of fear and despair have rolled away. In legal matters as well as in medicine prevention is better than cure.

There are many phases of legal medical relations. Some of these will be considered briefly: fee spliting, ghost surgery, the medical examiner's functions, malpractice, and euthanasia.

FEE-SPLITTING.—Fee-splitting among doctors is irregular, according to the Education Law of New York State, in whatever form it is practiced. This applies specifically to the medical profession; on the other hand, it is entirely ethical among lawyers. Actually it is encouraged sometimes among the latter in order to help the unwise and untrained young lawyer to try a difficult case. There are, however, certain qualifying circumstances such as not costing the client any more money, that the client should know about it, and that the forwarding attorney should do some work on the case. There are certainly some very specialized phases of the law, such as tax, admiralty matters, and patent problems, that can be handled only by specialists. The execution of wills also presents problems.

Another, greater factor is that the medical profession deals with the human being, and his ailments are pretty much the same the world over. The illnesses to which human flesh is heir exist in Europe, Asia, Africa, or wherever one resides. Usually the training of the good doctor or specialist is adequate to render good service in all of these areas. A lawyer finds the situation different because the laws vary from state to state, and he can appear in court only under certain permissive grants, which broadens the requirements of his experience and ability and the right to represent his client. A doctor does not meet such professional difficulties; for instance, a surgeon can take out an appendix as easily in one country as another. Of course he also has to be granted permission, but the basic knowledge is there.

Fee-splitting in the medical profession, under whatever guise, is unethical. All doctors know that. But the good doctors have not the police power to correct such a situation when it exists. It is done frequently and overtly, and to obtain proof and complaints against this practice is a most difficult problem. Those who split fees know this and feel quite complacent about their misdeeds. Good doctors know that it is wrong and often leads to unnecessary surgery, and, furthermore, it keeps the patient in the dark as to what really transpires. If the patient has confidence and trust in the doctor, he should expect no less than to have all phases of his medical care explained to him in every detail on an absolutely just basis. There is no excuse in medicine for fee-splitting. There is enough work for a physician who is efficient to make a comfortable living out of the practice of medicine, and beyond that he should not seek.

GHOST SURGERY.—Ghost surgery is as bad as fee-splitting. It is dishonest, and, again, it abuses an unsuspecting patient's doctor relationship. There should be no secrecy about who is going to operate on one, and a doctor who is a witness to this wrong, including the anesthetist, if he knows what is transpiring, is guilty of unprofessional conduct which could and should disbar him from the practice of medicine.

Ghost surgery has been adjudged a criminal assault by the one who performs it or by the one who witnesses and condones it. There are adequate protections for the surgeons who operate in an emergency or if an operating surgeon becomes ill and cannot continue the procedure. Of course common sense, and law is common sense, would not prosecute any surgeon under such circumstances. Probably the medical profession has not the power to eradicate many of the things they know take place behind the curtains of the operating room. But the profession cannot be a law unto itself. It must have the help of the legal profession. Grievance committees might help; reprimands by magazines and newspapers are not the answer. Printing such articles only emphasizes the wrongs; they do not give proper consideration to the good that is done by the profession. It is also wrong of newspapers to advertise the helplessness of the medical profession to clean its own house. The fault lies at the door of an uninformed public and the sometimes uncooperative legal profession. We need help in order to point out the way to cure the miscreants in our profession.

At the same time I am quite sure that the Bar and other professions also fail to separate the chaff from the grain. However, that is no excuse for the medical profession not to try.

I wish here to quote Judge Oliver K. King in the *Westchester County Bulletin* for March, 1954.

> Any surgical procedure is assault—assault with a deadly weapon—*except for the consent of the patient* or the parents, if the patient be an infant. It is true, as Judge Cardozo points out, that in emergencies, when actual consent is unobtainable, it may be implied. But if consent has been obtained by fraud, it is no consent at all. See *People* v. *Steinberg, supra.* The ghost surgeon lacks consent entirely and completely—fraudulent or otherwise. The patient has never seen him, never met him, never heard of him, and never been told that surgery is to be performed by him. Hence the attack upon the patient's body by the "ghost" is without consent and is an assault—a criminal assault.

I have heard doctors repeat again and again, that they distrust lawyers in courts. My experience teaches me that this arises largely from ignorance and lack of willingness to be informed. If they would read the opinions in detail of the honest judges—and I venture to say a great percentage of them are absolutely sincere and honest—if they would read the decisions in cases of malpractice, abortion, use of narcotics, and other unethical procedures, they would be convinced of the respect of these individuals for the medical profession. I do not think any doctor, if he practices medicine according to the accustomed procedures and intelligence that is customary in the community, has to fear that he will not receive the protection and good counsel of the judge in spite of the unpredictable action and often biased opinion of juries.

MEDICAL EXAMINERS.—Here is a field of common ground where a great service can and should be rendered by the legal and medical professions in an integrated activity with the purpose of protecting society and American power against the needless destruction of human life. You and I almost daily read such captions as "Death . . . untimely . . . sudden . . . unnatural . . . violent . . . accidental or obscure causes" relative to persons who have been found deceased. The theme could be "violent homicide," which always brings forth headlines and recriminations.

For a thousand years and more it was the practice to call in someone to judicate sudden deaths. This person was designated a coroner. Usually, he was a layman with no medical training or an undertaker who could conceivably have a personal interest in disposal of the deceased. The name "coroner" came to North America in the early colonial period from England. For years coroners served a useful purpose as conservers of the peace, because there were no other channels available that encompassed both the medical and legal aspects of unexplained deaths. Progress has afforded in modern times an effective legal jurisdiction over suspicious death. The death of any citizen is a loss to our government. The loss of any person demands an efficient and scientific evaluation of the cause of death. This can be done only by an expert staff consisting of pathologists, technicians, and toxicologists. These functions are directed through the office of the medical examiner. The medical examiner is created by a state, county, or other geographic political unit for legal jurisdiction in the improvement of scientific and professional data for the clarification and administration of justice in sudden, accidental, suicidal, or homicidal death.

Malpractice.—Volumes have been written upon all phases of malpractice in medical care. There are always acute and important legal problems inherent or arising from the physician-patient relationship. The legal profession is involved in this complicated problem. Malpractice is a plague to any profession, but particularly the medical profession. The ill will, the misunderstandings inherent in the many malpractice suits is appalling, expensive, unnecessary, and leads to a breaking down of the confidence of the public in the medical profession. Not only this, but it has been used to its full extent by the do-gooders and socialists to demand governmental "socialized" medicine. The incidence of malpractice claims is rising, day by day, month by month, year by year. The cost of premiums for insurance against such unfortunate circumstances has increased 300 per cent in the last three or four years. The blame for this rests with a breakdown of the patient-physician relationship in many instances. Certainly, and pray God it does not happen, if we have an economic recession and people think they can get easy money, there are going to be many more unjust claims for malpractice. It behooves our profession so to conduct ourselves and our affairs that unjustifiable malpractice cases will cease to be profitable. People have thoughtlessly and unintelligently assumed the attitude that if their illness, be it incurable or not, does not get better or if some poor result of surgery or therapeutic management occurs, it is the individual responsibility of the doctor. If, through some departure from proper practice, a patient is injured, a moral and ethical doctor, of course, wishes to see that the patient is recompensed for such injury. Any claims which are brought without just basis, however, should be fought in the courts, not only to protect the doctor and his reputation but to discourage a multiplicity of claims.

Euthanasia.—Euthanasia appears in the courts and in the newspapers with relative frequency and is usually portrayed in a most spectacular fashion. There are many sides to this question. A suffering, bedridden, pain-racked, incurable patient with a God-given freedom of everything else except the termination of his own existence presents to the medical profession a heart-rending picture about which many good doctors have come home and prayed. The patients have begged to be relieved of their miseries. The question of terminating such an existence becomes paramount, but no doctor loyal to his duties and the Hippocratic Oath can assume the responsibility of aiding a patient's terminus. He is under all circumstances sworn to conserve life to the last breath or the last beat of the heart. But many have stopped to think, "Is it just or merciful when looked at from a moral standpoint?" One cannot help believe and speculate that a panel of good and honest people, intelligent and spiritual people, should be appointed to judge this final and important decision for the patient. Up to now such does not exist, and no doctor would dare in his intelligent moments, ever attempt to practice euthanasia.

I think the judges might add a chapter to the medical care of the public by their opinions on this matter.

Conclusions.—The law, like medicine, is a dynamic and not a static profession. Both must change and meet new circumstances and demands of society. The profession of the healing arts—physicians, or dentists, or nurses—cannot afford to isolate themselves from the general social and economic currents of today. They should contribute everything in their power to the general good as well as protect the interest of their professional groups. This will redound to the benefit of the public whom we all pray to serve. One means to this end is that all professions should take part in forming and, if possible, guiding community thinking and planning in matters pertaining to health, hospitals, and other phases of medical care. And by the same token, they should take and maintain an intense and effective interest in legislation and the activities of legislative bodies. Medicine suffers from a sensation of frustration in obtaining legislative acknowledgment.

Every county should have a medical-legal relations committee in order to deal with malpractice actions and other similar mutual problems, as, for instance, the physicians' and patients' rights in workmen's compensation medical care. Such a committee could consider the settling of claims at hearings with the doctor and his lawyer, the plaintiff or his attorney. With cooperation the insurance representative could amicably settle many problems without animosity and with satisfaction to all parties concerned.

Such a system appeals to one as ideal and deserving of a fair trial. As in golf every shot gives someone pleasure, in litigation someone must win, someone must lose.

To you, Judge, and to your profession I raise my hat and salute a job well done. What a bulwark a just judiciary is in the honorable counselling of human beings and the rectification of wrongs in the sole interest of the rights of the public!

I am reminded, in our professional relationship, of a quotation by Ralph Waldo Emerson, "We are of different opinions at different hours, but we always may be said to be on the side of truth."

CORRESPONDENCE

Werner's Syndrome

To the Editor:

For the benefit of those who study Werner's syndrome in the future, we venture to comment on the comprehensive discussion by Dr. Andrew Kallos and Dr. John H. Ruppe, Jr., in their recent paper[1] entitled "Werner's Syndrome" which appeared in the NEW YORK STATE JOURNAL OF MEDICINE, August 1, 1954, p. 2180. Perhaps the following facts will clarify the history of this bizarre syndrome and of its name.

We have published four papers on Werner's syndrome. The first was entitled "Werner's Syndrome. A Heredo-familial Disorder with Scleroderma, Bilateral Juvenile Cataract, Precocious Graying of the Hair and Endocrine Stigmatization," which appeared in the *Transactions of the Association of American Physicians*.[2] In that paper we published the histories of the first American cases, two brothers who were under observation with this bizarre syndrome at the Montefiore Hospital for years. Similar cases had been described in the continental literature sometimes under the title "Scleroderma Associated with Cataract," occasionally with the subtitle "Rothmund's syndrome."

After reading most carefully Rothmund's original paper, published in 1868, we became convinced that the rare cases which he described were essentially quite different from our two cases and from those reported by Werner in an inaugural dissertation in 1904, and also subsequently described by other continental clinicians, especially the French. In 1934, therefore, we wrote, "Rothmund gave an account of a hitherto undescribed clinical picture which occurred in three families in the Bregenz Valley, characterized by a unique telangiectatic skin condition which began in infancy and was complicated by a very rapidly developing bilateral cataract. In spite of the illustration and the report of the biopsy of the skin in Rothmund's paper it has been impossible to make out precisely with what dermatologic condition Rothmund was dealing. It is certain, however, that his description differs essentially from that of Werner (1904) who was the first to describe a family of which four members presented features characteristic of the subsequently published Continental cases and also of our two American ones." We also stated that "in want of a better all-inclusive name, we have ventured to call the condition 'Werner's Syndrome.'" We cannot agree, therefore, with the statement of Drs. Kallos and Ruppe: "While Rothmund's and Werner's syndrome are recognized to be intimately related, they are both designated as progeria in the adult. Further studies and developments may prove just as clearly that the pictures in progeria in the child and progeria in the adult are the same, their framework accounting for their narrow margin of difference." Indeed if these authors will restudy their own Table I on "Differential Diagnosis of Progerias" modified from the table of Professor Thannhauser, they may admit there are significant differences between the symptomatology of Werner's and Rothmund's syndromes.

Now after over twenty years we still believe in keeping the clinical picture of Werner's syndrome quite clear and separate from Rothmund's syndrome and indeed from other conditions which bear some resemblance to Werner's syndrome but do not present the well-defined clinical picture. Until the cause or mechanism of this condition is determined, it would seem wisest to continue the patronymic name of Werner's syndrome.

In the original communication of 1934 we recognized the evidence of pluriglandular disturbance and the preponderant involvement of ectodermal structures and stated that the disturbances point rather to a participation of the parathyroid than of any other gland.

In 1941, we published another paper entitled "Werner's Syndome: Report of the First Necropsy and of Findings in a New Case."[3] By that time the Hamilton test had come into use, and in two of our cases this test was positive for an excess of circulatory parathormone. The necropsy gave additional evidence of endocrine disturbances, such as atrophy of the testicles and prostate gland, adenomata of the thyroid, and hyperactivity of the parathyroid gland. Histologic evidence of hyperactivity of the pituitary was lacking. Dr. David Marine reviewed these endocrinologic findings. They tended to confirm but did not prove a predominant parathyroid gland disturbance as the main etiologic factor in Werner's syndrome. At present one cannot incriminate any one gland as the primary cause of the endocrine disturbances. The clinical and pathologic findings of pluriglandular disturbance may not be primarily endocrine at all, but may be merely secondary to some as yet unknown cause of disorder.

We find ourselves entirely in agreement with Dr. Kallos when he states that the last word on Werner's syndrome has not been said—certainly not by us.

VICTOR H. KUGEL, M.D.
B. S. OPPENHEIMER, M.D.

Miami Beach, Florida
New York City

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[1] Kallos, A., and Ruppe, J. H., Jr.: NEW YORK STATE J. MED. 54: 2180 (Aug. 1) 1954.

[2] Kugel, V. H., and Oppenheimer, B. S.: Tr. A. Am. Physicians 19: 358 (1934).

[3] *Idem:* Am. J. M. Sc. 202: 629 (1941).

Woman's Auxiliary
to the MEDICAL SOCIETY OF THE STATE OF NEW YORK

Physicians' Home

REPRESENTING the distaff side of medicine, members of the Woman's Auxiliary to the Medical Society of the State of New York are constantly aware of the fears and anxieties that take possession of any person, young or old, who comes face to face with financial setbacks. We also recognize the problems of the older physicians and their wives and widows who must try to plan a budget even though they are without a regular source of income. This is perhaps one of the greatest burdens an older person can be called upon to carry. To alleviate such burdens, the State Medical Society has established the Physicians' Home and is to be commended for its interest in its indigent members and their families.

As physicians' wives, we are intimately acquainted with the many tangible and intangible causes that bring both physical and financial distress to members of a profession who are constantly placing the needs of others before their own.

For these reasons, the county auxiliary chairmen encounter no difficulties in arranging projects to raise funds for the Physicians' Home. Some auxiliaries have money-raising functions such as luncheons and fashion shows, raffles, rummage sales; others take up silver collections, while still more employ some ingenious methods for meeting their self-imposed goals. Another custom is for the county auxiliary to make a donation directly from its budget funds, and, individually, each auxiliary member urges her doctor husband to include a voluntary donation each time he forwards his county society dues.

We are proud to be able to report that 98 per cent of the county auxiliaries have contributed to the support of the Physicians' Home, and that a 100 per cent participation is the goal for this year.

Although physicians are known to have almost constant contact with persons in financial difficulties, we join with Dr. Beverly C. Smith, president of the Physicians' Home, when he observes, "Many of you would be surprised to know how often catastrophic misfortune such as illness, unsound investments, and circumstances beyond an individual's control have reduced successful physicians to genteel poverty and terminal indigency."

Our appeal to all physicians and to all Auxiliary members is two-fold: first, encourage your county society and county auxiliary to contribute as generously as possible to the Physicians' Home, and, second, make certain that the voluntary contribution of $2.00 is included when the check for county society dues is submitted.

To all members of the Medical Society of the State of New York, the Woman's Auxiliary extends its wishes for a Merry Christmas and a Happy New Year.

MRS. EDWARD P. CUMMINS, *Chairman*
Physicians' Home Committee

NECROLOGY

Louis Bauman, M.D., of New York City and New Rochelle, died on November 1 in New Rochelle Hospital at the age of seventy-four. Dr. Bauman was graduated from the Columbia University College of Physicians and Surgeons in 1901. He served as professor of internal medicine at the University of Iowa from 1912 to 1919 and then joined the faculty of Columbia University, where he served as assistant professor of internal medicine. A Diplomate of the American Board of Internal Medicine, Dr. Bauman was a member of the American Society for Clinical Investigation, the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Julius Hammond Beckwith, M.D., of Roslyn Heights and the Bronx, was drowned on November 9 while on a fishing trip in Long Island Sound. He was forty-five years old. Dr. Beckwith was graduated from New York University School of Medicine in 1936 and interned at City Hospital. He was associate attending obstetrician at City Hospital, assistant attending obstetrician and gynecologist at North Country Community Hospital, Glen Cove, and on the staff of the North Shore Hospital, Manhasset. Dr. Beckwith was a member of the Nassau Obstetrical Society, the Nassau County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Martin Cohen, M.D., of New York City, died on October 29 at the age of eighty-three. Dr. Cohen was graduated from the Columbia University College of Physicians and Surgeons in 1898 and for many years served as director of and professor in the Department of Ophthalmology at University Hospital. He was consulting ophthalmologist at University Hospital, Harlem Hospital, and the Hospital for Joint Diseases, and consulting surgeon at the Manhattan Eye, Ear, and Throat Hospital. A Diplomate of the American Board of Ophthalmology and a Fellow of the American College of Surgeons, Dr. Cohen was a member of the American Academy of Ophthalmology and Otolaryngology, the American Ophthalmological Society, the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Edward Spencer Cowles, M.D., of New York City, died on November 16 at his home at the age of seventy-five. Dr. Cowles received his medical degree from the Medical College of Virginia in 1907. He had served as director of psychopathology at the New York Polyclinic Medical School and as director of the Psychopathic Sanitarium in Portsmouth, New Hampshire. Dr. Cowles campaigned for opening churches for medical psychiatric treatment to help reduce insanity and conducted such a clinic for several years at St. Mark's Church. At the time of his death he was the director of a private hospital in New York City.

Henry Albert Ferguson, M.D., of New York City and Fonda, died on November 3 at his home in Fonda at the age of eighty-six. Dr. Ferguson was graduated from the New York University School of Medicine in 1895 and had operated the Falkirk Sanitarium in Central Valley until his retirement twenty-five years ago. For many years he had been a director of the New York Giants baseball club.

Herman Lee Harding, M.D., of Liverpool, died on October 24 at his home at the age of fifty-nine. Dr. Harding was graduated from the Syracuse University College of Medicine in 1932 and had practiced in Liverpool for twenty-one years. He was a member of the Syracuse Academy of Medicine, the Onondaga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

William P. Healy, M.D., of New York City, died on November 7 at his home at the age of seventy-six. Dr. Healy received his medical degree from the Johns Hopkins University Medical School in 1900 and interned at Roosevelt and City Hospitals. From 1922 to 1942 he was director of the Department of Gynecology at Memorial Hospital and served also as dean of the Fordham University medical faculty. Dr. Healy was consulting gynecologist at Roosevelt, Misericordia, Willard Parker, Fordham, and Sea View Hospitals, New York City; St. Luke's Hospital, Newburgh; Monmouth Memorial Hospital, Long Branch, New Jersey, and St. John's Riverside Hospital, Yonkers. He was consultant in neoplastic diseases at Fitkin Memorial Hospital in Neptune, New Jersey, and emeritus gynecologist at Memorial Hospital, New York City.

A Diplomate of the American Board of Obstetrics and Gynecology, a Fellow of the American College of Surgeons, and a Fellow of the American College of Radiology, Dr. Healy was a member of the American Gynecological Society, the American

Radium Society, the New York Academy of Medicine, the New York Obstetrical Society, the New York County Medical Society (of which he was a past president), the Medical Society of the State of New York, and the American Medical Association.

William Edgar Low, M.D., of Johnson City, died on October 26 at Wilson Memorial Hospital at the age of sixty-five. Dr. Low was graduated from Albany Medical College in 1912 and practiced in Richmondville before going to Johnson City in 1920. He was an honorary staff member at Wilson Memorial Hospital and belonged to the Binghamton Academy of Medicine, the Broome County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

William McKinley MacLean, M.D., of New York City, died on October 29 at New York Hospital at the age of fifty-seven. Dr. MacLean was graduated from the Columbia University College of Physicians and Surgeons in 1926 and had been on the medical staffs of the New York Telephone Company and the United Fruit Company. He was a member of the New York County Medical Society and the Medical Society of the State of New York.

David D. O'Brien, M.D., of Oswego, died on November 7 at the age of eighty-three. Dr. O'Brien was graduated from the Syracuse University College of Medicine in 1900 and was an emeritus member on the staff of Oswego Hospital. He belonged to the Tioga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Theodore Benedict Okoniewski, M.D., of Buffalo, died on October 10 at Mercy Hospital at the age of fifty-one. Dr. Okoniewski was graduated from the University of Buffalo School of Medicine in 1928 and interned at Sisters' Hospital. During World War II he served as a captain in the 65th Regiment of the State Guard. He was a member of the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles Samuel Prest, M.D., of Brooklyn, died on November 11 at his home at the age of seventy-nine. Dr. Prest was graduated from the Albany Medical College in 1898 and practiced in Waterford for several years. In 1913 he was appointed assistant secretary of the Commission on Hospitals of the State Charities Aid Association, and during World War I he worked with the American Red Cross. In 1920 he became director of health service of the Atlantic Division of the Red Cross, serving until his appointment in 1922 to the Brooklyn Tuberculosis and Health Association, of which he became managing director in 1946. Dr. Prest pioneered in the establishment of free chest x-ray clinics for tuberculosis detection.

Dr. Prest was a member of the American Public Health Association, the American Trudeau Society, the Brooklyn Thoracic Society, the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Gordon Priestman, M.D., of Kings Park, died on October 25 at the age of seventy. Dr. Priestman received his medical degree from the University of Toronto Medical School in 1910. For thirty-seven years he had served with the New York State Department of Mental Hygiene, retiring in 1947. A Fellow of the College of American Pathologists, Dr. Priestman had been a member of the New York State Society of Pathologists, the Suffolk County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Emil J. Senn, M.D., of Schenectady, died on October 10 at his home at the age of seventy-one. Dr. Senn was graduated from Albany Medical College in 1911 and had practiced in Schenectady for forty-one years. From 1937 to 1950 he served as coroner for Schenectady County and for many years was a school physician. He was consulting cardiologist at Schenectady City Hospital and a member of the Schenectady County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Hirsh A. Siff, M.D., of the Bronx, died on November 9 at his home at the age of eighty-one. A native of St. Petersburg, Russia, Dr. Siff received his medical degrees from the University of Kazan in 1898 and from the Long Island College Hospital Medical School in 1912. He returned to Russia to participate in the revolution but was forced to leave because of his anti-Communist views. Dr. Siff was a member of the Bronx County Medical Society and the Medical Society of the State of New York.

Harry Paul Swift, M.D., of New York City, died on November 16 at his home at the age of eighty-two. Dr. Swift received his medical degree from the Bellevue Hospital Medical College in 1896 and had practiced in New York City for approximately fifty years. He had served as a member of the City Board of Health for several terms, had been a member of the Board of Higher Education, and from 1922 to 1931 was chairman of the board of Hunter College.

BOOKS RECEIVED

(The following books were received during the month of October, 1954)

Directory of Professional Motion Picture Films and Authors, 1954. Octavo of 326 pages. Lawrence, Kansas, Professional Publications, 1954. Cloth, $7.50.

Cancer of the Thyroid. By John deJ. Pemberton, M.D., and B. Marden Black, M.D. Octavo of 47 pages, illustrated. New York, American Cancer Society, 1954. Paper, free.

Publications from the Department of Surgery, Northwestern University Medical School. Vol. XVII, 1953. Octavo. v.p. Illustrated. Chicago, [Northwestern University], n.d.

The Microphysical World. By William Wilson, D.Sc. Sextodecimo of 216 pages, illustrated. New York, Philosophical Library, 1954. Cloth, $3.75.

The Rauwolfia Story. From Primitive Medicine to Alkaloidal Therapy. Duodecimo of 63 pages, illustrated. Summit, N.J., Ciba Pharmaceutical Products, 1954.

Self-Help Devices for the Arthritic. By Edward W. Lowman, M.D. Quarto of 123 pages, illustrated. New York, Institute of Physical Medicine & Rehabilitation, New York University-Bellevue Medical Center, 1954. Paper, $1.00. (Rehabilitation Monograph #6).

Basic Anatomy. By G. A. G. Mitchell, D.Sc., and E. L. Patterson, M.D. Octavo of 438 pages, illustrated. Baltimore, Williams & Wilkins Co., 1954. Cloth, $10.

Myocardial Infarction. Its Clinical Manifestations and Treatment with Anticoagulants. A Study of 1031 Cases. By Irving S. Wright, M.D., Charles D. Marple, M.D., and Dorothy Fahs Beck, Ph.D. This is a report of the Committee on Anticoagulants, created by The American Heart Association, and reflects that Committee's findings in the matter under study. Quarto of 656 pages, illustrated. Published for the American Heart Association by Grune & Stratton, N.Y., 1954. Cloth, $8.50.

A Compend of Electrocardiography in General Practice. By Harris Sklaire, M.D., B.S., (Elect. Eng.) Third edition. Sextodecimo of 51 pages, illustrated. Rouses Point, N.Y., The Author, 1953, 1954.

Modern Occupational Medicine. Edited by A. J. Fleming, M.D., and C. A. D'Alonzo, M.D. Associate Editor, J. A. Zapp, Ph.D. Octavo of 414 pages. 44 illustrations. Philadelphia, Lea & Febiger, 1954. Cloth, $10.

Administrative Medicine. Transactions of the Second Conference, December 8, 9 and 10, 1953, Princeton, N.J. Edited by George S. Stevenson, M.D. Octavo of 164 pages, illustrated. New York, Josiah Macy, Jr. Foundation, 1954. Cloth, $3.00.

The Study of the Brain. A Companion Text to the Stereoscopic Atlas of Neuroanatomy. By Hyman S. Rubinstein, M.D. Quarto of 209 pages, illustrated. New York, Grune & Stratton, 1953. Cloth, $9.50.

The Pineal Gland. A Review of the Physiologic Literature. By Julian I. Kitay, M.D., and Mark D. Altschule, M.D. Octavo of 280 pages, illustrated. Cambridge, Mass., published for The Commonwealth Fund by the Harvard University Press, 1954. Cloth, $5.00.

The Clinical Use of Corticotropin, Cortisone and Hydrocortisone in Eye Disease. By Dan M. Gordon, M.D. Octavo of 88 pages, illustrated. Springfield, Charles C Thomas, 1954. Fabricoid, $5.50.

Urology. Edited by Meredith Campbell, M.D. With the collaboration of 51 contributing authorities. In three volumes. Quarto of 2,356 pages and 64 pages index. 1,148 illustrations. Philadelphia, W. B. Saunders Co., 1954. Cloth, $60 set.

From Fish to Philosopher. By Homer W. Smith, Sc.D. Quarto of 264 pages, illustrated. Boston, Little, Brown & Co., 1953. Cloth, $4.50.

An Introduction to Pathology. By G. Payling Wright, D.M. (England). Second edition. Octavo of 636 pages, illustrated. New York, Longmans Green & Co., 1954. Cloth, $7.50.

The Colon: Its Normal and Abnormal Physiology and Therapeutics. M. L. Tainter, M.D. (Organizing Chairman), Thomas P. Almy, M.D. (Conference Chairman), *et al.* Octavo of 248 pages, illustrated. New York, New York Academy of Sciences, 1954. Paper, $4.50. (*Annals of the New York Academy of Sciences*, v. 58, Art. 4.)

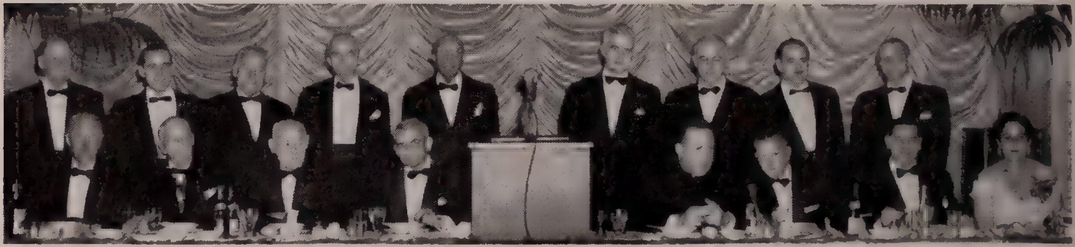
The Status of Multiple Sclerosis. By Pearce Bailey, M.D. (Conference Chairman), Harold R. Wainerdi, M.D. (Organizing Chairman), *et al.* Octavo of 180 pages, illustrated. New York, New York Academy of Sciences, 1954. Paper, $4.50. (*Annals of the New York Academy of Sciences*, v. 58, Art. 5.)

Properties of Sufarces. Cecil V. King, M.D., (Conference Chairman), R. J. Archer, J. A. Becker, Ph.D., W. H. Brattain, Ph.D., C. J. Calbick, M.A., *et al.* Octavo of 250 pages, illustrated. New York, New York Academy of Sciences, 1954. Paper, $3.50. (*Annals of the New York Academy of Sciences*, v. 58, Art. 6.)

Color Atlas of Pathology. [Volume 2.] Endocrine System, Including Pituitary, Thyroid, Parathyroid, Adrenals and Pancreas; Gynecology and Obstetrics, Including Reproductive Organs, Breasts; Male Genital Tract; Skin. Prepared under the auspices of the U.S. Naval Medical School of the National Naval Medical Center, Bethesda, Maryland. Octavo of 450 pages. Illustrated with 1,032 figures in color. Philadelphia, J. B. Lippincott Co., 1954. Cloth, $20.

MEDICAL NEWS

Kings County Medical Society Holds Tenth Annual Dinner



Dr. Alfred P. Ingegno, retiring president, was the guest of honor at the tenth annual dinner of the Kings County Medical Society, held on October 16 at the Hotel St. George, Brooklyn.

Seated at the dais were the following—*standing, left to right*: Dr. Charles F. McCarty, executive director, Kings County Medical Society; Dr. Julius Stolfi, chairman of the dinner committee; Dr. Sol Axelrad, president, Queens County Medical Society; Dr. Jean A. Curran, associate executive dean for medical education, State University of New York College of Medicine at New York City; Dr. Peter M. Murray, president, New York County Medical Society; Dr. Ezra A. Wolff, Forest Hills, chairman of the coordinating council, First District Branch; Dr. Robert F. Warren, president-elect, Kings County Medical Society; Dr. Max Werner, president, Richmond County Medical Society, and Dr. Charles Sandler, president, Bronx County Medical Society.

Seated, left to right: Dr. Walter P. Anderton, secretary, Medical Society of the State of New York; Dr. John J. Masterson, chairman of the board of trustees, Kings County Medical Society; Dr. Elmer Hess, president-elect, American Medical Association; Dr. Ingegno; Reverend Michael Quinn, director, Confraternity of Christian Doctrine, Diocese of Brooklyn; Dr. Solomon Schussheim, president, Kings County Medical Society; Honorable Charles J. Bickenella, Justice of the Municipal Court, and Mrs. Aaron Kottler, president, Woman's Auxiliary to the Kings County Medical Society.

American Medical Education Foundation—Contributors from New York State to the American Medical Education Foundation for the month of October were: *Bronx*—Drs. Ellis M. Black, Meyer Friedenthal, Marcus Nash, and Louis Tannenbaum; *Brooklyn*—Drs. John B. D'Albora and Samuel Solomon; *Buffalo*—Drs. H. D. Duryea, E. J. Lippschutz, R. L. Scott, Helen G. Walker, and H. K. Wittig; *Cobleskill*—Dr. John H. Wadsworth; *Cortland*—Dr. Edward P. Cummins; *Dannemora*—Dr. Laszlo R. Eber; *Flushing*—Dr. L. V. Casamas; *Hempstead*—Drs. Louis H. Bauer and Eugene Bifulco; *Honeoye Falls*—Dr. Niels G. Madsen; *Kingston*—Dr. John B. Krom; *Lockport*—Dr. Raymond La Porte; *Long Island City*—Dr. Joseph V. Lanza; *Marlboro*—Dr. W. B. Harris; *Maybrook*—Dr. Robert W. Rakov; *Medford*—Dr. Louis B. Jameson; *Middlebury*—Dr. B. W. Andrew; *Millerton*—Dr. Gilbert S. Tabor; *Moores Mills*—Dr. Lloyd Harris; *Mount Vernon*—Dr. Anthony F. Capraro; *Nassau*—Dr. Boris Klasons; *Newburgh*—

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INDEX REMOVED TO
BACK OF VOL.

In addition to the usual aids in selecting an electrocardiograph . . .

OTHERS' EXPERIENCES
MAKER'S LITERATURE
SALES DEMONSTRATION

Sanborn's

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However, exclusive *with* Sanborn is a "direct-to-user" policy which offers any physician or hospital added benefits in Ecg ownership. Among these is the opportunity to use a Viso Cardiette *as your own,* for 15 days, and without obligation of any kind. (If, at the end of the test period, you don't like the Viso, you simply return it to us in its convenient, specially designed shipping carton.)

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Dr. Paul Watson; *New Rochelle*—Dr. Samuel Silverman.

Also: *New York City*—Drs. Harold H. Aaron, Harold Altman, Allan R. Aronson, Vitus W. Badia, Edward K. Barsky, Bernard Berglas, Ernest S. Breed, May E. Chinn, Albert A. Cinelli, Lewis J. Doshay, B. Esterman, John B. Ferran, Jacques R. Fischl, Jechiel M. Friedmann, Felix Fuchs, Oscar Glassman, S. Goldschmitt, Milton H. Goolde, Leo B. Halleran, Leo Hess, Suzanne Howe, Charles H. Immordino, Alex P. Kaplan, Jetti Katz, Sophia J. Kleegman, Samuel Lanes, Louis Levine, J. W. Littler, Moses Lobsenz, Peter K. Maybarduk, Nina M. Mazzola, Robert McGrath, Gorman J. McVeigh, William T. Medl, Harold R. Miller, Dabney Moon-Adams, Paul M. Neuda, Melvin N. Newquist, Herbert S. Ogden, Frank S. Pierson, John L. Pool, Robert T. Porter, Willis G. Price, Fenn T. Ralph, Robert F. Russell, Robert Sheiman, James W. Smith, David Soletsky, Hamlin A. Starks, Aaron Stein, Bianca Steinhardt, Annis E. Thomson, I. W. Voorhees, Ernest B. Weiner, and Robert S. Wilkinson.

Also: *Norwich*—Dr. H. L. Wilson; *Peekskill*—Dr. Percy Garson; *Pine Plains*—Dr. Walter W. Wicks; *Plattsburg*—Dr. Leo F. Schiff; *Port Chester*—Dr. Saul Freedman; *Potsdam*—Dr. M. L. Stevenson; *Poughkeepsie*—Dr. George E. Lane; *Rochester*—Drs. F. A. Dobrzynski, Alfred G. Ebel, Ernest J. Field, A. Fischer, Warren E. George, and G. H. Whipple; *Schenectady*—Dr. J. M. Scott; *Swan Lake*—Dr. M. A. Baker; *Syracuse*—Dr. Leon A. Chadwick; *Thiells*—Dr. Harry C. Storrs; *Troy*—Drs. Charles E. Bessey and Walter A. Gunther; *Utica*—Dr. Herman J. Segaul; *White Plains*—Dr. E. K. Rockwell, and *Yonkers*—Dr. Anthony M. De Angelis.

Appointed to State Board—At a meeting held in October, the Board of Regents of the University of the State of New York reappointed Dr. Clyde L. Randall, Dr. Harold W. Brown, and Dr. Alexander P. Preston as members of the State Board of Medical Examiners. The appointments are for terms of three years commencing August 1, 1954.

To Make Hospital Survey—An independent survey to determine what number of long-term patients now occupying beds in the municipal hospitals of the City of New York might be transferred to their own homes, convalescent facilities, and nursing homes has been announced by Dr. Basil C. MacLean, commissioner of hospitals. Dr. Howard A. Rusk, chairman of the Department of Physical Medicine and Rehabilitation, New York University—Bellevue Medical Center, will direct the survey.

Hospital Establishes Research Service—Dr. Joseph S. A. Miller, medical director of Hillside Hospital, Glen Oaks, has announced the establishment of a research service at the hospital, devoted to the study of the psychologic, neurophysiologic, and biochemical aspects of mental illness. Funds for the service have been appropriated by the board of directors, supplementing two grants by the U.S. Public Health Service and one from the Dazian Foundation for Medical Research. Dr. Maximilian Fink, Great Neck, supervising psychiatrist at the hospital, has been appointed as director of research.

Institute on Rehabilitation in Industry—A two-day institute on "Rehabilitation in Industry" was held November 17 and 18 at the University of Buffalo, sponsored by the University of Buffalo School of Medicine Chronic Disease Research Institute, the Erie County Medical Society, the Industrial Medical Association, and the Buffalo Academy of Medicine. Topics of the meetings included "Control of Disability and Employment of the Disabled," "Relation of Workmen's Compensation and the Disability Benefits Law to Problems of Rehabilitation," "The Cardiac in Industry," "The Aging Worker in Industry," and "Rehabilitation of the Industrial Worker."

Appearing on the program were the following: Dr. Marvin L. Amdur, director, Buffalo Industrial Medical Center; Dr. Benjamin E. Obletz, associate clinical professor of orthopedic surgery, University of Buffalo School of Medicine; Dr. Jacqueline Messite, senior industrial hygiene physician, New York State Department of Labor; Dr. Kenneth E. Markuson, division medical director, Liberty Mutual Insurance Company; Dr. Leonard J. Goldwater, professor of industrial hygiene, Columbia University; Dr. Willis M. Weeden, medical director, New York State Workmen's Compensation Board; Dr. William A. Sawyer, consultant, International Association of Machinists; Dr. Milton Terris, assistant dean for postgraduate education, University of Buffalo School of Medicine; Dr. Rufus Baker Crain, medical director, Eastman Kodak Company, Rochester; Dr. Walter T. Zimdahl, director, Chronic Disease Research Institute, University of Buffalo; Dr. Henry V. Morelewicz, chief of physical medicine and rehabilitation, Chronic Disease Research Institute.

International Academy of Proctology 1954–1955 Award Contest—The annual cash prize and certificate of merit award contest for 1954 to 1955 for the best unpublished contribution on proctology or allied subjects has been announced by the International Academy of Proctology. The competition is open to all physicians in all countries whether or not affiliated with the Academy.

The award will be presented at the annual convention dinner dance in March, and the Academy reserves the right to publish all contributions in its official publication. Entries must be typewritten in English, limited to 5,000 words, and submitted in five copies. Entries must be received no later than the first day of February, 1955, and should be addressed to the International Academy of Proctology, 147–41 Sanford Avenue, Flushing 55, New York.

New York Allergy Society—The new officers of the New York Allergy Society are: Dr. William B. Sherman, president; Dr. Murray Albert, president-elect; Dr. Samuel J. Prigal, vice-president; Dr. Leoni N. Claman, secretary, and Dr. Aubrey Whittemore, treasurer.

Hill-Burton Grant—The status of all Hill-Burton hospital construction in New York State at the period ending October 31, 1954, is as follows: *Approved, but not yet under construction,* eight projects at a total cost of $12,836,851, including $3,273,685 Federal contribution and designed to supply 837 additional beds; *Completed and in operation,* 70 projects at a total cost of $66,058,162, including Federal contribution of $19,542,162 and supplying 3,757 additional beds, and *under construction,* ten projects at a total cost of $42,196,690, including Federal contribution of $5,540,371 and designed to supply 1,059 additional beds.

Institute of Industrial Health—The Institute of Industrial Health of the University of Cincinnati has available a limited number of fellowships for qualified candidates who wish to pursue a graduate course of instruction in preparation for the practice of industrial medicine. Applicants must be graduates of a class A medical school, completed satisfactorily at least two years of training in a hospital accredited by the American Medical Association, or may substitute experience in private practice or service in the Armed Forces for one year of training.

The course consists of a two-year period of intensive training in industrial medicine followed by one year of practical experience under adequate supervision in industry, and on satisfactory completion of the course the candidate will be awarded the degree of Doctor of Science in Industrial Medicine.

During the first two years, the stipends for the fellowship vary, in accordance with the marital status of the individual, from $3,000 to $3,600 in the first year and $3,400 to $4,000 in the second year. In the third year the candidate will be compensated for his service by the industry in which he is completing his training. A one-year course without stipend is also offered to qualified applicants.

Requests for additional information should be addressed to the Institute of Industrial Health, College of Medicine, Eden and Bethesda, Cincinnati 19, Ohio.

American Public Health Association—Dr. Herman E. Hilleboe, New York State Commissioner of Health, was elected president of the American Public Health Association for the term 1954 to 1955, at the eighty-second annual meeting in Buffalo October 11 through 15.

The next annual meeting will be held in Kansas

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City, Missouri, November 14 through 18, 1955, and the Municipal Auditorium will be headquarters.

1955 District Branch Meetings—District branch meetings scheduled for 1955 are as follows: First District Branch—During the House of Delegates in Buffalo; Second District Branch—Wednesday, September 21; Third District Branch—Thursday, September 22; Fourth District Branch—Thursday, October 20; Fifth District Branch—Wednesday, October 19; Sixth District Branch—Wednesday, October 26; Seventh District Branch—Wednesday, September 28; Eighth District Branch—Thursday September 29, and Ninth District Branch—Wednesday, October 5, with places of meeting to be decided by the executive committees of the district branches concerned.

Courses in Cardiovascular Disease—Refresher courses in cardiovascular disease for the general practitioner will be presented during the 1954–1955 academic year by New York University Post-Graduate Medical School and by the Mount Sinai Hospital under the fellowship program of the New York State Department of Health, the New York City Department of Health, and the Medical Society of the State of New York.

Courses at New York University include the following: March 28 through April 1, 1955—"Electrocardiography"; January 31 through February 2, 1955—"Auscultation of the Heart," and January 10 through 14, 1955—"Modern Concepts in the Etiology, Diagnosis, and Treatment of Heart Diseases."

Courses at Mount Sinai Hospital will include: January 17 to 22, 1955—"Intensive Course in Elementary Electrocardiography"; January 24 to 29, 1955—"Intensive Course in Advanced Electrocardiography," and January 31 to February 11, 1955—"Cardiovascular Diseases."

The New York State Department of Health provides fellowships for physicians licensed by and living in the State of New York for the courses listed. The number of persons for whom such tuition may be made available is limited. It will not be possible to provide living expense stipends, it was announced.

Application blanks may be obtained from the universities concerned or from the New York State Department of Health, 39 Columbia Street, Albany 7, New York. Completed applications should be forwarded promptly to the university, accompanied by a check for the registration fee, payable to the university (New York University and, for Mount Sinai Hospital courses, Columbia University). Completed applications must be in the hands of the university at least two weeks in advance of the start of the course, if the physician is to receive the benefits of the fellowship program. The words "New York State Department of Health Fellowship" should be written across the top of the forms. Applications will be acted upon in order of receipt. The registration fee will be refunded if the quota for a course is filled. Tuition for the courses for physicians enrolled under this program is paid directly to the university.

Essex County Medical Society—The annual meeting of the Essex County Medical Society was held on October 1. The officers elected for the year were: Dr. William Vilardo, Ticonderoga, president; Dr. Albert Hayes, Willsboro, vice-president; Dr. James E. Glavin, Port Henry, secretary-treasurer; Dr. T. R. Cummins, delegate to the Fourth District Branch meeting, and Dr. William Vilardo, delegate to the Fourth District Branch.

Lewis County Medical Society—Officers elected for the Lewis County Medical Society for 1955 are: Dr. Louis A. Avallone, president; Dr. Earle E. Barnes, Jr., vice-president, and Dr. William Reed, secretary-treasurer, all of Lowville. Chairmen of committees are: Dr. Bruce Phelps, Lowville, legislation; Dr. H. E. Chapin, Lowville, public health and education and public relations; Dr. R. D. Gerrard, Lowville, industrial health; Dr. Earle E. Barnes, Jr., Lowville, school health; Dr. William Reed, Lowville, tuberculosis; Dr. E. O. Boggs, Lowville, workmen's compensation; Dr. R. D. Gerrard, Lowville, grievance workmen's compensation; Dr. Elbert Dalton, Beaver Falls, cancer; Dr. R. D. Gerrard, Lowville, maternal welfare; Dr. Bruce Phelps, Lowville, emergency medical service; Dr. Earle E. Barnes, Jr., Lowville, diabetes; Dr. L. A. Avallone, Lowville, civilian defense; Dr. Harry Chapin, Lowville, heart disease; Dr. H. E. Chapin, Lowville, deaf and hard of hearing, and Dr. Earle E. Barnes, Jr., Lowville, malpractice.

Cattaraugus County Medical Society—Chairmen of committees of the Cattaraugus County Medical Society for 1954 to 1955 are: Dr. Joseph E. Anderson, Olean, program; Dr. Robert D. Kelsey, Franklinville, legislation; Dr. T. G. Gardner, Salamanca, military affairs; Dr. W. C. Goodlett, Olean, economics; Dr. Robert Peale, Olean, speakers for public meetings; Dr. E. Heier, Cattaraugus, welfare relations; Dr. N. P. Johnson, Olean, cancer control; Dr. W. L. Hogeboom, Helmuth, mental health; Dr. J. A. Wintermantel, Olean, grievance; Dr. William R. Casey, Olean, maternal and infant, child health; Dr. L. J. Atkins, Olean, public relations and publicity; Dr. M. Grant, Olean, public health; Dr. Francis Keefe, Olean, compensation; Dr. Frederick Redlich, Olean, heart disease; Dr. J. A. Johnson, Olean, school physicians; Dr. N. H. Frank, Gowanda, blood bank, and Dr. R. A. Loomis, Ellicottville, civilian defense.

Kings County Medical Society—Members of the committee on malpractice and defense of the Kings County Medical Society are: Dr. Charles B. Jones, chairman; Dr. James C. Barnett, Dr. Aaron Kottler, Dr. Harry Mandelbaum, Dr. Francis Mitchell, and Dr. Irving M. Pallin, all of Brooklyn.

Rochester Health Forums—The second year of a television program was inaugurated on November 17 by the Rochester Health Forums in cooperation with the Monroe County Medical Society, the Rochester Academy of Medicine, and the Rochester Chapter of the New York Pharmaceutical Association. The program was entitled "Miracle Medicine." Appearing on the panel were Dr. Charles A. Rogers, Dr. Priscilla L. Cummings, Dr. Joe Howland, and Dr. John J. Finigan.

Meetings—Past

Academy of Psychosomatic Medicine

The annual meeting of the Academy of Psychosomatic Medicine was held in New York City on October 8 and 9. Dr. Alfred J. Cantor, Flushing, was reelected to serve as treasurer. The second annual meeting will be held in New York City at the Hotel Plaza, October 6, 7, and 8, 1955.

Women's Medical Association of New York City

A meeting of the Women's Medical Association of New York City met for the first time with the Association of Women Dentists of New York on November 3 at the Beekman Tower Hotel, New York City. Speakers and their subjects were: Dr. Thomas W. Stevenson, attending surgeon, Presbyterian Hospital, "Plastic Surgery of the Face and Neck"; Dr. Arthur J. Barsky, plastic surgeon, Mount Sinai Hospital, "Plastic Surgery of Cleft Palate"; Josephine M. Abelson, D.D.S., F.A.C.D., "Deformities of the Jaw and their Correction," and Ida M. Golomb, D.D.S., "Tumors in the Oral Cavity."

Finger Lakes Neuropsychiatric Society

The annual dinner meeting of the Finger Lakes Neuropsychiatric Society was held on November 4 at the Veterans Administration Hospital, Canandaigua. Dr. Henry A. Davidson spoke on criminal responsibility.

Officers elected for the 1955 and 1956 term were: Dr. Daniel Davis, Canandaigua, president; Dr. Robert Schopbach, Clifton Springs, vice-president; Dr. Murray Bergman, Newark, secretary-treasurer; Drs. Daniel Davis, Robert Schopbach, Murray Bergman, Benjamin Pollack, Louis Lopez, Charles Greenberg, Francis Kelley, and Isaac N. Wolfson, members of the council.

New York Academy of Medicine

"Status of Cancer Knowledge" was the subject of the A. Walter Suiter Lecture on November 4 at

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the New York Academy of Medicine. The lecture was presented in the form of a symposium, "Cancer: What We Know Today." The first three topics and speakers were:

"Changing Incidence of Cancer Over the Years," by Harold F. Dorn, Ph.D., chief, Office of Biometry, National Institutes of Health, Bethesda, Maryland; "Multiple Views on the Causation of Cancer," Dr. Harold L. Stewart, chief, Laboratory of Pathology, National Cancer Institute, Bethesda; "The Natural History and Diagnosis of Cancer," Dr. Lauren V. Ackerman, professor of surgical pathology and pathology, Washington University School of Medicine, St. Louis.

The fourth topic was "Modern Therapeutic Measures in Cancer and Their Effectiveness," and the speakers were: surgery—Dr. Owen H. Wangensteen, professor of surgery, University of Minnesota Medical School, Minneapolis; radiology—Dr. Richard H. Chamberlain, professor of radiology, University of Pennsylvania School of Medicine, Philadelphia; chemotherapy—Dr. Alfred Gellhorn, director, Institute of Cancer Research, Columbia University College of Physicians and Surgeons.

Society of Medical Jurisprudence

The November meeting of the Society of Medical Jurisprudence was held at the New York Academy of Medicine on November 8. Dr. Richard H. Hoffmann discussed "The Problem of Desegregation in Relation to Adolescents."

Jefferson County Medical Society

The annual meeting of the Jefferson County Medical Society was held on November 14 at the Black River Valley Club. Dr. William R. Carson, Potsdam, was the speaker. His topic was "The Doctor's Relation to School Children's Behavior."

Geneva Academy of Medicine

Dr. James J. Smith, chief, Endocrinology Clinic, French Hospital, New York City, spoke on "The Pituitary Gland; Its Diagnostic and Therapeutic Implications," at a meeting of the Geneva Academy of Medicine on November 15 in Geneva.

This program was postgraduate education arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

Long Island Jewish Hospital

"The Iatrogenic Diseases or the Hazards of Medication" was the topic discussed by Dr. Alton Goldbloom at a meeting held at the Long Island Jewish Hospital on November 18. Dr. Goldbloom is professor emeritus, McGill Medical School, and former chief, pediatrics, Jewish Hospital, Montreal. Pediatric grand rounds were conducted on November 19 by Dr. Goldbloom.

Nassau Ophthalmological Society

A meeting of the Nassau Ophthalmological Society was held on November 22 in Bellmore. Dr. A. Gerard DeVoe discussed "Ocular Tumors."

Albany County Medical Society

A panel discussion on Blue Shield and Blue Cross was held at the meeting of the Albany County Medical Society on November 23. The annual dinner dance was held at the Colonie Country Club on December 10.

Binghamton Academy of Medicine

"The Various Medical, Surgical, and Neuropsychiatric Complications of Pregnancy; Their Treatment" was discussed by Dr. Alan F. Guttmacher at a meeting of the Binghamton Academy of Medicine on November 23. Dr. Guttmacher is director, Department of Obstetrics and Gynecology, Mount Sinai Hospital.

This program was postgraduate education arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

Nassau County Medical Society

Dr. Ludwik Gross, chief, Cancer Research, Veterans Administration Hospital, Bronx, and consultant, Sloan-Kettering Division, Cornell University Medical College; Dr. Nathan Rosenthal, consulting hematologist, Mount Sinai Hospital, and formerly associate clinical professor of medicine, Columbia University College of Physicians and Surgeons, and Dr. David K. Karnofsky, associate professor of medicine, Sloan-Kettering Division, Cornell University Medical Center, took part in a panel discussion of "Leukemia and Allied Diseases" at a meeting of the Nassau County Medical Society on November 30.

This program was postgraduate instruction arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

Mount Sinai Hospital

The William Henry Welch Lecture was delivered by Mr. P. R. Allison, Esquire, F.R.C.S., Nuffield Professor of Surgery, Oxford University, on December 2 at Mount Sinai Hospital, New York City. Mr. Allison discussed "Hiatus Hernia of the Diaphragm: Its Pathogenesis and the Anatomy of Repair."

Schenectady County Medical Society

The annual meeting of the Schenectady County Medical Society was held on December 2 at the Edison Club. Dr. Stanley Jaks, psychologist, Zurich, Switzerland, presented a lecture on "Curiosities of the Mind."

New York State Society of Anesthesiologists

The eighth annual postgraduate assembly in anesthesiology of the New York State Society of Anesthesiologists was held December 7 through 11 at the Hotel New Yorker.

Dutchess County Medical Society

Dr. John A. Finkbeiner, medical-neoplasia staff, Memorial Hospital, and assistant member, Sloan-Kettering Institute for Cancer Research, spoke on "The Treatment of Lymphomatous Diseases" at a meeting of the Dutchess County Medical Society on December 8.

This program was postgraduate instruction arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

Myasthenia Gravis Foundation, Inc.

An international conference on myasthenia gravis under the auspices of the Myasthenia Gravis Foundation, Inc., was held December 8 and 9 at the University of Pennsylvania School of Medicine. Among the speakers was Dr. K. E. Osserman, Mount Sinai Hospital, New York City.

Rochester General Hospital

A teaching day was held at the Rochester General Hospital on December 9. Dr. Alvin Donenfeld, instructor in obstetrics and gynecology, New York Medical College, and Dr. Alvin Goldfarb, clinical instructor in obstetrics and gynecology, New York Medical College, and trainee of the National Cancer Institute, were the speakers. The subject presented was "The Use of Endocrine Products in the Treatment of Menstrual Abnormalities."

This program was postgraduate instruction arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State Department of Health.

Nassau Pediatric Society

A scientific meeting of the Nassau Pediatric Society was held on December 13 in Westbury. Dr. Carl H. Smith, associate clinical professor in pediatrics, New York Hospital, Cornell Medical Center, spoke on "The Problems of the White Cells Series."

New York Society for Circulatory Diseases

The thirteenth regular meeting of the New York Society for Circulatory Diseases was held on December 14. At this time a symposium on "Graphic Methods in Congenital and Rheumatic Heart Disease" was held with Dr. Samuel O. Sapin, congenital cardiac group, Mount Sinai Hospital, and Dr. Alvin J. Gordon, assistant attending physician, Mount Sinai Hospital, participating. Dr. Simon Dack presided.

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Meetings—Future

New York Chapter, International Academy of Proctology

Papers on "Office Procedures in Proctology" will be presented at the meeting of the New York Chapter of the International Academy of Proctology to be held Tuesday, December 21, at the Madison Hospital, New York City. Dr. Henry I. Scheer, associate professor of anatomy, New York University Medical School, will speak on "Anorectal Anatomy"; Dr. Henry D. Janowitz, Mount Sinai Hospital, on "Anorectal Physical Examination," and Dr. Franz J. Lust on "Radiologic Examination of the Colon."

The next meeting of the New York Chapter will be held on Monday, February 21, 1955, at the Hotel Plaza, New York City. The subject of office procedures will be continued, and the following will be presented: Dr. Michael Weingarten, Beth Israel Hospital, "Medical Treatment in the Office"; Dr. Alfred J. Cantor, "Surgical Treatment in the Office," and a motion picture illustrating office technics.

Members of the medical profession are invited to attend, Dr. Paul B. Van Dyke, Suffern, president, has announced.

American Cancer Society, Arizona Division

The third annual cancer seminar of the Arizona Division of the American Cancer Society will be held in Phoenix, Arizona, January 13, 14, 15, 1955, at the Paradise Inn. Among the New York State doctors participating will be:

Dr. Alexander Brunschwig, professor of clinical surgery, Cornell University Medical School, and attending surgeon, Memorial Hospital; Dr. Charles S. Cameron, medical and scientific director, American Cancer Society; Dr. Victor F. Marshall, professor of clinical surgery (urology), Cornell University Medical School, and director, Department of Urology, New York Hospital, Cornell Medical Center, and Dr. George T. Pack, clinical professor of surgery, New York College of Medicine, and attending surgeon-in-chief, Gastric and Mixed Services, Memorial Hospital.

William Alanson White Institute

A practical seminar for physicians to be given by the William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology will begin on January 26, 1955. The seminar will consist of ten sessions and will be conducted by Dr. Vladimir Gurewich, at the Institute, 12 East 86th Street, New York City. Further information as to the fee, time, and place will be furnished if inquiries are sent to the William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology, 12 East 86th Street, New York 28, New York.

Kings County Medical Society

The fourth annual refresher course on "Resuscitation of the Newborn" will be given under the auspices of the Child Health and Welfare Committee of the Kings County Medical Society on Monday, February 14, 1955, 8:30 P.M. in the auditorium of "E" building of Kings County Hospital, Clarkson and New York Avenues, Brooklyn.

The course will be given by Dr. Richard L. Day, professor of pediatrics; Dr. Peter Gruenwald, assistant professor of obstetrics and gynecology (pathology); Dr. Merel H. Harmel, professor and executive officer, Department of Anesthesiology, State University of New York College of Medicine at New York City; Dr. Henry Rascoff, attending pediatrician, Beth-El and Kingston Avenue Hospitals, will serve as moderator.

Personalities

Honored

Dr. Edwin L. Harmon, at a tea on November 10 by the employes of Grasslands, Westchester County Hospital, where he has been director fifteen years . . . Dr. Maurice J. Lewi, by medical and educational leaders at Masonic ceremonies in New York City commemorating his seventy years of service to the fraternity, on October 28.

Appointed

Dr. Manfred R. M. Blashy, chief of physical medicine and rehabilitation services, Veterans Administration Center, Corning, as chief of physical medicine and rehabilitation at the Veterans Administration Hospital in Buffalo . . . Dr. Donald M. Carmichael, director in charge, and Dr. Dorothy Loynes, as psychiatrist in charge, of the new Bronx Clinic under the Department of Mental Hygiene . . . Dr. A. Allen Goldbloom, as clinical professor in medicine, New York Medical College, and attending physician, Flower-Fifth Avenue Hospitals . . . Dr. Frank X. Giustra, Brooklyn, as chairman, medical advisory committee of the Visiting Nurse Association of Brooklyn . . . Dr. Lester Lipson, as medical director of Sullivan County . . . Dr. Currier McEwen, dean, New York University College of Medicine, as a member of the advisory council for the Joint Hospital Survey and Planning Commission, to succeed Dr. Robert S. Cunningham . . . Dr. Ralph F. Schneider, medical director, to succeed Dr. Robert Collier Page of the Standard Oil Company of New Jersey.

Dr. Saul A. Schwartz, as assistant clinical professor of internal medicine at New York Medical College and Flower-Fifth Avenue Hospitals . . . Dr. John L. Sengstack, as chief of the medical staff, to succeed the late Dr. Joseph G. Patiky of the Huntington Hospital . . . Dr. Thomas W. Stevenson, New York City, as chief of the plastic surgery service, Presbyterian Hospital, succeeding Dr. Jerome P. Webster, who has retired . . . as vice-president and general manager of the Columbia-Presbyterian Medical Center, Mr. Alvin J. Binkert, succeeding the late Mr. John S. Parks . . . as chaplain of Presbyterian Hospital, the Reverend Robert Brockway Reeves, Jr., succeeding the Reverend Lyman R. Hartley . . . Dr. Thaddeus Witka, as associate physician, Department of Ophthalmology, University of Buffalo School of Medicine.

Elected

Dr. Eben Breed, as a trustee of Hofstra College in Hempstead . . . Dr. Lincoln M. Saulpaugh, Ancramdale, to retired membership in the Columbia County Medical Society.

Author

"Psychiatry for 1954" by Dr. James A. Brussel, assistant commissioner, New York State Department of Mental Hygiene, for the annual *Yearbook* of *Colliers Encyclopedia.*

New Offices

Dr. C. E. Dutchess, as consultant to Schenley Laboratories . . . Dr. Ivan Hay, formerly of Brooklyn, practice of obstetrics and gynecology in association with Dr. F. J. Mahrer in Rome . . . Dr. Donald Hinman, general practice in Troy . . . Dr. J. Harry Lagonegro, practice of eye, ear, nose, and throat medicine in Elmira . . . Dr. Charles A. Leach, practice of pediatrics in Dewitt . . . Dr. James E. Lewis, general practice in Liverpool . . . Dr. Robert W. McLaughlin, general practice with Dr. William G. Roberts in Penn Yan . . . Dr. Philip McManus, a second office in New Windsor . . . Dr. Leon Madowicz, general practice in Brentwood . . . Dr. Orla J. Park, formerly of South Hartford, practice of ophthalmology in Glens Falls . . . Dr. H. B. Roholt, general practice in Rye . . . Dr. Harry Sherman, practice of pediatrics in Great Neck . . . Dr. Anthony V. Sisca, formerly of Harrison, general practice in Port Chester . . . Dr. John K. White, practice of general surgery and medicine in Little Falls.

Reopens Office

Dr. Joseph Chibnik, general practice in Massena after serving eighteen months with the Navy.

Resigns

Dr. Frank Calderon, as director of medical services of the United Nations.

Retired

Dr. Herman G. Weiskotten, as a member of the New York State Public Health Council.

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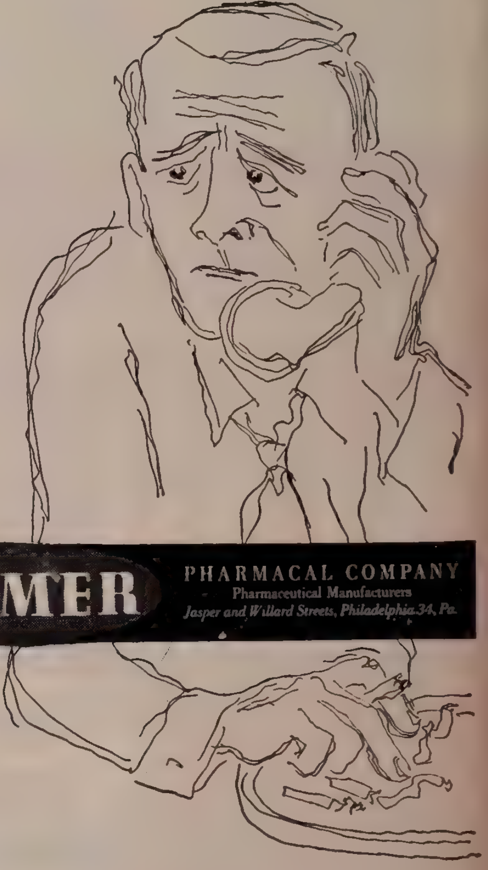

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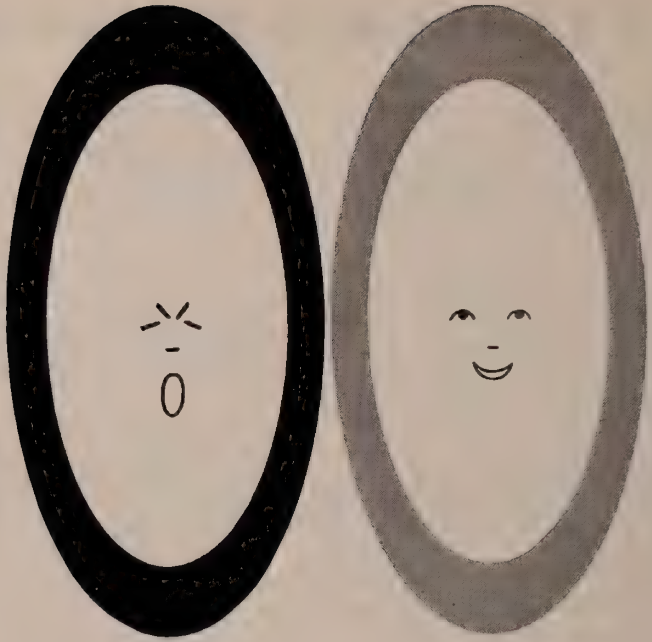

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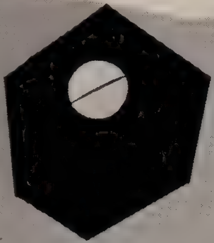

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EDITORIAL

In Part II, the supplement to the regular issue of September 1 of the NEW YORK STATE JOURNAL OF MEDICINE, will be found the complete transactions of the House of Delegates of the Medical Society of the State of New York, completely indexed for your convenience. This is the 148th meeting of the Society and was held at the Hotel Statler, New York City, May 10 to 14, 1954. This volume of the JOURNAL should be retained for reference purposes by the membership since it is the only readily available source of information from which the policy of the Medical Society of the State of New York, as determined by the duly elected representatives of its component units, can be obtained.

New members will find the supplement highly useful and instructive, since by studying the procedure they can familiarize themselves with the way in which the various resolutions are introduced on the floor, referred by the Speaker to the appropriate reference committees, how they are reported out of committee after consideration, and the final debate and action of the House on the recommendation of the reference committee.

Except by attending the sessions of the House of Delegates, which it is the privilege of any member to do, there is no other way than by studying the proceedings by which a member can follow the fate of a resolution introduced by his own or another county society.

It is the hope of the Publication Committee that the membership will preserve the supplements from year to year for handy reference. Questions constantly arise as to the policy of the Society on many topics. By consulting the index in this volume the answer may be found readily in the action taken by the House on the particular topic under consideration.

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Medical Society of the State of New York

HOUSE OF DELEGATES

MINUTES OF THE ANNUAL MEETING

May 10 to 12, 1954

THE 148th Annual Meeting of the House of Delegates of the Medical Society of the State of New York convened at the Hotel Statler, New York City, on Monday, May 10, 1954, at 10:10 A.M.: Dr. Frederic W. Holcomb, *Speaker;* Dr. Frederick W. Williams, *Vice-Speaker;* Dr. W. P. Anderton, *Secretary;* Dr. Gervais W. McAuliffe, *Assistant Secretary.*

SPEAKER HOLCOMB: The House will please come to order.

Mr. Secretary, would you kindly give the report of the Reference Committee on Credentials?

Section 1

Report of Reference Committee on Credentials

SECRETARY ANDERTON: Dr. McCarty is here, ready to report, sir.

DR. CHARLES F. MCCARTY, *Kings:* There are registered: officers, 17; ex-presidents, 2; district delegates, 7; section delegates, 5; county society delegates, 127.

SPEAKER HOLCOMB: Thank you, Dr. McCarty.

There is a quorum present. I now declare the 148th Session of the House of Delegates open for the transaction of business.

Section 2

Memorial Observance

SPEAKER HOLCOMB: At this time we wish to announce the passing of three of our members: Dr. Martin B. Tinker, of Ithaca, president, 1916–1917; Dr. Henry S. Martin, of Warsaw, district delegate from the Eighth District, and Dr. Samuel Lubin, of Brooklyn, county delegate from Kings County. Will the House please rise for a moment of silence in their memory?

...The members arose and stood for one minute with bowed heads in memory of their departed confreres...

Section 3

Invocation

SPEAKER HOLCOMB: Members of the House, at this time I think it is fitting that we ask an invocation for guidance, divine guidance. We have with us this morning Dr. Ralph Sockman, whom I know everyone in this House knows. He is the minister of the Christ Church, Methodist, and also of the National Radio Pulpit. Dr. Sockman.

REVEREND RALPH SOCKMAN: We unite in prayer.

Eternal and ever gracious God, in Whose law is our life, and in Whose love is our hope, we would be still at this moment and know that Thou art God. For this land that we love, and whose liberties we enjoy, we give Thee hearty and profound thanks. For the spirit of service which has brought us together, and which will inspire our thinking, we are grateful beyond words.

We thank Thee, O God, for that joy that comes to those who are in the fellowship of service, for that expansion of soul which we feel when we are doing our best for the highest that we know.

O God, in this day when the destructive forces are so beyond our measure, may we realize that there are forces that are building, and they too will conquer in the end. Strengthen all the things that unite and weaken the things that divide. Restrain the angry passions of men that war may cease, and the great efforts of nations like ours will lead the world to the healing of Thy Holy Family.

We ask Thy guidance in the deliberations of this great gathering. May all that we do and say be for the uplift of those who look to us for healing and help.

We ask this and all other personal requests in the name of the Highest that we know. Amen!

Section 4

National Anthem

SPEAKER HOLCOMB: We will now have the playing of the National Anthem.

...The National Anthem...

Section 5

Approval of Minutes of the 1953 Session

SPEAKER HOLCOMB: Members of the House, the next order of business is the approval of the minutes of the 1953 session. These appeared in Part II of the September 1, 1953, issue of the NEW YORK

State Journal of Medicine. There is a correction in the minutes. The published minutes of the Tuesday afternoon, May 5, 1953, session of the House of Delegates, *Section 163*, Report of Reference Committee on Report of Council, Part X: Workmen's Compensation, states that the Workmen's Compensation Committee advocated a first visit fee of $3.00 for the general practitioner. However, reference to the original report of the Workmen's Compensation Committee shows that the committee advocated a first visit fee of $5.00 for the general practitioner and subsequent office fees of $3.00.

Are there any further corrections or omissions in the minutes?

. . . There was no response . . .

Speaker Holcomb: If not, they stand approved as published, with the one correction.

Section 6

Reference Committees

Speaker Holcomb: The reference committee appointments have been published in the Journal. There are two changes, last minute changes, which I wish to announce: On Council, Part II, Maternal and Child Welfare, Dr. Frank J. McGowan, of New York County, will take the place of Dr. Harold Davidson, of New York County; on Council, Part V, Public Health Activities C, Dr. Joseph Alvich will replace Dr. Abraham J. Fleischer, of the Bronx:

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James R. Reuling, Queens

Section 7

Reference of Reports and Supplementary Reports

SECRETARY ANDERTON: Mr. Speaker, I move that the reports and supplementary reports of officers, Council, trustees, legal counsel, and district branches that have been published and distributed to the members of this House be referred to the respective reference committees without reading.

DR. THOMAS F. MCCARTHY, *Bronx:* I second the motion.

...There being no discussion, the motion was put to a vote and was unanimously carried...

Section 8 (See 73)

Secretary's Supplementary Report

To the House of Delegates, Gentlemen:

As a result of a letter from Mr. Royal W. Ryan, executive vice-president, New York Convention and Visitors Bureau, Inc., on April 8, 1954, the Council voted to recommend to you that the American Medical Association be invited to hold its annual convention in New York City, in the year 1958.

Respectfully submitted,
W. P. ANDERTON, M.D., *Secretary*

Section 9 (See 163)

Supplementary Report of the Blood Banks Commission

To the House of Delegates, Gentlemen:

It is my privilege to report at this time that the Blood Banks Association of New York State has begun operation of the Clearinghouse, whereby rare blood types may be expeditiously located and surplus blood transferred to where it is needed through inventory reporting. Twenty-two banks throughout the State are now included, and this number will gradually be extended. The Clearinghouse has already proved a service to our patients and the medical profession by providing blood quickly in emergencies.

The Blood Assurance Program has indicated its public appeal in the initial Genesee County pilot project by securing to date over 1,000 subscribers. Of this number, approximately 30 per cent of the persons joining had never before given blood. The word subscriber is used advisedly, because we find that persons enlisting in the Blood Assurance Program do not consider it a donation. They are giving their blood to protect their families.

The public relations value of the Blood Assurance Program has proved of definite value to the Genesee County Medical Society. Physicians have addressed over 100 organizations in three months. As they presented the assurance program as a public service of the medical professions, they have also brought in their other public service activities, e.g., mediation and emergency medical service.

At its last meeting, the Commission considered two resolutions referred to it by the Council. These resolutions refer to the use of professional blood donors. The resolution, submitted in the 1953 House of Delegates, declaring that newspaper advertising be declared necessary and ethical and approved, was accepted.

Your Commission wishes to commend the Blood Banks Association upon the excellence of its 1954 scientific program and upon the energy and ability with which it is entering upon an immense task, namely, the organization and coordination of all agencies interested in the use of blood, so that the best interests of the people of this State may be served under medical direction and leadership.

Respectfully submitted,
Dan Mellen, M.D., *Chairman*

Section 10 (See 80)

Supplementary Report of the Council Committee on Constitution and Bylaws

To the House of Delegates, Gentlemen:

In addition to the revisions and amendments previously reported, amendments to the constitution and bylaws of the Medical Society of the County of Wayne were approved by the Council at its March meeting after consideration by the secretary, the counsel, and the committee.

Respectfully submitted,
Frederick W. Williams, M.D., *Chairman*

Section 11 (See 45, 95, 144)

Supplementary Report of the Planning Committee for Medical Policies

To the House of Delegates, Gentlemen:

The Planning Committee for Medical Policies recommends that the following resolution be passed by your body:

Whereas, the care of the chronically ill is an ever-increasing problem; and

Whereas, the New York State Health Preparedness Commission has made a comprehensive study of this problem and published its recommendations in 1947; and

Whereas, the Medical Society of the State of New York was represented on this Commission and had a part in formulating these recommendations; and

Whereas, very little has been done to implement these recommendations since their submission seven years ago; therefore be it

Resolved, that the Medical Society of the State of New York go on record as approving the recommendations of the New York State Health Preparedness Commission and urge their immediate development; and be it further

Resolved, that a copy of this resolution be sent to the Governor of the State of New York and to other appropriate State officials and legislators.

Respectfully submitted,
Peter J. Di Natale, M.D., *Chairman*

Section 12 (See 42, 97)

Supplementary Report of the Board of Trustees

To the House of Delegates, Gentlemen:

Bureau of Industrial Health—At the last meeting of the House of Delegates the supplementary report of the Council, Part III, relating to industrial health said in the last paragraph of the report: "Therefore, in order to implement this important phase of medical practice, your committee wholeheartedly recommends to the House of Delegates the establishment of a Bureau of Industrial Health with a full-time director and proper personnel to carry out adequately proper duties and functions of such a Bureau, details about personnel to be decided by the Council and Board of Trustees."

The report of the reference committee to which this resolution was referred gave its approval to the above recommendation with the following addition, "but the reference committee also recommends that the Council study the feasibility and possibility of integrating such a bureau with the Society's Workmen's Compensation Bureau. It is our feeling that the possibility of having one director in charge of both departments, but at the same time keeping the departments separate, might lead to a more effective means of operation, especially since it is estimated that the cost of this new bureau would be approximately $25,000. By combining the departments the cost should not exceed $15,000, whereas it would be considerably higher if the new bureau was a separate department entirely." This report of the reference committee was approved by the House of Delegates last year.

For the information of this House of Delegates, the cost of operation of the bureaus which we have is as follows:

Workmen's Compensation	$23,825
Medical Care Insurance	19,328
Albany Legislation Bureau	26,336
	$69,489

We are in full accord with the idea expressed by the reference committee last year that we should consider the possibility and feasibility of integrating the Bureau of Industrial Health with the Workmen's Compensation Bureau under one head with a separate Council committee for each bureau.

The Board of Trustees has given considerable thought and study to this subject and has come to the same conclusion.

A committee of the trustees has been seeking someone to head the Industrial Health Bureau for some time, but men in this branch of medicine are not available at the salary we can afford to pay. Both bureaus under one head would save the Society at least $25,000 a year.

We therefore recommend to the House of Delegates that the Bureau of Workmen's Compensation and Bureau of Industrial Health be combined under one director, with a separate Council committee for each bureau.

Fiscal Year Budget—Under our present policy, Schedule of Monthly Budgetary Revisions—Board of Trustees, 1949–1953

	1949	1950	1951	1952	1953
January	300.56	2,771.61	19,685.47	1,791.00	3,676.00
February	1,500.00	4,983.00	603.28	1,032.00	0
March	25,630.00	3,912.00	20,750.00	650.00	250.00
April	505.00	6,525.00	6,625.45	*3,850.00*	1,362.00
May	0	0	0	8,700.00	4,350.00
June	24,338.00	2,361.18	871.75	9,277.50	25,000.00[3]
September	5,652.58	0	17,400.00	3,331.00	4,232.00
October	4,100.00	1,800.00	1,000.00	1,370.00	14,060.00
November	34,734.95	18,920.00	139.00	32,799.00[1]	3,430.00
December	2,900.00	6,180.00	17,900.00	29,045.00[2]	2,412.00
	99,661.09	47,452.79	84,974.95	84,145.50	58,772.00

[1] Includes $25,000 for American Medical Education Foundation.

[2] Includes $12,000 for Blood Banks Association of New York State.

[3] Contribution to American Medical Education Foundation.

the fiscal year corresponds with the calendar year. At the annual meeting the president-elect, just prior to assuming office, delivers an address to the House of Delegates in which he outlines his policies for the ensuing year. At the end of each annual meeting there is an organization meeting of the new Council at which the incoming president appoints all committees. There is also an organization meeting of the Board of Trustees under a new chairman and newly elected members of the board.

All of these newly elected officers then have to operate under a budget which has been in operation for at least five months.

During the summer months the work in the Society's office is at a much lower level than it is during the fall and winter.

At the end of the calendar year accounting firms in general are very much more in demand closing books in preparation for the March income tax returns.

For all of the reasons enumerated above, it would seem more logical for the Medical Society of the State of New York to change its fiscal year from the calendar year to July 1–June 30. Whether this would eliminate to any degree budgetary revisions which the Board of Trustees are asked to make during the year is problematic. However, one thing is certain, it could not make it any worse than it has been in the past.

There is appended a table showing budgetary revisions which the Board of Trustees have had to make over the past five years.

It is noted that with a single exception (April, 1952) each of these months contains an upward revision.

During the present year the Trustees have been asked and have had to make budgetary revisions as noted:

January	$ 2,042
February	5,071
March	17,024*
April	4,590
	$28,727

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* $12,000 for Blood Banks.

It is recommended that the fiscal year of the State Society be changed from January 1–December 31 to July 1–June 30.

It is understood that the above recommendation does not change the dues year.

As this entails a change in the Bylaws, I would move, Mr. Speaker, that it be referred to an appropriate committee for study and report at the next annual meeting.

Respectfully submitted,
James R. Reuling, M.D., *Chairman*

Section 13 (See 125)

Report of the Malpractice Insurance and Defense Board

To the House of Delegates, Gentlemen:

The Malpractice Insurance and Defense Board consists of the following:

Christopher Wood, M.D., *Chairman*	White Plains
Joseph A. Lane, M.D.	Rochester
John F. Kelley, M.D.	Utica
J. Stanley Kenney, M.D.	New York City
Leo F. Schiff, M.D.	Plattsburg
Thomas M. d'Angelo, M.D.	Jackson Heights
John C. Brady, M.D.	Buffalo
Walter P. Anderton, M.D., ex officio	New York City
Maurice J. Dattelbaum, M.D., ex officio	Brooklyn
William F. Martin, counsel, ex officio	New York City
Harry F. Wanvig, secretary, ex officio	New York City

The report of your board this year must be largely in the nature of a warning. To understand the situation faced by members of the Society with respect to their malpractice insurance protection, it is necessary to review briefly what has occurred during the past ten years.

In 1944 the rate for a minimum policy of $5,000/$15,000 was $30 throughout the State for all specialties except x-ray therapy and cosmetic plastic surgery. Five years later the rate in the metropolitan area had doubled, and in the upstate counties it had increased by one third. This year we find it necessary to recommend, for minor surgery in the metropolitan area, a rate double that required for general coverage in 1949 and, for major surgery, a rate four times that required only five years ago. In the upstate counties the new rate is nearly three times that required in 1949.

This board is charged, in theory at least, with responsibility for making our rates, but, in truth, it can only compute them. Neither this board nor our insurance company cause, nor can they control, the losses that produce the rates as surely and exactly as the natural laws of cause and effect. In a very real sense, therefore, it is the losses caused by insured members of the Society which make our rates.

There are certain elements or aspects of our malpractice insurance and defense program that the board can influence, and to these it has given its careful attention and best efforts. Among these is the matter of the expense ratio representing the cost of operating the Group Plan. Normally this constitutes 40 per cent of insurance rate, and that percentage applied to the rates of our Group Plan when it was organized in 1921. During the intervening years the Society and this board have continuously and successfully pressed for reductions in this factor of the cost.

As a result, while the cost of operating all other business enterprise in the country has been increasing by leaps and bounds, the ratio of cost of operating our Group Plan has been steadily reduced until it has reached an all-time low of 21.5 per cent. The importance of this is illustrated by the fact that, were it not for this reduction in our expense ratio, our average rate for the two sections of the State would be respectively $38.50 and $22 higher than at present.

The board can and has carefully watched the trend of our loss experience by classes and endeavored to devise a classification system that would fairly and accurately distribute the cost to the various classes in proportion to the loss hazards represented by each.

In 1951 the board recommended and the House of Delegates approved a division of medical practice between surgical and nonsurgical, fixing the dividing point at 5 per cent of surgery including other specified procedures, leaving it to each member to classify properly his own practice. This plan has not proved satisfactory for two important reasons.

First, it has not been self-policing. The overwhelming majority of members classified their practice as accurately as possible, but too many of them were honestly in doubt as to which group they belonged in. An unknown number, perhaps only a few, whose practice should have been classified as surgical, undoubtedly represented it as nonsurgical in order to avoid paying a surgical rate.

Second, the differential in rates between the surgical and nonsurgical classes was far too great, particularly as between those members whose surgical practice exceeded 5 per cent by a small margin and those who devoted all or most of their practice to surgery. After two years experience, which admittedly is inconclusive, the Board has decided that this method of classification and rating should be abandoned and that a new approach to the problem should be found. A great deal of thought and study was devoted to a search for a better solution, and the Board now recommends that, except in emergencies, all surgery requiring an anesthetic, transfusions, obstetrics, anesthesiology, and orthopedic procedures be excluded from the policy, the same as x-ray and electroshock therapy and cosmetic plastic surgery. Each member can then buy the particular coverage he desires at the rate applicable to the class he selects. To accomplish this, the board recommends that the following exclusion be incorporated in the policy contract, effective September 1, 1954:

> "Exclusion (*d*) Except to the extent that liability is specifically assumed therefor by a premium charge in his certificate of insurance, arising out of
>
> (1) the performance of any cutting or probing procedure, regardless of the instrument used, in which a general or local anesthetic of any kind is administered to a patient, transfusions, obstetrics, anesthesiology, and orthopedic procedures, but this exclusion shall not apply to (*a*) such immediate relief as shall be imperative at the time of an accident or (*b*) to unforeseen or unforeseeable emergencies when a qualified surgeon or specialist is not obtainable or cannot be obtained with reasonable effort."

The board further proposes and recommends that all medical practice be divided into three general classes as follows:

> *Class I. Major Surgery.*—Major surgery shall include anesthesiology, operative obstetrics, and, regardless of the instrument used, shall also include cutting or probing into any cavity or sinus of the head, neck, throat, chest, abdomen, spine, anus, or genital organs; incision or excision of the breast, thyroid, or any other gland of the body; amputations of any kind, open orthopedic procedures, nerve blocks, nerve and vascular surgery, removal of excess adipose tissue and skin grafts.

The doctor who selects this form of coverage will be protected on account of all medical and surgical procedures except x-ray and electroshock therapy and cosmetic plastic surgery.

> *Class II. Minor Surgery.*—Minor surgery shall include uncomplicated obstetrics, transfusions, and shall also include any cutting, probing, or other surgical procedure not classified as major surgery, regardless of the instrument used.

A doctor who selects this form of coverage will be protected on account of uncomplicated obstetrics, transfusions, and all medical and surgical procedures except those included in the definition of major surgery, x-ray and electroshock therapy, and cosmetic plastic surgery.

> *Class III. Nonsurgery.*—Nonsurgery shall include all medical procedures except those included in the definitions of major and minor surgery, x-ray and electroshock therapy, and cosmetic plastic surgery.

A doctor who selects this form of coverage will not be protected on account of any procedure classified as major or minor surgery or any one of the three excluded specialties.

Many attempts have been made to define the difference between major and minor surgery, and it is understood that the above classifications are not perfect. It may be that the definition of major surgery will have to be amended from time to time in the light of experience. It is also understood that until the foregoing definitions shall have been revised and made known to the insured doctors concerned, the Group Plan will be obliged to accept liability for those cases which are not clearly classified by these definitions. The board believes, however, that this is a long step in the right direction and that the Society will be better off by adopting this classification system, even if it proves to be not more than 90 per cent correct.

For minimum limits of $5,000/$15,000 the following rates will be necessary:

		Metropolitan	*Upstate*
Class I	Major Surgery	$226	$119
Class II	Minor Surgery	126	65
Class III	Nonsurgery	76	40

Surcharges for excluded specialties:

	Metropolitan	*Upstate*
Superficial x-ray therapy	$ 10	$ 10
Deep and superficial x-ray therapy	20	20
Electroshock therapy	55	55
Cosmetic plastic surgery	30	30

These surcharges are the same as those now in effect except that for electroshock therapy, which has been reduced $20 because of the improved loss experience of that specialty.

The contingent loss factors have been reduced $5.00 for both areas in the State, and this reduction is reflected in the class rates noted above for both the metropolitan area and upstate counties.

The board recommends the approval of the foregoing exclusions, classifications, rates, and surcharges.

The board can and has watched the changes which have developed in the modern practice of medicine and studied the effect that those changes have had upon the potential loss experience of the Group Plan. One of these changes concerns anesthesiologists. Specialists in this field are insisting that hospitals employ only anesthesiologists to administer anesthetics and have raised the question of practicing medicine without a license by nurse anesthetists. Since there are not enough licensed anesthesiologists to go around, those who have been installed in hospitals have been obliged, in many instances, to employ nurse assistants to do precisely the same work to which they objected so strenuously when the nurses were employed directly by the hospitals.

The board has no desire to inject itself into any controversy that may exist between the anesthesiologists and the hospitals, but neither does it want the Group Plan to be burdened with the liability for the acts of nurse-anesthetists employed by insured anesthesiologists. Therefore, the board proposes and recommends that the following exclusion be approved for incorporation in the policy contract effective September 1, 1954.

> "(*e*). On account of the acts of any person, other than a licensed physician, employed by an anesthesiologist in administering an anesthetic agent."

As will be seen, this does not apply to surgeons or obstetricians who employ their own obstetric or operating room nurses but solely to anesthesiologists who employ persons, other than licensed physicians, to give anesthetics.

The board can and has examined with care the qualifications and attitudes of insured members as indicated by the number or character of the losses caused by them and has ordered the discontinuance of the insurance of those deemed to be unduly hazardous risks to the Group Plan. This had been done under authority granted by the "Regulations Governing Malpractice Defense and Group Insurance" adopted by the House of Delegates April 3, 1933, and amended on December 13, 1945, and in May, 1951.

In its report to the House of Delegates last year, the board pointed out that 37 per cent of the suits analyzed had as their underlying reason the action of members who sued dissatisfied patients to collect their fees before the statute of limitations had expired for a malpractice suit and by those who unjustly and unnecessarily criticized the work of other doctors. Therefore, when insured members in either of these two groups can be definitely identified, it is proposed to invite them to meet with the board and to apply to them the same tests that are now employed with respect to others whose insurability is under consideration.

There seems to be no excuse for a doctor who, before the statute of limitation for a malpractice suit has run, institutes a suit to collect his fees from a patient known to be dissatisfied with his treatment or one who could be easily identified as such. The statute of limitation for a malpractice suit is normally two years, while the time in which a doctor may sue for his fee is six years. Except in a few special cases, it is not good medical-public relations for a doctor to sue a patient at any time, and it is certainly very bad policy to sue a dissatisfied patient until the time has expired in which a counter suit may be filed.

Regardless of the outcome of a counter suit, most of them cost the Group Plan something to dispose of, and not infrequently this amounts to more than the doctor's bill. When this has been pointed out to the doctors involved, some of them have boldly suggested that, in the circumstances, the Group Plan should pay their bills and have done with it. Members who in this manner wilfully add to the rate of incidence of suits and burden their fellow members with the cost of defending unnecessary suits should not be acceptable for insurance in the Group Plan.

Of the cases discussed in last year's report, 14 per cent were identified as having been caused by doctors who unjustly and unnecessarily criticized the work of fellow members. It is understood, of course, that every doctor has an obligation to explain to his patients his diagnosis and the treatment he believes should be given, and nothing should be permitted to abridge that obligation. On the other hand, there are too many doctors who make it almost a regular part of their practice to criticize the work of other doctors at every opportunity without regard to the facts or the consequences of their acts. Frequently, such men are more to blame for malpractice suits than are the defendant members. Denying insurance to such critics will not cure them of this questionable practice, but it will convince them, as perhaps nothing else could, that they are not regarded as worthy of protection under the Group Plan.

To reach these and other offenders the board recommends that the authority cited above be amended to read as follows:

> "When it shall appear to the satisfaction of the Malpractice Insurance and Defense Board that the medical procedure, conduct, or attitude of an insured member is such as to constitute an undue hazard to the Group Plan of insurance, the board shall have the right to withdraw from such member the privilege of renewing his indemnity insurance in the Group Plan or to cancel it."

Whenever the board finds it necessary to discontinue the insurance of a member for any reason, the name of that member should be reported to his county society.

Last year there was one suit or claim for every 30 insured members; this year there was one for every 25 policy holders. During the last few years the average cost of disposal has increased over $500 per case, with corresponding increases in the reserves for those outstanding and those still to be reported. Since there is not the slightest indication of any diminution in the rate of incidence or cost of disposal, we must frankly face the question as to what our situation will be five years or even one year from now.

Increased insurance rates, of course, are only mathematic expressions which mark the continued deterioration of our relationship with the public, but, like a moving finger, they write upon the wall in ever-increasing size a warning that medical men must arouse themselves to effective action or find themselves without dependable malpractice insurance protection.

It cannot be said that the efforts of this board have accomplished nothing, but it is obvious that these efforts have not been enough to have any appreciable effect upon the situation. It is now up to the House of Delegates and the county societies to do something more than note the reports of this board and deplore the deterioration of the situation which makes its warnings necessary. Raising our rates from year to year is no cure; this will merely price our protection out of the market. It is only by strong concerted action on the part of the House of Delegates and the component county societies that we can get at and eliminate those who are responsible for our plight.

Thousands of fine, competent members of the Society have never been threatened with a claim or suit throughout their professional lives. They, however, are the ones who are made to suffer, by reason of lowered public respect for our profession and increased insurance costs, by a few hundred doctors in their midst whose acts they cannot approve or condone. Yet this handful of doctors is allowed to continue, year after year, to misconduct themselves and their practices in every community without let or hindrance by the great majority of the members who are the real sufferers for their misdeeds.

Malpractice cases and the defense of them should no longer be considered as the sole concern of the defendants involved and this board. These matters must be made the business of all the members in every county. The House of Delegates should use its great influence to have established in every county at least one malpractice defense committee with authority to call in such specialists as may be needed to assist them. It should recommend that each county society amend its bylaws so as to require its members to report promptly every suit or claim or threat of one to the local committee and to obtain from this board similar reports received by it. These committees should be authorized, with the help and advice of our legal staff and a claim representative of our company, to investigate all matters reported to them, to consult with our legal representative as to how cases should be disposed of, to help work out theories of defense, to help secure defense witnesses, and to recommend to their societies and this board what action, if any, should be taken with respect to the insurance of the defendants.

After the board's report was approved by the House of Delegates last year, letters suggesting the appointment of malpractice committees were sent to each of the 61 county societies with a request that the secretary of this board be advised as to the names of the committee members and the address to which information from this board should be sent. Only 23 replied! Perhaps committees were organized in some of the other counties, but this board was not notified of the fact although their committees can accomplish little or nothing except through close association with this board. For that reason the board recommends that the House of Delegates direct that the name of county malpractice committees be changed and that they be designated as Advisory Committees on Malpractice Defense to the Malpractice Insurance and Defense Board. It further recommends that the House of Delegates authorize and direct the board to appoint, with the consent of the appointees, such advisory committees in counties which fail to establish them upon their own motion.

It is only through open and concerted action of this kind that county society members can learn what is going on in their own door yard, the number of suits and claims filed, which doctors are causing them, and assist in devising a way to reduce them. The conscientious doctor who makes an honest mistake will have nothing to fear from this program; he will receive sympathetic understanding and help. But offenders such as those listed in our report of last year will hesitate before committing rash, selfish, or unworthy acts if they know that cases against them will be reviewed in detail by a committee of fellow members in their own county societies.

Attention is again invited to the activities of those members who apparently believe that the cure for all of our ills is to find a different carrier for our insurance—some other company whose rates, for the time being at least, would be cheaper than those we are now paying. To believe that, one would have to conclude that the members of this board were incredibly stupid or worse. If the solution were as simple as that, can any member of the Society believe that this board would not have known about it and recommended it to the Society a long time ago?

The facts are that every dollar paid out is accounted for by vouchers checked and signed by our legal counsel and audited by the independent actuaries employed for that purpose by the Society. Every item of loss reserve is either checked by our counsel or computed by the actuaries. The sum of these together with a minimum addition for operating expenses represents the total cost of our insurance. This is the amount of money we must pay for our protection, and no insurance organization in the world with an expense ratio equal to or higher than that of our Group Plan can insure 15,000 members of the Society and lower that cost one whit. To believe that this can be done is a chimeric view born of wishful thinking.

There is no form of insurance more difficult to write or to rate correctly than malpractice, and there are probably less than ten companies in the entire country that have any intimate knowledge of the problems involved. It is most unlikely that any reliable company or organization could be found that, in the face of our carefully tabulated and recorded loss experience, would be willing to undertake our insurance at lower rates. However, if such a company were found, its lower rates would be maintained only long enough for it to learn the true cost of the insurance in this State. At that time we would be obliged to pay whatever rates were demanded or shop around for another company. That is the road to ruin, and this board will not be a party to such a program because it would bring discredit upon the good name of the Medical Society of the State of New York.

After our futile excursions after cheaper rates had failed, we would not have the Group Plan to fall back on because, like Humpty-Dumpty, if the Group Plan were allowed to disintegrate, it could never be put back together again. What price cheaper rates then?

If the proponents of cheaper rates in any company that will take them would devote as much time to ascertaining the causes of our increasing loss ratio and would expend as much effort in helping to eliminate them as they do in seeking a cheaper market for their insurance, they would have no need to look elsewhere because, to paraphrase a wise remark made by Cassius, the fault is not in our carrier but in ourselves.

In closing, the board wishes to extend its thanks and appreciation to the officers and staff of the Employers Mutual Liability Insurance Company for their patient assistance and for their steadfast confidence in the Medical Society of the State of New York and its determination to work out some mutually satisfactory solution of our difficult problem. Every insured member of the Society has ample cause to be grateful to this fine company and to those who direct it.

Respectfully submitted,
Christopher Wood, M.D., *Chairman*

Addendum—The following recommendations to the House of Delegates have been made in this report:

1. Approval of a proposal to exclude surgery and other procedures from the policy contract, a new classification system, new rates, and surcharges.
2. Approval of a proposed exclusion of certain persons employed by anesthesiologists.
3. Approval of a proposal to extend the authority of the board to discontinue the insurance of certain members.
4. Approval of a proposal that the House of Delegates use its influence to induce each county society to establish malpractice defense committees to be known as Advisory Committees on Malpractice Insurance and Defense to the Malpractice Insurance and Defense Board.

Section 14 (See 113)

Supplementary Report of the Council Committee on Public Relations

To the House of Delegates, Gentlemen:

The Council Committee on Public Relations met on April 8, 1954. The subcommittee, appointed by Dr. Andrew A. Eggston, president, to develop a code of cooperation between the press, radio, TV, photographers, magazine writers, and other organized means of public information, submitted the following report.

> *To the Council Committee on Public Relations, Gentlemen:*
>
> The chairman received from Mr. Miebach copies of several codes of cooperation (hereafter referred to as "Guide for Cooperation") that are in existence in other states. From these an original draft was prepared by the chairman and sent to the members of the subcommittee for their consideration. It was also distributed to representative persons in all the fields of public information. Comments and criticisms received by the subcommittee were then tabulated and incorporated into the document.
>
> As a result of this distribution, Mr. Burrows Matthews, president of the New York State Society of Newspaper Editors, invited the sub-

committee to participate in a panel discussion at the annual midwinter meeting of this society. Because the meeting was held in Buffalo, Dr. Naples was requested to join in this discussion.

Unfortunate publicity resulted from this meeting because of the coincidence of an attempt by law enforcement agencies and the legal profession to withhold news from the press. The initial reaction by the editors was that this document would be a further restriction. The sentiment at this meeting among the editors was mixed, but they did adopt a resolution (Appendix A) and appointed a committee to advise and consult with your subcommittee.

From the advice and suggestions received from this group, further changes were made in the document, which received consideration by the subcommittee on February 12. From the advice received from Dr. Givan, of our State Society, Mr. Bach, of the A.M.A., and suggestions from others who attended this meeting, we further modified our instrument.

On the afternoon of February 12, about 35 representatives from the hospital associations in this State, the reporters' association of New York, the photographers' association, the Society of Magazine Writers, representatives from the metropolitan newspapers, radio and television stations met with representatives of the Medical Society of the State of New York and the subcommittee. Many valuable suggestions were presented by this large group, and a transcript of the remarks has been prepared and distributed to those who attended this meeting. A further revision of the guide was then undertaken.

On March 12 a series of meetings was undertaken by the subcommittee, who met with representatives from radio and television in the morning and the Society of Magazine Writers in the afternoon, and on March 13 with representatives from the hospital associations and the advisory committee from the New York State Society of Newspaper Editors. The suggestions of this series of meetings were incorporated in the guide, which has then been corrected by the subcommittee and in its latest form is before you today.

On request of Dr. Harold B. Davidson, the chairman conferred with him at his home on March 13.

Dr. Davidson outlined the background of the origin of the resolution that was adopted by the House of Delegates that brought this subcommittee into being. He indicated to your chairman that the basic thought behind this resolution had been to prepare a document that would be of assistance to doctors in their relations with the press. It was curious that Dr. Davidson had indicated this background without knowing that the discussions of March 12 and 13 had led the committee to designate the document as being prepared for the members of the State Society.

Your subcommittee respectfully requests that the Public Relations Committee approve the "Guide for Cooperation" as presented here (Appendix B). We recommend that it be introduced into the House of Delegates at the annual meeting with the resolution that is appended hereto.

As a result of its experiences to date, the subcommittee feels very strongly that future discussions of mutual problems must be undertaken by a committee of the State Society on a semiannual basis. It is recommended that these meetings be held with small groups. In this way the peculiar problems that exist for the newspaper reporters, the newspaper editors, the science writers, magazine writers, radio and television representatives will not be lost in a large meeting.

Because most of the magazine writers are in New York City, it was suggested that the State Society through its Bureau of Public and Professional Relations develop a panel of specialists in all fields of medical practice who are capable and qualified to review magazine articles and check them for accuracy. Such individuals should be capable of accepting critical reports and advise the editor only with regard to the scientific correctness of the writer's statement. If this panel were developed and properly used, it might well become the means of suggesting improvement in magazine articles and of suggesting to the editors a title for such articles that might be less irritating to the profession of medicine. It was pointed out in these discussions that at the present time the medical profession is held in contempt by a large segment of the writers' group, because of the pettiness and internal jealousies that exist within the profession.

When endorsed by the House of Delegates, it is urged that the Public and Professional Relations Bureau be instructed to supply all branches of the media of public information with the names of the designated spokesmen in the State Society, who will be available for consultation with representatives from such media.

Your subcommittee urges that suitable funds be made available for the continuation of these extremely important functions.

Your subcommittee recommends that a copy of the proposed guide, when endorsed by the State Society, be sent to every member of the State Society.

The subcommittee further recommends that a special letter be sent to each county society president and the chairman of each county society public relations committee urging that they undertake a series of meetings with representatives from the media of public information in their communities, if they have not already done so.

Your subcommittee strongly recommends that a subcommittee be perpetuated to maintain the liaison that has been established and to endeavor to improve upon the goodwill that has thus far been developed.

Respectfully submitted,

JOHN C. MCCLINTOCK, M.D., *Chairman*

Henry I. Fineberg, M.D.
John D. Naples, M.D.

The Council Committee on Public Relations voted unanimously to approve the report of the subcommittee, and the committee recommends its approval by the House of Delegates.

Respectfully submitted,
Floyd S. Winslow, M.D., *Chairman*

APPENDIX A

Resolution Adopted by New York State Society of Newspaper Editors on February 3, 1954

It is the opinion of this society that

(*a*) No joint code of ethical procedures can be drawn to regulate the conduct of two groups in such unrelated fields of endeavor as the medical and journalistic professions.

(*b*) Neither profession can conscientiously submit to the effort of any other professional group to establish a code of conduct which will be binding upon it. Any such code must of necessity, to be effective, spring from voluntary action within the group itself.

(*c*) Nevertheless, appreciating the good will and cooperative spirit demonstrated by the appearance of spokesmen for the Medical Society of the State of New York, we hereby authorize the president of this society to name a committee which will advise and counsel with the medical society at their call in the latter's efforts to clarify the relationship which should exist between the medical profession and the press.

(*d*) We urge that in such an exchange of ideas the medical society fairly recognize at all times that the press itself is equally interested in health and humanity and can be trusted to safeguard such objectives by its own long accepted ideals and principles of decency, good taste, and honesty.

APPENDIX B

A Guide for Cooperation

Prepared by the Medical Society of the State of New York, the Hospital Association of the State of New York, and the Greater New York Hospital Association to assist their members in their relations with representatives of the media of public information. Acknowledgment is gratefully made to representatives of these media, who gave advice on the development of this guide.

Purpose—The purpose of this guide is to promote a greater and smoother flow of medical news from the medical profession and hospital associations to those who collect and disseminate such news. It is mutually agreed that the primary responsibility of the doctor and the hospital is the welfare of the patient. It also is agreed that the media of public information exist for the common good and function to bring matters of general interest to the public quickly and correctly. Within the framework of this guide, county medical societies and local hospitals may wish to make adjustments in its provisions to facilitate cooperation with the media of public information in their communities. With these understandings in view, the following considerations are given.

Doctors of Medicine.—1. The officers, committee chairmen, or designated spokesmen of a medical society in the State of New York shall be available at all times to the press, radio, and television in order that authentic information on medical subjects can be obtained as promptly as possible. The Public and Professional Relations Bureau of the Medical Society of the State of New York is available to representatives of all media of public information to assist them in any way possible. Medical societies shall urge all doctors who become aware of new developments in the field of medical science to make such facts available for public information, through proper officials of their county or State medical society.

2. Editorial executives of newspapers, radio and television stations, and magazine editors frequently find it necessary to obtain information for dissemination to their readers or listeners. To facilitate obtaining of such information, the medical societies may furnish them with a list of physicians from whom authoritative information may be obtained. Every effort should be made to supply the names of physicians qualified to speak in their respective fields.

3. These spokesmen may be quoted by name and title. This shall not be considered by their colleagues as seeking self-publicity, since it is done in the best interests of the public and the profession.

4. Publications of photographs of speakers who appear before recognized medical organizations, either in the official program of the scientific meeting or in the public press in connection with such meeting, shall be acceptable. The use of photographs in the press when physicians are elected to office or when physicians are quoted by name on matters of general interest, not related to the care of a specific patient, is likewise acceptable. Photographs of physicians in general or society news, not related to medical news or the care of patients, shall be acceptable unless the frequency of such photographs bespeaks self-exploitation. This applies also to magazine articles. Physicians should clear such publicity, whenever possible, with their county society.

5. At all times the doctor of medicine is expected to comply with the *Principles of Professional Conduct*. It shall be the responsibility of the board of censors of each county society to see that these principles are not violated.

6. Doctors of medicine are compelled to protect the inalienable rights of the personal privacy and legal rights of patients. The doctor-patient relationship with its confidential communications must be maintained. The physician must safeguard his own right of privacy to avoid legal retaliation. With these considerations in mind the physician should assist the representatives of these media in every way possible.

7. When information concerning a specific patient is requested, the physician should obtain the consent of the patient before releasing such knowledge. The patient's decision is final under the law. Embarrassment and irritation may be prevented if the physician discusses the request for information with the patient. Where a person of public interest is involved, the physician should arrange for regular bulletins concerning the personage. The physician of high ethical standing will use good judgment regarding the use of his name in connection with such published reports.

8. For purposes of clarity the Medical Society

outlines the following principles to guide physicians who appear on TV or radio programs:

(*a*) Doctors of medicine are expected to refrain from sponsoring products directly or by implication that are not accepted by the medical profession; i.e., patent medicines.

(*b*) When introduced as a doctor, such individual cannot escape the implication of representing the medical profession, and his conduct should be in keeping with the high standards of the profession.

(*c*) Sound judgment, good common sense, and adherence to the *Principles of Professional Conduct* are expected of any physician when appearing on radio or television in whatsoever capacity. It is the responsibility of the county society board of censors to discipline its own members who violate these fundamental qualities.

9. Doctors of medicine, other than officially designated spokesmen, when approached by representatives of the press, radio, television, science or magazine writers for information relating to scientific subjects are urged to comply with such requests. In cases where premature release of scientific information is a concern, a frank discussion of the problem is suggested between the doctor and the press representative.

Hospitals.—A. GENERAL PRINCIPLES AND PROCEDURE:

1. Each hospital shall have available at all times an authorized spokesman to answer inquiries from public information media.

2. The names of the designated persons, telephone numbers, and hours when available should be made known to the telephone operators, admitting departments, information desks, nursing supervisors, emergency departments, and others who are likely to receive calls from newspapers or reporters.

3. Similarly, the names, telephone numbers, and hours when available of these spokesmen should be filed with the press, radio, and television.

4. Information shall be provided to news agencies as rapidly as possible without interfering with the health, privacy, or legal rights of the patient or jeopardizing the hospital-patient relationship.

5. Information relative to the activities of the hospital should not be designed to secure comparative advantage over other hospitals or personal advancement of any individual.

6. Information relative to research and scientific projects should not be made without the consent of the administration and the individual or individuals involved nor in any manner to conflict with the ethics of the professional group concerned.

B. INFORMATION TO BE GIVEN TO NEWS AGENCIES:

1. Hospitals shall give the name of the attending doctor when so requested by the media unless such physician in advance requests that he not be identified.

2. When newspapers request the photographing of a patient in the hospital, such permission shall be given if the patient consents and if the attending doctor decides the patient's condition or interests will not be jeopardized. If the patient is a minor, permission of parents or guardian must be obtained unless the minor is "emancipated." If the minor is of sufficient maturity, his consent should also be secured. No pictures will be permitted of unconscious patients or patients suffering from severe facial injuries.

3. The death of a patient is presumed to be a matter of public record and shall be reported by the hospital without the diagnosis or cause of death.

4. Hospitals may give information concerning births in accordance with local practice.

5. The admission of a patient may be acknowledged and the general condition stated.

6. Emergency cases: Hospital may give name, age, address, occupation, sex, nature of accident, as automobile, explosion, shooting; general extent of injuries, such as injury to leg, arm, etc.; burns, wounds, and part of body. A definitive diagnosis or prognosis should not be expressed.

7. In cases of poisoning, stabbing, attempted suicide, or other similar occurrences, no motives or opinions of motives should be given. Attempted suicide should not be characterized as such.

8. No statement should be made as to whether or not a patient is intoxicated.

9. If a patient is unconscious when he is brought to the hospital, a statement of this fact may be made without indicating the cause of the unconsciousness.

Press, Radio, Television.—1. Press, radio, and television newsmen, science and magazine writers recognize that the first obligation of the doctor and the hospital is to safeguard the life, health, and legal rights of the patients. Conversely, the doctor should be aware of the existence of the "Canons of Journalism" and of television and radio codes under which all responsible members of such media function. Within the framework of this guide and the medical profession's code of ethics, physicians are urged to be less reluctant to discuss problems with representatives from any branch of the media of public information.

2. It is desired that the media of information know that the medical profession and hospital associations prefer no publication, broadcast, or telecast of information designed solely to exploit the patient, the hospital, or the doctor.

3. When official medical society spokesmen are available, it is suggested that on medical news a check for local tie-in will be considered before proceeding to local broadcast, telecast, or publication.

4. It is desirable for representatives of the media of public information to understand why there are limitations placed upon the doctor of medicine and the hospital with regard to the release of information.

This guide will be reviewed and renewed annually or more often, if necessary.

Section 15 (See 98, 161, 165)

Supplementary Report of Council Committee on Public Health and Education

To the House of Delegates, Gentlemen:

Your Council Committee wishes to make the following report as a supplement to its regular annual report, submitted in February, 1954.

Subcommittee on Diabetes.—Considerable interest in diabetes programs has been manifested by various county medical societies and other groups of physicians in New York State. A meeting will be held on May 12, 1954, at 4 P.M., of the Subcommittee on Diabetes and representatives of these groups interested in establishing local diabetes associations.

Subcommittee on Heart Disease.—A resolution is being presented to the House of Delegates proposing a study of the cardiac in industry. The committee also recommends that a session be devoted at the 1955 Annual Meeting to the problems of the employment of cardiacs.

Subcommittee on Maternal and Child Welfare.—This committee is planning a comprehensive study of cesarian section throughout the State on the basis of statistical information and follow-up in each of the twelve regions. A meeting of the committee and of the regional chairmen is contemplated for September.

Subcommittee on School Health.—A resolution sent to the State Society by the New York State chapter of the Academy of General Practice and referred by the Council to the Committee on Public Health and Education was taken under consideration by the Subcommittee on School Health. On February 28, Dr. Ayling, the chairman, reported that the resolution had been approved unanimously, and the Council endorsed the resolution at its March 11, 1954, meeting. It provides for the setting up of standards and qualifications for part-time school physicians through the collaboration of the New York State Education Department with the Medical Society of the State of New York, the New York State Association of School Physicians, and the Academy of General Practice. It also urges a four-year term for such positions and the formulating of equitable salary standards.

The subcommittee has reviewed for the State Department of Health its folder on pediculosis and has submitted suggestions for improvement in the text.

Dr. Ayling and your Council Committee chairman have been elected to the Advisory Council on School Health Services to the State Education Department, for a term of five years commencing January 1, 1954.

Subcommittee on General Practice.—1. A meeting of the subcommittee was held on April 14, 1954, in the State Society's offices. A health examination form on which the committee had been working for some time was approved as a sample specimen to be mailed to every physician in New York State for the purpose of stimulating routine physical examinations in the doctor's office. It was suggested that every county medical society should assume responsibility for printing and supplying its own members with further blanks upon request from the individual physician.

A progress report was made on replies to the questionnaire circulated in February among some 125 voluntary hospitals in the State relative to the status and privileges of the general practitioner in these institutions.

At this meeting the subcommittee went on record as desiring the continuation of the Special Committee to Study the Needs of the General Practitioner. The committee also expressed opposition to its being transferred to the jurisdiction of the Committee on Hospital and Professional Relations, as recommended by the Planning Committee for Medical Policies. They proposed to present a resolution to the House of Delegates relative to this.

2. In May, 1951, a resolution was introduced and passed at the House of Delegates requesting a survey of the status of the general practitioner in New York State hospitals. A questionnaire was devised by Dr. Seymour Fiske and Dr. Samuel A. Garlan and sent to about 125 voluntary hospitals in New York State. (A copy of the questionnaire and of the accompanying letter are attached.) The following comments were made by Doctor Fiske:

(*a*) The questionnaire stimulated an unusually high percentage of returns.

(*b*) It is self-evident that the situation of the general practitioner varies inversely to his location: He has the fewest restrictions in strictly rural areas; he has moderate restrictions in moderate sized towns; he is at present almost completely restricted in the large urban centers such as New York City.

(*c*) It is this restriction in the large urban centers that works a hardship on the public as well as the general practitioner by artificially increasing the cost of medical care to the public by specialists alone. General practitioners are not even wanted, so state 13 big urban hospitals in New York City out of 100 answers received from hospitals throughout New York State.

In numerous instances, particularly in large urban areas, the hospitals object to general practitioners even in the outpatient departments, and general practitioners are compelled, in order to secure and maintain hospital affiliations, to misrepresent themselves as specialists.

It is doubtful whether such subterfuge is conducive to a mutually beneficial hospital-physician relationship or really contributes to or furnishes the public with the best possible medical care. If a physician wishes to be a general practitioner, he should not be penalized for it; instead the hospitals should encourage him to be a better trained and well-rounded general practitioner to the general betterment of the community health.

(*d*) About one third of the hospitals indicated that they already have general practice departments.

(*e*) Approximately one third indicated they were willing to establish general practice departments, but most of these were upstate New York hospitals; only three were willing from among the Greater New York hospitals.

(*f*) Paradoxically, two hospitals stated that their staffs voted against such a department but failed to give: (1) how the vote was taken or (2) the reason for the negative vote.

(*g*) Finally, in the committee's opinion, the results of the questionnaire clearly indicate that the general practitioner is increasingly subject to a limitation: (1) in his hospital contacts generally—especially in the large urban centers; (2) in his own clinical hospital educational opportunities—in furthering his own medical skills and technical efficiencies; (3) in his capacity to give his patients a continuing high quality of general medical care.

State Department of Health.—1. At the request of the State Health Department an advisory committee on poliomyelitis prevention has been named and approved by the Council (April 8). This committee consists of Dr. Thurman B. Givan, member of the Council and of the scientific advisory committee of the City Health Department; Dr. Thomas Rivers, also a member of the latter body and director of the Rockefeller Institute for Medical Research; Dr. Tyree C. Wyatt, chairman of the Department and professor of pediatrics at the State University of New York College of Medicine at Syracuse. They have collaborated with the Health Department officials in drawing up a plan for distribution of gamma globulin for the 1954 season. This is based in part upon the recommendations of the Office of Defense Mobilization, the final decision as to its use in the local area resting with the health officer of the locality. The advisory committee is also making recommendations as to the administration of the Salk vaccine. The Department has stressed the fact that every possible safeguard has been taken to assure the safety of the vaccine being used in New York State.

2. At the joint meeting of the Council committee with the State Department of Health on April 2, 1954, Dr. John J. Bourke, executive director of the New York State Joint Hospital Survey and Planning Commission, was present. The proposed amendment to the Hill-Burton Law was discussed. This covers the establishment of chronic disease units, nursing homes, diagnostic centers, and rehabilitation centers with an appropriation of $150,000 from the Federal government. The broad plan is to center these services around voluntary hospitals. At the Council meeting of April 8, 1954, it was voted to appoint a committee composed of the medical men on the various regional hospital councils of the State, in conjunction with the chairman of the Planning Committee and the chairman of the Public Health and Education Committee, for the purpose of studying the amendment to the Hill-Burton Law.

Matters Referred from the House of Delegates, 1953.—1. USE OF TELEVISION IN MEDICAL EDUCATION (*Section 144*)—The evidence shows that even with the availability of channels given over to education the cost would be prohibitive. This would seem borne out by a statement made recently by Governor Dewey that if interested persons did not take advantage of these channels very soon, they would be taken over by commercial organizations.

2. MENTAL HYGIENE (*Section 212*)—It has been found that the principle of introducing the study of mental health "from a positive standpoint" into the medical schools is being worked out on the national level. In the light of recent legislation establishing local mental health boards throughout the State we anticipate that in a large measure the educational program at the local level will be taken care of.

3. FIBRINOGEN SUPPLY (*Section 215*)—While fibrinogen is still in short supply, within the last six months more of the material is coming onto the market at a lower price.

4. GERIATRICS (*Section 190*)—The committee was unable to carry out this recommendation because it lacked knowledge of persons throughout the State whom it might appoint. The committee would appreciate receiving information about members of the Medical Society who might be willing to serve on this subcommittee on a regional basis.

5. LEGALIZING THE DISTRIBUTION OF NARCOTICS (*Section 109*)—Dr. Herbert Berger, author of the resolution, was granted a conference with Dr. Ernest Gruenberg, executive director of the Mental Health Commission of New York State. It was Dr. Gruenberg's feeling that narcotic addicts should be treated in mental health clinics and that separate clinics may not be necessary. Since the passage of the Mental Hygiene Bill it seems likely that clinics may be established throughout the State where addicts could apply for treatment.

Subsequent to this meeting Dr. Gruenberg took up with the Mental Health Commission Dr. Berger's request that it endorse the resolution. Dr. Gruenberg has reported that the Commission did not consider it their function to form conclusions regarding proposals which are under consideration by medical societies or similar bodies.

APPENDIX A

Dear Doctor:

A resolution was introduced and passed at the House of Delegates of the Medical Society of the State of New York in May, 1951, requesting a survey of the status of the general practitioner in all hospitals in the State of New York. Furthermore, the resolution called upon the State to make every effort possible towards the integration of the general practitioner into the hospitals of the State of New York.

This resolution was referred to two separate and individual sources for further study: (1) the Subcommittee on General Practice of the Council Committee on Public Health and Education of the Medical Society of the State of New York and (2) a Special Committee to Study the Needs of the General Practitioners of the State of New York (this is a long-term committee created by the Medical Society of the State of New York to make a thorough and comprehensive study of general practice in this State).

As stated in the enclosed questionnaire, there are not objections on the part of the American Medical Association, the Advisory Board for Medical Specialties, or the American College of Surgeons to the formation of a general practice section in the voluntary hospitals. Furthermore, the A.M.A. and the American College of Surgeons have specifically stated, by resolutions, that a general practice section per se in the hospital would not prevent obtaining the approval of that hospital for training of interns and residents. Numerous resolutions have been passed by the A.M.A., urging the establishment of general practice sections in the hospitals. To date, over 1,700 hospitals in the United States have established general practice sections.

Many meetings have been held, and considerable time and effort have been devoted by the two aforementioned committees to studying the problems of the general practitioners. The two outstanding problems which would seem to demand the most attention are as follows: (1) continued or postgraduate education for the general practitioners; (2) integration of the general practitioner into the hospitals. (In the Greater Metropolitan area alone, over

2,500 doctors have no hospital appointments at this time. See report on the Hospital Council of Greater New York).

Furthermore, it was found that hospital integration and continued education for the general practitioner were closely interwoven and must be thought of in the same vein since, as stated so capably by Dr. Norman Moore in his article, "Responsibility of Hospitals to Doctors in the Community" in the NEW YORK STATE JOURNAL OF MEDICINE, volume 50, July 1, 1950, the modern hospital is the center of education for the physician of today. The physician excluded from the hospital staff must, of necessity, deteriorate, with the resultant effect of inferior medicine to the community.

The questionnaire which is enclosed represents the implementation of one of the recommendations directed toward solving the problems mentioned above. Your cooperation and assistance are requested in filling out the enclosed questionnaire, which has been sent to the presidents of the medical boards of all voluntary hospitals in the State of New York.

Anticipating an early response, and thanking you in advance for your cooperation,

Sincerely,
THEODORE J. CURPHEY, M.D., *Chairman*
Council Committee on Public Health and Education

QUESTIONNAIRE TO VOLUNTARY HOSPITALS

The Subcommittee on General Practice of the Council Committee on Public Health and Education of the Medical Society of the State of New York is conducting a survey relative to the opportunities available for general practitioners in hospitals in New York State.

In 1945 the House of Delegates of the American Medical Association expressed approval of the establishment of a Section on General Practice of Medicine, and approved the organization of sections on general practice in county societies. In 1946 the House urged the establishment of general practice sections in hospitals not having them. It was urged that appointments of the general practice section be made by hospital authorities on the merits and training of the physician. The House gave assurances that such a general practice section per se would not prevent approval of a hospital for the training of interns and residents. Furthermore, there are no objections from other approval agencies: the Advisory Board for Medical Specialties or the American College of Surgeons. Therefore, will you kindly answer the following questions:

1. Do you have general practitioners on your staff:
    - (*a*) with general practice privileges? Yes No
    - (*b*) with supervised privileges in specialized fields? e.g.: Yes No
        - Anesthesia Yes No
        - Pediatrics Yes No
        - Obstetrics and gynecology Yes No
        - Medicine Yes No
        - General surgery Yes No
2. Do you have a General Practice residency? Yes No
3. Do you have a General Practice Department? Yes No
4. If not, are you willing to establish a General Practice Department in your hospital? Yes No
5. Do you allow general practitioners to assist the surgeon and/or other specialists in the surgical and postoperative care of their patients? Yes No
6. Do general practitioners participate in the hospital teaching program? Yes No
7. Do you have an outpatient department? Yes No
    - (*a*) Do you have general practitioners in your outpatient department? Yes No
    - (*b*) Would you be willing to accept properly qualified general practitioners as members of your various outpatient department clinics? Yes No
        1. As general practitioners? Yes No
        2. As specialists in specific fields? Yes No
8. Does the medical board, and/or the trustees of your hospital, require certification by the American Boards, and/or Fellowship in an American College, for a staff appointment with full privileges? Yes No
9. Are major staff privileges granted a physician on the basis of medical or surgical experience, skill, training, and potential ability? Yes No
10. Does your credentials board supervise the applicant for privileges in your hospital? Yes No
11. Do you object to having general practitioners on your staff? Yes No
12. What is your inpatient bed capacity? No.______
13. What is your over-all daily outpatient attendance? No. ______

Date ________ ____________________
Hospital

____
President of the Medical Board

For your guidance, the American Academy of General Practice defines a general practitioner as any properly qualified physician who does not limit his practice to one specific field in medicine or surgery.

Section 16 (See 100)

Supplementary Report of the Council, Part III: Public Health Activities A, Rural Medical Service

To the House of Delegates, Gentlemen:

Your subcommittee on Rural Medical Service is composed of:

Denver M. Vickers, M.D., *Chairman*	Cambridge
Richard P. Bellaire, M.D.	Saranac Lake
Glenn C. Hatch, M.D.	Penn Yan
Leonard J. Schiff, M.D.	Plattsburg
Thomas M. Watkins, M.D.	Potsdam
Granville W. Larimore, M.D., *Adviser*	Albany

The committee has as one of its objectives the maintenance of contact between the doctor in rural practice and organized medicine as a whole. It is obvious that the distinction between rural and urban medical service is not so well delineated as it was formerly. Good roads and the increase in the number of automobiles have made transportation so much easier that there is no reason for a doctor in every crossroad hamlet, as was the case forty years ago. One doctor with a good car and modern laboratory and ancillary aids can care for a greater number of patients and do it better than ever before in our history. The patient can get in to the doctor, and it is obvious and unfortunate that the patient often bypasses good medical care in his own community to seek medical care in the city, which has perhaps the glamor of a large institution behind it. One of the basic formulas for holding a doctor in a rural community is to use him.

In New York there are approximately 14 million people of which half are in greater New York and half "upstate." There are approximately 28,000 doctors to care for these people, of whom 17,000 are in New York City and 11,000 "upstate." There are several large cities "upstate," so this division is not entirely accurate, and many doctors practice in the country and live in the city, or may practice in the cities and live 5 or 10 miles outside.

Good rural medical service implies good medical service in general, with the added complication of distance. Most rural doctors are general practitioners. This, added to the large bloc of general practitioners in the cities, would seem to make it the duty of the State Society to direct a considerable portion of its scientific and economic programs toward this group. The Society has its sections on the various specialties, medicine, surgery, and others, but it is an interesting trend over the past few years that there are more and more combined or joint meetings, comprising two or more sections, with a subject that overlaps both. Your Subcommittee on Rural Medical Service, therefore, commends the committee responsible for arranging the program for the annual scientific session for having so much time occupied by the subjects of general interest to those in the active practice of medicine.

The specialty societies all have their own meetings and programs, so the county medical societies, too, should be encouraged to present programs of general subjects of practical importance to the man working more or less by himself in the county.

The importance of rural health was brought to the attention of the American Medical Association at its regular session a year ago, and the following resolution was presented from North Dakota, referred to the proper reference committee, and passed.

> "WHEREAS, over the last few years the American Medical Association, through its Council on Rural Health and the constituent and component medical societies, has promoted a program to improve rural health; and
>
> "WHEREAS, this policy has been attended with such success that the medical profession has earned a place of high esteem among America's farm leaders and people; and
>
> "WHEREAS, notwithstanding these successful efforts, it is now recognized that there is need for further local support of the rural health program through cooperation among agricultural, medical, civic, and lay groups; therefore be it
>
> "*Resolved,* that this House of Delegates urge the constituent and component medical societies to organize rural health committees composed of personnel with an interest in rural health problems and an understanding of the needs for rural medical care, and to activate a rural health program in their respective communities."

New York is already carrying on such a program, and it is to be expected that it will become increasingly important, year by year. The standing committee of the American Medical Association on matters of rural medicine is the Council on Rural Health, and for nine consecutive years it has held a national conference, attended not only by doctors but by many others interested in health matters. It is rather striking that there is such widespread interest in the subject, which certainly warrants continued attention by your committee.

The Subcommittee on Rural Medical Service, over the past year, has listened in and been a part of two good meetings on rural health, first, the one in Dallas, Texas, on March 4, 5, and 6, sponsored by the Council on Rural Health of the American Medical Association, and the second, a meeting in Ithaca at Cornell University on March 25, sponsored by the New York State Citizens' Health Council and Cornell, at the time of the annual "Home and Farm" week, at the University.

These two meetings bring to our attention, as doctors, the complex position health, rural or urban, has in our present civilization. At the meeting of the American Medical Association Council, the first part of the meeting was for physicians and covered their own problems, one of which was how to bring Blue Cross coverage more widely to the farmers. The later portion of the meeting was attended by welfare officials, state university workers, masters of Granges, and men and women in many walks of life, all interested in health, especially as affecting rural people.

Good medicine in rural areas is dependent on good doctors in good hospitals, on good roads, on proper housing and proper water supplies, on cooperative public health administration, and on many other factors that do not immediately fall into the usual medical categories.

Cornell University has had, for a number of years, a Farm and Home week, inviting back many young and old friends to hear lectures, to see exhibits, and generally to obtain a view of the progress in their field of work. At the meeting this year, Dr. Carlton Wertz, former president of our Society and now president of the New York State Citizens' Health Council, arranged a panel of speakers to talk about rural health problems and their answers. At one afternoon meeting a group of individuals from a small upstate village explained how they had obtained and kept a doctor, after having had several disastrous experiences in the few years before. Another group told of their experience in organizing and building a 50-bed hospital. The audience, composed mostly of laymen, asked questions, some simple and some showing considerable insight, apparently stemming from conditions in their communities that might require similar action.

To us, the interest shown by these people in traveling a considerable distance to come to the meeting and their enthusiasm in telling about their problems were quite fascinating. It was with considerable satisfaction that we listened to very appreciative mention given to Dr. Anderton, our secretary, who tours the State during his "vacation" and listens to and advises the people in those communities which are asking for medical service. We would urge any rural doctor who can to attend the conference next year. It will make him a better citizen and a better doctor.

At the American Medical Association meeting, the movie on "JUGS" was shown, which is the story of a small rural hospital in northeastern Colorado, where the active administrator obtained the help of a group of high school girls, "Just Us Girls" or "JUGS," to make up for her lack of personnel. It was complicated; it was difficult; but it worked. The film is good and is available if similar problems come up elsewhere.

The observation has been rather frequent during the past dozen years that the old family doctor is gone, and the modern individual, while perhaps a better doctor, tends to become more of a machine in his treatment of the patient. Listening to these discussions with these groups makes it obvious that it is an important part of public relations between the medical profession and the public that the doctor become more and more a part in community life, that he take a part in community health programs, that he be willing and ready to sit around a table with his nonprofessional friends and advise them how to best help the health of the community.

Dr. Hilleboe and his staff from the State Department of Health again emphasized the fact that their department tries to improve health by advising the local districts, showing them the proper pattern of work, and improving the public health by advice and suggestion rather than by rules and edicts strictly enforced. The same scheme applies to community efforts in many health matters. Perhaps the community needs a doctor; perhaps it wants a hospital. The doctor is the proper person to know just how important these desires are and whether they are economically feasible.

In many states these matters are handled by Citizen's Health Councils, organized at the local levels, with the advice of the State Citizens' Health Council. These councils may not be called just that; perhaps they are committees of churches or Lions or Kiwanis Clubs or Chambers of Commerce. But they get together, decide what the community needs, and then decide how to go about obtaining those things most desirable.

Here is just the ready-made situation for the physician. If he will sit in on these deliberations as one of the group, give them the advantage of his expert knowledge of the facts, and perhaps try to influence them into a satisfactory solution, he will not only have benefited himself but improved the general feeling of that and other communities toward doctors in general. If enough physicians will go out and do their work in the community on such projects, we will not need to fear socialized medicine or any measures that may come before the legislature. This is public relations at the grass roots.

Dr. Carlton Wertz, president of our State Society just a few years ago, deserves great credit for the time and effort he has put into the work of the New York State Citizens' Health Council. Under his direction it is hoped that many local committees will be set up throughout the State to consider their individual problems, be they great or small. The activities of fund-raising committees for tuberculosis, heart, polio, and the many others might be handled by such a group, officially or otherwise, to avoid the tremendous overlapping of time and energy that has gone into such things in the past.

Your subcommittee recommends that the files for the placement of physicians in our State certainly should be kept actively functioning. If a doctor wishes to find a location or if the community wishes to find a doctor, it is natural for both to seek the information in our central office, and in the past this has worked to advantage on both sides. Many a doctor has received advance information about a given community from our Society that has helped him make a decision as to its desirability as a place to locate, and many a community has received information as to what steps to take to make it seem desirable as a place in which to practice.

The question of wider Blue Cross and Blue Shield coverage was one of the important items on the agenda of the meeting of the American Medical Association Council on Rural Health. Farmers are notoriously individualistic and cannot be insured in large groups, such as the employes of an industrial plant. Industry insures a hundred or a thousand workers at one time, with payroll deductions to pay for it, with resulting economy of administration and with good insurability by taking the average of the larger group. In some states, including New York, coverage has been extended to groups through the Granges, the Home Bureaus, and even some church men's clubs. Coverage of this sort is desirable and should be encouraged. Very possibly some communities may have other schemes for this purpose that worked satisfactorily, and, if so, these should be brought to the attention of the whole State. Farming is definitely a hazardous occupation and should be covered with insurance as much as possible.

President McCormick of the American Medical Association assures us that there is no shortage of doctors in the country, although perhaps there is a difficulty in distribution. Many states are working on this problem. Texas has started an ambitious program of survey over its large area to find just those regions that should have more doctors. Many other states already have organized programs for locating doctors, as does the parent American Medical Association.

The Medical Society of the State of New York has had a continuing list in the office of the secretary for a number of years of communities that request doctors and of doctors who would like to go into rural medicine. This is a project that is certainly worth while and should be continued. Many a good doctor is undergoing considerable competition in the city, when his efforts might be much more appreciated in a rural community. Certainly, the trend of population over the next few years, with the possibility of the atomic bomb over our heads, is for the population in general to move as much as possible to the country, and the doctors may follow or even lead the trend.

Many small communities throughout the country that wished doctors have obtained them, and records of their methods are to be found in the various journals. Briefly, there should be an adequate population to be served, or a population that is not already medically covered from adjoining territory. Office and living quarters should be available. Occasionally this may even mean building or remodeling a small building to serve as office and residence, if the community really is sincere in wishing a doctor. Laboratory diagnosis, x-ray facilities, and consultation should be available, at not too great a distance, and hospitalization should be within reach for the more seriously ill patients, with perhaps local help for ambulance service, et cetera. All these little details may make the difference between obtaining a doctor and holding him, but above all the community must "do business" with their doctor if they get him.

Your subcommittee recommends continuing study of the problems of rural medicine, in all its various angles, in an effort to make the practice of medicine in rural communities more scientific and satisfactory, both for the doctor and for the patient. We advise continued support of the community health councils, at both State and local levels, and suggest increased and continued activity in these councils or similar organizations by members of our Society. We take this opportunity of extending our appreciation to Dr. Anderton and his staff for their help during the past year.

Respectfully submitted,
DENVER M. VICKERS, M.D., *Chairman*

Section 17 (See 157)

Supplementary Report of the Council, Part IX: Legislation

To the House of Delegates, Gentlemen:

Your committee makes the following supplementary report on the results of the 1954 session of the Legislature.

Only one bill introduced by the Medical Society was passed and signed by the Governor. This was the Brydges-Brady bill to allow prorationing between participating physicians of medical expense indemnity allowances. This has become Chapter 207 of the Laws of 1954.

The Condon-Dwyer bill to permit free choice of medical expense indemnity plans by municipal employes was doomed to be killed in committee. By amending it to exclude cities of a million or more population, it was hoped that passage would be accomplished. The amended bill was passed by the Senate, but was not reported out of the Assembly Rules Committee.

The Bauer-Bannigan bill to allow free choice of physician in medical expense indemnity plans reached the Rules Committee, but died there. This was in spite of strenuous work by the metropolitan county societies, the State Society, and a strong plea from the Council. Both of these bills were strongly opposed by the proponents of Health Insurance Plan. The opposition was too strong to be overcome.

Both the original amendment to the autopsy law introduced by the Hospital Association and endorsed by the Medical Society, and a simpler amendment, S–3363, introduced by the Medical Society March 17, after the first had died in committee, were defeated by the opposition of the Mortician's Society.

The various bills introduced to prohibit the practice of medicine by hospitals died in committee. They were strongly opposed by the Hospital Association. However, the special committee, Dr. Louis H. Bauer, chairman, appointed by the Council to confer with the Hospital Association on this subject, is continuing its efforts to solve the problem. The Hospital Association has not as yet accepted the invitation to a joint conference.

The Association of Mayors was strongly opposed to our bill extending malpractice coverage to interns and residents in municipal hospitals, on account of added expense. Despite amending this bill to eliminate coverage for deaths, we were unable to overcome the Mayors' opposition, and the bill was not reported out of committee.

Neither of our amendments to the Workmen's Compensation Law (1) to abolish the Medical Practice Committee in cities over a million population and (2) to change the place of arbitration to the county in which the physician resides came out of committee. The entire law is under critical study, awaiting the findings of the Moreland Act

Commissioner. There was reluctance to make any changes until these findings are published.

The injunction bill, always a very controversial subject, also succumbed in committee.

As was expected, the introduction of the amendment to include the care of mental and nervous disorders by definition in the practice of medicine brought forth a storm of protest from psychologists, ministers, councilors, and also the State Education Department. Your committee felt that this amendment was ill-advised at this time, but introduced it notwithstanding as a mandate of the House of Delegates. Your executive officer and chairman met with representatives of the psychologists, the Education Department, and the Mental Hygiene Department. There is a solution to the problem which the Medical Society wishes to solve. By meetings and agreements the fields of psychiatry and psychology can be defined. Appropriate legislation could then be drawn up, permitting psychiatrists and qualified psychologists to work in their respective fields. Quacks would thus be eliminated. We have assurance that the two executive departments would welcome such action. Your committee recommends to the House of Delegates that they endorse this program for the ensuing year.

The Medical Society as represented by your committee under the direction of the Council took a definite stand on many other bills. In the main, our position was sustained. Chief among the bills we opposed which met defeat were the chiropractic bill, permission to sell eyeglasses without professional attendance, establishment of an independent physiotherapy board of examiners, licensing of x-ray technicians, sale of patent medicines in other than drug stores, change in the Workmen's Compensation appeals board, and the corporate practice of optometry.

A bill, Senate Int. 2057, was introduced to amend Section 13-i of the Workmen's Compensation Law to allow an employer or insurance carrier to recommend rehabilitation treatment to an injured employe. Your committee studied this bill carefully. The Medical Society has for several years been advocating rehabilitation, not only in compensation cases but for all handicapped patients. It was difficult for the committee to support this bill for several reasons. No definition of "rehabilitation" was included. Thus the interpretation of this term was left to the discretion of the commissioner. The committee was led to believe that it would be interpreted as starting immediately after injury. Such interpretation would unquestionably lead toward the "lifting" of cases, an action which the Medical Society had always opposed. Opposition was therefore voiced, and the bill did not pass.

We were able to amend the Community Mental Health Services Act to require two physicians in private practice on the community health boards and to eliminate State reimbursement for the care of patients able to pay.

The committee was also successful in changing a bill introduced by the podiatrists to make it permissive instead of compulsory to include them in medical expense indemnity plans.

Attention of the House of Delegates is drawn to a bill, Assembly Int. 1233, Pino, which would amend Section 6514 of the Education Law to permit the division of fees among physicians attending a patient provided the patient was advised thereof. This bill did not pass. Your committee took no action upon this bill, although it appeared to invite "fee-splitting." The committee would like the opinion of the House of Delegates concerning any similar bill which should be introduced in the future.

In reviewing the results of the year's work, it is important to realize that this is an election year. It is also of importance that the revelations in regard to politicians and racetracks occurred during the session. The Legislature was anxious to avoid any legislation which would produce public controversy. That fact worked to our disadvantage in regard to the bills which we sponsored, but at the same time it helped to defeat some of the proposals which we opposed.

Your committee has proposed to the Council, and the suggestion has been approved, that the executive officer, the counsel, and the members of the executive committee of the Legislation Committee examine carefully all resolutions introduced at the 1954 meeting of the House of Delegates which may call for legislative action. By presenting to the reference committees what information we have available as to the history, feasibility and advisability of passage, and the remote effects from such action, it is hoped that a program might be adopted for next year which would offer more chance of success. It hurts the medical profession in the eyes of the public to attempt so much and achieve so little.

I wish to thank the officers of the Society, our executive officer, and legislative counsel and, above all, the members of the Committee on Legislation whose loyal support and diligent work have been so helpful throughout the year.

Respectfully submitted,
JAMES GREENOUGH, M.D., *Chairman*

Section 18 (See 121)

Supplementary Report of Council, Part X: Workmen's Compensation

To the House of Delegates, Gentlemen:

In our annual report published in the JOURNAL of the Medical Society of the State of New York, April 1, 1954, page 1031, we refer to the practices of certain municipal and voluntary hospitals in connection with workmen's compensation patients. We also refer in this report to the question of hospitals and dispensaries maintaining medical bureaus for ambulatory patients. They are strictly prohibited under the Workmen's Compensation Law (Rule 14, page 262, Workmen's Compensation Law, 1951) but operated by indirection by a few hospitals by permitting physicians to hire space in hospitals to treat compensation patients. We do not believe it is proper or legal under the Workmen's Compensation Law (Section 13-d) or under the Education Law (Section 6514) for groups of physicians to treat compensation patients in hospitals and divide the fees, or transfer the fees to the hospital. We have expressed our views on this subject in the 1954 annual report. Mr. Archie O. Dawson, Moreland Commissioner, has been highly critical of hospitals and physicians who engage in this practice.

A hearing was held in his office, 33 Rector Street, New York City, on Monday, April 26, 1954, attended by the president of Kings and New York Counties, representatives of the Medical Society of the State of New York, representatives of voluntary and municipal hospitals, the New York State Hospital Association, and other interested persons. Mr. Dawson severely criticized certain hospitals for a number of violations of the law including most of the items to which we have alluded in our annual report under "Hospital Groups." The hospitals were given until June 1, 1954, to clean house, failing which further action will be taken by the Commissioner.

It was apparent at the meeting that there was a desire on the part of all representatives of groups and parties to cooperate to do away with any unethical or illegal practices in workmen's compensation cases. As this is being written, there are being arranged a series of meetings with the presidents of medical societies to draw up rules and regulations governing the treatment of workmen's compensation patients in hospitals, and the status of physicians with respect to these patients. We draw particular attention to the fact that compensation claimants should not be treated or classified as ward or charity cases. They are semiprivate patients, not a charge on philanthropy but a charge on industry. If the present hospital rates are not adequate to provide semiprivate accommodations, they should be increased. If a patient through inadvertence, or because of lack of space in a semiprivate pavilion, is admitted as a ward patient, he should have the status of a semiprivate patient, including all the privileges of same, including free choice of doctor within the limits of the hospital rules. In a closed hospital he should have the choice of any physician on the staff.

We feel that the practice of certain insurance carriers in refusing to pay the full semiprivate rate, and expecting the patient to pay the difference between the agreed upon fee of the carriers and the semiprivate fee of any given hospital, is improper. We feel that the chairman of the Workmen's Compensation Board and the Moreland Act Commissioner should take the necessary steps to see that the rights of the patient are protected in this respect.

We are also including herewith our views on the treatment of workmen's compensation cases by interns and residents, as well as our views concerning the propriety of physicians on the attending staffs of hospitals permitting interns or residents to participate in the treatment of compensation patients without active and personal supervision. We are of the opinion that if the rules or regulations or practices of any hospital permit an intern or resident to treat a compensation case beyond the immediate emergency without the intervention and personal supervision of a member of the attending staff at the earliest possible moment, such procedure is a violation of ethical and legal principles and should be stopped at once. The medical boards of hospitals are in a way responsible for such improper practices. The members of medical boards of hospitals should see to it that this violation of the law is no longer permitted or countenanced. Were this rule properly enforced by hospitals and physicians, there would be few instances where physicians could properly be charged with sending bills for cases which they did not either personally take care of or actively supervise.

The Moreland Act Commissioner, Mr. Archie O. Dawson, and his associates have done a fine job of investigating workmen's compensation administration in this State.

In our annual report, both this year and previously, we have alluded to numerous criticisms that have appeared in the press and elsewhere regarding the alleged high cost of workmen's compensation coverage in this State. Governor Dewey appointed Mr. Archie O. Dawson a Moreland Commissioner about a year ago, and he has done a remarkable job so far as we have been able to ascertain in studying and clarifying the situation. Instead of attempting to obtain newspaper headlines for himself and his investigators, he has made a real study to find out weaknesses and other faults in administration, and by compromise, cooperation, and admonition, he has attempted to rectify these faults and weaknesses in administrative procedures wherever they were found.

It is apparent that Mr. Dawson demands and expects to get the full cooperation of all parties in order to effect the changes that he believes are necessary to increase efficiency and reduce costs if this be possible.

One of the most important recommendations has been in respect to hearings. As a result, Miss Mary Donlon, chairman of the Workmen's Compensation Board, has issued a directive to all referees which is intended to eliminate unnecessary referee adjournments and continuances, to assist examiners who make up notices of hearings, and to help also to effect a smooth transition into the new procedure for trial hearings which is to become fully effective as soon as new forms are adopted and can be made available. Public hearings in order to acquaint physicians, insurance people, employers, and others interested in the administration of the Workmen's Compensation Law are now being held in various parts of the State where the new procedures are being explained by lectures and by means of question and answer sessions.

We believe it advisable to publish certain directives which have been issued to medical examiners and referees. It should be noted that in the future if the claimant has a condition which the medical examiner of the department is unable to diagnose and the patient suffers pain or is disabled, the case *must* be referred forthwith to one or more impartial medical specialists. If no objective signs are found and if the condition and the nature of the injury, the course of treatment, and the previous objective signs are such that the condition of which claimant complains is not, in the opinion of the medical examiner, disabling, the referee may close the case. Physicians are advised to read carefully this statement and acquaint themselves with the new procedure.

Under Rule 24 new penalties are now to be enforced for a variety of derelictions on the part of insurance carriers.

Under date of April 15, 1954, the chairman of the Workmen's Compensation Board advised all interested parties of certain changes in claims examining, scheduling, and hearing procedures. In order to receive the full cooperation of all carriers in the new hearing procedures, the following items were made available.

It should be noted that with respect to Rule 22 whenever medical care is terminated or a physician is refused authorization for special medical services, a form known as C-8.1 must be completed and filed with the chairman within five days after such termination or refusal together with (1) medical report by authorized physician that need for medical care has ended, (2) copy of notice to claimant's physician to discontinue medical care or to refrain from commencing medical care, together with report of authorized physician establishing basis of discontinuance or refusal, and (3) proof of mailing notice under (d-2) above to the claimant and his physician.

In other words, in the future, physicians must be notified by the carriers when authorization for medical service is refused or when the physician is notified to stop medical care. The treating physician must also be in receipt of the medical basis on which order to stop treatment or refusal for authorization of the right to begin treatment is based.

Many forms have been devised which will be submitted for information to the House. They include C-6.1 which is notice that payment of compensation is continuing without interruption or change in benefit rate. Others are as follows:

C-8.1—Notice that need for medical care has terminated or authorization for medical care refused to be filed with the Workmen's Compensation Board.

C-7—Notice to controvert a claim on liability or any other issue.

C-3—Employes claim for compensation.

C-24—A new form to be filled out by attending surgeons and a copy sent to (1) the insurance carrier, if known, or the employer, (2) to the chairman of the Workmen's Compensation Board in the district in which the accident occurred, following postoperative examination of the injured person eight weeks after operation in the case of a single hernia, or twelve weeks after operation in the case of a bilateral hernia. In this connection it should be noted that the chairman of the Workmen's Compensation Board added a new fee for a surgeon making out this report, known as 828a (which is in addition to allowance for 822 and 828 inclusive) in the amount of $10 for such examination and report.

C-210—Notice of a preliminary hearing for both the carrier and the claimant.

C-84—Notice of index and claim to insurance carriers or employer.

C-85.3—Notice of penalty to employer or carrier under C-6, C-6.1, C-8.1, or C-9.

Impartial Panels—In the original recommendations of Governor Lehman's Medical Commission on Workmen's Compensation in 1933 (Dr. Eugene Pool, chairman) there was a recommendation for the setting up of panels of experts to help the workmen's compensation referees decide medical questions too difficult or intricate for the paid medical examiners of the Department to decide; such questions as causal relationship, degree of disability, necessity for operation or type of operation, etc. These specialized groups of outstanding physicians were to be employed by the department for examination and opinion on a part-time basis. Section 13 (d) was amended a number of times since the original inclusion of such panels in Section 13 in 1935.

The present law gives the chairman discretion to designate physicians of outstanding qualifications in the various specialties to ascertain the diagnosis, causal relationship, type of medical care, operative procedure requisite in certain cases, and all other matters not readily determinable by the regularly employed medical examiners of the board. The law providing that the chairman *shall* appoint such panels of physicians was removed and the above discretionary power given to the chairman in 1947. In the original law these especially qualified experts were nominated by the various county medical societies throughout the State at the request of the Industrial Commissioner or chairman of the board, and new names were added on request. The law as amended in 1947, Chapter 159, permitted the chairman, a layman, to select these specialists without recommendation from the medical societies. While we do not claim the present chairman has been guilty of any improper selection of specialists, we actually have never been able to obtain a list of such "expert impartial specialists." We do feel that the situation is fraught with danger, should the head of the department be "politically" minded. This would be an important source of political patronage, and improperly or inadequately qualified physicians might be appointed. Furthermore, we believe that it would be to the advantage of the Workmen's Compensation administration if, instead of individual examiners, panels of specialists were appointed to serve in the various parts of the State on a salaried part-time basis so that they could retain their identification with private and hospital practice. These panels could be either of one specialty or mixed groups depending on the location either in the metropolitan or in the rural areas.

In conjunction with Commissioner Dawson's and Miss Donlon's efforts to speed up and simplify hearings, the presence of these panels throughout the State would in our opinion aid materially in this process.

Medical Appeals Unit—Section 10(a) subdivision 5 of the Labor Law provides for the appointment of a Medical Appeals Unit of three physicians as a part of the Industrial Council. The decisions and recommendations of the Medical Appeals Unit of the Industrial Council are advisory only to the chairman of the Workmen's Compensation Board and "shall not be binding or conclusive upon it." It should be noted that if a physician fails to receive a proper rating from the medical practice committee or a workmen's compensation committee of a county having a population of less than one million, he has the right of appeal to the Medical Appeals Unit. If a physician or employer fails to receive a license to conduct a medical bureau, he or it has the right of appeal to the Medical Appeals Unit. In other words, the Medical Appeals Unit is an appellate body with this exception, its decisions are only *advisory to and not binding upon the chairman.* It should be noted that under the Workmen's Compensation Law prior to 1944, the decisions of the Medical Appeals Unit were final and binding upon the Industrial Commissioner. All primary recommendations of the Medical Practice Committee and of the medical societies (as above) are now advisory to the chairman of the Workmen's Compensation Board. This is as it should be.

It is presumed that when the chairman of the Workmen's Compensation Board receives a recommendation from either the Medical Practice Committee or a medical society committee with reference to any matter in which they have jurisdiction, she investigates before giving her stamp of approval *to the recommendations* in granting, let us say, a rating to a physician. If the physician is dissatisfied and believes he is entitled to a different or higher rating, he may appeal to the Medical Appeals Unit over the action of the medical practice committee or the medical society in order to obtain a review of the matter. However, since the decision of the Medical Appeals Unit, if it be adverse to the medical practice committee or medical society, is merely advisory and not binding on the chairman, it would seem that the Medical Appeals Unit has lost much of its effectiveness as an appellate body because of the fact that its decisions are merely advisory and not final and binding upon the chairman. Consideration should be given to an amendment to restore the authority of the Medical Appeals Unit and make its recommendations final and binding.

Respectfully submitted,
Gerald D. Dorman, M.D., *Chairman*
David J. Kaliski, M.D., *Director*

APPENDIX A

The Role of Interns and Residents under the Workmen's Compensation Law

Dr. H. W. Nottley is president of the Westchester Chapter of the American College of Surgeons. He states it has been the practice in several hospitals in Westchester County to have interns treat compensation cases in emergency rooms of certain hospitals, especially for minor surgical conditions. It is also stated that subsequent to this treatment by the intern, a member of the attending staff is expected "to sign and send in the C-104 form." Dr. Nottley states that in his opinion this is wrong because, first, interns are not usually licensed to practice medicine in this State and, second, the attending surgeon was asked to "sign for something he did not personally do." Dr. Nottley then quotes from a letter from Miss Mary Donlon whose opinion on this subject was asked. In this quotation Miss Donlon states only physicians who have been duly authorized by the chairman of the Workmen's Compensation Board may render medical care under the Workmen's Compensation Law except in an emergency. Miss Donlon also states that in a true emergency any physician who is authorized to practice medicine is permitted to render necessary treatment in such circumstances. This is undoubtedly correct. The Workmen's Compensation Law provides [Section 13-b(*a*)] that any duly licensed physician may treat a patient in an emergency regardless of authorization under the Workmen's Compensation Law. Miss Donlon then correctly states that unless the licensed physician who treats an emergency is authorized to treat under the Workmen's Compensation Law, he may not continue to treat the claimant after the emergency is passed. Miss Donlon further states correctly that the physician must limit his practice to what he is authorized to do as indicated by his symbols. She then states that even interns who are licensed physicians may render medical care only in an emergency and not thereafter, notwithstanding some rule passed by the hospital concerning supervision over what interns may do.

I believe Miss Donlon is correct in limiting the activities even of interns who are licensed to practice medicine but who are not authorized under the Workmen's Compensation Law to provide medical care except in an emergency situation. Having rendered emergency service, the physician who rendered the medical care should, according to Miss Donlon, file an appropriate report and indicate in it the nature of the emergency. This report we believe should indicate whether the physician signing it is an intern, if such be the case. If the case is admitted to the hospital after emergency care by an intern or resident, the regular C-4 form should be made out by the attending who takes over the case. Other reports with respect to further medical care not given in an emergency are thereafter to be filed only by the authorized physician who rendered such care. This, we agree, is sound practice.

We wish, however, to draw attention here to the provisions of Section 13-b: "No person shall render medical care under this chapter without such authorization by the chairman, provided, that:

"(*a*) Emergency (first aid) medical care may be rendered under this chapter by any physician licensed to practice medicine in the State of New York without authorization of the chairman under this section; and

"(*b*) A licensed physician who is a member of a constituted medical staff of any hospital may render medical care under this chapter while an injured employe remains a patient in such hospital; and

"(*c*) Under the active and personal supervision of an authorized physician medical care may be rendered by a registered nurse, registered physiotherapist, or other person trained in laboratory or diagnostic technics within the scope of such person's specialized training and qualifications. This supervision shall be evidenced by signed records of instructions for treatment and signed records of the patient's condition and progress. Reports of such treatment and supervision shall be made by such physician to the chairman on such forms and at such times as the chairman may require."

Subdivision (*b*) is necessary to assure medical care by a nonauthorized physician who is a bona fide member of the attending staff of a hospital. It is presumed that the duly constituted staff of a hospital is well qualified or they would not be appointed. Of course this excludes interns and residents who are in training, so to speak.

As Dr. Nottley correctly states, most interns in hospitals are not licensed to practice medicine.* Hospitals, therefore, should be required to instruct interns not to participate in the medical care of compensation claimants except in a real emergency when they may render such medical care as is necessary pending the arrival of the member of the constituted staff of the hospital. A real attempt should be made to locate a licensed member of the hospital staff to treat the workmen's compensation patient. Hospitals should not encourage treatment by interns or residents. If the emergency is a minor one, it would be preferable if the patient were referred to the outpatient department of the hospital if same was in session and treatment rendered by a licensed staff physician in the minor emergency. As the hospital may not obtain a license to conduct a medical bureau, all further treatments in such ambulatory emergencies must be rendered outside of the hospital by an authorized licensed physician. We do not believe it would be to the advantage of either the injured worker or the medical profession to license hospitals to conduct medical bureaus.

If the emergency patient is in need of hospitalization, a member of the duly constituted staff of the hospital should be assigned to treat him, unless the patient wishes to exercise his right of free choice as a compensation claimant and select one of the members of the duly constituted staff to treat him, which is his right under the Workmen's Compensation Law. A member of the staff is always available to testify before a referee—an intern or resident on completion of his training period may be and usually is outside the jurisdiction of the Workmen's Compensation Board.

I fully agree with Dr. Nottley's opinion that when a patient applies to the emergency room for medical care he should be seen, if at all possible, by a member of the attending staff and not by an intern. Hospitals should attempt to enforce a rule covering this situation. If this rule were adopted, many of the complaints received about participation of the hospital in the treatment of compensation claims by interns or residents would fall away.

In regard to residents, it is my opinion that since residents must now obtain a temporary license, I feel a rule should also be made prohibiting the participation of such residents in the treatment of compensation claimants in hospitals, except in emergency. The right of a resident to obtain a temporary license is for the purpose of enabling him to carry out his duties during his period of training. It is not intended that the temporary licensing of the resident without examination shall permit him to practice medicine for remuneration, nor should a member of the attending staff delegate to a resident duties which devolve upon the attending himself. It should be pointed out that both interns and residents are members of an administrative staff placed at the disposal of the regular medical staff of the hospital. They are not, strictly speaking, members of the duly constituted staff of the hospital, which consists of licensed physicians. Neither the hospital nor the attending physician should collect fees for unsupervised services rendered by them. Under the provisions of Section 13-b(*c*) certain duties may be delegated to interns and residents under active and personal supervision. Under these circumstances it is legal and ethical for the supervising attending physician to bill and collect a fee under the Workmen's Compensation Law, in my opinion.

I believe the spirit of the Workmen's Compensation Law demands that physicians regard each compensation patient as a private patient and treat him personally, calling on the nursing, intern, and resident staff for such assistance as is legal and ethical. Physicians should not attempt to collect fees for services that they did not actually perform or personally supervise, as indicated in the above quotation from the Workmen's Compensation Law.

David J. Kaliski, M.D., *Director*
Workmen's Compensation Bureau

CITY OF NEW YORK
DEPARTMENT OF HOSPITALS

SURGEONS*****PLEASE NOTE

December 4, 1944

Dear Dr.————————:

Pursuant to the provisions of the Workmen's Compensation Law (New York Charter—effective January 1, 1938) and Local Law 49 (effective January 1, 1944), members of the visiting staff of the City's hospitals are permitted to collect for services rendered by them in these types of cases. It is important therefore that your institution should include on the bills submitted (bills in compensation cases and medical statements in liability cases), such service only as is actually rendered by them.

Only such services or visits or treatments may be charged for as appear on the patient's record over the signature or initials of the visiting physician. Thus, no visit may be charged unless a note appears on the progress sheet—dictated, signed, or initialed by the physician submitting the bills. Similarly, no charge may be made for such treatments as transfusions, hypodermoclysis, infusions, and procedures normally performed by the resident staff unless the treatment was actually carried out by the physician submitting the bill; also, the record of such treatment by the physician appears on the chart.

Rounds (visits) or treatments given by the members of the house staff, either intern or residents, may not be charged for. The phrase, "Visiting Physician" refers to directors of services, attendings, associate attendings, assistant attendings, and clinical assistant attendings and does not include members of the house staff.

Very truly yours,

E. J. Bernecker, M.D., *Commissioner*

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* See attached letter.

APPENDIX B

Remarks of Archie O. Dawson, Esq., Moreland Act Commissioner, Before the American Academy of Compensation Medicine, April 28, 1954

THE RESPONSIBILITY OF THE PHYSICIAN IN WORKMEN'S COMPENSATION

A number of years ago, the Workmen's Compensation Law of New York was amended to allow the injured workman the free choice of his physician. This is a rather unique provision in workmen's compensation laws. It was adopted at the urging in part of the medical societies of New York. It corrected certain undesirable situations which previously had existed. Before the enactment of this amendment to the Law, it was customary for the injured workman to be treated by the physician of the employer or insurance carrier, as it is in most states today. The result of this was that the doctor, when called upon to testify before the Workmen's Compensation Board, had a conflict of interest. He was the doctor for the patient. At the same time, he was being paid by the employer or the insurance carrier. This created a great deal of criticism—and properly so—on the part of laboring groups in the State of New York.

Furthermore, by the operation of the previous law, the handling of workmen's compensation cases was limited, in effect, to a small group of physicians who constantly did this work for employers and insurance companies. This was undesirable.

So, New York amended the statute to provide that the employe has the free choice of his physician to treat him in a workmen's compensation case, provided that the doctor is one of those who has been authorized to treat workmen's compensation cases by the Workmen's Compensation Board, and provided that the charges which he makes for his services are within the scale approved by the Workmen's Compensation Board. There are today in New York State over 20,000 physicians authorized to treat workmen's compensation cases.

This opportunity which was given to the medical profession generally to treat workmen's compensation cases must, however, impose responsibilities upon those doctors who receive authorization from the Workmen's Compensation Board to handle those cases. No person or group of persons should expect to receive a right without assuming the correlative responsibility. The responsibility of a doctor when he handles a workmen's compensation case does not stop with the mere treatment of the case. The Law requires that he must file certain reports promptly and periodically with the Workmen's Compensation Board so that the rights of the injured workman may be determined by that Board and the necessary awards made to the injured workman. Failure to file those reports may seriously affect the right of the patient to recover amounts to which he is entitled under the Act. There is, however, a still further responsibility, and that is that if the right to compensation is controverted, the doctor must be prepared to testify with reference to the case at the Workmen's Compensation Board. Any doctor who takes a workmen's compensation case assumes a duty to his patient to testify, if necessary, at the Workmen's Compensation Board, for the fees allowed under the workmen's compensation regulations for such testimony. He should no more expect that he will be excused from this duty than that he will be excused from the duty of furnishing the treatments at the rates prescribed under the regulations of the Workmen's Compensation Board.

As a result of the recommendations of my Commission, a new hearing system has been inaugurated by the Workmen's Compensation Board. It was long overdue. As you know, the Workmen's Compensation Board had been holding over 570,000 hearings before referees in the course of a year. Cases were continued month after month. Sometimes awards were not made for years after the accident due to the numerous continuances of the cases. The new hearing procedure which has been put into effect by the Board will, I expect, eliminate between one third and one half of the hearings. The procedure goes upon the basis that no case will be noticed for hearing unless there is an issue between the parties. When an issue has been raised by either party, a pretrial hearing will be held at which each of the parties will be asked to define the issue and state what witnesses they expect to produce. The claimant at that hearing will be advised, if necessary, as to the type of witnesses that he should produce. The case will then be put down for a hearing on a day certain not less than thirty days in advance, and the parties will be advised that there will be no continuances or adjournments of that hearing, and that the issue will be decided on that hearing. This necessitates the cooperation of the medical profession. If a hearing is set for a particular day and the doctor's testimony is needed, he must expect to be present on that day, just as he must expect to be present if a case is on for trial in a court. In the past, cases have been continued for month after month because doctors have said that they were too busy to appear for the hearing. This cannot go on.

I was advised by a referee of the Workmen's Compensation Board just a few days ago that he had set down a case for forty days in advance and had received a telephone call from a doctor that he could not appear on that day because he had office hours. I asked the referee what the doctor would do if he had been called for a court case. His reply was: "In that event, of course, he would get a larger fee than he would get in a workmen's compensation case, and so he probably would give up his office hours."

The point I make is this—that when a doctor takes a workmen's compensation case, he must expect that if his testimony is needed, he will appear at the hearing where that testimony is needed. If he is not willing to appear at a hearing, for the fee for appearing at the hearing, he should not take a workmen's compensation case.

I am going to recommend that physicians who fail to appear on the dates set for hearings, in the absence of unusual circumstances, should have their authorization to handle workmen's compensation cases revoked by the Workmen's Compensation Board. Such doctors, by a refusal to assume their responsibilities under the Act, have shown themselves unworthy of an authorization to handle cases under the Act.

I may say if the hearing system is properly administered with the cooperation of the Workmen's Compensation Board, the insurance carriers, the claimants' representatives, and the medical profession, it will, in the long run, save a great deal of time for the doctors, for it will enable issues to be determined promptly and on one hearing rather than after delays and many hearings.

There is still another phase of this matter on which I would like to comment. You have undoubtedly seen in the newspapers that we have been making an investigation of the handling by certain hospitals, both municipal and voluntary, of workmen's compensation cases and have discovered facts which indicate a widespread violation of the law. Let me point out to you that this violation of the law is not merely technical. The Workmen's Compensation Law is based upon the premise that an injured workman is entitled to the care of a private physician and the same type of hospital care that a patient would receive if he were being treated by a private physician. It is not intended that a workmen's compensation claimant should receive clinic care or ward care. If he were to receive clinic care or ward care, the medical profession and the hospitals would receive much lower rates of compensation.

Nevertheless, in a number of hospitals, we find that the patient had been receiving the equivalent of ward care but was being charged for as though he were not a ward patient. We have found that instead of receiving the care of a private physician, he was treated by anybody who happened to be on call, and that the fees for medical services went not to the particular physician who rendered the services but to a chief of service who may never have seen the patient and who used these funds either for his own use or for the use of the hospital as a whole. This is a direct violation of the Education Law and the Workmen's Compensation Law.

In other hospitals, we have found that workmen's compensation cases were sent to a private treatment area where the patients were treated by whatever physician happened to be available, and all the fees from this private treatment area were pooled and distributed among the physicians with no relation to the services performed. This is also a violation of the Education Law and the Workmen's Compensation Law. I have recently had a conference with the representatives of hospitals, medical societies, and the acting Commissioner of Hospitals of the City of New York and have stated that unless these practices are corrected within sixty days, it will be necessary to institute procedure for the revocation of licenses of a large number of physicians. I have taken this step rather than proceeding immediately for the revocation of licenses because I am frank to say I believe the fault lies not with the individual physicians but with the hospital administrations which have allowed these conditions to exist and have made the physicians victims of their illegal procedures.

I was pleased to see in the April issue of the publication of the Medical Society of the County of New York an article by Mr. Fox of your organization, in which he said: "The present Moreland Commission investigation is not a witch hunt or a headline probe." This is true. It is the reason why we have not wished to bring individual physicians up on charges in this situation or to blast their reputations if there was another more constructive means of meeting the problem. I have, therefore, appealed to the medical societies and the hospital groups to clean their own houses.

One of the important elements of my investigation of the high cost of workmen's compensation in the State of New York is the amount which is being paid for medical care. The investigation which I have made shows, for example, that in the policy year 1951, that is for claims which arose during that policy year which covered policies written during 1951 and running into 1952, the amount of incurred losses for medical claims amounted to $36,466,000. The incurred losses for indemnity payments to the injured workmen amounted to $88,594,000. Thus, of the incurred losses for payments directly to the injured workmen and payments to the medical profession totaling about $125,000,000, the medical profession got about $37,000,000 while the injured workmen got in indemnity payments the balance. These figures, of course, exclude the amounts paid to the insurance companies for their operating costs and profits, on which I expect to release a report to the Governor within the next few weeks.

Now, what do these figures show when compared with other states? The average cost for medical care per case in New York in this same policy year period was $70.14. In New Jersey it was $36. In Michigan it was $33. In Connecticut and California it was $49. In Illinois it was $31. Granted that the cost of medical care in New York may be higher than in other states, is it that much higher? Why should the average workmen's compensation cases in New York cost $70 for medical care while it only costs $36 in New Jersey? Nor are these figures unique to that one year, for the figures for 1949 and 1950 show a similar relationship.

Part of the answer may be the wider extension of medical care allowed under the New York statute and the longer period of medical care allowed under the New York statute. Part of it may be due to the free choice of physicians allowed in New York. To the extent that it is due to the free choice of physicians in the State of New York, the medical profession owes a duty to see that excessive charges and excessive treatments are curtailed. The doctor who takes a back case and bakes it 80 times and expects to be paid for that type of service should be held up to scorn by his own profession. My Commission is making an analysis of some of the factors which enter into the cost of medical care in the State of New York in workmen's compensation cases, and we hope to make a report to the Governor and the Legislature on that subject.

There is another phase of workmen's compensation in which the medical profession as well as all the citizens of the State should be interested. The Workmen's Compensation Law provides for compensation for a service-connected injury and defines injury as meaning "only accidental injuries arising out of and in the course of employment and such diseases or infection as may naturally and unavoidably result therefrom." What is meant by the term "accidental injuries?" The Workmen's Compensation Law, when it was originally enacted, was a substitution for the old employers liability action where an employer might have been held liable in tort for accidents arising because of the negligence of the employer. However, as a result of court interpretations, the present Workmen's Compensation Law has extended far beyond this original concept. Let us take the case of a man who is doing his regular and ordinary work and who suffers a heart attack. Is this an accident arising out of, and in the course of, his employment? Recently, the Appellate Division for the Third Department has held that in this situation the man was entitled to workmen's compensation. (*Gioia* v. *A. J. Courtmel Co., Inc.*, decided December 8, 1953.) The court said that if the burden upon industry is intolerable because of its decision, "the remedy is with the legislature and not with the courts."

This poses a very important problem. We all know that there are certain disabilities which arise from in part, at least, degenerative conditions in the body. With our increasing lifespan, more and more persons may be disabled primarily because of naturally degenerative forces. Is the test to be whether the actual onset of the disability takes place during working hours or after working hours? To apply the test now laid down by the court in these cases will mean that workmen's compensation becomes a form of social insurance for covered employes who may suffer disablement due primarily to natural degenerative conditions. Maybe this is right. Maybe it is wrong. It is a question of policy which the people of the State of New York will sometime have to meet in determining how far the burden of workmen's compensation payments are to rise. I simply throw this question out to you as a subject which I think is worthy of discussion by your group as well as by other groups in the State.

My Moreland Commission has been engaged in what it expects will be constructive endeavor to reduce the cost of workmen's compensation in the State of New York. Most of our work has been done by a loyal and devoted staff who are interested in getting the facts and not in getting publicity. I hope that the results which we achieve will be of benefit to all of the citizens of the State, and, in this endeavor, I bespeak the support and cooperation of the medical profession which plays such an important part in the administration of workmen's compensation.

Section 19 (See 132)

Supplementary Report of the Council, Part XII: Nursing Education

To the House of Delegates, Gentlemen:

A meeting was held on April 10, 1954. Attending besides myself were Dr. Louis Rousselot and Dr. W. P. Anderton. At this meeting all organizations of the former Coordinating Council on Nursing reported that they had all approved the reorganization with this Council being renamed the New York State Council on Care of the Patient.

A discussion on a tentative constitution was held, and the tentative constitution was referred back to the committee consisting of a Dr. John Bourke, Dr. W. P. Anderton, and Mr. Royal.

A report of this subcommittee will be made at a meeting to be called in June.

Respectfully submitted,
Joseph A. Geis, M.D., *Chairman*

Section 20 (See 135)

Supplementary Report of the Council, Part XII: Belated Bills

To the House of Delegates, Gentlemen:

A bill for $27 from Dr. Stuart T. Porter, of Nassau County, covering the expense of his attendance, as the representative of the Nassau County Medical Society, at the Secretaries' Conference in Albany on November 18, 1953, is submitted to the House of Delegates because it was received in the office of the State Society more than ninety days after it was incurred.

It is recommended that the House of Delegates empower the Board of Trustees to have this bill paid.

Respectfully submitted,
W. P. Anderton, M.D., *Secretary*

Section 21 (See 101)

Supplementary Report of Council, Part VII: Medical Care Insurance—Subcommittee on Medical Expense Insurance

To the House of Delegates, Gentlemen:

The special committee appointed by the chairman of the Subcommittee on Medical Expense Insurance, Dr. Carlton E. Wertz, completed its report to the subcommittee May 3, 1954, regarding the resolution of the 1953 House of Delegates referred to the subcommittee by the Council that "consideration be given to setting up a fair and adequate mechanism" in the "Standards for Approval by Medical Society of the State of New York of New York State Medical Care Plans," for adjudication of cases in which a medical care plan receives county medical society approval but not that of the Medical Society of the State of New York.

The present "Standards for Approval by the Medical Society of the State of New York of New York State Medical Care Plans" are as follows:

Local Approval

1. Approval of the county society or societies in whose area a plan operates.
2. In the event a local county medical society or societies do not approve a plan, a special committee of one member from each county society involved and one member by the Medical Society of the State of New York shall be appointed to consider the reasons for not granting local approval. After consideration of the reasons, a majority vote of the special committee shall determine, subject to confirmation by the Council, if approval will be granted by the Medical Society of the State of New York; and
3. That where a plan has applied to the State Society for approval and approval has been withheld, the State Society must state that the following plan has not been approved because it does not conform to the following standards adopted by the Medical Society of the State of New York.

Your subcommittee recommends to the House that the above standards under "Local Approval" be revised as follows:

Local Approval

1. Approval of the county society or societies in whose area a plan operates.
2. In the event a local county medical society does not approve a plan which has been approved by the Medical Society of the State of New York, a special committee shall be set up consisting of one member from the local county medical society involved and one member from the Medical Society of the State of New York. These two individuals shall mutually agree on a third member of the committee who shall act as chairman and must be a member of the Medical Society of the State of New York and not a member of the local county medical society involved. After consideration of the reasons

and discussion thereof, a majority vote of the special committee shall make recommendations to the Council of the Medical Society of the State of New York for decision; and

3. Where a local county medical society approves of a plan and the State Medical Society does not approve of a plan, a special committee shall be set up consisting of one member from the said local county medical society involved and one member from the Medical Society of the State of New York. These two individuals shall mutually agree on a third member of the committee who shall act as chairman and must be a member of the Medical Society of the State of New York and not a member of the local county medical society involved. After consideration of the reasons and a discussion thereof, a majority vote of the special committee shall make recommendations to the Council of the Medical Society of the State of New York for decision; and

4. That where a plan has applied to the State Society for approval and approval has been withheld, the State Society must state that the following plan has not been approved because it does not conform to the following standards adopted by the Medical Society of the State of New York.

Respectfully submitted,
CARLTON E. WERTZ, M.D., *Chairman*

Section 22

Announcements

SPEAKER HOLCOMB: Again, I wish to announce that Miss Lewis will be in the rear of the room and will edit resolutions and reports. She will act as our clearinghouse for returning resolutions to the committees, and also, of course, for the signing of resolutions by the committee members.

I wish also to announce at this time that the location of the tables for your reference committees will be in the Penn Top North and the Headquarters Room. Your stenographers will be there to type reports in the Schuyler Room. May I remind you that each report is to have nine copies. Those that are interested in appearing before these reference committees will please do so. The officers, the Council, and the Council committee members will please hold themselves in readiness to confer with the reference committees with whom they wish to consult or who may wish to consult with them.

Section 23

Address of the Speaker

SPEAKER HOLCOMB: Members of the House of Delegates, you know it is always a terrific temptation, when you get a captive audience that you have pretty well under your gavel, to make a few remarks. However, I promise you that my remarks this year will be characterized by the virtue of brevity.

As I reminded you in my letter some time ago to the House of Delegates, this year we have a very long and possibly controversial agenda. I think, when the session is over, many of you will admit that that is the understatement of the year. Again, I would like to ask the House of Delegates and remind you that we must avoid repetitious and irrelevant statements if the proceedings are not to be needlessly prolonged. Free discussion can certainly still be enjoyed.

I shall declare and direct this House to go into executive session for at least two matters which are on the agenda. On Tuesday evening the report of the Reference Committee on the Report of the Malpractice Insurance and Defense Board and Legal Counsel will be so considered in executive session. On Wednesday morning following our first scheduled order of business, the election of officers, will be the appeal of Dr. Ben E. Landess, of Queens County, from the decision of the Board of Censors of the Medical Society of the State of New York. I shall declare an executive session at this time, and wish to make respectfully the following comment and suggestions to this House of Delegates. The legal counsels of the appellant, Dr. Landess, and the appellee have filed memoranda for their respective principals, and copies of these will be distributed to you before the appeal is argued. May I remind you respectfully again that this House of Delegates is the highest court of appeals in the organization of the Medical Society of the State of New York and that you will act in the capacity of jurors. It will be your duty to hear the respective counsels present the memoranda and to form your opinions according to your best judgment. As this is an appeal, no new evidence may be introduced, and no witnesses should be heard or will be heard. This is an appeal. However, after you have studied the memoranda carefully, you may, as a delegate qualified to vote, submit a signed question addressed through the speaker to either counsel if you feel that clarification of any issue is necessary.

We shall allow approximately forty-five minutes to each counsel and a limited time for the answering of questions which appear to us to be material and relevant. Copies of the records and of exhibits will be on file for your inspection but may not be removed from the room where they are exhibited. Where these copies are to be exhibited, I shall announce, perhaps that morning.

May I state at this time that the members of the Board of Censors who served at the hearings and the delegates from Queens County have voluntarily disqualified themselves as voters. They may be present but should refrain from entering in the proceedings.

A vote by ballot will follow the hearing of this appeal to either uphold or disapprove the decision of the Board of Censors.

Finally, may I again suggest that you bear in mind your responsibilities in this important matter and refrain from open discussion with all persons. We fully assume that you will exercise your best individual judgment in rendering your decision.

Section 24

Introduction of Delegates Serving for the First Time

Speaker Holcomb: Members of the House, it is my pleasure at this time to introduce to you some of our so-called freshmen members who are serving for the first time. If we have made an error, and somebody is on his second year, I hope he will not take offense. I wish that you gentlemen, as I read your names, would just stand up for a moment and let the House look at you:

Bronx
Samuel Wagreich

Broome
Leonard J. Flanagan

Cayuga
Edward S. Platt

Dutchess
Maxwell Gosse

Erie
Thomas S. Bumbalo
John D. Naples
William J. Orr

Kings
Leo S. Drexler
Harry A. Mackler
Robert F. Warren

Livingston
George E. Lynch

Monroe
Donovan M. Jenkins
Christopher Parnall, Jr.

New York
Lawrence Essenson
John L. Madden
Frank J. McGowan
Ely Elliott Lazarus
Frederic Zeman

Oneida
Bradford F. Golly
Harold L. Pender

Onondaga
William J. Michaels, Jr.

Ontario
Robert E. Doran

Orange
Nathaniel T. Keys

Queens
John L. Finnegan
Tobias M. Watson

Richmond
Herbert Berger

Schuyler
Milton J. Daus

Suffolk
Victor K. Young

Tioga
Seymour M. Bulkley

Tompkins
C. S. Wallace

Westchester
W. Alex Newlands

Section on
Anesthesiology—Vincent J. Collins
Chest Diseases—Arthur Q. Penta
General Practice—Samuel A. Garlan
Industrial Medicine and Surgery—Donald B. Sanford
Medicine—E. J. Murphy
Ophthalmology and Otolaryngology—Martin L. Gerstner
Preventive Medicine and Public Health—Burke Diefendorf
Surgery—Walter Scott Walls
Urology—Thomas A. Morrissey

District Branches
Third—John H. Wadsworth
Fourth—J. Frederick Sarno
Fifth—Richard B. Cuthbert, Jr.
Seventh—Glenn C. Hatch
Ninth—John F. Rogers

It is a pleasure to me, as speaker, and to Dr. Williams, as vice-speaker, to welcome you at your initial appearance as delegates of this House. (*Applause*)

At this time the chair recognizes President Eggston, and I will ask Dr. McGarvey and Dr. Kenney to escort our esteemed president, Dr. Eggston, to the rostrum.

. . . The delegates arose and applauded as Dr Henry E. McGarvey and Dr. J. Stanley Kenney escorted Dr. Andrew A. Eggston to the rostrum . . .

President Eggston: It took two big men to do that. (*Laughter*)

Section 25 (See 115)

Supplementary Report of President

Dr. Andrew A. Eggston, *President:* Mr. Speaker and members of the House, old and new, you don't know how much I appreciate the honor that has been given me in the last year and the cooperation and the help that I have had in this rather hardy but interesting journey. I have found it a real pleasure to have been of service to organized medicine. I think it is everyone's individual duty to do that. I am not speaking to the House of Delegates now; I am speaking to the everyday member of the Society, many of whom do not appreciate what you people do at these meetings and what the Council does in your absence. I never saw any more sincerity in any body of men and women than you can find in this organization, and I know it is all to sustain the best medical service for the public.

I have only a few remarks to make. My regular report has been printed, so it is sort of useless to say anything more. This is, of course, you know, my final report to this august body of the House of Delegates of the Medical Society of the State of New York. It is my sincere intention to be brief because there is no need to reiterate things that have already been said, and unless there are some new things to be added, it would just waste your time, which I value highly. You have spent it generously for me in the past year in your devoted work on committees and subcommittees.

The first item of my message is I thank you all from the bottom of my heart.

There are a few things that I think might well be emphasized. As you well know, the one thing that I have visualized has been a home or headquarters for the State Society. Let me call to your attention that nearly every issue of the *Journal of the American Medical Association* shows pictures of headquarters for state societies that have not the resources that our State Society possesses. It will be a dream that will be consummated for me when and if the happy day comes when we can move into our own building that will do justice to and represent the largest state medical society in the nation.

There is no need to go into detail, but in the past year I have come to the conclusion that, in order to expedite and consummate such a project, a committee, with power to act quickly by permission of the Board of Trustees when the right opportunity presents itself, should be authorized to make at least a token commitment to place a binder on an acceptable place in order to assure temporary control of property that will suit our needs. I sincerely hope that such permissive action will be granted by this House of Delegates.

I also wish to comment, with thanks, that the Board of Trustees has allocated $100,000 towards a home for your Society. That action I wish to praise.

Another thing that strikes me—I know it strikes you—is this muddle of malpractice insurance. From all sides and all angles I hear discontent and complaints about the situation in which we find ourselves. There is one thing that I do know: Your Malpractice Insurance and Defense Board, as well as those that help it like Mr. Wanvig and Mr. Martin, are a conscientious, hardworking group of honest and sincere people. They have done their best to solve the problem, but they have failed to please a large portion of our constituency. There are so many imponderables affecting the situation that it is a difficult problem and a knotty problem to solve.

It occurs to me, and it has to others, that a more aggressive action on our part and on the part of the insurance company should be taken to fight unjust claims without settling them, without consideration of any individual, and to that end have the Board analyze carefully those cases which have justified claims and agree on a settlement. If this Board says that a suit against a doctor is not justifiable, every member of this Society, regardless of inconvenience, should act as a group to see that justice is done. But in cases where the individual doctor is repeatedly at fault, no mercy should be shown, and insurance should be discontinued.

I do not for one moment believe that any doctor who is sued many times does not have some feeling of guilt. Perhaps there is a new and unexplored solution of the problem, but I am sure disloyalty to our Group Plan is not the answer, and those who are disloyal will be sadly disillusioned and regretful. A third of a century of experience by this Board cannot be cast aside lightly.

Blood Banks.—There is just a word I have to say about the blood banks. Every community hospital needs now, and will continue to need, facilities to withdraw and process blood from voluntary donors for the use of local civilian demands. The philosophy of free blood to all regardless of ability to pay smacks of socialism and should have never been approved by organized medicine. As a result of this philosophy there is an inability of some of the quasi-governmental agencies to meet emergency demands in spite of many dollars spent for publicity. Furthermore, the taxation of one group, regardless of how hidden it is, for contributions beneficial to other areas is not fair play. There was an era of pressure publicity when local blood banks were allowed to discontinue. This should never have happened. Every community hospital should have its own blood bank, because there are many times when relatives and friends wish to contribute blood to their friends and relatives, and when these blood banks are not functioning, the facilities are not available in many instances. Every community hospital should be encouraged to reopen its blood bank, and the Blood Banks Association of New York State is ready to help.

Workmen's Compensation.—Right now we are hearing a lot of condemnation of workmen's compensation. Lawyers are casually mentioned, but doctors are in the headlines of defamatory publicity and are thus presented to the public as the devils in workmen's compensation. The majority of the doctors—the most ethical of the medical profession—unfortunately suffer thereby. But it is partly their own fault because the busy doctor, and frequently the better ones, will not accept and does not choose to treat workmen's compensation cases. Those who refuse do not fulfill their full professional duty. They should take part in workmen's compensation to encourage, foster, and promote medicine and surgery for the workman in caring for his illness and injuries and should exercise a keen interest in the clarification of the causal relationship between injury, disease, and disability.

Since the publication of my annual report, Commissioner Dawson has completed his investigation of workmen's compensation insurance, and after a conference of interested parties representing the hospitals as well as organized medicine, he has threatened to expose the hospitals and to withdraw the licenses of physicians who collect fees for services they have not actually performed. In order to see that necessary corrections are made, he has promised a reinvestigation after sixty days. If he finds that no correction has been effected by either hospitals or physicians, he will proceed to make examples of the institutions and doctors who have not eliminated the evil. This is surely the principle that has been advocated by county and state medical societies.

Many counties have had a program to correct such abuses, but often the hospitals have not cooperated. In some instances the hospitals have taken the attitude that they are private corporations with an implied right to do as they please about workmen's compensation medicine. The law, if not sufficiently powerful, should be clarified not only in regard to the practice by hospitals in workmen's compensation cases but also their violation in monopolizing the private practice of many phases of medicine. Many of these hospital corporations practice medicine in violation of the law in New York and in other states as well, by employing physicians on a full-time basis and retaining the proceeds above expenses. I feel that Judge Dawson's investigation of the current evils will have a salutary effect, and I wish for him all success in stamping out these violations. I am sure that organized medicine in every county of this State will applaud his efforts and cooperate with him.

I sincerely trust that the medical schools will carry on an educational program to indoctrinate the young graduate in compensation medicine, because his very first case may be a workmen's compensation case and it is very important that he conduct himself both personally and professionally according to the best traditions for the care of the injured workman. It is my opinion that this type of education has been woefully neglected.

It is an outstanding principle of the Workmen's Compensation Law in the State of New York that the workman has the right to choose his own physician or surgeon—a right which we have jealously preserved. Every doctor should be grateful that this principle prevails in this State and should bend backwards if necessary to deliver his services fairly, efficiently, and honestly. I am sure that the law provides for and seeks nothing more than just that.

Ethics.—Just a word. It is inconceivable that a doctor who works so hard to obtain his education should practice and conduct himself unsocially and unethically when he knows right from wrong and he knows every moment that when he transgresses the ethical principles of medicine, he not only hurts himself but every other doctor. It is not too much to ask of every member of this Society to consider not only his patient's care and himself but, above all, the effect his actions are going to have on his own clan and guild.

Recently we have heard much about questionable drives by charitable organizations. Governor Dewey has done the public a great service in exposing and taking measures to correct the situation. Yet even quasigovernmental agencies and, often, hospitals as well as other charitable organizations are in essence guilty of public exploitation. This is often done by sanction, regardless of the tear-provoking methods used. If an individual in organized medicine used similar tactics, the public would justly resent it. Sidewalk contribution should wait and question the safety and direction and use for which their dimes and dollars are expended, to see if they are dissipated by the organization on administration, or used for the purposes for which they are solicited.

A few new words have been added by statutory edict to the responsibility of the Board of Regents of this State. The words are "unprofessional conduct." In the past year we have surveyed some 14 or more types of unprofessional conduct. It won't be long until these will be spelled out so that all can read and understand. And unless the doctors obey them, disciplinary action and the possible loss of their right to practice medicine will follow. I sincerely hope that there will be enough force exercised to discipline severely any unethical physician.

Public Relations.—It is my sincere wish that this work continue to grow and draw nearer and nearer to the goal—and that goal is the public—so that they will learn in honest and simple terms just what organized medicine stands for. The modus operandi can be left in hands skilled in the technics. But it is my hope that nothing will be spared to carry the honest message of this organized group by press, radio, and television to the byroads and highways and the home of every person in this State. Anything short of this will be failure, and I know that the ones you have placed at the head of this department will strive never to fail.

Public Health and Education.—This program will never be found wanting, I am sure, and whatever is assigned to this work is money well spent.

It is hard sometimes to press education on the busy practitioner, but at the very least postgraduate education should be made available to every member of this Society, and he should be told that it is an important part of his practice of medicine to keep abreast of the latest developments in this field. If he does not, in my opinion it will not be long before he will be a past member and a poor doctor.

Hospital and Professional Relations.—There is no just reason why any doctor should toil both mentally and physically to build or maintain hospitals any more than there is for lawyers to support government buildings or courthouses. Furthermore, there is no reason that hospital trustees and administrators should be required, personally, to do so.

Between the hospitals and the medical profession there is a chasm, and something had better be done about it to better the relationship. Certainly the doctors have been patient and willing to compromise, but unfortunately the hospitals have contributed very little and have shown little willingness to reach a common ground of understanding.

Voluntary Health Insurance.—This is growing. There is probably room for a lot of improvement and expansion. I am inclined to feel that if proper controls are in the hands of organized medicine, government reinsurance might well be subjected to a trial for a period of years. Of course you know that if it is a steppingstone to government medicine, the whole idea should be abandoned. If such aid would extend comprehensive medical care under free choice of physician, it would fill an existing void.

Now then, I have come to the end of my trail. It has been an arduous one—interesting and educational. I do not hesitate to recommend to any doctor, if the lot falls to him to be named president, that he accept the responsibility.

I am a bit frustrated in having accomplished so little, but, after all, the Society is a conservative group. I hope that this conservatism will never interfere with true progress. Today is a day of liberal attitudes and progress. Adamant obstinacy and disagreement should be very carefully analyzed, because the medical profession for some unknown reason, probably through no fault of its own, is being weighed in a delicate balance of socioeconomic laws. After all, we are the trustees of the health of the people. We know what is best for them, and we know what is expected of us. Any floundering loss of faith or courage to protect what is best for the medical care of the people would be medical treason. And I know that you and I do not want any part of any such program. I cannot help recalling what Stephen Decatur said—"Our country! In her intercourse with foreign nations may she always be in the right! But our country—right or wrong." Such devotion the Medical Society can well use.

I close with the hope and admonition that we may not stumble and thereby interfere with progress, because this is a time of progress, and the medical profession, with head unbowed, should march in the front line. Reaction is not the keynote to progress. Nothing is stationary. We either march forward or lag behind.

With my deepest gratitude for your trust in me as well as your help in the past year, I say sincerely I shall always be with you, if not in person in spirit.

Speaker Holcomb: Members of the House, you have just heard a supplementary report of President Eggston. It will be referred to the Reference Committee on the President's Report, of which Dr. E. Dean Babbage, of Erie, is chairman.

Our next order of business is the presentation of our president-elect, Dr. Dan Mellen, of Rome. I would like to have Dr. Winslow and Dr. Schiff escort Dr. Mellen to the platform.

. . . The delegates arose and applauded as Dr. Floyd S. Winslow and Dr. Leo F. Schiff escorted Dr. Dan Mellen to the rostrum . . .

Section 26 (See 116)

Address of President-Elect

Dr. Dan Mellen, *President-Elect:* Although the Constitution and Bylaws of our State Medical Society require me to address you this morning, it is with gratitude that I appear before this august body. The honor of being president of this Society, which you have conferred upon me, is one of the highest which can be given to a member of the medical profession. From my long association with this Society in various lesser roles, I realize full well the heavy burdens the office of president places upon my shoulders. I promise to dedicate myself to the task of discharging the duties of my position to the best of my ability, hoping that I may accomplish as much as my eminent predecessor, Dr. Eggston.

It is not my intention this morning to present a detailed program involving the numerous critical problems facing the medical profession at this time. As delegates, you have come here to discuss these problems, and the time allotted to find suitable answers is scarcely adequate. My remarks, therefore, will be brief and, I hope, to the point.

At the outset, I should like to remind you that our Society's 150th anniversary is almost at hand. The Society was organized in 1807, and its 150th year will commence in 1956. While two years seems long from the point of view of time, it is a very short period to prepare for such an outstanding event. Work should be started at this session of the House to commence a program befitting the world's third largest medical society. With 23,501 members, your Society today is outranked numerically only by the American Medical Association, which has 146,723 members, and the British Medical Association, which has a roster of about 68,000 members.

Down through the almost one hundred and fifty years of this Society's existence, the basic goal of our organization has been the welfare of the people. In this atomic age when more people are receiving more medical care in more hospitals than ever before in the history of the world, this fundamental principle should continue to be the basic concern of this House of Delegates in all its deliberations. No problem involving the medical profession should be solved to the detriment of the public. In approaching a solution to each of the numerous problems which you will study, a positive, rather than a negative, attitude should be maintained whenever possible.

Constantly bear in mind that every act of this House will be scrutinized not only by the members of our own profession, but by the public and the press. The more constructive we are in facing modern medical economic problems, the more favorable will be the reaction of the public towards the medical profession.

Although there is no specific legislation before Congress at this time which is intended to bring about the socialization of medicine, we cannot take a lackadaisical attitude and consider the problem of government-controlled medicine as a thing of the past. We should be constantly on guard against measures which are harmless on the surface but which indirectly could bring about Federal control of medicine. As citizens, we have a solemn duty to be on the alert against well-intentioned laws that might make the Federal government so all-powerful in caring for every want of the individual as to make him almost wholly dependent upon the state for his existence. As physicians, we are bound to uphold the dignity of the individual and the principle that the power freely to choose a doctor is a natural right of every citizen and not a function of the government.

This House of Delegates in all of its actions should bear in mind, therefore, that the issue of government-controlled medicine is not dead. We have a period at hand in which we can build for the future. Now is the time to take action so that we can promote good will between the medical profession and the public. It is most important that in attempting to solve our problems we try also to find a solution to the patients' problems. Whatever we can do to ease the burden of the patients' financial load will win for us friends who can be of inestimable value in a battle against socialized medicine, if such should ever occur again.

Year after year this House of Delegates meets and does an admirable job in managing the affairs of our Society. In the interim, when the House is not in session, the Council and the Board of Trustees do an equally admirable job. I should like to take this opportunity, however, to pay tribute to the numerous men and women, who serve on the many Council committees of this Society. Functioning the year around as a vital part of our Society organization are approximately 50 Council and special committees and subcommittees. Approximately 320 individuals serve on these committees. Too much cannot be said for the fine spirit in which the individual committeemen give their time and devote their experience to the problems which come before them. Selflessly they work, not only to keep medicine at its high standard, where it justly belongs, but to better its position and to advance its interests wherever possible.

The various committees now functioning in this Society attempt to accomplish the greatest good for the greatest number of physicians in the Society and for the greatest portion of the public. Although problems which they have to face the year around are constantly increasing, they are, nevertheless, basically similar. Each problem may be different on the surface, but underneath there is some fundamental principle which must be discussed. To these men and women who serve on the committees, I want to offer my gratitude. I hope that they will continue their fine work, which they have been carrying on for many, many years.

We hear much these days about a possible depression, recession, or a readjustment period. Without taking a gloomy outlook on the future of the State Society, I feel that we should consider our finances in view of the present situation in our country. Apparently we are going through what financial experts have called a "readjustment period" from all-out wartime activities. We should take time out to review our financial situation in view of the changing times.

There comes to my mind a meeting we had in our town at one time on account of a little bit of a lull in business, and the village fathers thought it would be a good plan to get some man in there to give a so-called pep talk. Well, they chose the man whom they thought was the right fellow. He came, and he talked for quite a little while, and he kept getting back to the word "depression." He said it many times. That did not please the man who introduced him, and he tugged at his coat tail, and he said, "Don't use that word 'depression.' That is not what you came for. Can't you say something good about conditions?"

The fellow said, "Why, yes, I can. It is the slightest damned boom ever experienced." (*Laughter*)

No group within the structure of our Society has tried more diligently to keep financial matters on an even keel than our Board of Trustees. They deserve the thanks of every member of the State Society and this House of Delegates for the prudent manner in which they have acted. Many times, nevertheless, the demands made upon them for services, which require financial support, make it most difficult for this body to spend less and yet give the doctors what they request through their delegates. In the deliberations of this House, every proposal made should be considered in view of what it will cost the Society. An estimate of the cost of any procedure recommended should be thoroughly understood before monies are allocated to carry out the activity. No project should be undertaken which will endanger our financial position or make it necessary for us to go beyond our means. Whenever possible, the treasurer of the Society and the Board of Trustees should be consulted before any great financial burden is voted for.

All of us, I believe, are in agreement that the idea of purchasing a building to be used as a new home for our State Society is a splendid one. Such a move, no doubt, would be beneficial in many ways. It would provide adequate quarters, improve personnel morale, and add much to our standing in the community as well as among medical and allied groups. We should, however, devote much thought to this proposition before taking any definite action. One of the most important factors involved is the choice of the right time to take this step. A long-range view should be taken of this important matter, and the advantages and disadvantages in undertaking this project at this time should be carefully weighed.

There are so many problems facing the medical profession today that it would be impossible for me to discuss all of them this morning. These involve such matters as legislation, medical education, medical insurance, ethics, doctor-hospital-patient relationships, public relations, malpractice insurance, and numerous other current problems. In attacking them, we should do our best to map a program whereby every individual member of the State Medical Society will be induced to do his part to bring the greatest benefit to the doctors, to the hospitals, to the patients, and to all other persons involved. We will not be able to find answers to all the problems at this session. We should, therefore, concentrate our efforts on the important ones and try to find satisfactory answers to the most urgent.

Medicine in this State has made tremendous scientific strides forward since the Legislature authorized the organization of our State Society by a special act passed April 4, 1806. There is no need for me to substantiate this statement, because the developments in the diagnosis and treatment of disease resulting in the lengthening of life's span are well known to all of you.

With all the scientific progress which has been made, I should like to point out in passing, however, that the practice of medicine is not only a science—it is also an art. In addition to his intelligence and scientific skill, a practicing physician should give something of himself to each patient whom he serves—a kindly, personal, and human interest. The scientific attitude, with its emphasis upon curing disease, and the art of human relations, with its willingness to share another human being's burden of suffering, are the essential ingredients of which the ideal practice of medicine is compounded. No greater error could be made by the modern physician than to assume that the science of medicine alone or that the art of medicine alone can take the place of the proper blending of both.

Whatever you, as delegates, accomplish during the next few days will determine what action my fellow officers and I, as president, will be able to take during the next twelve months. I urge you, therefore, to bear in mind the few thoughts I have expressed this morning in developing not only a theoretically sound but, above all else, a workable program. From your record of the past, I know that you will spend long arduous hours at the task which lies before you. May your efforts be so successful that they will achieve the ultimate goal of our Society by advancing the science and art of medicine and by promoting better health for the public.

As individual physicians, each of us is guided by our *Principles of Professional Conduct* which state "the prime object of the medical profession is to render service to humanity; reward or financial gain is a subordinate consideration." Each of us, I know, in his private practice tries to live up to this fundamental principle to the best of his ability.

As a group working here today, and for days to come in the House of Delegates, I urge you to bear in mind the same basic philosophy. In the past, this House of Delegates has religiously lived up to this fundamental tenet and as a result accomplished much good for the medical profession and the public at large. I trust that you, as members of this 1954 House of Delegates to the Medical Society of the State of New York, will adhere to this basic rule in all your actions. I feel certain that if you do, the activities of this House of Delegates will not only equal the achievements of any previous House but will establish a record that will stand for a long time in the history of this Society.

Speaker Holcomb: Dr. Mellen's report is referred to the Reference Committee on the Report of the President, of which Dr. E. Dean Babbage, of Erie, is the chairman.

Section 27

Presentation of Scroll to the Distinguished General Practitioner of the Year

Speaker Holcomb: Members of the House of Delegates, the next order of business is the presentation of the scroll to the distinguished general practitioner of the year for the State of New York. As you all know, the candidate is selected from those presented by the various county societies and is chosen by the Council to receive this award. The name of the candidate is then forwarded to the American Medical Association to receive the award of "General Practitioner of the Year of the United States."

Dr. Mary J. Ross has been chosen this year. Dr. Ross is from Binghamton, New York, and in forty-four years has made the considerable record of delivering about thirty-two hundred babies. She was named the outstanding general practitioner of 1953 by our Medical Society. She is now in her seventy-sixth year, and of course was the unanimous choice of Broome County. Dr. Ross was born in Canada and came to the United States in 1889. She has her M.D. degree from Johns Hopkins University in 1907. She also holds degrees from Cornell and from the University of Pennsylvania. Dr. Ross was instrumental in establishing the Well Baby Stations in 1919, and due to her work the infant death rate was cut drastically and other Well Baby Stations were opened. Dr. Ross has listed among her many qualifications that she is in "Men of Science." Dr. Ross serves on the staff of the Binghamton City Hospital. She has been on the consulting staff of the Broome County Tuberculosis Sanatorium and on the courtesy staff of the local Our Lady of Lourdes Memorial Hospital. It is a very splendid tribute to Dr. Ross to have the Mayor of Binghamton, Donald Kramer, make this statement about her. He said: "I am certainly pleased to add my comments and congratulations to Dr. Mary Ross for receiving this award. The people of the City of Binghamton are proud that she has been chosen and compliment the New York State Medical Society on its choice. Dr. Ross has been an outstanding physician and humanitarian in our community for many years and deserves public recognition of her work."

I am going to ask the chairman of our Board of Trustees, Dr. James Reuling, to escort Dr. Ross to the platform, after which I shall ask our president, Dr. Andrew Eggston, to present her with this scroll.

. . . The delegates arose and applauded as Dr. James R. Reuling escorted Dr. Mary Ross to the platform . . .

President Eggston: The Medical Society of the State of New York presents this certificate to Mary J. Ross, M.D., in recognition of her selection by the Council as the outstanding general practitioner of New York State for 1953.

Dr. Ross, I know you have gotten up early and worked late at night to deliver that many babies, but I know one other thing too, that you had your heart in the work, and I am sure the mothers and the babies all over that county must love you. This is just a slight token of the affection that the Medical Society holds for you. May you live many, many years, and still be of many years' service, as I am sure you will be. (*Applause*)

Dr. Mary J. Ross: I would like to thank the Society for the honor they have done me. I remember when I first started in practice, after a couple of months two of my confreres—I overheard this, and one never hears good things about one's self—said, the one to the other, "She is a talker," but the other said, "We will wait and see." I then became a good listener. I ceased talking. I still have ceased, and I still am a good listener.

I thank you! (*Applause*)

Section 28

Introduction of Representatives from Other State Societies

Speaker Holcomb: Our next order of business will be the introduction of distinguished guests from this State and perhaps neighboring states.

The chair wishes to recognize Dr. Murray, who is representing the State of New Jersey. I am going to ask Dr. Anderton to escort Dr. Murray to the platform.

. . . The delegates applauded as Secretary Walter P.

Anderton escorted Dr. Harrold A. Murray to the platform . . .

Dr. Harrold A. Murray: Mr. Speaker and members of the House of Delegates, again it is my happy privilege to extend to you the greetings of your neighboring State of New Jersey on your 148th Annual Meeting. I might say, as I told you last year, you are the largest medical society in the United States, but we are the oldest, so we look upon you as a big brother. After listening to the addresses of your president and president-elect, I know that our aims and objectives and problems are exactly the same as yours. I feel very near to you in New Jersey, just looking across the river. I hope your deliberations will be fruitful and your meeting will be quite successful. (*Applause*)

Speaker Holcomb: Are there any representatives from the State of Connecticut present, Dr. George H. Gildersleeve or Dr. H. M. Marvin? Is either one of these gentlemen in the room?

. . . There was no response. . .

Speaker Holcomb: Is there any delegate from Pennsylvania present?

. . . There was no response. . .

Speaker Holcomb: Is there any delegate present from Vermont?

Dr. D. Dexter Davis, from Vermont, we are happy to see you. We are always very happy to see Dr. Davis. I am sure Dr. Davis has brought us all some trout for our dinner tonight.

Dr. D. Dexter Davis: Mr. Speaker, members of the Medical Society of the State of New York, ladies and gentlemen, I bring you greetings from Vermont. We hope that you have a very successful meeting. I appreciate the fact that I am not to take your time, even as Dr. Ross said, but I do feel that I always have to say something that comes from the State of Vermont so that you can carry it back with you.

I recently attended a meeting at which our governor of the state made the remark that "Vermonters oftentimes thought a lot, and said nothing while they were thinking." In order to interpret that he told a story which you probably have all heard about the Vermont farmer who just bought a wonderful retriever. He loved to go duck hunting, so when the occasion arose, the first time he could he took this dog out duck hunting. At his first shot at a duck, he watched the dog, very interested to see how the dog would work. Well, sir, that dog just ran to the bank, jumped into the water, and walked on top of the water out to get the duck. He looked at the dog, and he looked at the boat, and he looked around, and he could not believe it. He just reached around and put the cork back in the bottle. He said, "It can't be." He waited a few minutes, and he shot another duck, and the same thing happened. He got out of the duck boat and ran up to the house and got his friend, Bill, and said, "Bill, come down here. I have got a retriever. I want you to see him work and find out what you think of him."

He brought Bill into the duck boat, and the same thing happened. The dog dashed down to the shore, walked on top of the water, and did a good job on retrieving. The friend kept looking at him, but never said a word. The farmer said, "I wonder if he is thinking the same as I am thinking." They went back to camp. Bill never said a word. Finally, he said, "Bill, did you see anything funny about the way that dog worked?"

"Well," he said, "not that I noticed."

This kept on, and finally, the day after, he could not stand it any longer so he said, "Say, Bill, you watched this dog work. Wasn't there something unusual about it?"

Bill thought a long while, and then in a drawly tone said, "God, Jim, now that you speak of it, I don't believe that damned dog ever learned to swim." (*Laughter*)

I hope you have a very enjoyable meeting time. (*Applause*)

Speaker Holcomb: Thank you, Dr. Davis. It is always a very pleasant interlude to have you visit with us. We always enjoy it. We hope we have the pleasure next year of hearing you again, and that all of us will still be here.

At this time I would like to have one of our very good friends arise and take a bow, Dr. Stiles Ezell, who is secretary of the State Board of Medical Examiners. (*Applause*)

I wish to announce that the floor is now open for the introduction of supplementary reports and resolutions. Following the procedure of last year, which I think will make it much simpler, we will call them in alphabetic order, and I shall begin first with the district branches. The First District Branch, Dr. Charles McCarty.

Section 29 (See 150)

Illegal Collection of Fees for Workmen's Compensation Cases in Hospitals

Dr. Ezra A. Wolff, *Queens:* This resolution is introduced at the instruction of the First District Branch. It concerns the illegal collection of fees for workmen's compensation cases in hospitals, and reads:

> "Whereas, the Moreland Commission has called public attention to the widespread illegal collection of fees for workmen's compensation cases in hospitals; and
>
> "Whereas, the medical societies have been aware of these conditions for a number of years and have called to the attention of hospitals and governmental agencies that these practices are illegal; and
>
> "Whereas, the medical societies have vainly attempted to cause the termination of such practices in hospitals; now therefore be it
>
> "*Resolved,* that the House of Delegates of the Medical Society of the State of New York reaffirm the previous position of the medical profession that the practices disclosed are illegal and should be discontinued; and be it further
>
> "*Resolved,* that Commissioner A. O. Dawson and Miss Mary Donlon are to be commended for their action and that the medical profession pledges continuing cooperation in the enforcement of workmen's compensation laws of the State of New York."

Speaker Holcomb: Thank you, Dr. Wolff. That will be referred to the Reference Committee on Report of the Council, Part VI, having to do with Hospital and Professional Relations, of which Dr. Charles H. Loughran, of Kings, is the chairman.

Section 30 (See 155)

Hospital Practice of Medicine

Dr. Ezra A. Wolff, *Queens:* I have a second resolution, which is also introduced at the request of the First District Branch, concerning the hospital practice of medicine:

> "Whereas, it has been brought to the attention of the First District Branch that a widespread practice exists in the City of New York through which fees for medical services rendered by practicing physicians in hospitals in compensation, liability, and medical expense insurance cases, for ward, semiprivate, and private patients are diverted through various means from the physicians to the hospitals; and
>
> "Whereas, the physicians who render such medical services, whether employed full time by the hospital or affiliated with the hospital as staff members, are deprived of the fees for such services through contract with the hospital or through coercive understanding to the end that the hospital receives payment, in whole or in part for the services so rendered; and
>
> "Whereas, there is an increasingly large number of ward and semiprivate patients who formerly could properly be classed as medical indigents but, who, through medical indemnity insurance or compensation coverage, are no longer properly so classifiable; and
>
> "Whereas, under subparagraph 2 (f) of Section 6514 of the Education Law of the State of New York the license or registration of a physician may be revoked, suspended, or annulled or a physician may be reprimanded or disciplined if he directly or indirectly participates in the division, transference, assignment, rebating, splitting, or refunding of a fee in connection with the furnishing of medical care, diagnosis, or treatment or service; and
>
> "Whereas, in the opinion of the First District Branch the practice above described is in direct violation of said subparagraph 2 (f) of Section 6514 of the Education Law and constitutes at the same time a serious inroad upon the established methods and procedures of the private practice of medicine in this City and is not in the best interests of the patients or of the practicing physicians concerned; therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York take such action as it may deem proper to discourage and put a stop to such practices on the part of hospitals and physicians in the City of New York."

Speaker Holcomb: That resolution is also referred to the Reference Committee on Report of Council, Part VI, Dr. Charles H. Loughran, of Kings, chairman.

Are there any other resolutions from the district branches, from the:

Second District Branch
Third District Branch
Fourth District Branch

Section 31

Amend Constitution to Change Qualifications for District Branch Presidents

Dr. J. Frederick Sarno, *Fourth District Branch:* Mr. Chairman and gentlemen, this is introduced on instruction of the Fourth District Branch concerning the amending of the Constitution to change qualifications for district branch presidents:

> "Whereas, Article XI, Section 2, of the Constitution of the Medical Society of the State of New York provides 'that the district branch president shall have first served as a president of a component county society'; and
>
> "Whereas, it is not possible for some interested and competent leaders to become presidents of their county societies; and
>
> "Whereas, this provision of the Constitution may prevent worthy members from becoming active in district branch affairs; now therefore be it
>
> "*Resolved*, that Article XI, Section 2, of the Constitution of the Medical Society of the State of New York be amended by deleting the words, 'and they must provide that the district branch president shall have first served as a president of a component county society,' so that this Section 2 shall now read, 'Each district branch may adopt a constitution and bylaws for its government and may amend the same; but before becoming effective they shall be approved by the Council. They shall be consistent with the Constitution and Bylaws of this Society.' "

Speaker Holcomb: This resolution is referred to the Special Committee on Constitution and Bylaws of which Dr. A. H. Aaron, of Erie, is chairman. It will be laid on the table for action next year.

Section 32 (See 131)

Clarification of Admission Policies of Physicians' Home

Dr. J. Frederick Sarno, *Fourth District Branch:* I have a second one also recommended by the Fourth District Branch, dealing with the clarification of admission policies of Physicians' Home:

> "Whereas, there is confusion in the minds of some members of the Medical Society of the State of New York regarding the admission policies of the Physicians' Home; and
>
> "Whereas, this confusion has, in some instances, led to ill feeling directed against the Physicians' Home; and
>
> "Whereas, it is believed that a full explanation of the admission policies of the Home would dispel this feeling; now therefore be it
>
> "*Resolved*, that the directors of the Physicians' Home be requested to clarify the situation by a statement of their admission policies together

with the reasons for these, and to make such statement known to all members of the Medical Society of the State of New York."

Speaker Holcomb: This will be referred to the Reference Committee on Miscellaneous Business B, of which Dr. Edward J. Shea, of Ulster, is chairman.

Are there any other resolutions from district branches:

Fifth District Branch
Sixth District Branch
Seventh District Branch
Eighth District Branch
Ninth District Branch

If not, we will refer to the counties:

Albany
Allegany
Bronx

Section 33 (See 127)

Settlement of Malpractice Suits

Dr. Frederick A. Wurzbach, Jr., *Bronx:* This is introduced by the Bronx County Medical Society and concerns the settlement of malpractice suits:

> "Whereas, the cost of malpractice insurance has nearly tripled in the past two years; and
>
> "Whereas, there is a limit beyond which the insurance company will not go; and
>
> "Whereas, there is a limit beyond which the physician cannot afford to pay; and
>
> "Whereas, without this protection it would be impossible to practice medicine; and
>
> "Whereas, the number of suits settled out of court has increased to such an extent that the legal profession will undertake these suits when they previously did not accept them; and
>
> "Whereas, there must be an end to this increasing number of suits and excessive cost; therefore be it
>
> "*Resolved*, that no malpractice suit be settled out of court unless a majority of the malpractice committee of the county where the sued doctor be a member shall determine that the case is not medically defensible."

Speaker Holcomb: That will be referred to the Reference Committee on the Reports of the Malpractice Insurance and Defense Board and Legal Counsel, of which Dr. Norton S. Brown, of New York, is chairman.

Section 34 (See 88)

Contribution to American Medical Education Foundation

Dr. Edward P. Flood, *Bronx:* This is a brief resolution relative to the contribution to the American Medical Education Foundation:

> "Whereas, the 1953 House of Delegates of the Medical Society of the State of New York voted that a substantial contribution be made by the Medical Society of the State of New York to the American Medical Education Foundation; and
>
> "Whereas, the House of Delegates further voted to leave to the discretion of the trustees of the Medical Society of the State of New York the amount of the contribution; and
>
> "Whereas, the trustees voted a contribution of $25,000 to the American Medical Education Foundation; therefore be it
>
> "*Resolved*, that the Board of Trustees be commended for its action; and be it further
>
> "*Resolved*, that a similar appropriation be made for the year 1954."

Speaker Holcomb: That is referred to the Reference Committee on Report of the Council, Part VIII, having to do with the American Medical Education Foundation, of which Dr. Charles Sandler, of Bronx, is chairman.

Section 35 (See 110)

Setting Up Means to Refute Unwarranted Attacks on the Medical Profession by Press, Radio, and TV

Dr. Samuel Leo, *Bronx:* Mr. Chairman and gentlemen, this resolution from the County of Bronx relates to the setting up of means to refute unwarranted attacks on the medical profession by press, radio, and TV:

> "Whereas, some television and radio commentators and newspaper columnists have made unjustifiable charges of unethical conduct against the medical profession in general; and
>
> "Whereas, these same commentators and columnists have charged the medical profession with an attempt to create a monopoly in the practice of medicine by excluding chiropractors and psychologists; and
>
> "Whereas, these same commentators and columnists have accused the medical profession of being more concerned with the economic phase of medical practice than with the health of the patient; and
>
> "Whereas, such indiscriminate and false accusations against the medical profession are increasing to an alarming degree; and
>
> "Whereas, the constant repetition of these diatribes against the medical profession will serve to create an impression of their validity in the minds of the public unless forceful action is taken to refute them through the channels of their origin; therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York accept the responsibility of refuting the growing number of these false charges against the medical profession; and be it further
>
> "*Resolved*, that the Public Relations Committee of the Medical Society of the State of New York be empowered to select a panel composed of physicians in each district branch or county medical society to answer these unwarranted attacks against the medical profession."

Speaker Holcomb: That will be referred to the Reference Committee on Report of the Council, Part XI, on Public Relations, of which Dr. Ezra Wolff, of Queens, is the chairman.

Section 36 (See 152)

Malpractice Insurance for Residents and Interns

Dr. James Lynch, *Bronx:* This resolution is being introduced for the Bronx County Medical Society and is on the subject of malpractice insurance for residents and interns:

> "Whereas, in the performance of routine hospital duties residents and interns of the hospitals of the New York area are liable to malpractice litigation; and
>
> "Whereas, the stipend offered by the various hospitals in this area is, in general, too small to permit the purchase of malpractice insurance by residents and interns; and
>
> "Whereas, the Medical Society of the State of New York has sponsored legislation favoring malpractice insurance for residents and interns in hospitals; therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York strongly urge that hospitals maintaining resident and intern staffs provide adequate prepaid malpractice insurance for their residents and interns; and be it further
>
> "*Resolved*, that officials of the Medical Society of the State of New York confer with the proper authorities of the municipal, voluntary, and private hospitals for the purpose of effectuating the intent of this resolution."

Speaker Holcomb: This resolution, having to do with hospital and professional relations, is referred to the Reference Committee on Report of the Council, Part VI, of which Dr. Charles H. Loughran, of Kings, is chairman.

Section 37 (See 87)

Disapproval of "Tennessee Plan"

Dr. Philip Ladin, *Bronx:* This resolution is being introduced on behalf of the Bronx County Medical Society:

> "Whereas, the component county medical societies of the Medical Society of the State of New York have been actively solicited for support of a so-called 'Tennessee Plan,' promulgated by the Tennessee State Medical Society; and
>
> "Whereas, that Society proposes to introduce, at the forthcoming meeting of the House of Delegates of the American Medical Association, a resolution condemning the present policy of the American Medical Association with respect to the management of nonservice-connected disability and illness in Veterans Administration facilities; and
>
> "Whereas, the so-called 'Tennessee Plan' proposes a radical departure in such management, in that it advocates that veterans falling within certain income levels, as indicated by their tax returns, be authorized to acquire hospital, medical, and surgical insurance, to be paid for wholly by the Federal government, without regard for cause or origin of illness; and
>
> "Whereas, the present Veterans Administration medical facilities, together with government-insured veterans contemplated by this proposal, would constitute in effect a system of medical and hospital care at Federal expense which is clearly socialized medicine; therefore be it
>
> "*Resolved*, that this House of Delegates reaffirm its support of the American Medical Association stand with respect to the treatment of nonservice-connected disabilities at government expense, and that the so-called 'Tennessee Plan' be denounced for what it so patently is: the advocacy of Federally-paid-for hospital and medical care for veterans without reference to origin of illness or disability, constituting in effect socialized medicine for a privileged group, and the opening wedge for spreading such services; and be it further
>
> "*Resolved*, that our delegates to the American Medical Association be urged to vote against the 'Tennessee Plan' when introduced to the American Medical Association House of Delegates, as contemplated by its sponsors."

Speaker Holcomb: That resolution, having to do with a matter pertaining to the Veterans Administration, is referred to the Reference Committee on Report of the Council, Part VIII, of which Dr. Charles Sandler, of Bronx, is the chairman.

Section 38 (See 106)

Establishment of Additional Investment Funds

Dr. Abraham B. Tamis, *Bronx:* This is a short resolution and pertains to the establishment of additional investment funds:

> "Whereas, the surplus investment funds of the Medical Society of the State of New York constitute a substantial reserve; and
>
> "Whereas, the trustees of the Medical Society of the State of New York have this year established specific amounts for particular purposes of the Society; therefore be it
>
> "*Resolved*, that the trustees of the Medical Society of the State of New York be commended for their farsighted policy; and be it further
>
> "*Resolved*, that the trustees be requested to investigate the establishment of other similar investment funds, the income from which may be used for the good and welfare of the membership of the Medical Society of the State of New York."

Speaker Holcomb: This resolution is referred to the Reference Committee on Reports of the Treasurer, Trustees, and Finance Committee, of which Dr. Thomas F. McCarthy, of Bronx, is the chairman.

Section 39 (See 149)

Investigation of Effect on New York State License of Changes in Modern Medical Practice

Dr. Thomas F. McCarthy, *Bronx:* This concerns an investigation of the effect on New York State license of changes in modern medical practice:

> "WHEREAS, the Regents for and on behalf of the State Education Department confer a license to practice medicine and surgery in the State of New York; and
>
> "WHEREAS, infringement of this license, both within and without the medical profession, has demonstrated the failure to recognize the radical changes in modern medical practice over the past few decades; and
>
> "WHEREAS, it is noted that a committee to study improvement of the Medical Practice Act has been appointed under the report of the Legislation Committee; and
>
> "WHEREAS, this license has been impaired, restricted, and limited by regulations of hospitals, Federal, State, and local governments, boards, bureaus, health departments, and Workmen's Compensation laws; therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York urge the State Educational Department to institute a comprehensive investigation of the entire effect of changes in modern medical practices on the license to practice medicine and surgery in the State of New York."

. SPEAKER HOLCOMB: This has to do with licensure and medical service, and will be referred to the Reference Committee on Report of the Council, Part VI, of which Dr. Charles H. Loughran, of Kings, is the chairman.

Section 40

Greetings to Former Officers

DR. FRANK LAGATTUTA, *Bronx:* Mr. Speaker and members of the House, this is a short resolution introduced by Bronx County, and the subject is "Greetings to Former Officers":

> "WHEREAS, several of our esteemed colleagues who have served their profession with distinction as officers of the Medical Society of the State of New York are unable to attend this 148th Session of the House of Delegates; therefore be it
>
> "*Resolved*, that this session of the House, duly convened, send greetings and felicitations to these honored Nestors of the medical profession."

I move the immediate adoption of this resolution without referral to a reference committee.

DR. THOMAS F. MCCARTHY, *Bronx:* I second that.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

SPEAKER HOLCOMB: Are there any further resolutions from Bronx County?

. . . There was no response. . .

SPEAKER HOLCOMB: At this time I shall interrupt this regular procedure for the introduction of resolutions, and the chair will recognize Dr. Kenney who wishes to give us about a ten-minute summary of the work of the Blood Banks Association.

Dr. Kenney!

Section 41 (See 162, 164)

Supplementary Report of Blood Banks Association of New York State, Inc.

DR. J. STANLEY KENNEY, *Trustee:* Mr. Speaker and gentlemen of the House, I first want to express my thanks to Fred Holcomb for giving me these ten minutes to bring to your attention what I believe is very important in the further development of this program of the Blood Banks Association of New York.

During the last year our experience has been encouraging in very many ways, and we have made great progress in our work, but of late and recently we have run into certain areas of misunderstanding, shall I say, and it is for that reason that I am here to try to clarify a few points for you. I believe that these misunderstandings have arisen chiefly through lack of education and ignorance of the real facts. These must be pointed out and clarified so that progress from here will not be impeded. Cooperation, I am sure, will be forthcoming if understanding and knowledge of the background and the present status of this movement are fully comprehended.

You have all received this morning when you registered or have had it distributed to you a brochure, very artistically and carefully prepared, and it has been given to us at very considerable expense through the courtesy of Ciba Pharmaceutical Corporation. This is not advertising matter, gentlemen; this is a book of information, and I do hope that you will pay attention to it and not give it the "waste basket" treatment that frequently these things get.

I want to emphasize here and now that this program is a constructive program; that it is conceived and will be implemented as a needed and essential public service; that it can reflect only credit on the medical profession if it is so carried out; that it is a cooperative endeavor to aid and assist in the coordination of all facets of the program of blood banking, distribution, research, and education in this area of therapy; that it aims in no way to supplant any existing agencies now operating in the over-all blood program. I refer specifically to the Red Cross or members of its board of directors, with whom we hope and expect to do a cooperative job. I would like that comprehended and understood. We hope and expect to receive the wholehearted agreement and assistance in the achievement of our common goal from every facility now engaged in this humane and indispensable job of making blood available to everyone at a minimum cost commensurate with the high quality of service and product that must be maintained.

It will be necessary, gentlemen, to be very factual in delineating for you the background of this program and the authority for taking on by this State Medical Society the responsibility of its development and expansion. The American Medical Association since 1948 has repeatedly urged and reaffirmed by action of its House of Delegates the establishment of state society committees or councils on blood banking.

Quoting from the proceedings of the House of Delegates of the American Medical Association for December, 1950: "In its supplementary report the Committee on Emergency Medical Service recommends that a state committee on blood banks be established in each state, whose function would be to correlate the elements of the emergency blood program in its state. Your committee approves of this recommendation." This also was unanimously approved by the House.

At the same session, in December, 1950, the Committee on Blood Banks reported: "The committee recommends in order to avoid duplication and overlapping of effort and the confusion resulting therefrom, that each state medical society see to it that a state committee on blood banks be established whose function it would be to correlate the elements of the emergency blood program in its state and to see that the blood procured is properly channeled."

Again, in June, 1951, at the annual meeting of the House of Delegates of the American Medical Association, "The Committee [Committee on Blood Banks] re-emphasizes the importance of a committee on blood banks being developed in each state as recommended at the Cleveland session."

And at the Chicago session in June, 1952: "The importance of the formation of state committees on blood program as previously recommended is again emphasized."

In December, 1952, at Denver, that action was reaffirmed again, and in New York last June (1953) in the annual meeting in this city they adopted a resolution which pinpoints very clearly the attitude of the parent organization on this whole subject of blood banking. I am not going to read the entire resolution to you, but I do want to give you just the last whereas and the resolved. This resolution, gentlemen, is commonly referred to as the Ludwig resolution. It was introduced from California, and the last whereas reads:

"WHEREAS, the present American Red Cross program of so-called 'free' blood without requirement for replacement has made collection of adequate supplies for civilian use difficult, has been a tremendous drain on Red Cross funds which might be better devoted to purposes more consistent with Red Cross functions, and is inaccurate to the extent that blood is not free but is paid for by the community at large in contributions and by the government through tax revenues; now therefore be it

"*Resolved*, that this House of Delegates urge the establishment of a coordinated national blood bank program operated by the American Medical Association, the American National Red Cross, and other qualified organizations interested in blood banking on the following basis;

"1. Medical aspects of blood banking shall be under the exclusive control of the medical profession;

"2. Business administration, donor recruitment, stockpiling for civil defense and disaster relief, allocation of supplies to meet military needs, and public relations shall be matters of joint concern;

"3. The supply of blood shall be maintained on a replacement basis;

"4. The national blood bank program shall be a financially self-supporting but nonprofit arrangement operated in the national interest by and with the sole aim of promoting the widest availability of safe, usable blood and its derivatives."

Now let us look at developments in our own State: You will recall that in March of 1952, after an informal survey of medical opinion throughout the State of New York was made through our Public Relations Bureau by Mr. A. Carl Messinger, that considerable encouragement was given to this movement to establish a blood bank association. As a result of this and because of these mandates from the American Medical Association House of Delegates, a very historic meeting, in my opinion, was held in Albany in March of that year under the chairmanship of Dr. Ted Curphey, who is the chairman of our Council Committee on Public Health and Education. Some 40 persons attended this meeting, including about 29 physicians, many of them our leading hematologists and many of them representatives of laboratories, State Health Department, and other organizations in the field.

I am going to quote just one paragraph from Dr. Curphey's remarks on that occasion. "I believe that our very presence here is evidence of acute urgency that calls for the development, once and for all, of a simple, practical, and workable pattern for the procurement and donation of blood in New York State."

In order to establish a Blood Banks Association with the approval of the State Medical Society, the conference had Dr. Curphey introduce a resolution into the 1952 House of Delegates, calling for the creation of a Blood Banks Commission. This Commission was to supervise and counsel the further development of the Blood Banks Association of New York State and to act as a liaison between the Association and the Medical Society of the State of New York.

The Reference Committee on Report of the Council, Part IV, Blood Banks, under the chairmanship of Dr. James Greenough, of Oneonta, which studied the resolution, recommended that the Blood Banks Commission be established, and this recommendation was approved by the unanimous vote of that House of Delegates.

The composition of this Commission was definitely specified by the House.

Following a series of meetings in the fall of that year and after careful study of plans and budgetary needs, the Commission presented a detailed brochure to the Council and trustees of this Society which recommended that the Blood Banks Association of New York State be created as a nonprofit, membership corporation and further stipulated that starting capital should be loaned to the new Association by the State Society. It is anticipated that the Association will eventually operate on a self-sustaining basis and will be able to amortize this loan.

In January, 1953, the Association received its charter and proceeded with plans of organization according to its carefully considered constitution and bylaws.

Actual work began on August 10, 1953, with the State Society providing office space at its New York City headquarters and cooperating generously by making available services of its accounting, legal, medical economics, and insurance departments.

The office, now with four employes, is under the constant supervision of Mr. A. Carl Messinger, whose services have been loaned by the Public and Professional Relations Bureau. I am sure I express the sentiments of all the directors when I say this work could not have progressed to the point it has without his continued and unselfish guidance. We publicly voice our thanks to him and to Dr. Floyd S. Winslow and his bureau for their unstinting cooperation.

I hope some of you will have time during your visit in New York to visit the headquarters office at 386 Fourth Avenue, to see how your organization functions and take a look at the activity going on in that blood banks office in that building.

Obviously, time will not permit me to describe to you the essential functions of the clearinghouse and blood exchange program and the organized system of donor procurement which we call the blood assurance program. This booklet that you have before you, gentlemen, has these two programs very succinctly outlined, and at your leisure I do hope you will get yourselves thoroughly familiar with both of them. This latter program, the blood assurance program, is an originally conceived and imaginative program which is largely the work of Dr. Lester J. Unger. In effect, this blood assurance program is an extension of the principle of Blue Shield and Blue Cross prepayment medical and hospital insurance to the supply of blood, except that there is no charge to the recipient other than routine transfusion costs.

It is this facet of our over-all program that will have the greatest public appeal, and I strongly urge all of you to familiarize yourselves thoroughly with this endeavor and to support it earnestly in your own area. Its success will depend on wide community participation. It will stimulate local and civic pride. It should rank in the minds of the people back home on the same level as their church and their schools. There is need for this program, and its success will require coordinated, farsighted, and flexible planning.

Fortunately, we are now conducting our first pilot project under the auspices of the Genesee County Medical Society. They requested this privilege, and it was mandated by the 1953 House of Delegates. This program, gentlemen, is in full operation at the present time, and as an example of community effort it stands out, I think, as well as anything accomplished along medical lines in this State. Dr. Sydney McLouth, the president of the Eighth District Branch, and a practitioner in Corfu, in Genesee County, will make a brief report to you on the progress of this immediately following my remarks.

I am about through. Emphasizing again the philosophy of cooperation, our blood banking program will be introduced only in those areas where it has the approval of the local county medical society.

Responsibility for the medical aspects of blood banking must be under the exclusive control of the medical profession. We must accept this responsibility and must have the authority to discharge our obligations. We cannot afford to expose ourselves to the risk of public censure by permitting this program to fail.

Do not lose or destroy this brochure. Read it again and again until you fully understand this program. Ask questions and write the Commission or, better, the Association for information and clarification. Your participation as active members is required. It is essential. Do not be deluded by the mirage that all is fine in blood banking. There is need and room for this program of ours in all areas of this great State.

There exists a large, untapped field for donor procurement. The experience in Genesee County, brief as it has been, in bleeding so many thousand people, has revealed the fact that 30 per cent of that number have never given blood before, which is just an example of what I mean.

In closing, let me repeat again—and let me emphasize this please, particularly to those representatives from areas in the State who are not particularly understanding of this program—that we are not an agency which aims to supplant or replace any facility in the over-all field of blood banking and distribution.

We seek cooperation, and we will give it, too. Side by side operation must be achieved. I quote for you briefly the representative of the Red Cross who sits on our board of directors:

"My position has been to suggest and advise on planning that would permit of side by side operation of the Red Cross and the Blood Banks Association. The American Red Cross is anxious to cooperate within the limits of its basic policies."

We hope that this policy will be put into practice by everyone concerned in the programs of both these organizations.

The Blood Banks Association is in no sense a controversial project. We are not fighting anyone. We are attempting to bring organization into a field which needs it and to carry part of the terrific burden of securing blood donors. We hope to work as a community organization that will embrace all elements within the State for the benefit of the public and the medical profession.

Thank you, gentlemen, and I hope you will allow Dr. McLouth a few minutes to outline the Genesee County program.

SPEAKER HOLCOMB: Just a minute! We cannot give you any more time.

Members of the House of Delegates, Dr. Kenney has presented his formal and factual report, which will be referred to the Reference Committee on Council, Part IV, which has to do with Blood Banks, for their report.

There is another report on the public relations aspect of the blood assurance program which has been prepared by Dr. Sydney L. McLouth. I shall refer that at this time to the same Reference Committee, Part IV, of which Dr. Angrist, of Queens, is chairman, and that can be discussed at the time of the reference committee's report. I am sorry that I cannot allow any more time for the Blood Banks program this morning. These two reports, then, are referred to the Reference Committee on Report of Council, Part IV.

. . . The report referred to of Dr. Sydney L. McLouth is as follows:

Public Relations Aspect of the Blood Assurance Program

It has often been stated that medical society public relations are the result of the good professional conduct of each doctor. Many times, efforts at influencing a favorable public reaction by our societies, acting as a group, are met with much resistance and skepticism on the part of the public. I believe that the Genesee County Medical Society has made an enviable record in the field of public relations during the past several years: (1) by establishing and successfully operating a county-wide emergency service, (2) by providing a mediation or grievance committee, and (3) by our recent efforts in starting the blood assurance program.

The groundwork for beginning the present blood program was laid in counties such as Genesee, where the medical men decided not to hand over their blood banks to outside agencies and thereby maintained all of their contacts with the local public. Also, we cooperated wholeheartedly in procurement of blood for the armed services, and county society members donated their time on the blood-letting days.

The following editorial appeared in the *Batavia Daily News* on March 30, 1954:

> Genesee County Medical Society members are leaving no possibility uncovered in their preparation for public participation in the Blood Assurance Program.
>
> Physicians and surgeons, themselves, have stepped forward to be the first donors as a means of showing the way for the effort.
>
> Genesee was selected as "a pilot county" for the program by the State Medical Society. This will be a trial of a new idea. If it succeeds here, the State Society will, undoubtedly, recommend its adoption in other areas.
>
> This county was chosen as a typical rural area. Genesee has approximately 47,000 people with 18,000 of them in Batavia, and the remainder in five villages and thirteen towns. Its facilities are good for the dissemination of news. Its people are an ideal cross-section.
>
> The Medical Society members have taken to the speaker's trail to explain in detail, to all kinds of organizations, how the program will work. If there exists anyone in Genesee County who doesn't know about it when they get through, it won't be the fault of the doctors.

The director of WBTA (Batavia radio station) stated that, in his opinion, the Blood Assurance program definitely enhanced the public relations of the Genesee County Medical Society.

During the past two months, about 100 civic, church, and fraternal organizations have endorsed our program after a presentation by a society member. No organization so approached has failed to react favorably to the Blood Assurance program.

I believe it may be stated that the program is well received by the public, and that it increases the stature of the Medical Society in the eyes of the people we serve. . .

Speaker Holcomb: The next order of business will be the supplementary report of the Board of Trustees by Dr. Reuling, the first part of which has to do with the Bureau of Industrial Health. I wish to announce at this time that we are in the midst of introducing resolutions. This interval has been given to these two reports; I wish to announce that after Dr. Reuling's report the introduction of resolutions will continue.

Section 42 (See 12, 97)

Supplementary Report of the Board of Trustees: Bureau of Industrial Health

Dr. James R. Reuling, *Trustee:* Mr. Speaker, I will only take a few minutes. I believe you have already had referred to you the supplementary report of the Board of Trustees. I would ask the members of the House of Delegates, if they have not all read it, to review very carefully the report of the Board of Trustees as printed in the April 1 issue of the Journal and the supplementary report which is the auditor's report in the April 15 issue. This report has to do with two matters, and there is a correction that has to be made in one of them. I will read the supplementary report.

. . . Dr. Reuling then read the report, referred to in Section 12. . .

Speaker Holcomb: The Speaker wishes to mention the fact that in the back of the room there is a great deal of talk that distracts from Dr. Reuling's report. I will ask that you be a little more quiet, please.

Dr. Reuling: Might I supplement what the Speaker has said by saying that this also touches the pocketbooks of all of the physicians that you represent, and I believe that it would be wise for that reason to pay some attention to it.

. . . Dr. Reuling then continued reading the report, referred to in Section 12. . .

Speaker Holcomb: The Chair will refer this supplementary report as follows: that part having to do with industrial health and the change in fiscal year will be referred first to Dr. McCarthy's Reference Committee on Trustees, Treasurer, and Finance, and after his committee reports, we will then decide about referring it to the committee for study on the change of the Bylaws. I believe that would be a more orderly procedure.

We will now return to the regular order of business, which is the receipt of resolutions.

Dr. Theodore J. Curphey, *Councillor:* I have the two resolutions to introduce.

Speaker Holcomb: There are two resolutions from the Council Committee on Public Health and Education, which will be considered at this time.

Section 43 (See 161)

Establishment of a Committee to Study the Problems Arising from the Employment of Persons with Cardiac Impairments

Dr. Theodore J. Curphey, *Councillor:* Mr. Speaker, I have here a resolution from the Council Committee on Public Health and Education recommending the establishment of a committee to study the problems arising from the employment of persons with cardiac impairments:

> "Whereas, heart disease is a major cause of disability in industry (according to the New York Heart Association approximately 152,000,000 work days are lost in a single year); and
>
> "Whereas, the diagnosis of heart disease in many cases is ruled a compensable condition; and
>
> "Whereas, rulings for compensable heart disease often are made in the absence of sufficient evidence of the effect of work on the heart condition; and
>
> "Whereas, standards for work classification in the presence of a heart condition have not been established; and
>
> "Whereas, the liability which employers assume in employing cardiacs in industry places an added financial burden on the employer, making it difficult, if not impossible, for a young person applying for a first job, as well as an individual who has had a heart attack and who seeks a new position, to gain employment; therefore be it
>
> "*Resolved*, that the president of the Medical Society of the State of New York appoint a committee with funds and staff to study the cardiac in industry with the purpose of delineating the problems associated with the employment of persons with heart disease and to recommend a program to improve the understanding and management of these problems."

Speaker Holcomb: Thank you, Dr. Curphey. That will be referred to the Reference Committee on Report of the Council, Part IV, having to do with heart disease, of which Dr. Alfred Angrist, of Queens, is chairman.

Section 44 (See 130)

Recommendations for Safety Devices in Automobiles

Dr. Theodore J. Curphey, *Councillor:* Mr. Speaker, I have another resolution which deals with recommendations for safety devices in automobiles. This was received by the Council several months ago from the Colorado State Medical Society. I presume that they have sent a similar resolution to all the state societies in the country. It reads as follows:

> "Whereas, motor car deaths in the United States of America number between 35,000 and 40,000 annually, and motor car injuries number about four million annually; and
>
> "Whereas, there seems little likelihood of any great reduction of motor accidents in the near future; and
>
> "Whereas, studies by physicians and physicists have clearly shown that motor injuries and motor deaths can be strikingly reduced by the use of safety belts and safety shoulder straps; therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York hereby recommend to the motor car manufacturers of America that they equip all automobiles with safety belts to meet the specifications of the C.A.A. Technical Standard Order, T.S.O.–C22 A, November 15, 1950; and further recommend that these manufacturers provide seats, cushions, and doors which will withstand impacts of 10 to 15 G's without injuries."

Speaker Holcomb: That will be referred to the Reference Committee on Miscellaneous Business B, of which Dr. Edward Shea, of Ulster, is chairman.

We are now ready to proceed with the roll of counties. The next county is:

Broome
Cattaraugus
Cayuga
Chautauqua
Chemung
Chenango
Clinton

Section 45 (See 11, 95)

Development of Recommendations of the New York State Health Preparedness Commission

Dr. Leonard J. Schiff, *Clinton:* This is being introduced actually as a resolution from the Planning Committee for Medical Policies. It has already been published as a supplementary report, and you have it mimeographed. (*See Section 11*)

Speaker Holcomb: Thank you, Dr. Schiff! That will be referred to Reference Committee on Report of the Council, Part I, on Postgraduate Medical Education and Medical Defense, of which Dr. George A. Burgin, of Herkimer County, is chairman.

Continuing with the roll of counties. Are there any resolutions from:

Columbia
Cortland
Delaware
Dutchess
Erie
Essex
Franklin
Fulton
Genesee
Greene
Herkimer
Jefferson
Kings

Section 46 (See 153)

Hospital Practice of Medicine

Dr. Aaron Kottler, *Kings:* Mr. Speaker, I have been requested by the comitia minora of the Kings County Medical Society and the Brooklyn Academy of Medicine to introduce the following resolution, the title of which is "Hospital Practice of Medicine":

> "Whereas, the American Medical Association at its 1950 meeting approved the Hess Report which is a directive to prohibit the practice of medicine by hospitals in the fields of pathology, radiology, anesthesiology, and psychiatry; and
>
> "Whereas, recent developments in Blue Cross

contracts have made it more essential that hospitals and physicians should recognize the confines of their practice; and

"WHEREAS, the hospital practice of medicine has spread by the employment of full-time salaried physicians in all other branches of medicine; and

"WHEREAS, the transference of fees received by these full-time salaried physicians to the hospitals and/or other funds is a violation of both Section 6514, Paragraph 2f of the Education Law and also the *Principles of Professional Conduct* of the Medical Society of the State of New York; and

"WHEREAS, attempts have been made during the past years by special Council subcommittees to solve amicably these problems with the hospital authorities, and such attempts have failed; now therefore be it

"*Resolved,* that the Medical Society of the State of New York institute legal action challenging the right of hospitals to practice medicine."

SPEAKER HOLCOMB: This resolution is referred to the Reference Committee on Report of the Council, Part VI, Hospital and Professional Relations, of which Dr. Charles H. Loughran, of Kings, is chairman.

Section 47 (See 160)

Restriction on Sale of Proprietary Medicines

DR. AARON KOTTLER, *Kings:* This is on the subject of the restriction on sale of proprietary medicines:

> "WHEREAS, certain legislation has been introduced in the Legislature of the State of New York which we consider detrimental to the health and welfare of the people of the State of New York; and
>
> "WHEREAS, we consider that the promiscuous, unsupervised sale of proprietary medicines containing chemicals and drugs which, by themselves, are dangerous if taken too casually and used indiscriminately for any and all ailments without advice as to usage and dosage would be detrimental to public health; and
>
> "WHEREAS, we are of the opinion that the retail distribution of such proprietary medicines is well regulated by the law at present, and that the sale of such medicines should remain restricted to stores registered by the State Board of Pharmacy; and
>
> "WHEREAS, our prime consideration is the strict enforcement of all laws which have been enacted for the protection of the health of the public; and
>
> "WHEREAS, the laws governing the distribution and sale of proprietary remedies, as well as other drugs, when enacted carried the support of every profession and agency connected with the health and welfare of the public; therefore be it
>
> "*Resolved,* that the Medical Society of the State of New York express itself as opposed to any legislation which would expose the public to harm through the sale of potentially dangerous drugs, even though masquerading under a trade name, by stores other than those registered by the New York State Board of Pharmacy."

SPEAKER HOLCOMB: This resolution is referred to Reference Committee on Report of the Council, Part IX, Legislation, of which Dr. E. Kenneth Horton, of Nassau, is chairman.

Section 48 (See 146)

Discontinuing Legislative Bureau to Save Money

DR. SOLOMON SCHUSSHEIM, *Kings:* The subject matter of this resolution is "Discontinuing Legislative Bureau to Save Money":

> "WHEREAS, the chairman of the Board of Trustees of the Medical Society of the State of New York in his supplementary report called our attention to the cost of the Legislative Bureau in Albany; and
>
> "WHEREAS, there has been a deficit in the budget in the past three years necessitating an increase in dues; now therefore be it
>
> "*Resolved,* that the president appoint a committee to study the advisability of:
>
> 1. Discontinuing the Legislative Bureau and obtaining office space and help only immediately before and throughout the legislative session; and
> 2. Discontinuing the counsel to the executive officers of the Legislative Bureau and/or committee; and
> 3. Discontinuing the position of the Executive Officer of the Legislation Committee; and be it further

"*Resolved,* that this committee make its report to the Council of the Medical Society of the State of New York at its September meeting following this convention for approval and implementation."

SPEAKER HOLCOMB: This resolution is referred to the Reference Committee on Report of the Planning Committee for Medical Policies, of which Dr. Peter Murray, of New York County, is the chairman.

Section 49 (See 143)

Clarification of Principles of Professional Conduct

DR. ALFRED P. INGEGNO, *Kings:* This is a resolution for the clarification of the *Principles of Professional Conduct,* and it reads:

> "WHEREAS, on June 30, 1953, the Medical Society of the County of Kings voted by ballot on certain suggested clarifications of the *Principles of Professional Conduct* of the Medical Society of the State of New York and of the Code of Ethics of the American Medical Association; and
>
> "WHEREAS, these recommended clarifications were approved by the membership by a vote of nearly four to one; therefore be it
>
> "*Resolved,* that the Medical Society of the State of New York place in its *Principles of Professional*

Conduct the following clarifications; and be it further

"*Resolved,* that the delegates from the Medical Society of the State of New York to the American Medical Association request the American Medical Association also to place these clarifications in its Code of Ethics:

"1. Chapter I, Section 4, of the *Principles of Professional Conduct* reads as follows:

Advertising

> '*Section 4.* Solicitation of patients, directly or indirectly, by a physician, by groups of physicians, or by institutions or organizations is unethical. This principle protects the public from the advertiser and salesman of medical care by establishing an easily discernible and generally recognized distinction between him and the ethical physician. Among unethical practices are included the not always obvious devices of furnishing or inspiring newspaper or magazine comments concerning cases in which the physician or group or institution has been, or is, concerned. Self-laudations defy the traditions and lower the moral standard of the medical profession; they are an infraction of good taste and are disapproved.'

"It is recommended that the following clarification be added:

> 'It should be understood that any medical care plan, company, or organization which advertises for subscribers and directs such subscribers to a restricted panel of physicians for medical care is advertising for the benefit of the physicians involved.'

"2. Chapter III, Article VI, Section 3, reads as follows:

Contract Practice

> '*Section 3.* Contract practice as applied to medicine means the practice of medicine under an agreement between a physician or a group of physicians, as principles or agents, and a corporation, organization, political subdivision or individual, whereby partial or full medical services are provided for a group or class of individuals on the basis of a fee schedule, or for a salary or for a fixed rate per capita.
>
> 'Contract practice per se is not unethical. Contract practice is unethical if it permits of features or conditions that are declared unethical in these *Principles of Professional Conduct* or if the contract or any of its provisions causes deterioration of the quality of the medical services rendered.'

"It is recommended that in the first paragraph the words 'duly licensed' be inserted before the words 'physician' and 'physicians.'

"It is recommended also that the following sentence be added to the second paragraph:

> 'A contract with a hospital, organization, or political subdivision which is supported in whole or in part by public funds or by solicitation of private subscriptions, to diagnose and treat patients, is ethical only when such diagnosis and treatment is for a patient who is a public charge.'

"3. Chapter III, Article VI, section 4, reads as follows:

Free Choice of Physician

> '*Section 4.* The right of the patient freely to choose his doctor must be preserved and maintained. Nothing in any individual or group method of practice must be permitted to interfere with this right.'

"It is recommended that the following clarification be added:

> 'Free choice of physician is defined as the unrestricted freedom of a patient to choose his own physician. The interjection of a third party who has a valid interest, or who intervenes between the physician and the patient, does not per se cause a contract to be unethical. A third party has a valid interest when, by law or volition, the third party assumes legal responsibility and provides for the cost of medical care and indemnity for occupational disability.
>
> 'If, however, the third party be an organization or corporation which agrees to provide medical and/or surgical services through the medium of individual or group practice, payment to the physicians under contract being either on an indemnity or a per capita basis, a requirement restricting choice of physician to either the individual or group practitioners under contract vitiates the subscriber's right to free choice of physician. This is against the best interests of the public and of the medical profession.'

"4. The following is a proposed additional section to Chapter III, Article VI:

Proration of Fees

> '*Section 7.* It is not unethical for a fee to be prorated between two or more physicians when such physicians actively participate in the rendering of medical and/or surgical care, and the fee therefore be commensurate with the services rendered; and the patient to whom such care shall have been rendered shall be advised of the participation and of the distribution of the fee through an itemized combined statement or separate statements. Such proration would be considered ethical if it was limited to instances where a contracted fee payment for a service has been made by an insurance company.' "

This, incidentally, has already been passed into the law by the State Legislature. I see no particular point in reading it at this time. It is merely a matter of transferring to the code of ethics what has already gone into law.

Speaker Holcomb: This resolution is referred to the Reference Committee on Report of the Council, Part XII, of which Dr. Edward P. Flood, of the Bronx, is chairman.

Section 50 (See 111)

Commendation of Dr. Ingegno's Stand on Free Choice of Physician in Medical Care Plans

DR. ABRAHAM D. SEGAL, *Kings:* This is approval of the stand on unrestricted choice of physician of the comitia minora of Kings County in regard to the work of Dr. Ingegno and to counteract the personal attack upon him:

> "WHEREAS, the president of the Medical Society of the County of Kings, Dr. Alfred P. Ingegno, because of his vigorous espousal of the medical profession's fight for preservation of the patient's right to free choice of doctor, has been subjected to bitter and unwarranted personal attack in a statement addressed to the delegates of the Medical Society of the State of New York and widely distributed by the Medical Group Council, an organization of doctors associated with the Health Insurance Plan of Greater New York, Inc.; and
>
> "WHEREAS, the various county medical societies and the Medical Society of the State of New York have consistently upheld the free choice of doctor provisions of Article VI, Section 4, of the *Principles of Professional Conduct* of the Medical Society of the State of New York and have repeatedly supported proposed legislation to preserve free choice of doctor in publicly offered medical care plans; and
>
> "WHEREAS, the Health Insurance Plan of Greater New York, Inc., which does not permit its subscribers unrestricted free choice of doctor, opposed the free choice of doctor bills which were before the New York State Legislature; and
>
> "WHEREAS, the comitia minora of the Medical Society of the County of Kings has expressed full confidence in and support of Dr. Ingegno and commended him for his sincere and forthright advocacy of unrestricted free choice of doctor in medical care plans; now therefore be it
>
> "*Resolved*, that the House of Delegates of the Medical Society of the State of New York express similar commendation and support.

SPEAKER HOLCOMB: This resolution will be referred to the Reference Committee on Report of the Council, Part XI, dealing with Publication, of which Dr. Ezra A. Wolff, of Queens, is chairman.

Section 51 (See 117)

Representation of Nonuniversity-Affiliated Hospitals on American Medical Association Council on Medical Education

DR. ABRAHAM D. SEGAL, *Kings:* This next resolution is the representation of nonuniversity-affiliated hospitals on American Medical Association Council on Medical Education:

> "WHEREAS, nonuniversity-affiliated hospitals render care to 80 per cent of the patients in the United States, the university-connected hospitals caring for only about 20 per cent; and
>
> "WHEREAS, in the past there has been little, if any, representation of the nonuniversity-affiliated hospitals on the Council on Medical Education of the American Medical Association or on its advisory committees; and
>
> "WHEREAS, there is a serious problem of interns that involves the nonuniversity-affiliated as well as the university-affiliated hospital; and
>
> "WHEREAS, this lack of representation by the vast majority of hospitals does not allow them to discuss their problems on an equal basis and is unfair and does not conform to ways of medicine; therefore be it
>
> "*Resolved*, that this House of Delegates go on record as approving that there be equal representation of duly appointed and/or elected members to the Council or Advisory Committee of both the university-affiliated and nonuniversity-affiliated hospitals where problems of interns and residency are involved; and be it further
>
> "*Resolved*, that the delegates from the Medical Society of the State of New York to the House of Delegates of the American Medical Association be instructed to introduce a similar resolution in the House of Delegates of the American Medical Association at its annual meeting in June, 1954."

SPEAKER HOLCOMB: This resolution will be referred to the Reference Committee on Miscellaneous Business A, of which Dr. George J. Lawrence, Jr., of Queens, is the chairman.

Section 52 (See 159)

Social Security Benefits for Physicians

DR. ARTHUR P. KANE, *Kings:* The subject of this resolution is "Social Security Benefits for Physicians," and reads:

> "WHEREAS, 40 million wage earners are currently eligible for retirement and survivors benefits under the Federal Social Security system; and
>
> "WHEREAS, Congress amended the Social Security Act in 1950 so that four and one-half million self-employed persons were enabled to purchase the same retirement and survivors benefits at a maximum cost of $41 a year in 1953 and increasing to a maximum of $175.50 after 1969; and
>
> "WHEREAS, the retirement benefits provide $120 a month for husband and wife at the age of sixty-five and survivors benefits of as much as $150 a month for a wife and children under age of eighteen; therefore be it
>
> "*Resolved*, that the House of Delegates of the Medical Society of the State of New York withdraw its decision on Social Security and urge Congress to give benefits to self-employed physicians; and be it further
>
> "*Resolved*, that the delegates of the Medical Society of the State of New York to the American Medical Association introduce a similar resolution in the House of Delegates of the American Medical Association at its annual meeting in June, 1954."

SPEAKER HOLCOMB: This will be referred to the Reference Committee on Report of the Council, Part IX, Legislation, of which Dr. E. Kenneth Horton, of Nassau, is chairman.

Section 53 (See 84)

Publication of Results of National Board Examinations

Dr. Benjamin M. Bernstein, *Kings:* These two resolutions are introduced in behalf of myself. The first has to do with the publication of results of the National Board examinations:

> "Whereas, it is of vital concern to the public that it be fully informed concerning the education of the doctor; and
>
> "Whereas, the profession has not given due publicity to certain important aspects related to such education; and
>
> "Whereas, the legal profession, especially in certain areas of the country, regularly publicizes the results of the examinations for the privileges of practicing in one particular state; and
>
> "Whereas, most graduates from medical schools take the examinations of the National Board of Medical Examiners which permits its diplomates to practice medicine in 39 states of the Union; and
>
> "Whereas, the character of these examinations, given as they are in three parts spaced at intervals through the medical course, attests to the thorough training given to our medical students in preparation for their careers of medical care; and
>
> "Whereas, these examinations and their results with the names of the successful candidates ought to be given the widest possible publicity; and
>
> "Whereas, such publicity is ethical, desirable, and long past due; now therefore be it
>
> "*Resolved*, that the delegates of the Medical Society of the State of New York to the American Medical Association be instructed to present this resolution at the next meeting of the American Medical Association; and be it further
>
> "*Resolved*, that the House of Delegates of the Medical Society of the State of New York urge the House of Delegates of the American Medical Association to approve its recommendations to the end that the necessary procedure may be established whereby the results of the examinations by the National Board of Medical Examiners are made available to the American Medical Association for the publicity they so richly deserve."

Speaker Holcomb: I will refer that to the Reference Committee on Report of the Council, Part I, Postgraduate Education, of which Dr. George A. Burgin, of Herkimer, is chairman.

Section 54 (See 118)

Change in American Medical Association Membership Procedures

Dr. Benjamin M. Bernstein, *Kings:* The second resolution has to do with a change in the A.M.A. membership procedures:

> "Whereas, the American Medical Association is composed of a union of state medical societies; and
>
> "Whereas, the representation of delegates from the various states to the A.M.A. House of Delegates should depend on the number of members in each state society; and
>
> "Whereas, membership in the American Medical Association is a direct privilege and obligation of each individual member and not by way of membership in his state society; now therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York protest the ruling now in effect under which representation is based on the number of members in the American Medical Association from each state and urge a change in this procedure, which now penalizes the state as a whole when it fails to persuade all of its members to pay dues directly to the American Medical Association; and be it further
>
> "*Resolved*, that the Medical Society of the State of New York urge instead the establishment of a preferable method whereby one dues payment to the county would cover membership and dues to the county and state medical societies and the American Medical Association; and be it further
>
> "*Resolved*, that the Medical Society of the State of New York direct its delegates to present this resolution at the next meeting of the delegates of the American Medical Association."

Speaker Holcomb: This resolution will be referred to the Reference Committee on Miscellaneous Business A, of which Dr. George J. Lawrence, Jr., of Queens, is chairman.

Section 55 (See 145)

Establishment of a Section on Allergy

Dr. Charles E. Spratt, *Kings:* This resolution is introduced at the request of the Kings County Medical Society. The subject is the establishment of a section on allergy:

> "Whereas, the Medical Society of the State of New York has an annual meeting with a scientific program including all branches of medicine, surgery, and their subspecialties; and
>
> "Whereas, there is an occasional paper on allergy included in the program; and
>
> "Whereas, it is the desire of the allergists of New York State to present the subject of allergy in a more comprehensive form to the members of the Medical Society of the State of New York; therefore be it
>
> "*Resolved*, that a Section on Allergy be established by the Medical Society of the State of New York; and be it further
>
> "*Resolved*, that a meeting of the Section on Allergy be included in the scientific program at the annual meeting of the Medical Society of the State of New York."

Speaker Holcomb: That will be referred to the

Reference Committee on Report of the Planning Committee for Medical Policies, of which Dr. Peter Murray, of New York County, is the chairman.

Are there any further resolutions from Kings? Continuing:

Lewis
Livingston
Madison
Monroe
Montgomery
Nassau

Section 56 (See 137)

Request for A.M.A. Curb on Derogatory Statements by Physicians

Dr. John M. Galbraith, *Nassau:* This is requested from the Nassau County Society for an A.M.A. curb on derogatory statements by physicians:

> "Whereas, self-appointed spokesmen for medical groups have made public statements to the press and lay magazines, accusing members of the medical profession of gross breaches of ethics, specifically 'split fees,' 'ghost surgery,' 'overcharging,' and 'unnecessary operations'; and
>
> "Whereas, these statements have resulted in the publication of vicious articles degrading the medical profession, under such headlines as 'Why Some Doctors Should Be in Jail'; and
>
> "Whereas, the appearance of such material in print has created an atmosphere of unjustified suspicion, resulting in a loss of confidence and faith in all members of the medical profession; now therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York go on record as:
>
> "1. Strongly condemning the practice of physicians making derogatory statements about members of the medical profession to the press or representatives of lay magazines;
>
> "2. Requesting the American Medical Association to state its views, in definite terms, on all phases of unethical practice and what it proposes to do to bring disciplinary action against individuals guilty of such practice, and
>
> "3. Urging the American Medical Association to use every means available to prevent spokesmen for medical groups, as well as the members at large, from making statements derogatory to the medical profession; and be it further
>
> "*Resolved*, that the Medical Society of the State of New York direct its delegates to present this resolution at the next meeting of the delegates of the American Medical Association; and be it further
>
> "*Resolved*, that copies of this resolution be sent to the American Medical Association and to the American College of Surgeons."

Speaker Holcomb: This will be referred to the Reference Committee on Report of the Council, Part XII, of which Dr. Edward P. Flood, of the Bronx, is chairman.

Has Nassau County any further resolutions?

New York County.

Section 57

Election of Rudolf Paschkis to Retired Membership

Dr. A. Wilbur Duryee, *New York:* I have two short resolutions concerning retired membership:

> "Whereas, Rudolf Paschkis was elected to life membership to the Medical Society of the County of New York on December 8, 1952; and
>
> "Whereas, his name was inadvertently omitted from the list transmitted to the secretary of the Medical Society of the State of New York for election to retired membership at the Annual Meeting in May, 1953; therefore be it
>
> "*Resolved*, that Rudolf Paschkis be elected to retired membership in the Medical Society of the State of New York effective May 6, 1953, and that his dues for 1953 be remitted; and be it further
>
> "*Resolved*, that the records of the Medical Society of the State of New York show him to have been a member in good standing until his status was changed to retired member."

Speaker Holcomb: This is noncontroversial. The Speaker will entertain a motion that it be adopted, without being referred to a reference committee.

Dr. Clarence G. Bandler, *New York:* I so move.

Dr. Norton S. Brown, *New York:* I second that.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 58

Election of Arthur C. Moorhead and Max Krinke to Retired Membership

Dr. A. Wilbur Duryee, *New York:* The second resolution reads:

> "Whereas, Arthur C. Moorhead and Max Krinke, both members in good standing of the Medical Society of the County of New York, were elected to life membership in the Medical Society of the County of New York on May 11, 1953; and
>
> "Whereas, this made their application for retired membership in the Medical Society of the State of New York arrive too late to be acted upon at the Annual Meeting of the Medical Society of the State of New York in May, 1953; therefore be it
>
> "*Resolved*, that the dues of the Medical Society of the State of New York of Arthur C. Moorhead and Max Krinke be remitted for the year 1953, and that they be elected to the status of retired members in the Medical Society of the State of New York."

Speaker Holcomb: That also is noncontroversial. The Speaker will entertain a motion that it be adopted, without being referred to a reference committee.

Dr. Solomon Schussheim, *Kings:* I so move.

Dr. Samuel Z. Freedman, *New York:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 59

Amend Bylaws to Provide for Prospective Retired Members to Remain in Good Standing

Dr. A. Wilbur Duryee, *New York:* This concerns the amendment to the Bylaws to provide for prospective retired members to remain in good standing:

> "*Resolved,* that the Constitution and Bylaws of the Medical Society of the State of New York be amended as follows: Chapter I, Section 6, of the Bylaws be amended by adding to the end of the said Chapter I the following paragraph:
>
> > 'In the event a member in good standing reaches his seventieth birthday too late for consideration by the Annual Meeting of the Medical Society of the State of New York held in the same year, and too late to be recommended for retired membership by his component county society, he may be considered at the next Annual Meeting of the State Society, and on the recommendation of the component county society, remain a member in good standing until that time without paying dues or assessments to the State Medical Society.'"

Speaker Holcomb: This resolution having to do with an amendment to the Bylaws will be referred to Dr. Aaron's Special Committee on Constitution and Bylaws and will be acted upon next year.

Section 60 (See 89)

Retirement Benefits for Physicians in Armed Services

Dr. George Himler, *New York:* I would like to introduce the first resolution for Dr. James H. Ewing, who is not here today, subject "Retirement Benefits for Physicians in Armed Services":

> "Whereas, Title III P.L. 810 does not provide retirement benefits for members of the Armed Services for service less than twenty years; and
>
> "Whereas, most physicians enter the service at an age when other officers of equal rank have already attained between eight to ten years' longevity, by virtue of the fact that this amount of time is spent in physician training; and
>
> "Whereas, because of the above, a great injustice is done such physicians in all branches of the service, since many cannot attain twenty years' satisfactory longevity toward retirement prior to the deadline of sixty years of age; and
>
> "Whereas, twelve years prorated retirement would not cost the government any extra monies; therefore be it
>
> "*Resolved,* that the Medical Society of the State of New York go on record as favoring a provision to the effect that physicians may be retired with prorata benefits at the end of twelve years' satisfactory service; and be it further
>
> "*Resolved,* that the delegates of the Medical Society of the State of New York to the annual meeting of the American Medical Association present this resolution for adoption with the provision that it be presented to the Congress of the United States for passage."

Speaker Holcomb: Thank you, Dr. Himler. That will be referred to the Reference Committee on Report of the Council, Part VIII, having to do with Liaison with Veterans Administration, of which Dr. Charles Sandler, of the Bronx, is chairman.

Section 61 (See 154)

Hospital Practice of Medicine

Dr. George Himler, *New York:* Now I would like to introduce a resolution myself on the hospital practice of medicine:

> "Whereas, Section 6502 of the New York State Education Law defines who may legally practice medicine, and no corporation, profit or nonprofit, appears in the definition; and
>
> "Whereas, Section 6514, Paragraph 2f, of the same law expressly forbids division, rebating, or assignment of fees, with one minor exception; and
>
> "Whereas, there has been a notable increase in the number of salaried physicians and surgeons on the staffs of hospitals in New York State; and
>
> "Whereas, hospitals employing such salaried medical personnel customarily bill patients for their services, thereby placing themselves in the position of practicing medicine; and
>
> "Whereas, physicians entering into such arrangements do so in violation of the above-mentioned Section 6514, Paragraph 2f, of the New York State Education Law, and in violation of Chapter III, Article VI, Section 6, of the *Principles of Professional Conduct* of the Medical Society of the State of New York; now therefore be it
>
> "*Resolved,* that the Medical Society of the State of New York enter into negotiations with those hospitals now engaged in the practice of medicine, as above defined, to effect immediate termination of the practice where it is possible to do so without disrupting the services of the hospital concerned, and to make plans for such discontinuation over a longer period of time where necessary; and be it further
>
> "*Resolved,* that the Attorney General and the Commissioner of Education of the State of New York be advised by the secretary of this action and of the deep concern of the Medical Society of the State of New York with the unauthorized practice of medicine by institutions."

Speaker Holcomb: This will be referred to the Reference Committee on Report of the Council, Part VI, dealing with hospital and professional relations, of which Dr. Charles H. Loughran, of Kings, is chairman.

Continuing, are there any resolutions from:

Niagara
Oneida
Onondaga
Ontario
Orange
Orleans
Oswego
Otsego
Putnam
Queens

There is just one announcement I will make to members of the House. I realize this has been a long, arduous morning, but I believe we can dispose of our resolutions, which I do not think will take much longer—we have about five more—and then I will be able to declare a recess until tomorrow morning, so you will have this afternoon to do your work. Are you agreeable to that or are there any objections?

VOICES: Let's go.

SPEAKER HOLCOMB: We have got about five more resolutions, and then you will have a well-deserved recess.

Section 62

Amendment to Bylaws to Provide for Malpractice Defense for All Members in Good Standing

DR. EZRA A. WOLFF, *Queens:* This concerns an amendment to the Bylaws to provide for malpractice defense for all members in good standing, and is introduced at the instruction of the Queens County Society:

> "WHEREAS, there is no positive provision in the Constitution and Bylaws of the Medical Society of the State of New York whereby members are entitled to defense by the Counsel of the Medical Society of the State of New York; and
>
> "WHEREAS, all members in good standing of the Medical Society of the State of New York are equally entitled to defense by Counsel; now therefore be it
>
> "*Resolved*, that the Constitution and Bylaws of the Medical Society of the State of New York be amended by adding to the Bylaws, Chapter I, Section 2 (a), the following:
>
>> 'A member in good standing shall have the right to malpractice defense by Counsel of the Medical Society of the State of New York for any acts upon which suit may be predicated during the period of his good standing;'
>
> so that Chapter I, Section 2 (a), of the Bylaws will then read:
>
>> 'A member is in good standing when his dues to his county society and the assessment of the State Society have been paid when they are due and payable. The dues year shall coincide with the fiscal year, January 1 to December 31 of each year. A member in good standing shall have the right to malpractice defense by Counsel of the Medical Society of the State of New York for any acts upon which suit may be predicated during the period of his good standing.' "

SPEAKER HOLCOMB: This resolution is referred to the Special Committee on Constitution and Bylaws, of which Dr. A. H. Aaron, of Erie, is chairman, for action next year.

Section 63 (See 158)

Revision of Laws Governing Autopsies

DR. EZRA A. WOLFF, *Queens:* The second resolution is introduced for Dr. Alfred Angrist, also at the instruction of the Queens County Society. It concerns the revision of laws governing autopsies:

> "WHEREAS, existing ambiguity in the statutes of the State of New York dealing with definition, consent, purpose, and nature of the autopsy procedure and the regulations of death certification promotes misconceptions in the minds of the lay public; and
>
> "WHEREAS, such defects in the existing laws promote misunderstandings for all concerned and create obstacles for medical examiners, coroners, and pathologists in the performance of their duties; and
>
> "WHEREAS, such existing contradictory statutes and obsolete administrative procedure have led to recent erroneous and inflammatory publicity which has served no useful purpose but has created prejudice against the autopsy examination; and
>
> "WHEREAS, the present situation hinders the advancement of medical knowledge and is contrary to sound public policy and the promotion of public health and the general welfare; therefore be it
>
> "*Resolved*, that the House of Delegates of the Medical Society of the State of New York petition the Governor of the State of New York to use his good offices for the creation of a Commission which shall consult with interested sources, including the Legislature, the Bar Association, and the medical profession, to review existing laws and regulations governing the dead human body and the autopsy, to study the social and medicolegal aspects of the problem, and to submit a report with recommendations for the needed changes in the statutes of the State of New York to clarify the present ambiguities and promote a sound legal procedure for the regulation of death certification and the autopsy."

SPEAKER HOLCOMB: This resolution will be referred to the Reference Committee on Report of the Council, Part IX, Legislation, of which Dr. E. Kenneth Horton, of Nassau, is the chairman.

Section 64

Amendment to Bylaws to Change Procedure for Transferring Membership from One County Society to Another

DR. GEORGE J. LAWRENCE, JR., *Queens:* The following resolution is being introduced upon the instructions of the Queens County Medical Society.

It proposes an amendment to the Bylaws to change the procedure for transferring membership from one county society to another:

> "Whereas, Chapter XIV, Section 2, of the Bylaws of the Medical Society of the State of New York provides that a member in good standing of any component county medical society shall be transferred to the roster of another component county medical society to which he removes merely upon his request; and
>
> "Whereas, the county medical society to which he requests transfer must accept him as a member; and
>
> "Whereas, it is conceivable that certain instances might arise wherein a county medical society would have good and sufficient reason not to accept such a transfer; therefore be it
>
> "*Resolved,* that Section 2 of Chapter XIV of the Bylaws of the Medical Society of the State of New York be amended by adding to the first sentence 'and provided he is found acceptable by the county medical society to which he is requesting transfer.' "

Speaker Holcomb: This will be referred to the Special Committee on Constitution and Bylaws, of which Dr. A. H. Aaron, of Erie, is chairman, for action next year.

Is there any further resolution from Queens County?

Section 65 (*See 138*)

Proposed Change in Principles of Professional Conduct

Dr. Thurman B. Givan, *Councillor:* This is a resolution which Dr. Winslow, of the Public Relations Committee, asked me to prepare for the Ethics Committee. It is in regard to the proposed change in the *Principles of Professional Conduct:*

> "Whereas, the American Medical Association meeting in St. Louis in December, 1953, passed a resolution entitled, 'The Relationship of the Physician to Media of Public Information'; and
>
> "Whereas, it is discernible that the section in the *Principles of Professional Conduct* of the Medical Society of the State of New York pertaining to 'Educational Information not Advertising' does not now conform to the Code of Ethics of the American Medical Association; therefore be it
>
> "*Resolved,* that Chapter I, Section 5, of the *Principles of Professional Conduct* of the Medical Society of the State of New York be deleted, and there be substituted the following:
>
> The Relationship of the Physician to Media of Public Information
>
> Many people, literate and well educated, do not possess a special knowledge of medicine. Medical books and journals are not always easily accessible or readily understandable.
>
> The medical profession considers it ethical for a physician (1) to meet the request of a component or constituent medical society to write, act, or speak for general readers or audiences. (2) On the other hand, it may often happen that the representatives of popular news media are the first to perceive the adaptability of medical material for presentation to the public. (3) In such a situation the physician may be asked to release to the public some information, exhibit, drawing or photograph. Refusal to release this material may be considered a refusal to perform a public service, yet compliance may bring the charge of self-seeking or solicitation.
>
> An ethical physician may provide appropriate information regarding important medical and public health matters which have been discussed during open medical meetings or in technical papers which have been published, and he may reveal information regarding a patient's physical condition if the patient gives his permission, but he should seek the guidance of appropriate officials and designated spokesmen of component or constituent medical societies. Spokesmen should be empowered to give prompt and authoritative replies, and a list should be issued which identifies them and discloses the manner in which they may be reached. These provisions are made with full knowledge that the primary responsibility of the physician is the welfare of his patient, but proper observation of these ethical provisions by the physician concerned should protect him from any charge of self-aggrandizement.
>
> Scientific articles written concerning hospitals, clinics, or laboratories which portray clinical facts and technics and which display appropriate illustrations may well have the commendable effect of inspiring public confidence in the procedure described. Articles should be prepared authoritatively and should utilize information supplied by the physician or physicians in charge with the sanction of appropriate associates.
>
> When any sort of medical information is released to the public, the promise of radical cures or boasting of cures or of extraordinary skill or success is unethical.
>
> An institution may use means, approved by the medical profession in its own locality, to inform the public of its address and the special class, if any, of patients accommodated."

Speaker Holcomb: This will be referred to the Reference Committee on Report of Council, Part XII, having to do with Ethics, of which Dr. Edward P. Flood, of the Bronx, is the chairman.

Section 66 (*See 96*)

Standards for Inhalation Therapy

Dr. Vincent J. Collins, *Section on Anesthesiology:* This is a resolution from the Section on Anesthesiology. The subject of the resolution is "Standards for Inhalation Therapy":

"Whereas, well-trained technicians in inhalation therapy have demonstrated their tremendous usefulness in the care of patients; and

"Whereas, by their knowledge of equipment and the basic problems of inhalation therapy they have become important adjuncts to the physician, as are those in the nursing profession to the physician; and

"Whereas, the registration of these technicians would serve as an incentive to well-qualified people to continue the progress in inhalation therapy and to attract additional men of high caliber; therefore be it

"*Resolved*, that the Medical Society of the State of New York appoint a committee to work jointly with a committee from the New York State Society of Anesthesiologists (1) to determine minimum standards of therapy, (2) to establish the essentials of acceptable schools of inhalation therapy, and (3) to formulate a basis for the certification of technicians and make recommendations for the licensure of same."

Speaker Holcomb: This will be referred to the Reference Committee on Report of the Council, Part V, having to do with Public Health Activities C, of which Dr. Olin J. Mowry, of Oswego, is chairman.

Section 67 (See 148)

Establishing of General Practice Departments in Voluntary Hospitals

Dr. Samuel A. Garlan, *Section on General Practice:* Mr. Speaker, I would like to introduce the following resolution, which is presented from the Section on General Practice, and the subject of which is "Establishing of General Practice Departments in Voluntary Hospitals":

> "Whereas, general practitioners administer 85 per cent of the medical care to the people of the United States; and
>
> "Whereas, it is for the good and welfare of the American public that these general practitioners be well trained in modern medical methods; and
>
> "Whereas, the hospital of today is the center of continued medical education; and
>
> "Whereas, modern medical training requires the integration of the general practitioner in hospitals and teaching institutions; and
>
> "Whereas, the 1952 report of the Greater New York Hospital Council demonstrated an astounding number of general practitioners without hospital appointments; and
>
> "Whereas, a recent hospital survey on general practice by the Subcommittee on General Practice of the Council Committee on Public Health and Education of the Medical Society of the State of New York has revealed few changes, with the exception of rural areas, since the 1952 Greater New York Council report; in fact, in the large urban areas there is a tendency to absolute exclusion of the general practitioner from the large voluntary hospitals; and
>
> "Whereas, this state of affairs would seem to show a wanton disregard of the public welfare and discrimination against the general practitioner on the part of those who make up most hospital medical boards in the large voluntary hospitals of the urban areas; and
>
> "Whereas, the American Medical Association in 1947 approved the establishment of general practice departments in hospitals and has reaffirmed the principles of integrating the general practitioner in hospitals at yearly meetings since then; and
>
> "Whereas, the House of Delegates of the Medical Society of the State of New York in May, 1952, approved a resolution recommending that general practice departments be established in the hospitals of New York State; and
>
> "Whereas, the American College of Surgeons has approved and urged the immediate integration of the general practitioner into hospitals and where feasible a general practice department be established; furthermore, the American College of Surgeons has stated that such procedures per se will not interfere with the approval of hospitals for the training of interns and residents, and, furthermore, the main consideration of the American College of Surgeons is that these physicians and surgeons be ethical and competent in their areas of performance, otherwise this College imposes no restrictions which would prevent the general practitioner from having the status which he deserves on the hospital staff, and any other conception of A.C.S. is a result of misunderstanding; and
>
> "Whereas, the newly formed Commission on Accreditation of Hospitals under the chairmanship of Edwin Crosby has only recently supported the concept of general practice departments in hospitals, and furthermore, stated that the constitution and bylaws for hospital medical staffs may be easily modified by the individual hospitals to provide for a section of general practice, and, furthermore, the general practitioner can find his status in the general hospital within the limits of the constitution and bylaws and accepted policies of that hospital; now therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York reaffirm its approval of the establishment of general practice departments in voluntary hospitals in the State of New York; and be it further
>
> "*Resolved*, that every voluntary hospital in this State be notified of this resolution and strongly urged to take prompt action towards establishing such a department at the earliest possible date; and furthermore be it
>
> "*Resolved*, that a report be presented at the 150th (1956) Annual Meeting of the House of Delegates of the Medical Society of the State of New York with the data obtained from a hospital survey concerning the integration of the general practitioner into the hospitals with a special analysis of the general practice departments in hospitals."

Speaker Holcomb: That will be referred to the Reference Committee on Report of the Council, Part VI, Hospital and Professional Relations, of which Dr. Charles H. Loughran, of Kings, is chairman.

Continuing, are there any resolutions from:

Rensselaer
Richmond
Rockland
St. Lawrence
Saratoga
Schenectady
Schoharie
Schuyler
Seneca
Steuben
Suffolk
Sullivan
Tioga
Tompkins
Ulster
Warren
Washington
Wayne
Westchester

Section 68 (See 102)

Group Accident and Health Insurance Plans

Dr. Waring Willis, *Westchester:* The subject of this resolution is "Group Accident and Health Insurance Plans":

> "Whereas, a group accident and health insurance plan was established by a district branch during the past year without foreknowledge of the counties involved; and
>
> "Whereas, this did not give the county societies an opportunity to evaluate this plan as it might relate to and affect their own county group plan; and
>
> "Whereas, a small representation from the county societies in attendance at the branch meeting approved this plan without study and without the knowledge of their societies; and
>
> "Whereas, in this particular instance unfortunate complications regarding other types of insurance have resulted; now therefore be it
>
> "*Resolved*, that whenever units of medical organization in the State of New York above the county level consider group programs of action, such plans be first presented to the individual county societies for study; and be it further
>
> "*Resolved*, that when group plans of this type involve any phase of insurance, they should also be submitted to the Insurance Bureau of the Medical Society of the State of New York for information in regard to the advisability of the plan, both as to cost and coverage and the suitability of the company to provide such coverage."

Speaker Holcomb: This will be referred to the Reference Committee on Report of Council, Part VII, dealing with medical care insurance, of which Dr. Walter S. Bennett, of Washington, is chairman.

Section 69 (See 126)

Support of the Group Malpractice Insurance Plan of the Medical Society of the State of New York

Dr. David Fertig, *Westchester:* This resolution is offered on behalf of the Westchester County Medical Society, and it concerns the support of the Group Malpractice Insurance Plan of the Medical Society of the State of New York, and it reads:

> "Whereas, various insurance companies have attempted to offer malpractice insurance to physicians in this State, either on an individual or group basis, at rates less than the State plan; and
>
> "Whereas, these companies have invariably been compelled to raise their rates; and
>
> "Whereas, the premium rates of the Group Malpractice Insurance and Defense Plan of the State Society reflect actual costs plus losses; now therefore be it
>
> "*Resolved*, that all members of individual societies, specialty groups, and the like, be urged to participate in the State Malpractice Insurance and Defense Plan if eligible for this protection."

Speaker Holcomb: That resolution will be referred to the Reference Committee on Reports of the Malpractice Insurance and Defense Board and Legal Counsel, of which Dr. Norton S. Brown, of New York, is chairman.

Are there any others from Westchester?

Section 70 (See 109)

Commendation of the Important Educational and Public Relations Program of United Medical Service

Dr. Edwin L. Harmon, *Westchester:* This is offered in behalf of the Medical Society of the County of Westchester and concerns commendation of the important educational and public relations program of United Medical Service:

> "Whereas, United Medical Service, New York's Blue Shield Plan, in the interests of both the general public and the medical profession, adheres consistently to a fair and honest presentation of its services in its educational matter; and
>
> "Whereas, United Medical Service also stresses constantly the importance of free choice of physician in its educational program; now therefore be it
>
> "*Resolved*, that this body commend United Medical Service for its public relations program and extend specific thanks for the current newspaper announcements which explain the position of the doctor in modern society and cite the public service purposes of the 1954 Convention of the Medical Society of the State of New York."

Speaker Holcomb: Thank you, Dr. Harmon. This will be referred to the Reference Committee on Report of the Council, Part XI, Public Relations, of which Dr. Ezra A. Wolff, of Queens, is chairman.

Section 71 (See 103)

Voluntary Health Insurance Coverage During Periods of Unemployment

Dr. W. Alex Newlands, *Westchester:* This resolution is introduced on behalf of the Westchester County Medical Society, and its subject is "Voluntary Health Insurance Coverage During Periods of Unemployment":

> "Whereas, voluntary health insurance is the chief bulwark against socialized medicine; and
>
> "Whereas, such voluntary health insurance would lapse as soon as the individual became unemployed; and
>
> "Whereas, there is certainly no time when the insured would need his health insurance more than when he was unemployed; and
>
> "Whereas, in keeping this insurance in force the insurance company would receive premiums for insurance that would otherwise lapse; and
>
> "Whereas, such a plan would provide payment to the physician for his services when the insured was unemployed; and
>
> "Whereas, the insured would not incur heavy medical debts during periods of unemployment; and
>
> "Whereas, medicine as a body is being criticized as being reactionary and not attempting to solve the financial problems involved in providing medical care for the lower income groups; now therefore be it
>
> "*Resolved,* that the Medical Society of the State of New York appoint a committee to study a means of prepayment whereby such insurance could be continued in the event the insured became unemployed."

Speaker Holcomb: That will be referred to the Reference Committee on Report of the Council, Part VII, Medical Care Insurance, of which Dr. Walter S. Bennett, of Washington, is chairman.

Are there any further resolutions from:

Westchester
Wyoming
Yates

Are there any further resolutions from any county, district branch, or section?

. . . There was no response .

Section 72

Announcements

Speaker Holcomb: I have a few announcements to make before recess.

Ladies and gentlemen, members of the House, the First District Branch announces a very pleasant interlude, a cocktail party in the Keystone Room at 6 P.M.

I am asking Dr. Anderton if he will read an announcement of Dr. Curphey's.

Secretary Anderton: The seventieth anniversary dinner of the Society of Medical Jurisprudence is being held tonight in this room to honor Dr. Leon T. LeWald, Emeritus Professor of Roentgenology of New York University-Bellevue Medical College. There are many men in this House who have been students of Dr. LeWald, and who might like to share in honoring him. Tickets are $7.50 each and may be obtained from Dr. Theodore J. Curphey.

Speaker Holcomb: One further announcement: Let me remind you to get your tickets for the dinner dance, which will be held on May 12 at 7 P.M., subscription $10. We are looking forward to a splendid evening.

I want to thank, at this time, the members of this House of Delegates for being very patient in going through a long session this morning without even a recess of a moment, and to announce that we will meet tomorrow morning at 9 o'clock.

The reference committees will meet, of course, this afternoon, and I will ask the chairmen of these reference committees to meet with Dr. Williams for a moment at this end of the room. There will probably be some things you will wish to discuss in connection with the reference committees. It is now 1:25, and the reference committees will meet at 3 o'clock, except Dr. Angrist's committee, Reference Committee on Report of Council, Part IV, which will meet tomorrow morning at 9 o'clock; also Dr. Loughran's committee, Reference Committee on Report of Council, Part VI, requests that they meet at 2:30 this afternoon, cutting down their luncheon time.

. . . The session adjourned at 1:26 P.M. .

Morning Session

Tuesday, May 11, 1954

The session convened at 9:15 A.M.

SPEAKER HOLCOMB: The House will please come to order.

The Speaker wishes to announce at this time that reports of reference committees will be received in as far as possible in the order in which they are registered with Miss Dougherty or Dr. Anderton. Before they are brought to either Dr. Anderton or Miss Dougherty, I would like to have them cleared with Miss Lewis at the rear of the room to be sure that they are in order and that they are properly signed. After you sign in, you will please sit to the right in these chairs. We are going to keep them vacant as much as possible, and possibly keep some of the brass out of these upper seats so that the chairmen of the reference committees will have a place to sit.

I also wish to announce that Dr. Kenney is urging the delegates and their guests to procure their dinner tickets for Wednesday night. Please don't wait too long because they wish to know how many reservations are needed.

At this time I shall call for the introduction of any further resolutions.

. . . There was no response . . .

SPEAKER HOLCOMB: Is Dr. Bauer in the House?

. . . There was no response . . .

Are there any reference committees whose reports are ready? If so, will the chairmen of those committees please come up and sign in? I thought after that long afternoon off yesterday, everybody would be just ready to go.

Section 73 (See 8)

Report of Reference Committee on Reports of Secretary, Censors, and District Branches

DR. JOSEPH A. LANE, *Monroe:* Mr. Speaker, this is a very short report, because I have a very easy committee that did not have any resolutions referred to it.

The committee reviewed the report of the secretary and the supplementary report, and wish to commend him on his excellent summary of the activities of the year, which was in keeping with his usual fine work.

There was no report from the censors.

Report of the district branches was also reviewed, and the activities of the component branches are commended, and each is urged to continue as it is at present.

There were no resolutions presented to this committee this year.

In keeping with the provisions of the secretary's supplementary report, the committee endorses the recommendation to invite the American Medical Association to hold its annual convention in New York City in the year 1958.

I move the acceptance of the committee's report, which is signed by Moses H. Krakow, Bronx; George F. Nevin, Cortland; Joseph G. Zimring, Nassau; Frank A. Gagan, Dutchess, and by Joseph A. Lane, Monroe, as chairman.

DR. MOSES H. KRAKOW, *Bronx:* I second that motion to accept the report.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

VICE-SPEAKER WILLIAMS: Is there any other committee ready to report?

. . . There was no response . . .

VICE-SPEAKER WILLIAMS: I guess this would be the time to announce the dinner tickets are still on sale.

Is there any supplementary report on blood banks we might hear now?

. . . There was no response . . .

VICE-SPEAKER WILLIAMS: Is there any other announcement you would like to have made now? If not, we are all fatigued enough for a five-minute recess.

. . . Recess . . .

VICE-SPEAKER WILLIAMS: The House will be in order.

We know definitely there are still a few resolutions to be submitted. Are those who wish to introduce these resolutions ready?

The briefs for the hearing on appeal that you received yesterday are legal briefs and should not be cast about lightly. These are quite confidential, and I think the government would call these "earmarked, ultraconfidential." Please see that these are not thrown around in the hall or left for the help to pick up. When we adjourned yesterday, we found several of them lying on the table. The men had just walked away and abandoned them. Tomorrow they will wonder where they are because they have not read them. Be sure you read these briefs before tomorrow.

Are there any additional resolutions?

Section 74 (See 151)

Approval of Joint Commission on Accreditation of Hospitals

DR. SAMUEL A. GARLAN, *Section on General Practice:* Mr. Speaker, I would like to present a resolution from the Section on General Practice. The subject is "Approval of Joint Commission on Accreditation of Hospitals":

> "WHEREAS, the Joint Commission on Accreditation of Hospitals of the American Medical Association, since taking over its functions from the American College of Surgeons, has proved itself eminently capable of handling those functions to the satisfaction of the great majority of the medical profession; therefore be it

> "*Resolved,* that the House of Delegates of the Medical Society of the State of New York heartily endorse and approve the accomplishments of the Joint Commission on Accreditation of Hospitals and its rules and regulations; and be it further
>
> "*Resolved,* that the Joint Commission on Accreditation of Hospitals of the American Medical Association be informed of this resolution."

VICE-SPEAKER WILLIAMS: This resolution is referred to the Reference Committee on Report of the Council, Part VI, of which Dr. Charles H. Loughran, of Kings, is chairman—Hospital and Professional Relations.

Is there any further resolution?

Section 75

Amendment to Bylaws Altering Composition of Nominating Committee

DR. CHARLES F. MCCARTY, *Kings:* I have been instructed by the presidents of the five county societies making up the First District Branch to offer the following amendment to the Bylaws altering the composition of the Nominating Committee:

> "WHEREAS, the First District Branch, comprising approximately three fifths of the total membership of the Medical Society of the State of New York, is disproportionately represented on the Nominating Committee; be it therefore
>
> "*Resolved,* that the Bylaws be amended so that the first sentence of Chapter XI, Section 4, shall read:
>
> > 'The Nominating Committee shall comprise thirteen members, one member to be chosen by the president from each county in the First District Branch, and one from each of the remaining district branches, in conformity with Chapter VII, Section 1, of these bylaws.' "

That is wrong. I did not write this. The one member is wrong. I know what it is. It is five members to be chosen by the president.

VICE-SPEAKER WILLIAMS: We can't accept this verbatim change.

DR. MCCARTY: I am reading it the way it is written.

VICE-SPEAKER WILLIAMS: The way it is written it will be referred to Dr. Aaron's Special Committee on Constitution and Bylaws.

Are there any reference committees ready to report?

The chair recognizes Dr. Bauer, who has a resolution.

Section 76 (See 104)

Service Benefits for Blue Shield Plan

DR. LOUIS H. BAUER, *Ex-President:* This resolution concerns service benefits for Blue Shield plans:

> "WHEREAS, there are increasing demands for so-called service benefits in voluntary insurance plans; and
>
> "WHEREAS, the best interests of both the public and medicine will be promoted by the development of service benefits by the Blue Shield plans to meet the economic situation of certain groups in the population, who have annual incomes below specified levels; therefore be it
>
> "*Resolved,* that the Medical Society of the State of New York endorse the principle of service benefits and recommend the adoption of such principle as it may be properly applied in the local area of each Blue Shield plan."

VICE-SPEAKER WILLIAMS: This resolution is referred to the Reference Committee on Report of Council, Part VII, of which Dr. Walter S. Bennett, of Washington, is chairman.

Is there any other resolution?

. . . There was no response . . .

VICE-SPEAKER WILLIAMS: Is any reference committee ready to report?

. . . There was no response . . .

. . . Announcements were made regarding various members of reference committees whose signatures were required on reports before they could be presented to the House . . .

Section 77

Time Announced for Deadline on Receiving Resolutions

VICE-SPEAKER WILLIAMS: The Speaker wishes me to announce that he is going to close the time for resolutions at 12 o'clock today, this morning. No resolutions will be entertained after 12 o'clock today.

Are there any resolutions at this time?

. . . There was no response . . .

VICE-SPEAKER WILLIAMS: At this time, gentlemen, the chair recognizes Dr. Aaron. Dr. Aaron is chairman of the Special Constitution and Bylaws Committee of the Medical Society of the State of New York.

Section 78 (See 122)

Report of Special Committee on Constitution and Bylaws

DR. A. H. AARON, *Erie:* Mr. Speaker, Mr. Vice-Speaker, and members of the House of Delegates, the Committee on Constitution and Bylaws, composed of Dr. James R. Reuling, Dr. Thomas O. Gamble, and myself, appreciates the privilege of studying the material presented to us, and may I deeply express my appreciation for their assistance and splendid advice, which with that of Dr. Anderton makes it possible for us to present this report for your consideration and your action.

Page 1057, of your printed reports, which everybody please follow, is divided into columns, one the proposed and the other the present status.

In discussing this report with your Speaker, he felt that it would be unnecessary for us to read all of the material and all of the changes, but that perhaps I could abbreviate it without at all losing the important sense of what was contained in the resolution. I have done so, and I hope not at the expense of the material contained therein, and, therefore, we do not mind if you correct us or if you tell us we have left something out. We have done it to the best of our ability.

A resolution introduced by Dr. Bernstein of Queens, the very first one on page 1057. The concept there of that entire material has been referred to the Council, and the Council has referred it to Dr. Di Natale's committee. Dr. Di Natale's committee last year met several times and took up four items. This was number four on the agenda. It is in relation to the status of membership, the status of dues, the status of correlation of dues membership and such of the American Medical Association, the county societies, the district societies, and such. It was the advice of this committee that it be sent to the Council, which it was, as I told you, and the Council referred it to Dr. Di Natale's committee.

On consultation with Dr. Di Natale, we found he has had several meetings last year on many subjects, which took up his entire program. He has delegated for this year this subject to his committee to study. Therefore, we believe we shall have to await the report of Dr. Di Natale's committee to the Council, and the Council's report to the House of Delegates, before we can act on this portion of the amendments to the Bylaws and Constitution that you submitted to us.

I move the acceptance of this portion of the report.

Dr. A. W. Martin Marino, *Kings:* I second that.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Aaron: Constitution, Article VII, still on page 1057, submitted by Dr. Lawrence of Queens. You will note it is a change in the Board of Censors. Although sympathetic with the philosophy of the above proposal, your committee recommends that it be not adopted because we prefer a judicial council as advocated below. In other words, we are not in approval with the following: "There shall be a Board of Censors consisting of the president and secretary of the Society and the president of each district branch," etc. We believe this should be supplanted by a judicial council, which will be brought up in the next article that we present to you for amendment. Therefore, we recommend not to adopt the proposal of Dr. Lawrence of Queens as to the change in the Board of Censors.

Vice-Speaker Williams: You move the adoption of your recommendation?

Dr. Aaron: Yes, I move the adoption of that recommendation of our committee.

Vice-Speaker Williams: Is there a second?

Dr. Edwin A. Griffin, *Kings*: I will second that.

Vice-Speaker Williams: Is there any discussion? Are you ready for the question?

Dr. Ezra A. Wolff, *Queens:* Is this discussion on the substitution of the proposed amendment or is this on the amendment itself?

Vice-Speaker Williams: This is on the report of the committee which recommends the rejection of this proposed amendment in the light of the possible adoption of some recommendations which will come later.

Dr. Wolff: This is not discussion of the substituted amendment as yet?

Vice-Speaker Williams: No, this is the amendment recommended by Dr. Lawrence last year to change the Board of Censors.

Dr. Wolff: I understand that, but Dr. Aaron said that his committee has recommended a substitute.

Vice-Speaker Williams: Oh, no, this is not discussion on that substitute. That is coming later. This is not considered a substitution. This is merely to drop the change in the old Board of Censors. Is that clear?

Chorus: Yes.

Vice-Speaker Williams: Are the House members clear as to what we are voting on?

Chorus: Yes.

Vice-Speaker Williams: We are voting on the recommendation of the committee which calls for the rejection of this proposed amendment.

. . . The question was called, and the motion was put to a vote and was unanimously adopted . . .

Vice-Speaker Williams: The recommendation of the committee stands adopted. Proceed, Dr. Aaron.

Dr. Aaron: Constitution, Article VII, presented by Dr. Samuel Leo, of the Bronx, for the Board of Trustees of the Medical Society of the State of New York. The present provision reads, "There shall be a Board of Censors consisting of the president and secretary of the Society and the president of each district branch, as provided in the Bylaws. The proposal is to delete present Article VII, and substitute the following:

Judicial Council

> "There shall be a Judicial Council consisting of five members appointed by the president with approval of the Council. The president, secretary, and the legal counsel of the Society shall sit with the Judicial Council with voice but without vote."

I submit that for consideration.

Vice-Speaker Williams: Do you move its adoption?

Dr. Aaron: Yes.

Dr. Arthur E. Lamb, *Kings:* I second it.

Vice-Speaker Williams: Is there discussion?

Dr. Frederick A. Wurzbach, Jr., *Bronx:* The Bronx County unit, which was not under the joint rule, considered this Judicial Council, as opposed to the Board of Censors, and feels that the present mode of settlement is a much more democratic manner of handling appeals. It is not in favor of the Judicial Council but wishes to retain the Board of Censors, according to most of the sentiment that was expressed.

Vice-Speaker Williams: Is there any additional discussion?

Dr. Joseph A. Geis, *Councillor:* Surprisingly, I am in agreement with Bronx County. I believe that we should stay democratic on this proposition. There is too much control put into the hands of a president and a few men of the Council, of whom I happen to be one, on this censorship business. Under our present plan most of the censors are elected by the men in the field out over the entire State, and very often such men have had no experience in the House of Delegates, but they are men who have the feeling of the people from their district. I believe we should continue that method.

Dr. Thomas M. d'Angelo, *Assistant Treasurer:* I am going to support the amendment that Dr. Aaron proposes. I am going to ask for modification later on. I believe the present method is very cumbersome. First, we have a Board of Censors from each district, and as a Judicial Council these censors would carry on probably for a five-year period and be well acquainted with the work set before them. They will undoubtedly make decisions which will set precedents. You cannot, in my opinion, be a competent censor every two years and be there for a period of two years.

Second, there is an appeal now from our present Board of Censors to this House of Delegates. You will hear such an appeal tomorrow, and I am sure you will find the whole method of appeal a very cumbersome procedure, so that is my belief that some change is necessary, and that change asking for a Judicial Council I feel is proper. However, I do believe that the appointment of the original five censors, placed in the hands of the present president or any president that would be elected at this time, is not judicious. I believe that the censors should be appointed one every year by the president, but to allow any particular individual to appoint five at once is not proper. Therefore, I would rather favor that the present president appoint one individual and that the Council elect the other four for the time being, and then every year a president would appoint one individual. Therefore, I would like to amend the recommendation of the committee in that regard.

Vice-Speaker Williams: You move an amendment?

Dr. d'Angelo: I move an amendment that the president appoint one member to the Judicial Council every year, but that this year the president also appoint one member and that four members be appointed by the Council of the Medical Society of the State of New York. I move that amendment.

Vice-Speaker Williams: Do I hear a second to that amendment?

Dr. Thomas H. McGavack, *New York:* I will second that amendment.

Vice-Speaker Williams: Is there any discussion of the amendment?

Dr. Edward T. Wentworth, *Past-President:* Mr. Speaker and gentlemen of the House, I had the questionable privilege of presiding at the Board of Censors meeting on a hearing of appeals twice last year. This is an unusual experience. The Board of Censors meets very, very infrequently. Out of that experience, I have concluded certain things. While I have not any criticism whatever of the board which we had, I think, as Dr. d'Angelo has expressed it, the procedure is cumbersome. Moreover, the individuals serving on that Board of Censors are not particularly familiar with the work to be accomplished.

I believe in democracy, of course, but we don't elect our Supreme Court in the United States. I don't think it is necessary that the Society at large or that the regions in particular elect the members of the Board of Censors. I do think that the all-important thing is to have a continuity of thought on the part of a Board of Censors. That can be obtained only by a more or less continuous board, a matter which could be accomplished readily enough by changing one censor for each of the five years.

I think, however, that a sort of compromise between Dr. d'Angelo's difficulty and the idea of the reference committee is preferable. I think that this member of the Board of Censors should not be appointed by the president. He should not be elected by the Council. He should not be elected by any district branch, but I think he should be elected by this House. Now that we already have one amendment, I hesitate to complicate the situation any. If my ideas were to prevail in this situation, they would run something like this: to defeat the amendment, and then to accept an amendment that we have a Judicial Council, and that it be composed of five members and these additional officers who sit with voice but without vote, and that the membership in this Judicial Council be elected by this House. I think it is much more important to get the formation of this Judicial Council as correct as possible than it is to get it all done this year. I don't think this is an emergency situation, so I caution that it is much wiser to postpone any action until another year than it is to rush through with a plan which may well appeal to many of you as not completely satisfactory.

Vice-Speaker Williams: It might facilitate things if Dr. d'Angelo and Dr. McGavack would accept that as an alteration or amendment, that the members of the Judicial Council be elected by this House.

Dr. d'Angelo: Every year?

Vice-Speaker Williams: One each year, and we could schedule them in successive classes. Isn't that what you had in mind?

Dr. Wentworth: That is the necessary way to start it.

Vice-Speaker Williams: That is the way to start it and have a continuous Judicial Council. Do you accept that, or would you like to make a recommendation to refer it back to the committee?

Dr. d'Angelo: In discussing that portion of the amendment, I always keep before me the precedent set in our own nation, that as a rule the judiciary is completely separated from the legislative body. It is true that the legislative body approves the appointments of the president, but as a rule the judiciary body is separate in our national affairs. That does not hold true in our State affairs, so I really am undecided at present whether Dr. Wentworth's suggestion is a good one or not. However, since so many suggestions have been brought up here, one from the committee that the president appoint all five, one from me that the president appoint one and the Council appoint the rest, and another from Dr. Wentworth that the five be elected now, and thereafter one elected each year, I think we would take up an awful lot of time to discuss this complete situation. Therefore, Mr. Chairman, if no one else wishes to discuss this matter—

VICE-SPEAKER WILLIAMS: We have your amendment before us. I cannot entertain a motion—

DR. D'ANGELO: I move that the entire matter—

VICE-SPEAKER WILLIAMS: You have to withdraw your amendment.

DR. D'ANGELO: A motion to refer is in order.

DR. EZRA A. WOLFF, *Queens:* I second the motion to refer.

VICE-SPEAKER WILLIAMS: There is a motion before you that the matter of how the Judicial Council shall be constituted shall be re-referred to the committee. I am sorry, but I am told by my parliamentarian that a motion to refer is not discussable. The question before you is on the motion to refer, which has been made and seconded.

DR. WALTER T. HELDMANN, *Richmond:* If this motion is sent back, and a new proposal comes in, which is different from the original printed motion, does that have to lay over for a year, if you amend the motion? I would like a ruling on that.

VICE-SPEAKER WILLIAMS: It would not necessarily be. We could amend it now, or they can bring in a report next year because the subject of the Judicial Council would be reported now and then reported next year and voted on.

DR. HELDMANN: Could it not be voted on this year if you changed the original motion?

VICE-SPEAKER WILLIAMS. It could be amended here and now.

DR. HELDMANN. On the Constitution?

VICE-SPEAKER WILLIAMS. Yes.

Dr. Reuling, I was wrong on that. It is debatable, and I will have to recognize Dr. Wolff before you, Dr. Reuling, because I did knock him down with the other ruling. Dr. Wolff, I apologize.

DR. WOLFF: The reason I seconded the motion to recommit was because I think there are other solutions. To present another variation which I think might be equitable, it was the opinion of a group of us who discussed this that it might be equitable to have the president appoint one member each year, which would allow for a certain amount of latitude in your duly elected officer, whom we are sure would choose a man of standing, but in starting with five members to have the other four members elected by this House for periods respectively of four, three, two, and one years. In that way our basic composition will have been democratically selected by the entire group, and our succeeding members will be selected one each year, a man appointed by the president whom you elect, yet there will be no power in the hands of any one man to control the entire group. I think that is a safeguard that is well worth-while. Therefore, Mr. Speaker, I urge the recommittal of this motion for implementation.

DR. JAMES R. REULING, *Trustee:* I was sorry to have to disagree with you. A motion to refer is debatable. It opens everything that has been said. It opens all amendments and everything else to discussion, but I understand that you have reversed your ruling now, and this is discussable.

I would say, gentlemen, that it has been my experience that it is very easy to get up and talk democracy. It is very easy to wave the flag and get support on that basis, but you are all mature gentlemen, and this is a very important thing. I believe it does not need to be re-referred to the committee. I think you can complete this thing at this time. I am speaking as a member of the committee, with the permission of the chairman. A board of censors or a judicial council, whichever you want to call it, should be composed of individuals who have some peculiar qualifications. Those qualifications should not be whether they are friends of somebody in some section in the State. They should not be just good fellows. They should be good physicians, but they also should have some judicial, clear, semilegal approach to matters. We have an example in this State of such an individual. Dr. Edward Cunniffe has been on the Judicial Council of the American Medical Association, which is the highest appeal body of medicine in this country. Dr. Cunniffe has been on the Judicial Council of the American Medical Association for many years. The term of office is five years, and I think at the present time he is serving his third term as chairman of the Judicial Council of the American Medical Association.

I would urge that Dr. Wentworth's proposal that this House elect be defeated. You elect an executive officer once a year. He is a man who is and always has been—I won't say he always will be—one in whom you can have confidence. He can't pack the supreme court, and that is what a judicial council would be. He can appoint one fifth of them. For this House to elect you might have only one name before you; on the other hand, you might have ten names of men who are elected in various parts of the State, but the other parts of the State would not have any opportunity at an election unless the elections are done differently than they are now. The rest of the members of this House would not have any opportunity to know whether that individual whom they were going to elect had those peculiar qualifications that are necessary for this important post. It should be a more or less continuing body. It should be a body made up of men who have the peculiar attainments that I have mentioned.

The method of starting in the amendment proposed by Dr. d'Angelo—I am in hearty accord with it. The president should appoint one man, and that a larger body— and I believe your Council is probably that proper body—can give serious thought to, and select your four other men, one for one year, one for two years, one for three, and one for four, and let the president appoint the fifth one. Next year another president will appoint for five years, and that will replace the first man.

There is another point that I have discussed with the chairman of the interim committee that I believe this House should be cognizant of. You have an appeal from the Board of Censors that you are going to hear tomorrow. As a rule, the adoption of a change of Bylaws takes effect immediately upon adoption. It is my opinion that the adoption of this whole change from censors to a judicial council would not take effect as far as this appeal of the House of Delegates, because that is a matter that would then be in process. I mention that because it is only my opinion. Maybe, Mr. Speaker, at some time in this proceeding that thing should be clarified, the point that I raised there, by action of this House it should be clarified.

Vice-Speaker Williams: We have not heard the complete report. The chances are that Dr. Aaron has included in his report a provision as to when the change would become effective, if adopted. Most likely it would be after the meeting of the House of Delegates.

Is there any discussion on the motion to refer?

Dr. Christopher Parnall, Jr., *Monroe:* I would simply like to second Dr. Reuling's remarks heartily. They contain very good sense.

Vice-Speaker Williams: If it is the sentiment of the delegates that they want to adopt this now, they will have to defeat this motion to refer. The motion before you now is to refer. Is there any further discussion on the motion to refer?

Dr. William B. Rawls, *New York:* Will you please restate what the motion is, to refer back to the reference committee or to refer to the Council, I was not sure?

Vice-Speaker Williams: This is a motion to refer this back to the Special Committee on Constitution and Bylaws of this House of Delegates of the Medical Society of the State of New York—this being the portion entitled Article VII that has to do with the Judicial Council.

Dr. Rawls: Does that mean we could not vote on it at this session of the House of Delegates, if that is referred back?

Vice-Speaker Williams: You could refer it back, and Dr. Aaron could call his committee together, meet tonight or tomorrow, and come in with it again to this House. There is no reason why the committee could not still meet. We can re-refer and have it come in tomorrow or refer it and direct that it be brought back next year.

Dr. Rawls: I would like to amend the motion on the referral that they be directed to bring it back to this meeting of the House of Delegates.

Dr. d'Angelo: I second that.

Vice-Speaker Williams: Does the seconder accept the amendment?

Dr. Wolff: Yes.

Vice-Speaker Williams: Now, then, the motion is to refer with the directive that it be brought back at this session of the House of Delegates.

Dr. Rawls: Any session during this meeting of the House.

Vice-Speaker Williams: Yes. Is there any discussion on that?

Dr. Leo F. Schiff, *Trustee:* At my first appearance in the House of Delegates a number of years ago the first thing I ever tried to do was to get up and talk upon a motion of referral. At that time we had a most experienced, capable, domineering, and ruthless speaker. I, as a young man from the country districts, got up, opened my mouth, and had hardly said seven words when the speaker informed me that on a motion to refer I might speak on the motion to refer but not mention the subject. I had a hell of a hard time, but I managed to get through. Now I have learned my lesson, and I am speaking only on the motion to refer.

Gentlemen, I think you would do well to defeat that motion because from all that I have heard here there is nothing in the subject itself which would not be better off if we discussed it right here and settled it. On the reference, whether you bring it in tonight or tomorrow, you are simply postponing something that is going to take a lot of your time and get you nowhere. I earnestly urge you to defeat the motion to refer so that we can get down to business and settle this thing and take up the excellent suggestions that have been offered.

Vice-Speaker Williams: Is there any other discussion on the motion to refer?

. . . There were calls for the question. . .

. . . The motion to refer was put to a vote and was defeated. . .

Vice-Speaker Williams: The motion to refer is defeated. Is there any appeal?

Dr. Aaron: Now, sir, it will be necessary to return to page 1058, and in the long list of procedures, as—

Vice-Speaker Williams: We have not adopted your proposal. You have to move the adoption of your proposal.

Dr. Aaron: I move, sir, the adoption of that portion of the report.

Vice-Speaker Williams: Have you accepted the amendment, as to how the men should be selected?

Dr. Aaron: Yes.

Vice-Speaker Williams: You have before you the motion that has been made by the chairman of the committee to accept this proposed amendment. Now in discussion of that motion, I recognize Dr. Ezra Wolff.

Dr. Wolff: It is my understanding that what we have before us now is the amendment itself.

Vice-Speaker Williams: That's it.

Dr. Wolff: Since the motion to recommit, which I think it properly should be called, was defeated, I want to raise some other questions here about how we can hope to write an amendment here in this House when it will entail a number of changes from the committee's original wording. I think that that has to be done very carefully by a small group. For instance, the amendment has not specified the periods. We don't have an exact wording on the terms of office of the members who will be elected by the Council. Is there any reference any place in this suggested amendment that says a member of the Judicial Council may or may not be another officer of the State Society? Is there a prohibition against holding two offices in the Society? I don't think we can settle those things here and word them properly.

If we do, we are going to get ourselves tangled up in a lot of difficulty, and we will end up by having a poorly constructed portion of our Constitution. If we can discuss our primary ideas here, they can be properly set down for us by the committee, and we can then act upon that wording without further discussion. We are all willing to trust Dr. Aaron to put into the amendment what the House decides it wants, but I don't think we can give it here and now. Thank you.

Dr. Benjamin M. Bernstein, *Kings:* Call it judicial council or board of censors, any way you wish, the people on this board or body have to do with the economic and professional life of any individual who is brought up for misconduct. With all due respect to Dr. Reuling, we elect councillors, we elect trustees, we elect other people. Why can't we elect these people who have to do with the economic existence of all of us? Is there any reason we cannot elect members of the Board of Censors who may hold office for three years, if you will? I have a proposal of my own that we have six censors elected for three years, two every year; therefore, you will have eventually six men who will have served for three years. It seems to me that no appointment by our president could be better than our own judgment.

Dr. Reuling says we don't know who a man from upstate might be. That is true. We must not, therefore, discriminate between upstate and downstate. We have done too much discrimination between upstate and downstate in all the officerships. We represent the medical profession of the State of New York. We can act accordingly.

I would accordingly urge that we defeat the proposal made by our excellent subcommittee and devise some means somewhat like the one I just discussed whereby we might elect a board of censors or judicial council.

Vice-Speaker Williams: That is discussion. You did not offer an amendment?

Dr. Bernstein: I would be delighted to.

Vice-Speaker Williams: Are you offering an amendment?

Dr. Bernstein: I should, therefore, offer an amendment to the amendment that there should be a judicial council or board of censors consisting of six men to hold office for three years, two to be elected each year.

Dr. Edwin A. Griffin, *Kings:* I second that.

Dr. d'Angelo: May I raise a point of order? That amendment that Dr. Bernstein just interposed is not an amendment to the amendment, but an entirely separate amendment. I do not believe that two amendments can be on the floor at the same time.

Vice-Speaker Williams: I felt that we were not considering your amendment; we were considering now the motion of Dr. Aaron on the proposal itself, which incorporated yours.

Dr. d'Angelo: If that is the case—

Vice-Speaker Williams: If the House is now under consideration of your amendment to Dr. Aaron's motion, then I cannot accept the motion from Dr. Bernstein as a second amendment.

Dr. d'Angelo: Therefore, may I say this: If my amendment has been incorporated in Dr. Aaron's report, I would like Dr. Aaron now to read the proposal with the various terms of the members to be elected different bodies, including the president, with all the necessary commas, periods, and quotations thereof.

Dr. Abraham D. Segal, *Kings:* There have been many viewpoints expressed from a great many angles, and we are placing the chairman of this committee in an awkward position to do that. I would like to move to table this until tomorrow morning. A motion to table is not discussable, and it will give him a chance to work it out. There are many angles which cannot be solved here; otherwise we will be at it all day.

Vice-Speaker Williams: You want to move to table or recommit?

Dr. Wolff: Point of order, if this is stated as a motion to table until tomorrow morning, then it becomes a motion to postpone action, which is discussable. I think we ought to have that clarified.

Vice-Speaker Williams: A motion to table is not debatable.

Dr. Wolff: It is not a motion to table if it specifies a time, such as tomorrow. When there is a definite period expressed, it becomes a motion to postpone action.

Vice-Speaker Williams: You are quite right. To postpone to a certain date is debatable. The motion is to postpone to a certain time, and it is debatable.

Dr. Segal: Change that to a motion to table, and let them bring it in.

Vice-Speaker Williams: After all, the motion to table would be like recommitting it so it could be reconsidered here where we are a committee as a whole. The motion to table is before the House. Is it seconded?

Dr. Frederick A. Wurzbach, Jr., *Bronx:* I second that.

Dr. Wolff: May I ask a ruling whether a motion to table disposes of the matter entirely, or does it in effect recommit? A motion to table kills the proposition until somebody brings it up again on the floor.

Vice-Speaker Williams: That is true. I feel quite sure that this very important committee of the House will surely bring it up again next year. They can bring it up any time they want. The motion to table has been made and seconded—

Dr. Rawls: Mr. Chairman—

Vice-Speaker Williams: A motion to table is not debatable. Do you want to rise on a point of order?

Dr. Rawls: I don't know whether this is a point of order. I want to try to read something, and I have tried to put together all the discussion here—

Voices: You can't do it.

Vice-Speaker Williams: I am afraid I cannot entertain it, as much as I would like. The motion to table is before you. All in favor—

Dr. Leo F. Schiff: Is this a motion to table? Is that all, with no limitation?

Vice-Speaker Williams: There was no specific date set. Wasn't that true, sir?

Dr. Segal: Right.

Dr. Wolff: May I ask the chair to explain to the House what the status of this proposition will be if this motion to table is carried?

Vice-Speaker Williams: If the motion to table is carried, the report of Dr. Aaron's committee is tabled, but they can bring it up or anybody can move to reintroduce it, or he can bring it in next year. That is the way I would rule. I think that is what it expresses, and that is in keeping with the sentiments of the delegates.

. . . The motion to table was put to a vote and was lost. . .

Vice-Speaker Williams: The motion to table has been defeated. Now, then, let us make it clear: We are now under consideration and discussion of Dr. d'Angelo's amendment. Is that right?

Dr. Wolff: That is right.

Vice-Speaker Williams: Under that decision the chair recognizes Dr. Rawls.

Dr. Rawls: I am not trying to introduce another amendment but trying, if possible, to clarify what has been said on the floor: There shall be a Judicial Council consisting of five members. One member shall be appointed by the president for a term of five years each year, subject to the approval of the Council. The other four members shall be for a term of one, two, three, and four years, and shall be appointed by the Council of the Medical Society of the State of New York, in order to implement this Judicial Council at the present time.

Vice-Speaker Williams: Dr. d'Angelo, do you accept that? We are considering your amendment to Dr. Aaron's proposal.

Dr. Rawls: I would like to make that as a substitute amendment.

Vice-Speaker Williams: Substitute motion.

Dr. Rawls: I meant to say substitute motion.

Dr. d'Angelo: I wonder if Dr. Rawls would include the time at which this amendment is to take place?

Dr. Rawls: Immediately.

Vice-Speaker Williams: That will lead us to a lot of complications.

Dr. Rawls: I meant at the end of this.

Vice-Speaker Williams: At the end of this session of the House.

Dr. Rawls: Not today, but after this meeting.

Vice-Speaker Williams: Do you accept that, Dr. d'Angelo?

Dr. d'Angelo: I accept that as a substitute motion for what I said.

Vice-Speaker Williams: Does Dr. McGavack accept it?

Dr. McGavack: Yes.

Vice-Speaker Williams: Now we know what we are doing. We are considering this as a substitute for Dr. d'Angelo's amendment to Dr. Aaron's proposal.

Dr. Reuling: A substitute for the main motion.

Vice-Speaker Williams: You accept that?

Dr. Reuling: He does not have to.

Vice-Speaker Williams: If he does, though, it will help.

Dr. Reuling: He does not have to.

Vice-Speaker Williams: He does not have to accept, so what we will do is call for any discussion on the substitute motion that is before you. It has been made and seconded.

Dr. Clarence G. Bandler, *New York:* I second it.

Vice-Speaker Williams: Is there any discussion of Dr. Rawls' substitute motion?

Dr. Leo F. Schiff: May we have it read again? I did not listen to it very well. I would like to have the substitute proposal read.

Dr. Rawls: May I add I did not include the last sentence that says, "The secretary, president, and the legal counsel of the Society shall sit with the Judicial Council with voice but without vote." I simply said there shall be a Judicial Council consisting of five members. One member shall be appointed by the president for a term of five years each year, subject to the approval of the Council. The other four members shall be for a term of one, two, three, and four years, and shall be appointed by the Council. This is to take effect at the end of this meeting, end of this session.

Vice-Speaker Williams: Gentlemen, you have heard the statement of the substitute motion. Now the question before you is, first, as a House to decide shall we accept a substitution. I think that question does not need to be debated, but it is wide open.

Dr. McGavack: Mr. Speaker, as I understand Dr. Rawls' substitute motion, it includes the sentence which begins on the bottom of page 1057, "The secretary, president, and the legal counsel of the Society shall sit with the Judicial Council with voice but without vote."

Dr. Rawls: Yes.

Vice-Speaker Williams: It is so understood.

Dr. McGavack: Also in Dr. Rawls' motion should not the word "initial" precede the other four members because those are only to be elected once by the Council? Otherwise one is left with the assumption from his motion that these might be elected in some mysterious way.

Vice-Speaker Williams: The word "initially" should be inserted. Just the initial election is under the Council. I still want to get the sentiment of the House whether we will substitute; then the text of this can be opened and passed later. Let us not get snarled in the text before we have decided we will substitute.

Dr. Leo F. Schiff: I think we are in the wrong spot for a substitution. If you will just look along the page, page 1058, right hand column, beginning at the top, in Section 1, you will find there comes up the details of the appointments of these men. It is taken up in order there. Now if we would just assume that we are in favor of a Judicial Council, and that is the matter that is taken care of in the proposed Judicial Council amendment, the first one of them, which begins at the bottom of page 1057, which provides for the existence of that council composed of five members appointed by the president, with the counsel and those other officers who have the right to sit in with voice but without vote, I think you could go right back and pass that one, gentlemen, reject the substitute, and ask Dr. Rawls to again bring in his substitute when we get on the order of business which begins at the top of the second column of page 1058. If you do that, you will get a much nicer looking Constitution and By-laws, if you do it in that orderly fashion, than if you try to stick it in here.

Dr. Frank A. Gagan, *Dutchess:* There is a great deal of confusion in some of the views, so I should like again to move that this entire matter be referred back to the committee for crystallization of these views, and that the committee be instructed to bring in their crystallized statement prior to the ending of this session.

Vice-Speaker Williams: You want to move to reconsider the motion to recommit?

Dr. Gagan: Yes.

. . . The motion was seconded by several. . .

Dr. Bernstein: Point of order!

Vice-Speaker Williams: State your point of order, Dr. Bernstein.

Dr. Bernstein: I would like to be persistent in order to clarify my point of order on amendments. An amendment to a motion, or an amendment to an amendment, may add, delete, or completely change the material of any previous motion. Thus Dr. d'Angelo was wrong when he said that material which might be introduced that is new is out of order. It is always in order even if it be entirely different from the original motion.

Vice-Speaker Williams: Is Dr. Gagan's motion seconded?

Dr. Joseph Alvich, *Bronx:* If not, I will second it.

Dr. Wolff: The motion to recommit may be properly made without having to reconsider it.

Vice-Speaker Williams: Dr. Gagan, did you so make it?

Dr. Gagan: I made a motion to recommit.

Vice-Speaker Williams: Has it been seconded?

Dr. Alvich: Yes, I seconded it.

Dr. Wolff: I might suggest in recommitting we might instruct or make the recommendation.

Vice-Speaker Williams: Please take a microphone so we can hear you. It will make it better for all the delegates to hear you if you take the microphone.

Dr. Wolff: I want to suggest, Mr. Speaker and members of the House, that if we have definite ideas on what we want, let us so instruct our committee, so that they will know how to write it up. The mechanics of the writing I think properly belong in the hands of a committee. We cannot write amendments standing on our feet in front of a microphone. If we know what ideas we want to incorporate, then the committee can do it for us. I feel that before this is recommitted, this House should instruct the committee as to just what it wants, and then they can do a job for us.

Dr. Aaron: Mr. Speaker, I think perhaps I was negligent in not reading this entire thing to you. As the chairman of this committee, I should like to proceed with the reading of this entire proposition to you at this time:

"Section 1. The Judicial Council consists of five members, including a chairman, appointed by the president, and confirmed by the Council. In 1954, one member shall be appointed for five years, one member for four years, one for three years, one for two years, and one for one year, such appointments to be so arranged that at each annual convention of the Society the term of one member shall expire. Thereafter, whenever the term of a member expires, a member shall be appointed for five years. In the event of a vacancy, a member shall be appointed for the unexpired term.

"The Judicial Council shall meet upon the call of the chairman. The secretary of the Society shall prepare and submit the report of the Judicial Council to the House of Delegates.

"Section 2. The Judicial Council shall have jurisdiction to hear and determine all appeals from decision on discipline of component county medical societies or decision of such societies which may involve the privileges, rights, or standing of members, whether in relation to one another or to county medical societies or to this Society. Any member of any component medical society who shall have been disciplined or directed to suffer discipline in any degree by any final decision of his county medical society and who shall have exhausted his right of appeal, if any, with any such county medical society, feeling aggrieved by the decision of such society, may appeal to the Judicial Council of this Society from the decision of such component medical society by filing a notice of appeal with the secretary of this Society and with the secretary of such component medical society within three months after final decision by such component medical society.

"Section. 3 Any applicant for membership in a component county medical society who may have been excluded from membership in such society may likewise appeal from the action of said society excluding him.

"Section 4. Any notice of appeal shall set forth in writing the name of the appellant, the name of such component county medical society, and the date and substance of the decision appealed from and shall indicate the ground or grounds upon which each appeal is taken. If the appellant desires to be present, with or without counsel at the hearing of said appeal, the notice of appeal must so state. In that event, the appellant must file with the notice of appeal a bond in the sum of $500 to cover the costs of said appeal. If the appellant fails to appear in person or by counsel upon hearing of said appeal, he shall forfeit to the Medical Society of the State of New York such share of said bond as represents necessary expenditures incident to convening the Judicial Council for the hearing of said appeal.

"Section 5. Upon filing a notice of appeal, the appellant and the component county medical society shall submit to the secretary of the Society all records, minutes, letters, papers, and all written evidence, including a digest of all testimony not stenographically reported, relating to the matter.

All data so submitted shall be available only to the Judicial Council.

"SECTION 6. The Judicial Council shall consider the appeal on the data so submitted to it, and may affirm, modify, or reverse the decisions so appealed from, by a majority vote of the members present and voting. If, in its opinion, the taking of further evidence is advisable, the Judicial Council may summon witnesses and proceed to take such evidence in such manner as it may deem proper and render its decision by a majority vote of those present and voting, which decision shall be final and binding.

"SECTION 7. The Judicial Council shall investigate all charges preferred (*a*) by a member of a component county society against any component county medical society of which he is not a member; and (*b*) by a component county medical society against another such county medical society or a member thereof, and the secretary shall submit a report of the Judicial Council to the Council.

"SECTION 8. Three members of the Judicial Council shall constitute a quorum."

Your committee approves of the above proposed amendments to the Constitution and Bylaws.

You will note that the present Constitution provides for an appeal from a decision of the Board of Censors to the House of Delegates. The proposed amendment does not provide for any appeal from the decision of the Judicial Council but requires a report to the Council.

In addition, Item 10 on the list of order of business, in Section 8, Chapter II, of the Bylaws, shall be instead of "Report of the Board of Censors," changed to "Report of the Judicial Council."

VICE-SPEAKER WILLIAMS: Now, Dr. Gagan, do you wish to move to recommit?

DR. GAGAN: Yes, I wish to move to recommit and let the committee bring in the correct wording.

VICE-SPEAKER WILLIAMS: Before the end of this session?

DR. GAGAN: That is correct.

VICE-SPEAKER WILLIAMS: Is that seconded?

DR. SEGAL: Yes, I will second that.

VICE-SPEAKER WILLIAMS: Is there any discussion? If not, are you all ready for the question to recommit and that it be brought back again before the end of this session? All in favor, say "Aye"; opposed, "No." The motion to recommit has been defeated.

VOICES: No! No!

DR. SEGAL: I call for a standing vote.

VICE-SPEAKER WILLIAMS: There is a request for a standing vote. All in favor of recommitting, please stand. All those opposed will now please stand. The motion to recommit is carried. (*Applause*)

Is there any additional portion of the report you wish to present now? I think the motion to recommit included just the portion pertaining to the Judicial Council.

VOICES: Correct.

VICE-SPEAKER WILLIAMS: We will hear the rest of Dr. Aaron's report. We may accept the others.

DR. AARON: Mr. Speaker, will we receive in writing all of the ideas that the men have expressed here today so we may take them to our meeting? I don't remember them.

VICE-SPEAKER WILLIAMS: The best way to do it is not to receive it in writing. I think the best way for you to do it is to announce your committee will meet in the back of the reference committee room and have the members of the House heard there. I don't see how we can get a transcript by this afternoon. Our secretary is going to be busy with the proceedings. He can't type what he has taken.

DR. AARON: We will accept that as the method of procedure, and immediately after the session here this morning, Dr. Gamble, Dr. Reuling, and I will meet in the reference room in the rear to hear those members of the House of Delegates who wish to submit further changes in this portion of the report, in order that we may consider them and give you a report tomorrow.

VICE-SPEAKER WILLIAMS: Will you proceed, Dr. Aaron, with the rest of your report?

DR. AARON: Now we are on page 1060, and in order that we may have no further difficulty I am going to read it all to you. I am sorry to have to do this, but it seems to me that perhaps by not reading it we did not get the gist of the other across to you. I tried to do it by agreement, but it did not work. The item here is Constitution, Article IX. Proposed:

> "WHEREAS, the Medical Society of the State of New York has spent more monies than received during the past several years; and
>
> "WHEREAS, this deficit spending has occurred largely because of the fact that activities have been undertaken without taking into consideration or ascertaining whether sufficient funds are available and without providing any appropriation for the carrying on of such activities; now therefore be it
>
> "*Resolved*, that Article IX of the Constitution of the State Society entitled 'Funds' shall be amended by striking out the second sentence beginning with the words 'Funds may' and ending with the words 'in session,' and also striking out the last sentence beginning with the words 'The approval' and ending with the words 'of the Society,' and in lieu thereof adding the following language:
>
> > 'No money shall be paid out of the treasury of the State Society or any of its funds or any of the funds under its management except in pursuance of an appropriation by the House of Delegates. Every such appropriation shall distinctly specify the sum appropriated and the object or purpose to which it is to be applied. All such appropriations shall be subject to the approval of the Board of Trustees and the Council. The Board of Trustees and the Council shall not approve any appropriation of the House of Delegates unless the appropriation can be met without resorting to deficit spending or by pledging the credit of the State Society. No debt shall hereafter be contracted by or on

> behalf of the State Society unless such debt shall be authorized by the House of Delegates for some single purpose to be distinctly specified therein. Nothing herein contained however shall prevent the Council, subject to the approval of the Board of Trustees, from contracting debts in anticipation of the receipt of dues and revenues for the purposes and within the amounts of appropriations theretofore made.' "

The committee recommends retention of Article IX of the Constitution unchanged. Defeat of the proposed amendment is urged because its adoption would prevent contraction of any debt without previous authorization of the House of Delegates. This would be an almost impossible procedure to follow. Therefore, your committee recommends as I read. I move the adoption of the committee's recommendation.

Dr. Moses H. Krakow, *Bronx:* I second that motion to disapprove.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Aaron: Bylaws, Chapter I, Section 2, Proposed:

> "1. Chapter I, Section 2, subdivision (*a*), second line, after the word 'society' delete the words 'and the assessment.' On the third line, after the word 'Society' insert 'and the American Medical Association.' This will make the paragraph read: 'A member is in good standing when his dues to his county society, the State Society, and the American Medical Association have been paid when they are due and payable.'
>
> "2. In subdivision (*c*), on the fifth line, delete the word 'and,' and after the words 'State Society' add 'and the American Medical Association.' This paragraph will then read: 'The member whose dues and assessments are unpaid after December 31 of any current year shall automatically be dropped from the rolls of membership of both his county society, the State Society, and the American Medical Association without notice to such member by the county medical society or the Medical Society of the State of New York, all without further action on the part of either the county society or the State Society, and upon such date he shall automatically cease to be a member of all three societies.'
>
> "3. In subdivision (*d*), delete the word 'State' in the first line, and after the word 'assessments' add: 'of county and State societies, and the American Medical Association.' This paragraph will now read: 'Dues and assessments of county and State societies and the American Medical Association of a member elected or reinstated after October 1 shall be credited to the succeeding year, all rights and privileges of membership, however, dating from the time of election; but no member dropped for nonpayment of dues and assessments shall be reinstated until he has, in addition, paid his dues and assessments for the year in which he was dropped.' "

Your committee disapproves of the proposed amendment because we do not believe membership in the American Medical Association should be mandatory at this time for members of the Medical Society of the State of New York. However, we believe we should all be members of the American Medical Association and that such should be compulsory at some future date.

I move the adoption of this portion of our report.

Dr. Ben A. Borkow, *Kings:* I second that.

Vice-Speaker Williams: Is there any discussion? If not, are you ready for the question?

Dr. Joseph A. Geis, *Councillor:* Mr. Speaker, I believe we should approve this amendment. I introduced it last year. I believe that New York State should be one of those states which has joined the majority of the states of these United States in having a compulsory membership in our national association. Last year we had several other matters come up here in regard to collecting dues. They were all defeated on this floor due to the fact that this amendment had been introduced, the members feeling this would solve the question. I believe there is only one way for medicine in this nation to succeed, and that is by all of us joining the American Medical Association, and it should be a compulsory proposition. In that way we also will raise the question of these delegates that was introduced this year, and why we should be changing from year to year the number of delegates we are entitled to in the American Medical Association. I feel that we should definitely take a stand and either be all-out doctors and all-out medical members or not at all. I definitely believe that we should approve of this amendment.

Vice-Speaker Williams: Is there any further discussion?

Dr. Benjamin F. Glasser, *Queens:* Mr. Speaker and gentlemen of the House, I am in accord with Dr. Geis' point of view that we should all be doctors, not half doctors. I am also in accord with the view that we in the State Society should take the lead in joining the American Medical Association, but up to the present time the American Medical Association has not forwarded that proposition to the county societies. It has never stressed that point of view, and I believe the county societies should have voice in discussing the matter before we take up the question on a State level. I know we of Queens County have had no opportunity to press the question, and we do not know what our county thinks of it in these terms. Therefore, I would urge adoption of the committee's recommendation, and let us bring it home for further discussion.

Dr. Frederick A. Wurzbach, Jr., *Bronx:* Mr. Speaker, the previous speaker brings up a point that we, in Bronx, anticipated. We have 1,473 dues-paying members in the Bronx. Of these dues-paying members between 900 and 1,000 are members of the American Medical Association. We sent out a referendum to each dues-paying member concerning this proposed amendment, and of the 1,473 that were sent out we received 1,059 responses, of which 689 opposed this proposed amendment and only 370 approved it.

Vice-Speaker Williams: Is there any other discussion?

Dr. Frank A. Gagan, *Dutchess:* Mr. Chairman I think it is highly desirable that some amendment such as this be introduced some time in the future. However, I consider the endorsement of that proposal premature. For instance, in Dutchess County, where we have a large proportion of men in various services in the hospital, veterans' hospital groups, these men would resent keenly the element of compulsion. The feeling of compulsion is the one thing we should avoid. There is considerable merit in the amendment, but as Dr. Glasser has previously implied it should be approached on the county level where it becomes a question of education by us prior to the introduction of any particular effort such as this.

Vice-Speaker Williams: That reflects exactly the recommendation of the reference committee.

Dr. Benjamin M. Bernstein, *Kings:* Sometimes I feel myself in the position of an inebriate who quite unexpectedly found himself in the tent of an evangelist. After a few perfunctory attempts to listen, he fell fast asleep. The preacher kept on exhorting his audience and finally shouted that all those who are with the Lord arise, and almost everyone in the room arose noisily and sat down. This woke the inebriate up, and he saw the parson standing up quite alone He did not quite understand what had been said, so when the parson shouted, "Now all those who are with the devil arise." The inebriate looked at the parson and said, "Parson, I did not quite understand what you said, nor did I hear it very well, but I am with you to the end." He looked around, and then he added, "I see, however, we seem to be in a fighting minority."

We must defeat this amendment, I think, and substitute for it possibly the resolution I introduced yesterday morning. We should provide one dues payment at the county level to provide membership in the county, State, and American Medical Association. Any method which would permit maintenance of a dual system would be absolutely wrong from every conceivable point of view.

. . . There were calls for the question. . .

Vice-Speaker Williams: The question is whether we should approve the recommendation of Dr. Aaron's committee.

Dr. Herbert Berger, *Richmond:* Mr. Speaker, there seems to be considerable concern over the action our membership might take if membership in the American Medical Association was compulsory. In the Richmond County Medical Society, which is one of the smaller county societies, there are 204 members. Last year with the adoption of our new constitution, membership in the American Medical Association was mandatory. We still have 204 members. Nobody has dropped out because of this mandatory action on the part of our constitution. Since even the reference committee notes that membership in the American Medical Association is desirable, and that this should be accomplished at some time in the future, I see no reason why it should not be done now. We would not lose any members.

Vice-Speaker Williams: Are you ready for the question. You are all aware of what you are voting on.

Voices: What is the question, precisely?

Vice-Speaker Williams: A vote "Aye" supports the recommendation of Dr. Aaron's committee, which carries with it the refusal to adopt this as an amendment.

. . . There being no further discussion, the motion was put to a vote and was carried. . .

Vice-Speaker Williams: The amendment is defeated.

Dr. Aaron: Bylaws, Chapter I, Section 7, proposed:

> "Section 7. Junior members shall be physicians licensed by the State of New York, who are in intern or resident training, or who are in the first five years of practice, except those who are salaried employes of a government or private agency. They shall become active members at the termination of the first five years of practice. They shall be privileged to attend all meetings of their county society where they shall have voice but no vote. They shall be entitled to receive the New York State Journal of Medicine and the *Newsletter* but not the *Medical Directory of New York State.*"

Your committee disapproves of the above proposed amendment to the Bylaws, Chapter 1, Section 7. We feel it is unsound financially because, if enacted, it would burden the budget of the Society. We propose, however, the following substitute (new matter in ***boldface italics***):

> "Section 7. Junior members shall be those members who have been graduated from medical college not more than five calendar years, and licensed by ***or eligible to take the medical licensing examinations of*** the State of New York. They shall be privileged to attend all meetings of their county societies where they shall have voice in all discussions but not vote. They shall be entitled to receive the New York State Journal of Medicine and the *Newsletter* but not the *Medical Directory of New York State.*"

We move the adoption of this portion of our report.

Vice-Speaker Williams: A substitute amendment is offered. Is there a second to the motion?

Dr. Joseph Alvich, *Bronx*: I will second it.

Vice-Speaker Williams: Is there any discussion of the substitute amendment?

Dr. Aaron Kottler, *Kings:* Point of information, these junior members are accepted as members of our State Society. They shall be eligible for licensure, assuming they are not licensed. Assuming they are accepted into membership under the terms of the Constitution, will you provide malpractice insurance for them as unlicensed doctors?

Vice-Speaker Williams: Does Dr. Aaron care to answer that?

Dr. Aaron: I would wish to have that ruled upon by our special committee interested in malpractice insurance or our attorney. Personally, I should say that we should not grant them malpractice insurance if they are not licensed to practice. I do not see how you can in the State of New York grant a man insurance to protect him against accidents when the State of New York has not licensed him to practice medicine.

Dr. Joseph A. Geis, *Councillor:* The question here revolves around, "or eligible to take the medical licensing examinations of the State of New York." How long are we going to allow him to be eligible? I know of one case in this State where the man has been taking the licensing examination for eleven years, and he is still taking it. Are you going to have a man like that a junior member for eleven years?

Vice-Speaker Williams: I think that is answered in the first sentence where it says a man cannot be more than five years out of medical college. Isn't that so?

Dr. Aaron: Yes.

Dr. Irving J. Sands, *Kings:* Are these people privileged to vote right at the meetings?

Chorus: No.

Vice-Speaker Williams: Any other discussion?

Dr. Kottler: My question has not been answered. If he is a member, he is entitled to all the privileges of membership. Will we grant him the privilege of a member to secure malpractice insurance? The answer is yes or no. I would like an answer.

Dr. Aaron: It was my opinion, no, sir, bearing in mind that all I am is a physician like yourself, attempting to pass an opinion upon a legal matter, which I am not qualified to do. But it would seem to me that we cannot grant protection to a person who is not licensed to perform these acts by New York State. I don't see how anyone can be insured in any way whatsoever to drive an automobile unless he is licensed by the State of New York to drive an automobile. If he gets into an accident and kills somebody, he is responsible. I don't believe that he has the great power of protection as given to us as practicing physicians by the State.

Vice-Speaker Williams: I think, Dr. Kottler, the answer is no.

Is there any other discussion? If not, are you ready for a vote?

Dr. Herbert S. Ogden, *New York:* I move this be amended to delete the words "not licensed to practice", so in other words this will be confined only to residents or interns who are licensed to practice.

Vice-Speaker Williams: There are no words "not licensed to practice" in the amendment. The words are now "licensed by *or eligible to take the medical licensing examinations,*" the latter being in italics from "or" on.

Dr. Ogden: The point is to delete the italics, delete "or eligible to take the medical licensing examinations."

Vice Speaker Williams The italics are just the words the committee added?

Dr. Aaron: Yes.

Vice-Speaker Williams: Is there any other discussion? If not, the recommendation is before you to adopt this as a substitute amendment to the Constitution and Bylaws. Are you ready for the question?

Dr. Leo F. Schiff, *Trustee:* Mr. Speaker, a point of information.

Vice-Speaker Williams: I think you had better take a loudspeaker. They don't hear your voice.

Dr. Leo F. Schiff: On a point of information, if this recommendation of the committee which proposes a substitute amendment is defeated, it is my understanding that the Bylaws will then remain as they were. Is that correct, sir?

Dr. Aaron: Yes.

Vice-Speaker Williams: I am sorry, but can you repeat that?

Dr. Leo F. Schiff: My impression is if this substitute offered by the committee is defeated, the Bylaws will remain as they were.

Vice-Speaker Williams: Absolutely.

Dr. Leo F. Schiff: Then I simply wish to point out whatever Dr. Ogden had to say is effected by the defeat of the recommendation of the committee.

Vice-Speaker Williams: Is there any more information? Is there any more discussion? Now, understand, the question before you is the recommendation of the committee to adopt this substitute amendment to the Bylaws.

. . . The question was put to a viva voce vote. . .

Vice-Speaker Williams: The chair is not certain. I will have to ask for a standing vote.

. . . The question was put to a standing vote, and it was defeated. . .

Vice-Speaker Williams: The recommendation of the committee is defeated. The recommendation of the committee is not adopted in this particular section, Dr. Aaron.

Dr. Aaron: Chapter IV, Section 1, Proposed:

> "*Resolved*, that Chapter 4, Section 1(*a*) of the Bylaws under duties of the Council which reads, 'It shall prepare an annual budget for submission to the Board of Trustees' be deleted."

Your Committee on Constitution and Bylaws approves of the above proposed amendment to the Bylaws so that Chapter IV, Section 1(*a*), will read as follows:

> "Section 1. (*a*) The Council shall be the executive and administrative body of the Society while the House of Delegates is not in session and shall control all arrangements for the annual meeting. Its resolutions and actions shall be decisive and final except that all resolutions and actions of the Council are subject to review, reconsideration, and action by the House of Delegates. Its actions shall be governed by the Constitution and Bylaws of the Society and the rules and regulations of the House of Delegates. The Council shall have power and authority to employ, discharge, and arrange duties and, with the approval of the Board of Trustees, fix compensation of and for any employe whom it may find necessary for conducting the affairs of the Society."

I move the adoption of this portion of our report.

Dr. Henry J. Barrow, *Bronx:* I second it.

Vice-Speaker Williams: Is there any discussion of this portion of the report or this amendment?

Dr. Maurice J. Dattelbaum, *Treasurer:* Point of information, Mr. Speaker, does this include when this "Resolved, that Chapter 4, Section 1(*a*) of the

Bylaws under duties of the Council which reads, 'It shall prepare an annual budget for submission to the Board of Trustees' be deleted," that that is taken over by the Board of Trustees?

Dr. Aaron: There is a further item in regard to that, Dr. Dattelbaum, that we will take up later.

Dr. Dattelbaum: I did not hear that. Excuse me! I am only interested in that one proposal.

Vice-Speaker Williams: Dr. Aaron, as you read it, you said your Committee on Constitution and Bylaws approves of the above proposed amendment, which is the one that Dr. Dattelbaum mentioned. It is in the right hand column of page 1061, in the middle of the page, and it says, "Bylaws under duties of the Council which reads, 'It shall prepare an annual budget for submission to the Board of Trustees' be deleted." That is in the present Bylaws, under the duties of the Council, "It shall prepare an annual budget for submission to the Board of Trustees."

Dr. Dattelbaum: That is right.

Dr. Aaron: Ours omits that.

Vice-Speaker Williams: It omits that the Council is to prepare the annual budget. You want that portion eliminated about the Council preparing the annual budget, but you will probably have a recommendation later to take care of that?

Dr. Aaron: Yes.

Dr. Dattelbaum: Have you got any other place where the budget shall be prepared?

Vice-Speaker Williams: Yes, he is coming to that later.

Dr. Dattelbaum: Where?

Dr. Aaron: I will have to look for that. Here it is:

> "*Resolved*, that Chapter V, Section 2, under duties of the Trustees which reads, 'The budget prepared by the Council shall be submitted to the Board for its approval' be deleted and be replaced by the following phrase: 'The budget shall be prepared by the Board of Trustees.' "

Vice-Speaker Williams: At this timet he recommendation of the committee is before you in this portion of the report, which eliminated the preparation of the budget by the Council. We have been assured that we will come to the portion where the budget will be prepared by the Board of Trustees later. Is that point clear now, Dr. Dattelbaum?

Dr. Dattelbaum: If you vote that now, will that include that change?

Vice-Speaker Williams: No, the vote now would merely take that out of the hands of the Council. That is the portion that is before the House right now. Isn't that so, Dr. Aaron?

Dr. Aaron: Yes.

Vice-Speaker Williams: Is there any other question? Is there any other discussion? Are you ready for the question on the adoption of this portion of the report?

Dr. Dattelbaum: I am not clear about that, Mr. Speaker. I want to know now whether the budget, if we approve of this, will be prepared by the Trustees, only the Trustees, or by the Council.

Vice-Speaker Williams: To answer your point of information, Dr. Dattelbaum, we are taking up only this portion now, and I want to make it clear in your mind at this time the House is voting the portion of the amendment to the Bylaws to take the power of budgeting out of the hands of the Council. That is the portion we are discussing now. We will come to the other portion that you have had read to you later. Be assured we will come to the other portion subsequently which puts budget-making in the hands of the Board of Trustees. That is not being considered at this point. Is that clear? Now are you ready for the question?

. . . The question was put to a viva voce vote. . .

Vice-Speaker Williams: These are amendments to the Bylaws. It is important. All in favor of the adoption of this portion of the committee's report, please rise. The recommendation of the committee stands adopted.

Dr. Aaron: Bylaws, Chapter IV, Section 10, Proposed:

> "*Resolved*, that a chairman of a standing committee may or may not be a member of the Council; and be it further
>
> "*Resolved*, that in the event someone is appointed chairman who is not a member of the Council, he shall be invited to present his report to the Council and shall have voice; and be it further
>
> "*Resolved*, that the Constitution and Bylaws be amended in whatever way is necessary to effect this change."

This was introduced by Dr. Lewis, of New York County. Dr. Rawls, of New York County, also referred to our committee what was part of another resolution which advocated that the House "recommend amending the Constitution so that chairman need not necessarily be Council member," as applied to the chairman of the Legislation Committee.

Your committee recommends that such proposed alterations in the Bylaws be not made. We feel that the Council is presently constituted as a well-rounded body, representative of the whole State of New York, of general practitioners and specialists. It consists of the officers, chairman of the Board of Trustees, and 12 councillors. It acts as a coordinating committee and well represents the House of Delegates. The present Bylaw requires that those eligible for chairmanship of most of the important committees shall have been elected to the Council by the House of Delegates. Your committee feels that this is an important protection for the Society.

We move the adoption of this portion of the report.

Vice-Speaker Williams: Which carries with it no change in the present Bylaws. Is there a second?

Dr. Leo F. Schiff, *Trustee:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Vice-Speaker Williams: The recommendation of the committee is adopted. Proceed, Dr. Aaron.

Dr. Aaron: Chapter V, Section 2, proposed:

> "*Resolved*, that Chapter V, Section 2, under duties of the Trustees which reads, 'The budget

prepared by the Council shall be submitted to the Board for its approval' be deleted and be replaced by the following phrase: 'The budget shall be prepared by the Board of Trustees.' "

Your committee also approves of this amendment so that Chapter V, Section 2, will read:

> "SECTION 2. The Board of Trustees shall have charge of all property including trust funds and shall supervise the financial affairs of the Society and shall invest the surplus from time to time. The budget shall be prepared by the Board of Trustees. All resolutions and recommendations of the House of Delegates or Council pertaining to expenditures of money must be approved by the Board of Trustees before the same shall become effective. The Board of Trustees shall make and execute all contracts for the Society. The fiscal year shall begin January 1 and end December 31 of each calendar year."

I move the adoption of this portion of the report.

DR. IRVING J. SANDS, *Kings:* I second it.

VICE-SPEAKER WILLIAMS: Now for information, gentlemen, you realize you have by your previous action taken budget-making, the budget-making power, out of the hands of the Council. At this moment there is no one able to make the budget, and you now have before you a recommendation of your committee to put budget-making into the hands of the Board of Trustees. Now that that is clear in everybody's mind, the motion is now open for discussion.

DR. MAURICE J. DATTELBAUM, *Treasurer:* Mr. Speaker and members of the House of Delegates, I am speaking in opposition to that part of the change of the Constitution that will put the budget preparation in the hands of the Board of Trustees. Your Council represents you. You are in session every month when the regular Council meetings are held. The chairmen of the committees are your men whom you have elected to carry out certain duties of the committees of which they are chairmen. They have a lot of work to do. They have to prepare a budget for their own committee. There are other things in connection with the budget which must be prepared by different members of the personnel of the staff of the organization, and they work in conjunction with the chairmen of your committees. I believe the chairmen of your committees should have the duty of proposing the budget. I don't like to give all power into the hands of a group of trustees. We do not adopt a budget; we simply prepare it. It is studied. Your committee prepares it, and brings it to the Council. If there are any changes to be made, they make them. It is then recommended to the Trustees to carry out the budget. The Trustees then fine-comb it, screen it, and they cut off, and do a lot of work to reduce that budget. In this way your representatives know what the budget will be and how far they can go. The other way it is not brought back to the Council from the Trustees, and they proceed with the budget as they have arranged it, alone. I do not think that the deficits of our Society are out of proportion to the amount of work you have asked them to do. After all, when we have a deficit, we certainly are not taking that money or losing it; it is simply taken from one pocket and put into the pocket of another account. The five years that we have been running a deficit has been due mainly to the condition of affairs. Everything has gone up, railroad fares, hotel, employment, salaries, everything else. It is the usual thing that occurs.

During these five years with the able judgment of the Trustees—I am not questioning their ability—they have not contributed anything from their income to our budget, where it was said in 1951 that if we are meeting an emergency, the Trustees should help. Instead we take it all from the dues collected. In our general fund right along we have worked only from the dues income, and we never asked the Trustees to contribute one cent from their surplus. They have always, and now when the market has been rising right along, they are in a good position. I give them all the credit there, but I still want to make this claim: Please keep the powers in your Council, and do not delegate them to a group of a few men. That is the only objection I have. Whoever makes the budget, I don't care who makes it, it does not have to be made by the treasurer. It can be made by others, not always prepared by the treasurer. Dr. Bauer did it for a number of years. He was not a treasurer. Dr. Andresen did it for a number of years. He was not a treasurer. It makes no difference who prepares the budget. I am only pleading to keep the power in the Council, where the actual work of the Society must be carried out. You can always depend upon the Trustees to cut out as many items as they see fit. That is all I want to say about it.

DR. PETER J. DI NATALE, *Councillor:* I want to endorse heartily the statement that the previous speaker has made.

VICE-SPEAKER WILLIAMS: Is there any other discussion?

DR. IRVING J. SANDS, *Kings:* At the present time the arguments, no matter how valid they may be, are out of order. You have just voted to take away the power of preparing the budget from the Council. Somebody will have to prepare that budget, and it is now given to the Board of Trustees. Where else could you put it?

DR. ALFRED P. INGEGNO, *Section on Gastroenterology and Proctology:* I certainly believe that the budget should be prepared by the Trustees, but I certainly also agree with Dr. Dattelbaum and others that the final decision should always be in the hands of the Council and the House of Delegates. Mr. Chairman, I move that this be referred back to the committee with the recommendation that there be put into this section of the Constitution safeguards for the power of the Council and of the House of Delegates.

VICE-SPEAKER WILLIAMS: Before I can entertain that, you realize, gentlemen, just a few moments ago you adopted a recommendation of the committee which, as Dr. Sands said, took the budget-making power out of the hands of the Council. You would have to reconsider that if you don't at this time adopt this to put it into the hands of the Trustees. If you defeat this, then you are in the impossible position where you have to move to reconsider the previous adoption and put it back into the hands of the Council.

Dr. Aaron: Mr. Speaker, your committee considered these two problems and was confronted by the problem of which to act on first and which to act on second. If that portion of this referring the budget to the Trustees is defeated, then I believe we should reconsider the other portion, and I think we can clear the subject entirely. We are not left without a method, but if we had first turned the budget over to the Trustees, then we would still have been left with the other part, so we were in a bit of a controversy which part to put first and which part to put second. We preferred to leave ourselves with the parliamentary opening to reconsider the other part if this proposal were not found satisfactory.

Dr. Thomas F. McCarthy, *Bronx:* Is this a motion of referral?

Vice-Speaker Williams: No, just a—

Dr. Ingegno: I made such a motion.

Vice-Speaker Williams: I did not hear a second, sir.

Dr. Ingegno: You did not ask for a second.

Vice-Speaker Williams: Repeat your motion.

Dr. Ingegno: The motion was to refer this back to the committee and that proper safeguards be put into the section of the Constitution to preserve the powers of the Council and of this House of Delegates in the expenditures of funds. All that this provides for at the present time, as proposed, is that the Trustees prepare the budget, but there can be some safeguards put into that section of the Constitution which would give the Council some power in this matter, not necessarily the preparation, but a decision.

Vice-Speaker Williams: Is your motion to refer back seconded?

Dr. Felix Ottaviano, *Madison:* I second it.

Dr. McCarthy: Last year I was a member of the committee which considered the report of the financial side of the Medical Society of the State of New York. If you are going to refer this back again, after arguing for an hour and one quarter over another change, I don't see when you will get through. But in regard to referral, if you will think back historically to a year ago, you will remember the circumstances that led to the introduction of this. I think these things should have some information printed on them as to why they were introduced. The reason why I think this should not be referred is we gave you very good reasons last year in the report of the Reference Committee on the Reports of Trustees, Treasurer, etc., as to why we thought the budget should be prepared by the Board of Trustees. If I could just rechurn over those a little bit, one of the reasons that was given to us why our Society runs into a deficit every year so we have to raise the dues —now I think quite regularly every second year they come in with a request for a raise in dues—is because the Trustees, who ultimately must spend the money or approve the spending of the money, sometimes do not get this budget for four to five months after the money has begun to be spent. Even at one time, they told us, a few years ago the budget was not received for approval by the Board of Trustees until October of that year. Now how can you possibly have any control of the expenditure of funds without the ones who approve or must approve the expenditure of funds having the authority to determine that by January 1 of the year that the money is to be spent? You must have a budget prepared that they must approve. That is the reason why the committee last year voted to offer this amendment. I don't care whether you want to put controls by the Council on this, but there was a good, valid reason which no one has brought out here why this was introduced last year.

Vice-Speaker Williams: This is discussion on the motion to refer back.

Dr. Thomas M. d'Angelo, *Assistant Treasurer:* I would like to correct some statements that were made by Dr. McCarthy. I think he gave the House a wrong impression. Let me put it this way: I am on the Finance Committee. The budget is prepared before January 1. It is then submitted to the Trustees. If the Trustees take four or five months to approve that budget, that in no way reflects on the Finance Committee, except possibly to say that the Finance Committee did not do too good a job. It is not true that the budget is handed to the Trustees months after the 1st of January. It is given to the Trustees before the 1st of January.

Vice-Speaker Williams: On the question to refer back, is there any other discussion? Do you wish to refer this portion back to the committee? Are you ready for such a question?

Dr. James R. Reuling, *Trustee:* I have a question, Mr. Speaker. We are considering a portion of change in the Bylaws, and I am raising the question with you, sir, the fiscal year in this part of the Bylaws we are considering now is specified as January 1 to December 31. Can that part of this section of the Bylaws be changed at this time? You will recall that yesterday there was a recommendation made that was to lay over for a year. If we are in the process of changing this portion now, can it be changed additionally or must that lay over for a year? I am asking that as a question.

Vice-Speaker Williams: I think I would have to go back and ask the man who made the motion to refer if he limits the reference just to the phrase that the budget should be prepared by the Board of Trustees or did he mean the entire paragraph, including the change in dates of the fiscal year?

Dr. Ingegno: I would have to mean the entire paragraph, Mr. Chairman, because the recommendation was that proper safeguards be put into that paragraph to guard the powers of the Council and the House of Delegates.

Vice-Speaker Williams: The answer is that a change in the fiscal year is not to be considered now but referred back just as everything else would be. Are you ready for the question on referral back to the committee with the recommendations included in the motion?

. . . The question was called, and the motion was put to a vote and was carried. . .

Vice-Speaker Williams: This portions stands referred back.

Dr. Aaron: Bylaws, Chapter XIV, Section 2, Proposed:

> "*Resolved*, that Chapter XIV, Section 2, of the Bylaws be amended by adding to the first sentence the following: 'and provided his application for membership has been acted upon favorably by the members of the society of the county to which he has removed.'
>
> "Chapter XIV, Section 2, of the Bylaws would then read:
>
> 'Section 2. Whenever an active member in good standing or a retired member in any component county medical society removes to another county in this State, his name upon his request shall be transferred to the roster of the component county medical society of the county to which he removes, without cost to him, provided that he files a certificate with the secretary signed by the president and secretary of the component society from which he removes as to his good standing in such society, and provided his application for membership has been acted upon favorably by the members of the society of the county to which he has removed. No member, however, shall be an active member of more than one component county society, nor shall any component county society accept a physician residing in another county in any other way than in accordance with the law governing transfers.
>
> 'When a member in good standing, except a retired member, ceases to reside and practice in the State of New York, he shall ipso facto cease to be an active member of the Society and his component county medical society at the end of the current year. His status shall be deemed that of a resigned member, and all rights and title to any share in the privileges and property of the Society, the district branch, or county society shall be deemed to have been forfeited by such action.
>
> 'The dues of any member of the Medical Society of the State of New York may be remitted for the current year on account of illness when the request is made by the member's component county medical society.' "

Your committee recommends the adoption of this proposed amendment, and I so move.

Dr. Clarence G. Bandler, *New York:* I second it.

Dr. Benjamin F. Glasser, *Queens:* Point of information, you have here, "No member, however, shall be an active"—

Vice-Speaker Williams: Would you take a microphone so we can hear you?

Dr. Glasser: I just want to know something.

Vice-Speaker Williams: Point of information?

Dr. Glasser: Yes. I want to know whether the statement about residing or practicing means anything. Where we have a question of residence and practice, does that wording mean anything?

Vice-Speaker Williams: Which portion?

Dr. Glasser: On page 1063, "No member, however, shall be an active member of more than one component county society, nor shall any component county society accept a physician residing in another county in any other way than in accordance with the law governing transfers." The word there is "residing." Is that limited to the question of residence or practice?

Dr. Aaron: I would say "practice."

Dr. Moses H. Krakow, *Bronx:* On page 1063, eight lines from the bottom, "When a member in good standing, except a retired member, ceases to reside and practice in the State of New York," if a man lives, say, in New Jersey or Connecticut, and retains his office in New York State, is he eligible for membership or not?

Vice-Speaker Williams: If he practices in New York.

Dr. Aaron: We discussed that doctor on the borderline between Pennsylvania and New York, and as you have it here, the border is where he practices. Does that answer your question?

Dr. Glasser: Why are you worried and thus create problems? Why not eliminate the word "reside?" Would that not eliminate all the problems?

Vice-Speaker Williams: Wasn't that put in so a man may choose to be a member of the county society in which he practices, though he may reside in another county, and you gave him an option? If I reside in Westchester and practice in the Bronx, it is O.K. if I remain a member of the Bronx, or I may choose to join Westchester. This allows an option.

Dr. Glasser: This refers to the State. If he resides in the State of New York, can he practice in Connecticut and be a member of New York? Can it be reside or practice, or does he have to do both?

Vice-Speaker Williams: He does not have to do both. He has the option of either one.

Dr. Glasser: But the amendment does not say so. Read your wording. It reads, "ceases to reside and practice in the State of New York."

Vice-Speaker Williams: You recommend that "and" be changed to "or?" Is that what you recommend?

Dr. Glasser: I would so move.

Dr. Aaron: I accept that.

Vice-Speaker Williams: The committee accepts the change of "and" to "or," "reside or practice."

Dr. Alfred P. Ingegno, *Section on Gastroenterology and Proctology:* Putting an "or" in there is what Dr. Krakow just does not want to do. As it is now he would have to stop practicing in this State, or be put out, or become by that fact no longer a member. Now if you make it "either or," that means any man who happens to be living in New Jersey and practicing in New York City could not be a member of this State Society.

Speaker Holcomb: Is that the way you understand it?

Vice-Speaker Williams: I don't quite understand that. I don't follow that. Neither does Dr. Aaron. Is there any other discussion?

Dr. Irving J. Sands, *Kings:* Mr. Chairman, I think that we ought to stop to think and to consider what we are going to do by accepting this amendment. John Smith practices in Kings and now wishes to move his practice to Westchester. The new amendment says that the only way he may be accepted to membership in the Westchester County

Society is after he has gotten the necessary clearance papers from the County of Kings and by being accepted in the County of Westchester as a member. That may put so many obstacles in that man's way. We know that certain groups of societies, state or otherwise, make it very, very difficult for other doctors to come in and take their license or practice. That is a reality, whether we want to accept it or not. A man who has practiced in one county medical society, and has been an ethical practitioner of medicine there, deserves membership in every other county of the State. It is a right, a privilege, and we have no right to deny that to him. Suppose he wishes to move to the County of Montgomery, and there are only a few doctors there, they may not want to have another doctor coming there for reasons of their own or for reasons which you and I know, and they may not want to discuss it openly, and that man may be denied the right and privileges given to a man by membership in the medical society. I think that is brutal, unrealistic, and no other group of men would do such a thing, except we are in a hurry. Doctors are sometimes in a hurry and don't stop to reflect and think. I think that must be defeated.

Number two, that word "reside" and practice—any simple lawyer will tell you that these two are combined. He must both reside and practice in that society. That is what you say here. It is not what is implied that they want to put in there. The word "reside" must be removed. No man can be denied the privilege of living in Connecticut and practicing in New York, and then be denied membership in that society. That is unfair. I think the whole amendment must be defeated. It is brutal to deny membership into the new county medical society.

Dr. Thomas O. Gamble, *Albany:* I introduced this amendment to the Constitution and Bylaws. I think much of the discussion is not germane to the subject. The only change suggested was as follows: The addition, "and provided his application for membership has been acted upon favorably by the members of the society of the county to which he has removed." You can make that residing or anything else, if you want to change that. The remainder of what Dr. Aaron has read is in the Constitution and Bylaws as of the present day, so if you want to change "reside" or anything else there, it must be a new amendment to the Constitution and Bylaws.

The reason that I introduced this thing was that there have been doctors who are not proper members of the Society. Dope addicts, criminal abortionists had to be accepted by other county societies. I remember when I was on the board of censors of the Albany County Medical Society, a doctor moved to our county and applied for membership. I would say that practically every doctor in our society knew that this man was a criminal abortionist. Our board of censors did not act on his application. We simply pigeonholed it hoping he would not press it, and thank God he did not. If he had, we would have had to accept him under the present Constitution and Bylaws. A man, a dope addict, was transferred recently from Albany to another county. I don't know how it is in other counties, but in Albany it is practically automatic. An applicant, if he is a proper doctor, is never turned down. I do not believe that this will have any influence upon the rights of any proper doctor.

Vice-Speaker Williams: Is there any other discussion?

Dr. Aaron: I should like to make it clear to the House that neither Dr. Gamble, Dr. Reuling, nor I prepared this from the standpoint of just our own ideas. These are ideas that are submitted to you at previous meetings for us to compile, put together, discuss, and act, and secure information if we possibly can from the members, and then place it before you for just what you are doing with it. When anything turns up here, it is something that you have in the past referred to this committee or to the Speaker, and he has referred it to this committee for action. I know that you well understand that none of these represent personal opinions by ourselves except as we studied it and as we worked it out, and we thought we were interpreting the ideas. Definitely we had in mind that this House was not last year willing to accept the idea that a man should have the right to transfer from one county society to the other without the approval of the county or acceptance of the county into which he moved. That was a very definite point in our mind that it had been thoroughly discussed and placed before us before we included that portion in the Bylaws. I can see that a man has a membership in the State Society, whether another county society desires to accept him, but that was made quite clear to us that this Society did want that privilege granted to county societies.

Dr. George E. Anderson, *Kings:* If you adopt this present suggestion, it seems to me you are placing the power of disenfranchising members of this organization, and whether the purpose was to keep clear of the abortionist and dope addict or not, it can be used to disadvantage. I think that the responsibility for the original membership is where the action should be taken. In other words, it is the county society from which this individual is receiving the so-called dishonorable discharge. You should not be in the position of disenfranchising him or any other one; the original society should do this. I hope this will be defeated.

Dr. George J. Lawrence, Jr., *Queens:* Mr. Speaker, having forgotten that this resolution had been introduced to the House last year, Queens County introduced this year a similar resolution. I think you should have knowledge of our reasons for doing that, and the reasons might explain why without this amendment the Constitution does not cover certain eventualities.

A member of our society was dropped for nonpayment of dues about eight or nine years ago. He then moved to another county upstate New York where he has been practicing. He applied for reinstatement a year or so ago. He was reinstated merely by paying his dues for the year he was dropped and for the present year. He then applied for transfer to the other county. No matter what the Constitution now says, he was turned down by the county to which he applied. Therefore, we feel that this amendment is necessary. We feel that the other county should have had the opportunity to turn down his application, and whether they were constitutionally correct or not, they did it.

Dr. Leonard J. Schiff, *Clinton:* I would like to point out to the House that the decision of a county to keep a member out is not final by any means because our own Constitution and Bylaws provide in Chapter VI, Section 3, "Any applicant for membership in a component county society who may have been excluded from membership in such a society may likewise appeal from the action of said society excluding him. All decisions shall be subject to approval of the House of Delegates." So if a county society for evil reasons of its own excludes a man, he still is not without the right of a fair trial.

Vice-Speaker Williams: Is there any other discussion?

Dr. Frank A. Gagan, *Dutchess:* Those of us who are somewhat apart from New York are quite cognizant of the problem that is inferred by this and probably the comment by Dr. Gamble. We occasionally do have, and it is conceivable that a person comes out of New York City with a personality that is suspiciously known to us, and we would like to have the prerogative of not accepting him as a member in good standing in our county. I do endorse, and I speak in support of Dutchess and other groups when I further endorse, the approval of this amendment and move its adoption.

Dr. Abraham D. Segal, *Kings:* Gentlemen, we all realize the difficulties that may beset a county when you accept a man whose character is not what you would like it to be, but the fault is not with our Constitution, and the fault is not with changing it. The fault is with your credentials committee. Every man that is accepted in a county society must pass through the credentials committee, and that is where the laxity has occurred. If your credentials committee will make the effort to investigate this man thoroughly, there will be no difficulty, and I am sure that the great freedom which is extended from one county to another will be continued, and I think will be appreciated by all.

Vice-Speaker Williams: You all realize the question before the House is the recommendation of the committee to adopt this.

Dr. Frederick A. Wurzbach, Jr., *Bronx:* I do not think the statement of the last speaker is fair. I do not think the original county society can be blamed for many things. Certainly, a man may be a completely proper and ethical character when he becomes a member of the county society, and what is going to happen five or ten years after he is elected, that has nothing to do with when he was elected.

Vice-Speaker Williams: Are you ready for the question?

Dr. Ezra A. Wolff, *Queens:* I want to, without belaboring the point, bring up once more the wording in the last paragraph. I think that it would be better to divide this amendment into the portion that you are discussing now and separate the last paragraph. I think the elimination of the residence provision would make it read properly. As it reads now, it will do certain things we don't want it to do.

Vice-Speaker Williams: It has been moved to consider this as a whole. Now if you want to offer an amendment for deletion, we can vote on that.

Dr. Wolff: I move an amendment that this be considered with the exception of the last paragraph.

Dr. Krakow: That was moved and seconded, with "and" changed to "or."

Vice-Speaker Williams: The committee accepted the word "or" instead of "and." Now your motion is what, Dr. Wolff?

Dr. Wolff: To exclude the last paragraph from the present consideration.

Dr. Irving J. Sands, *Kings:* Consider one part at a time.

Vice-Speaker Williams: You move to amend to exclude the last paragraph?

Dr. Wolff: I am sorry, the paragraph beginning, "When a member in good standing . . . ceases to reside and practice in the State of New York."

Vice-Speaker Williams: This is a motion to amend by the deletion—

Dr. Wolff: I don't want to take action on that now.

Vice-Speaker Williams: I cannot entertain another motion, unless it is a motion to amend.

Dr. Wolff: The motion on the floor now is to adopt the entire portion under discussion. I would like to break that down so that only the part preceding this comes up for adoption, and then have this discussed immediately after that.

Vice-Speaker Williams: Is that acceptable to you?

Dr. Aaron: Very acceptable.

Vice-Speaker Williams: All right. Now you have before you the adoption of the portion up to the paragraph, "When a member in good standing," all in favor of the adoption of that portion preceding that say "Aye"; opposed "No." That portion of the recommendation is adopted.

Dr. Sands: I would like to have a rising vote.

Vice-Speaker Williams: A rising vote is called for. All in favor of the adoption of the first portion up to the paragraph "When a member in good standing," please arise. Are you convinced, Dr. Sands? It is carried again.

Now, Dr. Aaron, bring up the last portion.

Dr. Aaron: "When a member in good standing, except a retired member, ceases to reside and practice in the State of New York, he shall ipso facto cease to be an active member of the Society and his component county medical society at the end of the current year. His status shall be deemed that of a resigned member," that is that paragraph.

Vice-Speaker Williams: You don't need to read it. We all know it.

Dr. Wolff, will you take a microphone so they can all hear you.

Dr. Ezra A. Wolff, *Queens:* As the paragraph stands a man who resides and practices in this State and is now a member may be debarred from the State Society if he moves, as has been said, his residence across the line. On the other hand, if you change it to "and reside or practice," then if he changes his residence he has ceased to reside while he still practices, and it therefore would still not have the meaning that we would want. I think if we eliminate the residence provision and say, "When a man ceases to practice in the State of New York," that will do it; that the words "reside and" be deleted.

Vice-Speaker Williams: And you accept that?

Dr. Aaron: Yes, I accept that.

Vice-Speaker Williams: I will now entertain a motion to accept that as corrected.

Dr. Wolff: I will move it.

Dr. Ben A. Borkow, *Kings:* I will second that.

Vice-Speaker Williams: Any discussion?

Dr. Thomas O. Gamble, *Albany:* Point of information, are not these two last paragraphs what you intended to delete?

Vice-Speaker Williams: We are not deleting the last paragraph, just deleting the one portion that includes "reside," just deleting the word "reside."

Dr. Gamble: In the Bylaws as of today, they can't be deleted without another amendment.

Dr. Wolff: May I explain to Dr. Gamble through the Chair, there is no intention to delete these paragraphs. We want to correct a portion of the Constitution which has come up for amendment. That is perfectly acceptable. The only motion I made before was that this portion be considered separately from the previous portion which has already been adopted. There is no intent to delete these paragraphs, simply the one residence provision, which I think will clarify the portion of the Constitution we are discussing and give the meaning to it that I think the House desires.

Dr. Gamble: Would you not have to introduce an amendment?

Vice-Speaker Williams: No. If we have this paragraph under consideration, we can correct, amend, and then adopt it, and not hold it over for another year.

Dr. Wurzbach: It is absolutely necessary to leave the word "reside" as it is. If we take a man in the armed forces, he resides in New York State, but he is going to be practicing maybe in Korea for the next year and a half, and if you take that word "reside" out, he is automatically no longer a member of his county society.

Vice-Speaker Williams: Are you ready for the question? It is before you to adopt this portion of the recommendation as corrected with the deletion of the residence.

Dr. George Himler, *New York:* The only thing I wanted to say is that it seems to me we could solve the problem by simply saying "reside and/or practice in the State of New York."

Vice-Speaker Williams: That is exactly what they object to.

Dr. Walter T. Heldmann, *Richmond:* Mr. Speaker and members of the House, I don't like to take up any more time, but it is particularly vital to our county that you pass this amendment as given by Dr. Wolff. We have two members of our Society who are practicing in New York but who reside in New Jersey. They have paid State dues for years. I found out today it is unconstitutional for them to be members of the Medical Society of the State of New York, yet we have been accepting their dues for years under the old Constitution.

Dr. John C. Kinzly, *Niagara:* I would like to correct the impression that was given here. A man serving in the armed forces does not give up his residence, so Dr. Wurzbach is out of order.

Dr. Thomas M. d'Angelo, *Assistant Treasurer:* For these amendments to be passed, they need a two-thirds vote. Am I correct?

Vice-Speaker Williams: Yes.

Dr. d'Angelo: If so, I think the chair then should declare that a two-thirds vote has been received by certain amendments and passed.

Vice-Speaker Williams: The speaker has told me that that has been so.

Dr. Leo F. Schiff: Point of information, again. My understanding, Mr. Speaker, is that we are voting on the last part of this thing, in which a change has been accepted by the committee that would make it read for practicing only, leaving out the residence part. Is that correct?

Dr. Aaron: Yes, sir.

Vice-Speaker Williams: That is correct.

Dr. Leo F. Schiff: If that is defeated, let us say, we still have our old Constitution, our old Bylaws. If it is accepted, we limit the thing to practice, but what happens legally about where they reside?

Vice-Speaker Williams: You are out of order, Doctor.

Dr. Leo F. Schiff: Who is out of order?

Vice-Speaker Williams: Please, no catcalls from the floor.

Dr. Leo F. Schiff: If it is accepted, we limit the situation to men who practice in the county, but if it is not accepted, if this is defeated, then as I understand it we simply go along with our old Constitution and Bylaws. Is that thoroughly understood?

Vice-Speaker Williams: This portion—

Dr. Leo F. Schiff: Wait a minute, or is this part all deleted and nothing said about the out-of-state members? I am trying to get clear to guide me in my vote.

Vice-Speaker Williams: We are only voting on the last paragraph. The last paragraph was objectionable because of the residence. There has been a motion which corrected the report of the committee and eliminated the residence phrase. Now you have before you the adoption of this with the residence phrase eliminated. Is that clear?

Dr. Leo F. Schiff: That part is clear, but should the House defeat this particular thing, then what?

Vice-Speaker Williams: Then we would have to entertain some other motion to put a new last paragraph on, or re-refer this paragraph, or something else, if you don't adopt this. That is the way I stand on that.

Dr. Leo F. Schiff: Thank you!

Dr. Wolff: May I have a clarification? We are considering now my amendment to delete the words "and reside?"

Vice-Speaker Williams: He accepted that, so there is not a motion on your correction. He accepted that. He recommends that, the committee recommends, the approval of this with the deletion of "and reside." He accepted it. Did you not hear me say that would save a vote?

Dr. Wolff: What about the approval of that paragraph with the deletion?

Vice-Speaker Williams: It comes from him. It will save us a vote that way. Are you ready now, gentlemen? Are you clear?

. . . There were calls for the question from all parts of the room . . .

Vice-Speaker Williams: All in favor of the acceptance of this with the deletion of this phrase of residence say "Aye"; opposed, "No." It is carried by more than a two-thirds vote.

Dr. Aaron: I recommend the adoption of the report, except for those portions that apply to the Judicial Council and the Board of Trustees, which will be taken up immediately after this meeting by Drs. Gamble, Reuling, and myself.

Vice-Speaker Williams: He offers a motion for the adoption of the report exclusive of the parts re-referred. Is there a second?

Dr. Thomas O. Gamble: I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Vice-Speaker Williams: Thank you very much, Dr. Aaron.

Speaker Holcomb: You have had a very hard morning. I have one request. I wish to call a recess after Dr. Bauer has brought in a short report on hospital and professional relations. After that, members of the House, we shall consider a few reference committee reports, but this is rather important. Following Dr. Bauer's report, it will be referred to a reference committee, and I would like to give you a ten or fifteen-minute recess if you all feel that you need it.

Section 79 (See 156)

Report of Special Committee to Study Hospital and Professional Relations

Dr. Louis H. Bauer, *Ex-President:* Before I present my report, I think it should appear in the record as a correction of what Dr. Heldmann from Richmond said. His county society has not been doing anything illegal. A person has the right to membership either in the county where he practices or the county where he resides.

This is the report of the special committee appointed by President Eggston, December 10, 1953, to study hospital and professional relations.

To the House of Delegates, Gentlemen:

After some preliminary work, the committee met on February 10, 1954, six members present. As the chairman pointed out, with unanimous agreement of the committee, the primary objective was to provide the best possible medical care for the public. The economics of medical care, as it affected either the physicians or the hospitals, was a very secondary consideration except in so far as exploitation of either led to deterioration in medical care.

The agreement between the American Medical Association and the American Hospital Association (*J.A.M.A.* **152**: 731, June 20, 1953) was reviewed carefully. The committee was of the opinion that both the medical profession and the hospitals should adhere to its provisions.

The problem of hospitals employing physicians on salary and using the income from their activities for meeting hospital deficits was discussed at length. There are many disadvantages to such a procedure. Teaching of hospital interns and residents would lack the practical aspects which in the past have been provided by a staff in active outside practice. The salaried physician in the hospital does not see the patient in relation to his economic, family, and other surroundings. He sees less incipient disease. Hospital training thus tends to become a continuation of the didactic training of the medical school. Discord develops between the salaried man, the private practitioner, and the hospital. Many practicing physicians are deprived of good hospital appointments. The competitive factor, a strong stimulus in producing the best human effort, would be decreased.

The committee believes that sharing of fees with hospitals in no way differs from splitting fees with other physicians and is unethical and illegal.

Why do hospitals have deficits which have to be met by absorbing income from the staff members? The committee feels that hospital accounting is in part to blame. A simple uniform cost-accounting system throughout the State would indicate the cost of various services and, therefore, the fair charge for furnishing them. It would tend to show inefficiencies in management. It would definitely demonstrate what should be charged "third-party" cases such as compensation, Blue Cross, or welfare.

If the physicians suggest to the hospitals that hospital fees should be set at a level to eradicate deficits and that the hospitals should not assess physicians' fees for running costs, in order to show the good faith of the medical profession, it appears advisable to the committee for the Medical Society of the State of New York to urge its component county societies to promulgate and publish average fee schedules. Public opinion will then oppose exorbitant charges, and it will be evident that the medical profession is not trying to increase its income by eliminating medical fees going to hospitals.

In summary, the committee adopted the following agenda as a basis for discussion with representatives of the Hospital Association:

1. Adoption of the entire Guide to Hospital-Physician relationship of the A.M.A. and A.H.A.
2. Discussion of the advantages of hospital cost-accounting including a realistic collection by the hospitals of adequate payment for Blue Cross, compensation, welfare, or any other third party cases.
3. Methods for increasing the personal interest in the patient by all members of the hospital staffs.
4. Discussion of defects in medical care due to:

(*a*) Inadequate training and supervision of residents and interns.

(*b*) Inadequate postgraduate training of hospital graduates.

(*c*) The loss of well-trained men not on salary and patients adequately able to pay hospital charges to nonteaching or private hospitals with poorer professional supervision.

(*d*) Patients not being treated by the personnel they expected and believed would treat them.

(*e*) Dishonesty in certifying insured cases treated by junior personnel.

5. The necessity of residencies in nonteaching hospitals.

6. A review of the status of salaried men in regard to their duties, full-time or part-time work, the number required in ratio to unpaid men, and the charges made to them for rent, facilities, etc.

7. Discussion of the possibility and advisability of county societies setting up average fee schedules.

Dr. Eggston wrote Mr. J. Russell Clark, president of the Hospital Association of New York State, on March 4, 1954. The letter was referred to Dr. A. J. Rourke, executive director of the Hospital Council of Greater New York. To date, the committee has been unable to arrange a joint meeting with the hospital group.

On March 26, 1954, the chairman of the committee met informally with the director of one of the large New York City hospitals. He was very sympathetic to the aims of the committee and felt that agreement could be reached between the medical profession and the hospitals to the satisfaction of both, and one which would definitely improve the medical care of the public.

Respectfully submitted,

Louis H. Bauer, New York, *Chairman*
Harold F. Brown, Buffalo, *Co-Vice-Chairman*
James Greenough, Oneonta, *Co-Vice-Chairman*
Walter P. Anderton, New York
Edward R. Cunniffe, Bronx
Andrew A. Eggston, New York
John J. H. Keating, New York
James R. Reuling, Bayside
Floyd S. Winslow, Rochester
Christopher Wood, White Plains

Dr. John C. McClintock, of Albany, is also a member of the committee. May I say, however, Dr. McClintock has not seen the report, and he is not here, so he is not committed to it. In my absence in Europe, getting back Sunday morning, the report had to be drafted in the interval, so he had no opportunity to see it. I do not wish to imply the committee is speaking for him as the committee has no right to speak for him.

Speaker Holcomb: This report will be referred to the Reference Committee on Report of the Council, Part VI, of which Dr. Charles H. Loughran, of Kings, is chairman.

I will now declare a fifteen-minute recess, and then we will reconvene to hear two or three reference committee reports.

. . . Recess . . .

Speaker Holcomb: The House will come to order.

Dr. Schiff's report for the Council Committee on Constitution and Bylaws' report will come next; then Dr. George A. Burgin, of Herkimer County, will report for the Reference Committee on Report of the Council, Part I, and the third will be Dr. Charles Sandler reporting for the Reference Committee on Report of the Council, Part VIII, on Liaison with Veterans Administration and American Medical Education Foundation. As soon as we resume our seats, I would like to have at least three reports considered, and this House will recess at 1:15 approximately.

Gentlemen, we have a quorum present in the House. If we can start now, we will hear from Dr. Schiff, who is to report for the Reference Committee on the Report of the Council Committee on Constitution and Bylaws.

Section 80 (See 10)

Report of Reference Committee on Report and Supplementary Report of Council Committee on Constitution and Bylaws

Dr. Leonard J. Schiff, *Clinton:* This is a very brief report. It has nothing whatsoever to do with the previous Committee on Constitution and Bylaws, thank goodness.

Having reviewed the report and the supplementary report of the Council Committee on Constitution and Bylaws, your reference committee approves this report and commends the committee for its work.

It is noted that five of the nine district branches revised or amended their bylaws during the past year. This indicates a wholesome activity on the part of the district branches.

I wish to thank the members of my committee, Dr. Aaron Kottler, Dr. Frank J. Cerniglia, Dr. William J. Tracy, and Dr. Joseph H. Cornell for their assistance.

Mr. Speaker, I move the adoption of this report.

Dr. George A. Anderson, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Speaker Holcomb: Thank you, Dr. Schiff.

Section 81

Greetings from Mr. Thomas Hendricks

Speaker Holcomb: Will Tom Hendricks come up here a moment? I would like to have the House hear and see Tom Hendricks. He is secretary of the Council on Medical Service of the American Medical Association. Would you just come up and greet the House?

Mr. Tom Hendricks: Mr. Speaker and gentlemen, I have had the pleasure of attending some of the meetings of your Council and some of your Board of Trustees, but this is the first time I have had the opportunity of sitting in on a meeting of your House of Delegates. I would say that certainly you don't act like the fellow who tried to tell the difference between a single petunia and a double petunia. He said, "A single petunia is a begonia, a begonia is a sausage, sausage and battery is a crime, monkeys crime trees, trees grow roots, roots crow and make a noise, I have a noise and two eyes above my face, wherever there are eyes there are nays, a horse nays. A horse also has a coat. If you go to bed with a coat, you will wake up with a double petunia."

I do want to bring you greetings from Dr. Lull, of the American Medical Association. I want to tell you how delightful it is to be here, and I will take back to them the assurance this group is a healthy group, and they will not be shown to be any wolvertons.

Speaker Holcomb: Thank you, Mr. Hendricks. He reminded me when I first met him he was not a doctor, and I said, "You have a lot to be thankful for." (*Laughter*)

The next order of business is the report of the Reference Committee on Report of the Council, Part I, Postgraduate Education, of which Dr. George A. Burgin is chairman.

Section 82

Report of Reference Committee on Report of Council, Part I: Postgraduate Education

Dr. George A. Burgin, *Herkimer:* Mr. Speaker and members of the House, your Reference Committee on Postgraduate Medical Education has reviewed the fine report submitted by Dr. Theodore J. Curphey's Council committee. It has been the privilege of the chairman of your reference committee to evaluate this report for the past three years, and he cannot help but inject a personal note regarding the excellent work and increasing service offered by this committee and its energetic executive assistant, Miss Sue Baker.

As stated in the report, the functions of this Council committee are:

1. To arrange postgraduate medical instruction for the members of the State Society.
2. To act as a liaison committee between the Society and the State Department of Health; and
3. To coordinate the work of its various subcommittees with that of the Society as a whole so that future action and policy may be determined by the Council or House of Delegates.

Since its last report there have been arranged lecture series, symposiums, or single lectures for 39 groups. A total of 185 speakers participated in these meetings compared with 101 the previous year.

It is noted that this committee also made its services available this year to several organizations not directly identified with a particular county society but still bringing information to the physicians of the State.

Regional meetings and teaching days were again held, and 22 lectures were arranged in this connection. The teaching day to be held at this Annual Meeting will be on geriatrics, and it is hoped that the physicians attending this convention will avail themselves of the opportunity presented.

The excellent *Course Outline Book* which presents topics and speakers available for scientific and educational programs is being revised with some changes, particularly in regard to the increasingly popular panel discussion type of presentation.

Meetings were held from time to time through the year with Dr. Hilleboe and his staff with the idea of developing policies favorable to both the State Department of Health and the Society. Your reference committee feels that this friendly liaison has been of tremendous value to the practicing physicians of the State. Dr. Curphey states in his report: "It is hoped that in the future we might further build on this broad base of mutual confidence that now exists by being accorded a seat at the council table of the various State agencies concerned with health during the early planning stages of programs that have direct concern with the problems of medical care." Your committee agrees wholeheartedly with this objective.

Your reference committee would like to suggest that some lectures be arranged as panel discussions, or otherwise, on subjects which combine medical and legal topics, medical and dental problems, medical and pharmaceutical relations, and also problems concerning the medical profession and morticians.

The committee feels that the scientific meetings of the sections of the Society should be more pointedly directed toward the general practitioner. To expedite this it would be well formally to include in the program planning committees of the sections representatives of the Academy of General Practice. Such formal liaison in the planning of programs would assure to the members of the Academy due educational credit for attendance at section meetings.

We are convinced that the doctors of the State of New York are well provided with programs which should be of interest to all. Our greatest criticism comes from the fact that so few societies take advantage of the wealth of material that is available.

In summary, your reference committee feels that the Council Committee on Postgraduate Education has done a splendid job in the service of the Society.

Mr. Speaker, I move the adoption of this portion of the report.

Dr. Richard P. Doody, *Rensselaer:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 83

Report of Reference Committee on Report of Council, Part I: Medical Defense

Dr. George A. Burgin, *Herkimer:* The report of the Special Committee on Medical Defense has been reviewed by your reference committee. Dr. Fred Hiss has replaced Dr. Masterson as chairman this year, and his committee has continued the established policies which primarily are to function with the Office of Medical Defense of the State Health Department.

Special effort has been made to overcome the general apathy of the profession and public and to stockpile additional equipment.

The reference committee suggests that perhaps the role of the industrial physician should be stressed in organizing the employes of the plant whose health program he supervises. Such a physician could form small, very well-trained groups or "flying squadrons" which would serve as a nucleus of large community first aid groups. We would also like to suggest that each physician equip the car trunk of his car as an emergency station where a few dressings, hypodermic outfits, and antibiotics can be stored, so that, in case of an emergency, the physician himself could immediately set up a station to help the injured around him. It seems to us that a great deal of embarrassment to the physicians can be avoided if they were equipped in this way.

I move the adoption of this portion of the report.

Dr. John C. Kinzly, *Niagara:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 84 (See 53)

Report of Reference Committee on Report of Council, Part I: Publication of Results of National Board Examinations

Dr. George A. Burgin, *Herkimer:* One resolution was referred to us, presented by Dr. Benjamin M. Bernstein, regarding publication of results of National Board examinations. (*See Section 53*)

Mr. Speaker, this resolution was discussed at length by our committee, and we finally decided to disapprove this resolution on the basis that it might prejudice the public in favor of those taking the National Board examinations as against those taking the State Boards, and in essence can serve no really useful purpose.

Speaker Holcomb: You move the disapproval of the resolution?

Dr. Burgin: That is right.

Speaker Holcomb: The chairman moves the disapproval of this resolution. Is there a second?

Dr. Clarence G. Bandler, *New York:* I second it.

Dr. Benjamin M. Bernstein, *Kings:* May I ask the chairman of the committee why the committee disapproved the resolution?

Dr. Burgin: The reference committee finally decided to disapprove the resolution on the basis that it might prejudice the public in favor of those taking the National Board examinations and in essence can serve no really useful purpose.

Speaker Holcomb: Is there discussion? The reference committee's report calls for disapproval of the resolution of Dr. Bernstein. Would you wish to discuss that, Dr. Bernstein?

Dr. Bernstein: I don't want to prolong this. I don't see any reason why you refuse to publicize the good things we do as one of the public. The press publicizes the rotten things we are supposed to do. Here we are doing something worth-while for our graduates, permitting these men to take the examinations, permitting them to practice in 39 states, yet you refuse to give that publicity. I don't quite understand that point of view, I am sorry.

Speaker Holcomb: Is there any further discussion?

. . . There were calls for the question . . .

Speaker Holcomb: The question is called of disapproval of the resolution.

. . . The motion was put to a vote and was carried . . .

Speaker Holcomb: The resolution is disapproved.

Dr. Burgin: I would like to move the adoption of this report as a whole.

Dr. George E. Anderson, *Kings:* I second that.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Burgin: The chairman wishes to thank the members of this committee for the interest and time they have given in helping to formulate this report, the members being George E. Anderson, John C. Kinzly, Richard P. Doody, and Adelaide Romaine.

Speaker Holcomb: Thank you, Dr. Burgin.

Section 85

Report of Reference Committee on Report of Council, Part VIII: Liaison with Veterans Administration

Dr. Charles Sandler, *Bronx:* The Reference Committee on the Report of the Council, Part VIII, has carefully reviewed the report of the Liaison Committee with Veterans Administration, as published. Representing the Council in the study of medical and hospital care for the veterans. the Liaison Committee with the Veterans Administration also supervised the functioning of the Veterans Medical Service Plan of New York, Inc., an organization set up in the period immediately following World War II to care for the medical needs of the veterans. The existing Veterans Administration facilities in the period 1946–1947 were wholly inadequate to care for service-connected disability or disease, and at the request of the VA your State Medical Society set up this corporation for hometown fee-basis care.

Following the considerable expansion of VA medical facilities, veterans were instructed to report to a VA clinic for medical care of service-connected disability or disease or to pay for private medical services by personal funds. And when VA funds run low, a drastic curtailment in authorization for medical service plan care, by private physicians, usually ensues. Considering how large a share of the VA dollar now goes to support hospital care for nonservice-connected disabilities, it is easy to see how the curtailment of funds to the Medical Service Plan works a real hardship upon the veteran not conveniently near a VA hospital. From the directors of the regional branches of the Plan come reports detailing the gradual diminution in services rendered to the veterans because of fewer authorizations, the falling off being especially noticeable in the large cities, which usually provide Veterans Administration clinics.

At the June, 1953, annual meeting of the house of delegates of the American Medical Association, a resolution was passed, relating to veterans medical care, which recommends that Congress enact new legislation limiting the care of veterans to (1) veterans whose diseases or disabilities are service-incurred or aggravated, and (2) within the limits of existing facilities, veterans with wartime service, suffering from tuberculosis or psychiatric disorders of nonservice-connected origin, who are unable to defray the expenses of necessary hospitalization. It was further recommended that the VA hospitals discontinue "the medical care of remaining groups of veterans with nonservice-connected disabilities, and that responsibility for the care of such veterans revert to the individual and the community where it rightfully belongs."

The Liaison Committee, and subsequently the Council, approved this proposal of the A.M.A. to work for a change in the law regarding nonservice-connected disabilities in Veterans Administration hospitals.

Your reference committee wishes to express its admiration for the efforts of the Liaison Committee with Veterans Administration, in continuing to exercise its functions through the Veterans Medical Service Plan in the face of increasingly difficult circumstances, and your committee wishes to record its wholehearted approval of the substantial backing given by the Liaison Committee to the Council and to the A.M.A. in their efforts to curtail the invasion by the VA in the care of nonservice-connected illness and disability.

Mr. Speaker, I move the adoption of this portion of the report.

Dr. Irving L. Ershler, *Onondaga:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 86

Report of Reference Committee on Report of Council, Part VIII: American Medical Education Foundation

Dr. Charles Sandler, *Bronx:* Your committee has carefully reviewed the report of the Special Committee on American Medical Education Foundation, which presents a meticulous analysis of the rising costs of medical education, the increase in numbers of students, and the problem of financing medical school operation without governmental subsidy. It is pointed out that tuition fees account for only 21.5 per cent of medical school operating budgets.

The American Medical Education Foundation consists of two bodies: (1) physicians and (2) an industrial division. From all sources within these groups, during the calendar year 1953, a total of $1,089,962.93 was received, and of this sum the nine schools of our State were allocated $218,043.10. An active campaign to exploit all possible sources of revenue for the Foundation is now in progress.

The contributions from New York State showed an increase in numbers from 3.13 per cent in 1952 to 9.91 per cent in 1953, and in total amount, $38,456 last year, plus the $25,000 donated by the State Society, making a sum of $63,456. One must not forget, however, that $170,375 were also sent direct to the schools through the alumni associations of New York State physicians. This totals up to the respectable sum of $233,831. Several of the county medical society auxiliaries made generous contributions which should be added to this sum.

The State of Illinois Medical Society last yea levied a tax of $20 on each of its members, an raised $190,461.99. The goal set for physicians o New York State is $250,000, and the Special Committee on American Medical Education Foundatio believes "that the quota can be met if the Medica Society of the State of New York in its House o Delegates should pass a compulsory tax for th Foundation." Your reference committee wishe respectfully to point out that without resorting t compulsory tax levies, over $234,000 was donate through physicians to the purposes of medica school support in this State, a respectable sum indeed, and for which no apologies need be offered Your reference committee feels that the quota se is within easy reach, and with some increase activity among the alumni societies, may well b surpassed without compulsory taxation of ou Society membership.

Your reference committee wishes to express its commendation for the considerable effort expende by the Special Committee on American Medica Education Foundation in preparing its report, and its endorsement of the advocacy of more generous support of the Foundation by the physicians of our State. Your reference committee feels, however, that compulsory donations, as by levies imposed by a State Society, are neither required nor advisable in our case.

With this emendation, your committee moves the approval of the report of the Special Committee on American Medical Foundation, as printed in the Journal.

I move the adoption of this portion of the report.

Speaker Holcomb: Just a moment, Dr. Sandler. Dr. Bauer has a correction to make.

Dr. Louis H. Bauer, *Ex-President:* There is an error in the report where it says the American Medical Education Foundation consists of two bodies: physicians and an industrial division. The American Medical Education Foundation consists of physicians only. The industrial division is the National Fund for Medical Education, which is a separate organization. The amount of $1,089,962.93 which was received was the amount collected by the American Medical Education Foundation itself and does not include the funds collected by the National Fund for Medical Education, which came from industry, so that the total amount collected in 1953 was over $2,000,000 from the two sources. The $1,089,962.93 was from the Foundation itself. It is the first time the Foundation has gone over a million dollars. That does not include either donations which physicians made direct to medical schools without going through the Foundation.

Speaker Holcomb: Thank you, Dr. Bauer.

Do you accept that correction, Dr. Sandler.

Dr. Sandler: Yes.

Dr. Isaac Levine, *Kings:* I second the motion to accept the report of the reference committee, as corrected.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 87 (*See 37*)

Report of Reference Committee on Report of Council, Part VIII: Disapproval of "Tennessee Plan"

DR. CHARLES SANDLER, *Bronx:* Your reference committee has several resolutions referred to it.

On the resolution introduced by Dr. Philip Ladin concerning the Tennessee Plan. (*See Section 37*)

Your reference committee recommends approval of this resolution, and I so move.

DR. IRVING L. ERSHLER, *Onondaga:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 88 (*See 34*)

Report of Reference Committee on Report of Council, Part VIII: Contribution to American Medical Education Foundation

DR. CHARLES SANDLER, *Bronx:* The next resolution concerns the contribution to the American Medical Education Foundation:

> "*Resolved,* that a similar appropriation be made for the year 1954."

That was a resolution introduced by Dr. Edward P. Flood, and your reference committee recommends approval of this resolution, and I so move.

DR. ARTHUR J. SULLIVAN, *Albany:* I second the motion.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 89 (*See 60*)

Report of Reference Committee on Report of Council, Part VIII: Retirement Benefits for Physicians in Armed Services

DR. CHARLES SANDLER, *Bronx:* The final resolution, Mr. Speaker, concerns a resolution introduced by Dr. Himler, for Dr. James H. Ewing, of New York County, covering retirement benefits for physicians in the armed services. (*See Section 60*)

Your reference committee recommends the approval of this resolution, and I so move.

DR. EDWIN A. GRIFFIN, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

DR. SANDLER: Now I should like to move the adoption of the reference committee's report as a whole, as amended.

DR. ERSHLER: I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

DR. SANDLER: I should like to express my thanks for the assistance given in our deliberations by the members of this committee, Dr. Arthur J. Sullivan, of Albany; Dr. Isaac Levine, of Kings; Dr. Irving L. Ershler, of Onondaga.

SPEAKER HOLCOMB: Thank you, Dr. Sandler.

At this time, members of the House, I wish to announce a recess until 2:30, at which time I will ask you to be prompt. Our first order of business will be the report of Dr. Mowry's Reference Committee on Report of the Council, Part V, and he will be on hand to give it at that time.

. . . The meeting recessed at 1:15 P.M. . . .

Afternoon Session

Tuesday, May 11, 1954

The session convened at 2:35 P.M.

SPEAKER HOLCOMB: The House will please come to order. Yesterday afternoon after the close of the morning session, I think everyone felt very much encouraged. We felt that the proceedings would go along very nicely without any interruptions or without any delay. This morning we did encounter a few unavoidable delays, perhaps completely unavoidable but sometimes perhaps due to the fact that we did not all follow the text of the reports. Some of the remarks could have been, perhaps, more carefully considered before the delegate expressed them. I am not making these remarks in a spirit of criticism but in a spirit of expediency of carrying on our proceedings so that they are not too unduly prolonged. I feel that we shall be here a long, long time, so I shall again ask the delegates please to follow the proceedings from their printed reports and to consider remarks that are made from the floor to the Speaker and to the House. I think we can save a great deal of time if we do that. I hope you will all agree with that.

The chair recognizes Dr. Mowry, who will present the report of the Reference Committee on Report of Council, Part V, which has to do with Public Health Activities.

Section 90

Report of Reference Committee on Report of Council, Part V: Physical Medicine and Rehabilitation

Dr. Olin J. Mowry, *Oswego:* Mr. Speaker and members of the House, the first part of this report deals with physical medicine and rehabilitation.

Your reference committee notes with pleasure the forward-looking program of the Subcommittee for Physical Medicine and Rehabilitation, of which Dr. Weeden is chairman. We note that he has had two meetings of this committee during the past year. This committee wishes to emphasize the important need of physiotherapists and particularly their supervised training by and closer affiliation to the State medical schools and Society. This committee concurs with the course of action of presenting this problem to the Commissioners of Health and Education.

Inasmuch as much of the work of physical medicine and rehabilitation will be concerned with compensation patients, this committee feels that fees for specialists in this field should be established by the Workmen's Compensation Board working in cooperation with the respective subcommittees.

We would advise caution in establishing rehabilitation units in the counties. Careful and intensive survey work should be done to establish a proved need prior to any further development.

Mr. Speaker, I move the adoption of this portion of the report.

Dr. Arthur E. Lamb, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 91

Report of Reference Committee on Report of Council, Part V: Geriatrics

Dr. Olin J. Mowry, *Oswego:* This reference committee commends the Subcommittee on Geriatrics on this program in the general session of the current State meeting, and compliments its chairman, Dr. Frederic Zeman, on the work of his committee during the past year. The rapidly increasing number of geriatric patients will demand that more concrete interest be developed for the care and comfort of these elderly people and for the utilization of their years of experience.

Mr. Speaker, I move the adoption of this portion of the report.

Dr. Moses H. Krakow, *Bronx:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 92

Report of Reference Committee on Report of Council, Part V: Diabetes

Dr. Olin J. Mowry, *Oswego:* This committee is in hearty accord with the work of the Subcommittee on Diabetes and commends Dr. Leonard Schiff for his enthusiastic leadership. We approve of the recommendation of the committee in having one scientific session annually on diabetes and urge that each county society formulate a like program. There is to be a special meeting of the Subcommittee on Diabetes, May 12, 1954, at 4:00 p.m. in the Town Room, relative to their program.

In addition to Diabetes Week, this committee desires to emphasize the significance of each physician acting as a committee of one, functioning fifty-two weeks in the diabetes detection program.

This reference committee wishes to congratulate our State Journal on the splendid series, "Current Concepts in Diabetes Mellitus."

Mr. Speaker, I move adoption of this portion of the report.

Dr. Joseph Alvich, *Bronx:* I second the motion.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 93

Report of Reference Committee on Report of Council, Part V: School Health

Dr. Olin J. Mowry, *Oswego:* The Subcommittee on School Health has aggressively championed the cause of health in our schools. Your reference committee approves of the appointment of a school health committee in all county medical societies. In addition, all county medical societies are urged to devote a meeting to the problem of school health.

The subcommittee and its chairman, Dr. Ayling, are commended on their effort in the appointment of Dr. John A. Forst as chief of the Health Service in the State Department of Education and the establishment of standards and qualifications for school physicians.

Mr. Speaker, I move adoption of this portion of the report.

Dr. Edwin A. Griffin, *Kings:* I second the motion.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 94

Report of Reference Committee on Report of Council, Part V: Hard of Hearing and the Deaf

Dr. Olin J. Mowry, *Oswego:* The report of Dr. Fowler and his colleagues on hard of hearing and the deaf effectively serves to emphasize to the State Society the significance and magnitude of this defect. They have made definite and constructive proposals on how this need may be met, prevented, alleviated, and oftentimes solved. We note with pleasure the completeness and efficiency of this report to the Council. Every physician in the State should thoroughly acquaint himself with the content of these recommendations.

Mr. Speaker, I move the adoption of this portion of the report.

Dr. Herbert S. Ogden, *New York:* I second the motion.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Mowry: In reviewing the various subcommittee reports, it comes to our attention that the House of Delegates passed a motion recommending the Council to review the work and activities of these various subcommittees as to their value of service to the Council. We understand that the

Planning Committee will report in detail on this proposal.

Section 95 (See 11, 45)

Report of Reference Committee on Report of Council, Part V: Development of Recommendations of the New York State Health Preparedness Commission

Dr. Olin J. Mowry, *Oswego:* We have had several resolutions submitted to us. The first one on which I would like to report is the resolution submitted by Dr. Leonard J. Schiff on the development of recommendations of the New York State Health Preparedness Commission directed to the Planning Committee for Medical Policies:

> "*Resolved*, that the Medical Society of the State of New York go on record as approving the recommendations of the New York State Health Preparedness Commission and urge their immediate development; and be it further
>
> "*Resolved*, that a copy of this resolution be sent to the Governor of the State of New York and to other appropriate State officials and legislators.

Your committee unanimously approves of this resolution and recommends its adoption.

Mr. Speaker, I move adoption of this resolution.

Dr. Edwin A. Griffin, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 96 (See 66)

Report of Reference Committee on Report of Council, Part V: Standards for Inhalation Therapy

Dr. Olin J. Mowry, *Oswego:* Our committee reviewed a second resolution presented by Dr. Vincent J. Collins, of the Section on Anesthesiology, on "Standards for Inhalation Therapy." After discussion, the original resolution was amended to read as follows:

> "Whereas, well-trained technicians in inhalation therapy, not to include administration of anesthetic agents, have demonstrated their tremendous usefulness in the care of patients; and
>
> "Whereas, by their knowledge of equipment and the basic problems of inhalation therapy they have become important adjuncts to the physician, as are those in the nursing profession to the physician; and
>
> "Whereas, the registration of these technicians would serve as an incentive to well-qualified people to continue the progress in inhalation therapy and to attract additional men of high caliber; therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York appoint a committee to work jointly with a committee from the New York State Society of Anesthesiologists (1) to determine minimum standards of therapy, (2) to establish the essentials of acceptable schools of inhalation therapy (not to include administration of anesthetic agents), and (3) to formulate a basis for the certification of technicians and make recommendations for the licensing of same."

The reference committee approves of this resolution, and recommends its adoption. I so move.

Dr. C. Stewart Wallace, *Tompkins:* I second it.

Speaker Holcomb: Does anyone wish to discuss this resolution?

Dr. Thomas M. d'Angelo, *Assistant Treasurer:* I think this resolution, as brought out now, asks that these individuals eventually be licensed. Isn't it rather better to have a society of these individuals directly under the control of the medical profession in that respect rather than have them licensed eventually? When a section such as this is licensed, they immediately begin to enlarge their scope and begin to take over medical therapy. I think that it would be wise at this juncture anyhow that we not press for licensure of this group.

Speaker Holcomb: Dr. d'Angelo, do you move an amendment to this resolution or a deletion?

Dr. d'Angelo: A deletion, a deletion of the portion that has to do with licensing. I don't mind the certification. That is excellent. I don't believe we should push for licensing at present.

Dr. George E. Anderson, *Kings:* I second that.

. . . There being no discussion further, the amendment was put to a vote and was carried; then the motion, as amended, was put to a vote and was carried . . .

Dr. Mowry: Mr. Speaker, I move the adoption of the report of this reference committee, Part V, as a whole, as amended.

Dr. Herbert S. Ogden, *New York:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Mowry: I wish to thank the members of my committee for their efforts and valuable contributions in the rendering of this report: Dr. Charles W. Mueller, Dr. C. Stewart Wallace, Dr. Herbert S. Ogden, and Dr. Joseph Alvich.

Speaker Holcomb: Thank you, Dr. Mowry.

Section 97 (See 12, 42)

Report of Reference Committee on Report of Council, Part III: Report of Council Committee on Industrial Health and the Supplementary Report of the Board of Trustees on Bureau of Industrial Health

Dr. Felix Ottaviano, *Madison:* Mr. Speaker, I think a few preliminary remarks are in order because of the apparent brevity of these reports. I doubt that brevity in a report before this House of Delegates needs an apology; however, it might be construed that perhaps the committee did not consider these reports that we are reporting on at length, but I wish to assure the House that the members of this committee spent a great deal of time with members of the referring committees and other interested parties in drawing their conclusions.

Concerning the report of the Council Committee on Industrial Health and the supplementary report of the Board of Trustees on the Bureau of Industrial Health—they are much the same—and your reference committee approved them both and recommends their adoption with the recommendation that the director need not necessarily be a medical man.

I move the adoption of this portion of the report.

Dr. Herbert Berger, *Richmond:* I second it.

. . . There being no discussion, the motion was put to a vote and was carried . . .

Section 98 (See 15)

Report of Reference Committee on Report of Council, Part III: General Practice

Dr. Felix Ottaviano, *Madison:* Concerning the report of the Subcommittee on General Practice, after conferring with members of the subcommittee, your reference committee voted to delete the paragraph, "A health examination blank has been drawn up and approved. It is expected that the State Health Department will soon print these blanks for distribution and use by New York State physicians. Cancer detection and the necessity of complete health surveys when patients are being examined by their family physicians are emphasized," and to substitute the words, "A health examination blank for the convenience of the family physician has been drawn up and approved by the subcommittee. It is expected that the State Department of Health will soon print and distribute these blanks, as a courtesy to the Medical Society of the State of New York."

Your committee recommends the adoption of the corrected report, and I so move.

Dr. Clarence G. Bandler, *New York:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Ottaviano: The supplementary report of the Subcommittee on General Practice was approved by your committee, and its adoption is recommended. I so move.

Dr. George Himler, *New York:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 99

Report of Reference Committee on Report of Council, Part III: Report of the Special General Practice Committee

Dr. Felix Ottaviano, *Madison:* The report of the Special General Practice Committee was approved by your reference committee with the following changes:

The definition of general practice which appears in fine print is to be deleted and the following to be substituted: "The general practitioner is a legally qualified Doctor of Medicine who does not limit his practice to a particular field of medicine or surgery. In his general capacity as family physician and medical adviser, he may, however, devote particular attention to one or more special fields, recognizing at the same time the need for consulting with qualified specialists when a situation occurs beyond the capacity of his training and experience."

We move disapproval of the recommendation of the Special General Practice Committee that a Bureau of Postgraduate Education be established with a full-time director.

Your committee recommends the adoption of this part of the report, and I so move.

Dr. Kenneth F. Bott, *Greene:* I second that.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 100 (See 16)

Report of Reference Committee on Report of Council, Part III: Public Health Activities A—Rural Medical Service

Dr. Felix Ottaviano, *Madison:* The report of the Subcommittee on Rural Medical Service was approved by your reference committee, and the committee recommends its adoption. I so move.

Dr. John M. Galbraith, *Nassau:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Ottaviano: I move the adoption of the report of the reference committee on Report of the Council, Part III, as a whole.

Dr. Herbert Berger, *Richmond:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Ottaviano: I should like to take a moment to thank the members of the reference committee for their help, Herbert Berger, Richmond; George Himler, New York; Kenneth F. Bott, Greene, and John M. Galbraith, Nassau.

Speaker Holcomb: Thank you, Dr. Ottaviano.

Section 101 (See 21)

Report of Reference Committee on Report of Council, Part VII: Medical Care Insurance

Dr. Walter S. Bennett, *Washington:* Your committee has studied with much interest the report of the Subcommittee on Medical Care Insurance and desires to express its appreciation on the clearness and conciseness of its report.

Your committee approves the modification of Article IX in which an applicant may transfer from his group to another enrolled group, to a contract available in that group or to a contract offered to direct pay applicants.

The rider to the State-wide contract reference to allowances for anesthesia we are in favor of. It was noted that no allowance was made for anesthesia in maternity cases by the subcommittee. This matter was discussed with Dr. Wertz and Mr. Farrell, of the subcommittee, and they stated this action was advisable at this time due to the fact that the cost of obstetric care represented approximately 22 per cent of all medical care cost and that the increased cost for anesthesia would increase the premium cost beyond a point where the low income subscribers could afford to avail themselves of medical care protection and also allowance for physical medicine while hospitalized.

There has been considerable feeling that Health Service, Inc., and the National Blue Cross stock insurance company could underwrite both Blue Cross and Blue Shield coverage for State-wide groups. However, it was pointed out that Health Service, Inc., would be competing with local Blue Shield plans in writing local groups. Your committee agrees with the subcommittee in that the national companies should not write intrastate business.

The question of adoption by all insurance companies of uniform certificates and reduction of questions asked to those actually needed has been taken up with the Council on Medical Service of the American Medical Association, and work is being done on this matter. The individual hospital reporting form has been revised and approved by the Health and Accident Underwriters and others interested. The American Medical Association to date, however, has not approved of these forms.

The Subcommittee on Medical Care Insurance, through the Council Committee on Economics, recommends that the Medical Society of the State of New York extend its approval for the ensuing Society year to the following Blue Shield Plans:

United Medical Service, Inc., New York City
Western New York Medical Plan, Inc., Buffalo
Genesee Valley Medical Care, Inc., Rochester
Central New York Medical Plan, Inc., Syracuse
Medical and Surgical Care, Inc., Utica
Northeastern New York Medical Service, Inc., Albany
Chautauqua Region Medical Service, Inc., Jamestown.

We recommend approval of the report, and I so move.

Dr. William B. Rawls, *New York:* I second it. . . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Bennett: The report of Mr. George P. Farrell, director of the Bureau of Medical Care Insurance, shows that he has taken an active interest in the duties assigned to him during the past year.

In his report on his attendance at an educational conference at the Biltmore Hotel, New York City, he states: "It was unanimously felt that through meetings of this kind a better understanding would result regarding doctors' charges and hospital costs as they relate to health insurance programs underwritten by commercial companies and that health plans could be developed offering broader coverage when all parties concerned had a better understanding of these problems."

In this your committee heartily agrees and expresses its endorsement.

The director has attended the meetings of all the district branches and reported to those present on the activities of his organization.

We would especially direct your attention to the recommendations which were adopted at the Chicago meeting on January 16 and 17 of this year:

"We are in sympathy with the principle that service contracts are the ideal, and perhaps will be the ultimate, solution of the voluntary health program, but at the present time we recognize that there are a number of plans on the indemnity basis, and we do not feel we should attempt to disturb their organization.

"Any change from indemnity to service benefits has to be agreed upon by the physicians themselves.

"Wherever feasible, Medical Indemnity of America should attempt to conform to the service principle in the areas in which service is sold and to indemnity in the areas where indemnity is sold.

"Wherever practicable, Medical Indemnity should make every effort to adhere as closely as possible to the existing type of practice. Medical Indemnity should make every effort to sell local benefits at local rates; that Medical Indemnity of America, Inc., submit to local plans involved in national accounts, contract specifications, schedule of allowances, and enrollment regulations before underwriting the account; and that Blue Shield Plans in affected areas have an opportunity to submit rates to Medical Indemnity of America, Inc., for use in developing a composite rate for quotation to a prospective risk; that the Blue Shield Commission join with it to review the cooperative agreement in existence between Medical Indemnity of America, Inc., and Health Service, Inc., especially concerning themselves with the advisability of separately employing a chief executive for the Medical Indemnity of America, Inc.

"The four specialties of anesthesiology, pathology, radiology, and physiatry are an integral part of the practice of medicine and should be provided through Medical Indemnity of America, Inc., as medical services and not by Health Service, Inc., as hospital services when rendered by a lay employe of a hospital.

"Blue Shield Medical Plans hereby affirms the definitions of the practice of medicine and of medical services as set forth in the official actions of the House of Delegates of the American Medical Association, and that Medical Indemnity of America, Inc., contracts be consistent with these actions, and that this resolution be transmitted to the Board of Directors of the Medical Indemnity of America, Inc., with the urgent request that its provisions be carried out to the extent possible and negotiations be undertaken with Health Service, Inc., to achieve the desired results."

It is encouraging to note that during the year 1953 membership in the Blue Shield Plans has increased 544,369, and all the seven plans in operation in New York State have shown a healthy growth. Also the earned premium income has shown an increase in all the plans operating. It is also encouraging to note that during the past year incurred claims were 70.95 per cent of the earned premium as compared to 72.49 per cent in the year 1952.

It is the opinion of your committee that the several medical plans in New York State are in a healthy and prosperous condition.

We recommend approval of the report, and I so move.

Dr. Edwin A. Griffin, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Speaker Holcomb: Do you have any resolutions?

Dr. Bennett: Yes, and I have a special supplementary report. The special committee appointed by the chairman of the Subcommittee on Medical Expense Insurance, Dr. Carlton E. Wertz, completed its report to the subcommittee, May 3, 1954, regarding the resolution of the 1953 House of Delegates referred to the subcommittee by the Council that "consideration be given to setting up a fair and adequate mechanism" in the "Standards for Approval by Medical Society of the State of New York of New York State Medical Care Plans," for adjudication of cases in which a medical care plan receives county medical society approval but not that of the Medical Society of the State of New York.

The present "Standards for Approval by the Medical Society of the State of New York of New York State Medical Care Plans" are as follows under:

Local Approval

1. Approval of the county society or societies in whose area a plan operates.

2. In the event a local county medical society or societies do not approve a plan, a special committee of one member from each county society involved and one member by the Medical Society of the State of New York shall be appointed to consider the reasons for not granting local approval. After consideration of the reasons, a majority vote of the special committee shall determine, subject to confirmation by the Council, if approval will be granted by the Medical Society of the State of New York, and

3. That where a plan has applied to the State Society for approval and approval has been withheld, the State Society must state that the following plan has not been approved because it does not conform to the following standards adopted by the Medical Society of the State of New York.

Your reference committee recommends to the House that the above standards under "Local Approval" be revised as follows:

Local Approval

1. Approval of the county society or societies in whose area a plan operates.

2. In the event a local county medical society or societies does not approve a plan which has been approved by the Medical Society of the State of New York, a special committee shall be set up consisting of one member from each local county medical society involved and an equal number of members appointed by the Medical Society of the State of New York. These individuals shall mutually agree on an additional member of the committee who shall act as chairman and must be a member of the Medical Society of the State of New York and not a member of the local county medical society or societies involved. After consideration of the reasons and discussion thereof, the special committee shall make recommendations to the Council of the Medical Society of the State of New York for decision; and

3. Where a local county medical society or societies approves of a plan and the State Medical Society does not approve of a plan, a special committee shall be set up consisting of one member from the said local county medical society or societies involved and an equal number of members appointed by the Medical Society of the State of New York. These individuals shall mutually agree on a third member of the committee who shall act as chairman and must be a member of the Medical Society of the State of New York and not a member of the local county medical society or societies involved. After consideration of the reasons and a discussion thereof, the special committee shall make recommendations to the Council of the Medical Society of the State of New York for decision, and

4. That where a plan has applied to the State Society for approval and approval has been withheld, the State Society must state that the following plan has not been approved because it does not conform to the following standards adopted by the Medical Society of the State of New York.

The committee recommends approval of the supplementary report as amended. I so move.

Dr. Edwin A. Griffin, *Kings*: I second it.

Speaker Holcomb: Dr. Heyd is recognized.

Dr. Chas. Gordon Heyd, *Ex-President:* I just seconded that.

Speaker Holcomb: I am sorry. I thought you wanted to speak on it. Is there any discussion?

. . . The question was called, and the motion was put to a vote and was unanimously carried . . .

Section 102 (See 68)

Report of Reference Committee on Report of Council, Part VII: Group Accident and Health Insurance Plans

Dr. Walter S. Bennett, *Washington:* I have several resolutions that were referred to us. The first resolution is that introduced by Dr. Willis, of Westchester:

> "*Resolved*, that whenever units of medical organization in the State of New York above the county level consider group programs of action, such plans be first presented to the individual county societies for study; and be it further
>
> "*Resolved*, that when group plans of this type involve any phase of insurance they should also consult with the Insurance Bureau of the Medical Society of the State of New York for information in regard to the advisability of the plan, both as to cost and coverage and the suitability of the company to provide such coverage."

Your committee recommends that whatever

units of medical organizations in the State of New York above the county level consider group insurance plans, same must first be approved by each individual county society. Societies already having existing plans shall, in no way, be interfered with.

Your committee further recommends that when group plans of this type involve any phase of insurance, they should consult with the Insurance Bureau of the Medical Society of the State of New York for information in regard to the advisability of the plan, both as to cost and coverage, and the suitability of the company to provide such coverage.

We recommend approval of this resolution as amended. Mr. Speaker, I move the adoption of this recommendation.

Dr. Clarence G. Bandler, *New York:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 103 (See 71)

Report of Reference Committee on Report of Council, Part VII: Voluntary Health Insurance Coverage During Periods of Unemployment

Dr. Walter S. Bennett, *Washington:* The second resolution referred to us was introduced by Dr. W. Alex Newlands, of Westchester, and concerns voluntary health insurance coverage during periods of unemployment:

> "*Resolved,* that the Medical Society of the State of New York appoint a committee to study a means of prepayment whereby such insurance could be continued in the event the insured became unemployed."

Your committee, although believing that this resolution may have certain merits, can also visualize many complications such as actuarial problems and the limit of time to which this should apply. It is impossible for your committee to study all the problems involved, and, therefore, it recommends that this resolution be referred to the Council for further study. I move approval of this portion of the report.

Dr. Irving J. Sands, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 104 (See 76)

Report of the Reference Committee on Report of Council, Part VII: Service Benefits for Blue Shield Plan

Dr. Walter S. Bennett, *Washington:* The last resolution referred to us was presented by Dr. Louis H. Bauer, concerning service benefits for Blue Shield Plan:

> "*Resolved,* that the Medical Society of the State of New York endorse the principle of service benefits and recommend the adoption of such principle as it may be properly applied in the local area of each Blue Shield Plan."

Your reference committee recommends approval of this resolution. I so move.

Dr. Walter Dreyfuss, *Montgomery:* I second it.

. . . There being no discussion, the motion was put to a vote and was carried . . .

Dr. Bennett: Now I move the adoption of the report of the reference committee on Report of the Council, Part VII, as a whole.

Dr. John W. Latcher, *Otsego:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Bennett: I would like at this time to have the privilege of thanking Dr. Walter Dreyfuss, of Amsterdam; Dr. William B. Rawls, of New York City; Dr. Irving J. Sands, of New York City, and Dr. John W. Latcher, of Oneonta, for the assistance and cooperation they have given in preparing this report.

Speaker Holcomb: Thank you, Dr. Bennett. I think that is a very good report, Dr. Bennett.

Section 105

Report of Reference Committee on Report of Treasurer

Dr. Thomas F. McCarthy, *Bronx:* These are four short reports. First is the report of the reference committee on report of the treasurer.

Your committee reviewed and evaluated carefully all information supplied in the several reports of the treasurer and auditors. While the present financial condition of the Society would seem to be satisfactory, we must insert a word of caution. A raise in dues of five dollars was voted last year. It may be anticipated that, after repaying the funds borrowed to cover the deficit for the year 1953, the present income will meet necessary expenses. However, this happy situation will only obtain if the House of Delegates does not pass any additional legislation that will require the expenditure of additional sums of money that the trustees feel compelled to approve this coming year. Certain charges are fixed; the matters have been debated in the House of Delegates; they constitute a rather high percentage of the budget, namely, the *Medical Directory,* the Journal, and the activities of the various bureaus and committees. Our membership desires these services for which they are apparently willing to pay a reasonable amount. Your committee would again counsel prudence on the part of the delegates.

We commend our worthy treasurer, Dr. Maurice J. Dattelbaum, for his outstanding work and freely proffered cooperation with this committee.

I move for the adoption of this report.

Dr. Kenneth M. Lewis, *New York:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Section 106 (See 38)

Report of Reference Committee on Reports of Board of Trustees

Dr. Thomas F. McCarthy, *Bronx:* The next is the report of the Board of Trustees. The various reports submitted to the House of Delegates by our trustees were examined by our committee. It is always a great privilege to discuss the financial affairs of our Society with the sagacious group of our colleagues who have accepted this responsibility to serve us as trustees. Unquestionably, during a period of serious inflation, they have conserved and even augmented investment funds of your Society. We note that a new idea has been presented this year. Building Equipment Reserve and Employes' Beneficial Funds have been established. The purposes of these special funds is self-explanatory, and the committee approves and commends the establishment of such special reserve funds.

I wish to insert here a resolution which was presented by Bronx County and approved by this committee without change because it adds additional weight to the approbation of this committee. The resolved portion of this resolution was:

> "*Resolved*, that the trustees of the Medical Society of the State of New York be commended for their farsighted policy; and be it further
>
> "*Resolved*, that the trustees be requested to investigate the establishment of other similar investment funds, the income from which may be used for the good and welfare of the membership of the Medical Society of the State of New York."

I move the adoption of this portion of the report, with the resolution.

Dr. Sydney L. McLouth, *Eighth District Branch:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Section 107

Report of Reference Committee on Report of the Finance Committee

Dr. Thomas F. McCarthy, *Bronx:* The report of the Finance Committee, which is authorized to prepare a budget, was discussed with both the treasurer and the trustees. It was unanimously agreed that the change in the Bylaws, Chapter V, Section 1, "The budget shall be prepared by the Board of Trustees," as presented this year, met with the approval of this committee, at this time. After a review of the budget presented by the Finance Committee, your reference committee felt that a tighter control of the expenses was imperative.

At the risk of reiteration, your reference committee stresses that solvency will require restraint on the part of every member of this House of Delegates. May we also suggest that any approval expressed by your committee does not in any way constitute acceptance of the change in the Bylaws by the House of Delegates. This committee recognizes this change as an attempt to effect tighter controls that may or may not meet with the favor of the House itself.

I move the adoption of this portion of the report.

Dr. Benjamin M. Bernstein, *Kings:* I second that.

Speaker Holcomb: Is there any discussion?

Dr. Benjamin F. Glasser, *Queens:* I wonder if we can discuss that.

Dr. McCarthy: That is why I deliberately put that phrase into the report—that I thought we made it clear this only constitutes the approval of the reference committee and has nothing to do with committing the House to the change in Bylaws.

Dr. Denver M. Vickers, *Councillor:* Inasmuch as the same matter comes up under the report of the Committee on Constitution and Bylaws, I move you that this matter be laid on the table.

Speaker Holcomb: The chair wishes to remind Dr. Vickers that Dr. McCarthy has, perhaps, amplified his statement and made it explanatory that he does not wish this to affect the House of Delegates in their deliberations later on. The chair will entertain a motion if Dr. Vickers wishes to withdraw that. It has not been seconded.

Dr. Vickers: Because of that consideration, I will withdraw the motion.

Speaker Holcomb: Thank you, Dr. Vickers.

Dr. McCarthy: I now move the approval of this portion of the report.

Speaker Holcomb: Is there a second to the approval of this portion of the report?

Dr. Clarence G. Bandler, *New York:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Section 108

Report of the Reference Committee on Report of the War Memorial Fund

Dr. Thomas F. McCarthy, *Bronx:* For six years this praiseworthy enterprise, the War Memorial Fund, has been administered by a special committee of the Board of Trustees. Under their sympathetic, paternal eye, a substantial number of children of our colleagues have been assisted in their education. The effort has been made to render financial assistance that would permit higher education where such might not be feasible otherwise.

Some questions as to the adequacy of the financial commitment in the present inflated condition was raised by your committee. We were assured that every endeavor to broaden the program within the limits of the directive of the House of Delegates was being made by the War Memorial Fund Committee. However, your reference committee would urge the War Memorial Committee, so ably directed by Dr. Edward Cunniffe, to consider two additional suggestions: (1) to include the children of Korean veterans and (2) the possibility of raising the yearly contributions.*

Your committee commends the foresight of the late Dr. James Rooney in the establishment of this living memorial to those men who sacrificed all for their country.

I move the acceptance of this portion of the report.

Dr. John F. Mosher, *Albany:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

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* This fund was established by one contribution from most members in 1948. It does not receive "yearly contributions."—W. P. Anderton, Secretary.

Dr. McCarthy: Now I would move the acceptance of the report of the reference committee as a whole.

Dr. John L. Sengstack, *Suffolk:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. McCarthy: I now take the opportunity to thank the members of my committee who cooperated so well and took a lively interest in the financial affairs of the Society, Dr. Kenneth M. Lewis, of New York; Dr. John F. Mosher, of Albany; Dr. Sydney L. McLouth, of Corfu, and Dr. John L. Sengstack, of Suffolk. Thank you.

Speaker Holcomb: Thank you, Dr. McCarthy. The next in order of business will be the report of Dr. Ezra Wolff, Part XI, on Publications, Public Relations, and History.

Section 109 (See 70)

Report of Reference Committee on Report of Council, Part XI: Publications and Public Relations—Commendation of the Important Educational and Public Relations Program of United Medical Service

Dr. Ezra A. Wolff, *Queens:* Mr. Speaker and members of the House, I have first three short resolutions that I shall try to dispose of.

The first is a resolution introduced by Dr. Edwin L. Harmon, of Westchester, entitled "Commendation of the Important Educational and Public Relations Program of United Medical Service":

> "*Resolved*, that this body commend United Medical Service for its public relations program and extend specific thanks for the current newspaper announcements which explain the position of the doctor in modern society and cite the public service purposes of the 1954 Convention of the Medical Society of the State of New York."

This resolution is approved without comment.

I move, sir, the adoption of this portion of the report.

Dr. Benjamin M. Bernstein, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Section 110 (See 35)

Report of Reference Committee on Report of Council, Part XI: Setting Up Means To Refute Unwarranted Attacks on the Medical Profession by Press, Radio, and TV

Dr. Ezra A. Wolff, *Queens:* The second resolution is one introduced by Dr. Samuel Leo, of the Bronx, and it concerns setting up means to refute unwarranted attacks on the medical profession by press, radio, and TV. The resolved portions of the resolution read:

> "*Resolved*, that the Medical Society of the State of New York accept the responsibility of refuting the growing number of these false charges against the medical profession; and be it further
>
> "*Resolved*, that the Public Relations Committee of the Medical Society of the State of New York be empowered to select a panel composed of physicians in each district branch or county medical society to answer these unwarranted attacks against the medical profession."

The objectives of this resolution, it is felt by the reference committee, can be adequately achieved, if assumed advisable, through the Speakers Bureau. It is highly questionable whether some of our detractors should even be dignified by replying to them. The resolution is, therefore, disapproved.

I move the adoption of this portion of the report.

Dr. W. Walter Street, *Onondaga:* I second that.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Section 111 (See 50)

Report of Reference Committee on Report of Council, Part XI: Commendation of Dr. Ingegno's Stand on Free Choice of Physician in Medical Care Plans

Dr. Ezra A. Wolff, *Queens:* The third resolution was introduced by Dr. Abraham D. Segal, of Kings, and is entitled "Commendation of Dr. Ingegno's Stand on Free Choice of Physician in Medical Care Plans." This resolution is approved. We feel it requires no comment.

I move the adoption of this portion of the report.

Dr. Benjamin M. Bernstein, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Section 112

Report of Reference Committee on Report of Council, Part XI: Publications

Dr. Ezra A. Wolff, *Queens:* The improvements in format and content of the Journal during the past year are noted with approbation as being qualitative advances in keeping with a dynamic and forward-looking editorial policy. We are pleased to note that Operation Hegira, the second great trek of the Journal's offices in two years, was accomplished without incident. We are assured by the Publication Committee that it resulted, not from growing pains, but from a Garboesque desire to be alone, where the work of the editorial staff can go forward undisturbed by the hurly burly of other State Society business. We are told, too, that there is no prospect of further moving in the foreseeable future. The reference committee wishes them well in their new home.

Mr. Speaker, I move the approval of that portion of the report.

Dr. Elton R. Dickson, *Sixth District Branch:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Wolff: The proposal that the Journal have a full-time editor has our wholehearted support, for we feel that despite the ability and the zeal with which our editor and his committee and staff have addressed themselves to their task and the notable results they have achieved, they cannot hope to keep pace with the ever-widening scope of the JOURNAL's contents and the increasingly complex technics of production and circulation with which they must continue to compete. The benefits that will accrue from having a full-time editor should be manifest in the form of continuing improvement in scientific content and, it is to be hoped, added revenue from resulting increase in circulation and ultimately from advertising.

I move the adoption of this portion of the report, with the recommendations contained therein.

DR. ELTON R. DICKSON, *Broome:* I second it.

DR. THOMAS M. D'ANGELO, *Assistant Treasurer:* I would like to know, from the chairman of this reference committee, whether this makes it mandatory, or it is just a recommendation.

DR. WOLFF: This is a recommendation. We recommend the employment of a full-time editor.

DR. D'ANGELO: Thank you.

SPEAKER HOLCOMB: Is there further discussion?

DR. JOSEPH A. GEIS, *Councillor:* Mr. Speaker, can the chairman inform us as to what the cost will be?

DR. WOLFF: I was going to refer that question to the Publication Committee. We did get some ideas on costs, but I think they can be more fully explained by the Publication Committee, Dr. Masterson's committee.

SPEAKER HOLCOMB: The chair recognizes Dr. Masterson. Will you speak in answer to the full-time editor, particularly as to the cost?

DR. JOHN J. MASTERSON, *Trustee:* The cost of the full-time editor will only be determined after we have had a conference with Dr. Redway, our present editor. I am sure that we can come to terms that will be agreeable not only to Dr. Redway but that are within the means of the Society.

SPEAKER HOLCOMB: Thank you, Dr. Masterson! I might remind the House that Dr. Masterson is the chairman of the Publication Committee and has his pulse on all of its activities.

DR. WOLFF: May I proceed, sir?

SPEAKER HOLCOMB: Is there any further discussion on this portion of the report?

. . . The question was called, and the motion was put to a vote and was unanimously carried. . .

DR. WOLFF: The delay in publication of the *Directory*, occasioned primarily by inability to obtain paper, suggests the advisability of stockpiling enough paper for at least one issue of the *Directory* in advance so as to insure against recurrence of this source of dislocation in the production of such a widely used reference volume.

I move the adoption of this portion of the report.

DR. CLARENCE G. BANDLER, *New York:* I second the motion.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

DR. WOLFF: We wish finally, with respect to all who contribute to the functions of the Publication Committee, to extend an expression of admiration and congratulation for their accomplishments in the face of many adverse circumstances. We heartily second the recommendation that this House continue the Publication Committee as constituted, with Dr. George Kosmak as editor emeritus.

I so move.

DR. BEN A. BORKOW, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Section 113 (See 14)

Report of the Reference Committee on Report of Council, Part XI: Public Relations

DR. EZRA A. WOLFF, *Queens:* Public Relations: The stated objectives of the general public relations program, including (1) cultivation of better public attitude toward physicians and medical societies, (2) improving doctor-patient relationships, (3) stimulating effective cooperation between county societies and the State Society in development of public relations programs, and (4) promoting cooperation of physicians and county societies with voluntary prepayment health insurance plans are highly commendable. Evaluation of the effectiveness of the program, however, will undoubtedly require the passage of considerable time.

The development and publicizing of emergency services and mediation committees would seem, on the basis of experience elsewhere, to be practical and rewarding in the improvement of public confidence in the profession and should be diligently pursued.

The annual conference of county society public relations chairmen is a valuable means of transmitting effective public relations methods to the local county groups and should be continued.

Increased utilization of radio and television is in consonance with the times and offers a most unique opportunity for reaching large segments of the population and influencing them favorably. The maintenance of a press room likewise provides a practical channel for bringing our story to the public.

The pamphlet series on medical economic subjects seems to have been well received and probably should be expanded if the demand becomes manifest. The *Newsletter* continues to be a popular medium for the diffusion of news of topical interest.

I move the adoption of this portion of the report.

DR. SAMUEL Z. FREEDMAN, *New York:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

DR. WOLFF: Liaison with the Public Relations Department of the A.M.A., as outlined in the committee's report, is a most important function in maintaining a continuous interchange of ideas, to the mutual advantage of both State and national organizations. The many other activities of the Bureau, detailed in the report, give indication of the multiplicity and complexity of its functions. We feel certain that the further development and improvement of the Bureau over a period of years will ultimately be seen, in terms of improved understanding of the profession by the public, to be among the most important of the Society's functions. The program outlined for 1954 is an ambitious one, and its satisfactory prosecution is anticipated.

The work of the subcommittee on press, radio, and television cooperation, which has progressed toward a highly practical and concrete conclusion, will be of inestimable value in eliminating a lag almost invariably experienced in the past in the transmission of medical news to the public. We strongly recommend that it be consummated as soon as possible so that the guide to cooperation may be put to use in all of its phases. We would like to emphasize the admiration of the reference committee for the subcommittee's accomplishment in gaining the confidence of the news disseminating media, in itself an excellent piece of public relations.

Mr. Speaker, I move the adoption of this portion of the report.

Dr. Edwin A. Griffin, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Wolff: In conclusion, the chairman wishes to express his thanks to Drs. Masterson, Winslow, Larimore, Moore, Redway, Wagreich, Mr. Miebach, and others who helped to supply data upon which this report is based. My sincere appreciation, likewise, is extended to the members of the committee, all of whom attended faithfully and made valuable contributions to our mutual effort.

Mr. Chairman, I move the adoption of the report as a whole.

Dr. Clarence G. Bandler, *New York:* I second the motion.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Speaker Holcomb: Thank you, Dr. Wolff. That is a very excellent report, very nice.

Section 114

Report of Reference Committee on Report of Council, Part II: Maternal and Child Welfare

Dr. Waring Willis, *Westchester:* The Subcommittee on Maternal and Child Welfare under the able chairmanship of Dr. Charles A. Gordon has attempted the difficult task of reactivating the local regional chairmen in obstetrics and pediatrics, difficult because the area of endeavor has been so repeatedly covered by this same subcommittee and by the national societies of both specialties. In addition, difficulty was experienced by several regional chairmen in securing the data from neighboring counties with which they have little or no contact and in which there are no standing committees on these subjects. It would seem reasonable to urge each county society to set up a maternal and child welfare subcommittee so that the required information could be constantly accumulated.

The survey indicated that blood procurement, laboratory facilities, and other accommodations for obstetric and pediatric care were generally satisfactory throughout the State. The areas needing improvement were pointed up, and in one instance the information has warranted the State Department of Health's taking steps to establish a new county health department.

The stressing of the necessity for each county medical society to be a clearinghouse for information on child health agencies should be endorsed. In fact, it further highlights the reasonable concept that the county medical society has a duty to the public to initiate the formation of a county council of health agencies.

The exemplary cooperation between the State Health Department and our subcommittee is to be especially commended. Dr. Yankauer is to be particularly congratulated for his efforts on behalf of the people of this State. His offer to make available matched certificates of births and deaths on a current basis in each county or region will advance the study of neonatal mortality immeasurably.

All areas will benefit by the postgraduate courses for physicians on physical examinations and health problems of school children, but the program will especially aid the more rural communities.

The resolution to define the employment period for pregnant women will assist the Unemployment Commission of the State of New York with respect to payment of unemployment insurance and will relieve the pressure on the obstetrician.

The reference committee commends the Subcommittee on Maternal and Child Welfare for its diligence and recommends the acceptance of their report with thanks. I move the adoption of this recommendation of the reference committee.

Dr. R. Scott Howland, *Chemung:* I second the motion.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Willis: I wish to express my thanks to the members of my reference committee who cooperated so well in the writing of this report.

Speaker Holcomb: Thank you, Dr. Willis.

Section 115 (See 25)

Report of Reference Committee on Report of President

Dr. E. Dean Babbage, *Erie:* Careful perusal of President Eggston's report convinces us that he has endeavored to give a brief but thorough résumé of his tenure of office. Throughout the report he has carefully given thought to the matters in which this Society is interested, giving most emphasis to those matters which to him seemed most important. But more to the point, throughout his report runs a trend that this great Medical Society has to be realistic about financial matters. His suggestion that the agenda and various committees be streamlined, both to save manpower and expense, is pertinent.

He stresses the point that the Medical Society of the State of New York needs a permanent headquarters and pledges his continuing support to the special committee investigating this undertaking. A bond issue, voluntarily subscribed to by the members of the Society, should be tried. This reference committee recommends that this special committee of the Council be continued to study this problem and to render its report to the Council, the Board of Trustees, and the 1955 House of Delegates.

I move the adoption of this portion of the report.

Dr. Edwin A. Griffin, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Babbage: The Blood Banks Association of

New York State, Inc., occupies a great deal of the president's report. One of the most, if not the most, worth-while projects this Society has sponsored in a decade, this program has progressed tremendously this past year. Making blood and blood products available for all of the people of New York State is about to be realized.

This reference committee must commend the president for the tribute paid to the editor and the editorial board of the STATE MEDICAL JOURNAL. They also agree with him that the ever-recurring problem of the cost of the *Directory* again be studied by the Publication Committee. Over 10 per cent of the income of this Society is used up in this publication.

In discussing proposed Federal and/or State reinsurance of voluntary health plans, President Eggston urges that all medical policies be under the control of the medical profession and never allow a governmental or lay group to supervise them. We must certainly support this medical control, should Congress pass such legislation.

President Eggston's observations and conclusions on group practice are masterful and deserve reading and rereading by every physician in this State. He emphasizes the point that as long as the concept of free choice of physician is maintained, group practice is never condemned by medical societies.

In his report the president mentions again and again that specific matters be settled by the family physician. This is good. The recent trend to bolster the general practitioner is certainly progressing. The role of the family doctor in the practice of medicine must be jealously guarded.

This reference committee in conclusion must particularly laud the president for his two sentences in discussing malpractice: "It is my opinion that many of these malpractice claims should go to trial. Let it inconvenience the public and the doctors, regardless of the time and effort needed or where the chips fall, so that the malcontents about the principles that have been followed and the cost of medical defense insurance can be set straight."

I move the adoption of this portion of the report.

DR. WILLIAM E. PELOW, *Onondaga:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 116 (See 26)

Report of Reference Committee on Report of President-Elect

DR. E. DEAN BABBAGE, *Erie:* President-Elect Mellen's address has been reviewed, and this committee approves it. In addition to many other matters, he stresses the importance of economy and care in the use of this Medical Society's finances.

I move the adoption of this portion of the report.

DR. BENJAMIN M. BERNSTEIN, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

DR. BABBAGE: I move the adoption of the report of the reference committee as a whole.

DR. HENRY I. FINEBERG, *Queens:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

DR. BABBAGE: At this time I would like to thank personally the other members of the committee, Dr. Benjamin H. Bernstein, Dr. William E. Pelow, and Dr. Henry I. Fineberg. Dr. John L. Edwards was unavoidably called out of town and could not participate.

SPEAKER HOLCOMB: Thank you, Dr. Babbage.

Section 117 (See 51)

Report of Reference Committee on Miscellaneous Business "A": Representation of Nonuniversity-Affiliated Hospitals on American Medical Association Council on Medical Education

DR. GEORGE J. LAWRENCE, JR., *Queens:* Your reference committee considered the resolution introduced by Dr. Abraham D. Segal, of Kings County, concerning representation of nonuniversity-affiliated hospitals on American Medical Association Council on Medical Education. The committee wishes to call to the attention of the House that at our meeting in 1953 this same resolution was introduced on behalf of New York County and acted upon favorably by the House. This House, in fact, instructed its delegates to recommend to the American Medical Association that a special committee be appointed by that body to conduct a "prompt re-evaluation of the intern problem," such committee to be "composed of physicians, each of whom at least shall not be connected with medical schools or their affiliated hospitals and who shall be in the active practice of medicine."

In view of the fact that this recommendation was not acted upon favorably by the House of Delegates of the American Medical Association, your committee strongly approves this resolution with minor changes in its wording and with an added "resolved," instructing that copies of the resolution be sent to all constituent associations of the American Medical Association before the next meeting of its House of Delegates. Therefore, the resolution as approved by your committee reads as follows:

> "WHEREAS, nonuniversity-affiliated hospitals render care to approximately 80 per cent of the patients in the United States, the university-connected hospitals caring for only about 20 per cent; and
>
> "WHEREAS, in the past there has been little, if any, representation of the nonuniversity-affiliated hospitals on the Council on Medical Education of the American Medical Association or on its advisory committees; and
>
> "WHEREAS, there is a serious problem of interns, that involves all hospitals; and
>
> "WHEREAS, this lack of representation of the vast majority of hospitals does not allow them to discuss their problems on an equal basis and is unfair and does not conform to medicine's interest in the public's health and welfare, therefore be it
>
> "*Resolved*, that this House of Delegates go on record as approving that there be equal represen-

tation of duly appointed and/or elected members to the Council on Medical Education of the American Medical Association or its advisory committees of both the university-affiliated and nonuniversity-affiliated hospitals where problems of interns and residency are involved; and be it further

"*Resolved,* that the delegates from the Medical Society of the State of New York to the House of Delegates of the American Medical Association be instructed to introduce a similar resolution in the House of Delegates of the American Medical Association at its annual meeting, June, 1954; and be it further

"*Resolved,* that a copy of this resolution be sent promptly to each constituent association of the American Medical Association to be considered by their delegates to the American Medical Association."

Mr. Speaker, I move the adoption of this part of my report.

Dr. Edwin A. Griffin, *Kings:* I second it.

Speaker Holcomb: Does anyone wish to discuss this portion of the resolution?

Dr. James R. Reuling, *Trustee:* For the information of the House, and to correct what may be a misstatement of fact, there is a special committee of the House of Delegates of the American Medical Association studying this matter right now. It happens that this interim committee that is studying it has one man from New York State from this Medical Society as a member of that special committee that is studying that intern problem. I am not speaking against the adoption of this. I am heartily in favor of it, but I simply wanted to correct what might be a misinterpretation that nothing was being done about it.

Speaker Holcomb: Thank you, Dr. Reuling.

Dr. William B. Rawls, *New York:* I happened to have introduced this resolution last year, not from New York County, I introduced it as an individual last year, but it did pass this House.

I heard the discussion on this motion before the house of delegates of the American Medical Association, and I heard certain individuals get up and say, "Let us not get emotional." Now we are not all getting emotional. They said, "We should not pass it," but when 80 per cent of the people ask to be represented, I don't think that is emotional. I think that this House—and I would like to see this House go on record—should unanimously favor this resolution because I think the time has come when we must have some action. Most of you men here are on hospital staffs where you have troubles; at least I am, and I think most of you are. I would like to urge the unanimous passage of this resolution to be sent to the house of delegates of the American Medical Association. It will do no harm to reintroduce it once again. I know Dr. Reuling agrees on that.

Speaker Holcomb: Thank you, Dr. Rawls.

Is there any further comment or suggestions concerning the resolution?

. . . The question was called, and the motion was put to a vote and was unanimously carried. . .

Speaker Holcomb: Let the record show that it was carried unanimously.

Section 118 (See 54)

Report of Reference Committee on Miscellaneous Business "A": Change in American Medical Association Membership Procedures

Dr. George J. Lawrence, Jr., *Queens:* Your committee has studied the resolution introduced by Dr. Benjamin M. Bernstein, Kings County, concerning changes in American Medical Association membership procedures. (*See Section 54*)

Because your committee is of the opinion that each county society should have the right to decide for itself as to how it shall collect dues, we recommend disapproval of this resolution.

I move the adoption of this portion of the report.

Speaker Holcomb: Is there a second to the motion to adopt the committee's report, which carries with it disapproval of the resolution?

Dr. Leo E. Gibson, *Councillor:* I second that.

Dr. Benjamin M. Bernstein, *Kings:* You are perfectly willing to accept the edict that A.M.A. representation of this House depends not upon the number of men in this House or the number of men from the State who are members of the Medical Society of the State of New York but upon the number of members of any constituent society who wish to become, who feel it is their duty to become, members of the American Medical Association. In 1950–1951 when the A.M.A. first put on its assessment, and then declared it as dues, they made a mistake. I think many of them realized that they made a mistake, by the imposition of a separate dues by a more or less autonomous body, if you will, since there is no integration of dues, and when our State Society is formed by all of the county societies more by integration of dues than by any other method. I say to you unless you have an integration of dues which goes from county, to state, to American Medical Association, you are missing the point of a national organization when you make it not compulsory. I have no desire to make it compulsory unless you decide or find some means whereby the American Medical Association decides that one single dues payment from a constituent through the state, and by it to the A.M.A., constitutes membership in all of the three. I venture to predict to you, before many years are over you will adopt this method because you will find the other is cumbersome, the other is inequitable. If you adopt it now, I want to repeat just this, you are accepting the edict of the A.M.A. depending on a false premise.

Speaker Holcomb: Thank you, Dr. Bernstein.

Dr. Reuling wishes to speak on this resolution.

Dr. James R. Reuling, *Trustee:* Mr. Speaker, I hope you don't get tired of my coming up here once in a while, but I just want to call the attention of the House to what in my opinion is very bad verbiage first in this resolution. I am not speaking for or against its adoption. It says:

> "Whereas, the American Medical Association is composed of a union of state medical societies."

Gentlemen, our record should never show that the American Medical Association is a federation; it is a federacy of its constituent associations. I bring that up only because the Supreme Court has found that we are a trade union. If we have something like this on our records, before long some day we are going to find that we said something that is going to tie something around our necks. Thank you.

Speaker Holcomb: Is there any further discussion?

Dr. Samuel Z. Freedman, *New York:* It is very difficult to discuss this resolution, but it has two parts. I would like to address myself to the first part, and before I do so I would like to ask Dr. Reuling a question. Is the Medical Society of the State of New York a federation of component units?

Dr. Reuling: You might ask the secretary. I have not a copy of our Constitution and Bylaws here.

Speaker Holcomb: Dr. Anderton will read from the Constitution and Bylaws.

Secretary Anderton: Reading:

> "Article I—Name and Purpose
>
> "The name and title of the Society shall be the Medical Society of the State of New York. The purposes of the Society shall be to federate into one organization the medical profession of the State of New York; to extend medical knowledge and advance the science and art of medicine; to promote the betterment of public health; and to enlighten and direct public opinion in regard to the problems of medicine and health for the best interests of the people of the State."

I believe that we are a federation.

Dr. Freedman: Thank you!

The point I want to make is that this House is quite unfair in the way it apportions delegates to the different county societies. I might call to your attention, for instance, that, with a minor modification, representation in this House depends upon political units of the State; in other words, depending upon the political subdivisions into senatorial districts, then into assembly districts, depends the representation here with one exception, in that not so long ago the County of New York, which has the largest number of dues-paying physicians, had found itself, because of the political subdivisions, in the very untenable position that it had but 16 delegates to the House of Delegates, whereas our neighbors across the river, Kings County, had 25 delegates. It took quite a good deal of persuasion on the part of Dr. Curphey and myself many years ago to have the County of New York have at least, but certainly no more, delegates than the County of Kings, so that in that respect this House cannot very well do anything talking about representation to the House of Delegates without bearing in mind that it is certainly not democratic in its representation.

I certainly look with displeasure upon the adoption of the rule, as I understand it, by the House of Delegates of the American Medical Association, that they will only give representation to the state societies depending upon dues-paying members. Before I am misunderstood, I agree that physicians should be members of the American Medical Association, but I don't believe that the American Medical Association can very well continue to say that it represents American medicine if, for instance, in the County of New York, where it so happens, due to the makeup of this metropolitan city and the concentration in our county, particularly of individuals who, for one reason or another, refuse to pay A.M.A. dues but still are members of our county society and of course of the State Society, that this County of New York, for instance, shall be deprived of proper representation in the American Medical Association, and then ask us who have these contests every year to go out and support the American Medical Association and say that they speak for us. I think it comes with poor grace from the American Medical Association to put representation entirely on the matter of, shall we say, the material aspects.

I also would like to talk about having one bill for all the dues. As treasurer of the County of New York, we find ourselves again in a very unfavorable predicament because bills are sent out, and people say, "Well, the dues are $80." They even forget that $25 of the $80 goes to the State Society, and $25 is expected to go to the American Medical Association by separate bill, and only $30 this year goes to us.

I would be opposed, definitely opposed, to having the county society send one bill. If the American Medical Association sees fit not to give representation to members of the State Society according to the numbers of its members and wants to hide behind the cloak of semantics, and speak of a federation—and incidentally, I was hoping that we would not be afraid to talk as a union, because the unions are to be emulated; perhaps if we emulated them we would not argue so much about what we should get from the public—if we are to hide behind that, I don't think we should collect the dues for the American Medical Association.

Speaker Holcomb: Is there any further comment before the question is called?

Dr. William B. Rawls, *New York:* Mr. Speaker, not discussion, only a question, and that is to ask Dr. Lawrence please to reread the resolution. I know several men back here have said they are not quite clear because there are two parts.

Speaker Holcomb: I shall ask Dr. Lawrence to reread the resolution.

Dr. Lawrence: There are two pertinent resolveds, the first of which is:

> "*Resolved*, that the Medical Society of the State of New York protest the ruling now in effect under which representation is based on the number of members in the American Medical Association from each state and urge a change in this procedure, which now penalizes the state as a whole when it fails to persuade all of its members to pay dues directly to the American Medical Association."

Dr. Rawls: What does the reference committee feel about that?

Speaker Holcomb: They disapprove of the resolution as a whole as worded. The report calls for disapproval of the resolution as it is worded. Dr. Lawrence will read the second part.

Dr. Bernstein: Point of order, will it be permissible to break the resolution into two parts now?

Speaker Holcomb: The resolution has been presented as it is. Your reference committee is reporting on its action on the entire resolution.

Dr. Bernstein: I understand that, but will it be possible to break it into two now?

Speaker Holcomb: I don't think you can do that. I don't feel that this House can break a resolution in two after it has been acted upon by the reference committee.

Do you move to amend?

Dr. Bernstein: Could I offer a substitute?

Speaker Holcomb: You can move to amend to break this into two parts. Dr. Bernstein, will you come to the rostrum and state your amendment, if you wish to break the resolution into two parts?

Dr. Bernstein: With your permission, then, I should like to amend the resolution, so that the first portion read by Dr. Lawrence a minute ago shall constitute part one, and therefore offer that part as an amendment to the report, an amendment to the resolution.

Dr. Rawls: Mr. Speaker—a point of order—

Dr. Bernstein: I asked a question: Is it permissible to divide it into two parts? Somebody said yes, and somebody said no.

Speaker Holcomb: Point of order, Dr. Rawls is recognized. Will Dr. Rawls state his opinion on this matter?

Dr. Rawls: I think it is perfectly permissible for the chairman of this committee to move to consider this portion of the resolution without including the second part, and then to include the second part in another motion, and then to consider the resolution as a whole.

Voices: How about the whereases?

Dr. Rawls: I don't think the whereases come into it. You only vote on the resolveds.

Speaker Holcomb: Dr. Lawrence is recognized.

Dr. Lawrence: The chairman of the committee does not feel he can speak for the committee except to disapprove the resolution as we have reported it. I think if it is the action of the House, the House has the right to take any action it pleases, but as chairman of the committee, I do not intend to propose any changes in the report.

Dr. Joseph A. Geis, *Councillor:* I wanted to talk on the whole resolution and asked for the floor before this other thing came up. Mr. Speaker, this resolution I believe has only one action that we can take, and that is the action that is suggested by this committee. This group today, this morning, on my resolution, my amendment to the Bylaws, showed that they did not have guts enough to stand up as one group and say that medicine in the United States is married in one place. Under those circumstances we have no right to find fault with the American Medical Association if they don't want to recognize our attitude of yes and no and don't take the attitude that we are either in or we are out. I definitely would like to see this resolution go through as reported by the committee.

Dr. Leo F. Schiff, *Trustee:* Mr. Speaker and members of the House, there is no question, if you would listen to the entire resolution, that it is very poorly worded. My thought was that the House was going to reject it, as the committee did, partly for that reason and partly for reasons of common sense.

Let us take the first part of the thing. Certainly we must feel that the American Medical Association can logically apportion delegates among the states in proportion to the number of A.M.A. members in those various states. That is what we try to do in our State, in spite of this assembly district thing. That was done because there is a provision in the Bylaws whereby the number of delegates from each county society is in direct proportion to the number of members in the Society. I think that is a commonly accepted principle that the number of delegates of any organization from various constituents are somewhat relative to the number of members. Therefore, this first part or this first resolution of the entire thing does not make sense. It would be unreasonable for us to vote that.

As to the second part, the inclusion of dues, county, state, and A.M.A., we have had considerable discussion on that in other places than just this resolution. I think it is our feeling that that is going to come some day, but with our minds somewhat at different angles on this thing at the present, it would seem to me that this is foolish and almost useless for us to waste a great deal of time on that discussion, and rather let a little more time elapse in which thought can be given to working this thing out. I believe the time will come without question when A.M.A. down to the county society will be one organization working together as well and as powerfully as does our big Empire State. I think the smartest thing we can do is to dispose of this entire resolution in accordance with the wishes or the recommendation of the reference committee and get on with something more important.

Speaker Holcomb: Thank you, Dr. Schiff.

Dr. Bernstein is recognized.

Dr. Thomas F. McCarthy, *Bronx:* Point of order, I think this is the third time Dr. Bernstein got up to discuss this thing. We have a rule that he can only talk once for five minutes.

Speaker Holcomb: He wishes to make a motion to recommit. I will recognize Dr. Bernstein.

Dr. Bernstein: I have been accused of using poor rhetoric, bad grammar, and worse judgment. In view of what has been said, I wish to move to recommit the entire resolution to this reference committee for report tomorrow morning.

Speaker Holcomb: Is there a second to that motion?

Dr. Edwin A. Griffin, *Kings:* I will second it.

. . . There being no discussion, the motion to recommit was put to a vote and was lost . . .

Speaker Holcomb: The motion is lost.

Dr. McCarthy: I move the question.

Dr. Rawls: Mr. Chairman—

Speaker Holcomb: The motion to recommit has been lost.

Dr. Rawls: Gentlemen, can we vote on this separately? This House has a right to do that. Since the chairman does not wish to take the responsibility of voting on this in two separate parts, this House has the right to move and vote on this as they please. I move that we consider this in two parts, part 1 and part 2, and that will settle it instead of voting on both at the same time.

Dr. Arthur P. Kane, *Kings:* I second that.

Dr. Geis: Point of order, I think Dr. Rawls is out of order. You have a motion before the House by the chairman to adopt his recommendation.

Speaker Holcomb: The motion to recommit has been lost.

Dr. Geis: I am talking about the motion of the reference committee.

Speaker Holcomb: The motion to accept Dr. Lawrence's report, which carries with it disapproval of the resolution, that is before the house.

. . . There were calls for the question. . .

Speaker Holcomb: I think Dr. Rawls has offered this as an amendment. Is that true?

Dr. Rawls: Yes.

Speaker Holcomb: That this be voted upon in two sections. I think that that is acceptable. Is there any discussion on the amendment that this be voted on in two sections? Is there any further debate on the amendment?

. . . There were calls for the question. . .

. . . The question on the amendment was put to a vote and was lost. . .

Voices: Call the previous question.

Speaker Holcomb: The amendment is lost.

We are now voting on the original question which carries disapproval of the reference committee's report on this resolution.

Dr. Lawrence: No, the reference committee disapproves the resolution, but the motion is to approve our report which carries with it disapproval of the resolution.

Speaker Holcomb: The motion is to approve the reference committee's report, which carries disapproval of the resolution. Is there any discussion on that motion?

Voices: Question! Question!

. . . The question was put to a vote and was carried. . .

Speaker Holcomb: The motion is adopted.

Dr. Lawrence: I move approval of the committee's report as a whole.

Dr. John F. Rogers, *Ninth District Branch:* I second that.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Lawrence: Mr. Speaker, I would like to thank the members of my committee who helped in the preparation of this report: Dr. John F. Rogers and Dr. Samuel A. Garlan.

Section 119

Report of Special Prize Essays Committee

Speaker Holcomb: At this time I should like to ask Dr. Anderton, who has had very little to say so far, to report to the House of Delegates on the Special Prize Essays Committee.

Secretary Anderton: Mr. Speaker, reporting for the Special Prize Essays Committee:

"*To the House of Delegates, Gentlemen:*

"We do not believe that any of the papers this year are deserving of a prize.

"We have had special opinions expressed on a number of the papers when we were not familiar with the subject.

Respectfully submitted,
David Kimball Miller
Leo F. Simpson
R. Townley Paton, *Chairman*"

I move approval of the report, with thanks.

Dr. Edwin A. Griffin, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Section 120

Announcement

Speaker Holcomb: The chair wishes to make an announcement at this time that the exhibits in the matter of the appeal of Doctor Landess from the Board of Censors of Queens County Medical Society can be viewed in the Headquarters Room. None of these exhibits may be removed, and they must be viewed in that room, if any member so qualified wishes to do so.

Our next order of business is the presentation of the reference committee's report, Part X, Workmen's Compensation, by Dr. Harold W. Grosselfinger, chairman.

Section 121 (See 18)

Report of Reference Committee on Report of Council, Part X: Workmen's Compensation

Dr. Harold W. Grosselfinger, *Rockland:* Your reference committee is in accord with the spirit and recommendations of the report of the Committee on Workmen's Compensation, Part X, and its supplementary report, and commends the Committee on Workmen's Compensation, its chairman, Dr. Gerald D. Dorman, and the director of the Workmen's Compensation Bureau, Dr. David J. Kaliski, for their insight into the spirit and letter of the Workmen's Compensation Law.

The Workmen's Compensation Bureau has been in operation for almost two decades and has been an important arm in the administration of the Workmen's Compensation Law as it concerns the medical profession in the State. We wish to commend the Medical Society of the State of New York for supporting the Bureau at considerable expense. The Bureau looks out for the interest of the medical profession and is always at the service, not only of the county medical societies throughout the State but also of physicians and other interested parties who come in contact with the medical profession in the carrying out of the Workmen's Compensation Law.

We wish to emphasize a few of the statements made in the annual report regarding the importance of the medical profession in workmen's compensation cases. In treating injured workers, in advising patients about their claims, in reporting their accidents, in testifying before referees of the Workmen's Compensation Board, and in the contacts with employers and insurance carriers, the practicing physician is an important factor in making for a successful and economical administration of the

Workmen's Compensation Law. We approve the advice of the committee in urging physicians to familiarize themselves with their responsibilities under the law as well as with the benefits they derive from this legislation.

We believe the medical profession should take a statesmanlike attitude toward the future of workmen's compensation in this State. We should try to foresee future eventualities in this important social legislation. We should attempt to safeguard those privileges which have been given to us and which we believe have resulted in a very high quality of medical care for the injured workmen in this State. We refer particularly to the "free choice" principle, which entitles an injured workman to select his own physician, be he either a general practitioner or a specialist, the only limitation being that the physician who is selected shall be competent and qualified under the Workmen's Compensation Law to treat the particular injury the patient has suffered. We believe that physicians should realize that this is the only state which provides full free choice of the physician. To safeguard this important social advantage, the physicians should so conduct themselves that their patients receive the best possible medical care and see to it that the patient is treated as a private patient. The physician's responsibility towards all patients should be identical, and the fact that a third party pays the bill should not be an inducement to unethical practice or overtreatment.

It should be borne in mind, as the report states, that under our present system of free choice and unlimited medical care, a tremendous responsibility is placed on the individual physician, whether he be a general practitioner or a specialist. Similarly, the medical societies have been clothed with definite disciplinary and regulatory responsibilities. The societies should not neglect these responsibilities.

Your reference committee points out that the Committee on Workmen's Compensation and the Bureau have been cognizant of the fact that the costs of workmen's compensation administration should be kept within reasonable limits in accordance with the benefits accruing to injured workers in this State under the free choice principle. Procedures have been shown by which this cost of administration might be reduced without decreasing in any way the *quality* of medical care or the many benefits accruing to the injured worker as a result of free choice.

The present Moreland Act commissioner, Mr. Archie O. Dawson, is now engaged in studying and making recommendations to bring about improvements in the administration of the Workmen's Compensation Law to the end that costs but not benefits may, if possible, be reduced. We commend the commissioner and his staff for their constructive work. We are also satisfied that the Moreland Act commissioner has received and will continue to receive the full cooperation of the Medical Society of the State of New York and its Workmen's Compensation Bureau in its efforts to do a constructive job of investigating workmen's compensation administration.

We advise members to read the annual report of the Council Committee on Workmen's Compensation with special reference to the setting up of panels of experts in the various specialties to assist the referees in the determination of causal relationship, degree of disability, necessity for medical treatment, type of treatment necessary, as well as in the evaluation of medical testimony.

We believe with the committee that the cost of administration of the Workmen's Compensation Law could be materially reduced if the carriers had medical departments separated from their claims departments.

We wish especially to support the committee in calling attention to the need for legislation to restore to the four New York counties having a population of one million or more the functions of the compensation committee. They possessed these functions prior to 1944, and they are presently functions of all other counties in this State. We agree with the committee that these functions can be better and more efficiently carried out in the four New York counties by the county medical societies than by the Medical Practice Committee and at no cost to the State.

We also approve the recommendations of the committee for new legislation with respect to the collection of medical bills, the arbitration of disputed items, and for the arbitration of medical bills in the county in which the medical service was rendered rather than in the county in which the claimant resides.

Your reference committee strongly approves the sentiments of the Workmen's Compensation Committee condemning the treatment of compensation claimants by hospitals. A hospital is not entitled to operate a medical bureau and should not participate in the treatment of workmen's compensation cases. Fees for such treatment should accrue only to physicians authorized to treat workmen's compensation claimants and not to the hospitals by indirection. Compensation claimants should be considered as semiprivate patients, not clinic or charity cases, and should have all the privileges of semiprivate patients, including free choice of physician. We also would like to comment on the need for assuring workmen's compensation patients semiprivate accommodation status in voluntary hospitals and their removal from municipal hospitals at the earliest possible moment when the emergency has ceased to exist, in the opinion of the attending physician. We agree that the hospitals, the medical societies, and their compensation committees should be vigilant in seeing that both the letter and the spirit of the Workmen's Compensation Law, covering treatment of compensation claimants, are carried out. The Workmen's Compensation Law specifically excludes hospitals from rendering medical care. The intent of the law is that only a physician can render medical care and be paid therefor. We recommend that the law be enforced. Where the county medical societies have jurisdiction, they should not fail to act. Should the hospitals fail to cooperate, they should be held accountable under proper legislation.

We wish to commend the chairman of the Workmen's Compensation Board for recently increasing fees for general practitioners for court testimony from $10 to $15. We also wish to acknowledge payment of a new fee of $10 for a report to be made within eight to twelve weeks after an operation on a unilateral or bilateral hernia by the surgeon who operated. We urge continued efforts to increase fee schedules, especially as they refer to the general practitioner.

We approve certain additional recommendations made by the committee, which are:

1. Copies of reports of State medical examiners, which are now sent only to the claimant, should also be sent to the reporting physician or specialist.
2. Copies of reports of impartial specialists assigned by referees or the Workmen's Compensation Board should also be sent to the patient's doctor or specialist.
3. Consideration should be given to acceptance by physician of subpoenas by mail if sent at least two to four weeks in advance of a hearing. We urge doctors to cooperate in appearing at hearing when requested to do so.
4. The chairman of the Workmen's Compensation Board should reconsider the validity and legality of Rule Number 19—"Hospitals may bill for physiotherapeutic, anesthesia, and pathologic services when rendered by or under the supervision of salaried physicians on the staff." The amendment of May 20, 1947, applies to x-ray services in voluntary hospitals, not to the other services in Rule Number 19.
5. The chairman of the Workmen's Compensation Board should grant M-17 rating in thoracic surgery.
6. The chairman of the Workmen's Compensation Board should give consideration to editing, clarifying, and, where necessary, adding new procedures to the fee schedule.

We approve the comments of the committee on the question of rehabilitation. This is a broad field which involves many phases other than workmen's compensation claimants, and we would suggest that the Council appoint a committee for further investigation of this broad subject.

We approve the recommendations of the committee with respect to the payment of medical fees in third party actions. Where a third party action is successful and an award of settlement is such as to compensate fully the employer or insurance carrier for all outlay leaving a surplus, the physician should not be bound by workmen's compensation minimum fees.

It would take your reference committee too far afield to comment on every aspect of the committee report. It is replete with information of value to every physician and specialist, and we recommend its careful study.

We support the committee in its recommendation that the Medical Appeals unit, now a part of the Workmen's Compensation Board, should have true appellate power. Its decisions should, as they were prior to 1944, be final and binding on the chairman of the Workmen's Compensation Board.

We also feel that physicians would benefit by the reading of the brief on the rule of interns and residents under the Workmen's Compensation Law as submitted in the supplementary report.

We again thank the chairman of the committee, the director of the Bureau, and the clerical and secretarial staff for their outstanding contribution to the welfare of the medical profession and of the Society.

I move the report be approved.

Dr. A. Wilbur Duryee, *New York:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Grosselfinger: I would like to thank the members of the committee for their efforts in preparing this report: Dr. A. Wilbur Duryee, Dr. John L. Norris, Dr. Leonard J. Flanagan, and Dr. James A. Lynch.

Speaker Holcomb: Thank you, Dr. Grosselfinger.

At this time, members of the House, I will declare a ten-minute recess, after which time Dr. Aaron's committee will take up the little matter that we struggled with this morning. I think now we should have a ten-minute recess and reconvene at 4:40 P.M.

. . . Recess . . .

Vice-Speaker Williams: Is there a quorum present so we can proceed with Dr. Aaron's committee's report?

Dr. Charles F. McCarty, *Kings:* There is a quorum present.

Section 122 (See 78)

Report of Special Committee on Constitution and Bylaws

Dr. A. H. Aaron, *Erie:* Mr. Speaker and members of the House, we shall with your kind permission read the entire material that is new in regard to the Judicial Council, and then we shall bring up each portion of it for your action. We do that to make it easier perhaps for all of us to see where we are at the moment.

Constitution, Article VII, delete the present article which reads, "Board of Censors—There shall be a Board of Censors consisting of the president and secretary of the Society and the president of each district branch as provided in the Bylaws" and substitute therefor:

> "Judicial Council
>
> "There shall be a Judicial Council consisting of five members. The president, secretary, and legal counsel of the Society shall sit with the Judicial Council with voice but without vote."

This is in regard now to matter which appears in the Bylaws. Chapter II, Section V, which reads, "The House of Delegates shall hear and finally determine all appeals taken from decisions of the Board of Censors," shall be deleted.

Change the Bylaws, Chapter II, Section 7, Number 10, to delete "Report of the Board of Censors," and substitute "Report of the Judicial Council."

Bylaws, Chapter VI, delete the entire chapter as at present written and substitute the following:

"JUDICIAL COUNCIL

"SECTION 1. "One member shall be appointed by the president each year for a term of five years with the advice and consent of the Council. No member shall serve for more than two consecutive terms, but a member elected to serve an unexpired term shall not be regarded as having served a term unless he has served three or more years. In the event of a vacancy, a member shall be appointed for the unexpired term with the advice and consent of the Council.

"Immediately at the close of the annual meeting of the Medical Society of the State of New York, the Judicial Council shall organize and elect their own chairman.

"The secretary of the State Society shall be the secretary of the Judicial Council.

"The Judicial Council shall meet upon the call of the chairman, and the chairman shall submit an annual report of the Judicial Council to the House of Delegates.

"In the year 1954 the president shall appoint one member of the Judicial Council for a five-year term, subject to the approval of the Council.

"In the year 1954 the House of Delegates shall elect four members to the Judicial Council: one for a period of four years, one for a period of three years, one for a period of two years, and one for a period of one year. Thereafter, the president shall appoint one member as provided for."

That brings us up to the first part, and I shall read one other that is not in line with that. I shall ask you to turn to page 1059, and I shall read from the bottom of the page, Section 6:

"The Judicial Council shall consider the appeal on the data so submitted to it, and may affirm, modify, or reverse the decisions so appealed from, by a majority vote of the members present and voting. If, in its opinion, the taking of further evidence is advisable, the Judicial Council may summon witnesses and proceed to take such evidence in such manner as it may deem proper and render its decision by a majority vote of those present and voting, which decision shall be final and binding."

At this point we insert the following sentence:

"except that a member of the American Medical Association shall have the right of appeal to the Judicial Council of the American Medical Association."

All of the provisions of the changes in the Constitution and Bylaws shall become operative at the close of the present session of the House of Delegates.

There may be other places in the Constitution and Bylaws where the term "Board of Censors" is used, and the secretary is instructed to make editorial change, substituting the words "Judicial Council" for "Board of Censors" where it may appear.

Mr. Speaker, I recommend that "there shall be a Judicial Council consisting of five members. The secretary, president, and legal counsel of the Society shall sit with the Judicial Council with voice but without vote," and that we delete the present article which reads, "Board of Censors—There shall be a Board of Censors consisting of the president and secretary of the Society and the president of each district branch as provided in the Bylaws."

I recommend the approval of this portion of our report.

DR. CLARENCE G. BANDLER, *New York:* I second that.

VICE-SPEAKER WILLIAMS: Is there discussion?

. . . The question was called, and the motion was put to a vote and was unanimously carried . . .

DR. AARON: The committee recommends that Chapter II, Section 5, which reads, "The House of Delegates shall hear and finally determine all appeals taken from decisions of the Board of Censors," shall be deleted.

I move the adoption of this portion of our report.

DR. THOMAS O. GAMBLE, *Albany:* I second it.

VICE-SPEAKER WILLIAMS: Is there discussion?

DR. ABRAHAM D. SEGAL, *Kings:* Point of order, on that resolution before that Dr. Aaron presented, did that preclude any further motions before this body with regard to the Judicial Council? I have this point in mind: I would like to amend this, if possible, somewhere along the line that no member of the Judicial Council shall hold office or be a member of the Council.

DR. AARON: Am I correct in interpreting it, that no man can hold two offices in the State Society?

DR. SEGAL: I don't know. I would like to make that amendment, that a member of the Judicial Council shall not be a member of the Council automatically, that is an elected member, at the same time he is a member of the Judicial Council.

DR. AARON: I should like to ask Dr. Anderton if I am correct about the interpretation that no man can hold two positions in the State Society?

SECRETARY ANDERTON: I do not believe that is anywhere in the Constitution and Bylaws. I would be glad to look it up, but I don't think so.

DR. SEGAL: I have this in mind—may I continue?

VICE-SPEAKER WILLIAMS: I wish you would take a loudspeaker so all the members of the House can hear you.

DR. SEGAL: The reason I am asking whether an individual may hold two positions and be a member of the Judicial Council as well as the Council, I am sure you will realize from Dr. Aaron's report that if a man should resign from the Judicial Council, and it comes before the Council of the State Society for the reappointment of a man to this Judicial Council, they can appoint somebody from their own Council, and in that way perpetuate themselves more or less for a given period of time. Therefore, I feel in the interests of everybody concerned that a man who is on the Judicial Council as a member should not be a member of the Council or hold any other office in the State Society. I move that as an amendment, if I may at this time.

VICE-SPEAKER WILLIAMS: May I ask, so we don't get bogged down, Dr. Aaron, do you feel in the course of your report, in the portions that you have in mind for presentation, this will fit in better some other place than right here?

DR. AARON: No, we have no other place. We could fit it in I suppose, but I want to call this to your attention: Mr. Martin, our counsel, has just informed me that we should emphasize strongly that no man should be appointed by the Council to the advisory council to act in this capacity, that we must have separation of the two types and character of effort. It would be an impossible situation otherwise and should not be allowed to occur. Do I word it correctly, Mr. Martin.

Mr. William F. Martin: We want this simple. Whoever is appointed to the Judicial Council, it would be that the men appointed to the Judicial Council served in no other capacity. The doctor's suggestion is a sound one. We will try to work out the detail of putting that in so these men will have one, and only one, function in the State Society, sitting as a member of the Judicial Council.

Vice-Speaker Williams: Where do you want to put that?

Dr. Aaron: We can put that in right at this point, sir, if you so desire.

Dr. James R. Reuling, *Trustee:* That is not the place for it.

Vice-Speaker Williams: Dr. Gamble, Dr. Aaron wants to consult with you.

Dr. Leo F. Schiff, *Trustee:* I heartily concur in the suggestion made by Dr. Segal. To me it seems that the place for it is in the article that we just passed in the Constitution, and if it were permissible to reopen that, that phrase could be added very quickly and close that issue right then and there.

Vice-Speaker Williams: Do I hear a move to reconsider?

Dr. Segal: I will make that motion, having voted in favor of the original motion.

Dr. Ben A. Borkow, *Kings:* I second it.

. . . There were calls for the question, and the motion was put to a vote and was unanimously carried . . .

Vice-Speaker Williams: The previous motion is now open for reconsideration.

Dr. Aaron: Our committee has met, and with the advice of the counsel of the State Society, we can add that. I wish that the stenotypist would get this. I may not word it very well: "A member of the Judicial Council shall hold no other appointive or elective position in the State Society while he serves as a member of the Judicial Council."

Vice-Speaker Williams: And your motion is?

Dr. Aaron: I move this sentence apply to this portion of our report: All of the provisions of the changes in the Constitution and Bylaws shall become operative at the close of the present session of the House of Delegates. There may be other places in the Constitution and Bylaws where the term "Board of Censors" is used, and the secretary is instructed to make editorial change substituting the words "Judicial Council" for "Board of Censors" where it may appear. No member of the Judicial Council shall hold an appointive or elective position in the Medical Society of the State of New York while he is in office on this Council.

Vice-Speaker Williams: That has been moved. Is there a second?

Dr. Frederick A. Wurzbach, Jr., *Bronx:* Point of information, does this include the elected delegates to the American Medical Association?

Vice-Speaker Williams: The question is does this include the elected delegates from the State Society to the American Medical Association? Is such an elected delegate an elected officer of this State Society?

Dr. Aaron: May I ask Mr. Martin that?

Mr. Martin: Our intention is to have the members of this Judicial Council hold no other position of any kind by election or appointment but this position while they are in office, and to work out the insertion of appropriate language therefor in this section.

Vice-Speaker Williams: In answer to Dr. Wurzbach's question, the secretary hands me the Constitution and Bylaws, Article V, and it is entitled "Officers," and it reads:

> "The officers of the Society shall be a president, a president-elect, a vice-president, a secretary, an assistant secretary, a treasurer, an assistant treasurer, a speaker, and a vice-speaker of the House of Delegates. They shall take office at the termination of the annual meeting at which they are elected."

So a delegate from the State Society to the A.M.A. is not an officer in the Society. Although he is elected as a delegate to the A.M.A. under this title. I could not interpret it as his being an officer.

Dr. Ezra A. Wolff, *Queens:* The language of the proposed amendment says that he shall hold no other elective office. While a delegate to the A.M.A. is not an officer, he holds an elected office, and he would, therefore, be disqualified, Mr. Chairman, I believe. Are we discussing the amendment? Has the amendment been seconded and opened for discussion?

Vice-Speaker Williams: Yes, the proposed amendment is now open for discussion.

Dr. Wolff: And may I discuss it now, sir?

Vice-Speaker Williams: You are.

Dr. Wolff: I thought I was clarifying. I am not entirely convinced, members of the House, that this is a wise provision. I don't know all of Mr. Martin's reasons, but I can see where this will be a way of kicking somebody upstairs. It will be a way of relieving us of our valuable members who will have a job once in five or seven years. I think it would be much wiser not to put this provision in. If we have active men working in the Society, who know the workings of the Society, I would want those men on the Judicial Council. That is why we have people carefully selected. I think we have men who know what is good for the Society. Those are the men we want, not men who are inactive, who are possibly superannuated, who are probably beyond the scope of the Society. I say let them do the Society work here, the work of the Judicial Council. They are not going to take part in the original decision that has been appealed from, therefore will not be prejudiced in the eyes of the law. I do not believe in, and I would be against, the amendment.

Dr. Segal: Point of order, may I ask the counsel if it would be against his better judgment if we could eliminate the word "delegate," so that a member of the Judicial Council at least can attend the delegates' convention.

Mr. Martin: I don't want to seem to be in such a capacity as suggesting this. It has all been the result of discussion between myself and the officers. This is not just my own idea. Dr. Wolff raises an interesting point. It was my initial thought that the men should have absolute independence of view and have no other duty to discharge. He makes the point that they would not meet very frequently, and perhaps some active men who would handle this sort of duty extremely well might want to participate in the activities of the State Society in some other capacity altogether. It is altogether possible and probably will work out very well if we just let this thing go as it is for the present, and then if it is found necessary to make any further amendment you could do it after a period of time. I recognize the force of what he says that this Judicial Council might sit only once in every two or three years, and you might want some of those men participating in other affairs of the Society more frequently than that, so turn it over in your own minds. Don't let me decide it either way. I think it would work out. It might be an improvement of our present system, and we might by process of error find different improvements and changes as we go on.

Vice-Speaker Williams: That is why most constitutions have a provision for amendment.

Dr. Thomas M. d'Angelo, *Assistant Treasurer:* According to the wording proposed by Dr. Aaron, it seemed to me that he said elected officer of the Society or elected member—what were the words, Dr. Aaron?

Dr. Aaron: Appointive or elective.

Vice-Speaker Williams: Office?

Dr. Aaron: Position in the State Society while he serves as a member of the Judicial Council.

Dr. d'Angelo: Appointive or elective—

Vice-Speaker Williams: "Shall hold no other appointive or elective position in the State Society while he serves as a member of the Judicial Council."

Dr. Aaron: Right.

Dr. d'Angelo: That clarifies that end of it because it includes officers, and Council, and trustees, and our delegates to the American Medical Association. In other words, anyone who is elected would not be able to serve on the Judicial Council.

I am going to second completely the remarks of Dr. Wolff. I think it would be a bad move. We would certainly lose some of our valuable men in that office. We could certainly leave it to the discretion of the president to appoint someone whom he knows has a good judicial mind and would not be influenced too much or any at all by the workings of the Council.

Dr. Louis H. Bauer, *Ex-President:* I can't agree that a delegate to the American Medical Association is an officer position—

Voices: We can't hear.

Dr. Bauer: I can't agree that a delegate is an officer by any stretch of the imagination, merely a representative of this Society to the American Medical Association. I think it would be just as reasonable to say you could not sit in this House of Delegates, and call that an office, because you are a member of this House. I do not think we can in any way reason that a delegate to the American Medical Association is holding an office. Of course, he is elected, but elected as your representative to another organization. It is certainly not an office.

Dr. William B. Rawls, *New York:* Mr. Speaker, I am not going to discuss the motion pro or con. I am going to point out one thing that in most county societies your board of censors are members of the comitia minora. Why set up the State Society entirely different from this? The board of censors originally pass on the question. These are members of the comitia minora. I see no reason here of making this group separate from the other Society group. I would be opposed to the amendment. I see no reason for it.

Vice-Speaker Williams: You passed it in its original form, gentlemen. You moved to reconsider. You are now under reconsideration. It is amended, and you are now discussing it as amended. Is there any further discussion?

Dr. Alfred P. Ingegno, *Section on Gastroenterology and Proctology:* I would like to move an amendment to an amendment. My amendment to amend the amendment would be that the original wording prevail.

Vice-Speaker Williams: If you defeat the amendment, then you get that. Is there a second to the amendment to amend, which means reverting back.

Dr. Peter J. Di Natale, *Councillor:* It seems to me we are no longer speaking on an amendment. The reference committee has incorporated that amendment in its own report; therefore, we are now speaking to the report of the reference committee.

Dr. Edwin A. Griffin, *Kings:* I second the amendment to the amendment.

Vice-Speaker Williams: Then it is a first amendment, Doctor.

Dr. Di Natale: Right.

Vice-Speaker Williams: I accept his motion as a first amendment. There is a second. Is there any discussion? Are you ready for the question?

Voices: What is the question?

Vice-Speaker Williams: The question now is to take the report of Dr. Aaron which has excluded a judicial councillor from holding any other office, and the amendment to that is not to bar him from holding any other office. Is that right?

Dr. Ingegno: To return to the original motion.

Vice-Speaker Williams: To return to the original motion as we passed it just a few moments ago. Is that clear in everybody's mind? Are you ready?

Voices: No.

Vice-Speaker Williams: It is not clear?

Voices: No. What are we going to vote for?

Vice-Speaker Williams: If you vote "aye" for the motion made as an amendment, you return this to the original form as we passed it, which means a man becomes a judicial councillor and is eligible to hold any office in the State Society. Is that right?

Dr. Aaron: Yes.

Vice-Speaker Williams: Are you ready for that question? Is everybody clear as to what he is voting for?

. . . The question was called, and the amendment was put to a vote and was carried . . .

Vice-Speaker Williams: Now we are restored to where we were before the reconsideration of Dr. Aaron's amendment.

Dr. Aaron: Delete Chapter II, Section 5, which reads, "The House of Delegates shall hear and finally determine all appeals taken from decisions of the Board of Censors."

I move the adoption of this portion of the report.

Dr. Thomas O. Gamble, *Albany:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Aaron: Change Bylaws, Chapter II, Section 8, Number 10, by deleting "Report of the Board of Censors," and substituting "Report of the Judicial Council."

I move the adoption of this portion of the report.

Dr. Thomas F. McCarthy, *Bronx:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Aaron: Bylaws, Chapter VI, delete the entire chapter as at present written and substitute the following:

"Judicial Council

"Section 1. One member shall be appointed by the president each year for a term of five years with the advice and consent of the Council. No member shall serve for more than two consecutive terms, but a member elected to serve an unexpired term shall not be regarded as having served a term unless he has served three or more years. In the event of a vacancy, a member shall be appointed for the unexpired term with the advice and consent of the Council.

"Immediately at the close of the annual meeting of the Medical Society of the State of New York, the Judicial Council shall organize and elect their own chairman.

"The secretary of the State Society shall be the secretary of the Judicial Council.

"The Judicial Council shall meet upon the call of the chairman, and the chairman shall submit an annual report of the Judicial Council to the House of Delegates.

"In the year 1954 the president shall appoint one member of the Judicial Council for a five-year term, subject to the approval of the Council.

"In the year 1954 the House of Delegates shall elect four members to the Judicial Council: one for a period of four years, one for a period of three years, one for a period of two years, and one for a period of one year. Thereafter, the president shall appoint one member as provided for."

I move the adoption of this portion of the report.

Dr. Clarence G. Bandler, *New York:* I second the motion.

Vice-Speaker Williams: Is there discussion?

Dr. Leo F. Schiff, *Trustee:* I speak to propose an amendment, sorry, involving only the last paragraph of this section, which begins: "In the year 1954," and in place of all of that—I will give you my reasons first. That paragraph says that one member shall be appointed by the president with the advice or approval of the Council and four members shall be elected by this House for four-, three-, two-, and one-year terms. Gentlemen, there is no great rush about getting a Judicial Council. It is better to take just a little time and get the right kind of men. Without any reflection upon the integrity and ability of this House, in which I was for many years a delegate and thought a lot of myself, I don't believe we are in a position to know where the men are throughout this State who might make the best members for a judicial council.

I don't think we need to worry about our Council. They are our own Council of the State Society. They are the men elected by us to carry on our duties, and in effect what I am going to suggest will give you—I will give you the wording of it in just a moment—would be that we let the Council on the nomination of the president appoint or have the president appoint with the confirmation by the Council, whichever way you want to put it. It will amount to the same thing. The president and the Council will search through our membership for five men, and give them at once an appointment for five, four, three, two, and one years, respectively, and at the expirations of their terms of office they will then be supplanted by themselves or others in the same course.

I am also going to suggest in this amendment that the time limit for this all to go into effect be set somewhat ahead of just right after this particular annual meeting. It is going to be hard for us to find the men whom we think we want, and it would be far better to have the amendment so worded that they would have, say, until December 1 or January 1 of next year to fill these offices completely.

Therefore, my amendment will in substance say that in the year 1954 the president, with the approval of the Council, shall appoint five members, one for a term of five years, one for four, one for three, one for two, and one for one year, and thereafter the president— it has already been provided for—shall nominate or appoint, with the approval of the Council, men each time for five-year terms. Also I believe that the condition of vacancies has already been taken care of in the previous paragraph. The point is that the resolution provides that these five appointments will come as the one appointment is going to come—the way the thing reads now—by the president with the advice of the Council, and I wanted to add in this particular paragraph these appointments shall be made on or before December 1, 1954, of this year. While I said December, you can change that to January. I will take anything you want, even thereafter. Subsequently the time of going into office shall be immediately following the annual meeting for which they are appointed. You have also got to change the wording and say five, four, three, two, and one years. You have got to say ending after the annual meeting in 1959, 1958, 1957, 1956, and 1955. That is going to be a matter of wording. The intent is there that these five men be picked by the Council, which has time, appointed by the president. Let us not feel that we cannot trust our Council to appoint our Judicial Council, which is a very important body. I feel that the delegates are being robbed of any prerogative which they should have in not taking it up in the kind of a meeting we hold here. If the chair will accept that which I have said as an amendment, I think we will get along. I think you have the sense of it, the sense being that the Council shall appoint five members for terms to expire immediately after the annual meeting of 1955, and so on.

Vice-Speaker Williams: Dr. Schiff, the chair could not possibly accept anything as vague and roundabout as that. The thing I think you are driving at is to change Dr. Aaron's suggestion where in the year 1954 he says the Council will elect and the president appoint. Isn't that what you are trying to say?

Dr. Leo F. Schiff: There is one other point: For the first year let us not make it right after the annual meeting, but give ourselves an opportunity to pick the right men for the Judicial Council.

Vice-Speaker Williams: That has nothing to do with the particular paragraph you are speaking of.

Dr. Leo F. Schiff: Unless you put the other paragraph in, allowing the appointment to go to December 1 but having the terms end after the annual meeting. You can say it this way: Appoint five members, instead say electing. The House shall elect five members, whose terms shall expire immediately after the annual meeting of 1955, 1956, 1957, 1958, and 1959, respectively, and thereafter the terms shall all—

Vice-Speaker Williams: Did you appear before Dr. Aaron's committee at lunch when they met?

Dr. Leo F. Schiff: I did not get into there until that thing had been done. I expressed my sorrow.

Vice-Speaker Williams: It is awful hard. You have not got a written amendment. It is hard to accept the verbal general statement as an amendment to the Bylaws.

Dr. Leo F. Schiff: If you will read back my last statement you will have it pretty well. It isn't too bad.

Dr. Aaron: Mr. Speaker, I would like to call the House's attention to the fact that all of this material was carefully considered by representatives of the House at noon today, from about 1 to 3 p.m., and many men went over this subject. All of their opinions were solicited, and they had the opportunity to state what they desired, and it was voted on. It was actually voted on what they desired, and it was a unanimous vote. I will say Dr. Schiff was not there at that moment.

Dr. Leo F. Schiff: I came later.

Dr. Aaron: It was a unanimous vote that this last paragraph should be as written here. It was read, reread, and reconsidered by all of the men there. I have no objections to changing it to what this House desires, but I should like to call your attention to the fact that it was not loosely arrived at. It was well arrived at with all of those men this morning who opposed the original proposition, and who had an opportunity to express themselves, and this is the resulting portion of that report.

Mr. Speaker, in order to expedite this, and in view of the fact there is no other matter, no other amendment or motion before the House, I move you, sir, the adoption of this report up to and including everything above the last paragraph. In other words, this is the only controversial point at the moment. I move that this portion of the report of the committee be approved.

Vice-Speaker Williams: The chairman of the committee amends his motion or makes a substitute motion that we approve it all down to the paragraph—

Voices: Will you read it?

Vice-Speaker Williams: Read it.

Dr. Aaron: "One member shall be appointed by the president each year for a term of five years with the advice and consent of the Council. No member shall serve for more than two consecutive terms, but a member elected to serve an unexpired term shall not be regarded as having served a term unless he has served three or more years. In the event of a vacancy, a member shall be appointed for the unexpired term with the advice and consent of the Council.

"Immediately at the close of the annual meeting of the Medical Society of the State of New York, the Judicial Council shall organize and elect their own chairman.

"The secretary of the State Society shall be the secretary of the Judicial Council.

"The Judicial Council shall meet upon the call of the chairman and the chairman shall submit an annual report of the Judicial Council to the House of Delegates.

"In the year 1954 the president shall appoint one member of the Judicial Council for a five-year term, subject to the approval of the Council."

I move the adoption of that portion of our report.

Dr. Clarence G. Bandler, *New York:* I second the motion.

Vice-Chairman Williams: Is there any discussion?

Dr. Herbert Berger: Mr. Speaker, in the previous sections that we have adopted, we were to replace the term "Board of Censors," with the term "Judicial Council." The provision now makes it specific that the Judicial Council shall organize and elect their own chairman. I now refer to Chapter VII, Section 1, of the Bylaws, which reads, "The president shall preside at all meetings of the Society, the Council, and the Censors." So we are left with two chairmen.

Vice-Speaker Williams: Dr. Aaron, has your committee made any recommendation so that the president does not sit as chairman of the Judicial Council?

Dr. Aaron: It is in here that the president and the secretary of the Society shall sit at these meetings with the privilege of voice but without the privilege of vote.

Dr. Frederick A. Wurzbach, Jr., *Bronx:* The Board of Censors has been abolished.

. . . There were calls for the question . . .

Vice-Speaker Williams: There have been calls for the question to adopt the report of the committee thus far.

Dr. Leo F. Schiff, *Trustee:* I want a point of information. There has been a misunderstanding as to where that thing should break off. I think Dr. Aaron read one sentence too many again, beginning "In the year 1954—"

Vice-Speaker Williams: To answer your point of information, that sentence gives the president the right to appoint just the one member of the Judicial Council for a five-year term annually every year when this thing ultimately is set up.

. . . There were calls for the question . . .

Vice-Speaker Williams: All in favor of the reference committee's recommendation as it has now been offered will say "aye"; opposed, "no." This portion stands adopted. Now for the establishment of other members, that paragraph, Dr. Aaron.

Dr. Aaron: "In the year 1954 the House of Delegates shall elect four members to the Judicial Council: one for a period of four years, one for a period of three years, one for a period of two years, and one for a period of one year. Thereafter, the president shall appoint one member as provided for."

I move the adoption of this portion of our report.

Dr. Solomon Schussheim, *Kings:* I second it.

Vice-Speaker Williams: Do you move an amendment, Dr. Schiff?

Dr. Leo F. Schiff: Yes, I want to move to amend.

Vice-Speaker Williams: All right, formulate it. Make a formal motion.

Dr. Leo F. Schiff: I make the following amendment: You now have one member appointed on or before December 1, 1954. The president with the approval of the Council shall appoint four additional members, one whose term shall expire at the annual meeting of 1955, one whose term shall expire at the annual meeting of 1956, one in 1957, and one in 1958. The reason for that bulky way of describing it is that we cannot say five, four, three, two, and one years because we are beginning them in 1954, at December 1, so any of them won't have the full year, but it gives you time to think of whom you are going to get, and it places the appointment of these men in the hands of the Council instead of having it on an elective basis here at this House.

While I am on it, I want to call the attention of the committee to the fact that in authorizing the secretary to make changes, I hope that they will allow him to change numbers. Some paragraphs are going to have to be renumbered and also—

Vice-Speaker Williams: That is immaterial to this.

Dr. Leo F. Schiff: Because I think I heard something about a man being elected, and under this they would all be appointed by the president; in other words the use of the word "appointed" for "elected."

Vice-Speaker Williams: Is there a second to the amendment?

Dr. Peter J. Di Natale, *Councillor:* I will second it.

Vice-Speaker Williams: Discussion on the amendment.

Dr. Ezra A. Wolff, *Queens:* Mr. Speaker and members of the House, I want to apologize for being up here so often. I offer as my excuse that the original suggested amendment came from our county, and we are instructed on certain points with regard to the proposed substitute for our original suggestion. I hate to be on the opposite side from Dr. Schiff. I am an old admirer of his, and I don't think I would be on the opposite side if I did not feel I had good reason. I think that this House is capable of selecting men who will be fit to serve us on our Judicial Council. If we like, we can get the advice of the Nominating Committee, ask them to canvass the field and bring back names to us, but I think we can do it ourselves.

With all due respect to our eminent counsel, Mr. Martin, I am not sure I would want four men merely with just judicial minds rather than with common sense. I think that these men will act not as judges but as jury. I think they can get technical legal advice. Men who have common sense can appreciate the problems that come up and act in a proper manner. I will be very much in favor of defeating the amendment and reverting to the original proposal.

Dr. Thomas M. d'Angelo, *Assistant Treasurer:* I am going to speak against Dr. Schiff's amendment because Dr. Schiff does not put the elective power in the hands of the Council. He puts the appointive power in the hands of the president of the five individuals, with the advice and approval of the Council. That is quite different from putting the elective power in the hands of the Council itself. I had proposed this morning that the elective power be put in the Council. Dr. Schiff's amendment does not do it. I am going to vote against the amendment.

Vice-Speaker Williams: Is there any other discussion on Dr. Schiff's amendment? A vote "aye" now approves to supplant this and puts the appointment in the hands of the president, subject to the approval of the Council, of the Judicial Council. Are you ready for the question? Everybody knows what they are voting for.

. . . The question was called, and the amendment was put to a vote and was defeated . . .

Vice-Speaker Williams: The amendment is defeated. The original motion is before you, which is the recommendation of Dr. Aaron's committee. Is there any discussion on that now?

. . . There were calls for the question . . .

Vice-Speaker Williams: There being calls for the question, a vote "aye" at this time will set it up as Dr. Aaron's committee has recommended it, and they will be elected by the House.

. . . The question was put to a vote and was carried . . .

Vice-Speaker Williams: The report of the committee stands adopted. Proceed, Dr. Aaron.

Dr. Aaron: Speaking for our committee, I should like to assure you that this never got into it, whether Dr. Schiff or anybody else was for or against it. This was the consensus of opinion that we secured from the delegates who came to us.

Dr. Leo F. Schiff: May I say one word to explain my position?

Vice-Speaker Williams: No, I am sorry, sir.

Dr. Leo F. Schiff: All right.

Dr. Aaron: On page 1059, you remember we interposed the following phrase, "except that a member of the American Medical Association shall have the right of appeal to the Judicial Council of the American Medical Association."

I move the adoption of this portion of our report.

Dr. Edwin A. Griffin, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Aaron: All of the provisions of the changes in the Constitution and Bylaws shall become operative at the close of the present session of the House of Delegates.

I move the adoption of this portion of our report.

Dr. James R. Reuling, *Trustee:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Aaron: There may be other places in the Constitution and Bylaws where the term "Board of Censors" is used, and the secretary is instructed to make editorial change, substituting the words "Judicial Council" for "Board of Censors" where it may appear.

I move the adoption of this portion of the report.

Dr. John F. Kelley, *Oneida:* I second it.

Dr. Walter T. Heldmann, *Richmond:* I am going to ask the chairman of the committee to reconsider that once more. In view of the information that Dr. Berger has already put before you, if you pass that, you are going to have two chairmen of the Judicial Council, according to your Constitution. If you would just say that the secretary has the right to edit it, not only to change "Board of Censors" to "Judicial Council" but to delete "Board of Censors," particularly in this one paragraph, it will solve your problem.

Dr. Aaron: I did not get the last part. I am sorry, but may I have the last part again.

Dr. Heldmann: Dr. Berger pointed out that in Chapter VII under "Duties of Officers," it states the president shall preside at the meeting of the Board of Censors. If you change that to the Judicial Council, the president of the Society is going to have to preside at the Judicial Council. In another place, you say they are to elect their own chairman, and he will preside. The best way to do it in my mind is to delete "Board of Censors," instead of merely changing it to "Judicial Council."

Dr. Ingegno: Change or delete.

Dr. Heldmann: Change or delete, right.

Dr. Aaron: If we use the term, "substitute, delete, or practice editorial policy."

Vice-Speaker Williams: I could not entertain anything as broad as that. You want to amend his report and say what?

Dr. Heldmann: "Add, change, or delete."

Vice-Speaker Williams: I don't get it quite clear the way you want it. Do you want to move an amendment to the report?

Dr. Heldmann: Yes. Would you ask Dr. Aaron to read it again?

Dr. Aaron: There may be other places in the Constitution and Bylaws where the term "Board of Censors" is used, and the secretary is instructed to make editorial change substituting the words "Judicial Council" for "Board of Censors" where it may appear.

Dr. Heldmann: "Substitute or delete."

Vice-Speaker Williams: You want to move to amend by inserting "substitute or delete"?

Dr. Heldmann: Yes.

Dr. Griffin: I second it.

Vice-Speaker Williams: Is there any discussion on the amendment to insert "substitute or delete"?

Dr. Ezra A. Wolff, *Queens:* If I may, I think we can resolve this by adding to Dr. Aaron's proposed amendment, "Except that in Chapter VII, Section 1, the first two sentences—

Vice-Speaker Williams: This is to amend, to insert "substitute or delete." I think we must wait, and if you defeat this, then we will be glad to entertain—

Dr. Wolff: I am going to make this as an amendment.

Dr. Heldmann: I withdraw my amendment.

Vice-Speaker Williams: Does the seconder withdraw his second?

Dr. Griffin: Yes.

Dr. Wolff: "The president shall preside at all meetings of the Society and the Council," period, leaving out the term "and the Censors." "He shall be ex officio member," etc. By leaving out the term "Board of Censors," I think that will resolve it.

Vice-Speaker Williams: Is there a second to this amendment?

Dr. Griffin: I will second it.

. . . There being no discussion, the motion on the amendment was put to a vote and was adopted . . .

Vice-Speaker Williams: The amendment stands. Now the resolution as amended, is there any discussion?

. . . The question was called, and the motion was put to a vote and was carried . . .

Dr. Aaron: Now, Mr. Speaker, I move the adoption of Section 2 of the report of the committee on Judicial Council as it appears in the text. If you want it all read, we will start all over again.

Voices: No.

Vice-Speaker Williams: Is there a second for the adoption of the entire section?

Dr. Clarence G. Bandler, *New York:* I will second it.

Dr. Walter W. Mott, *Trustee:* Point of order, I understand that we have passed a resolution now that this takes effect at the end of this meeting. That would preclude the election of these men at the present session.

Vice-Speaker Williams: It does not necessarily have to, I don't think.

Dr. Aaron: I move the adoption of Section 2 of this report.

Dr. Mott: That is the wording, that it is to take effect later.

Vice-Speaker Williams: Dr. Mott, as vice-speaker I would say if we now in this House assembled have discussed and adopted amendments, and we say that they are going to take effect at the end of this meeting, I think this House is well aware of the fact that they are going to take effect, and they can go ahead and nominate men to fill an office which we know is going to be produced when the meeting is over. Is there any appeal from the decision of the chair? If not, it stands.

We are up to this discussion of Section 2.

Dr. Aaron: I move the adoption of this portion of our report.

Vice-Speaker Williams: Dr. Aaron, to be perfectly clear, this is on page 1062, Bylaws, Chapter XIV, Section 2. Is that right?

Dr. Aaron: I am speaking now of page 1058, Section 2.

Vice-Speaker Williams: Let us get this right.

Speaker Holcomb: Is it page 1059 as first stated, or page 1058?

Dr. Aaron: 1058, Section 2.

Vice-Speaker Williams: On page 1058 of your text, Bylaws, Chapter VI, Section 2, on the right hand side of the page about half way down?

Dr. Aaron: That is right, sir.

Vice-Speaker Williams: Do you want that section all read?

Voices: No.

Vice-Speaker Williams: Are you acquainted with it?

Voices: Yes.

Vice-Speaker Williams: Is there any discussion?

Voices: No.

Vice-Speaker Williams: All in favor of the adoption of the section as a whole, as suggested by the chairman, say "aye"; opposed, "no." This section stands adopted.

Dr. Aaron: I move the adoption of Section 3, as it appears on page 1059 at the head of column number two.

Dr. Edwin A. Griffin, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Aaron: I move the adoption of Section 4 as it appears on page 1059.

Dr. Griffin: I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Aaron: I move the adoption of Section 5, as it appears there, of this report.

Dr. Edwin A. Griffin, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Aaron: I move the adoption of that portion of our report designated "Section 6," with the interlining of the phrase "except that a member of the American Medical Association shall have the right of appeal to the Judicial Council of the American Medical Association." I move the adoption of that portion of the report with that additional sentence.

Dr. Edwin A. Griffin, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Aaron: I move the adoption of Section 7 of the report, as we have submitted it.

Dr. Griffin: I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Aaron: I move the adoption of Section 8 as presented.

Dr. Griffin: I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Aaron: I move the adoption of that portion of our report, the entire material referring to the Judicial Council, with any changes that have been made by the House today.

Dr. Griffin: I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Vice-Speaker Williams: Is there any further report from your committee, Dr. Aaron?

Dr. Aaron: Yes. May I ask a question of our members, Dr. Reuling and Dr. Gamble? Is there anything that I have omitted from this at the present time?

Dr. James R. Reuling, *Trustee:* You are doing swell.

Dr. Aaron: Now, sir, regarding the proposed changes in the Bylaws to have the Board of Trustees prepare the budget in place of the Council. Your committee heard many individuals with a great deal of interest. It seemed to be the consensus of opinion that the Bylaws, Chapter V, Section 2, should not be changed in any manner.

I move, sir, that we reconsider that portion of our report this morning that deals with the problem of removing from the Council the sentence that gave them the—

Dr. Reuling: That took it away.

Dr. Aaron: That took away from them the right to prepare the annual budget, "It shall prepare an annual budget for submission to the Board of Trustees." I move that we reconsider that portion of the report as we submitted it this morning.

Vice-Speaker Williams: Will someone from the floor who voted in favor of it please make that motion. I don't think Dr. Aaron voted.

Dr. Leonard J. Schiff, *Clinton:* I will make that motion, having voted in the affirmative.

Dr. Joseph A. Geis, *Councillor:* I second it.

Vice-Speaker Williams: Now on a motion to reconsider this amendment which we passed this morning depriving the Council of the right to make the budget. Is there any discussion?

. . . The question was called, and the motion to reconsider was put to a vote and was carried . . .

Vice-Speaker Williams: Now this amendment is up for reconsideration, Dr. Aaron.

Dr. Aaron: The committee now recommends disapproval of the proposed resolution which would place the preparation of the budget in the hands of the Board of Trustees and recommends that it remain unchanged as at present written in the Constitution and Bylaws, except that the committee moves that the Bylaws, Chapter V, Section 2, shall be changed in the last sentence, which at present reads, "The fiscal year shall begin January 1 and end December 31 of each calendar year," and substitute for that, "The fiscal year shall begin July 1 and end June 30." I move the adoption of this portion of the report.

DR. ALFRED P. INGEGNO, *Section on Gastroenterology and Proctology:* I second that.

VICE-SPEAKER WILLIAMS: Is there any discussion? Are you ready for the question? An "aye" vote will keep the preparation of the budget in the Council as it always has been and will only change our fiscal year dates. Is that clear?

. . . The question was called, and the motion was put to a vote and was unanimously carried . . .

DR. AARON: Mr. Speaker, under the Bylaws, Chapter XIV, Section 2, pertaining to the following portion, "When a member in good standing, except a retired member, ceases to reside and practice in the State of New York, he shall ipso facto cease to be an active member of the Society and his component county medical society at the end of the current year. His status shall be deemed that of a resigned member, and all rights and title to any share in the privileges and property of the Society, the district branch, or county society shall be deemed to have been forfeited by such action."

I move this portion of our report as given this morning be reconsidered.

VICE-SPEAKER WILLIAMS: I will entertain a motion from someone who voted in favor of that this morning.

SECRETARY ANDERTON: I so move.

DR. INGEGNO: I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

VICE-SPEAKER WILLIAMS: The amendment is now up for reconsideration.

DR. AARON: May I ask that Dr. Anderton be given the privilege of the floor to discuss this portion of the report?

VICE-SPEAKER WILLIAMS: Dr. Anderton!

SECRETARY ANDERTON: Mr. Speaker, as amended this morning that section would require a man to practice medicine in the State of New York in order to be a member of the State Society, which would preclude the membership of anybody who was in an executive position in the State Health Department, the city health department in various counties, and so forth. Therefore, I have taken the liberty to offer the following change in the second paragraph from the end of Section 2, of Chapter XIV, of the Bylaws. As amended, the sentence will then read, "When a member in good standing, except a retired member, no longer resides or practices in the State of New York, he shall ipso facto cease to be an active member of the Society and his component county medical society at the end of the current year. His status shall be deemed that of a resigned member, and all rights and title to any share in the privileges and property of the Society, the district branch, or county society shall be deemed to have been forfeited by such action."

I move the adoption of this amendment.

VICE-SPEAKER WILLIAMS: Is there a second to that amendment?

DR. ELTON R. DICKSON, *Sixth District Branch:* I second that.

VICE-SPEAKER WILLIAMS: Is there any discussion?

DR. WALTER T. HELDMANN, *Richmond:* Mr. Speaker, you are going right back where you started from. That means now a man who resides in another state and practices in New York State cannot become a member of our county medical society.

VOICES: No, no. It says, "resides or practices".

. . . There were calls for the question, and the motion was put to a vote and was unanimously carried . . .

DR. AARON: Mr. Speaker, I move the adoption of that portion of the report with the amendment as given by Dr. Anderton.

VICE-SPEAKER WILLIAMS: We just approved that.

DR. AARON: Now, sir, may I take this opportunity of sincerely thanking Dr. Gamble, Dr. Reuling, Dr. Cunniffe, and the many members of the State Society for the ample aid that they gave us in what, I am afraid, was a relatively amateurish handling of much of this. May I now move the adoption of this report as a whole with the alterations and changes.

DR. BEN A. BORKOW, *Kings:* I second that.

VICE-SPEAKER WILLIAMS: I would like to amend that from the chair, if I may, with a vote of thanks to the chairman. (*Applause*)

As you can see that vote was carried by acclamation.

SPEAKER HOLCOMB: We shall recess. It is now six o'clock. Would anyone suggest 8 o'clock or 8:30 as the time for reconvening?

VOICES: Eight.

SPEAKER HOLCOMB: Will you just keep your seats. I believe 8 o'clock will be a better time. We shall have two hours. We will go into executive session at 8 o'clock to consider the report of the Malpractice Insurance and Defense Board, and the report of the reference committee thereon.

I would also like to state at this time that Dr. Post has a short report on the prize exhibits to present, but all reference committee reports will be given following the executive session, those which we can finish tonight.

Section 123

Report of Scientific Awards Committee

DR. CHARLES D. POST, *Chairman:* Members of the House, we were anxious to get this report in at this hour so that those receiving the awards can profit by the fact that the awards will be placed on the exhibits, and more people will know where to look for them.

The exhibits this year are outstanding in the fine selection of scientific subjects that are displayed. Credit for that selection should go to the scientific exhibits committee, of which Dr. Watson is chairman. The number of exhibits equals or exceeds all other states in the number of exhibits and equals any of the interim sessions of the American Medical Association. I think that is due to the fact that New York State has many scientific schools, and it is but a recognition of the scientific center in which we live. I hope there are no amendments to my report:

First Scientific Award

"Dermatoses and Malignant Internal Tumors"
Helen Ollendorf Curth, M.D.
College of Physicians and Surgeons of Columbia University, New York City

Second Scientific Award

"The 'Protein Profile' in Multiple Sclerosis"
Bruno W. Volk, M.D.
Abraham M. Rabiner, M.D.
Abraham Saifer, M.S., Ch.E. (*By invitation*)
Irwin Oreskes, B.S. (*By invitation*)
Jewish Sanitarium and Hospital for Chronic Diseases, Brooklyn

First Clinical Award

"Preventive Ophthalmology"
Isadore Givner, M.D.
Bernard Kronenberg, M.D.
New York University—Bellevue Medical Center, New York Eye and Ear Infirmary, New York City

Second Clinical Award

"Pulmonary Complications of ACTH and Cortisone: Roentgen Observations"
Israel Steinberg, M.D.
John A. Evans, M.D.
N. Finby, M.D. (*By invitation*)
New York Hospital, New York City

Honorable Mention

"Recent Advances in the Treatment of Lung Cancer"
William L. Watson, M.D.
David A. Karnofsky, M.D.
John L. Pool, M.D.
Raymond K. L. Luomanen, M.D.
Alexander J. Conte, M.D.
Sam H. Seal, M.D. (*By invitation*)
Memorial Center for Cancer and Allied Diseases, New York City

"Carcinoma of the Lung"
Adrian Lambert, M.D.
Roosevelt Hospital, Knickerbocker Hospital, New York City

Those two exhibits are adjacent. One is equal to the other. They are on the same subject and, as you will note, are on a subject of great clinical interest at the present time.

I wish at this time to express my very great appreciation to Dr. Andresen and Dr. Maslon who so ably assisted me in presenting this report.

I move the adoption of this report.

Dr. Clarence G. Bandler, *New York:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Speaker Holcomb: Thank you, Dr. Post.

May I call your attention to the fact that the hour of reconvening will be 8 o'clock, when the House will be in executive session. I will now call a recess until 8 o'clock.

. . . The session recessed at 6:10 p.m. . . .

Evening Session

Tuesday, May 11, 1954

The session convened at 8:25 p.m.

Speaker Holcomb: The House will come to order.

I will ask Dr. McCarty, chairman of the Credentials Committee, to report to the chair as to whether we have a quorum present.

Dr. Charles F. McCarty, *Kings:* A quorum is present, sir.

Speaker Holcomb: Dr. McCarty reports that a quorum is present. The chair will call at this time an executive session of the House, and will turn the chair over to Dr. Williams, Vice-Speaker.

. . . In executive session the House considered the following annual report regarding the Malpractice Insurance and Defense group plan, by Mr. Linder, actuary.

Section 124
Report of Actuary

Mr. Joseph Linder: Mr. Speaker, ladies and gentlemen, again it is my privilege to present to the House of Delegates the results of our examination of your Group Plan of Malpractice Insurance and Defense.

The original of our report has been filed with the secretary of the Society. This report indicates that an average rate increase of approximately 18 per cent for metropolitan certificate holders appears to be necessary, while for upstate certificate holders, the increase is approximately 12 per cent. Also, a further refinement in the classification system has been adopted by your Malpractice Insurance and Defense Board so that the business is now rated in three classes, that is, major surgeons, minor surgeons, and nonsurgeons, instead of the two classes of surgeons and nonsurgeons which prevailed heretofore.

It is my intention, this year, to devote practically all of the time that is available to me to a discussion of the present and future status of the Group Plan rather than to attempt the rather difficult presentation of technical matters.

As of July 1, 1949, when the present carrier undertook your insurance, the rates charged for $5/15,000 limits were $55 and $42 for metropolitan and upstate certificate holders, respectively, no differentiation being made between major surgeons, minor surgeons, and nonsurgeons.

As of September 1, 1954, it is proposed to charge $226, $126, and $76 for major surgeons, minor surgeons, and nonsurgeons, respectively, in the metropolitan area. Similarly, the charges would be $118, $65, and $40 for the three classes in the upstate area. Over the five-year period, the increases have been as follows:

For metropolitan
  Major surgeons—an increase of 311 per cent
  Minor surgeons—an increase of 129 per cent
    Nonsurgeons—an increase of 38 per cent
  or an average increase for metropolitan of 145 per cent.
For upstate
  Major surgeons—an increase of 181 per cent
  Minor surgeons—an increase of 55 per cent
    Nonsurgeons—an increase of 5 per cent
  or an average increase for upstate of 86 per cent.

In brief, metropolitan policyholders will be required to pay, on the average, approximately two and one-half times as much now as they paid five years ago. Similarly, upstate policyholders will be required to pay, on the average, almost twice as much now as they paid five years ago.

It seems to us highly desirable to place squarely before the Society the reasons for this increase.

Rates for liability insurance are determined as a product of claim frequency (number of suits or claims per policy) and claim severity (average cost of disposing of suits and claims). When either factor rises, even though the other factor remains constant, insurance rates rise. In the case of malpractice insurance, there has been a substantial rise in both factors.

Unfortunately, it is not possible to measure with a great degree of accuracy the "severity" factor, due to the long delay in realizing actual claim settlements. While disposal costs have certainly increased, the degree to which they have risen is speculative. In this connection the reserve policy of the carrier with regard to estimates is of extreme importance. While we believe the carrier is being conservative, it should be kept in mind that all estimates for outstanding claims are the result of collaboration between the carrier and the legal representative of the Society.

As contrasted with the cost factor, it is possible to measure with reasonable accuracy the "frequency" factor. This factor, over the past five years, has increased by 85 per cent. In other words, had the severity remained constant, an increase of 85 per cent in rates would be necessary on account of the cost factor alone. Actually, over this five-year period, rates have increased by 145 per cent for metropolitan, and 85 per cent for upstate.

It is apparent, therefore, that it is the incidence factor which deserves the most careful exploration. The question immediately arises as to whether the Society fully understands the danger of this constantly increasing frequency of claims and is doing all that can or should be done to rid its Group Plan of the small minority of "bad" risks whose losses do so much to raise the cost of insurance for the vast majority of members who have no losses.

As matters now stand, premium rates *appear* so high that there is grave danger of "in and out carriers" being attracted to malpractice insurance. It seems to me well to repeat the comment contained in my original report dated May 7, 1948, and this is a quotation therefrom:

> "It is a known fact in casualty insurance that more companies have been in and out of the malpractice insurance business than has been the case of any other form of liability insurance. It is a difficult form of insurance to write, and, so far as we know, it has never proved satisfactory to any company. The inordinate lag in the reporting and disposing of actions against doctors has made the loss experience look favorable during the early years of writing. Later, when the companies learn the actual cost of the business, there is a rude awakening. When that occurs, the companies are forced to seek greatly increased rates or withdrawal from the business, usually the latter. It is not unknown in the past when companies have withdrawn from the field, that many doctors, most of whom have never had a claim, suddenly find themselves unable to purchase insurance except at what they feel were exorbitant rates. Because of the unsatisfactory nature of this business, as near as we can ascertain, it is being written by a very limited number of companies."

This ends the quotation from the aforementioned report.

It seems to us that a further increase in rates, or even a continuation of present rates, will seriously jeopardize the continuation of the Group Plan. This would mean the loss to the Society of the very great advantages it now has. These advantages are chiefly delegation by the carrier to the Society of a large measure of control over the policy contract, loss settlements with the attendant assurance that the professional interest of the members will always have consideration in the handling of claims against them, cost accounting, and the sole right to decide who shall or shall not be members.

One other matter: Last year I was asked the question from the floor: "Why is it that our own insurance is reinsured with Lloyds?"

I assumed that the questioner had verified this fact, and accordingly I stated: "Here we are talking not about excess coverage; we are talking about the basic coverage."

I now find that your present carrier has never reinsured and does not now reinsure any part of its excess malpractice business with Lloyds. This statement is merely to straighten out the record. Inquiry shows that they have a very small amount of reinsurance with Lloyds covering certain extrahazardous operations. This is far different from writing direct insurance on malpractice risks in New York State. Again, and as I stated last year, we are considering basic coverage and not excess coverage.

. . . This was discussed at length, and the report of the reference committee on Report of the Malpractice and Defense Board and actions upon it were as follows . . .

Section 125 (*See 13*)

Report of Reference Committee on Reports of Malpractice Insurance and Defense Board and Legal Counsel

Dr. Norton S. Brown, *New York:* Mr. Speaker and members of the House of Delegates, the reference committee finds in the report four specific recommendations to the House of Delegates:

1. Approval of a proposal to exclude surgery and other procedures from the policy contract, a new classification system, new rates and surcharges. These are detailed on page 2 of the report of the Malpractice Insurance and Defense Board. The reference committee recommends adoption of the proposal with the suggestion that the text be reworded to define more accurately the proper classification of various routine diagnostic procedures which in the present text might be construed as constituting major surgery.

Adopted.

2. Approval of a proposed exclusion of certain persons employed by anesthesiologists.

Adopted.

3. Approval of a proposal to extend the authority of the Board to discontinue the insurance of certain members as described on page 7 of the report of the Malpractice Insurance and Defense Board.

Adopted.

4. Approval of a proposal that the House of Delegates use its influence to induce each county society to establish malpractice defense committees to be known as Advisory Committees on Malpractice Insurance and Defense to the Malpractice Insurance and Defense Board, as discussed on page 8 of the report of the Malpractice Insurance and Defense Board.

Adopted.

. . . The House next considered the reference committee report on the Legal Counsel's annual report which was approved. . . .

Dr. Brown stated in part:

"In order to facilitate the successful handling of this increasingly large group of cases, and in an effort to reduce the cost of suits and to satisfy the objections which have been raised by some members concerning decisions which have been made to try certain cases or to settle them, the reference committee has conferred extensively with counsel and with members of the Malpractice Insurance and Defense Board. Your reference committee, on the basis of these investigations, therefore, recommends that the Malpractice Insurance and Defense Board shall establish a panel of highly qualified physicians representing all specialties. The sole duty of such a panel will be to confer with counsel, various investigators, and representatives of the insurance carriers concerning the professional and technical aspects of cases awaiting action. Such a group would provide counsel with immediate expert professional advice and, in some measure, reduce the load now assumed by the Malpractice Insurance and Defense Board of the Medical Society of the State of New York."

. . . This recommendation *was adopted*. . . .

The House also considered the report of this reference committee on two resolutions referred to it, as follows.

Section 126 (*See 69*)

Report of Reference Committee on Report of Malpractice Insurance and Defense Board: Support of the Group Malpractice Insurance Plan of the Medical Society of the State of New York

Dr. Norton S. Brown, *New York:* The reference committee has considered the following amended resolution introduced for the County Society of Westchester by Dr. David Fertig on the "Support of the Group Malpractice Insurance Plan of the Medical Society of the State of New York":

> "Whereas, various insurance companies have offered malpractice insurance to physicians in this State, either on an individual or group basis, at rates less than the State Plan; and
>
> "Whereas, these companies have been compelled to raise their rates; and
>
> "Whereas, the premium rates of the Group Malpractice Insurance and Defense Plan of the State Society reflect actual costs plus losses; now, therefore, be it
>
> "*Resolved,* that all members of individual societies, specialty groups, and the like be urged to participate in the State Malpractice Insurance and Defense Plan if eligible for this protection."

After discussion, the amended resolution *was adopted.*

Section 127 (*See 33*)

Report of Reference Committee on Report of Legal Counsel: Settlement of Malpractice Suits

Dr. Norton S. Brown, *New York:* The reference committee has considered the following amended resolution introduced for the County Society of the Bronx by Dr. Frederick Wurzbach on the "Settlement of Malpractice Suits":

> "Whereas, the cost of malpractice insurance has nearly tripled in the past two years; and
>
> "Whereas, there is a limit beyond which the insurance company will not go; and
>
> "Whereas, there is a limit beyond which the physician cannot afford to pay; and
>
> "Whereas, the number of suits settled out of court has increased to such an extent that the legal profession will undertake these suits when they previously did not accept them; and
>
> "Whereas, there must be an end to this increasing number of suits and excessive cost; therefore be it
>
> "*Resolved,* that each malpractice case be reviewed by the malpractice committee of the county society of which the accused doctor is a member, and that records be kept of each case."

After discussion, the amended resolution *was adopted.*

The reference committee report as a whole *was approved.*

Dr. Louis H. Bauer, *Ex-President:* I would like to make three motions: First, that the actions actually taken by this House in executive session be made a part of the minutes and discussion omitted.

Dr. Chas. Gordon Heyd, *Ex-President:* I second that.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Bauer: The second motion is that we arise from executive session.

Dr. Clarence G. Bandler, *New York:* I second that.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Bauer: The third is I move we adjourn until tomorrow morning at 9 o'clock.

. . . The motion was seconded by delegates from all over the House, was put to a vote, and the session was recessed at 11:15 p.m. . . .

Morning Session

Wednesday, May 12, 1954

The meeting convened at 9:25 a.m.

Speaker Holcomb: The House will please come to order.

Section 128

Announcements

Speaker Holcomb: The Speaker has the following announcements to make: Immediately after the House adjourns there will be a meeting of the Council in the Empire Room on the first floor.

The Board of Trustees will meet immediately thereafter in the same room.

Mr. Secretary, is there a quorum present?

Secretary Anderton: Yes, sir, there is a quorum present.

Section 129 (See 140)

Elections: Nominations and Balloting

Secretary Anderton: I would like to present the names of the tellers at this time.

. . . Secretary Anderton called off the following names:

John H. Wadsworth
Vincent J. Collins
Arthur Q. Penta
Samuel A. Garlan
Halford Hallock
Homer L. Nelms
Arthur J. Sullivan
Irwin Felsen
Henry J. Barrow
Frank LaGattuta
Charles Sandler
Leonard J. Flanagan
Joseph A. Wintermantel
R. Scott Howland
Leonard J. Schiff
Frank A. Gagan
John C. Brady
William J. Orr
Thomas R. Cummins
George A. Burgin
Leo S. Drexler
John J. Flynn
Arthur E. Lamb
David Kershner
Arthur P. Kane
George E. Lynch
Joseph A. Lane
Christopher Parnall, Jr.
John M. Galbraith
E. Kenneth Horton
Norton S. Brown
John H. Garlock
George Himler
Kenneth M. Lewis
Peter M. Murray
Guy S. Philbrick
John F. Kelley
Dwight V. Needham
W. Walter Street
Robert E. Doran

Robert J. Hewson
Walter Shifton
Olin J. Mowry
Robert S. Cleaver
Sol Axelrad
William Benenson
George J. Lawrence, Jr.
Anthony A. Mira
Richard P. Doody
Walter T. Heldmann
Joseph H. Cornell
G. Gordon Knight
James M. Watkins
David W. Beard
Stanley B. Folts
William J. Tracy
John L. Sengstack
Victor K. Young
Harry Golembe
Seymour M. Bulkley
Eugene F. Galvin
Morris Maslon
Walter S. Bennett
David Fertig
Edwin L. Harmon
G. Stanley Baker

Speaker Holcomb: The tellers will meet in the reference room at the further end of this section under Dr. McCarty's protective wing, and at this time I shall call on Dr. Wertz, chairman of the Nominating Committee, for his report.

Dr. Carlton E. Wertz, *Ex-President:* Mr. Speaker and members of the House, your Nominating Committee has nominated the following men:

President-Elect—Renato J. Azzari
Vice-President—Charles A. Prudhon
Secretary—W. P. Anderton
Assistant Secretary—DuMont F. Elmendorf
Treasurer—Maurice J. Dattelbaum
Assistant Treasurer—Thomas M. d'Angelo
Speaker—Frederic W. Holcomb
Vice-Speaker—Frederick W. Williams
Councillors (three-year terms)—Leo E. Gibson, Thurman B. Givan, Gerald D. Dorman, Albert Vander Veer, II
Trustees (five-year terms)—James R. Reuling, Walter W. Mott
Delegates (two years)—W. P. Anderton, Herbert H. Bauckus, Harold F. Brown, Elton R. Dickson, Edward P. Flood, Thurman B. Givan, John J. H. Keating, James R. Reuling, Carlton E. Wertz, Floyd S. Winslow, Ezra A. Wolff

Thank you!

Speaker Holcomb: The chair recognizes Dr. Keating.

Dr. John J. H. Keating, *New York:* Mr. Speaker, I would like to ask that my name be withdrawn as a delegate. New York County is very anxious to place Dr. Dorman in that spot, from which I have withdrawn. Dr. Dorman is on the Council and able to give a good deal of time to it. He is a very enthusiastic member of this Society.

Speaker Holcomb: Is there any objection from any member of the House that Dr. Dorman take the place of Dr. Keating? If not, the chair will announce that change will be allowed.

Are there any further nominations from the floor for any office?

The following names were placed in nomination from the floor:

Assistant Secretary—Ezra A. Wolff
Councillor (three-year term)—Raymond S. McKeeby
Delegates to the A.M.A. (two-year terms)—William B. Rawls, Charles H. Loughran, Frederic W. Holcomb, Leo F. Schiff, Denver M. Vickers, William T. Boland, Henry E. McGarvey.

Dr. d'Angelo, assistant treasurer, moved that nominees for uncontested offices be declared elected by acclamation. Dr. Marino seconded this motion, and it was unanimously carried.

The names of all nominees were placed on the blackboards in view of the delegates in alphabetic order.

When the assistant secretary read the following list of those who were entitled to vote, ballots were cast into the ballot box:

OFFICERS, COUNCILLORS, TRUSTEES

Andrew A. Eggston
Dan Mellen
Earl C. Waterbury
W. P. Anderton
Gervais W. McAuliffe
Maurice J. Dattelbaum
Thomas M. d'Angelo
Frederic W. Holcomb
Frederick W. Williams
Joseph A. Geis
Leo E. Gibson
Thurman B. Givan
Gerald D. Dorman
Harold F. Brown
Theodore J. Curphey
James Greenough
Denver M. Vickers
Renato J. Azzari
Peter J. Di Natale
Scott Lord Smith
Floyd S. Winslow
James R. Reuling
Walter W. Mott
Herbert H. Bauckus
Edward R. Cunniffe
John J. Masterson
J. Stanley Kenney
Leo F. Schiff

EX-PRESIDENTS

Thomas H. Halsted
Orrin Sage Wightman
Nathan B. Van Etten
William H. Ross
Chas. Gordon Heyd
Arthur J. Bedell
Thomas A. McGoldrick
Louis H. Bauer
Leo F. Simpson
Carlton E. Wertz
Edward T. Wentworth

COMMISSIONER, NEW YORK STATE DEPARTMENT OF HEALTH

Herman E. Hilleboe

DISTRICT DELEGATES

Charles W. Mueller
George P. Bergmann
John H. Wadsworth
J. Frederick Sarno
Arthur Gaffney
Elton R. Dickson
Glenn C. Hatch
Sydney L. McLouth
John F. Rogers

SECTION DELEGATES

Vincent J. Collins
Arthur Q. Penta
George M. Lewis
Alfred P. Ingegno
Samuel A. Garlan
Donald B. Sanford
E. J. Murphy
William F. Beswick
Raymond J. Pieri
Martin L. Gerstner
Halford Hallock
Harry P. Smith
Frederick H. Wilke
William Holla
Frank J. Borrelli
Walter Scott Walls
Thomas A. Morrissey

DELEGATES FROM COMPONENT COUNTY SOCIETIES

Albany (4)
Thomas O. Gamble
John F. Mosher
Homer L. Nelms
Arthur J. Sullivan

Allegany (1)
Irwin Felsen

Bronx (13)
Joseph Alvich
Henry J. Barrow
Philip Ladin
Edward P. Flood
Moses H. Krakow
Frank LaGattuta
James A. Lynch
Thomas F. McCarthy
Charles Sandler
Samuel Leo
Abraham B. Tamis
Samuel Wagreich
Frederick A. Wurzbach, Jr.

Broome (3)
F. Albert Baumann
Leonard J. Flanagan
John A. Kalb

Cattaraugus (1)
Joseph A. Wintermantel

Cayuga (1)
Bernard Hartnett

Chautauqua (2)
Edward L. Schwabe
Clyde L. Wilson

Chemung (2)
R. Scott Howland
William T. Boland

Chenango (1)
Norman C. Lyster

Clinton (1)
Leonard J. Schiff

Columbia (1)
Henry J. Noerling

Cortland (1)
George F. Nevin

Delaware (1)
Philip Hust

Dutchess (3)
Frank A. Gagan
Maxwell Gosse
E. Gordon MacKenzie

Erie (8)
A. H. Aaron
E. Dean Babbage
John C. Brady
Thomas S. Bumbalo
Stephen A. Graczyk
John D. Naples
William J. Orr
Samuel Sanes

Essex (1)
Thomas R. Cummins

Franklin (1)
Carl G. Merkel

Fulton (1)
Sylvester C. Clemans

Genesee (1)
Alfred L. George

Greene (1)
Kenneth F. Bott

Herkimer (1)
George A. Burgin

Jefferson (1)
Charles A. Prudhon

Kings (24)
Charles A. Anderson
George E. Anderson
Louis Berger
Benjamin M. Bernstein
Ben A. Borkow
Leo S. Drexler
John J. Flynn
Edwin A. Griffin
Arthur P. Kane
David Kershner
Aaron Kottler
Arthur E. Lamb
Isaac Levine
Charles H. Loughran
Frederic Elliott
A. W. Martin Marino
Charles F. McCarty
David B. Monheit
Charles E. Spratt
Irving J. Sands
Solomon Schussheim
Abraham D. Segal
Milton B. Spiegel
Robert F. Warren

Lewis (1)
Edgar O. Boggs

Livingston (1)
George E. Lynch

Madison (1)
Felix Ottaviano

Monroe (5)
Donovan M. Jenkins
Joseph A. Lane
John L. Norris
Christopher Parnall, Jr.
Libby Pulsifer

Montgomery (1)
Walter Dreyfuss

Nassau (6)
Ray McCune Bowles
John M. Galbraith
Stephen F. Gerde
E. Kenneth Horton
Percival A. Robin
Joseph G. Zimring

New York (25)
Philip D. Allen
Clarence G. Bandler
Norton S. Brown
Samuel B. Burk
Joseph E. Corr
Frederic D. Zeman
J. Homer Cudmore
A. Wilbur Duryee
Lawrence Essenson
James H. Ewing
Samuel Z. Freedman
John H. Garlock
George Himler
John J. H. Keating
Ely Elliott Lazarus
Kenneth M. Lewis
William H. Lewis, Jr.
John L. Madden
Thomas H. McGavack
Frank J. McGowan
Peter M. Murray
Herbert S. Ogden
William B. Rawls
Adelaide Romaine
John R. Murphy

Niagara (2)
John C. Kinzly
Guy S. Philbrick

Oneida (3)
Bradford F. Golly
John F. Kelley
Harold L. Pender

Onondaga (5)
Irving L. Ershler
William M. Michaels, Jr.
Dwight V. Needham
William E. Pelow
W. Walter Street

Ontario (2)
Robert E. Doran
Philip M. Standish

Orange (3)
Robert J. Hewson
John D. Van Zandt
Nathaniel T. Keys

Orleans (1)
Walter Shifton

Oswego (1)
Olin J. Mowry

Otsego (1)
John W. Latcher

Putnam (1)
Robert S. Cleaver

Queens (13)
Alfred Angrist
Sol Axelrad
William Benenson
Frank J. Cerniglia
Meyeron Coe
Henry I. Fineberg
John L. Finnegan
Benjamin F. Glasser
George J. Lawrence, Jr.
John E. Lowry
Anthony A. Mira
Ezra A. Wolff
Tobias M. Watson

Rensselaer (2)
Gilbert A. Clark
Richard P. Doody

Richmond (3)
Herbert Berger
Lewis D. Foote
Walter T. Heldmann

Rockland (2)
Harold W. Grosselfinger
G. Gordon Knight

St. Lawrence (1)
Thomas M. Watkins

Saratoga (1)
Sonya Hoffman

Schenectady (2)
James M. Blake
Joseph H. Cornell

Schoharie (1)
David W. Beard

Schuyler (1)
Milton J. Daus

Seneca (1)
Stanley B. Folts

Steuben (2)
William J. Tracy
E. H. Ober

Suffolk (4)
D. J. Wexler
John L. Sengstack
Sol Shlimbaum
Victor K. Young

Sullivan (1)
Harry Golembe

Tioga (1)
Seymour M. Bulkley

Tompkins (1)
C. Stewart Wallace

Ulster (2)
Eugene F. Galvin
Edward F. Shea

Warren (1)
Morris Maslon

Washington (1)
Walter S. Bennett

Wayne (1)
James H. Arseneau

Westchester (7)
David Fertig
Edwin L. Harmon
Reid R. Heffner
Henry E. McGarvey
W. Alex Newlands
Waring Willis
Christopher Wood

Wyoming (1)
G. Stanley Baker

Yates (1)
William G. Roberts

Vice-Speaker Williams: That completes the reading of the list of eligible voters. Is there anybody whose name has not been called?

. . . There was no response. . .

Vice-Speaker Williams: Have all the delegates now ballots for members of the Judicial Council?

The chair wishes to announce that ballots for Judicial Council are on a blank paper of this type, with the words, "Judicial Council." The balloting will go through the same order. You will get ballots in a moment. Let me remind the delegates once more to get the ballots in because we are going to close the balloting for officers and delegates shortly.

Has everyone now cast his ballot?

. . . There was no response. . .

Vice-Speaker Williams: If so, I shall announce that the balloting for the official election for officers, councillors, and delegates to the American Medical Association is now closed.

The House will please come to order. If possible, candidates for the office of Judicial Council will now be offered, and I wish to announce that they shall be made in the same way that our other nominations were made. I would prefer that you come to the front of the House and make your nominations.

President Eggston: Mr. Speaker and members of the House, in view of the fact that one of the members of the Judicial Council is to be appointed by the president, Dr. Mellen and I in conference have suggested to you and to the Council for membership for five years in the Judicial Council, as the presidential appointee, Dr. Charles H. Loughran of Kings, Brooklyn.

. . . The following names were placed in nomination: Dr. Norton S. Brown, Dr. Frederick A. Wurzbach, Jr., Dr. John F. Kelley, Dr. John C. Brady, Dr. John L. Edwards, Dr. Walter T. Heldmann, Dr. Edward T. Wentworth, Dr. Christopher Wood. . .

VICE-SPEAKER WILLIAMS: The House is reminded that you will vote for four members of the Judicial Council. The man who has the largest number of votes will serve four years, the next highest three years, the next two years, and the next one year.

Is the House ready to begin balloting? If so, I shall ask Dr. Anderton to read again the list of qualified voters for the members of the Judicial Council.

. . . Secretary Anderton read the list of those entitled to vote, and the votes were cast into the ballot box. . . .

VICE-SPEAKER WILLIAMS: Is there any eligible voter whose name has not been called? Has every eligible voter now deposited his Judicial Council ballot?

. . . There was no response. . .

VICE-SPEAKER WILLIAMS: I now declare the ballot for the Judicial Council closed.

The chairman of the tellers wants me to announce that the tellers will now meet in the room which was used by the reference committees yesterday.

Will the tellers go back for instruction and proceed to do their counting?

It is the plan of the Speaker that while the tellers are out and doing the counting, we will entertain the reports of a few short reference committees, and then when we have the report of the tellers and the report of the election after that, the Speaker intends to set you up for the executive session for the hearing.

DR. J. STANLEY KENNEY, *Trustee:* I would like to present Dr. Thomas G. Hull, of Chicago. He is chairman of the scientific exhibits and secretary of the Council on Scientific Assembly. (*Applause*)

SPEAKER HOLCOMB: The House will please come to order. We have five reference committees to be heard from at this time. While the ballots are being counted, we have two committees who are ready to report and whose reports I feel are not controversial in any sense of the word. I feel that we can hear them and at least make some progress while the ballots are being counted.

Dr. Edward Shea, of Ulster County, on Miscellaneous Business B has two resolutions on which he will report. I think after that I can entertain a motion to hear the report of Dr. Flood; in fact, it won't be necessary to entertain a motion. I think Dr. Flood's report is also of a noncontroversial nature.

Section 130 (See 44)

Report of Reference Committee on Miscellaneous Business B: Recommendations for Safety Devices for Automobiles

DR. EDWARD F. SHEA, *Ulster:* The first resolution was presented by Dr. Theodore J. Curphey and concerns a recommendation for safety devices in automobiles:

> "*Resolved*, that the Medical Society of the State of New York hereby recommend to the motor car manufacturers of America that they equip all automobiles with safety belts to meet the specifications of the C.A.A. Technical Standard Order, T.S.O.–C22A, November 15, 1950; and further recommend that these manufacturers provide seats, cushions, and doors which will withstand impacts of 10 to 15 G's without injuries."

Your reference committee has reviewed the resolution as presented by Dr. Theodore J. Curphey and feels that it would like to know considerably more about the technical specifications relative to the equipment of all automobiles with safety belts. We recommend that this be studied further. Relative to the improved safety construction of automobiles by the manufacturers to minimize traumatic injuries, it is heartily approved in principle by your committee.

I move that this report be adopted.

DR. CHARLES A. ANDERSON, *Brooklyn:* I second the motion.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Section 131 (See 32)

Report of Reference Committee on Miscellaneous Business B: Clarification of Admission Policies of Physicians' Home

DR. EDWARD F. SHEA, *Ulster:* Mr. Speaker, this resolution carries with it some misunderstanding. I should say the answer could have been obtained by the Fourth District Branch, who presented the resolution through Dr. J. Frederick Sarno. They could have simplified the situation a great deal by simply writing to the directors of the Physicians' Home.

The resolution pertains to the clarification of admission policies of the Physicians' Home. I am glad that this has been presented because it brings to our attention once again the very laudable project of the Physicians' Home. I have also learned that there is a great deal that is not understood by the members of the State Society relative to the Physicians' Home, and perhaps this will be a plug for it.

The resolution reads:

> "*Resolved*, that the directors of the Physicians' Home be requested to clarify the situation by a statement of their admission policies together with the reasons for these, and to make such statement known to all members of the Medical Society of the State of New York."

Your reference committee, Mr. Speaker, approves of the request that the admission policies of the Physicians' Home be further clarified by the directors of the Home. It is evident to the committee that there continues to exist a startling indifference on the part of the members of the Society toward the Physicians'

Home along with a surprising ignorance of its structure and policy. The committee feels that the policies and financial status of the Physicians' Home be briefly reviewed once again through the medium of the STATE JOURNAL, emphasis being placed upon the need for continued and added financial support of this noble project.

The committee did not feel that this was a criticism, although some gentlemen felt it was. It simply was asking for a clarification. There are some men in the House, Mr. Speaker, who can clarify this further if there is a desire to ask any questions.

SPEAKER HOLCOMB: What do you recommend, the approval of the resolution?

DR. SHEA: The reference committee recommends publication of more facts concerning the Physicians' Home.

SPEAKER HOLCOMB: Also the chairman of the reference committee, Dr. Shea, wishes to announce that there may be some men, perhaps Dr. Smith, present who could further clarify, if there is a request for that information. I should be glad to call on Dr. Smith if he is in the House. Do you know whether he is here.

DR. SHEA: Dr. Smith is not here, but there are some other men present who can.

DR. J. STANLEY KENNEY, *Trustee:* I am a director of Physicians' Home. I don't think we should take up the time of this House. It can well be clarified by an article prepared for the JOURNAL.

DR. GERALD D. DORMAN, *New York:* I move the adoption of the reference committee's recommendation.

DR. IRVING J. SANDS, *Kings:* I second it.

. . . There being no further discussion, the motion was put to a vote and was unanimously carried. . .

DR. SHEA: Mr. Speaker, may I be allowed to thank you for giving me such an astute committee comprised of Dr. Charles A. Anderson, Dr. John E. Lowry, Dr. David W. Beard, and Dr. Walter T. Heldmann.

SPEAKER HOLCOMB: Thank you, Dr. Shea.

I believe at this time I should call on Dr. Flood since perhaps his committee is also concerned with matters which we all feel are noncontroversial in type.

Section 132 (See 19)

Report of Reference Committee on Report of Council, Part XII: Nursing Education

DR. EDWARD P. FLOOD, *Bronx:* Mr. Speaker and members of the House, this is a partial report of the Reference Committee on Report of Council, Part XII, dealing with Convention, Nursing Education, Woman's Auxiliary, Office Administration and Policies, Ethics, and Belated Bills.

Your committee considered the supplementary report of the Council Committee on Nursing Education which reports that the former Coordinating Council on Nursing is in the process of reorganization and is to be renamed the New York State Council on the Care of the Patient. This change envisages a more comprehensive organization of all those interested in this problem.

I move the adoption of this portion of the report.

DR. SOL SHLIMBAUM, *Suffolk:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Section 133

Report of Reference Committee on Report of Council, Part XII: Woman's Auxiliary

DR. EDWARD P. FLOOD, *Bronx:* The committee carefully studied the report of the advisory board of the Medical Society of the State of New York to the Woman's Auxiliary. We reaffirm the commendation that the committee and President Eggston have made on the accomplishments of the Auxiliary. We particularly note their valuable contribution to nursing education in providing scholarships for nurses in training, their contributions to the American Medical Education Foundation and the Physicians' Home.

Every member of the Medical Society of the State of New York should urge his wife and female members of his family to become members of the Auxiliary. This organization has contacts with the public that we professional men lack or are unable to utilize. The committee is grateful to the president, Mrs. Thomas d'Angelo, for her untiring efforts in behalf of the medical profession.

Mr. Speaker, I move this portion of the report be accepted.

DR. CLARENCE G. BANDLER, *New York:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Section 134

Report of Reference Committee on Report of Council, Part XII: Ethics

DR. EDWARD P. FLOOD, *Bronx:* The report of the Council Committee on Ethics was carefully considered. The decision on several matters presented to the committee has been held in abeyance awaiting the action of the House of Delegates of the American Medical Association at its meeting in June, 1954. We approve a recommendation of the Council that Chapter XVII, Section 1, of the Bylaws be amended so that following the word "Bylaws" there be inserted the words "or the *Principles of Professional Conduct*," so that Chapter XVII would then read:

> "*Section 1.* Amendments to these Bylaws and the *Principles of Professional Conduct*, except such as are obligatory by law, shall be made only at an annual meeting of the House of Delegates.
>
> "*Section 2.* Notice of the proposed amendment shall be given at a previous annual meeting of the House of Delegates, and before the same can be acted upon, it shall be published once before the annual meeting in the official bulletin or journal of the Society.
>
> "*Section 3.* The affirmative vote of two thirds of the House of Delegates present and voting shall be necessary for adoption.
>
> "*Section 4.* Amendments made necessary by law shall be made either by the Council or House of Delegates whenever such necessity exists."

I move that this part of the report be accepted.

Dr. Clarence G. Bandler, *New York:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

(For referral to Special Committee on Constitution and Bylaws, see Section 138, page 122.)

Section 135 (See 20)

Report of Reference Committee on Report of Council, Part XII: Belated Bills

Dr. Edward P. Flood, *Bronx:* The reference committee recommends the payment of the belated bills as published in the report of the Council, as well as that of Dr. Stuart G. Porter submitted in a supplementary report.

I move the adoption of this portion of the report.

Dr. Alfred L. George, *Genesee:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 136

Report of the Reference Committee on Report of Council, Part XII: Convention

Dr. Edward P. Flood, *Bronx:* The report of the Convention Committee was carefully considered, and it is with satisfaction that we note an increase in attendance at the Buffalo meeting of 1953.

The scientific program was outstanding, and the innovation of limiting the meetings of the sections to one has resulted in presentations of a higher quality in the specialty programs and has enhanced the attraction of the general sessions. The committee considered the recommendation of the Council to change the Section on Ophthalmology and Otolaryngology into two separate sections, and it is approved.

I move to accept this portion of the report.

Dr. Clarence G. Bandler, *New York:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Section 137 (See 56)

Report of Reference Committee on Report of Council, Part XII: Requesting A.M.A. Curb on Derogatory Statements by Physicians

Dr. Edward P. Flood, *Bronx:* The committee considered three resolutions.

Considering resolution number three introduced by Dr. Robin of Nassau, the subject was a request for an A.M.A. curb on derogatory statements by physicians. This resolution is similar in purport to one considered by the reference committee on Part XII of the Council Report at last year's meeting. It was one of many similar resolutions introduced and acted upon at the meeting of the House of Delegates of the American Medical Association in New York City last June. The committee feels that no useful purpose would be served by adoption of this resolution at this time. Motion therefore moved that the resolution be disapproved.

Dr. Clarence G. Bandler, *New York:* I second it.

Speaker Holcomb: Is there any discussion on this recommendation, which carries with it the disapproval of the resolution?

Dr. James R. Reuling, *Trustee:* Mr. Speaker, I wonder if the chairman of the reference committee would change his recommendation to that of no action instead of disapproval?

Voices: We can't hear you.

Speaker Holcomb: Will you please come forward and take a microphone?

Dr. Flood: I will accept the suggestion: instead of disapproval, that to say no action should be taken on it at this time.

Dr. Reuling: I think to attach a possible stigma to that by disapproving it is bad. If the chairman would change that to no action, it would be better.

Dr. Flood: I accept the suggestion, Dr. Reuling.

. . . There being no further discussion, the motion was put to a vote and was unanimously carried. . .

Section 138 (See 65)

Report of Reference Committee on Report of Council, Part XII: Proposed Change in Principles of Professional Conduct

Dr. Edward P. Flood, *Bronx:* The committee also considered resolution number 36, introduced by Dr. Thurman B. Givan, a councillor, on the subject of a proposed change in the *Principles of Professional Conduct*, the resolution being that Chapter I, Section 5, of the *Principles of Professional Conduct* of the Medical Society of the State of New York be deleted and there be substituted a paragraph titled, "The Relationship of the Physician to the Media of Public Information." This would make the language of the *Principles* identical with that in the Code of Ethics of the American Medical Association. The committee accepted this resolution, and I move its adoption.

Dr. Ben A. Borkow, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Flood: Mr. Speaker, I ask permission of the House to defer the report of the reference committee on a third resolution which we considered.

I move the adoption of the report which has been read, as amended.

Dr. Gerald D. Dorman, *Councillor:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Speaker Holcomb: Dr. Anderton and Dr. Williams just called my attention to the fact that that resolution having to do with the Bylaws (*See Section 134*) is automatically referred to Dr. Aaron's committee for action next year and report, and it is so ordered.

Dr. Rawls is recognized.

Section 139

Remarks by Dr. William B. Rawls

Dr. William B. Rawls, *New York:* I would like to make a few remarks concerning last evening's meeting. These are being made with the full knowledge of our speaker, and I hope will not be controversial. I would have made these last night, but Dr. Bauer's motions came so fast and furious, I had no chance. I think the meeting last night was very instructive. I think Dr. Schussheim's work, if nothing else, served to emphasize that the mounting costs of malpractice insurance are not due to any one factor and are beyond the control of this House. My own impression is that suits have increased because for the past twenty years there has been more or less a concerted effort to belittle the doctor in the eyes of the public and to destroy the confidence the public places in the doctor.

I think Dr. Schussheim misinterpreted the applause of the House. In my opinion this applause was a sporting one showing their appreciation for a good job done by Mr. Linder, a nonmedical man, under somewhat difficult circumstances, and if we had not had a closed session, we would not have obtained all of the information we did. I think we all agree that this House received a good deal of valuable information, but we are only a small part of this membership. What about the other members? How are we to educate them? During the past few days a good many doctors, knowing I was a member of this House, stopped me in the corridors of hospitals and called me at my office and wanted to know what goes on and made the following comments: "Why do I have to pay so much more? The American College of Physicians is writing a cheaper policy. Lloyds is writing a cheaper policy. The American College of Surgeons is planning one," etc. I patiently tried to explain some of the advantages of a group plan. I tried to point out that we had friendly, experienced counsel interested in us as doctors, and that if Lloyds or others' experiences were had, we might find ourselves without insurance.

Like Dr. McCarthy of the Bronx, I have had some experience in this field. When I was chairman of the Economic Council of the five counties of New York —I believe Dr. McCarthy brought the resolution up there—we asked Mr. Wanvig to appear before us, also other members of the Board on Malpractice Insurance. In spite of this I have an awful lot to learn about malpractice insurance. Most of the members of this House have had some experience, but what do you think the average member knows about this problem? I believe we must try and educate them. I believe such facts as the cost of administration being the lowest of any insurance, the rising number of suits throughout the State, the increasing size of verdicts in each case should be pointed out. Perhaps, it would be good for each county society to present some information on this subject at a stated meeting, and in addition the facts be published in each county journal. Perhaps the State Society should prepare a brochure under the direction of the Council. These are suggestions only, but I would like to move that the Council, bearing in mind some of the things I have mentioned, and the many facets to this problem, take some action to inform the membership. I would also like to urge every member of this House, whenever possible, to try and inform our membership.

Speaker Holcomb: The Vice-Speaker said there will be a few minutes before the election results are announced. Naturally, the executive session will not start until the election is over. I will declare a ten-minute recess. Please hold yourselves ready to come to order on short notice.

. . . Recess. . .

Section 140 (See 129)

Election Results

Speaker Holcomb: The House will please come to order. Dr. McCarty will report the results of the election. Dr. Anderton will put them on the board in his usual fine manner.

Dr. Charles F. McCarty, *Kings:* The results are as follows:

Assistant Secretary

Ezra A. Wolff	156
DuMont F. Elmendorf	46

Councillors

Gerald D. Dorman	205
Leo E. Gibson	201
Thurman B. Givan	199
Raymond McKeeby	123
Albert Vander Veer, II	114

Drs. Gibson, Givan, Dorman, and McKeeby were elected. (*Applause*)

Delegates

Walter P. Anderton	199
James R. Reuling	175
Floyd S. Winslow	154
Edward P. Flood	144
Ezra A. Wolff	140
Carlton E. Wertz	137
Thurman B. Givan	134
Gerald D. Dorman	123
Charles H. Loughran	92

That is nine. These men were elected as regular delegates.

For first alternate there was a tie between:

Frederic Holcomb	84
Herbert H. Bauckus	84
Elton R. Dickson	83
Harold F. Brown	73
William B. Rawls	62
Leo F. Schiff	60
Denver M. Vickers	45
Henry E. McGarvey	36
William T. Boland	22

Judicial Council

Norton S. Brown (four years)	179
Edward T. Wentworth (three years)	160
John F. Kelley (two years)	126
Christopher Wood (one year)	104

Speaker Holcomb: Thank you for your excellent report. Now you have all heard the results of the election.

At this time, members of the House of Delegates, our first scheduled order of business following the close of the elections is the appeal of Dr. Ben E. Landess from a decision of the Board of Censors of the Medical Society of the State of New York, and at this time the House will go into executive session.

Just one second, Dr. Anderton has a list of retired members to be elected first.

Section 141

Election of Retired Members

Secretary Anderton: I move the election to retired membership in the Medical Society of the State of New York of the gentlemen whose names are listed in the program of this Annual Meeting on pages 8, 9, 10, 11, and 12, and, in addition, the following gentlemen who have been nominated since the booklet program went to press:

James S. Allen, *Geneva*
Irvin C. Bronstein, *Bronx*
William H. Cary, *New York City*
Russell L. Cecil, *New York City*
Morris J. Clurman, *Brooklyn*
Vernon Ehle, *Gloversville*
Jacob Fisk, *New York City*
Harry Gans, *New York City*
Thomas F. Hassett, *Elmira*
Patrick Joseph Hurley, *Buffalo*
Arthur Israel, *New York City*
Alexander Philip Kaplan, *New York City*
George E. Lane, *Poughkeepsie*
Vincent D. Leone, *Niagara Falls*
Henry Miller, *Brewster*
Charles D. Post, *Syracuse*
Herman Louis Reis, *New York City*
William H. Ross, *Brentwood*
Frederick Hallet Spencer, *Waverly*
Michael J. Thornton, *New York City*
Walter Timme, *Cold Spring*
Adelaide E. Weston, *Jamestown*
John Harry Wild, *Buffalo*

Dr. Chas. Gordon Heyd, *Ex-President:* I second it.

Speaker Holcomb: You have heard the list. Is there any discussion? Wait a minute, there is one more that just came in.

Secretary Anderton: One further name: Benjamin Kresberg, of Queens County.

. . . There being no discussion, the motion was put to a vote and was unanimously carried, the complete list referred to being as follows:

James S. Allen, *Geneva*
Joseph I. Alperin, *Syracuse*
Edward M. Anderson, *Fulton*
Fannie Updyke Angelicola, *Elmira*
Bernard Aschner, *New York City*
Clyde O. Barney, *Syracuse*
Richard Bauer, *New York City*
Estelle C. Beach, *New York City*
Albert W. Beck, *Monroe*
August L. Beck, *New Rochelle*
Reuel A. Benson, *New York City*
Nelson K. Benton, *Mamaroneck*
Kurt Bleuhdorn, *New York City*
Ellis Bonime, *New York City*
Solomon Bossak, *New York City*
Wesley C. Bowers, *New York City*
Edwin C. Braynard, *Glen Cove*
George B. Broad, *Syracuse*
Irvin C. Bronstein, *Bronx*
Herbert R. Brown, Sr., *Rochester*
David Brumberg, *Buffalo*
Samuel A. Buchenholz, *New York City*
Timothy S. Buckley, *Jackson Heights*
John H. Burke, Sr., *Elmira*
Ethan Flagg Butler, *Elmira*
Arthur J. Capron, *Owego*
William H. Cary, *New York City*
Alfred F. Casebeer, *Rochester*
Russell L. Cecil, *New York City*
Festus M. Chaffee, *Middlesex*
Ralph W. Chaffee, *Syracuse*
Giuseppe Cirincione, *New York City*
Arthur Vernon Clarke, *Southampton*
Morris J. Clurman, *Brooklyn*
Moses Cohen, *Flushing*
Mabel C. Conway, *Syracuse*
Armistead C. Crump, *New York City*
Edmund Otto Darbois, *Brooklyn*
Morris Davidson, *New York City*
Rudolf Denig, *Bei Bayreuth, Germany*
William T. Doran, *New York City*
Francis B. Doyle, *Brooklyn*
James G. Dunseith, *New York City*
Marshall W. Dyer, *Syracuse*
Barnett I. Edelsack, *Bronx*
Charles Egelhofer, *Bayside*
Vernon Ehle, *Gloversville*
Clifford Walter Ellison, *New York City*
Max Elpern, *New York City*
Hyman S. Emil, *East Rockaway*
Alfred C. Emmel, *Mount Vernon*
Charles H. Erway, *Elmira*
Vincenzo Fanoni, *New York City*
Charles E. Farr, *New York City*
Jacob C. Fisk, *New York City*
Norton DeL. L. Fletcher, *White Plains*
Joseph H. Fobes, *New York City*
Moses L. Freundlich, *New York City*
Max Werner Friedemann, *New York City*
Joseph Friedmann, *New York City*
George H. Gage, *Rochester*
Harry Gans, *New York City*
John C. A. Gerster, *New York City*
David Gingold, *Brooklyn*
William R. Gladstone, *Walton*
Joseph Glassman, *New York City*
Abraham Goldberg, *Lynbrook*
John Randolph Graham, *New York City*
Francis L. Guarino, *Woodhaven*
Edwin Perry Hall, *Oneonta*
Leon C. Hamilton, *Elmira*
Anthony H. Hansen, *Douglaston*
Louis Harris, *Brooklyn*
Thomas F. Hassett, *Elmira*
Alfred M. Hellman, *New York City*
Leo J. Herbert, *Syracuse*
Karl K. Herz, *Hornell*
John V. Hibbard, *Port Chester*
Hugo C. Hoffmann, *Buffalo*
Arthur L. Holland, *New York City*
William Henry Holzapfel, *New York City*
James L. Hondorf, *Rochester*
Perry B. Hough, *New York City*
Anna Hubert, *New York City*
Edward H. Hume, *New York City*
H. N. Lyons Hunt, *New York City*
Edwin H. Huntington, *Ossining*
Albert R. Hurley, *East Rochester*
Patrick Joseph Hurley, *Buffalo*
Arthur Israel, *New York City*
James Jackson-Moore, *New York City*
Moritz Jacobson, *New York City*
Henry James, *New York City*
Edmund R. P. Janvrin, *New York City*
Leonard W. Jones, *Rochester*
Harold Booth Judd, *New York City*
Anthony T. Jurasz, *Elmhurst*
David John Kaliski, *New York City*
Alexander Philip Kaplan, *New York City*
Louis Rene Kaufman, *New York City*
Sylvester D. Keller, *Fulton*
Catherine Rose Kelley, *New York City*
Samuel O. Kemp, *Albany*
Eldred W. Kennedy, *Rochester*
Hugh M. Kinghorn, *Saranac Lake*
Hugo Oswald Klein, *New York City*
Homer J. Knickerbocker, *Geneva*
Otto Knina, *Staten Island*

John H. Korns, *Tarrytown*
Benjamin Kresberg, *Miami Beach, Florida*
Adolf Kriegsmann, *Binghamton*
Max Krimke, *New York City*
George E. Lane, *Poughkeepsie*
Thomas F. Laurie, *Syracuse*
Frederick J. Leonard, *Ilion*
Vincent D. Leone, *Niagara Falls*
Jerome S. Leopold, *New York City*
Michael Levitan, *Rome*
Jacob Hunter Lobsenz, *New York City*
Margaret Loeffler, *Rochester*
James E. Lovell, *Trumansburg*
Alfred F. Luhr, Sr., *Buffalo*
Luther B. MacKenzie, *Bedford, Nova Scotia*
Duncan MacPherson, *New York City*
Paul Mehlman, *Yonkers*
Elizabeth H. Merle, *Rochester*
William J. Mersereau, *New York City*
Henry Miller, *Brewster*
Isidore Miller, *Bronx*
Alvin H. Monroe, *Elmira*
Arthur C. Moorhead, *New York City*
John J. Moorhead, *Millbrook*
Charles I. Newton, *Geneseo*
Alfred H. Noehren, *Buffalo*
John Oberwager, *New York City*
John C. O'Connor, *Rochester*
William Herbert Ordway, *Longmeadow, Massachusetts*
Arthur H. Paine, *Rochester*
Rudolf Paschkis, *New York City* (Effective May 6, 1953)
Frank Pearlstein, *New York City*
Mabel H. Pearson, *Bridgewater, Connecticut*
Elmer L. Pennock, *Harrison*
Merle A. Place, *Hornell*
Charles D. Post, *Syracuse*
Winfred L. Potter, *Syracuse*
James K. Quigley, *Rochester*
Adoniram Judson Quimby, *New York City*
William J. Quinn, *Ridgewood*
Harris Milton Rabinowitz, *Brooklyn*
Loren P. Hansom, *Syracuse*
Floyd O. Reed, *Yonkers*
Hyatt Regester, *Buffalo*
Edmund P. Reimann, *Buffalo*
Herman Louis Reis, *New York City*
Isidor L. Ritter, *New York City*
Joseph Charles Roper, *New York City*
William H. Ross, *Brentwood*
Leo L. Roth, *Schroon Lake*
Howard F. Rowley, *Rochester*
Thomas A. Ryan, *Albany*
Arthur Sachs, *Elmhurst*
Solomon J. Sambur, *Brooklyn*
Charles R. Sawyer, *Yonkers*
Alexander H. Schmitt, *New York City*
Augusta Scott, *New York City*
Harry L. Segal, *Rochester*
Louis Sheinman, *New York City*
John A. Shields, *Brooklyn*
Joseph Slavit, *Brooklyn*
Frederick W. Smith, *Syracuse*
Morris Smith, *New York City*
Frederick Hallett Spencer, *Waverly*
Frank B. Spengler, *Baldwinsville*
Samuel Spiegel, *New York City*
Richard F. Steen, *New York City*
Ignatius L. Stein, *Flushing*
Leopold Stieglitz, *New York City*
Anna M. Stuart, *Elmira*
Clarence P. Thomas, *Rochester*
Michael J. Thornton, *New York City*
Walter Timme, *Cold Spring*
Claude H. Topping, *Binghamton*
Charles C. Trembley, *Saranac Lake*
Manuel Uribe Troncoso, *New York City*
Edward Delavan Truesdell, *Huntington*
Hendrik van Renken Stam, *New York City*
Philip J. Vetter, *City Island*
Ernst Waldstein, *New York City*
Allen Vincent Walker, *Rochester*
John Waluk, *Huntington*
William A. Wardner, *Saranac Lake*
Charles H. Webster, *Ithaca*
Elmer J. Wendel, *Rochester*
Max Wertheimer, *New York City*
Davenport West, *New York City*
Alfred J. Westlake, *Horseheads*
Adelaide E. Weston, *Jamestown*
Ernest E. Whipple, *Painted Post*
John Harry Wild, *Buffalo*
Percy Herbert Williams, *New York City*
Frank M. Wright, *New Rochelle*

SPEAKER HOLCOMB: Thank you, Dr. Anderton.

Section 142

Appeal of Dr. Ben E. Landess

. . . At 12:20 P.M. the House went into executive session. . .

The appeal of Dr. Landess from the decision of the Board of Censors was heard.

Mr. Mathias F. Correa represented the appellant, and Mr. Charles Margett was counsel for the appellee, the Medical Society of the County of Queens.

After presentation of their cases Mr. Correa and Mr. Margett answered several questions.

Following discussion the House, by ballot, *voted* that the decision of the Medical Society of the County of Queens, Inc., adopted at a meeting of said Society on September 30, 1952, in reference to the charges of unethical conduct made against Dr. Ben E. Landess is hereby sustained.

The House arose from executive session at 3:45 P.M.

SPEAKER HOLCOMB: The next consideration is a resolution which we passed over this morning, which was in Dr. Flood's report. We considered it, perhaps, could not be rightfully presented before the hearing.

Section 143 (See 49)

Report of Reference Committee on Report of Council, Part XII: Clarification of Principles of Professional Conduct

DR. EDWARD P. FLOOD, *Bronx:* Mr. Speaker and members of the House, the sequence in my report was interrupted, so for the benefit of the stenotyper we will go back to the second resolution that our committee considered, and it was carefully considered, the resolution of Dr. Alfred P. Ingegno, of Kings, the subject of which is "Clarification of *Principles of Professional Conduct.*" The committee heard the interested parties and was impressed by the result of the referendum of the membership of Kings County which favored these changes overwhelmingly. It recommended that the *Principles of Professional Conduct* of the Medical Society of the State of New York and the Code of Ethics of the American Medical Association clarify their respective codes in the sections relating to advertising, contract practice, and free choice of physicians, as well as the adoption of an additional section to Chapter III, Article VI, relative to the proration of fees. The reference committee approved this resolution, and I hereby move its adoption.

DR. CLARENCE G. BANDLER, *New York:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Flood: I now move the adoption of the report of my reference committee as a whole, and before doing so I want to thank the other members of the committee for the assiduous cooperation and consideration they gave, Dr. Clarence G. Bandler, Dr. Sol Shlimbaum, Dr. Arthur Q. Penta, and Dr. Alfred L. George.

Dr. Edwin A. Griffin, *Kings:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Speaker Holcomb: The House will now move from Penn Top to Sky Top.

. . . The meeting reconvened at 4:05 p.m. Vice-Speaker Williams called on Dr. Peter M. Murray, chairman of the Reference Committee on Report of the Planning Committee for Medical Policies. . . .

Section 144 (See 11)

Report of Reference Committee on Report of Planning Committee for Medical Policies and Permanent Headquarters

Dr. Peter M. Murray, *New York:* Mr. Speaker, this is a report of the reference committee on the Planning Committee for Medical Policies and Permanent Headquarters.

Your Planning Committee for Medical Policies submitted a report published in the April 15 issue of the New York State Medical Journal dealing with three matters which had been referred to it for study. They are (1) permanent headquarters, (2) Council Committee for General Practice, and (3) status of osteopaths. The committee also discussed (1) annual meeting dates for the district branch meetings, (2) the problem of the chronically ill, and (3) the study of Council and other committees from the standpoint of number of committees and size of committees, and so forth. This latter was approved by the Council following a suggestion of the Planning Committee that such a study be undertaken.

Two resolutions were referred to your reference committee by the speaker of the House at Monday's meeting:

1. The establishment of a Section on Allergy, introduced by Dr. Charles Spratt of Kings County, and

2. Discontinuing of Legislative Bureau to save monies, introduced by Dr. Schussheim of Kings County.

Permanent Headquarters.—Your committee notes the progress reported by the Planning Committee in regard to this important matter. It has held consultations with sources of authority for advice and guidance in reaching a proper decision. It showed awareness of the fact that in an organization of the dignity and strength of the Medical Society of the State of New York, practical considerations of original cost, upkeep, proper maintenance of facilities, adequate facilities for proper functioning of our Society, proper working conditions for the personnel, location, and so forth should reflect sound business judgment. The Planning Committee has exhibited favorable attitudes toward securing permanent headquarters. The Board of Trustees has earmarked $100,000 as a permanent home fund. The committee has inspected several buildings and has planned inspections of other buildings. Your committee notes with approval this statement in their report: "Consideration has been given to the idea that perhaps other mutually interested groups could be invited to participate in our plan."

The experience of our Society in the last ten years in rental occupations, changing sites, and inadequacy of housing of all of the activities of the Society in one building certainly gives sound basis for the direction of the thought of the Planning Committee.

The project of a permanent headquarters is under continuing study by the Planning Committee. Your committee applauds as sound the Planning Committee's admonition, as stated: "We urge that we do not jump to quick decisions; we urge that these headquarters be not elaborate, but modest and in keeping with the honor and dignity which the State Society justly deserves." Your reference committee recommends that the Subcommittee on Permanent Headquarters be empowered to place a binder on suitable property which may be available, in order to secure ample time for full and determinative decision by the Council.

Mr. Speaker, I move the approval of this part of the report.

Vice-Speaker Williams: Any discussion?

Secretary Anderton: May I suggest that after the words "a binder," "with consent of the trustees" be inserted?

Vice-Speaker Williams: Do you accept that?

Dr. Murray: I do.

Vice-Speaker Williams: Any discussion? All those in favor say "aye"; contrary "no." The motion is carried. This portion of the report stands adopted.

Dr. Murray: *Establishment of a Council Committee on General Practice.*—The House of Delegates voted to approve in principle and to refer through the Council to the Planning Committee for further study a resolution that this Society establish a Council Committee on General Practice. The Planning Committee has given thorough study to this resolution and has carefully evaluated its merits and its far-reaching implications.

On one point there is substantially unanimous agreement: that the general practitioner is the backbone of good medical practice. Everything possible should be done to recapture and retain—yes to enhance—the dignity and to promote appreciation by the public of the general practitioner. They are the foundation stones on which the substantial edifice of our present efficient system of medical practice is erected. This trend back to such appreciation of the value of the family doctor bids fair to increase in the direction of the restoration of this public servant to his proper place in the public mind.

The American Academy of General Practice and its New York State unit have done and are continuing to perform a highly meritorious service for the public good through its principles and program.

"It has been stated that there are about 31,000 physicians in New York State: 18,000 or 19,000 are general practitioners, and about 1,800 to 2,000 are members of the New York State Academy of General Practice. Much discussion took place about the practice of certain hospitals having established rules and orders or directives that are detrimental to the hospital practice of the general practitioner. There was much talk about discrimination against general practitioners."

Therefore, undeniably a very good case has been made out in favor of the general practitioner.

It is necessary, however, to consider the total picture of our Society and its various membership fields of interests and to relate this resolution, "that this Society establish a Council Committee on General Practice," to this total picture and the Society's welfare.

The relation of general practitioners to the various hospital staffs and restriction of their activities amounting to exclusion from participation in many staff activities for which they are qualified concern the Planning Committee greatly and elicited from them serious sympathy and thorough analysis. It seemed, however, to be the consensus of the Planning Committee that the solution of these problems did not lie in the establishment of a Council Committee on General Practice. Contributions to the solution of these problems should be the concern of every Council committee.

There are at present two committees concerned with general practice: (1) subcommittee of the Council Committee on Public Health and Education, composed of seven members; the present chairman is an active member of the New York State Chapter of the Academy of General Practice. (2) There is also a special committee on general practice appointed by our president representing the State Health Department, State Medical Society, and general practitioners group.

The Planning Committee recommends that action on the establishment of a Council Committee on General Practice be deferred at this time and "suggests to the president when he makes up his committee assignments for the next current Society year that the Subcommittee on General Practice be continued at this time but that it be made a subcommittee of the Council Committee on Hospital and Professional Relations."

Your reference committee after consultation with the Subcommittee on General Practice of the Council Committee on Public Health and Education, in accordance with their wishes, offers the following resolution:

"Since the primary need of the general physician is that of continuing postgraduate education and since this need appears to be best accomplished while under the guidance of the Council Committee on Public Health and Education, that the Subcommittee on General Practice be continued as a subcommittee of the Council Committee on Public Health and Education."

Mr. Speaker, your reference committee so recommends, and I move the adoption of this portion.

. . .The motion was seconded. . .

Vice-Speaker Williams: Any discussion? All those in favor say "aye"; contrary "no." The motion is carried. This portion of the report of the reference committee stands adopted.

Dr. Murray: *The Care of the Chronically Ill.*—The Planning Committee for Medical Policies recommends that the following resolution be passed by the House of Delegates:

> Whereas, the care of the chronically ill is an ever increasing problem; and
>
> Whereas, the New York State Health Preparedness Commission has made a comprehensive study of this problem and published its recommendations in 1947; and
>
> Whereas, the Medical Society of the State of New York was represented on this Commission and had a part in formulating these recommendations; and
>
> Whereas, very little has been done to implement these recommendations since their submission several years ago; therefore be it
>
> *Resolved*, that the Medical Society of the State of New York go on record as approving the recommendations of the New York State Health Preparedness Commission and urge their immediate development; and be it further
>
> *Resolved*, that a copy of this resolution be sent to the Governor of the State of New York and to other appropriate State officials and legislators.

Your reference committee recommends the approval of this resolution. For your information, I should like to read from a supplementary report of the Planning Committee:

> "At the joint meeting of the Council Committee with the State Department of Health on April 2, 1954, Dr. John J. Bourke, executive director of the New York State Joint Hospital Survey and Planning Commission, was present. The proposed amendment to the Hill-Burton Law was discussed. This covers the establishment of chronic disease units, nursing homes, diagnostic centers, and rehabilitation centers with an appropriation of $150,000 from the Federal government. The broad plan is to center these services around voluntary hospitals. At the Council meeting of April 8, 1954, it was voted to appoint a committee composed of the medical men on the various regional hospital councils of the State, in conjunction with the chairman of the Planning Committee and the chairman of the Public Health and Education Committee, for the purpose of studying the amendment to the Hill-Burton Law."

Your reference committee recommends the approval of this resolution, and, Mr. Speaker, I move the adoption of this portion of the report.

. . .The motion was seconded. . .

Vice-Speaker Williams: This portion carries with it the approval of the resolution. All those in favor say "aye"; contrary "no." The motion is carried. This portion of the report stands adopted.

Dr. Murray: *The Status of Osteopathy.*—To refresh the minds of the members of the House of Delegates and to give proper background information for intelligent consideration of this portion of the report of the reference committee dealing with the report of the Planning Committee for Medical Policies on the status of osteopaths, it seems necessary to state the directive under which the Planning Committee worked, namely, "The House adopted a reference committee report approving the intent of a resolution that this Society 'clarify its attitude toward osteopaths and the relations of the latter to the medical profession,' and 'suggesting that the appropriate Council committee study this subject in correlation with studies and/or recommendations made by the A.M.A.' "

Further, it seems necessary to include in the record the recommendations made at the June, 1953, meeting of the A.M.A. house of delegates in New York City, namely, (1) that the House of Delegates declare so little of the original concept of osteopathy remains that it does not classify medicine as currently taught in schools of osteopathy as the teaching of "cultist" healing; (2) that the House of Delegates state that pursuant to the objectives and responsibilities of the A.M.A. which are to improve the health and medical care of the American people, it is a policy of the association to encourage improvement in undergraduate and postgraduate education of doctors of osteopathy; (3) that the House of Delegates declare that the relationship of doctors of medicine to doctors of osteopathy is a matter of determination by the State Medical Association of the several states and that the State Associations be requested to accept this responsibility; (4) that the committee for the study of relations between osteopathy and medicine or a similar committee be established as a continuing body.

Following this, the board of trustees of the A.M.A. made the following recommendation: "Because of the length of the report and the controversial nature of its subject, the board feels that the House should have adequate time for its study and that the state associations should have opportunity to express their opinion. Therefore, it is recommended that the committee be continued but that action on the report be deferred until the June, 1954, session."

It was suggested that at that time the house be prepared—the house of delegates of the A.M.A. be prepared—to answer the following questions:

1. Should modern osteopathy be classified as cultist healing?

2. Since the objectives of the A.M.A. include improvement in undergraduate and postgraduate education, should doctors of medicine teach in osteopathic schools?

3. Should the relationship of doctors of medicine to doctors of osteopathy be a matter for determination by the several state associations?

The report of the Planning Committee deals with the question of osteopathy from these viewpoints.

The Planning Committee held several lengthy meetings on this problem. They availed themselves of authoritative sources of information in lengthy comprehensive panel discussions of the entire problem. The panelists included (1) the president and also immediate past-president of the New York State Osteopathic Society, (2) the present member of the New York State Board of Medical Examiners, (3) a former member of the New York State Board of Medical Examiners, (4) present secretary of the New York State Osteopathic Society, (5) a past-president of the American Osteopathic Society and chairman of the Bureau of Hospitals of the A.O.S., and (6) the president of the Chicago College of Osteopathy.

Information by letter and by appearance in person was obtained by your committee from the deans of our New York State medical schools; also the secretary of the State Board of Medical Examiners presented his views.

The resulting 100 or more pages of detailed recorded discussions of the differing points of view of the various persons is testimony to the thoroughness with which the Planning Committee conducted its deliberations under the able chairmanship of Dr. Peter Di Natale. Our interpretation of the report of the Planning Committee is that it recommends to the House of Delegates that the questions propounded in the recommendation of the board of trustees of the A.M.A. for report at the 1954 meeting of the A.M.A. be answered in the following manner:

Question 1.—Should modern osteopathy be classified as "cultist healing"? *Answer:* There is much evidence to show that modern osteopathy should no longer be classified as "cultist healing."

Question 2.—Since the objectives of the A.M.A. include improvement in undergraduate and postgraduate education, should doctors of medicine teach in osteopathic schools? *Answer:* We approve of removing the stigma "cultist" and approve physicians teaching in osteopathic schools.

Question 3.—Should the relationship of doctors of medicine to doctors of osteopathy be a matter for determination by the several state associations? *Answer:* We believe at this time it should be a matter of determination by the several state associations.

Your reference committee listened very patiently to all who came to appear before it to discuss the merits and the principles involved in their consideration of the status of osteopaths. It also read and digested the voluminous record of the hearing conducted by the Planning Committee; it also had the benefit of a very comprehensive and well-documented discussion of this problem by Dr. Charles L. Farrell, delegate to the A.M.A. from Rhode Island. The conclusions and recommendations of your reference committee, which incidentally reflected the consensus of opinion of those appearing before it, and concurred in by the chairman of the Planning Committee, are as follows:

1. Should modern osteopathy be classified as cultist healing? Your committee recommends that the answer be yes.

2. Since the objectives of the A.M.A. include improvement in undergraduate and postgraduate education, should doctors of medicine teach in

osteopathic schools? Your committee recommends that the answer be no. Not unless they disavow their basic concept.

3. Should the relationship of doctors of medicine to doctors of osteopathy be a matter of determination by the several state associations? Your reference committee recommends that the answer be no. The decision should be made on a national level.

Now, Mr. Speaker, please indulge a short discussion of the principles of osteopathy, and this material was largely taken from the report of Dr. Farrell of Rhode Island, to whom we wish to give due credit.

What is a cult? The principles of medical ethics of the A.M.A., 1953 revision, Chapter II, read as follows: "A sectarian or cultist as applied to medicine is one who alleges to follow or in his practice follows a dogma, tenet, or principles based on the authority of its promulgator to the exclusion of demonstration and scientific experience."

Does osteopathy today fit this designation of a cult?

Regardless of what individual osteopaths may claim—

Vice-Speaker Williams: May I interrupt? The next two pages of your report are all limited to the explanation of cults and osteopaths, are they not?

Dr. Murray: They are.

Vice-Speaker Williams: You have planned to move the adoption of a portion of the resolution?

Dr. Murray: I am prepared to move the adoption.

Vice-Speaker Williams: I would suggest, if I may, because of our press for time, that I interrupt you now and let us move back to the end of your number 3, where you say the "reference committee. . .be no. The decision should be made on a national level." Let's move the adoption there, and then I would suggest that the remainder of your evidence be presented in writing to be published in the Journal and the delegates can acquaint themselves of those facts between now and the next sitting. Will that be all right? With due respect to the work of your reference committee and yet in behalf of time.

. . .This part of the report of the reference committee on Report of the Planning Committee for Medical Policies is as follows:

> "A sectarian or cultist as applied to medicine is one who alleges to follow or in his practice follows a dogma, tenet or principles based on the authority of its promulgator to the exclusion of demonstration and scientific experience."
>
> Does osteopathy today fit this designation of a cult?
>
> Regardless of what individual osteopaths claim, regardless of the curriculum and the number of hours in the curriculum as advertised as being given to medical subjects in osteopathic schools, the record is clear. The 1914–15 Chicago College of Osteopathy catalog said, "Drugs are a failure." In 1914 at a meeting of the American Osteopathic Association they declared by official action: "We maintain an invariable stand against the teaching and practice of drug therapeutics." In 1915 the action was reaffirmed. In 1928 the official report of the Bureau of Professional Education of the American Osteopathic Association said: "No better weapon could be placed in the hands of the allopathic school than teaching materia medica in our colleges."
>
> In 1937 the Chicago College of Osteopathy catalog on page 44 states: "The subjects of pharmacology and materia medica as bases of therapy are not included in the curriculum." A discussion of various drugs by other schools of practice to influence a disease is given for the purpose of analysis.
>
> The Kansas City College of Osteopathy catalog for 1937, page 15, says: "The osteopathic physician in probably 90 per cent of his cases uses no drug or chemical agent. . . . He is known as a drugless physician."
>
> Many other sources could be quoted, all in the same vein, all of which point up the fact that if materia medica was taught, it was designed to show the poisonous effects of drugs and chemicals.
>
> Now for modern times. We turn to 1952. The authoritative osteopathic textbook by Dr. Page states on page 24: "Still worked out a system of practical therapeutics which subsequent discoveries have progressively confirmed and never invalidated." From the same textbook: "Pharmacology based on scientific experiment was dealing a deathblow to traditional drug therapy."
>
> Page 26—"A few alleviating drugs were still employed, but no longer as agents believed to possess curative value in themselves. . . The osteopathic structural technique devised by Still and elaborated by his pupils constituted original and valuable discoveries of modern therapy. . . . The restoration of structure integrity is the primary objective of the osteopathic physician. . . osteopathy is essentially a form of structural therapeutics."
>
> *The Osteopathic Concepts*—In the 1954 edition, the catalog of the Kirksville College of Osteopathy on page 10 states: "Manipulation has always been and still is a distinctive feature of osteopathic practice."
>
> Castilo, the Kansas City college professor, on page 11 defines the osteopathic lesion as follows: "Osteopathic lesions should be visualized and thought of as a roughly spherical area of disease and disordered tissue having as its approximate center a disturbed spinal articulation, and directly within its diameter one or more segments of spinal cord and one or more pairs of sympathetic ganglia."
>
> *Present-Day Concepts of the Osteopathic Principle*—A recent osteopathic textbook (Leon Page, D.O., 1952) states on page 33: "Structural abnormalities are encountered if diseased states exert their noxious defects chiefly by mechanical stress and by reflex disturbance to the blood and nerve supply to involved tissues."
>
> Andrew Taylor Still continues to be quoted constantly throughout the modern textbook:

Page 185—"Osteopathy as a system of structural therapeutic differs from conventional medicine." Page 164—"The practical application of osteopathic therapy as a treatment of disease has as a distinguishing feature the diagnosis and correction of structural derangement which have become known as osteopathic structural lesions."

Irvin M. Korr, Ph.D., of the Kirksville College of Osteopathy, writing in the *Journal of American Osteopathic Association*, volume 47, December, 1947, says: "It may be concluded that an osteopathic lesion represents a facilitated segment of the spinal cord maintained in that state by impulses of endogenous origin entering the corresponding dorsal root. All structures receiving efferent nerve fibers from that segment are therefore potentially exposed to excessive excitation or inhibition."

The foreword of Page's book, which is one of the latest authoritative textbooks of osteopathy, reads in part as follows: "The physician who masters the osteopathic philosophy and applies its principles knows what to do when confronted with bodily ills. Moreover he knows the modus operandi of osteopathic therapy and forsees its effect on the patient. . . . The more skillful he becomes in restoring normal structure in the patient the less use he finds for the methods which may be considered mere emergency or adjunctive value."

The 1954 catalog of the Chicago College of Osteopathy on page 12 says: "The true measure of usefulness of osteopathy lies in the enlarged scope of therapeutic technique made available through a study of *osteopathic* principles and through proficiency and skill in applying these principles. The College *emphasizes this phase* of student training."

Apparently the osteopathic colleges recognize no change in the concept of osteopathy.

The Code of Ethics of the American Medical Association previously quoted defines very clearly what the A.M.A. at the present time considers a cultist to be. Either the Code of Ethics is correct and should be followed or, if incorrect, should be changed. If osteopathy is a cult, then physicians who work with and consult with osteopaths are guilty of violating the Code of Ethics.

The House of Delegates of the American Medical Association has the power to change its Code of Ethics, but until changed the code should be observed. The power to suspend or modify the Code of Ethics cannot be delegated to the several state associations. The medical profession would be quick to refuse cooperation with Christian Scientists, faith healers, naturopaths, chiropractors, and others who are *not* doctors of medicine. Actually the osteopath is *not* a doctor of medicine in any sense of the word.

Therefore, we cannot consult with them or work with them. It would be improper, moreover, to teach *medicine* in a nonmedical institution, i.e., a college of osteopathy. We do not extend postgraduate *medical* training to people who are *not* doctors, and we do not become a party to a philosophy that is basically wrong, even though its graduates, in actual practice, espouse our system and give only lip service to their own.

The institution of postgraduate training for osteopaths is *not* our problem, nor is the welfare of their patients our problem, any more than the welfare of the patients of any other cultist is our problem. These patients *do not seek* the services of medicine! They choose their own practitioner and their own method of treatment —just as they choose their church and their politics. If the church they choose or the political party they vote into office seems to fail them, they can always change.

If patients choose *not to use* our services and to reject our system of medicine, they are free to change their original choice at any time, but they cannot be our responsibility until they choose to accept medicine and reject nonmedical practitioners. When we see the patient of another type of practitioner, it should only be after the other practitioner has discharged the case. That is provided for in the Code of Ethics.

The requirements of the American Osteopathic Association for minimum standards for osteopathic hospitals specifically state that the word "osteopathic" must be used and prominently displayed on all hospitals. The modern osteopathic textbook and current osteopathic literature reiterate time and again the principles of manipulative therapy, relate it to Dr. Still's discoveries, and quote methods of treatment based upon manipulative therapy.

Comment—The only way to eliminate the stigma of cultism is for osteopathy itself to disavow the osteopathic concept and embrace modern medical science, just as they attempt to follow modern medical practice in the community. We in medicine constantly question our own hypotheses and constantly change our methods as science advances.

Fifty-five years ago there were 32 sectarian medical schools. Now there is one allopathic system of medicine. Sectarian doctrine faded with the advance of science, and that *must* happen to osteopathy, or it will continue to pursue a separate course.

The osteopaths, themselves, have no intention of changing, and it is interesting to read in the October, 1953, issue of *Medical Economics* the following:

> OSTEOPATHS STATE GOAL:
> STRENGTH IN UNITY
>
> Although Osteopaths would welcome recognition and cooperation from the medical profession, they plan to continue standing on their own two feet as a separate school of healing. They made that abundantly clear—by work and deed—at their latest annual convention in Chicago. Some typical statements of the D.O. point of view:
>
>> The outgoing president of the American Osteopathic Association, Donald V. Hampton of Cleveland, urged his fellow D.O.'s to be proud of their calling. To meet the problems of the future, he said in his valedictory, osteopathy must remain "strong and united."

> Incoming president, Allan A. Eggleston of Montreal, said osteopathy has never been stronger. To keep the profession that way, he called on his colleagues to give financial support to the six colleges of osteopathy.
>
> The A.O.A. House of Delegates followed up by reaffirming the determination of the osteopathic profession to maintain its identity as a separate and distinct school of medicine.
>
> Summing up the work of the convention, a reporter for the *Chicago Daily News* quoted an A.O.A. spokesman as saying that osteopathy is ready to cooperate with the A.M.A. to improve health services—but (we're) not standing with hat in hand waiting for the A.M.A. blessing.

Medicine has not reached the point where it has to compromise its principles in order to make life easier for some doctors or to save them embarrassment in certain local situations. When osteopathy is ready to disavow its dogma that the osteopathic lesion is the basis of its pathology and that the correction of the "lesion" is the principle on which their science of osteopathy is based, then will be the proper time to talk about cooperation in elevating the standards of osteopaths to those of regular practitioners of medicine. That will be the time when cooperation will be possible.

All other sectarian schools of medicine have recognized this principle, and there has been no compromise on the part of medicine regarding the poor quality of medical training given in second-rate and third-rate medical schools. There should be none regarding osteopathy. Certainly the American Medical Association and the American medical profession does not need to include osteopaths in their sphere of influence in view of the official attitude of the Osteopathic Association in reaffirming their determination to maintain their integrity as a separate school of medicine. We should not be put in a position of making concessions to osteopathy.

Dr. Murray: Yes, Mr. Speaker, I move the approval of this part of our report.

. . . The motion was seconded . . .

Vice-Speaker Williams: We are now ready to vote the adoption of these three recommendations:

1. Should modern osteopathy be classified as cultist healing? Your committee recommends that the answer be yes.

2. Since the objectives of the A.M.A. include improvement in undergraduate and postgraduate education, should doctors of medicine teach in osteopathic schools? Your committee recommends that the answer be no. Not unless they disavow their basic concept.

3. Should the relationship of doctors of medicine to doctors of osteopathy be a matter for determination by the several state associations? Your reference committee recommends that the answer be no. The decision should be made on a national level.

You are all aware of these three resolutions?

Dr. Denver M. Vickers, *Councillor:* I think this is still a controversial question. Osteopaths are licensed to practice in the State of New York and are quite different from some of the other cultists. It is an open question. It isn't settled yet. I would move you, therefore, that it be referred back to the Council, the appropriate Council committee, for restudy during the coming year.

Vice-Speaker Williams: Don't you realize, Dr. Vickers, that the A.M.A. action has been—the A.M.A. has sent this to the states to try and find out the opinion of each state so that the next A.M.A. knows how the states feel about this? This isn't our final word on it. This is just our opinion as a constituent of A.M.A.

Dr. Peter J. Di Natale, *Councillor:* Mr. Speaker, and members of the House, your Planning Committee, as it has intimated, has spent a great deal of time—I hold no brief for osteopaths, believe me. However, Dr. Murray quoted from the code of ethics of the A.M.A. I am quoting from the *Principles of Professional Conduct* of the Medical Society of the State of New York. I believe this is the same thing. "A sectarian or cultist as applied to medicine is one who alleges to follow or in its practice follows a dogma, tenet, or principle based on the authority of its promulgator to the exclusion of demonstrations and scientific experience."

In my opinion, I don't think the osteopaths come under that category. They do not exclude demonstrations and scientific experience. They are allowed to practice medicine and surgery in New York State. They also come under the Disability Benefits Law. They also practice compensation medicine.

May I read to you: Your Planning Committee wishes to state that the following report in regard to the osteopathic problem does not necessarily represent the policy of the Medical Society of the State of New York. It is merely the thinking of the Society at this time to be combined at the top level with the thinking of the other state medical societies. This is offered for purposes of discussion and further study at the next session of the A.M.A. Your committee felt particularly in regard to the question of teaching at osteopathic schools, a doctor should teach in the osteopathic schools provided that, and these provisos were left off in the report of the reference committee, we of organized medicine—excuse me—provided we of organized medicine know more definitely what role these physicians would be permitted to play in the teaching program. Two, provided that these physicians have a part in controlling the curriculum. Three, provided that these physicians have a voice in developing teaching standards and teaching methods and provided that proper inspection is permitted by the A.M.A. Council on Medical Education and Hospitals or other medically accepted accreditation groups.

We do not believe that physicians should teach in osteopathic schools just as window dressing only. We also believe that this approval should be given for a stipulated time such as five years and after that period has elapsed re-evaluation of the problem to be again studied to observe evidence of general good faith and intent on the part of these osteopathic institutions.

We felt that we certainly shouldn't stick our heads in the sand and not talk to these men. It was our opinion that perhaps at the next session of the A.M.A. we could meet with them if they agreed to our provisos. We were willing to go along and allow medical men to teach in their institutions if they accepted the provisos that we had put on them, but not otherwise.

Could I be permitted to read? I know it's long, sir, but this is an important topic. I don't think there—that it should be dispensed with that readily. I would like, if I may—if I may not, please tell me—to read to you a couple of pages of testimony given at our meeting?

Vice-Speaker Williams: Has this testimony been presented to the reference committee?

Dr. Murray: We have heard that.

Vice-Speaker Williams: I think the House has confidence in the committee. Does the House wish to hear this testimony at this time? Is there a motion that some of this testimony be put in the recorded minutes as we did with the portion of Dr. Murray's?

. . . The motion was made and seconded . . .

Vice-Speaker Williams: All in favor say "aye"; contrary "no." The motion is carried. Is there any other discussion? Dr. Dorman is recognized.

Part of Report of Planning Committee for Medical Policies

Status of Osteopaths.—Your Planning Committee wishes to state that the following report in regard to the osteopathic problem does not necessarily represent the policy of the Medical Society of the State of New York. It is merely the thinking of the Society at this time, to be combined at the top level with the thinking of the other state medical societies. This is offered for purposes of discussion and further study at the next session of the A.M.A.

In order to acquaint the members of the Council and House of Delegates and to review briefly the above situation, let us state that at the June, 1953, session of the A.M.A. in New York City a special committee of the A.M.A. House of Delegates reported to the House of Delegates on its study and made the following recommendations:

1. That the House of Delegates declare so little of the original concept of osteopathy remains that it does not classify medicine as currently taught in schools of osteopathy as the teaching of "cultist" healing.
2. That the House of Delegates state that pursuant to the objectives and responsibilities of the American Medical Association, which are to improve the health and medical care of the American people, it is the policy of the Association to encourage improvement in undergraduate and postgraduate education of doctors of osteopathy.
3. That the House of Delegates declare that the relationship of doctors of medicine to doctors of osteopathy is a matter for determination by the state medical associations of the several states, and that the state associations be requested to accept this responsibility.
4. That the Committee for the Study of Relations Between Osteopathy and Medicine or a similar committee be established as a continuing body.

Following this, the Board of Trustees of the A.M.A. made the following recommendations:

> Because of the length of the report and the controversial nature of its subject, the Board feels that the House should have adequate time for its study and that the state associations should have opportunity to express their opinions. Therefore, it is recommended that the committee be continued but that action on the report be deferred until the June, 1954, session.
>
> It is suggested that at that time the House be prepared to answer the following questions:
>
> 1. Should modern osteopathy be classified as "cultist" healing?
> 2. Since the objectives of the American Medical Association include improvement in undergraduate and postgraduate education, should doctors of medicine teach in osteopathic schools?
> 3. Should the relationship of doctors of medicine to doctors of osteopathy be a matter for determination by the several state associations?

There was a division of opinion on the report of the Reference Committee on Miscellaneous Business, to which the special committee report was referred at the House of Delegates session.

The majority opinion was as follows:

> We, the majority of the Reference Committee on Miscellaneous Business, recommend the adoption of the Supplementary Report of the Board of Trustees on the report of the Committee for the Study of the Relations Between Osteopathy and Medicine. The resolution introduced by Dr. J. Lafe Ludwig for the California Medical Association on the subject of osteopathy was considered with the supplementary report of the Board of Trustees on osteopathy, and it is our opinion that this resolution is covered by the supplementary report of the Board. A minority report from your reference committee will be presented.
>
> It is our opinion that the committee of the Board of Trustees has made a great contribution in its Study of the Relations Between Osteopathy and Medicine. It is a splendid and constructive accomplishment and requires complete knowledge, time, and very careful consideration in order that we may make no mistake in our recommendations and deliberations concerning it.
>
> There are many differences in the types of licensure granted to osteopaths in different states.
>
> The Board of Trustees also recommends that action on the report be deferred until the June, 1954, session.
>
> It is our present belief that these recommendations are sound, constructive, and demand from the House of Delegates the usual evaluation and support it likes to give to reports of our Trustees. We cannot see any cause for emergency action. As members of the Reference Committee on Miscellaneous Business, we would like to move the adoption and concurrence with the recommendations of the Supplementary Report of the Board of Trustees on the Study of the Relations Between Osteopathy and Medicine.

Your Planning Committee, in order to make proper study of the problem and to give the osteopathic group an opportunity to be heard and also so that we could obtain information that would guide us in our deliberations, invited to our meetings the following individuals representing osteopathy: (1) the president and also immediate past-president of the New York State Osteopathic Society, (2) the present member of the New York State Board of Medical Examiners, (3) a former member of the New York State Board of Medical Examiners, (4) present secretary of the New York State Osteopathic Society, (5) a past-president of the American Osteopathic Society and chairman of the Bureau of Hospitals of the A.O.S., (6) the president of the Chicago College of Osteopathy. Information by letter and by appearance in person was obtained by your committee from the deans of our New York State medical schools; also the secretary of the State Board of Medical Examiners presented his views.

We of the Planning Committee feel that the above men were of the higher echelon of the osteopathic physicians. They represented their particular group very ably. They are men of the highest intention and desires. They are trying to elevate their members to higher standards and to the highest type of their particular practice of osteopathic medicine.

Many statements and questions and answers have been recorded. Many opinions have been expressed. Minutes of these meetings are on file in our State Society's office. There are about 100 pages of statements, questions, and answers devoted to this problem of osteopathy.

The Planning Committee was selected by our Council to study this problem. We have spent a great deal of time at our meetings in this discussion. We have studied statements made by several deans of our medical schools, letters from a great majority of the deans in response to a letter from your chairman, and statements made by Dr. Ezell, secretary of the State Board of Medical Examiners, who has visited several osteopathic schools.

We believe that the questions that have been propounded by the Trustees of the A.M.A. in regard to this osteopathic problem could have been answered by a "yes" or "no." However, we believe, too, this was not the intent of the Council. Let us not forget that this issue was the most controversial one brought before the House of Delegates meeting of the A.M.A. in June, 1953. With that in mind, we attempted to survey the issue as thoroughly as we could in the prescribed time. This we believe we have done.

We would suggest that the questions asked by the trustees of the A.M.A. in regard to this osteopathic problem be rearranged in order, and to that end, we desire to offer our comments to question 3, namely, "Should the relationship of doctors of medicine to doctors of osteopathy be a matter for determination by the several state associations?" We believe that, at this time, this should be a matter for determination by the several state associations.

Question 2, "Since the objectives of the A.M.A. include improvement in undergraduate and postgraduate education, should doctors of medicine teach in osteopathic schools?" The first paragraph of the Oath of Hippocrates is as follows:

> I swear by Apollo, the physician, and Aesculapius, and Health, and All-heal, and all the gods and goddesses, that, according to my ability and judgment I will keep this oath and stipulation: to reckon him who taught me this art equally dear to me as my parents, to share my substances with him and relieve his necessities if required; to regard his offspring as on the same footing with my brothers, and to teach them this art if they should wish to learn it, without fee or stipulation, and that by precept, lecture and every other mode of instruction, I will impart a knowledge of the art to my own sons and to those of my teachers, and to disciples bound by a stipulation and oath, according to the law of medicine, but to none others.

Following considerable discussion, your committee desires to answer this portion of the A.M.A. questionnaire as follows: We of the Planning Committee believe that doctors of medicine should teach in osteopathic schools provided that (1) we of organized medicine know more definitely what role these physicians would be permitted to play in the teaching program; (2) these physicians have a part in controlling the curriculum; (3) these physicians have a voice in developing teaching standards and teaching methods; and (4) proper inspection is permitted by the A.M.A. Council on Medical Education and Hospitals or other medically accepted accreditation groups. We do not believe that physicians should teach in osteopathic schools just as "window dressing" only. We also believe that this approval should be given for a stipulated time such as five years, and after that period has lapsed, re evaluation of the problem to be again studied to observe evidence of general good faith and intent on the part of these osteopathic institutions.

Question 1, "Should modern osteopathy be classified as 'cultist' healing?," we think should be answered last. Definition of "cult" according to Webster is as follows: "1. A system of worship of a deity; as, the cult of Apollo. 2. Hence: (*a*) the rites of a religion. (*b*) Great devotion to some person, idea, or thing, esp. such devotion viewed as an intellectual fad. (*c*) A sect" (*Webster's New Collegiate Dictionary*, copyright 1949).

Quote from Cline report on the concept of osteopaths follows:

> Osteopathy was begun in 1874 by Dr. Andrew Taylor Still, a practicing physician. He promulgated a concept that all "disease is the result of anatomical abnormalities followed by physiological discord," and that the "anatomical abnormalities" consisted of lesions of bones, joints, and their supporting structures. These, in turn, induced disturbances of nerve and vessel functions that produced pathological conditions in other tissues. He inveigled against drugs, serums, vaccination, and "electricity, x-radiance, hydrotherapy or other adjuncts." He believed that "Osteopathy is an independent system and can be applied to all conditions of disease. . .and that surgery should be advocated only "as a last resort." He said, "We believe that our therapeutic house is just large

> enough for osteopathy and that when other methods are brought in just that much of osteopathy must move out."
>
> The original concept of Dr. Still could be classified only as a "cultist" healing.
>
> Since that time a great evolutionary change has taken place in osteopathy. It is difficult to trace the chronological course of this development and to document it with relation to time. Apparently no historical account exists. We were unable to find one and the American Osteopathic Association could not furnish us with a reference to one.

Quote from *Principles of Professional Conduct*, Medical Society of the State of New York, follows: "A sectarian or cultist as applied to medicine is one who alleges to follow or in his practice follows a dogma, tenet, or principle based on the authority of its promulgator to the exclusion of demonstration and scientific experience."

It would appear from statements made at our meetings and from reports received by our committee from the deans of our medical schools and from information obtained from numbers of physicians and from the secretary of the New York State Board of Medical Examiners that there is much evidence to show that modern osteopathy should no longer be classified as "cultist" healing. We believe that this classification should be subject to a time limit, and five years was suggested. At the end of that period of probation, if you will, organized medicine shall review the situation noting well what changes, if any, for the better and how the osteopaths meet other conditions that may be set up by medically accepted agencies.

We of the Planning Committee wish to state further that we approve of removing the stigma of "cultist" and approve physicians teaching in osteopathic schools with the provisos stated, not because they have been licensed by our State Board of Medical Examiners or State Board of Regents but in spite of that fact, lest we forget we had nothing to do with their licensing.

Dr. Gerald D. Dorman, *Councillor:* I would like to move these three questions be voted on separately in succession.

Vice-Speaker Williams: I will just say that that is what we will do.

Dr. Murray: I wish the ladies and gentlemen of the House will bear in mind that your reference committee has made three recommendations. The supporting argument for it has not been read. It has been ordered printed. You have not heard it.

Voice from the Floor: Mr. Speaker, gentlemen, may I suggest that you do not form your opinions because of the fact that the osteopaths are licensed to practice medicine in this State and recognized in workmen's compensation and under the disability laws. Probably they know how to put legislation across for their benefit.

Vice-Speaker Williams: Any members of the House feel that they are not well enough informed before we vote on these three recommendations separately?

Dr. Thomas M. D'Angelo, *Assistant Treasurer:* Dr. Di Natale intimated that although they come under the name of cult according to definition of the A.M.A., they possibly do not come under that definition with our own code of ethics because they do other types of practice besides osteopathy. If that be so, and the osteopaths do other forms of treatment, carry out other forms of treatment besides osteopathy and then do not admit officially by their national organizations that there are other causes for disease besides some dislocations or malformations of the spine, then I think they are intellectually dishonest.

Vice-Speaker Williams: Any further discussion? Dr. Flood.

Dr. Edward P. Flood, *Bronx:* When Dr. Cline presented this to the House of Delegates, I sat in on the reference committee. I asked Dr. Cline were they willing to change their titles, to disassociate themselves from the word osteopath and be doctors of medicine? He said, no, they will not do that.

Vice-Speaker Williams: All in favor of the first recommendation of the reference committee, which reads: Should modern osteopathy be classified as cultist healing? And your committee recommends that the answer be yes. All those in favor signify by saying "aye"; contrary "no." The ayes have it. This portion of the report stands adopted.

The second question: Since the objectives of the A.M.A. include improvement in undergraduate and postgraduate education, should doctors of medicine teach in osteopathic schools? Your committee recommends that the answer be no. Not unless they disavow their basic concept. Is there any discussion of this particular question? Dr. d'Angelo.

Dr. d'Angelo: I think the other two questions are purely academic. If we have gone on record that they are a cult then we certainly can't teach in their schools or anything else.

Vice-Speaker Williams: All in favor of this portion say "aye"; contrary "no." It is carried.

To the third question, your reference committee recommends the answer be no. All in favor say "aye"; contrary "no." It is carried.

All three recommendations of the reference committee stand adopted.

Dr. Murray: Your reference committee submits the following schedule for district branch meetings for 1954, and this has been worked out in accordance with the various district branches.

Number 1, the afternoon of Monday, during the House of Delegates.

District Branch 2, dinner, evening, on Wednesday of the third week of September.

District Branch 3, the forenoon, afternoon, and dinner on Thursday of the third week of September.

District Branch 4, afternoon, dinner, and evening on Thursday of the third week of October.

District Branch 5, afternoon, dinner, evening on Wednesday of the third week in October. These two district branches, four and five, will swap days on alternate years.

District Branch 6, afternoon, dinner, evening on Wednesday of the fourth week in October.

District Branch 7, morning, afternoon, dinner on Wednesday of the fourth week in September.

District Branch 8, morning, afternoon, dinner on

Thursday of the fourth week in September. District Branches 7 and 8 will swap days in alternating years.

District Branch 9, afternoon, dinner, evening on Thursday of the first week in October.

Mr. Speaker, I move the adoption of this portion.

. . . The motion is seconded . . .

Secretary Anderton: To clarify the record, the Seventh and Eighth Branches have agreed to change the days as read by the chairman of the reference committee, and this year the Seventh will meet on Thursday, the fourth week in September, and the Eighth will meet on Wednesday in the fourth week of September.

Dr. Murray: That is provided for in the swapping of alternate years.

Vice-Speaker Williams: They can swap. All in favor say "aye"; contrary "no." This portion of the report stands adopted.

Section 145 (See 55)

Report of Reference Committee on Report of the Planning Committee: Establishment of a Section on Allergy

Dr. Peter M. Murray, *New York:* Now, of the two resolutions referred to this committee, the first is the "Establishment of a Section on Allergy." (*See Section 55*)

Your reference committee recommends approval of this resolution. Mr. Speaker, I move its adoption.

Dr. A. W. Martin Marino, *Kings:* I second the motion.

Vice-Speaker Williams: All those in favor say "aye"; contrary "no." The motion is carried.

Section 146 (See 48)

Report of Reference Committee on Report of Planning Committee: Discontinuing Legislative Bureau To Save Money

Dr. Peter M. Murray, *New York:* A resolution concerning "Discontinuing Legislative Bureau To Save Money." (*See Section 48*)

Your reference committee recommends disapproval of this resolution, and I move its adoption, Mr. Speaker.

Dr. Peter J. Di Natale, *Councillor:* I second the motion.

Dr. Aaron Kottler, *Kings:* For the past number of years the Legislation Committee has worked very hard and diligently trying to have legislation enacted on behalf of this Society. Your various chairmen have given up much of their time at a sacrifice to their practices and have not accomplished the desired result of this House of Delegates.

A recommendation came in that we have a change in our executive officer, a number of years ago. Such change was made. Another recommendation was made that we have a legal adviser to the executive officer. I am using that word, legal adviser, very advisedly. And a legal adviser to the executive officer was engaged to enhance the passage of bills on behalf of our Society. Three years have passed, and outside of one bill this past year on a proration of fees, none of our bills has been enacted into law. If these people cannot produce for us, then I believe studies should be made of having others who will produce for us. You are paying for it. And if anybody can't do what you want, it's about time, after three years, to make a change. Last year, or the year before, a special committee was appointed to evaluate the activity of the Legislation Committee. I believe Dr. Wolff was chairman of that committee. Dr. Loughran was a member of that committee. Recommendations were drawn. I wonder what has been done with the report of that special committee? What action has been taken on it? This resolution does not say that we should discontinue the Legislative Bureau. It says that we should refer to the Council, that the president shall appoint a committee to study the advisability of discontinuing this particular branch of our State Medical Society and make recommendations to the Council of the State Medical Society. If the Council of the State Medical Society and this special committee think that certain changes should be made and still retain this particular branch, then we still could have this particular branch and make the improvements.

The monies that we are spending—I believe it was $27,000 this year, $25,000 last year, and another $20,000 the year before—thus, in three years a good sum of money, so that we should be able to see some results with what we are trying to accomplish.

Voice from the Floor: In reference to this matter I merely want to state all the action of the Legislative Bureau is not in attempting to pass the bills which the House mandates, but there is a great deal of action in preventing the passage of bills which would do us harm. I also want to state in answer to Dr. Kottler that if he would read the report of the Legislation Committee, he will find what happened to the report of the special committee of Dr. Wolff.

Vice-Speaker Williams: Any other discussion?

Dr. Charles H. Loughran, *Kings:* I was a member of that special committee. Dr. Wolff is here, and in our discussions I don't think we were too enthusiastic about the effect and efficacy of the Albany office. We did, however, state that the organization at Albany had had two or three years in which to gain some experience and that we felt that it should be given some further time to decide and to find itself and that at that time some means to investigate its efficacy should be taken by some responsible body, and I think this resolution merely makes that effective. I would, therefore, think that it should be approved.

Vice-Speaker Williams: Dr. Burk.

Dr. Samuel B. Burk, *New York:* Mr. Speaker, ladies and gentlemen, I believe that it is a question of referring it. I don't see any harm that can be done by referring a problem such as was presented, and I, therefore, call for the question.

Vice-Speaker Williams: A call for the question means a vote.

Dr. Solomon Schussheim, *Kings:* The reference committee treated me very kindly when I appeared before it in trying to ascertain from me what I thought of the capabilities of legal representatives and the medical representative, which I thought was germane to the discussion of the resolution. All it said was that a committee be appointed to study it. We didn't say it should be dissolved; a committee should be appointed to study. We have been studying for three and a half days; perhaps the committee can study for another half an hour and report to the Council.

Dr. Murray: Mr. Speaker, may I call to the attention of the House that early in my report I read that your Planning Committee discussed among other things the study of the Council and other committees of our Society from the standpoint—of the number of the committees, the size of the committees, the expense of the committees, and so forth, and so forth. It was approved following the suggestion of the Planning Committee that such a study be undertaken. That work is in process now, and it might well include this subject.

Dr. Schussheim: Mr. Speaker, it happens that this points directly at a report that was given a year ago. This is a continuation of a problem that has been confronting us for years.

Vice-Speaker Williams: The chairman says that readoption of this resolution is unnecessary. He has just told you so.

All those in favor of the resolution of the reference committee will say "aye"; contrary "no." It is carried. The reference committee's recommendation which carries with it the defeat of the resolution stands adopted.

Dr. Murray: Mr. Speaker, I move the adoption of the report of this committee as whole, with the changes as indicated.

...The motion was seconded...

Vice-Speaker Williams: All those in favor will say "aye"; contrary "no." The motion is carried. The report as a whole, with the changes indicated, stands adopted.

Dr. Murray: I wish to thank all of those who appeared before our reference committee and helped us with the discussion of these problems and especially for the devoted work of the members of this committee, John C. Brady, Christopher Wood, and John F. Kelley. Dr. Anderson, who was on the committee, was absent and didn't take part in the deliberations. Thank you.

Vice-Speaker Williams: Thank you very much, Dr. Murray.

...The members arose and applauded...

Section 147

Report of Reference Committee on Report of the Council, Part VI: Economics, Public Medical Care, Medical Licensure and Medical Service, Hospital and Professional Relations

Vice-Speaker Williams: The chair recognizes Dr. Loughran, who is chairman of the Reference Committee on Report of the Council, Part VI, Medical, Hospital, and Professional Relations.

Dr. Charles H. Loughran, *Kings:* Mr. Speaker, ladies and gentlemen of the House. The report of the Subcommittee on Public Medical Care reveals a great amount of work done in the interest of the welfare patient and his physician. The committee advises (1) no legislation, at this time, (2) further study of health and hospital insurance, (3) further observation of the improved work of the Welfare Department under the new welfare manual, (4) that the medical profession take the lead in providing solutions to the medical economics problems, lest the initiative be passed to others.

I move the adoption of this part of the report.

Vice-Speaker Williams: Any discussion?

...The motion was seconded...

Vice-Speaker Williams: All those in favor will say "aye"; contrary "no." The motion is carried. This portion of the report stands adopted.

Dr. Loughran: The Economics Committee reports some valuable information which should be read and is important for the refutation of claims of excessive gain by the profession. It covers the income of physicians and the expenditure of the medical dollar. It is for your information. The report of the Committee on Old-Age and Survivors Insurance disapproves social security. Your reference committee disapproves this report and recommends the approval of old-age and survivors insurance on a voluntary basis. I move the adoption of this part of the report.

Vice-Speaker Williams: Any discussion? Dr. Wolff.

Dr. Ezra A. Wolff, *Queens:* May I ask what the effect of this will be? What will be our stand if we pass this resolution?

Vice-Speaker Williams: Mr. Chairman?

Dr. Loughran: The expectation was that we would approve social security.

Vice-Speaker Williams: Any other discussion?

Dr. Wolff: I think this House on several occasions has gone on record as being against the idea of petitioning the government to include physicians under social security. The A.M.A. has similarly gone on record. We all know, I think, by now, the meaning of social security. We know that in terms of dollars that if we go for social security, if we are included, they will give us a small sum of money which we cannot live on. If we try to add to it and we do, they will not give it to us. So that in either case we cannot have any security. We will be being social. This is strictly socialistic. We are getting a handout. I say we want no handout. I say if we can get our fair share of money to hold back from taxes by such a mechanism as the Keogh-Jenkins bills that have been introduced recently, then we will be retaining our self-respect, and we can stand on our own feet. I am opposed to it. If we want a handout from the government, we can do better. I think we have to pay in for at least six months. If we go on relief, we never have to pay. (*Laughter*)

Vice-Speaker Williams: Any further discussion?

Voice from the Floor: The words "on a voluntary basis" are included in the recommendation of the chairman, and if it is on a voluntary basis, I can't see that we can get into very much trouble.

Dr. Thomas M. d'Angelo, *Assistant Treasurer:* I am going to comment on that "voluntary basis." It's not going to continue on that voluntary basis very long. Furthermore, I believe that we cannot have, and we will not get, both the Keogh-Jenkins bill, which allows us to put a certain part of our income in some sort of a pension fund, and social security both. I think we should fight for the original Keogh-Jenkins bill and allow social security to go by the board.

Vice-Speaker Williams: Any other discussion? Dr. Horton.

Dr. E. Kenneth Horton, *Nassau:* I have a similar bill in my possession which has come up under legislation. Our committee, after long consideration of the thing, felt that we couldn't come to any definite conclusion in the House of Delegates as to how the men of medicine in New York State, some 22,000 or 23,000 men, feel about the subject. We have recommended that our bill be referred back to the Council, that they can get in touch with the county societies and get a complete cross section of New York State to hand to the A.M.A.

Dr. Loughran: As far as being afraid that you may not be able to have the Keogh bill, you must remember that all our businessmen have both. The ones that are in these arrangements similar to the Keogh bill also have social security. And as long as this is on a voluntary basis, I don't see any reason why we shouldn't be able possibly to have both and have whichever we desire.

Dr. d'Angelo: I want to make a motion. I move the matter be tabled.

...The motion was seconded...

Vice-Speaker Williams: All those in favor will say "aye"; contrary "no." The motion is carried. The recommendation of the reference committee in regard to this portion has been moved tabled.

Dr. Loughran: The report of the Economics Committee on Keogh-Jenkins bill, approving this bill, is approved by the committee. I move the adoption of this part of the report.

...The motion was seconded...

Vice-Speaker Williams: All in favor say "aye"; contrary "no." The motion is carried.

Dr. Loughran: The report of the Committee on Medical Licensure and Medical Service presents the approval of the candidacy of Dr. Mary Ross of Broome County as the New York candidate to the A.M.A. for general practitioner of the year. I move the adoption of this part of the report.

...The motion was seconded...

Vice-Speaker Williams: All in favor say "aye"; contrary "no." The motion is carried by acclamation.

Section 148 (See 67)

Report of Reference Committee on Report of Council, Part VI: Establishment of General Practice Departments in Voluntary Hospitals

Dr. Charles H. Loughran, *Kings:* The resolution of Dr. Samuel Garlan of the Section on General Practice concerning the establishment of general practice departments in voluntary hospitals.

Skipping the next two pages, we come to our report. The resolution of Dr. Samuel Garlan of the Section of General Practice concerning the establishment of general practice departments in voluntary hospitals resolves that the Medical Society of the State of New York reaffirm its approval of the establishment of general practice departments in general hospitals, voluntary hospitals in New York State, and that every voluntary hospital be so notified and urged to take prompt action.

The resolution also provides that a report be presented to the House in 1956 with the data obtained from a hospital survey concerning the integration of the general practitioner into the hospital. The proposer agreed to delete the words "with a special analysis of the general practice departments in hospitals."

The resolution was approved with this change, and I recommend this.

Vice-Speaker Williams: The resolution as amended?

Dr. Loughran: The resolution as amended.

Vice-Speaker Williams: Any discussion? All those in favor will say "aye"; contrary "no." It is so ordered. This portion stands adopted. This resolution as amended stands adopted.

Section 149 (See 39)

Report of Reference Committee on Report of Council, Part VI: Investigation of Effect on New York State License of Changes in Modern Medical Practice

Dr. Charles H. Loughran, *Kings:* The resolution of Dr. Thomas F. McCarthy of Bronx County, in reference to the investigation of effect on New York State license of changes in modern medical practice.

This was discussed at length, and your reference committee recommends this approval if the resolved is changed to read that the Medical Society of the State of New York make an investigation instead of the New York State Education Department.

The resolved will then read that the Medical Society of the State of New York institute a comprehensive investigation of the entire effect of changes of modern medical practices on the license to practice medicine in New York State. I move the adoption of this part of the report and recommend its referral to the council.

Vice-Speaker Williams: Is there any discussion? Dr. Dorman.

Dr. Gerald D. Dorman, *Councillor:* Does this involve any outlay of finances?

Dr. Loughran: As a matter of fact, Dr. Dorman, two years ago Dr. John Flynn of Brooklyn introduced an identical resolution, which was approved, and I understand some kind of survey was done then.

Vice-Speaker Williams: Will it involve an outlay of money?

Dr. Loughran: I don't see why it should. It has already been done.

Dr. Dorman: Mr. Speaker, I believe that there is a bylaw or a resolution that if there is an outlay of money that that be presented at the time of the resolution.

Vice-Speaker Williams: Not necessarily. It meant the reference committee should consider the outlay and consult the trustees at the time of discussion.

Dr. Moses H. Krakow, *Bronx:* Has this been done?

Dr. Loughran: It has been done.

Dr. Krakow: What is this resolution for?

Vice-Speaker Williams: I might say for the information of the House, to the best of my knowledge the adoption of this is the equivalent to referring this to the Council. I am sure the Council wouldn't spend money without the trustees letting them.

Dr. Dorman: I move the resolution be referred to the Council.

. . .The motion was seconded . . .

Vice-Speaker Williams: As Speaker, I think that is what this recommendation amounts to. All in favor will say "aye"; contrary "no." The motion is carried. This resolution with the recommendations made by the reference committee is referred to the Council for study and action.

Section 150 (See 29)

Report of Reference Committee on Report of Council, Part VI: Illegal Collection of Fees for Workmen's Compensation Cases in Hospitals

Dr. Charles H. Loughran, *Kings:* The resolution by Dr. Charles McCarty of the First District Branch in which the State Society reaffirms the previous position of the medical profession concerning some practices in the collection of fees for workmen's compensation in hospital are illegal and should be discontinued and that Commissioner A. O. Dawson and Miss Mary Donlon are to be commended for their action. The medical profession pledges continuing cooperation in the enforcement of the Workmen's Compensation Law of the State of New York.

I move the adoption of this section of the report.

. . .The motion was seconded . . .

Vice-Speaker Williams: All in favor will say "aye"; contrary "no." The motion is carried. This recommendation stands adopted.

Section 151 (See 74)

Report of Reference Committee on Report of Council, Part VI: Approval of Joint Commission on Accreditation of Hospitals

Dr. Charles H. Loughran, *Kings:* The resolution of Dr. Samuel Garlan from the Section on General Practice requesting approval of the activities of the Joint Commission on Accreditation of Hospitals be disapproved as premature considering the widespread dissatisfaction with the organization. I move that it be tabled.

. . .The motion was seconded . . .

Vice-Speaker Williams: All in favor of the motion to table say "aye"; contrary "no." The motion is carried. This resolution is tabled.

Section 152 (See 36)

Report of Reference Committee on Report of Council, Part VI: Malpractice Insurance for Residents and Interns

Dr. Charles H. Loughran, *Kings:* The resolution of Dr. James Lynch of Bronx County resolves that the Medical Society of the State of New York strongly urge that hospitals provide adequate prepaid malpractice insurance for their residents and interns and that the Society confer with such hospitals to effectuate the intent of the resolution. The reference committee approves this resolution.

I move the adoption of this portion of the report.

. . .The motion was seconded . . .

Vice-Speaker Williams: Any discussion? All in favor will say "aye"; contrary "no." The motion is carried. This portion of the report stands adopted.

Section 153 (See 46)

Report of Reference Committee on Report of Council, Part VI: Hospital Practice of Medicine

Dr. Charles H. Loughran, *Kings:* The resolution of Dr. Aaron Kottler of Kings, resolving that the Medical Society of the State of New York institute legal action challenging the right of the hospital to practice medicine, was, after prolonged study, disapproved pending the completion of the work of the committee headed by Dr. Bauer to study hospital and professional relations.

I move the disapproval of this resolution.

Vice-Speaker Williams: You move the disapproval of the resolution?

Dr. Loughran: Yes, sir. I am sorry. I move the adoption of this part of the report.

Vice-Speaker Williams: The adoption of this part of the report carries with it the disapproval of the resolution, is that right?

Dr. Loughran: That's right.

Vice-Speaker Williams: Any discussion? Dr. Kottler.

Dr. Aaron Kottler, *Kings:* I have since discussed this question with Dr. Bauer, Dr. Loughran, your chairman of the reference committee, chairman of the special committee appointed by the Council to study this matter, and we came to the conclusion that this resolution should be referred to the Council of the Medical Society of the State of New York for further study and action.

The reason is that Dr. Bauer believes that his committee is going to convene with the hospitals in the very near future, and after his results with the hospitals, he would render his report to the Council of the State Medical Society.

Vice-Speaker Williams: You are offering a substitute motion to refer this to the Council? Is there a second?

. . .The motion was seconded . . .

Vice-Speaker Williams: Any discussion? If not, the substitute motion is before you. All in favor say "aye"; contrary "no." The motion is carried. The substitute motion is adopted, and the original motion need not be considered.

Section 154 (See 61)

Report of Reference Committee on Report of Council, Part VI: Hospital Practice of Medicine

Dr. Charles H. Loughran, *Kings:* The resolution of Dr. George Himler of New York County concerning the hospital practice of medicine was discussed at length. We approve the purpose in spirit but feel that these resolutions come within the scope of the special committee headed by Dr. Bauer to study hospital and professional relations and should be referred to them.

I move the adoption of this part of the report.

. . .The motion was seconded. . .

VICE-SPEAKER WILLIAMS: Any discussion? All in favor say "aye"; contrary "no." The motion is carried. This recommendation is adopted.

Section 155 (See 30)

Report of Reference Committee on Report of Council, Part VI: Hospital Practice of Medicine

DR. CHARLES H. LOUGHRAN, *Kings:* The resolution of Dr. Charles McCarty of the First District Branch concerning hospital practice of medicine.

Your reference committee is in sympathy with and approves the purpose and intent of this resolution, but it is a reduplication of the work of the special committee appointed by Dr. Eggston, of which Dr. Louis Bauer is the chairman. This resolution should be referred to this committee.

I move the adoption of this portion of the report.

. . .The motion was seconded. . .

VICE-SPEAKER WILLIAMS: So ordered.

Section 156 (See 79)

Report of Reference Committee on Report of Council, Part VI: Report of Special Committee to Study Hospital and Professional Relations

DR. CHARLES H. LOUGHRAN, *Kings:* The report of the special committee appointed by the president to study hospital and professional relations, of which Dr. Louis Bauer is chairman, was presented.

Your reference committee, after thorough discussion, approves this report.

I move the adoption of this part of the report.

. . .The motion was seconded. . .

VICE-SPEAKER WILLIAMS: Any discussion? All in favor say "aye"; contrary "no." The motion is carried. This portion of the report stands adopted.

DR. LOUGHRAN: As chairman of this committee, I commend the assistance and effort expended by my fellow members, Dr. Harry Golembe, of Sullivan; Dr. Guy S. Philbrick, of Niagara Falls; Dr. Meyeron Coe, of Queens Village, and Dr. Robert Hewson, of Monroe.

We sincerely appreciate the help of those who came to our table and gave us the support which was so necessary.

Gentlemen, I request the approval of the report as a whole as amended.

. . .The motion was seconded. . .

VICE-SPEAKER WILLIAMS: All those in favor say "aye"; contrary "no." The report as a whole as amended stands adopted. Thank you very much, Dr. Loughran.

. . .The members arose and applauded. . .

VICE-SPEAKER WILLIAMS: Next is Dr. Horton, chairman of the reference committee, Part IX, on Legislation. Dr. Horton.

Section 157 (See 17)

Report of Reference Committee on Report of Council, Part IX: Legislation

DR. E. KENNETH HORTON, *Nassau:* Due to the extreme length of this report I have permission from the Speaker to ask for approval only at the bottom of each page instead of each section.

VICE-SPEAKER WILLIAMS: I think that will be satisfactory.

DR. HORTON: The committee reviewed the activities of the Council Committee on Legislation, and we are wholly in accord with the recommendation relating to alertness of physicians to needs and cooperation and setting up qualifications for office of county society legislation chairmen based on experience.

The present committee endorses the recommendations of the Council Committee on Legislation that a new approach should be made to improve the efficiency of county societies and their legislation in the light of the first two recommendations of the special committee.

We commend the Committee on Legislation of the Council in the methods and approach and the activities of the various members in the metropolitan area and the smaller areas with a greater amount of attention to the utilization of experienced chairmen to carry on this important work.

The reference committee feels that the meeting by the executive officer and the State committee has been of great service in their informal meetings in ten areas.

We also commend the committee for its institution of a liaison system setup, whereby the executive officer through the local member of the State committee could reach the county chairmen rapidly where action was needed, and the county chairmen through meetings with their local State councilman could reach their committee and executive officer with information and suggestions.

The institution of a loose-leaf file for county chairmen to be a continuing process to be handed down by each chairman to his successor is also a desirable feature.

I ask approval of this part of the report.

. . .The motion was seconded. . .

VICE-SPEAKER WILLIAMS: This part of the report is mainly the review and commendation of the work done. Are there any questions or comment? If not, those in favor will say "aye"; contrary "no." It is carried and so ordered.

DR. HORTON: It is pleasing to note that in addition to the foregoing, communications were sent to county society presidents asking for election or appointment of experienced legislation chairmen, preferably continuing from year to year, to be succeeded by members of the Society who have had experience as members of the Legislation Committee.

Dr. Smith, your executive officer, who is also an attorney, and the Legislation Committee have indicated that they would like to make further suggestions which would not only improve the legislation but also other activities of the Society. The foregoing meets with the recommendation and approval of the committee, and we recommend the adoption of this portion of the report.

Your committee also believes that preparation for the ensuing legislative session should start at least as early as June or even earlier and not a few weeks before the legislative session.

Your committee notes with approval that the annual meetings of 61 county societies were held as follows: two in January, two in May, five in June, eight in October, ten in November and December, and other miscellaneous meetings numbering six, without any set date.

We also feel that the new county chairmen of legislation who shall be appointed or elected in October, November, December, or January, are handicapped in consummating the legislative program. It is recommended that this House bring attention to county societies that they should change their constitution or bylaws so that their annual meetings and election of officers are held at the succeeding meeting after the State convention.

Your committee further recommends that a streamlined group be formed from the Committee on Legislation to facilitate consultation with and by the Albany office. Your committee is also in accord with the recommendation that the executive group be formed of five men, three of them from the metropolitan area and two from upstate, and that this is to take place at the first meeting of the Committee on Legislation.

I ask approval of this portion of the report.

. . . The motion was seconded . . .

Vice-Speaker Williams: Any discussion or comment on this portion of the report? All those in favor say "aye"; contrary "no." It is carried and so ordered.

Dr. Horton: We also note that the committee has thus far held meetings in June and November, and a meeting is planned in February. The executive committee met in July and September, and a third meeting was held immediately after the last day for the introducing of bills in the legislature.

Your reference committee also takes due notice with approval of the State Committee's recommendation that the chairman of the State Committee be carefully selected and should retain office over an extended period. Your reference committee also recommends that consideration be given to amending the Constitution so that the chairman should not necessarily be a Council member.

Your reference committee also believes that the House of Delegates should give clear instruction to the Council with some latitude of action and should formulate a program coordinated with respect to relative priority of emphasis. Your committee recommends that the executive officer be consulted relating to the review of the previous history of a proposal to indicate its possibility of passage and to help draft it in language suitable for a bill or an amendment.

Your reference committee emphasizes and recommends that year-round liaison should be maintained between the Council members and State officials as well as lawmakers.

The reference committee also notes with approval that there should be a specific outline of duties and responsibilities of the executive officer and legal counsel and recommends that this should be promulgated by the Legislation Committee of the Council.

I ask for approval of this portion of the report.

Dr. Gerald D. Dorman, *Councillor:* I second the motion.

Vice-Speaker Williams: Are there any comments or discussion? If not, those in favor will say "aye"; contrary "no." It is carried and so ordered.

Dr. Horton: Your committee also recommends that all matters pertaining to legislation coming from the House of Delegates should be funnelled through the executive officer and his legal counsel for technical advice and form content and feasibility of enactment, which is already in effect and is submitted to you for your information only.

Your reference committee approves a continuation of cooperation between the Committees on Legislation and Public Relations and feels this should be a year-round education program stressing positive benefits of medicine and working actively to discredit unscientific cults and to extend active public relation programs to county and individual levels. The foregoing, as you know, has been carried out effectively by the Committee on Public Relations and is given to you for your information.

The committee recommends with approval the recommendation of the State Committee relating to maintaining a nonpartisan approach to legislation.

The reference committee approves the recommendation of the State Committee that members of the Society foster extra-Society organizations friendly to our aims.

The reference committee notes that the Legislation Committee of the State Society received 13 mandates from the House of Delegates and that there were two resolutions calling for opposition to the licensure of cultists —and the reference committee also noted that the Committee on Legislation and the Committee on Public Relations put forth every effort to prevent undesirable legislation. Your reference committee commends them for their action.

At the same time your reference committee noted that the Injunction Bill, the Condon Bill requiring free choice of plan, and the Panken Bill requiring free choice of physician have failed of passage. Your committee recommends that these bills be again introduced and fostered by the State Committee on Legislation and its executive officer.

I ask for approval of this part of the report.

Dr. Samuel B. Burk, *New York:* I second the motion.

Vice-Speaker Williams: Any comment on this matter?

Voice from the Floor: The bill relating to free choice of physicians was not the Panken Bill. This year it was the Bauer-Panken Bill.

Vice-Speaker Williams: That is correct, thank you. Are there any further comments? All those in favor will say "aye"; contrary "no." It is carried and so ordered

Dr. Horton: Your committee also has noted that a bill requiring municipalities to protect interns and residents in municipal hospitals from malpractice liabilities has failed of passage and recommends that suitable action be taken by the State Committee and executive officer pursuant to their appreciation of the situation as it exists.

Your reference committee also recommends the introduction of legislation to restore to metropolitan counties, by abolition of the Medical Practice Committee, the functions which they exercised prior to 1944 and, second, to require arbitration proceedings under the compensation law to be held in the county in which the physician resides.

Your committee stands in approval of the desired change in the present autopsy law and asks for your approval of these resolutions.

The committee notes the action of the Council relating to the reintroduction of the Friedman Bill which prohibits the practice of medicine by hospitals and recommends that steps be taken to carry out the wishes of the Council.

The committee also notes that steps have been taken for a long-range study of the Medical Practice Act with a view to improving the same and wishes to comment that all procedures be taken slowly.

The reference committee also wishes to advise the House of Delegates that it has taken note of the fact that the Governor has interested himself in the Mental Hygiene law.

Your reference committee also makes note of the retirement of Miss Adelaide Briggs after thirty years of valuable service as secretary of the Legislative Bureau in Albany and feels the Society owes her a vote of gratitude for the excellent work she has done and emphasizes the appreciation of her faithful service by the Council. We note also that Mrs. Murial Greenfield has been appointed in her place.

We ask approval of this portion of the report.

Dr. Dorman: I second the motion.

Vice-Speaker Williams: Those in favor will say "aye"; contrary "no." It is carried and so ordered.

Dr. Horton: Due to the length of the supplementary report, the committee respectfully refers to the delegates the Supplementary Report of the Council, Part IX, which indicates the progress which was made in connection with the various bills handled by the Legislature during the past season, and it is the understanding of the chairman that every member present has a copy of the same.

It is noted in this report that some of the bills in which we were interested were passed, and we are grateful to the Legislature for passing the legislation which is favorable to the Medical Society with the help of the Legislative Bureau, for which the committee extends its thanks.

This is the end of Part I.

I move the adoption of that portion of the report.

. . . The motion was seconded . . .

Vice-Speaker Williams: All those in favor say "aye"; contrary "no." It is carried. This section of the report has been adopted. The next portion of the report has to do with resolutions which have been referred to the Reference Committee on Legislation, Part IX.

Section 158 (See 63)

Report of Reference Committee on Report of Council, Part IX: Revision of Laws Governing Autopsies

Dr. E. Kenneth Horton, *Nassau:* The first resolution. This resolution is introduced by Dr. Alfred Angrist concerning the "Revision of Laws Governing Autopsies." Skipping the whereases,

> "*Resolved,* that the House of Delegates of the Medical Society of the State of New York petition the Governor of the State of New York to use his good offices for the creation of a commission which shall consult with interested sources, including the Legislature, the Bar Association, and the medical profession, to review existing laws and regulations governing the dead human body and the autopsy, to study the social and medicolegal aspects of the problem, and to submit a report with recommendations for the needed changes in the statutes of the State of New York to clarify the present ambiguities and promote a sound legal procedure for the regulation of death certification and the autopsy."

The committee approves of this resolution in principle and asks for its adoption.

. . . The motion was seconded . . .

Vice-Speaker Williams: Your committee approves this resolution in principle. All in favor say "aye"; contrary "no." It is carried and so ordered.

Dr. Horton: Autopsy Law Amendment (*Section 108*). The House adopted a resolution providing that this Society "act through its legislative personnel, committees, and officers to make every effort to promote legislation to liberalize the New York State Autopsy Law in conformity with that of Wisconsin."

This was referred by the Council to the Committee on Legislation.

The Legislation Committee reports that it will cooperate with the New York State Hospital Association to obtain passage of an amendment for this purpose.

In connection with Section 108, the Committee also considered the amendment submitted by Dr. Alfred Angrist who was invited to discuss this subject matter with the committee. The committee approved the Autopsy Law as written in the minutes of the April 1 issue of the New York State Journal of Medicine with certain modifications which should be transmitted to the Council for its final disposition.

Vice-Speaker Williams: I think this part is probably for clarification and information of the House. I don't think it requires any official action.

Section 159 (See 52)

Report of Reference Committee on Report of

Council, Part IX: Social Security Benefits for Physicians

Dr. E. Kenneth Horton, *Nassau:* The next resolution is introduced by Dr. Arthur Kane. The subject is "Social Security Benefits for Physicians."

Deleting the whereases as to so many million self-employed, and so forth, and so forth, we come to the first resolved:

> "*Resolved*, that the House of Delegates of the Medical Society of the State of New York withdraw its decision on social security and urge Congress to give benefits to self-employed physicians; and be it further
>
> "*Resolved*, that the delegates of the Medical Society of the State of New York to the American Medical Association introduce a similar resolution in the House of Delegates of the American Medical Association at its annual meeting in June, 1954."

Now, the committee considered this very carefully, as I told you a few moments ago. We felt that the only way you could get a true picture of how the men of medicine in New York State felt would be to go back to the county level, and we made that suggestion at the time. In order to do that we suggested throwing it in the hands of the Council. So the committee has considered the bill presented by Dr. Arthur Kane in detail and recommends that this matter be referred to the Council for further study and disposition.

...The motion was seconded...

Dr. Ezra A. Wolff, *Queens:* I think this has been discussed in the counties, discussed in this House not so much longer than ten minutes ago. I think we have a pretty good idea of the disposition of this House. I move this also be tabled.

...The motion was seconded...

Vice-Speaker Williams: Any discussion of this motion? All those in favor will say "aye"; contrary "no." It is carried and so ordered.

Section 160 (See 47)

Report of Reference Committee on Report of of Council, Part IX: Restriction on Sale of Proprietary Medicines

Dr. E. Kenneth Horton, *Nassau:* The next is a resolution by Dr. Kottler. The subject is the "Restriction on Sale of Proprietary Medicines."

Deleting the whereases,

> "*Resolved*, that the Medical Society of the State of New York express itself as opposed to any legislation which would expose the public to harm through the sale of potentially dangerous drugs, even though masquerading under a trade name, by stores other than those registered by the New York State Board of Pharmacy."

The committee approves this in principle and recommends that all matters pertaining to health and welfare should be through the direct control of licensed physicians.

Dr. Henry J. Barrow, *Bronx:* I second the motion.

Vice-Speaker Williams: Is there any discussion of the report? All those in favor will say "aye"; contrary "no." It is carried and so ordered. Approved in principle.

Dr. Horton: In conclusion, I wish to thank the committee: Dr. Burk, Dr. Galvin, Dr. Wilson, Dr. Watkins, and the secretaries who have made possible the presentation of this report.

I would like to ask for the adoption of this report as a whole as amended.

Vice-Speaker Williams: All those in favor will say "aye"; contrary "no." It is carried and so ordered.

...The members applauded...

Section 161 (See 15, 43)

Report of Reference Committee on Report of Council, Part IV: Public Health Activities B—Cancer, Blood Banks, Heart Disease, Mental Hygiene, Film Review

Vice-Speaker Williams: The next order of business, and I think this is our last, is Dr. Alfred Angrist, chairman of the Reference Committee on Report of the Council, Part IV.

Dr. Alfred Angrist, *Queens:* Mr. Speaker, members of the House, I want to assure you this is the last and the least and we have reached the bottom of the barrel, but that part of the potion may be a bit heady.

I shall avoid some of the flowery language at the beginning of this report and summarize by stating that there were six separate items before us and go immediately to the first, which deals with the resolution introduced by Dr. Curphey, and the topic of which is "Establishment of a Committee to Study the Problems Arising from the Employment of Persons with Cardiac Impairments."

The resolved portions of that resolution call for the president of the Medical Society of the State of New York to appoint a committee with funds and staff to study the cardiac in industry with the purpose of delineating the problems associated with the employment of persons with heart disease and to recommend a program to improve the understanding and management of these problems.

The resolution of Dr. Curphey, dealing with establishment of a committee to study the problems arising from the employment of persons with cardiac impairments, was concurred in by the committee, but it is the consensus of the reference committee that this matter should be referred to the Cardiac Subcommittee of the Council Public Health and Education Committee for implementation.

It is further recommended that this matter be referred to the new combined Committee on Industrial Medicine and Compensation or the Committee on Industrial Medicine, depending upon final action taken in this matter by the House of Delegates.

And it is further recommended that the suggestion of the Subcommittee on Heart Disease of the Council Committee on Public Health and Education, that a session be devoted at the 1955 Annual Meeting to problems of the employment of cardiacs, be referred to the Scientific Program Committee for implementation with the recommendation that such a session or group of papers be so included in the program.

That is the completion of the three specific recommendations. I will come to a discussion of this resolution by your reference committee.

I recommend the adoption of this resolution.

. . . The motion was seconded . . .

VOICE FROM THE FLOOR: This recommendation requests funds. There has to be a stipulation as to how much it is going to cost.

DR. ANGRIST: I can state the reason for referring it was that we thought the Council could then control the expenditure of funds in that fashion.

VICE-SPEAKER WILLIAMS: I can assure you that the Council and the Board of Trustees will watch the funds. Is there any further discussion? Dr. Berger.

DR. HERBERT BERGER, *Richmond:* As a member of the American Heart Association and the New York Heart Association, I can assure you of the tremendous advances being made in this direction by both these organizations. It might be possible for us, our committee, to work through them without any expenditure on our part. (*Applause*)

VICE-SPEAKER WILLIAMS: Thank you, it's very nice, thank you very much. Any further discussion? Those in favor of the recommendation say "aye"; contrary "no." It is carried and so ordered.

Section 162 (See 41)

Report of Reference Committee on Report of Council, Part IV: Supplementary Report of the Blood Banks Association of New York State, Inc.

DR. ALFRED ANGRIST, *Queens:* The second item dealt with the resolution on blood banks, introduced by Dr. J. Lafe Ludwig of California before the house of delegates of the American Medical Association and which was referred to the Reference Committee on Miscellaneous Business which acted upon it and then referred it to your present reference committee, Council, Part IV.

I will not give you the whereases, except one particular one which is altered by the recommendation of your reference committee. This resolution was read before this House by Dr. J. Stanley Kenney, and I think I can just say that we accept the resolution to save you time, if you so wish, with the exception of the following paragraph:

> "WHEREAS, the present American Red Cross program of so-called "free" blood without requirement for replacement has made collection of adequate supplies for civilian use difficult, has been a tremendous drain on Red Cross funds which might be better devoted to purposes more consistent with Red Cross functions, and is inaccurate to the extent that blood is not free but is paid for by the community at large in contributions and by the government through tax revenues."

It was the recommendation of your committee that this whereas, this particular paragraph, be deleted from the whole resolution.

In the light of the announced statement on the part of the Blood Banks Association of New York State of its sincere desire to cooperate with the various blood procurement agencies of the State, it is the recommendation of your reference committee to delete the above last paragraph from the resolution.

VICE-SPEAKER WILLIAMS: What is your recommendation?

DR. ANGRIST: I move that the original resolution of Dr. J. Lafe Ludwig, referred to this committee from the Reference Committee on Miscellaneous Business, be approved with the deletion of the paragraph specified.

. . . The motion was seconded . . .

VICE-SPEAKER WILLIAMS: The chairman brought up the one controversial subject having to do with the Red Cross. If the House desires, he may read the various parts of the resolution, of the resolved. Will you read the resolved portion?

DR. ANGRIST: It's a long resolve. I will give it to you:

> "*Resolved*, that this House of Delegates urge the establishment of a coordinated national blood bank program organized by the American Medical Association, the American National Red Cross, and other qualified organizations interested in blood banking in so far as may be appropriate on the following basis:
>
> "1. The medical aspects of blood banking shall be under the exclusive control of the medical profession.
>
> "2. The business administration, donor recruitment, stockpiling for civil defense and disaster relief, allocation of supplies to meet military needs, and public relations shall be matters of joint interest.
>
> "3. The supply of blood shall be maintained on a replacement basis.
>
> "4. The national blood bank program shall be a financially self-supporting but nonprofit arrangement operated in the national interest with the sole aim of promoting the widest availability of safe, usable blood and its derivatives."

This is the resolved portion of the report, and I therefore move that that resolution, that portion of the resolution be adopted as read.

VICE-SPEAKER WILLIAMS: With the amendment or the deletion, you mean, of that one particular paragraph that you gave.

DR. ANGRIST: I think that has been acted upon.

VICE-SPEAKER WILLIAMS: No, it hasn't. Are there any further comments? If not, those in favor will say "aye"; contrary "no." The motion is carried, and it is so ordered.

Section 163 (See 9)

Report of Reference Committee on Report of Council, Part IV: Supplementary Report of the Blood Banks Commission (Advertising for Professional Blood Donors)

DR. ALFRED ANGRIST, *Queens:* Item number 3 deals with blood banks and in particular the supplementary report to the House of Delegates by Dr. Dan Mellen, chairman of the Blood Banks Commission of the Medical Society of New York State.

I am anxious not to burden you with the details of this report. If I could summarize it quickly, I would state that except for the exception which I will call to your attention immediately, it deals with a commendatory statement about the Blood Banks Association by the Commission.

The part to which your reference committee took exception in this report is as follows. The following statement is excepted, in paragraph five:

> "The resolution, submitted in the 1953 House of Delegates, declaring that newspaper advertising be declared necessary and ethical and approved was accepted."

Your committee, the opinion of the reference committee, is that the report of Dr. Dan Mellen, chairman of the Blood Banks Commission, which was accepted by the Council, should be altered by the substitution of the following sentence, "It is felt that under current conditions, newspaper advertising for blood bank donors may be necessary, and there is no intent to declare unethical, licensed physicians who are connected with organizations so advertising for donors." The latter sentence to be in lieu of the last sentence in paragraph five, bracketed above and read for your pleasure.

I move the adoption of the recommendation of your reference committee in this matter as amended.

Vice-Speaker Williams: Is there any discussion? Dr. d'Angelo.

Dr. Thomas M. d'Angelo, *Assistant Treasurer:* I just want to ask one question. If a physician himself should run a blood bank and make a profit from that blood bank, would it be all right for him to advertise for donors? I ask that of the chairman of the reference committee under interpretation of that rule?

Vice-Speaker Williams: I will refer that to the chairman.

Dr. Angrist: If I get your question specifically, Dr. d'Angelo, it is if a physician should own a blood bank, has he the right, by this recommendation, to advertise for donors to appear at his blood bank? I would infer, and I am not the legal mind, that this reading as presently inserted would permit such a practice.

Dr. d'Angelo: If that be the interpretation of the reference committee, then I would certainly be definitely against such a proposition.

Vice-Speaker Williams: At this time I will ask the chairman to reread the last paragraph. Would you kindly read that again for the information of the House?

Dr. Angrist: May I read the original sentence, sir?

Vice-Speaker Williams: You can do that too, yes, I think for clarification, yes, sir.

Dr. Angrist: As the matter was referred to us it reads as follows: "The resolution, submitted in the 1953 House of Delegates, declaring that newspaper advertising be declared necessary and ethical and approved was accepted." That states that it is ethical. I want to call your attention to that statement. In lieu of that, and this was done on the advice of counsel, or I can say in consultation with counsel, it is felt that under current conditions newspaper advertising for blood bank donors may be necessary, and there is no intent to declare unethical licensed physicians who are connected with organizations so advertising for donors.

Now, if I can clarify this. As the matter stands here now in reply to Dr. d'Angelo's question, I cannot help but interpret it as to include giving permission to such a physician as might own a blood bank to so advertise.

If you wish to alter that meaning, you have to amend this further and limit it to nonprofit organizations or the like. But we did not do it in our reference committee.

Vice-Speaker Williams: Any further comment?

Dr. John J. Flynn, *Kings:* I think we have gone over this question, and it still brings over the third party advertising. I think in the first instance of this, when it was broached as newspaper advertising, it meant that in Oyster Bay on the 17th of March the Red Cross will pick up blood; at the Lincoln Savings Bank at 59th Street and Fifth Avenue, Brooklyn, on March 17, the Red Cross will pick up blood.

What is injected into this specifically is that Dr. John Flynn pays $5.00 for a pint of blood. That is advertising directly for Dr. John Flynn, and it is quite different from what was the intent of the first sentence. And it would abrogate your third party in the advertising tangle again. We have just gone through one of those sessions, and this would circumvent the *Principles of Professional Conduct.*

Vice-Speaker Williams: Any further comment?

Dr. Ezra A. Wolff, *Queens:* Might I ask whether it is considered whether advertising for blood donors is the same as advertising for patients?

Dr. Angrist: That was fully covered in the discussion of the reference committee, and it was specifically noted that it was not the same, very definitely so. It was the consensus of all members of the committee on that score.

Vice-Speaker Williams: I would like to state that Dr. Scannell is not a member of this House of Delegates, and we all realize the contribution he has made in the past to blood banking, and if it be the opinion of the House that he can give us this statement in five minutes and if the House so agrees, we will extend the courtesy of the floor to Dr. Scannell to make a statement. (*Applause*)

Dr. Scannell: Dr. John M. Scannell, member Queens County Medical Society, wishes to make a statement on "Advertising for Blood Donors in the Public Press."

In 1952 the delegates to the Annual Meeting of this Society voted unanimously to adopt a resolution to disapprove advertising in the public press as it bordered on the unethical practice of medicine.

Last year (1953) at the Annual Meeting of this Society two resolutions were introduced. One by the Queens County Medical Society stating that they reaffirm the resolution passed in 1952 and advised that the members of this Society refrain from this practice. A personal resolution was introduced by a doctor from New York County which in substance would rescind the resolution passed in 1952.

It would be very unfair to the committee, who worked so hard in 1952 to solve this disagreeable problem, to do anything at this meeting to change in any way the resolution presented by them in 1952.

When this resolution was passed in 1952, there were nine commercial blood banks, commonly known as "Skid Row" blood banks, advertising in the public press for blood donors. On April 5, 1954, we have but one, the University of Bellevue Hospital Blood Bank, which is a new name for the Post-Graduate Hospital Blood Bank. The director of this blood bank is responsible for the present Blood Assurance Program of the State of New York Blood Banks Association.

I spent one and one-quarter hours before the reference committee and presented much documented evidence to prove what an undignified and disgraceful practice this is and wish to warn that if we do not put our own house in order, the public will.

May I respectfully ask that the delegates to this convention do nothing to disturb in any way the resolution passed in 1952.

Much more could be said on this subject. I am very grateful for this privilege of addressing you. Many thanks.

Dr. Angrist: Mr. Speaker, may I comment? I do want the House of Delegates to realize that Dr. Scannell did appear before our committee, and every opportunity was offered him to state his case. It was considered most deliberately and carefully, and the recommendation of your committee is a result of considerable separate consultation with many of the higher echelons in the Society and represents the consensus and the uniform opinion of your committee, in the face of such recommendation.

Voice from the Floor: For the benefit of the House may I remind this group that—while I can't give the exact wording, I am drawing on my memory—the reference committee stated that in its opinion it was not considered unethical to advertise for blood donors. That reference committee report was adopted by the 1953 House of Delegates. So I think Dr. Scannell is slightly out of order in chronologically trying to pin a decision of this House on a statement or a policy adopted in 1952 which was reversed in substance in 1953.

So I feel that our action in 1954 is doing nothing more than confirming the stand we took in 1953 and reversing the report in 1952.

Vice-Speaker Williams: Dr. Schiff.

Dr. Leo F. Schiff, *Trustee:* Since it appears there is a conflict of opinion here—time is short—I don't believe that this handful of delegates now represents the State Society of New York, and I would move you, sir, that this matter be referred to the Council who can study it at leisure and formulate an opinion in due time.

I move it be referred to the Council.

Vice-Speaker Williams: You are offering this as a substitute motion?

Dr. Schiff: Yes.

. . .The motion was seconded. . .

Vice-Speaker Williams: All those in favor will say "aye"; contrary "no." It is carried and so ordered.

Section 164

Report of Reference Committee on Report of Council, Part IV: Blood Banks Association

Dr. Alfred Angrist, *Queens:* Gentlemen, the worst is over. The next item on the agenda deals with the "Report of Public Relations Aspect of the Blood Assurance Program."

The report of public relations aspect of the Blood Assurance Program by Dr. Sydney L. McLouth, Corfu, New York, is noted but no action was taken inasmuch as this seemed to be a progress report noting excellent public relations but seemed to call for no specific action at this time. We all look forward to the success of this venture in Genesee County.

I move the adoption of this portion of the report.

. . .The motion was seconded. . .

Vice-Speaker Williams: All those in favor will say "aye"; contrary "no." The motion is passed and so ordered.

Dr. Angrist: Our last item. Blood Banks Association of New York State, statement of Dr. Stanley Kenney to the House of Delegates.

I think all of you heard Dr. Kenney's statement, and there is no need to repeat it because it was a rather lengthy document.

Your reference committee is of the opinion that the principles and program of the Blood Banks Association are probably the best solution to the problem of procurement and should receive our full endorsement, and in so doing the State Society is carrying out the repeated recommendations of the American Medical Association in the several instances cited. And we go on to cite specific adoptions of resolutions and recommendations by the American Medical Association endorsing this policy.

I move the approval of this portion of the report.

. . .The motion was seconded. . .

Vice-Speaker Williams: Any discussion? If not, all those in favor will say "aye"; contrary "no." It is carried and so ordered.

Dr. Angrist: Finally, your reference committee notes that in the report to the House of Delegates by the Blood Banks Association great emphasis was placed on the cooperation and cooperative philosophy which predominates in all of its activities. To substantiate this we quote briefly from the remarks of Dr. J. Stanley Kenney: "This is a cooperative endeavor to aid and assist in coordination of all facets of the program of blood banking. That it aims in no way to supplant any existing agencies now operating in the over-all blood program. It is emphasized that this movement is in no sense a controversial project. We are attempting to bring organization into a field that needs it and to carry part of the terrific burden of securing blood donors."

We would stress particularly the words of the representative of the Red Cross on our board of directors, and this is particularly important in view of some press releases which occurred yesterday: "My position has been to suggest and advise in planning so as to permit side by side cooperation of the Red Cross and the Blood Banks Association. The American Red Cross is anxious to cooperate within the limits of its basic policies."

In the opinion of the committee there is great promise of cooperation and mutual assistance in this Blood Assurance Program.

May I move that this portion of the report be approved?

...The motion was seconded...

Vice-Speaker Williams: Any discussion? If not, all in favor will say "aye"; contrary "no." The motion is carried, and it is so ordered.

Dr. Angrist: May I ask then that the report of the reference committee, on Council, Part IV, be approved as a whole as amended? And may I note that contrary to the usual procedure, the members of my committee provided the yeoman work, and I am truly, personally grateful to each of them, individually and collectively, for having made it possible for your chairman to present to you the fruition of their experience and mature deliberation. The committee wishes to thank our counsel, Mr. Martin, for the guidance and wisdom he contributed to our deliberations. I thank you. I do want to thank the individual members of my committee and all those who appeared.

Vice-Speaker Williams: Members of the House, at this time the motion is before the House to approve the report as a whole.

...The motion was seconded...

Vice-Speaker Williams: All those in favor will say "aye"; contrary "no." It is carried and so ordered.

Section 165 (See 15)

Report of Reference Committee on Report of Council, Part IV: Supplementary Report of Council Committee on Public Health and Education (Legalizing the Distribution of Narcotics)

Dr. Alfred Angrist, *Queens:* I am sorry, there is another resolution. The resolution of Dr. Herbert Berger which was referred to the reference committee from the supplementary report of the Council Committee on Public Health and Education.

It was noted that the cause of crime in addiction resides in the illegal acquisition through the underworld. Further, addicts are patients with mental disturbance and should be treated by physicians, presenting a medical problem with, very often, the legal and criminal problem appearing secondarily. There was good reason to have existing mental health clinics or established narcotic clinics handle such patients with every prospect of a cure rate superior to what now is recorded. An equivalent resolution has been adopted in the states of California, Michigan, and Illinois.

It was the considered opinion of your reference committee that there is distinct merit in the purpose, objectives, and recommendations included in the resolution, and that this matter be referred to Council for the establishment of a committee to make special recommendations for its formal endorsement and implementation.

I move the approval of this resolution.

...The motion was seconded...

Vice-Speaker Williams: Any discussion? If not, all in favor will say "aye"; contrary "no." It is carried and so ordered.

Section 166

Votes of Thanks

Speaker Holcomb: Members of the House, at this time the chair will entertain certain motions. The chair will recognize Dr. Anderton.

Secretary Anderton: In introducing a motion of this type and description, Mr. Chairman, I move that the secretary be empowered to add to the minutes of this meeting resolutions of thanks to those of the hotel and others who have contributed so much for the success of these meetings.

I move that these be similar to those passed in 1952.

...The motion was seconded...

Speaker Holcomb: All those in favor say "aye"; contrary "no." The motion is carried, and it is so ordered.

...The following resolutions were prepared by the secretary in accordance with this action...

> "*Thanks to the Subcommittee on Scientific Program.—Resolved,* that the Subcommittee on Scientific Program, Dr. Alfred P. Ingegno, chairman, is hereby thanked in the name of the Society.
>
> "*Thanks to the Convention Committee.—Resolved,* that a vote of thanks is hereby extended to Dr. Thomas M. d'Angelo, chairman, his committee and subcommittees, for their splendid work in connection with this very successful convention.
>
> "*Thanks to the Office Staff.—Resolved,* that a vote of thanks is hereby extended to the group from the headquarters who have worked so diligently in preparation for and in helping the success of this convention.
>
> "*Thanks to the Woman's Auxiliary.—Resolved,* that the Woman's Auxiliary to the Medical Society of the State of New York is hereby thanked for its wholehearted and cheerful cooperation in helping to bring success to this convention.
>
> "*Thanks to Business Manager of Convention.—Resolved,* that Mr. Charles L. Baldwin is hereby thanked in the name of the Medical Society of the State of New York for his diligent efforts in behalf of the 1954 convention and for the successful fruition of his endeavors.
>
> "*Thanks to Hotel Management.—Resolved,* that the management of the Hotel Statler, New York City, is hereby extended a vote of thanks 'for the way they have taken care of us.'
>
> "*Thanks to Subcommittee on Scientific Exhibits.—Resolved,* that this House gives a vote of thanks to Dr. William Watson, chairman; Dr. Beverly C. Smith, cochairman, and the other members of their subcommittee. The scientific judgment exhibited by these gentlemen in select-

ing and placing the scientific exhibits has done much to further the success of this convention.

"*Thanks to Mr. Thomas E. Alexander.—Resolved*, that this House of Delegates extend to Mr. Thomas E. Alexander, office manager, our thanks for his valuable and capable assistance at this convention."

SPEAKER HOLCOMB: Dr. Aaron.

DR. A. H. AARON, *Erie:* I ask that there be placed in the minutes the deep appreciation on the part of the Committee on Constitution and Bylaws of the innumerable hours of work and service and advice given to us by Dr. Anderton. Unfortunately, yesterday I neglected to include his name at the end of my report.

Section 167

Announcement of Intention to Propose Amendment of Bylaws, Chapter III

SPEAKER HOLCOMB: Dr. Schiff is recognized.

DR. LEO F. SCHIFF, *Trustee:* Mr. Speaker, in the footsteps of the late, illustrious, and never-to-beforgotten James Rooney, I take this opportunity to give notice under the provisions of the Bylaws that I propose to produce within the required legal time an amendment to Chapter III of the Bylaws having to do with the election of delegates to the American Medical Association.

SPEAKER HOLCOMB: Thank you, Dr. Schiff.

Section 168

Presentation of President-Elect and Incoming President

SPEAKER HOLCOMB: The chair would like to have Dr. Wurzbach and Dr. Barrow escort President-Elect Azzari to the rostrum.

...The members arose and applauded as the president-elect was escorted to the rostrum...

DR. RENATO J. AZZARI, *President-Elect:* Mr. Speaker, members of the House, I won't take more than a minute. I feel humbly grateful and deeply appreciative for the great honor that you have bestowed upon me this morning. I shall consider your action today as a mandate for continuing service to our Society and hope that I will merit your trust in the years ahead.

I pledge you my sincere effort to carry on my new duties to the best of my ability and with the thought ever in mind to do at all times what is best for the Medical Society of the State of New York.

Again, I thank you from the bottom of my heart.

...The members arose and applauded...

SPEAKER HOLCOMB: Will Dr. Gibson and Dr. Schiff bring Dr. Dan Mellen up to the rostrum?

...The members arose and applauded as Dr. Dan Mellen was escorted to the rostrum...

DR. DAN MELLEN, *President:* This won't take very long because there is nothing to say, only to promise you that I will just do the best I can.

...The members arose and applauded...

Section 169

Vote of Thanks to Speaker and Vice-Speaker

DR. JOHN J. MASTERSON, *Trustee:* I would like, at this time, to offer a resolution expressing the thanks of the House of Delegates for the fair, impartial, and courteous manner in which Dr. Holcomb and Dr. Williams presided over the affairs of this most difficult session.

...The motion was seconded...

...The members arose and applauded...

SPEAKER HOLCOMB: Thank you, gentlemen, and may I say in return that I made the remark this morning that I had never before attended a session of this House of Delegates or presided over it, in part or in whole, where a group of men have been so faithful, so long-suffering, and who so thoroughly cooperated in every way.

I want to thank the chairmen of the reference committees and every one connected with this meeting for doing a bang-up job. Thank you.

If there is no further business we stand adjourned.

...The meeting was adjourned at 6:05 P.M. sine die...

MEDICAL SOCIETY
OF THE
STATE OF NEW YORK

149th

ANNUAL CONVENTION

- **House of Delegates**
- **Annual Meeting and Banquet**
- **Scientific Program**
- **Scientific Exhibits**
- **Scientific Motion Pictures**
- **Television Program**
- **Technical Exhibits**
- **Woman's Auxiliary**

May 9 to 13, 1955

HOTEL STATLER, BUFFALO

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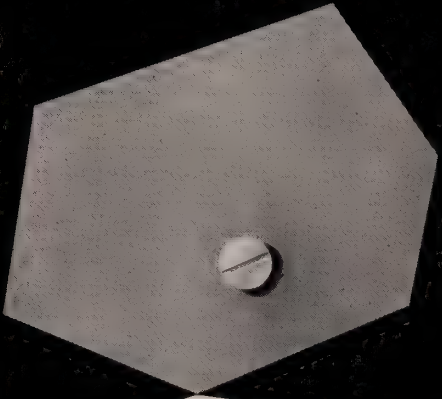

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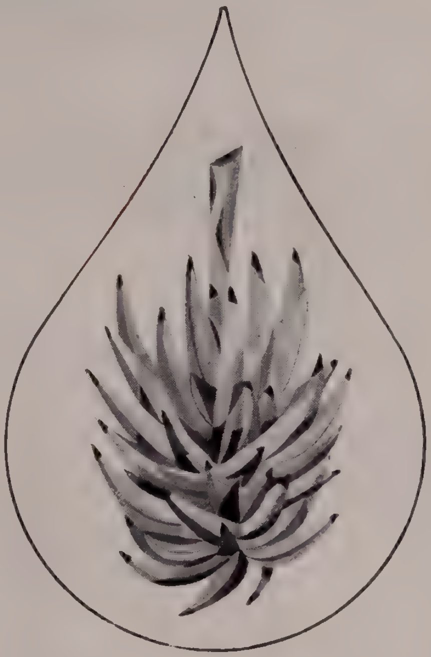

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(1) Johnston, R. L.: J. Ind. St. Med. Assn. 46:869, 1953
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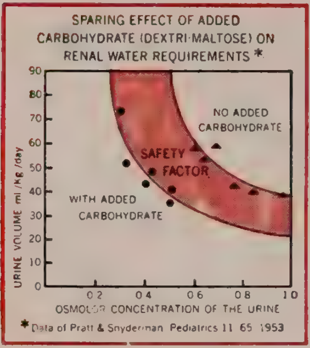
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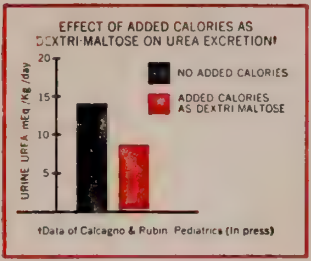
* Data of Pratt & Snyderman Pediatrics 11 65 1953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